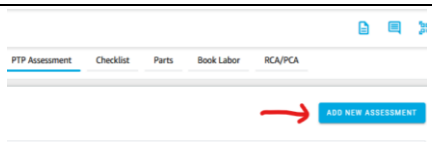
Maintenance Job Planning/Estimating Worksheet

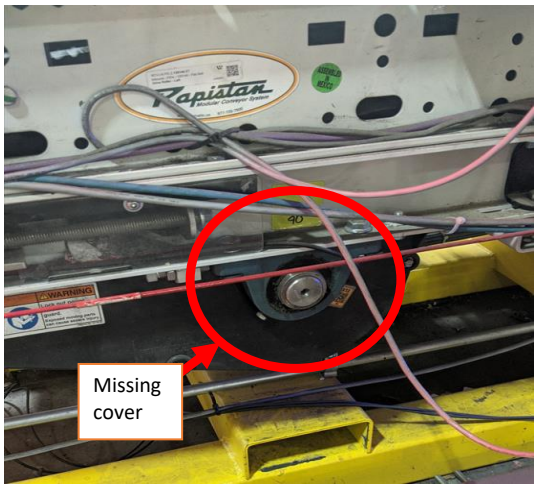
DEMATIC MODEL 9405 13 WEEK PM

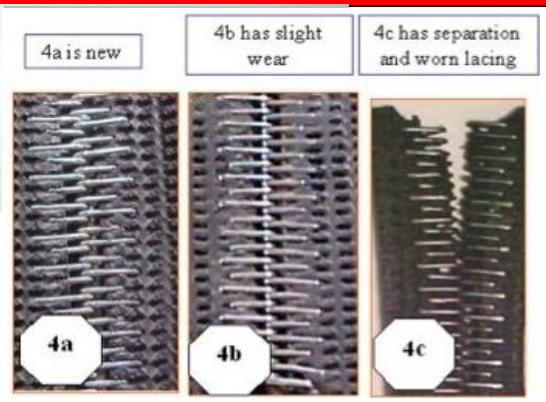
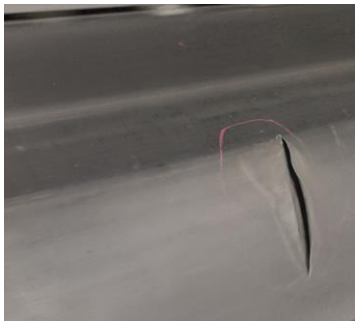
Job Description:	DEMATIC MODEL 9405 13 WEEK PM
Techs Needed:	1 (2 if elevated)
Equip Needed	Hand tools, sonic belt tester or tension gauge
Elapsed Time:	1.5 Hours
Equipment Down:	1 Hour
PPE:	safety shoes, gloves, safety glasses, bump cap, reflective vest, Electrical PPE appropriate for disconnect
Hazards:	Electrical (LOTO), Heights (if elevated)
Helpful Links:	Belt on Slider/ Belt on Roller Manual — This manual includes information on both belt on roller and belt on slider
	Belt on Slider Drawings — There are 19 different drawings that apply to 9405 for belt on slider. You will need to pick the drawings that apply to the sub assembly that you are looking for
	Drive belt tension w/ push meter — Broadcast video for checking drive belt tension with a push meter
	Drive belt tension w/ sonic tester — Broadcast video for checking drive belt tension with a sonic tester

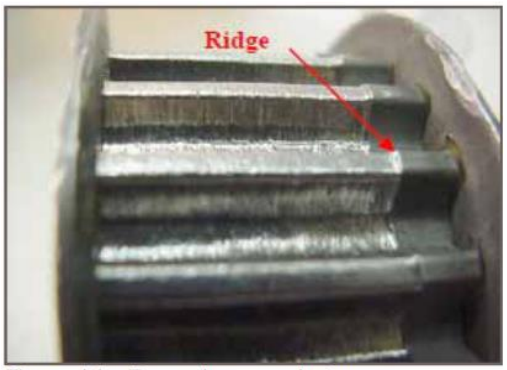
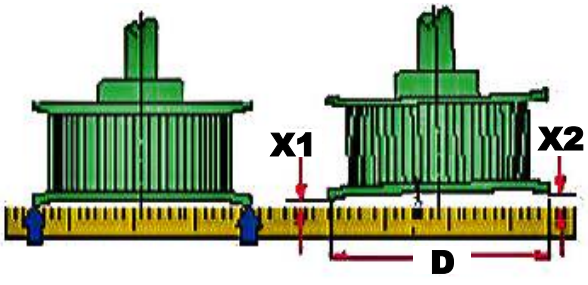
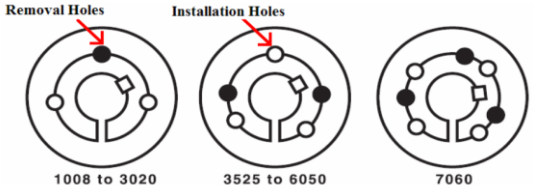
Job Scope

