



maintenance management order

SUBJECT: PM Guidelines for Package Bar Code Sorter System (PBCSS) Primary

DATE: May 24, 2002

NO: MMO-025-02

TO: Bulk Mail Centers
Phoenix P&DC

FILE CODE: Y
dfau: MM01045AF

Online Change Record		
Change #	Date	Description of Change
1	4/27/2022	Attachment 2, corrected skill level 4 and 5, no longer in use, to level 7. Changed Items 15, 16, 20, and 21 from skill level 7 to level 9.

This Maintenance Management Order (MMO) provides Preventive Maintenance (PM) guidelines for the Package Bar Code Sorter System (PBCSS) Primaries. It supersedes MMO-091-00.

This MMO incorporates the preventive tasks necessary to maintain the Grand Rapids Label type printer. Please continue to use MMO-057-99 for the original SATO printers until all of your site High Speed Induction Stations have been modified.

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

WARNING

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

WARNING

The use of compressed or blown air is prohibited. 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 only on optical equipment when other cleaning methods can not be used.

The attached master checklist provides tasks to be performed at periodic intervals (as noted in the frequency column), the time required per task, and the minimum skill level for each task.

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

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

Rex M. Gallaher
Manager
Maintenance Technical Support Center
Maintenance Policies and Programs

Attachments: 1. Summary-Workload Estimate
2. PBCSS Primary Master Checklist

ATTACHMENT 1**SUMMARY****WORKLOAD ESTIMATE FOR****PACKAGE BAR CODE SORTER SYSTEM (PBCSS) PRIMARY**

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
292.6	87.8	380.4	38.0	418.4

* Repair estimates based on 30% of servicing.

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

TIME TOTALS

Daily Time Total: 0.7 Hrs.***

Weekly Time Total: 0.5 Hrs.***

Monthly Time Total: 0.3 Hrs.***

Quarterly Time Total: 1.3 Hrs.***

Semi-Annually Time Total: 1.0 Hrs. ***

NOTE

The time shown does not allow for multiple assemblies on any equipment. Should multiple assemblies exist, the time must be modified at the local level to account for those occurrences. Other unique site conditions that require additional time are to be addressed at the local level.

*** These times are provided for data entry for the VMARS System.

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ATTACHMENT 2**PBCSS PRIMARY MASTER CHECKLIST**

03-BCS-AA-001-M

The "Part or Component" column for each step on the Master Checklist provides a "Frequency Code" designation followed by a letter or series of letters. These letters correspond to the frequency codes as published in MS-63 and specify the frequency for which that instruction (step) must be performed. These frequency codes are in compliance with VMARS superseding route structure. The possible frequencies and their codes are given in the table below:

Table 2-1. MS-63 (VMARS) Frequency-Codes

<u>CODE</u>	<u>FREQUENCY</u>	<u>DESCRIPTION</u>
A	ANNUAL	Once every 13 APs.
B	BI-WEEKLY	Once every 2 weeks.
C	BI-MONTHLY	Once every 2 APs.
D	DAILY	Once a day; 7 days a week.
E	DAILY	Once a day; 6 days a week.
F	DAILY	Once a day; 5 days a week.
G	DAILY	Once a day; 4 days a week.
H	DAILY	Once a day; 3 days a week.
J	SEMI-WEEKLY	2 days a week.
K	BI-ANNUAL	Once every 2 years.
L	TRI-ANNUAL	Once every 3 years.
M	MONTHLY	Once every AP.
N	QUAD-ANNUAL	Once every 4 years.
P	QUINT-ANNUAL	Once every 5 years.
Q	QUARTERLY	4 times every 13 APs.
S	SEMI-ANNUAL	Twice every 13 AP.
T	TOURLY	3 times a day; 7 days a week.
U	TOURLY	Twice a day; 7 days a week.
V	TOURLY	3 times a day; 6 days a week.
W	WEEKLY	Once a week.
X	TOURLY	Twice a day; 6 days a week.
Y	TOURLY	3 times a day; 5 days a week.
Z	TOURLY	Twice a day; 5 days a week.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION										
	Work Code		Equipment Acronym				Class Code		Number		Type
	0	3	B	C	S		A	A	0	0	1
Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)		Equipment Model PBCSS				Bulletin Filename MM01045AF		Frequency ALL			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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SAFETY STATEMENT Frequency Code: -D-W-Q-S-	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.	3 min	All
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THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.

