



## **Extrusion+ Audit with Complimentary Online Support Session**

Eukalin is offering to Webinar attendees its Extrusion+ audit template (including a completed sample template) and complimentary online support session to assist in evaluating the current mechanical, electrical and control configuration of your side seam extrusion systems.

The Extrusion+ audit was developed in conjunction with personnel who have in-depth knowledge of Valco, ITW Dynatec and Baumer hhs equipment. A representative from EUKALIN will reach out to within the next week and if interested will schedule your complimentary online session with the appropriate extrusion system expert to review and explain the Extrusion+ Audit process in more detail and answer questions.

We are confident this online support Extrusion+ process and online session will be valuable in improving the side seam extrusion process at your facility.

The following 5 pages are an example of an audit template that Eukalin has recently performed. The final three pages are the audit template for you to use evaluate your extrusion systems in conjunction with your Eukalin representative.

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## Extrusion+ Audit for Dynatec/HHS Systems

Dynatec/HHS Technician Performing Audit			
Envelope Company:		Date:	

### Machine Data

Machine Type:	W+D 627RC	Serial Number:		Name:	
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### Adhesive System Configuration

Pump Type:	1:1 Diaphragm	Manufacturer:	ARO	Model #:	666053-3EB
Filter:	Valco	Regulator:	Valco 1:1	Transducer:	SMC ITV-2030
Ops Side Gun:	DynaCold-F (filter removed?)	Nozzle Type:	6mm Contact	Orifice Size	0.30mm
		Gun Serial #:	716533.J12	Repair Kit SN:	54134.J19
Drive Side Gun:	DynaCold-F (filter removed?)	Nozzle Type:	6mm Contact	Orifice Size:	0.30mm
		Gun Serial #:	717842.J17	Repair Kit SN:	51235.K17

### Adhesive System Observations

Pump/Tank:	The plant is on a centralized adhesive supply system. Each machine has a stand-alone pump for system maintenance. This pump was used to trail the Eukalin adhesive.
Filter:	The filter is changed each week. The dirty filter is cleaned by burning off the organic matter using a propane torch. <u>These filters should not be getting so dirty as to require burning after only a week's use.</u> Thorough cleaning should be possible under running water and a toothbrush or similar nylon brush to remove any minor solids on the interior filter screen. Significant solids build-up inside the filter after only a week should be a topic of discussion with your adhesive supply representative.
Regulator:	The fluid regulator is on the operator side of the machine. This causes the area around the gun bracket to be very cluttered and tempts the Adjustor to modify the glue pressure manually, via the "T" handle, instead of performing this function via the pattern control pressure menu.
Adhesive Guns:	There was a build-up of a resin film inside the glue applicator body. A nylon bore brush was used to remove this film. The inside of the glue applicator should always be inspected and cleaned, as necessary, each time the glue system is flushed.

Hoses/Tubing:	The fluid delivery is thoughtfully done, though a bit congested. The addition of a fluid pressure gauge and ball valve shut-offs at both the fluid manifold and guns are very handy items!
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**Pattern Control Data**

Model/Channels:	DY2008/4-Channel	Software: Not Observed
Cables Condition:	Both drive cable outer jackets are dry and should be replaced. Operator side drive cable is loose in connector.	
Other:	The DY2008 Pattern Control has a grounding stud but is not connected to machine ground.	

**Pattern Control Settings**

	Before		After	
Offset, Ops Gun:	178mm		192mm	
Offset, Drive Gun:	178mm		192mm	
Offset, Other Gun:				
	Start	Stop	Start	Stop
Pattern, Ops Gun:	25mm	97mm	10mm	98mm
Pattern, Drive Gun:	25mm	90mm	10mm	98mm
Pattern, Other Gun:				
	On	Off	On	Off
Comp, Ops Gun:	10mm	25mm	8mm	12mm
Comp, Drive Gun:	10mm	25mm	8mm	14mm
Comp, Other Gun:				
	Min	Max	Min	Max
Adhesive Pressure:	74%	75%	25%	70%
Pressure/Speed (M/min):	95 (start) 80 (stop)	360M/min	50M/min	450M/min

**Intelligent Designs**

Extrusion Solutions for the Envelope Industry

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Other:	Pattern control drive outputs #3 & #4 are being used. I assume #1 and #2 are damaged. This leaves no back-up drive outputs, should something happen to #3 or #4.
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### Technician's Notes/Observations:

The Minimum Pressure setting was programmed to 74%, Maximum to 75%, which means the same adhesive pressure was used, regardless of machine speed. This situation creates potential problems at machine start since excessive glue is being applied to envelopes at these lower speeds. This glue can squeeze out and track throughout the machine, even if the initial envelopes are thrown away. Properly adjusted glue pressures are particularly important when running contact nozzles.

The Offset and Compensation values were incorrectly programmed, requiring the glue pattern values to be "fudged" to locate the adhesive in the proper position on the envelope.

The Offset value should never change, if the proximity sensor flag, that initiates the glue pattern, is not moved (i.e. rotated).

