

MAINTENANCE TECHNICAL SUPPORT CENTER  
HEADQUARTERS MAINTENANCE OPERATIONS  
UNITED STATES POSTAL SERVICE



# Maintenance Management Order

**SUBJECT:** Powered Industrial Vehicle Management  
System (PIVMS) Preventive Maintenance  
(PM) Guidelines

**DATE:** July 2, 2015

**NO:** MMO-096-15

**TO:** All PIVMS Offices  
All Area Offices

**FILE CODE:** O

mlot:mm14161ac

This Maintenance Management Order (MMO) provides Preventive Maintenance Guidelines for the Powered Industrial Vehicle Management System (PIVMS). This Maintenance Management Order (MMO) supersedes MMO-104-09. This bulletin applies to Acronym PIVMS, Class Code AA.

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.

**WARNING**

Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO for appropriate EWP PPE and barricade requirements.

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



Andy L. Henderson  
Manager (A)  
Maintenance Technical Support Center  
HQ Maintenance Operations

- Attachments
1. Summary of Workload Estimate
  2. Master Checklist 03-PIVMS-AA-001-M – Weekly PM
  3. Master Checklist 03-PIVMS-AA-002-M – Monthly PM
  4. Master Checklist 03-PIVMS-AA-003-M – Quarterly PM

**ATTACHMENT 1****SUMMARY****WORKLOAD ESTIMATE****FOR PIVMS SYSTEM****PM Checklist Time Summary**

Operation 7 Day/Week	Routine Servicing (Hrs/Yr)	Routine Servicing + Repair Time (Hrs/Yr)	Non- productive Time** (Hrs/Yr)	# of Vehicle Asset Communicators (VACs)	Total Servicing Per Device (Hrs/Yr)
Weekly	18.20	5.46	2.37	N/A	26.03
Monthly per VAC	6.60	1.98	0.86		9.44 x (# of VACs)
Quarterly per VAC	2.07	0.62	0.27		2.96 x (# of VACs)

**NOTES**

\*Repair estimates based on 30% of servicing.

\*\*Based on 10% of routine servicing and repair.

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**ATTACHMENT 2**

**WEEKLY MASTER CHECKLIST**

03-PIVMS-AA-001-M

Time Total: 21 minutes

U.S. Postal Service  <b>Maintenance Checklist</b>	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	P	I	V	M	S			A	A	0	0	1
Equipment Nomenclature PIVMS	Equipment Model						Bulletin Filename mm14161ac				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	<b>COMPLY WITH ALL SAFETY PRECAUTIONS.</b> 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.  <b>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</b> When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.  <b>WARNING FOR EWP/PPE:</b> Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO for appropriate EWP PPE and barricade requirements.	1	All			
	2	<b>Check subsystems communications status.</b> <b>Check Gateway/WAM, Beacon, and VAC communications.</b>  1. From ACE workstation Remote Desktop into PIVMS server and login Vision software. a. Select Data Reporting and Analysis menu button. b. Select Data Reports. c. Select _PIVMS Baseline folder.  2. <b>Select and view 209 Quick Beacon Verification report.</b> a. The date and time in "Last Configured" should be within the last 24 hours.	20	10			

U.S. Postal Service  <b>Maintenance Checklist</b>	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	P	I	V	M	S			A	A	0	0	1
Equipment Nomenclature PIVMS	Equipment Model						Bulletin Filename mm14161ac				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.

		b. Create 05 work orders for discrepancies. <b>3. Select and view 210 Quick Gateway-WAM Verification report.</b> a. The date and time in "Last Completed Sync" should be within the last 24 hours. b. Create 05 work orders for discrepancies. <b>4. Select and view 211 Quick Vehicle Verification report.</b> a. The date and time in "Last Detected" should be within the last one hour if the vehicle is in operation. b. In Service Yes/No is consistent with current vehicle status. c. All vehicles are not in Soft or Hard Bypassed. d. Create 05 work orders for discrepancies. <b>5. Select and view report 213-A Vehicle Usage Sensor Detail report.</b> a. For like vehicles, values should be comparable. b. Create 05 work orders for discrepancies. <b>6. Select and view report 214 Vehicle Impact Detail report.</b> a. Look for Severity other than Low (Moderate, Medium, Severe, or unknown). b. Play back the event in Visibility to find the location of the event and inspect vehicle/facility. c. Create 05 work orders for all discrepancies. <b>7. Select and view Vehicle Health Issues Snapshot report in the _Eng-HQ folder.</b> a. Review In Service, Soft/Hard Bypassed, Impact Enabled and Days Since Last Detect b. Create 05 work orders for discrepancies.					
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U.S. Postal Service  <b>Maintenance Checklist</b>	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	3	P	I	V	M	S			A	A	0	0	1	M
Equipment Nomenclature PIVMS	Equipment Model						Bulletin Filename mm14161ac				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.

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**ATTACHMENT 3**

**MONTHLY MASTER CHECKLIST**

03-PIVMS-AA-002-M

Time Total: 33 minutes per VAC

U.S. Postal Service  <b>Maintenance Checklist</b>		IDENTIFICATION												
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER		TYPE
		0	3	P	I	V	M	S		A	A	0	0	2
Equipment Nomenclature PIVMS		Equipment Model						Bulletin Filename mm14161ac			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	<p><b>COMPLY WITH ALL SAFETY PRECAUTIONS.</b> 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.</p> <p><b>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</b></p> <p>When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p><b>WARNING FOR EWP/PPE:</b></p> <p>Steps contained in this bulletin may require the use of Personal Protective Equipment (PPE). Refer to the current Electrical Work Plan (EWP) MMO for appropriate PPE requirements.</p>	1	All			
	2	<p><b>Check vehicle sensor, wiring and calibration</b></p> <p>1. For each vehicle</p> <p>a. Check wire harness physical condition to each sensor, VAC, and power connections</p> <p>b. Check impact sensor for secure mounting to vehicle</p> <p>2. Calibrate impact sensor</p> <p>a. Refer to the USPS VAC Users Guide for calibration procedures.</p> <p>3. Calibrate speed sensor</p> <p>a. Refer to the USPS VAC Users Guide for calibration procedures.</p>	32	9			

**ATTACHMENT 4**

**QUARTERLY MASTER CHECKLIST**

03-PIVMS-AA-003-M

Time Total: 31 minutes per VAC

U.S. Postal Service  <b>Maintenance Checklist</b>	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	3	P	I	V	M	S				A	A	0	0	3
Equipment Nomenclature PIVMS	Equipment Model						Bulletin Filename mm14161ac				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	<b>COMPLY WITH ALL SAFETY PRECAUTIONS.</b> 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.  <b>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</b> When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.  <b>WARNING FOR EWP/PPE:</b> Steps contained in this bulletin may require the use of Personal Protective Equipment (PPE). Refer to the current Electrical Work Plan (EWP) MMO for appropriate PPE requirements.	1	All			
Lift and Tow sensors	2	<b>Calibrate Lift and Tow sensors.</b>  1. Calibrate Lift Sensor a. Refer to the USPS VAC Users Guide for calibration procedures.  2. Calibrate Tow sensor. a. Refer to the USPS VAC Users Guide for calibration procedures.	30	9			