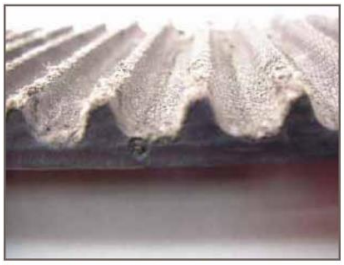
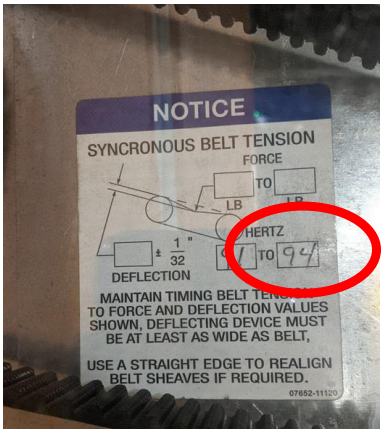
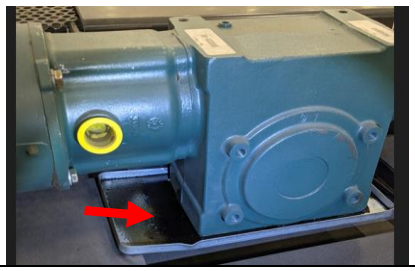
All job plan estimates are based off of work being performed on a ground level conveyor. All elevated or excessively long conveyors will require more techs & time

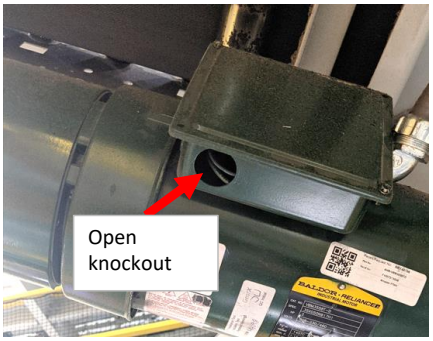
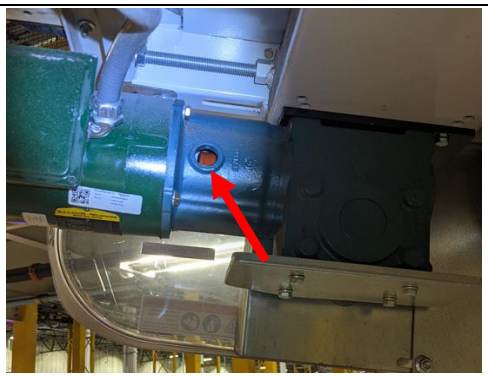
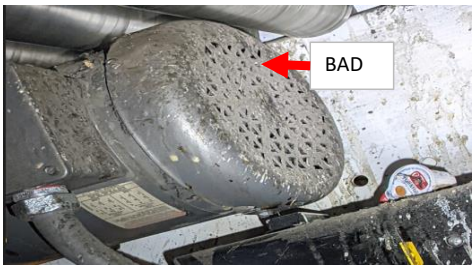
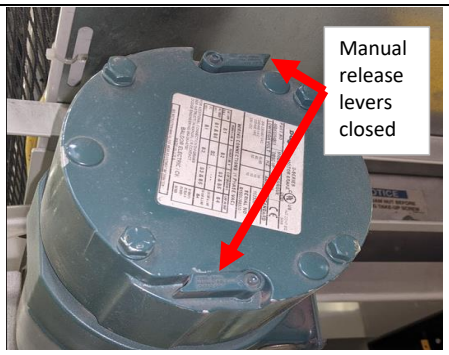
Job Plan Seq.	Task Description	Task Duration	# of Techs	Total Est Labor Hours	Reference Pictures
10	Check for any open or recently repaired WO's in EAM/ ezRME. Check for any open PdM work orders or Waites Wireless/ Monitron alarms	0.03	1	0.03	
20	In ezRME, complete a PTP for all technicians completing this PM and submit any other permits for approval	0.02	1	0.02	
30	Ensure you have all of your PPE (safety shoes, gloves, safety glasses, bump cap, reflective vest, Electrical PPE appropriate for disconnect)	0.02	1	0.02	
40	Always follow OSHA, LOTO, NFPA, FTHA, and Amazon policies before placing hands on equipment	0.02	1	0.02	
Before shutting down and locking out, follow these steps					
50	Inspect guide rails: no signs of tote/package shavings, loose or missing hardware	0.02	1	0.02	
60	If safety netting is present, ensure it is secure the length of conveyor with no rips	0.02	1	0.02	
70	Inspect that all rollers are turning concentric with no up/down or side-to-side movement	0.02	1	0.02	
80	Check belt tracking. Belt should not rub frame. Adjust tracking as needed, ensure to monitor for 15 minutes continuosly and check throughout the day.	0.02	1	0.02	