The compensation values may change over time due to reasons, such as changes in gun height, adhesive characteristics, armature spring aging and gun coil aging. The main issue with incorrect compensations is the pattern must be adjusted for a specific machine run speed. Changing this speed will result in a pattern shift that can cause significant quality issues if not immediately corrected by modification of the glue pattern settings in the pattern control.

Contact nozzle height is typically adjusted to 5 paper thicknesses above the machine bed plate. The product guides on this machine are not appropriate for use with contact nozzles. It is extremely difficult to adjust the nozzles low enough due to the product guide design.



Bore brush used to clean inside of the glue applicator.

### Intelligent Designs

Extrusion Solutions for the Envelope Industry

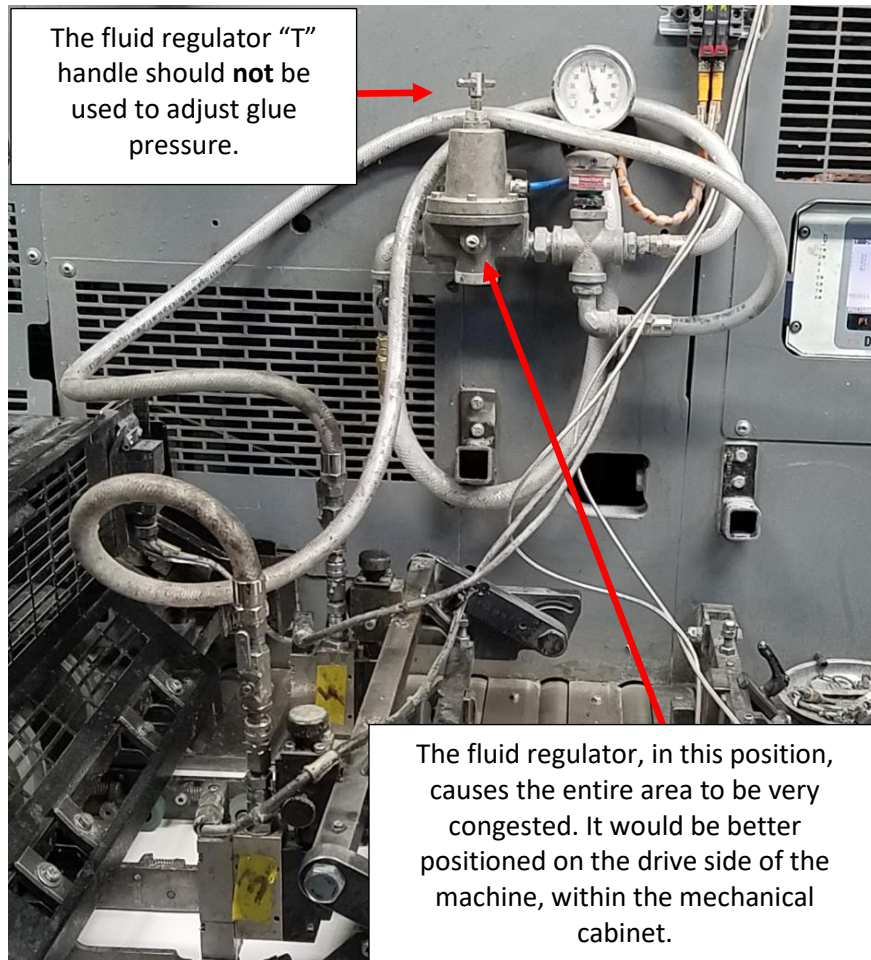
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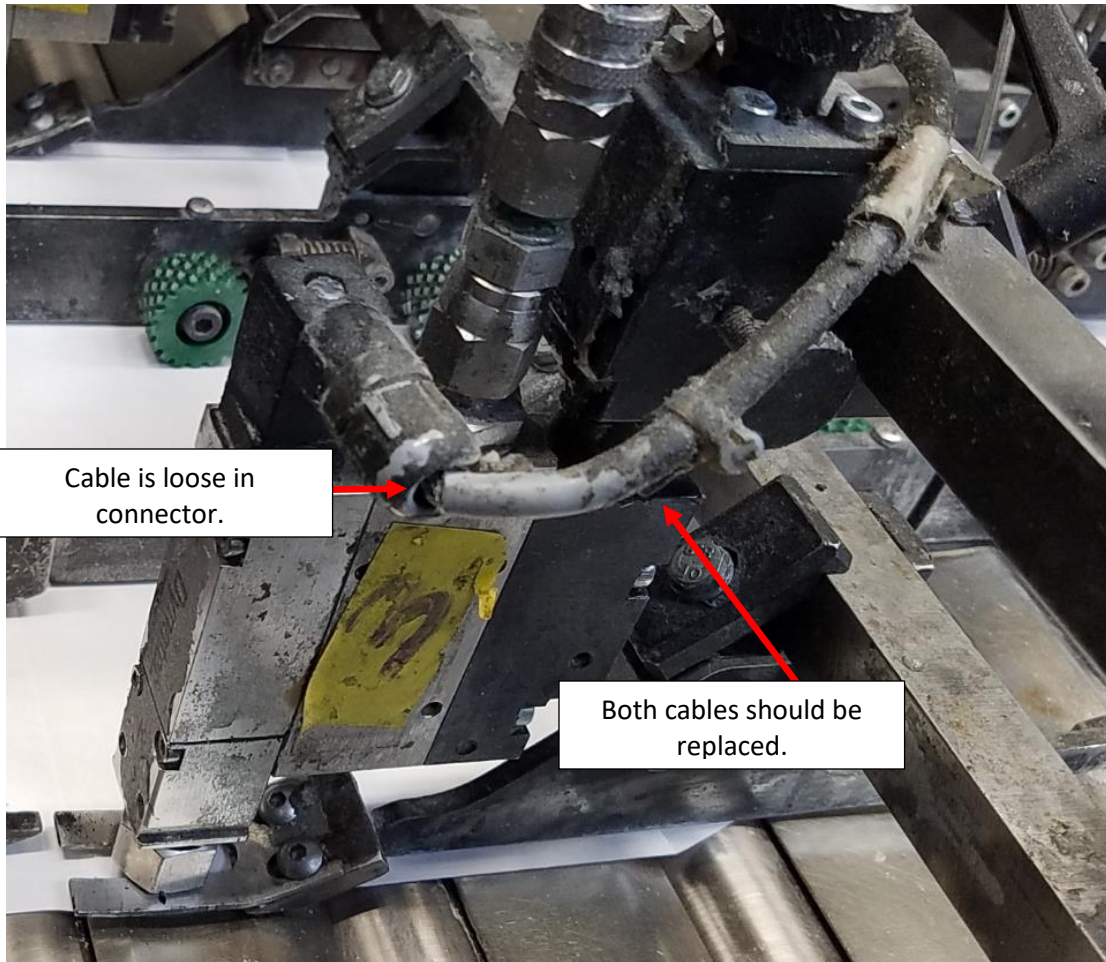
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Dynatec/HHS Technician Performing Audit	
Date	

