MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE

Maintenance Management Order

SUBJECT: Operational & Preventive Maintenance (PM) Guidelines for Automatic Tray Unsleever (ATU)

TO: All ATU Offices

DATE: April 29, 2016

NO: MMO-017-16

FILE CODE: F13

dste:mm14070ag

This Maintenance Management Order (MMO) provides Operational & Preventive Maintenance (PM) for the ATU. This MMO supersedes MMO-014-11 and MMO-119-13.

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

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

The attached master checklists provides tasks to be performed at periodic intervals (Daily, Weekly, Monthly, Semi-Annual, Annual, and Operational Maintenance), time required per task, and the minimum skill level for each task.

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.

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.

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.

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

Kevin Couch
Manager
Maintenance Technical Support Center
HQ Maintenance Operations

Attachments:
1. Summary Work Load Estimate for Automatic Tray Unsleever
2. ATU Master Checklist: 03-ATU-001-M: Daily
3. ATU Master Checklist: 03-ATU-002-M: Weekly
4. ATU Master Checklist: 03-ATU-003-M: Monthly
5. ATU Master Checklist: 03-ATU-004-M: Quarterly
6. ATU Master Checklist: 03-ATU-005-M: Semi-Annual
7. ATU Master Checklist: 03-ATU-006-M: Annual
8. ATU Master Checklist: 09-ATU-001-M: Tourly

ATTACHMENT 1

SUMMARY

WORKLOAD ESTIMATE

FOR

AUTOMATIC TRAY UNSLEEVER

SUMMARY

WORKLOAD ESTIMATE
FOR
AUTOMATIC TRAY UNSLEEVER

Operation Days	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/Yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/Yr) **	Total Servicing per Machine (Hrs/Yr)	Operational Maintenance + Total Servicing		
						1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
5 Days	351.22	70.24	421.46	42.15	463.61	519.94	576.28	632.61
6 Days	392.82	78.56	471.38	47.14	518.52	586.12	653.72	721.32
7 Days	434.42	86.88	521.30	52.13	573.43	652.29	731.16	810.03

* **Repair maintenance estimates based on 20% of preventive maintenance.**

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

THRESHOLDS and PM TIME SUMMARY Hrs PER Year

Daily	339.73
Weekly	76.27
Monthly	11.20
Quarterly	5.47
Semi-Annual	0.70
Annual	1.05

	OPERATIONAL MAINTENANCE		
	One Tour	Two Tours	Three Tours
5 Day	56.33	112.67	169.00
6 Day	67.60	135.20	202.80
7 Day	78.87	157.73	236.60

NOTES

∗Repair estimates based on 20% of servicing.

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

ATTACHMENT 2

ATU MASTER CHECKLIST

03-ATU-AA-001-M

DAILY

Time Total: 56 Minutes

Refer to MS-243 if additional maintenance information is required.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	1	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency Daily	

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)	Weeks
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 check 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 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.** **WARNING FOR EWP/PPE:** **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			
		WARNING **Be cautious when working around or on equipment when power has been applied.**					
AIR MANAGEMENT SYSTEM ASSEMBLY OF BASE MODULE ASSEMBLY	2.	**Verify air supply.** Verify as follows**:** 1. No water/oil/debris is visible in sight glass in air management system assembly filter/regulator unit. 2. Verify air pressure of 90 (+10/-0) PSI on the air management system assembly filter/regulator air pressure gauge. 3. If any deficiencies are noted, notify supervisor.	1	7			
BASE MODULE ASSEMBLY	3.	**Power down and lock out air and electrical power.** Stop the ATU. Power down the machine and lock	2	All			

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	0	3	A	T	U						A	A	0	0	1	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: Daily

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)	Weeks
		out air and electrical power as prescribed by current local lockout procedures.					
ATU MACHINE MAIL SEARCH	4.	**Perform mail search of the ATU.** Perform mail search as follows: 1. Open access doors. 2. Open sleeve conveyor bottom hinge guard pan assembly. 3. Search for mail pieces in and under machine, including input conveyor, base module index conveyor assembly, exit conveyor, and sleeve conveyor. 4. Follow local procedures for returning mail to operations for processing. 5. Close access doors and sleeve conveyor bottom hinge guard pan assembly.	3	7			
SLEEVE GRIPPING ASSEMBLY OF BASE MODULE ASSEMBLY	5.	**Check and clean sleeve gripping assembly suction cups.** 1. Open access door. 2. Check sleeve gripping assembly suction cups for cracks or tears. Replace suction cups if cracked or torn. 3. Using a soft clean cloth dampened with water**,** clean the suction cups. 4. Close access door.	2	7			
		WARNING **The saw guard may be sharp. Take care when working around it.**					
BASE MODULE ASSEMBLY	6.	**Clean and vacuum ATU, computer cabinet, strap cutter, photo sensors, and reflectors.** Remove dust and debris from ATU**.** Wipe off faces of sensors/reflectors**.** Use care not to bump sensors/reflectors out of alignment**.** 1. Clean any tray straps from entire machine. Vacuum tray shock absorber seats to remove debris. 2. Use a vacuum to clean inside ATU, especially around the sensors/reflectors.	25	7			