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 can not be used. Report safety deficiencies to your supervisor immediately upon detection.

PBCSS Frequency Code: -D-W-Q-S-	2.	POWER DOWN AND LOCKOUT POWER. - Power down the equipment and lockout its electrical power as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.	1 min	All
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CAUTION

Avoid using any sharp objects to scrape the print head as it may be permanently damaged. Do not spray alcohol on the printer. Apply alcohol directly to a clean cotton cloth or swab.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION										
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	0	3	B	C	S		A	A	0	0	1
Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)		Equipment Model PBCSS			Bulletin Filename MM01045AF			Frequency ALL			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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PRINTER APPLICATOR Frequency Code: -D-----	3. CLEAN PRINTHEAD AREA. - Open printhead mechanism, move label stock as needed and clean the print head element area using Isopropyl alcohol (99.7% by volume) on a cotton swab or clean cotton cloth. Pay particular attention to print elements (dark area). Refer to Material Safety Data Sheet.	5 min 7
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PRINTER APPLICATOR AREA Frequency Code: -D-----	4. CLEAN ROLLERS AND ASSOCIATED HARDWARE. - Move label stock as needed; clean all rollers in the path of label stock travel and the catch plate area using Isopropyl alcohol (99.7% by volume) on a cotton swab or clean cotton cloth. Refer to Safety Data Sheet. Clean catch plate full sensor and lookdown sensor using a dry cotton cloth. Avoid using alcohol on these items as this may damage these sensors. Remove all labels from the foam rollers, printer applicator assembly, conveyor, and surrounding framework.	10 min 7
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WARNING

Use extreme caution when performing the cleaning of the cutter assembly. The blades of the cutter assembly are very sharp and present a potential for serious injury. The cutter blade provides a locking mechanism to hold the blade open while performing cleaning in this area. Use it to ensure blade does not close inadvertently. Use ONLY a cotton swab to clean the cutter blade edge. DO NOT place your fingers on the cutter blade edges.

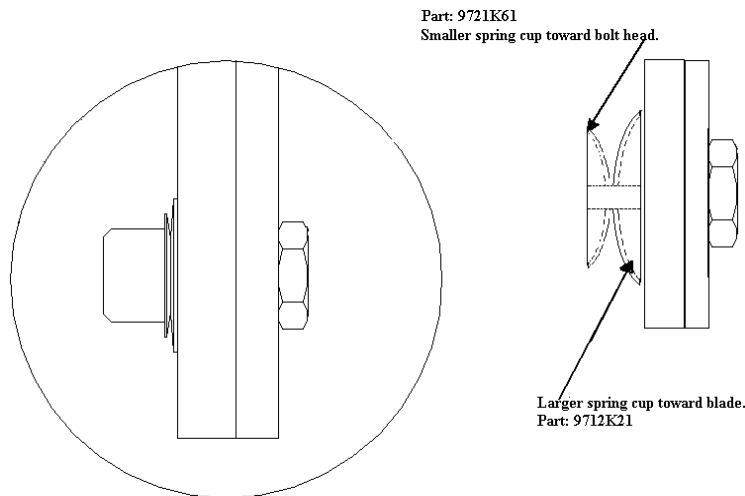
PRINTER APPLICATOR Frequency Code: -D-----	5. CLEAN CUTTER ASSEMBLY AREA. - Open cutter assembly mechanism, carefully lift the upper blade of the cutter against the spring tension in the cutter cylinder. Use the cutter blade locking mechanism to hold the blade open during cleaning. Clean the upper/lower blade edges using only a cotton swab with Isopropyl alcohol (99.7% by volume). Clean the upper/lower blade sides	15 min 9
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U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	B	C	S	A	A	0	0	1	M	
Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)		Equipment Model PBCSS				Bulletin Filename MM01045AF		Frequency ALL				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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using cotton swab or clean cotton cloth with Isopropyl alcohol (99.7% by volume). Clean the label pad (vacuum pad) and adjacent hardware using a clean cotton cloth dampened with Isopropyl alcohol (99.7% by volume). Verify the air assist holes located at the front and rear of the cutter assembly are not obstructed. Clean as needed. Refer to Material Safety Data Sheet.

