Equipment Maintenance · On-site Troubleshooting

L-Bar Sealer Common Alarm Troubleshooting Guide

Professional English version for operation, maintenance and field fault diagnosis.

Alarm causes · Corrective actions · Reference images

E-stop / Sealing Jaw Switch

Film Unwind / Rewind Drive

Safety Guard / Waste Film

Anti-Cut Protection

Servo Drive Alarm

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1 · Safety Circuit Alarms

Possible causes

1.The emergency stop button is pressed.

2. The E-stop circuit is open due to a loose, disconnected, or damaged wire.

Corrective actions

1.Turn the red emergency stop button clockwise until it pops back out.

2. If the alarm remains, check the E-stop signal on the machine’s I/O screen.

3.If the signal is still abnormal, check for loose or disconnected wires between the E-stop button and the PLC.

4. If the wiring is OK, check the contact block behind the E-stop button.



Possible causes

1. The black rotary selector switch is in the **left OFF position**.

2. The sealing blade switch circuit is open due to a loose, disconnected, or damaged wire.

Corrective actions

1.Turn the black rotary selector switch from the **left OFF position** to the **right ON position**.

2. Check the sealing blade switch status on the machine’s I/O screen.

3. If the signal is abnormal, check for loose or disconnected wires between the selector switch and the PLC.

4. If the wiring is OK, check the switch contact block.



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2 · Film Unwinding / Drive Alarm

1. Film unwinding speed is lower than film-feeding /drawing speed.
2. Sensor No. 1 remains continuously active.
3. Film unwinding motor is stalled.

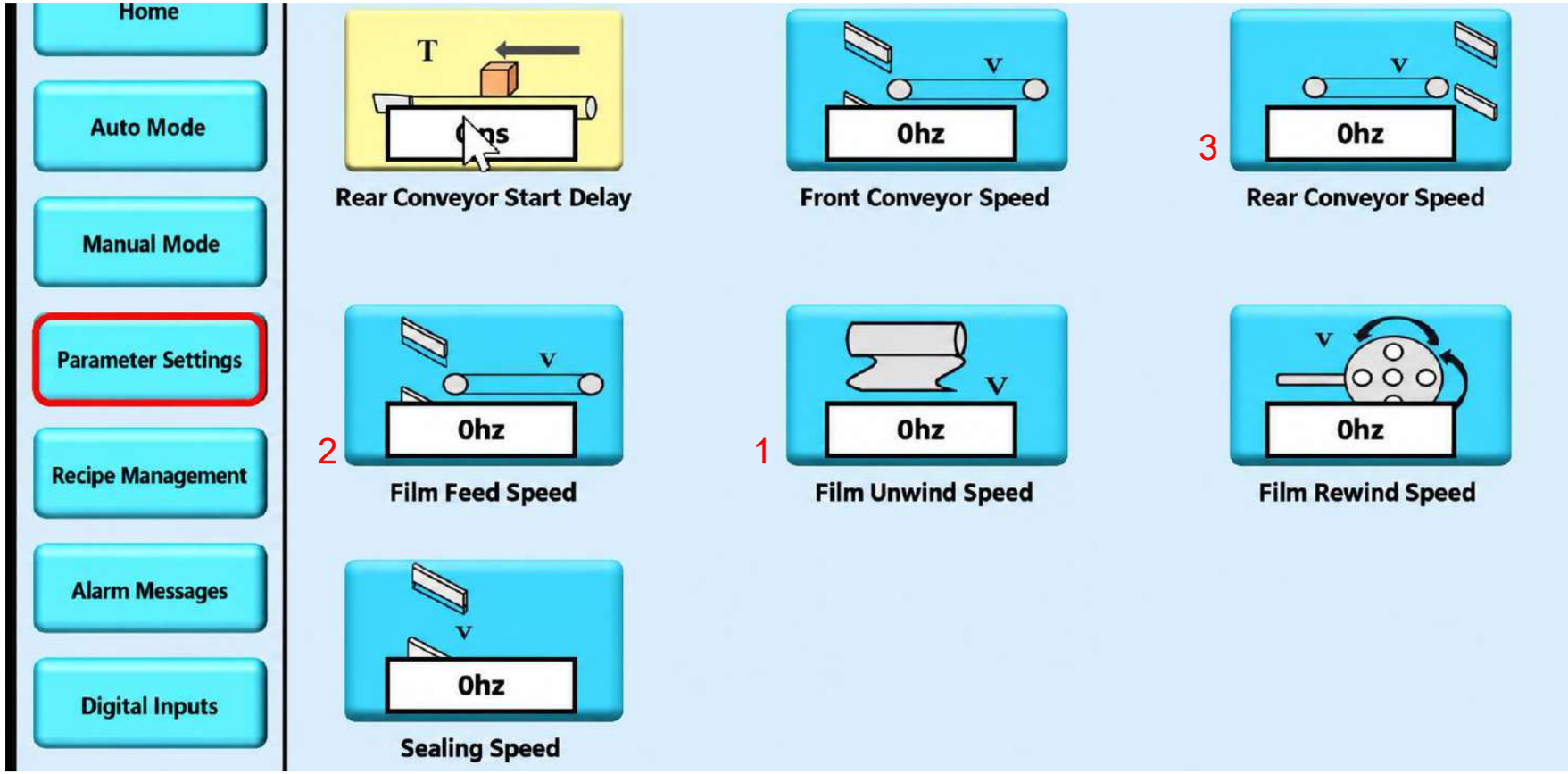


1. Adjust the unwinding speed in the parameter screen, or reduce film-drawing / rear conveyor speed.
2. Check whether film is wrapped around the roller. When the swing arm drops naturally, check the proximity sensor signal. If active, adjust the sensing distance or No. 1 trigger block.
3. Check drive wiring and RS-485 communication cable. If the red indicator is flashing, restart the drive. If the alarm remains, replace the drive and inspect chain / gear wear.