Envelope Company:		Date:	
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### Customer Responsibilities in Preparation for the Inspection Visit

- **Provide number of machines to be inspected.**
- **Adhesive System Information:** (required for each machine to be inspected)
  - Pattern control model?
  - Adhesive applicator model?
  - How many adhesive applicators on the machine?
  - Type nozzle on each applicator? (i.e. contact or non-contact)
  - Nozzle orifice size?
  - Consolidate a list of questions/issues concerning each machine from maintenance and/or operational personnel.
- **Tools & Supplies:** The inspector will not carry tools to the work site. A list of the typical items to be supplied for inspector's use is provided below.
  - New or clean adhesive filter screen for each machine.
  - 2 clean, 5-gallon buckets
  - 2 clean ½ or 1-gallon plastic containers to place under adhesive applicators when flushing the system.
  - Easy access to deep sink & fresh, hot water.
  - Typical tools for system maintenance, such as:
    - 10mm, 13mm, 17mm & 19mm wrenches
    - Metric hex (Allen) wrench set, complete
    - Flat blade and cross point (Phillips) screw drivers.
    - Clean rags
    - Note: This may not be an exhaustive list, depending upon the specifics of the equipment

**Personnel:** It is suggested that maintenance and/or operational personnel be present during the inspections to gain knowledge of the adhesive systems.

**Machine Data**

Machine Type:		Serial Number:		Name:	
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**Adhesive System Configuration**

Pump Type:		Manufacturer:		Model #:	
Pressure Tank:		Manufacturer:		Model #:	
Filter:		Regulator:		Transducer:	
Ops Side Gun:		Nozzle Type:		Orifice Size	
		Gun Serial #:		Repair Kit SN:	
Drive Side Gun:		Nozzle Type:		Orifice Size:	
		Gun Serial #:		Repair Kit SN:	
Other Gun:		Nozzle Type:		Orifice Size:	
		Gun Serial #:		Repair Kit SN:	

**Adhesive System Observations**

Pump/Tank:	
Filter:	
Regulator:	
Adhesive Guns:	
Hoses/Tubing:	
Other:	

**Pattern Control Data**

Model/Channels:		Software:	
Cables Condition:			
Other:			

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**Pattern Control Settings**

	Before		After	
Offset, Ops Gun:				
Offset, Drive Gun:				
Offset, Other Gun:				
	Start	Stop	Start	Stop
Pattern, Ops Gun:				
Pattern, Drive Gun:				
Pattern, Other Gun:				
	On	Off	On	Off
Comp, Ops Gun:				
Comp, Drive Gun:				
Comp, Other Gun:				
	Min	Max	Min	Max
Adhesive Pressure:				
Pressure/Speed:				
Other:				

Technician's Notes/Observations:

Technician's Signature/Date:

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Company Rep's Signature/Date:

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