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	0	3	A	T	U						A	A	0	0	1	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency Daily	

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)	Weeks
		3. Clean debris from strap cutter motor and saw blade. Vacuum area. 4. Using a clean, dry, soft lint-free cloth, wipe dust off faces of sensors/reflectors: a. PE-1 – index conveyor home position b. PE-2 – sleeve conveyor bin full c. PE-3 – index conveyor sleeve detect d. In-feed conveyors 1) PE-6 – tray front scan start and zone start 2) PE-7 – full length tray 3) PE-8 – beyond end of zone jam 4) PE-9 – end of zone 5) PE-10 – tray height (EMM) 6) PE-11 – tray rear scan start 7) PE-12 – tray in loading station 8) PE-13 – tray in strap cutting station 9) PE-14 – tray between flights (just beyond strap cutting stations) 10) PE-15 – tray in sleeve removal station e. Index conveyor 1) PE-18 – tray between sleeve removal and strap cutting stations 2) PE-19 – tray between strap cutting and tray loading stations f. Out-feed conveyor 1) PE-27 – diagonal 2) PE-28 – end of zone 3) PE-29 – start up/jam g. PE-30 – downstream conveyor, gravity conveyor line full					
		WARNING **Be cautious when working around or on equipment when power has been applied.**					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	T	U						A	A	0	0	1	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: Daily

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)	Weeks
INFEED CONVEYOR ASSEMBLY	7.	**Clean the two tray label scanner cameras.** With a soft lint-free cloth, clean the two tray label scanner cameras. Remove all dust from the face of the cameras.	2	7			
SYSTEM	8.	**Restore air and electrical power.** Restore power to machine as prescribed by local lockout instructions providing lockout/restore procedures.	2	7			
BASE MODULE ASSEMBLY VACUUM SYSTEM	9.	**Operate vacuum system.** 1. Press **MAINTENANCE MENU BUTTON** on Change User Mode screen to place the ATU in the maintenance mode after entering the maintenance password. 2. The Maintenance screen appears. Access the de-sleeve screen by pressing the rectangle between the tray ram and out-feed conveyor on Maintenance screen. 3. To clean internal parts of the vacuum system, press the **BLOWER ON** button on the de-sleeve screen. Leave it on for 15 seconds to blow out the vacuum cup lines then press **BLOWER OFF** to turn it off. 4. Press **MAIN SCREEN** to return to main screen.	3	9			
		NOTE The following item must be performed seven days a week when machine is in service.					
ATU SYSTEM	10.	**Select Operator User and press Start button.** 1. Check Operator screen top left corner. Ensure **Operation:** indicates “Running”. 2. Ensure **MPE MMS Running** radio button indicator is green. 3. Check Operator screen lower left corner. Ensure system date and time are correct 4. Check Operator screen lower right corner. Ensure **IOS: Session->** is “Active”. 5. Run a mail tray through machine with tray label on front of tray, (label facing machine). As tray is fed into machine, check Operator	4	7			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	1	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency Daily	

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)	Weeks
		screen. Ensure decoded tray label data is indicated below Tray Label: 6. Run a mail tray through machine with tray label on back of tray, (label facing away from machine). As tray is fed into machine, check Operator screen. Ensure decoded tray label data is indicated below Tray Label:					
ATU SYSTEM	11.	**Return ATU to service.** Return the ATU to normal operation.	2	9			
CLEAN UP	12.	**Clean up.** Ensure all tools**,** lubricants**,** rags**,** etc**.,** are removed from the work area. Clean up water that may get on the floor as the result of this procedure. Report all deficiencies to your supervisor.	2	All			
		NOTE The following item must be performed seven days a week when machine is in service.					
MPEWATCH VERIFICATION	13.	**Access MHE Monitor Screen. Check IDS Data Flow and Read Rate Status.** 1. After running test trays through the system, wait at least 15 minutes, and then access MPEWatch at the following link: http://mpewatch.usps.gov/ 2. Go to the Local Site Applications Column and select **MPEWatch Site List.** 3. Select the appropriate site in the site selection list. 4. Select the **mhe monitor** link in the top right corner of screen. 5. Ensure **IDS Data Flow Status** indicator is green. 6. Ensure **IDS Data Flow IDS Connection and ULX Data** are both “OK”. 7. Ensure **Read Rate Status Current Alert** indicates green and says “OK” 8. Report all deficiencies to your supervisor.	4	9			