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2.1 Film Unwinding / Drive Alarm

2.1. Adjust the unwinding speed(1) in the parameter screen, or reduce film-feed speed(2) / rear conveyor speed.(3)



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2.2 Film Unwinding / Drive Alarm

2. 2. 1. Check whether film is wrapped around the roller.



Possible reason 1,
After replacing the film, ensure the handle is fully lifted. The two rollers must firmly clamp the film to provide the proper tension required for film unwinding.

Failure to lift the handle will trigger a Film Unwind Alarm.



Possible reason 2,
Do not pull out excessive film during pre-feeding.
 Excess film may wrap around the silicone roller, causing continuous film unwinding.

If the servo motor runs continuously for more than 3 seconds, the HMI will trigger an "Unwind Film Alarm"

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2.3 Film Unwinding / Drive Alarm

Possible reason 3,
Servo Drive Faults are usually caused by incorrect parameter settings.

If the film feeding speed is too fast and the film unwind speed is too slow, the unwind system cannot keep up with the film demand.

Adjust the film unwind parameters so that the unwind speed matches the feeding speed.



Possible reason 4,
The film unwind process only begins when the photoelectric sensor detects the film. If you pull the film and the sensor misses it, the PLC sends no signal to the unwind motor. The film will not feed. See the video here,
https://www.youtube.com/watch?v=jq61zcRjZjQ

You can test the sensor manually. Move the tension arm by hand. Check if the sensor detects the signal. This should trigger the motor to unwind the film.

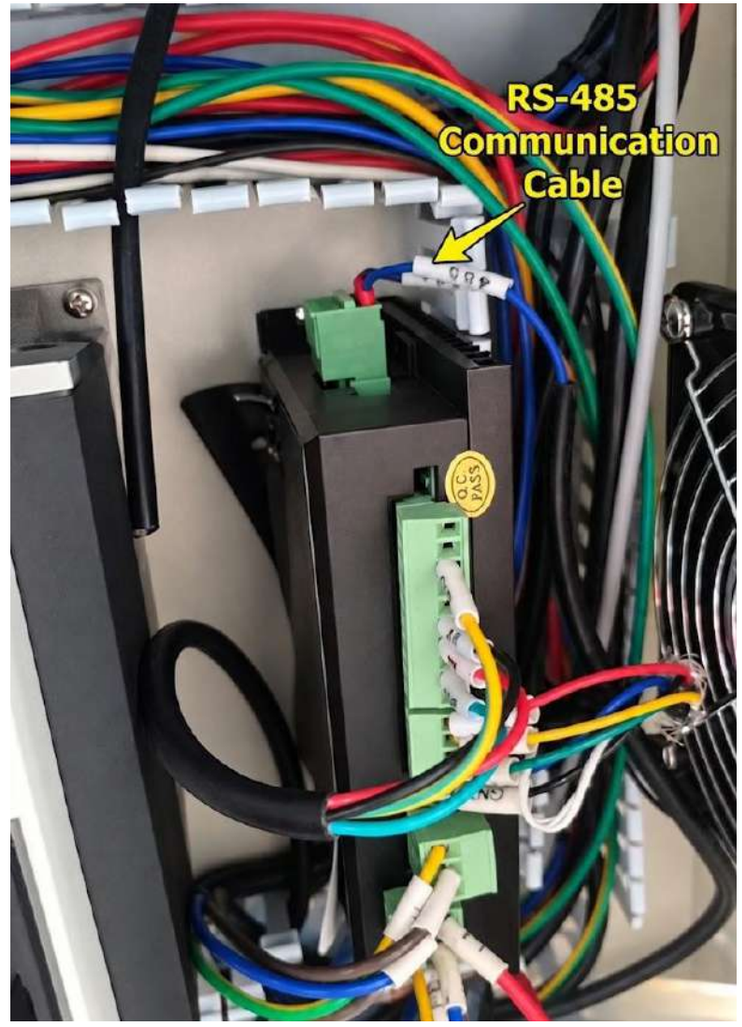
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2.4 Film Unwinding / Drive Alarm

Possible Reason 5:
Drive Error or Communication Failure

Troubleshooting:
Check the drive wiring and the RS-485 communication cable. If the red fault light flashes, restart the drive. If the issue persists, replace the drive. Check the chains and gears for wear.

RS-485 Communication Cable: Function: Enables data transmission between the PLC and motor drive. The controller sends start, stop, and speed commands. The drive sends back status feedback. A loose or damaged cable interrupts this signal. This stops the motor and triggers a fault.



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03 · Film Rewinding / Drive Alarm

Film Unwind Control Working Principle

Here is how the sensor and the slider control the film.