90	Listen for any unusual noise or excessive vibrations.	0.03	1	0.03	
100	Inspect that drive cover and bearing caps are in place and not damaged	0.02	1	0.02	
110	Inspect all electrical conduit and j-boxes, no visible damage or exposed wires.	0.02	1	0.02	
120	Ensure cables are secured and not at risk of impacting rotating or moving components.	0.02	1	0.02	
130	Ensure all photo eye cables are properly secured as to prevent damage from belts, sheaves etc.	0.03	1	0.03	
140	Inspect emergency pull cord routing to ensure there are no obstructions	0.02	1	0.02	
150	Pull estop cable to ensure that conveyor shuts off properly. Restart conveyor and test every e-stop for the equipment. Ensure to do this check during DTW to not affect operations.	0.05	1	0.05	

160	LOTO Equipment: Complete LOTO Application portion of current LOTO Tracking Form	0.05	1	0.05	
170	Verify LOTO, equipment should not start up	0.02	1	0.02	
LOCKED OUT Belt & Roller inspections					
180	Check belt lacing for excessive wear or separation.	0.01	1	0.01	
190	Visually inspect the belt condition for wear or damage, cracks, frayed spots, cuts or unusual wear patterns.	0.02	1	0.02	 
200	Manually lift up the belt and check slider pans for damage, debris buildup, excessive wear. Check underside of belt for wear	0.01	1	0.01	

210	Inspect snubber/ return rollers to ensure that all fasteners, acorn nuts, and bolts are tight.	0.07	1	0.07	
220	Visually inspect the snub/ return rollers for dents, bending, wear, damage or label/debris buildup. Clean as necessary	0.07	1	0.07	
230	Inspect that the finger guard is less than 1/4" from, but not touching, the belt.	0.03	1	0.03	
240	Remove bearing caps and check bearings for evidence of wear, damage, loose or missing hardware. Ensure seals are in place and undamaged. Check set screws make sure they are in place and tight. Re-install caps after inspection	0.10	1	0.10	
LOCKED OUT Drive Package Inspections					
250	Check the belt sprockets for missing or worn teeth, and damage to outer flanges	0.02	1	0.02	 Figure 14 - Excessive sprocket wear
260	Check the alignment of the drive and driven sprocket by laying a straight edge across both. The Straight edge should touch all 4 edges of the sprocket as shown in the image	0.02	1	0.02	
270	For most taper lock bushing, check that there are two setscrews on sprocket taper lock are in place and tight, replace/tighten as needed. See tightening torques & number of bolt specs in the picture to the right.	0.02	1	0.02	 Figure 1 – Taper–Lock Bushing Installation Diagrams

