



**Suggested Initial & Preventative Maintenance**

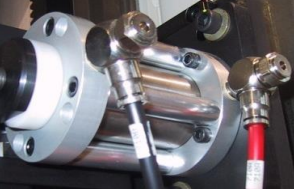



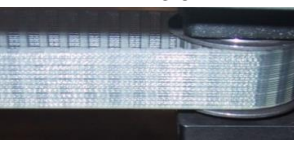



A maintenance schedule is highly subjective and can vary considerably, due to the variation in machine design and the variety of manufacturing environments. It is the customers' responsibility to adjust any recommendations to properly maintain operations in your facility. Please place this equipment on a schedule for regular maintenance checks similar to other EAC equipment.

PROCESS	NOTES
<b>1. Before Installation or Setup:</b>	1.1- Clean conveyor belts and plastic surfaces with lukewarm cleaning solution and a soft cloth, dry with a soft cloth.  1.2- Make sure that all bolts are tight & did not loosen during shipment. Make special note of gearbox set-screws.  1.3- All bearings and gearboxes were lubricated prior to shipment and should not require additional lubrication for several months.  1.4- Exposed bearing rails have been treated with an anti-rust agent, prior to shipment.
<b>2. General Instructions:</b>	<p align="center">NOTES</p> 2.1- This is a general guide for preventative maintenance. As such, there will likely be items or components that are on an 'as applicable' basis.  2.2- Do not over-lubricate. Always clean up spills, drips & excess lubricant.  2.3- Do not lubricate slides or plastic slide elements, clean only.  2.4- Keep all equipment and associated tooling, clean.  2.5- Chain tension should be checked regularly during the first month of operation.  2.6- For proper operation of your delivery pump system, read the delivery system manuals.  2.7- For proper care of sealant, read all associated documents related to the storage, testing, and proper use of sealant being used.



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<p><b>3. Component Specific Guide:</b></p>	<p>3.1</p> 	<p>3.2</p> 	<p>3.1- <u>Bimba Air Cylinders</u>- Wipe any contaminants such as dust or silicone from rod surface. 3.2- <u>Bimba (TRD) Air Cylinders</u>- Wipe any contaminants such as dust or silicone from rod surface 3.3- <u>Fabco Air Cylinders</u>- Wipe any contaminants such as dust or silicone from rod surface 3.4- <u>Worm Gear Drive</u>- It is important that the proper type of oil be used since many oils are not suitable for lubrication of gears. (SEE NOTE) 3.5- <u>Timing Belt</u>- Check for dust, silicone build up. Check for tension, wear, abrasions. Replace per manufacture's instructions and recommendations.</p>	
	<p>3.3</p> 	<p>3.4 (SEE NOTE)</p> 		
	<p>3.4-NOTE: The lubricant must remain free from oxidation and contamination by water or debris, since only a very thin film of oil stands between operation and failure. To assure long service life, the reducer should be drained (preferably while warm) and refilled to the proper level with recommended gear oil. Oil changes are required every 6 months or 5000 hours or 250,000 units</p>			<p>3.6- <u>Chain Drive</u>- Check for dust, silicone build up. Check for tension, wear, abrasions. Replace per manufacture's instructions and recommendations. 3.7- <u>General Bearing</u>- Bearings are factory lubricated and sealed.</p>
	<p>3.5</p> 	<p>3.6</p> 		
	<p>3.7</p> 	<p>3.8</p> 	<p>3.8- <u>THK Bearing Blocks and Rails</u>- Pay special attention to Blocks and Rails. Wipe any contaminants such as dust or silicone from rail surfaces daily at minimum, between shifts is preferred. NOTE: LM blocks with seals are filled with lithium soap based No. 2 grease. Bearing blocks must be greased every 20,000 units. Neglecting to grease at this interval may lead to premature failure.</p>	