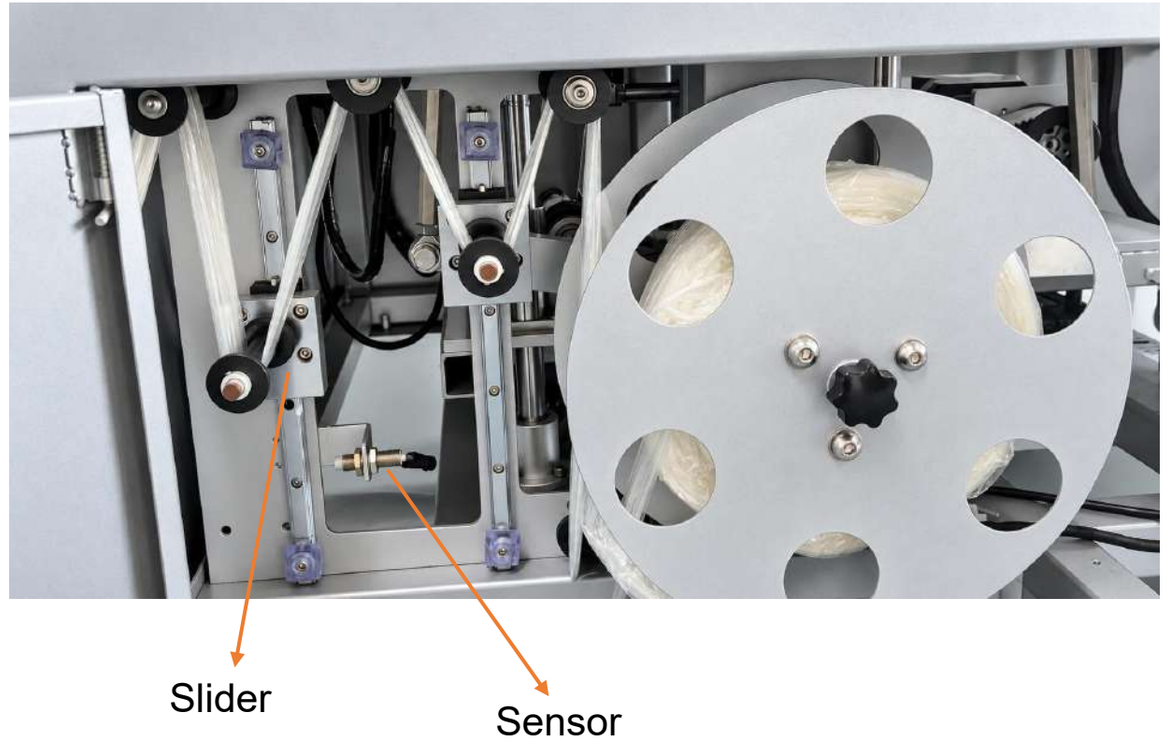
1. The Setup The slider rests on the film like a weight.

2. Normal Operation The machine pulls the film and makes it loose. Gravity pulls the slider down. The slider drops in front of the sensor. The sensor detects it. It tells the motor to wind the loose film.

3. Auto-Stop The motor winds the film tight. The tight film lifts the slider back up. The slider leaves the sensor's view. The motor stops.

If Sensor remains active when slider is in the upper position, replace the sensor.

4. Film Break Alarm If the film breaks, the slider falls to the bottom. It stays there. The sensor sees it constantly. The motor spins endlessly. The system catches this and triggers the alarm.

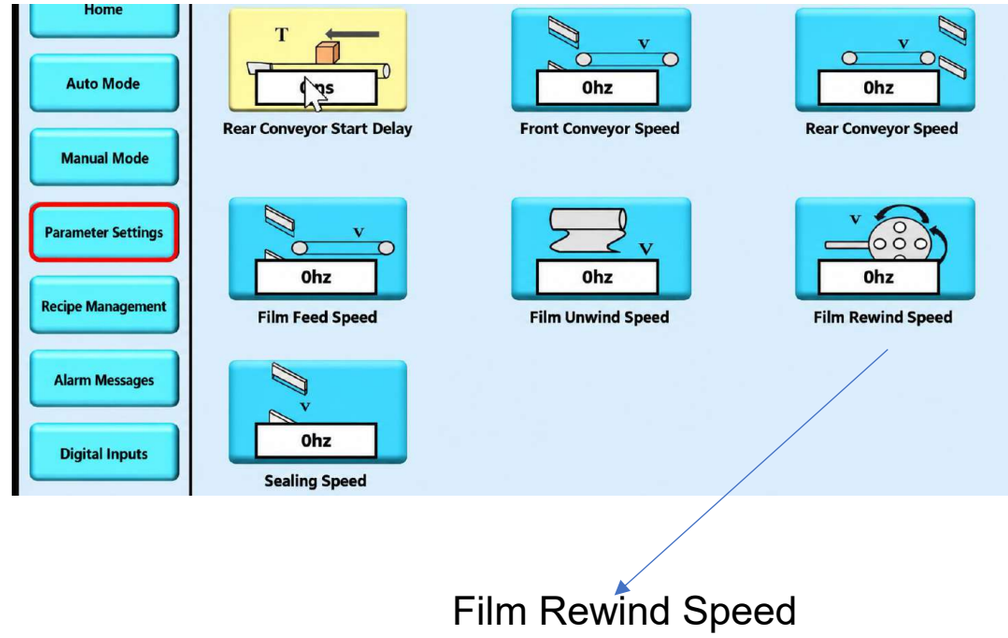


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03 · Film Rewinding / Drive Alarm

1. Film rewinding speed is lower than film-feeding speed.
2. Sensor remains continuously active.
3. Film breakage.
4. Rewinding motor is stalled.