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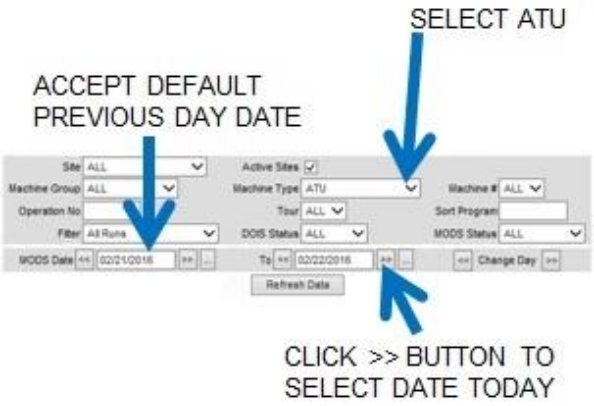
	0	3	A	T	U						A	A	0	0	1	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: Daily

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)	Weeks
		NOTE The following item must be performed seven days a week when machine is in service and used to process mail.					
WEBEOR VERIFICATION	14.	**Access WebEOR and ensure End-Of-Run reports transferred from ATU machine to WebEOR.** 1. Access WebEOR at the following link: http://webeor. 2. On WebEOR Main Menu screen, under File, click **EOR Viewer** link. 3. Click **Machine Type** drop down menu and select **ATU**. 4. Select From and **To MODS Dates**.  5. Click **Refresh Data** button. 6. Ensure ATU machine transferred an EOR report to WebEOR for each of the previous tours machine processed mail. 7. Report missing EOR reports to supervisor.	3	9			

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Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency Daily	

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)	Weeks

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ATTACHMENT 3

ATU MASTER CHECKLIST

03-ATU-AA-002-M

WEEKLY

Time Total: 88 Minutes

Refer to MS-243 if additional maintenance information is required.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
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 check 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 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.** **WARNING FOR EWP/PPE:** **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			
SYSTEM	2.	**Power down and lock out air and electrical power.** Stop the ATU. Power down the machine and lock out air and electrical power as prescribed by current local lockout procedures.	2	All			
ATU MACHINE	3.	**Check ATU hardware.** 1. Check ATU machine bolted connections to ensure they are properly positioned and tight. 2. Check index conveyor servo motor mounts for proper servo motor alignment and tightness of drive belt. a. Remove acrylic panel that is beneath tray ram. b. Check index drive motor eagle tooth belt alignment and tension. This belt must be tight enough for the index chain conveyor to home properly.	15	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
		c. Check the acrylic panel interlock switch. d. Replace acrylic panel. 3. Check index conveyor flights and chains for proper alignment and tightness.					
BASE MODULE ASSEMBLY	4.	**Clean and check six ATU actuators.** Clean debris, dust, and old oil from 6 actuators. Inspect actuators for scoring and abnormal wear. Repair/replace as needed.	5	9			
STRAP CUTTER ASSEMBLY	5.	**Lubricate the rod-less cylinders.** Place several drops of Shell Tellus 32 or DTE24 oil on the oil felts found on each side of the strap cutter assembly, rod-less cylinder (vertical actuator) and on the top and bottom of the rod-less cylinder (horizontal actuator).	2	7			
BASE MODULE ASSEMBLY	6.	**Check the six actuators.** Check the 16 hall-effect sensors for position and tightness on the actuators, the tightness of the actuator mounting and its shock absorber stops. 1. Tray loading station a. HS-4 - tray stop at –Z b. HS-5 - tray stop at +Z 2. Tray ram assembly a. HS-16 – tray ram at +X b. HS-17 – tray ram at –X 3. Strap take-away assembly a. HS-20 – strap puller Y axis at +Y b. HS-21 – strap puller Y axis at –Y c. HS-22 – strap puller Z axis at –Z d. HS-23 – strap puller Z axis at +Z 4. Sleeve gripping assembly a. HS-24 – sleeve grip axis at +Z b. HS-25 – sleeve grip axis at EMM position c. HS-26 - sleeve grip axis at –Z 5. Strap cutting assembly	20	9			

