

Troubleshooting Tunnel and Sealer Conveyors.

Conveyors stop working because:

1. Mechanical failure.
2. Motor failure.
3. Motor Control failure or malfunction.

MECHANICAL CAUSES:

Conveyor binding due to lack of lubrication, worn bushings or bearings, conveyor chains loose or worn, rollers jammed, conveyor jam due to shrink film debris or other mechanical failure.

HOW TO CHECK THE CONVEYOR:

Do a visual inspection first. Check for broken or loose parts. After removing the conveyor motor, (or drive chain) grab one of the rollers inside the tunnel and pull. The conveyor should move easy without considerable force. Do this several times to ensure there are no restrictions. If the conveyor does not move easy, there is a problem as mentioned above.

DC CONVEYOR MOTORS:

DC conveyor motors do wear and will eventually fail. Routine maintenance will extend the life of each DC motor however. Motor maintenance should include the following:

1. Inspecting and replacing the brushes if needed.
2. Removing carbon dust.
3. Checking oil level in gear housings, lubricating bushings where needed.

Under no circumstance **defeat or increase the fuse value** protecting the Motor and the Speed Control Board. Use proper fuse as specified in the manual or at the front control panel. In most cases, a **2 Amps fast blow** fuse is optimal for protecting the motor and motor control electronics.

Never unplug or plug in the conveyor motor while the machine is powered, a short circuit may occur.

Machine must be completely turned off at the main switch/breaker.

If the conveyor fuse blows repeatedly, first unplug the motor and replace the fuse. If the fuse is still blowing, then the motor-control and the drive motor are bad and need to be replaced or repaired.

MOTOR-CONTROL BOARDS:

Motor controls do not wear-out and should operate trouble-free unless the following occurs:

1. Motor failure and over-fusing.
2. Mechanical failure and over-fusing.
3. Control-Board failure (rare). Main Control-Board malfunctions may also cause the conveyor to stop running.

Troubleshooting the 3830 PWM Speed Ctrl. Board

That type of Speed Control Board features an Electronic Shear Pin, **ESP™**. (overload protection) It protects the conveyor belt, conveyor motor, speed control PC-board and other components against damage in case of a conveyor malfunction. If a problem occurs, **ESP™** will engage and disconnect the power to the conveyor motor and the tunnel heaters.

If the conveyor stops running repeatedly, a mechanical problem exists. Read "How to Check a Conveyor" above.

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Shrink Packaging Equipment

The sensitivity of the **ESP_{TM}** varies greatly with the conveyor speed.

At lower speed it is less sensitive. In some rare cases the electronic sheer pin protection should be increased or decreased to get the optimal setting.

Locate the P5 CL (for Current Limit) Trimmer on the Speed Ctrl. PCB and turn Clock Wise for less or Counter Clock Wise for more sensitivity. Do not set the trimmer fully CW, this will eliminate the **ESP_{TM}** protection.

Under no circumstances defeat or increase the fuse value protecting the Motor and the Speed Ctrl. PCB.

Use a 2 Amp fast blow fuse. If the fuse blows repeatedly, the motor or Speed Ctrl. Board may have failed.

Scheduled conveyor and conveyor motor maintenance will prolong machine up time.

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