1. Adjust the film rewind speed. If film breaks easily, reduce the rewinding speed.
2. If Sensor remains active when slider is in the upper position, replace the sensor.
3. Film breakage may be related to film quality; fine-tune the rewinding speed accordingly.
4. For motor stall, follow the same drive inspection procedure as the unwinding system.



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04 · Guard Alarms

Working Principle
https://www.youtube.com/watch?v=L8tPpYS7MRw

Possible causes

1. Proximity sensor signal is lost.
2. Safety guard is not detected by the sensor.

Corrective actions

1. Trigger the proximity sensor with a metal object and check the guard door signal on the PLC I/O screen.
2. If there is no output, check for broken wires. If wiring is normal, replace the proximity sensor.
3. Adjust the sensor closer to the safety guard.



Proximity sensor

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04 · Waste Film Alarms

1. Function Description

A proximity sensor is installed below the waste film collection wheel to monitor the roll diameter. When the waste film accumulates and enters the sensor's detection range, the orange indicator light illuminates and the system triggers an alarm. This prevents oversized waste rolls from jamming the machine. Operators must clear the waste film when this alarm occurs.

See the video of this sensor https://www.youtube.com/watch?v=bM2QI5M8vvc

2. Troubleshooting Procedures

If the machine triggers a waste film alarm, inspect the following conditions:

Condition A: Normal Full Load

- **Symptom:** The waste film roll has reached its maximum physical capacity.
- **Solution:** Pause the machine. Remove and clear the waste film roll. Resume operation.

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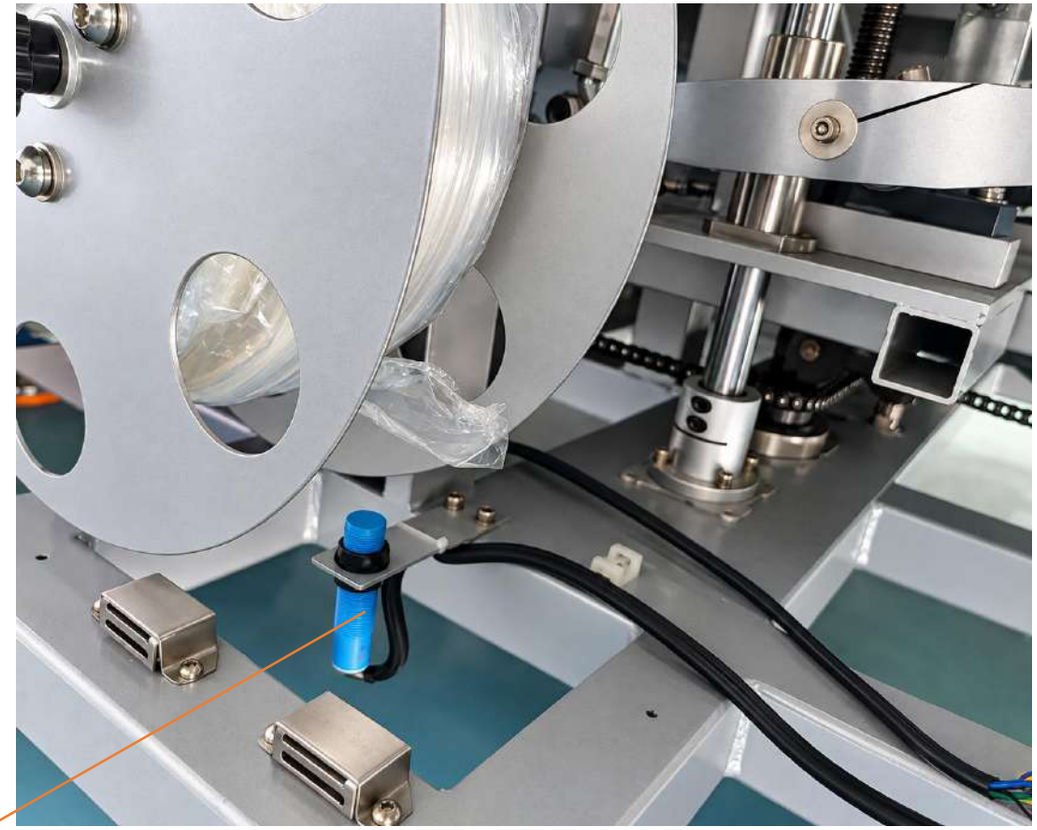
04 · Waste Film Alarms

Condition B: Incorrect Sensor Position (Premature Alarm)

- **Symptom:** The alarm triggers when the waste film roll is barely filled.
- **Solution:** The physical mounting position of the sensor is too high, causing false detection. Loosen the mounting nuts, adjust the sensor vertically downward to increase the clearance distance from the wheel, and retighten.