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	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
		a. HS-31 - strap cutter Z axis at -Z b. HS-32 - strap cutter Z axis at EMM c. HS-33 – strap cutter Z axis at +Z d. HS-34 – strap cutter Y axis at +Y e. HS-35 - strap cutter Y axis at –Y					
BASE MODULE ASSEMBLY	7.	**Check pinch roller assembly**. Check pinch roller spring tension and flexibility of movement between rollers.	1	9			
		WARNING **Eye protection (goggles or face shield) must be worn.**					
VOLUME REDUCTION EQUIPMENT	8.	**Check cyclone interior for residual material.** 1. View interior of cyclone by looking through viewing window or upward through the material discharge opening. 2. If material/obstruction is blocking discharge of cyclone, remove by agitating until cyclone discharge is clear of any obstructions.	1	7			
VACUUM PUMP ASSEMBLY	9.	**Clean and vacuum, vacuum filter bowl and filter.** Remove vacuum filter bowl and filter, and vacuum them. Wash them with soap and water, if necessary. Reinstall vacuum filter and bowl.	2	7			
		WARNING **Be cautious when working around or on equipment when power has been applied.**					
SYSTEM	10.	**Restore air and electrical power.** Restore power to machine as prescribed by local lockout instructions providing lockout/restore procedures.	2	7			
BASE MODULE ASSEMBLY	11.	**Check audible and visual indicators.** Go into maintenance mode and check stack light's audible device and lamps and the remote amber stack light. Also, check in the operations mode. Repair or replace as needed.	2	9			

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	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
BASE MODULE ASSEMBLY	12.	**Check operation of six actuators and tray ram.** Go into maintenance mode and operate the six actuators. Go to: 1. Load screen – tray stop actuator (raise and lower) 2. Strap cutting station – horizontal (raise and lower) 3. Vertical (extend and retract) strap cutter actuators 4. Strap removal screen – horizontal (extend and retract) 5. Vertical (raise and lower) strap removal actuators 6. De-sleeve screen – sleeve gripping (suction cups) actuator up and down 7. Tray ram – extend and retract.	2	9			
ATU SYSTEM	13.	**Verify that photo sensors are working.** Go into the maintenance mode and check the operation of the photo sensors. Do this after the daily PM route has been completed. Go into the proper maintenance screen and block the photo sensor and see that its status changed: 1. Screen #1 – in-feed screen. Block: a. PE-6 – tray front scan start & zone front start b. PE-7 – full length tray c. PE-8 – beyond end of zone jam d. PE-9 – end of zone e. PE-10 – tray height (EMM) f. PE-11 – tray rear scan start. 2. Screen #2 – from in-feed screen, select scanner screen. Block: PE-6 – tray front scan start & zone start 3. Screen #3 – load screen. Block: PE-12 – tray in tray loading station	5	9			

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	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:								Bulletin Filename: MM14070AG				Frequency: 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)	Weeks
		4. Screen #4 – index conveyor. Block: PE-1 – index conveyor home position. Use Position, Home, Jog Forward, and Index buttons to change home in reference LED. 5. Screen #5 – strap cutting station screen. Block: a. PE-13 tray in strap cutting station. b. PE-14 tray between flights (just behind strap cutting station). Tray in position after cut. c. PE-19 – tray between strap cutting and tray loading station. 6. Screen #6 – de-sleeve screen. Block: a. PE-15 – tray in sleeve removal station, tray at de-sleever. b. PE-18 – tray between sleeve removal station (tray between de-sleever and strap cut). 7. Screen #7 – sleeve belt screen. Block: PE-2 – sleeve bin full.					
BASE MODULE ASSEMBLY	14.	**Calibrate the sleeve detect sensors.** Go into the maintenance mode, select the load screen, and select the sleeve detect screen. Calibrate the sleeve detect sensors.	20	9			
VACUUM PUMP ASSEMBLY	15.	**Check vacuum pump assembly operation.** 1. While in maintenance mode: a. Select de-sleeve screen by pressing sleeve removal section of ATU icon on main screen. b. Press vacuum button on de-sleeve screen. c. The vacuum gauge should read 10 Hg or less without anything on the suction cups. 2. If any deficiencies are noted, notify supervisor.	3	9			

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	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
	16.	**Change to the operator mode.** Run several trays with tray labels in the lead and trail positions to verify machine operation.	1	7			
ATU SYSTEM	17.	**Return ATU to service.** Return the ATU to normal operation.	2	9			
CLEAN UP	18.	**Clean up.** Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor.	2	All			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	2	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency 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)	Weeks

