



Maintenance Management Order

SUBJECT: Preventive Maintenance (PM) Servicing Guidelines for
Lockheed Martin (LM) Tray Management System (TMS) -
Tray Transport Powered Belt (TT) - ECA Belt Conveyor

DATE: August 2, 2010

NO: MMO-075-10

TO: All LM TMS Sites

FILE CODE: TM05

rorn:mm09027ad

This Maintenance Management Order (MMO) provides Preventive Maintenance Guidelines for the Lockheed Martin (LM) Tray Management System (TMS) - Tray Transport Powered Belt (TT) - ECA Belt Conveyor.

The workhours represented in this MMO reflect the maximum workhours required to maintain the equipment. Given local conditions, management may modify task frequencies.

Maintenance Managers are to use these preventive maintenance guidelines when preparing the route sheets for local maintenance personnel. It is the responsibility of each Maintenance Manager to ensure all WARNINGS, CAUTIONS, and NOTES are included with each applicable task as part of the preparation of any local route sheets.

WARNING

Various products requiring Material Safety Data Sheets (MSDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current MSDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current MSDS be requested. Refer to MSDS for appropriate personal protective equipment.

WARNING

The use of compressed or blown air is prohibited. An alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp rag, lint-free cloth, or brush must be used in place of compressed or blown air.

For questions or comments concerning this bulletin contact the MTSC HelpDesk, either online at **MTSC>HELPDESK>Create/Update Tickets** or call (800) 366-4123.



Robert E. Albert
Manager
Maintenance Technical Support Center
Maintenance Policies and Programs

Attachments:

1. Summary Workload Estimate
2. LM TMS TT ECA Belt Conveyor: Master Checklist: 03-TT-GA-001-M: Weekly
3. LM TMS TT ECA Belt Conveyor: Master Checklist: 03-TT-GA-002-M: Quarterly

ATTACHMENT 1

SUMMARY

WORKLOAD ESTIMATE

FOR

LM TMS TT ECA BELT CONVEYOR

**SUMMARY
WORKLOAD ESTIMATE**

Days	Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
5 Day	22.67	6.80	29.47	2.95	32.41
6 day	22.67	6.80	29.47	2.95	32.41
7 day	22.67	6.80	29.47	2.95	32.41

NOTES

*Repair estimates based on 30% of servicing.

**Based on 10% of total servicing and repair.

ATTACHMENT 2

LM TMS TT ECA BELT CONVEYOR

MASTER CHECKLIST

03-TT-GA-001-M

WEEKLY

Time Total: 25 Minutes

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	T	T					G	A	0	0	1	M
Equipment Nomenclature LM TMS TT		Equipment Model ECA Belt Conveyor					Bulletin Filename MM09027AD			Occurrence Weekly				

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.

SAFETY STATEMENT	1.	COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.	2	All			
		THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.					
POWER DOWN	2.	Power down and lockout power as prescribed by the current local lockout/restore procedures.	1	9			
PULLEY CHECK	3.	Check end pulleys, snub and take-up pulleys. Verify the pulley shell is centered within the conveyor frame. If the pulley is not centered, realign and retighten the hardware attaching the shaft to the end plate.	5	9			
BELT SPLICE CHECK	4.	Check belt splice. Check belt splice for hanging or missing lacing. If the lacing is damaged, repair/replace as needed.	1	9			

WARNING

Be cautious when working around or on equipment when power has been applied.

RETURN TO SERVICE	5.	Restore equipment to service. Restore equipment to service as prescribed by the current local lockout/restore procedures.	1	9			
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U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
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Equipment Nomenclature LM TMS TT		Equipment Model ECA Belt Conveyor					Bulletin Filename MM09027AD			Occurrence Weekly				

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.

indicates excessive lagging deterioration. If the lagging wears off, there will be slippage of the belt on the pulley.

2. Check for oil leaks around shafts and seals. If leaks are observed, notify supervisor.
3. Check for excessive noise generated by the motorized pulley. If the motorized pulley generates excessive noise, notify supervisor.

CLEAN UP

10. **Clean up.** Ensure all tools, lubricants, rags, etc., are removed from the work area. Notify supervisor of any deficiencies. 1 All

ATTACHMENT 3

LM TMS TT ECA BELT CONVEYOR

MASTER CHECKLIST

03-TT-GA-002-M

QUARTERLY

Time Total: 15 Minutes

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	T	T					G	A	0	0	2	M
Equipment Nomenclature LM TMS TT		Equipment Model ECA Belt Conveyor					Bulletin Filename MM09027AD			Occurrence QUARTERLY				

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.

SAFETY STATEMENT

- | | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|
| 1. | COMPLY WITH ALL SAFETY PRECAUTIONS.
Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment. | 2 | All |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|

THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.

When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.

WARNING

Be cautious when working around or on equipment when power has been applied.

NOTE

Operate belt conveyor at least 15 minutes before powering it down and locking it out.

POWER DOWN

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|----|-----------------------------------------------------------------------------------------------------|---|---|
| 2. | Power down and lock out power as prescribed by the current local lockout/restore procedures. | 1 | 9 |
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WARNING

Discard solvent soaked materials according to local procedures to prevent spontaneous combustion.

BEARING INSPECTION

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|----|---------------------------------------------------------|---|---|
| 3. | Check and lubricate take-up and flange bearings. | 3 | 9 |
| | 1. After the belt conveyor has operated for at | | |

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least 15 minutes, check take-up and flange bearing housings for excessive heat by checking with IR thermometer. Consistently taking readings at the same approximate point, normal operating temperatures after 15 minutes for similar bearings should baseline approximately equal and range from approximately 90 – 100 degrees. If a bearing temperature is higher than similar bearings, notify supervisor.

- Using a paper wipe, remove any dust and dirt from the grease fitting.

CAUTION

Do not over fill bearings with grease. Over filling of bearings causes bearing to over heat and may damage grease seals.

- Using lithium based No. 2 grease in a grease gun rated at approximately 20 strokes per 1 ounce; insert not more than 1/20 of an ounce of grease into fitting.
- Verify grease is not forced out around seals. If excessive quantity of grease has been applied to bearing, remove fitting to allow excess grease to escape.
- Using a paper wipe, remove any residual grease from fitting, casing, etc.

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| PHOTOEYES | 4. | Clean photo eyes and reflectors. Using a clean, dry cloth, clean dust and dirt from the photo eyes and reflectors. | 1 | 9 |
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WARNING

Be cautious when working around or on equipment when power has been applied.

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|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|---|---|
| RETURN TO SERVICE | 5. | Restore equipment to service. Restore equipment to service as prescribed by the current local lockout/restore procedures. | 4 | 9 |
|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|---|---|

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E-STOP CHECK	6.	Check emergency stop switches.	3	9			
		1. With conveyor section running, push the emergency stop switch and verify it stops.					
		2. Reset the emergency stop switch activated.					
		3. Repeat steps 1 and 2 utilizing the emergency stop cords.					
CLEAN UP	7.	Clean up. Ensure all tools, lubricants, rags, etc., are removed from the work area. Notify supervisor of any deficiencies.	1	All			