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|------------------------------|----|--|-----------|---|
| Frequency Code:
-----M--- | 6. | Remove the pivot bolt holding the upper and lower cutter blades. Clean all adhesive residues from the bushing, mounting bolt, and blade mating surfaces. Apply one to two drops of UltraPower-100 lubricant to the pivot point bushing and reassemble. Ensure that the two disc springs are installed correctly. Reference illustration below. | 15
min | 7 |
|------------------------------|----|--|-----------|---|



DETAIL (A) ENLARGED

Drawing from Cutter Assembly, D1064, Rev C, Sheet 1.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	B	C	S		A	A	0	0	1	M
Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)		Equipment Model PBCSS				Bulletin Filename MM01045AF		Frequency ALL				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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PRINTER APPLICATOR Frequency Code: ---W-----	7.	CHECK PRINTER APPLICATOR AND ASSOCIATED COMPONENTS. - Check as follows: <ol style="list-style-type: none"> 1. Check printer applicator assembly for loose screws/bolts, vertical and horizontal actuators, and motor drive belts and associated parts for any damage. 2. Check for accumulation of moisture in filter/regulator and drain if required. 	8 min	7
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CAUTION

Do not use commercial glass cleaner.

PBCSS Frequency Code: ---W-----	8.	SERVICE PBCSS COMPONENTS. - Service the following PBCSS components: <ol style="list-style-type: none"> 1. Clean all photo eyes and sensors. 2. Clean scanner laser exit window with 60%/40% denatured alcohol/water solution. 	5 min	7
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WARNING

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SYSTEM CONTROL and OMNI-X SCANNER Frequency Code: ---W-----	9.	SERVICE AIR FILTERS. - Vacuum or replace (as determined locally necessary) air filters for both the System Controller and the OMNI-X Scanner.	5 min	7
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	Work Code		Equipment Acronym				Class Code		Number		Type
	0	3	B	C	S		A	A	0	0	1
Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)	Equipment Model PBCSS				Bulletin Filename MM01045AF			Frequency ALL			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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PBCSS	10.	CLEAN LIGHTING FIXTURES AND HARDWARE TOPS. - Using a vacuum, clean all lighting fixtures and the tops of all related hardware (System Controller Enclosure, OMNI-Scanner, etc.).	15 min	7
Frequency Code: -----S-				
SYSTEM CONTROL	11.	SERVICE SYSTEM CONTROLLER. - Service the System Controller as follows:	15 min	7
Frequency Code: -----S-		<ol style="list-style-type: none"> 1. Open the System Controller Enclosure. 2. Use a vacuum to clean dust and debris. 3. Visually check for loose connections. 4. Close System Controller Enclosure. 		
OMNI-X SCANNER	12.	SERVICE SCANNER. - Service OMNI-X Scanner as follows:	15 min	7
Frequency Code: ----Q---		<ol style="list-style-type: none"> 1. Remove OMNI-X Scanner cover. 2. Use a vacuum to clean dust and debris. 3. Visually check for loose connections. 4. Replace OMNI-X Scanner cover. 		
PRINTER ENCLOSURE	13.	SERVICE PRINTER ENCLOSURE. - Service printer enclosure as follows	15 min	7
Frequency Code: -----S-		<ol style="list-style-type: none"> 1. Open Printer Enclosure. 2. Use a vacuum to clean dust and debris. 3. Visually check for loose connections. 4. Close Printer Enclosure. 		
PBCSS	14.	RESTORE EQUIPMENT TO SERVICE. - Restore equipment to service as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.	1 min	All
Frequency Code: -D-W-Q-S				