Condition C: Sensor Failure

- **Symptom:** The orange indicator light remains on without film proximity, or fails to illuminate when the film directly contacts the sensor.
- **Solution:** The proximity sensor is defective. Replace the sensor.



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05 · Sealing Parameter Settings & Alarm Troubleshooting

1.Parameter Definitions

Locate the "Blade Opening" and "Blade Stroke" values on the "Parameter Settings" screen.

A."Blade Opening" defines the open height of the sealing jaw.

B. "Blade Stroke" defines the closing position of the sealing jaw.

2. Alarm Causes

The screen will show a " Sealing Parameter Alarm" if settings are incorrect.

The message states "Sealing Depth Must Not Exceed Jaw Opening".

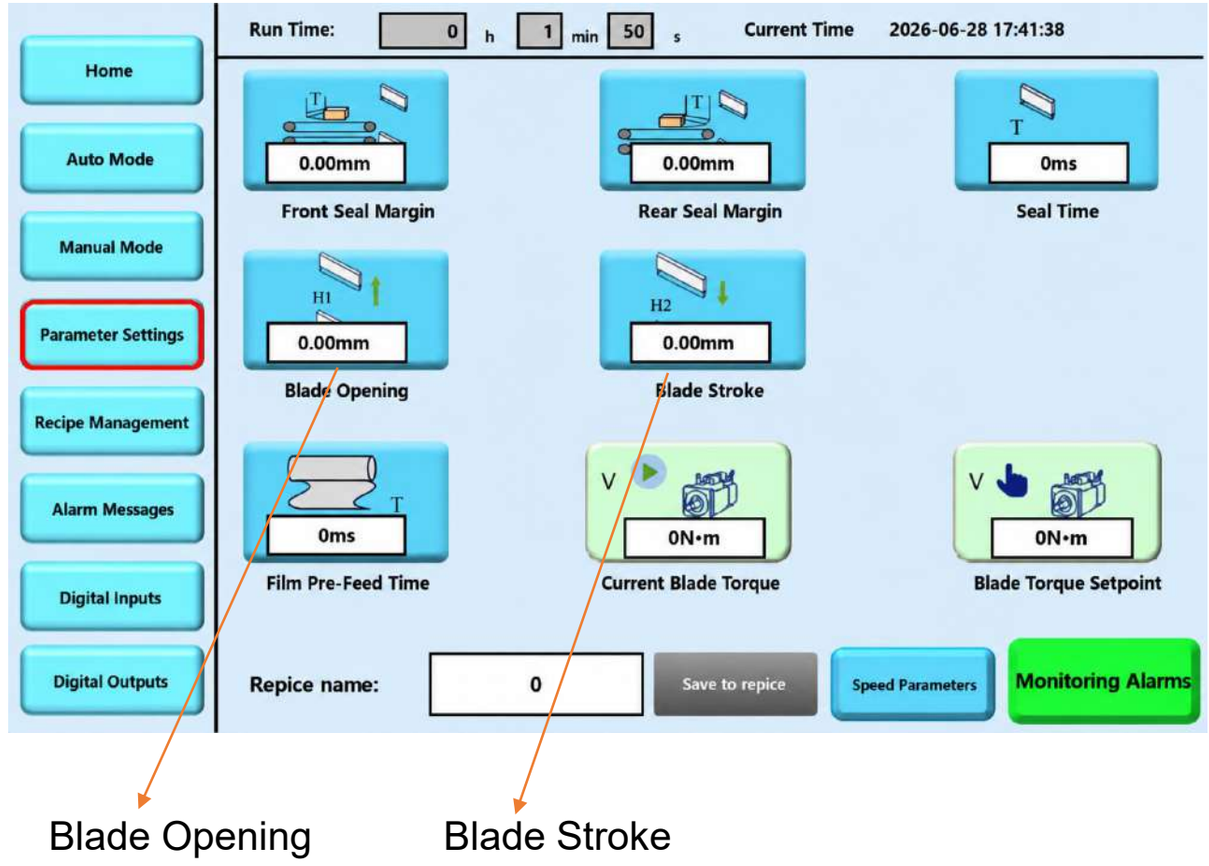
This happens when the commanded closing depth does not remain within the allowed jaw opening range.

3. Setting Rules & Example

The Blade Stroke value must always be larger than the Blade Opening value.

For example, if the Blade Opening is set to 120.

We recommend setting the Blade Stroke to 210.



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06 · Anti-Cut Protection Alarm

1. Possible Causes

The anti-cut alarm (including the Vertical Sensor Anti-Cut Alarm and Anti-Cut Alarm) is typically caused by the following physical interferences:

- **Product Misplacement:** A product is dwelling beneath the sealing blade, or the product has not completely cleared the vertical photoelectric sensor.
- **Trigger Block Activated:** During the sealing cycle, if the Sealing Blade Guard contacts a product, it will be lifted upward, simultaneously driving the internal Trigger Block (anti-cut metal target) up. Once the trigger block enters the detection range of the Proximity Sensor, the control system will immediately halt the downward movement and trigger an alarm before the actual sealing blade touches the product.

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06 · Anti-Cut Protection Alarm

2. Corrective Actions

For troubleshooting, please perform the following adjustments in order:

Step 1: Parameter Adjustments

If a product is dwelling beneath the sealing blade (pushing against the film), increase the **Rear Seal Margin** parameter on the HMI Parameter Settings screen.