280	If the taper lock has a keyway present, ensure that the key is tightly in place with no damage or rolling of the keyways	0.02	1	0.02	**Taper-Lock® Bushings** **Bushing Style** / **Bolts: Qty.** / **Bolts: Size** / **Torque Wrench: lb-ft** / **Torque Wrench: lb-in** 1008 — 2 — 1/4-20 x 1/2 — 4.6 — 55 1108 — 2 — 1/4-20 x 1/2 — 4.6 — 55 1210 — 2 — 3/8-16 x 5/8 — 14.6 — 175 1610 — 2 — 3/8-16 x 5/8 — 14.6 — 175 2012 — 2 — 7/16-14 x 7/8 — 23.3 — 280 2517 — 2 — 1/2-13 x 1 — 35.8 — 430 3020 — 2 — 5/8-11 x 1 1/4 — 66.7 — 800 3525 — 3 — 1/2-13 x 1 1/2 — 83.3 — 1000 4030 — 3 — 5/8-11 x 1 3/4 — 141.7 — 1700 4535 — 3 — 3/4-10 x 2 — 204.2 — 2450 5040 — 3 — 7/8-9 x 2 1/4 — 258.3 — 3100 6050 — 3 — 1 1/4-7 x 3 1/2 — 651.7 — 7820 7060 — 4 — 1 1/4-7 x 3 1/2 — 651.7 — 7820
290	Inspect the drive belt for damage, missing teeth, or fraying. Replace as needed	0.02	1	0.02	 Figure 9 – Excessive tooth wear
300	Check the belt tension of the drive belt using a sonic tester or push tester. Reference the synchronous belt tension sticker on the drive unit or consult with the maintenance manual for proper tension.	0.08	1	0.08	
310	Inspect for gearbox for oil leaks. There should be no oil at shaft seals, bottom of gear box, or drip pan.	0.02	1	0.02	
320	Clean the drip pan of oil, dust, or debris	0.02	1	0.02	

330	Check both the motor & gearbox for damage or missing or loose covers.	0.02	1	0.02	
340	Check that the motor/ gearbox mounting hardware is in place and tight.	0.02	1	0.02	
350	If possible, remove the coupling plug and inspect the coupling. Ensure that there is still tight contact between the coupling halves and the spider and that the set screws are tight	0.05	1	0.05	
360	Clean motor fan. Use vacuum or canned air. There should be no visible dust or debris after cleaning	0.03	1	0.03	
370	If brake is present, ensure that mounting bolts are tight and the manual release levers are closed	0.02	1	0.02	
380	Vacuum out the drive belly pan, removing all dirt and debris.	0.05	1	0.05	
390	After inspection, make sure that all motor/ gearbox guards are in place and that they are tight, secure, and with no holes or damage	0.08	1	0.08	

LOCKED OUT transition belt drive (if present)					
400	Remove the cover for the transition drive belt	0.03	1	0.03	
410	Check the belt sprockets for missing or worn teeth, and damage to outer flanges	0.02	1	0.02	Reference picture in the drive package section
420	Check the alignment of the drive and driven sprocket by laying a straight edge across both. The Straight edge should touch all 4 edges of the sprocket as shown in the image	0.02	1	0.02	Reference picture in the drive package section
430	On both sprockets, check that there are two setscrews on sprocket taper lock are in place and tight, replace/tighten as needed.	0.02	1	0.02	Reference picture in the drive package section
440	If the taper lock has a keyway present, ensure that the key is tightly in place with no damage or rolling of the keyways	0.02	1	0.02	Reference picture in the drive package section
450	Check the belt tension of the drive belt using a push tester. The correct belt tension is a deflection of 1/8" (3 mm) with a force of 2 – 3 lb(0.9 – 1.4 kg) applied at the midspan of the cog belt.	0.05	1	0.05	Reference manual PG 105 for more information
460	Re-install the cover for the transition dive belt	0.03	1	0.03	
Closing					
470	Wipe down all surfaces: no visible dust, debris, fingerprints or lubricants Ensure all tools used are cleared and removed from	0.08	1	0.08	
480	Reverse Lockout: Complete LOTO Removal portion of current LOTO Tracking Form	0.03	1	0.03	
490	Conduct startup and test with normal production; no unusual noises or vibrations	0.02	1	0.02	
500	Close out PM work order and ensure that all follow-ups found have been created	0.08	1	0.08	
Total Job Plan Duration:		**1.63**	**Total Backlog Labor Hours:**		**1.63**

Safety Requirements								
Permits:		Confined Space Entry	NO	Hot Work	NO	LOTO	YES	
PPE:	safety shoes, gloves, safety glasses, bump cap, reflective vest, Electrical PPE appropriate for disconnect							

Additional Comments: All estimates are only that, estimates. Time may be adjusted based on access, ease of entry, elevated work, number of guards & belly pans, etc., etc. The estimates are only meant to be a reference

Special Tools Needed: Sonic belt tester-Sequence #300
Belt tension push tester- Sequence #450