



Maintenance Management Order

SUBJECT: Preventive Maintenance Servicing Guidelines for
Lockheed Martin (LM) Tray Management System (TMS)
Tray Transport (TT) Power Roller - Conveyor
Intermediate

DATE: August 16, 2010

NO: MMO-079-10

FILE CODE: TM05

TO: Lockheed Martin TMS Sites

rorn:mm09071ac

This Maintenance Management Order (MMO) provides PM Servicing Guidelines for LM TMS TT Conveyor Intermediate. The acronym is TT. The class code is BA.

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

The minimum maintenance skill level required to perform each task is included in the Minimum Skill Level column of each checklist. This does not preclude higher level employees from performing any of this work.

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 of Workload Estimate
2. LM TMS TT Conveyor Intermediate: Master Checklist: 03-TT-BA-111-M: Monthly
3. LM TMS TT Conveyor Intermediate: Master Checklist: 03-TT-BA-112-M: Semi-Annual

ATTACHMENT 1

SUMMARY

WORKLOAD ESTIMATE

FOR

LM TMS TT CONVEYOR INTERMEDIATE

**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	2.20	0.66	2.86	0.29	3.15
6 day	2.20	0.66	2.86	0.29	3.15
7 day	2.20	0.66	2.86	0.29	3.15

NOTES:

*Repair estimates based on 30% of servicing.

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

ATTACHMENT 2

**LM TMS TT CONVEYOR INTERMEDIATE
MASTER CHECKLIST**

03-TT-BA-111-M

MONTHLY

Time Total: 10 Minutes per module

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	T	T					B	A	1	1	1	M
Equipment Nomenclature LM TMS TT		Equipment Model Conveyor Intermediate					Bulletin Filename MM09071AC			Occurrence Monthly				

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.

- | | | | | |
|---------------|----|--|---|---|
| IDLER ROLLERS | 2. | Check idler rollers for debris. | 3 | 9 |
|---------------|----|--|---|---|
1. On the Cell Control PC, enter login ID and Password.
 2. On the TMS Main Menu, select Cell Controller.
 3. On the CELL STATUS screen, select the Cell Offline button.
 4. Select the Conveyor button.
 5. On the CONVEYOR MANAGEMENT screen, select the Device Id(s) (and select the zone(s) if applicable) for the conveyor being checked.
 6. Select the Force Output button. The conveyor (zone(s)) selected should now be operating.

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Equipment Nomenclature LM TMS TT		Equipment Model Conveyor Intermediate					Bulletin Filename MM09071AC			Occurrence Monthly				

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.

7. Check drive and idler rollers for debris.
8. Power down and lock out power as prescribed by the current local lockout/restore procedures.
9. Remove any dirt/debris found. If required, clean the roller with soap and water.

WARNING

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

10. Restore equipment to service as prescribed by the current local lockout/restore procedures.

DRIVE ROLLERS 3. Check drive roller and O-rings. 4 9

1. On the Cell Control PC, enter login ID and Password.
2. On the TMS Main Menu, select Cell Controller.
3. On the CELL STATUS screen, select the Cell Offline button.
4. Select the Conveyor push button.
5. On the CONVEYOR MANAGEMENT screen, select the Device Id(s) (and select the zone(s) if applicable) for the conveyor being checked.
6. Select the Force Output button. The conveyor (zone(s)) selected should now be operating.
7. Check for noise. If roller is excessively noisy, notify supervisor.
8. Check fastening nuts for movement. If the fastening nuts do not rotate when the rollers start and stop, continue with step 9. If the fastening nuts rotate when the rollers start and stop, power down the affected conveyor segment.
 - a. Lock out its electrical power as

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prescribed by the current local lockout/restore procedures.

- b. Retighten the nuts to 35 to 37 foot-pounds.

WARNING

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

- c. Restore the equipment to service as prescribed by the current local lockout/restore procedures.
9. Check for sluggish movement of trays. If sluggish movement is present in the normal direction, check for broken or slipping O-rings and check for malfunctioning, cut, or torn O-rings. If any of these conditions exist, notify supervisor.
10. After completing all checks, select OK on the TMS: Error screen.
11. On the CONVEYOR MANAGEMENT screen, select Cell Status push button.
12. On the CELL STATUS screen, press Cell Online button.
13. Select Exit button.
14. On the TMS Main Menu, select Log Off button.

CLEAN UP

4. **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 CONVEYOR INTERMEDIATE
MASTER CHECKLIST**

03-TT-BA-112-M

SEMI-ANNUAL

Time Totals:

6 Minutes per floor level module
6 Minutes per 1-4 zone elevated module
7 Minutes per 5-8 zone elevated module

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
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	0	3	T	T					B	A	1	1	2	M
Equipment Nomenclature LM TMS TT		Equipment Model Conveyor Intermediate					Bulletin Filename MM09071AC			Occurrence Semi-Annual				

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 shutdown and lockout 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. 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.	2	All			
POWER DOWN	2.	Power down and lock out power. Power down the machine and lock out its electrical power as prescribed by the current local lockout/restore procedures.	1	9			
PHOTO EYES	3.	Clean photo eyes and reflectors. Using a clean, dry cloth, clean dust and dirt from the photo eyes and reflectors.	* 1	9			
			** 1				
		*Minute per floor level module **Minute per 1-4 zone elevated module *** Minute per 5-8 zone elevated module	*** 2				

WARNING

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

RETURN TO SERVICE	4.	Restore equipment to service. Restore equipment to service as prescribed by the current local lockout/restore procedures.	1	9			
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CLEAN UP 5. **Clean up.** Ensure all tools, lubricants, rags, etc., are removed from the work area. Notify supervisor of any deficiencies. 1 All