If the film feeding speed does not match the conveying speed, adjust the **Film Feed Speed** or **Rear Conveyor Speed** accordingly.

Step 2: Trigger Block Adjustment

If the alarm is overly sensitive, loosen the fastening screw and adjust the vertical position of the **Trigger Block** downward. (Note: A longer sensing distance results in later activation of the protection function.)

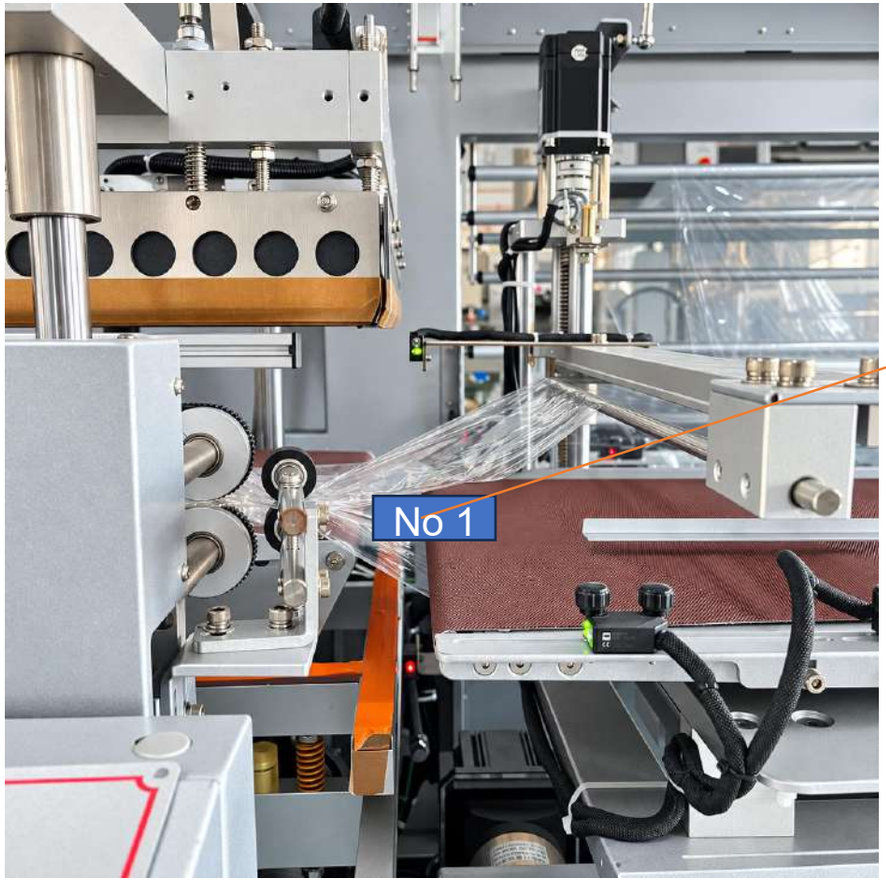
Step 3: Infeed Guide Rail Alignment (Front Rail Adjustment)

During the film pulling process, film tension may cause the product to shift or rotate slightly (e.g., a tray twisting from 90° to 93°). This rotation increases the product's effective diagonal length, which can block the vertical photoelectric sensor. The system will prompt that the product is still at the vertical sensor, preventing the blade from cutting.

Solution: The infeed conveyor guide rail must be aligned with the edge of the rear conveyor. For optimal stability, it is highly recommended to adjust the infeed guide rail to be slightly tighter—approximately **3 to 5 mm narrower** than the rear conveyor edge. This restricts unwanted product movement during film feeding and ensures smooth passage through the sensor zone.