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	0	3	B	C	S	A	A	0	0	1	M
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Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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WARNING

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

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|--|-----|---|--------|---|
| PRINTER
Frequency Code:
-D----- | 15. | PRINT AND VERIFY A LABEL. - Start HSIU and print test label. Verify the printhead elements are functional by ensuring that the vertical bars are present and horizontal bar is solid. Also, verify the human-readable characters are legible and that the numeric characters "12345" are correctly printed.

If necessary, initiate corrective action. | 4 min | 9 |
| PRINTER
Frequency Code:
---W----- | 16. | CHECK LOOKDOWN SENSOR CLEARANCE. Check and adjust lookdown sensor in accordance with MS-136. | 3 min | 9 |
| SYSTEM CONTROLLER
Frequency Code:
-----S-- | 17. | RUN THE "LEARN" FUNCTION. - (In accordance with MS-136) | 10 min | 7 |
| PRINTER

Frequency Code:
-D----- | 18. | VERIFY LABEL APPLICATION. - Manually key two packages of different sizes. Check for proper application of the labels to each package. | 1 min | 7 |
| PBCSS

Frequency Code:
---W----- | 19. | CHECK FAN OPERATION. - Check fans on the System Controller Enclosure, 6000 Chassis, and OMNI-X Scanner for proper operation. | 2 min | 7 |

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Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)		Equipment Model PBCSS			Bulletin Filename MM01045AF		Frequency ALL				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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PBCSS	20.	CHECK SYSTEM OPERATION. - Check system operation with the HSIU running as follows:	7 min	9
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Frequency Code:
---W----

1. Close two scanner "X" patterns by rotating the laser shut-off thumb screws clockwise.
2. Induct three bar-coded packages while checking the Operator Control Panel to ensure correct ZIP codes are displayed. For this operation use the following size packages: 1 package less than six inches high to check the far zone; 1 package greater than six but less than twelve inches high to check the mid zone; and 1 package greater than twelve inches high to check the near zone.
3. Repeat the same process for each of the remaining two "X" patterns.
4. Restore three "X" patterns by rotating the laser shut-off thumb screws fully counter-clockwise.
5. Note discrepancies and initiate a work order as needed.

WARNING

Only a trained person should work on the scanner unit! Avoid looking directly into the laser window or injury to eyes may result.

SCANNER DIAGNOSTIC	21.	RUN SCANNER DIAGNOSTICS. - Run the ACCUVIEW software "manual mode" diagnostic procedures outlined in the OMNI-X Scanner Service Manual (most current revision) on all three lasers.	60 min	9
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Frequency Code:
-----Q---

Each laser must register a "Q value" of 80 or greater on each of the three zones (near, mid and far). If the Scanner unit passes this diagnostic test, no further action is required.

If any laser fails this diagnostic, report the deficiency to your supervisor to initiate a Work Order to perform the optical / electronic alignment procedures outlined in the OMNI-X Scanner Service Manual (most current revision).

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		0	3	B	C	S		A	A	0	0	1
Equipment Nomenclature PACKAGE BAR CODE SORTER SYSTEM (PRIMARY)		Equipment Model PBCSS			Bulletin Filename MM01045AF			Frequency ALL				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min Skill Level
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CLEAN-UP Frequency Code: -D-W-Q-S	22.	CLEAN-UP. - Ensure all tools, lubricants, rags, etc. are removed from the work area. Report all deficiencies to your supervisor.	2 min	All
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