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<p><b>3. Component Specific Guide, Continued:</b></p>	<p>3.9</p> 	<p>3.10.</p> 	<p>3.9- <u>Dodge Setscrew Ball Bearings</u>- The bearing has been greased at the factory and is ready to run. Relubrication is required every 216,000 units.</p>
	<p>3.11</p> 	<p>3.12</p> 	<p>3.10- <u>Planetary Gearhead</u>- Units are sealed and permanently lubricated to provide long maintenance free life.</p>
	<p>3.13</p> 	<p>3.14</p> 	<p>3.11- <u>Gear Rack and Spur Gear</u>-Wipe any contaminants such as dust or silicone from rack surfaces daily at minimum, between shifts is preferred. Check gear and rack for alignment and proper adjustment. Look for un-even tooth wear which can be a sign of improper alignment or installation. Due to environmental conditions it is not recommended to oil/grease the rack due to build up of airborne contaminants. See manufacture for any other requirements and recommendations.</p>
	<p>3.16- <u>Rollers</u>- Clean rollers with a clean dry lint free rag. Dampen rag with warm water if they need to be scrubbed.</p> <p>3.17- <u>Converter Belt</u>- Clean with lukewarm water. A mild soap may be used. Dry with a soft cloth. Check for dust, silicone build up. Check for tension, wear, abrasions. Replace belt if wear in belt is at a depth greater than a 1/16".</p>	<p>3.15- <u>Nook Bearing Shafts and Bearings</u>- Lubrication should be applied to shaft up to weekly based on environment. Straight mineral oils are generally the favored lubricant for lubricating these types of roller bearings.</p> <p>3.14- <u>Power Cable Plug</u>- Tighten screw terminals for the plug every twelve months.</p>	<p>3.12- <u>Electric Squirrel-Cage Motor</u>- See appropriate manufacturer instruction manual for installation, operation, and maintenance of equipment.</p> <p>3.13- <u>Bost-Bronz Sleeve Bearing</u>- Wear life cannot be applied to Bost-Bronz (oil impregnated) or Bear-n-bronz (SAE CA932/660) bearings. Under ideal conditions the shaft rides on a film of oil and will give almost infinite life. If this film is disrupted, intimate metal to metal contact results leading to eventual failure. Therefore it is imperative that any contaminants near the bearing be removed as soon as possible.</p>



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<p><b>4. Original Equipment Manufactures Recommendations and/or Specifications</b></p>	<p>Information in this portion is either taken directly from each specific products literature or based on experience. The suggested preventative maintenance or cycle life, as it applies to each product, is subject to variation due to the environment of operation. Please make arrangements accordingly to reduce failure of components. Vendor components are installed on Erdman Automation machinery according to specifications and should not be altered in the field.</p>
<p><b>5. Erdman Automation Corp. Gear Pumps and Valves:</b></p>	<p><u>5.1- EAC fluid meters:</u>For any questions regarding maintenance of the pumps please contact Erdman Automation .</p> <p><u>5.2- EAC valves</u> For any questions regarding maintenance of the pumps please contact Erdman Automation</p>
	<p>3.7 NOTE: This bearing is factory lubricated with a lithium or lithium complex* base grease which is suitable for most applications. However, extra protection is necessary if the bearing is subjected to excessive moisture, dust, corrosive vapor or other harsh environments. In these cases, the bearing should contain as much grease as speed will permit (a full bearing with consequent slight leakage through the seal is the best protection against contaminant entry).</p> <p>For relubrication, select a grease that is compatible with a lithium or lithium complex* grease. Some situations may require a change in lubricating periods as dictated by experience. Generally, a lower quantity of grease at frequent intervals is more effective than a greater quantity at extended lubrication intervals.</p> <p>Successful operation is dependent upon adequate lubrication. Precaution should be taken during handling and recycling grease, oil, or water glycol mixtures.</p>
	<p>Bearings: All other non-specified bearings can either be greased every 20,000-36000 units ( or monthly) or 215,000-225,000 units ( or 6 months).</p>