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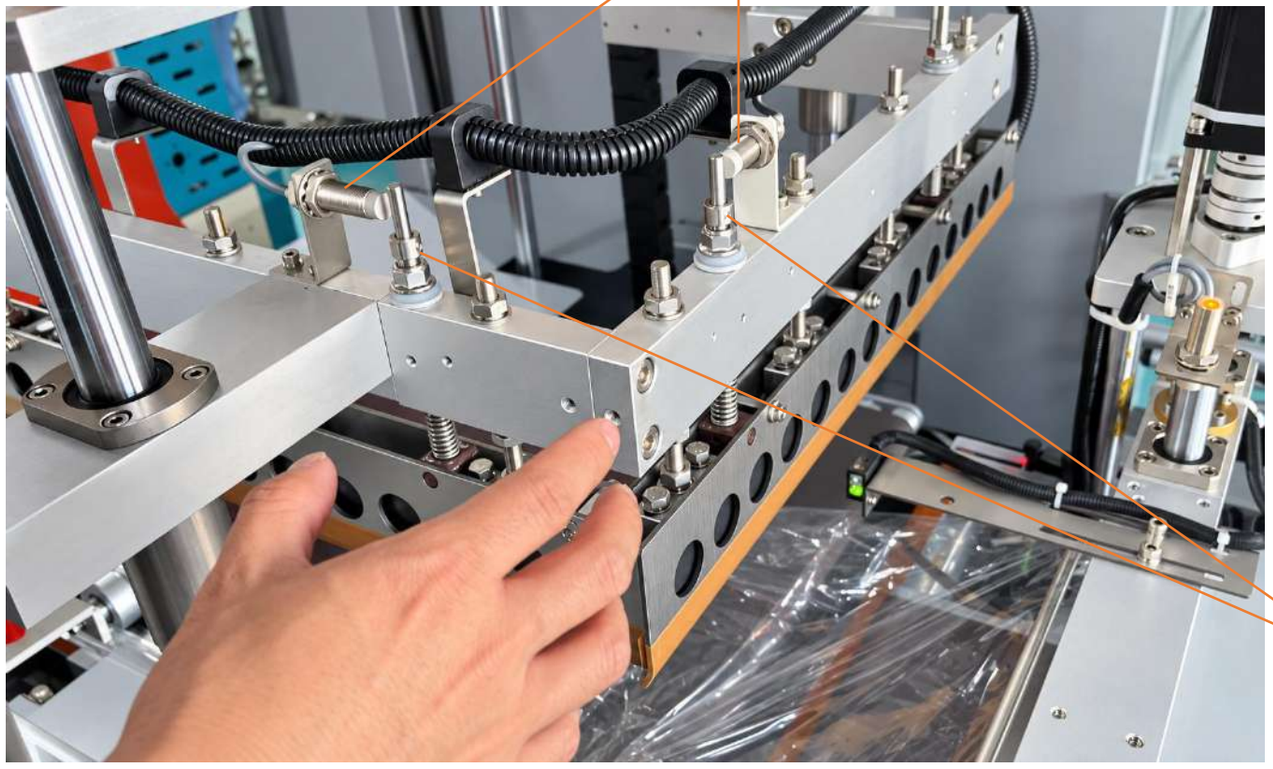
Reason 1, Product not pass the Detection Zone No. 1

A product is dwelling beneath the sealing blade/

The product has not completely cleared the vertical photoelectric sensor

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06 · Anti-Cut Protection Alarm



Reason 2, Trigger Block Activated:
When the sealing cycle begins, if the Sealing Blade Guard presses against a product, it moves upward and lifts the internal Trigger Block.

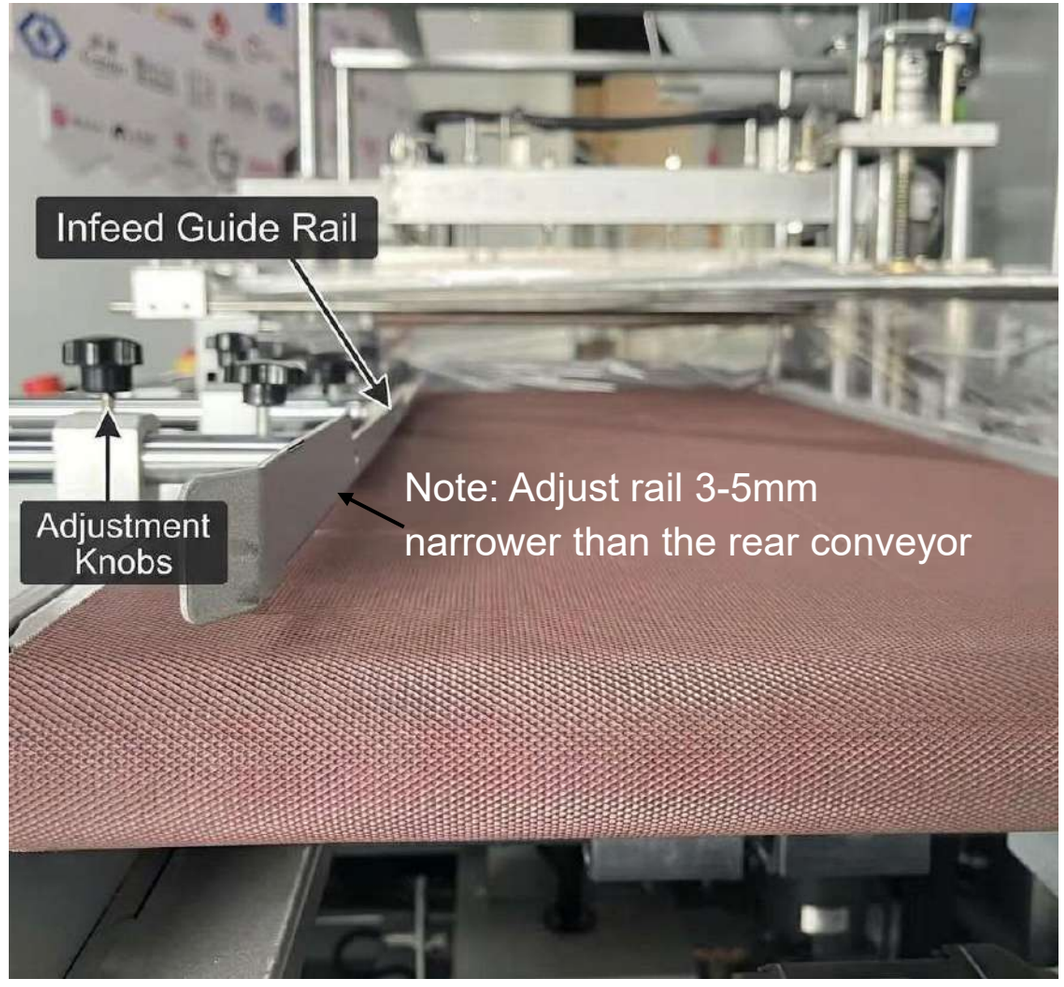
Once this block enters the Proximity Sensor's sensing range, the system instantly stops the machine and triggers an alarm before the blade can damage the product.

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07 · Anti-Cut Protection Alarm

Infeed Guide Rail Adjustment

Film tension can shift the product.
Use the knobs to move the guide rail inward.
Set it 3-5 mm narrower than the rear conveyor.
This keeps the product straight.
It prevents the product from blocking the vertical sensor.
This stops false anti-cut alarms.



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08 · Servo Drive Alarm

1. Cause

The motor is stalled.

The encoder cable or power cable is loose.

2. Troubleshooting & Solutions

Mechanical Check (Power OFF the machine and manually push the mechanisms):

If the movement feels stiff: Check Gearbox No. 3, chains, and gears for jams.

If the movement is free-spinning: The mechanical connection is lost.

Check the gear keys and set screws.

Check the gearbox clamping screws for looseness.

Wiring Check:

Check Cable No. 1 (Encoder Cable) and Cable No. 2 (Power Cable).

Ensure both cables are securely connected at the drive end and the motor end.

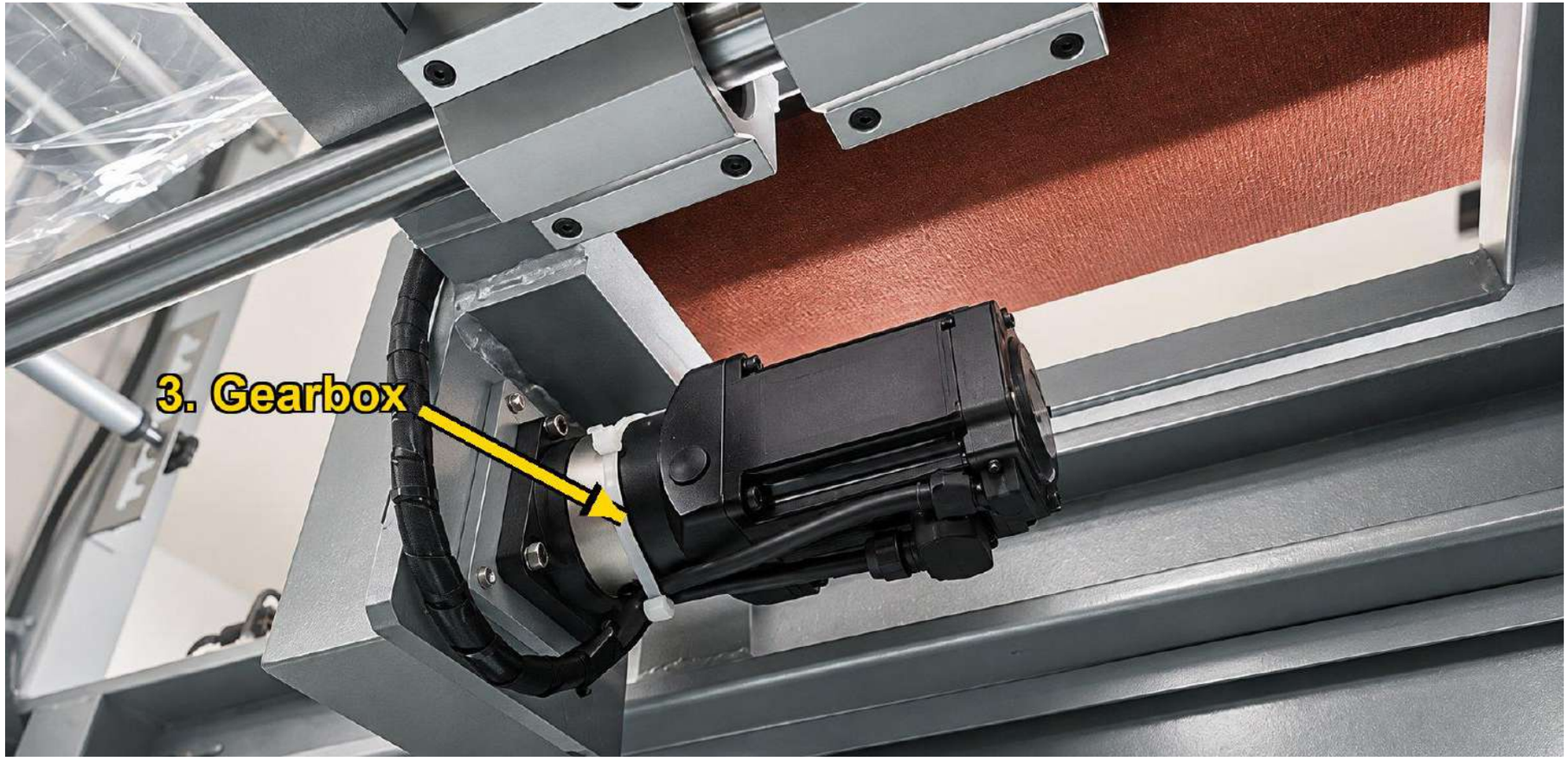
Final Solution:

If the alarm persists after completing all mechanical and wiring checks, the drive is damaged. Replace the servo drive.



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08 · Servo Drive Alarm



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