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ATTACHMENT 4

ATU MASTER CHECKLIST

03-ATU-AA-003-M

MONTHLY

Time Total: 56 Minutes

Refer to MS-243 if additional maintenance information is required.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	3	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency 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)	Weeks
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 check 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 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.** **WARNING FOR EWP/PPE:** **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			
SYSTEM	2.	**Power down and lock out air and electrical power.** Stop the ATU. Power down machine and lock out air and electrical power as prescribed by the current local lockout procedures.	2	All			
		NOTE The following procedure requires two people.					
BASE MODULE ASSEMBLY	3.	**Check strap puller alignment.** Check alignment between the lateral strap puller and the strap puller guide. Realign as needed.	10	9			
STRAP REDUCTION MODULE	4.	**Check strap cutting.** Pull cut straps from the can underneath the hopper. Visually check cut strap output. Straps should be cleanly cut and shorter than 10 inches. Notify supervisor if straps are longer than 10 inches or the cut end appears frayed.	2	7			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	3	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
BASE MODULE ASSEMBLY	5.	**Check vacuum cup level compensators.** Visually inspect vacuum cup level compensator plungers for scoring and abnormal wear. Repair/ replace as needed.	2	9			
		WARNING **Saw blade guard may be very sharp. Be cautious when working on it.**					
BASE MODULE ASSEMBLY	6.	**Check the saw blade guard for sharpness**. If saw blade guard is sharp, dull it by filing it down or replace it.	1	9			
		WARNING **Be cautious when working around or on equipment when power has been applied.**					
ATU SYSTEM	7.	**Restore air and electrical power.** Restore power to machine as prescribed by local lockout instructions providing lockout/restore procedures.	2	7			
ATU SYSTEM	8.	**Perform E-Stop switch, door interlock switch, stop switch, blower and cutter switch, and GUI functionality tests.** **NOTE** The ATU has eight E-Stop switches, four access door switches, a switch on the blower, a switch on the cutter, a switch on the acrylic panel that is beneath the tray ram, and an in-feed and out-feed stop switch. 1. Operate both stop switches, one at a time with the machine running. Check graphic user interface (GUI) display operator menu screen for proper change of state. Restart machine and check second stop switch. 2. Check each E-Stop switch, one at a time while the machine is running and not processing letter mail trays. Restart the machine after each time an E-Stop is activated and the machine stops.	30	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	3	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
		a. Activate an E-Stop. 1) Machine stops. 2) Red stack light illuminates. 3) Observe the graphic user interface (GUI) display operator menu screen for proper change of state. b. De-activate the E-Stop. c. Start machine. Green stack light illuminates. Observe the graphic user interface (GUI) display operator menu screen for proper change of state. d. Repeat sub-steps a thru c until all E-Stops have been checked. 3. Check all access door interlock switches one at a time while the machine is running and not processing letter mail trays. a. Activate an access door interlock switch. 1) Machine stops. 2) Red stack light illuminates. 3) Observe the graphic user interface (GUI) display operator menu screen for proper change of state. b. De-activate the access door interlock switch. c. Start machine. Green stack light illuminates. Observe the graphic user interface (GUI) display operator menu screen for proper change of state. d. Repeat sub-steps a thru c until all access door interlocks have been checked. 4. Check the blower interlock switch. a. Run a single flats tray. This starts blower and cutter motors. b. Check the blower interlock switch. 1) Remove the two switch mounting screws. 2) Remove blower interlock switch to check operation.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	3	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
		a) Machine stops. b) Red stack light illuminates. c) Observe the graphic user interface (GUI) display operator menu screen for proper change of state. d) De-activate the blower interlock switch and remount switch using removed screws. c. Start machine. Green stack light illuminates. Observe the graphic user interface (GUI) display operator menu screen for proper change of state. 5. Check the cutter interlock switch. a. Run a single flats tray. This starts blower and cutter motors. b. Check the cutter interlock switch. 1) Remove the two switch mounting screws. 2) Remove the cutter interlock switch to check the cutter interlock switch operation. a) Machine stops. b) Red stack light illuminates. c) Observe the graphic user interface (GUI) display operator menu screen for proper change of state. 3) De-activate cutter interlock switch. 4) Remount the cutter interlock switch using removed screws. c. Start machine. Green stack light illuminates. Observe the graphic user interface (GUI) display operator menu screen for proper change of state. 6. Check the acrylic panel interlock switch. a. Check the acrylic panel interlock switch. b. Loosen and remove some of the acrylic					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	3	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
		panel mounting screws to check the acrylic panel interlock switch operation. 1) Machine stops. 2) Red stack light illuminates. 3) Observe the graphic user interface (GUI) display operator menu screen for proper change of state. c. De-activate acrylic panel interlock switch by installing and tightening the acrylic panel mounting screws. d. Start machine. Green stack light illuminates. Observe the graphic user interface (GUI) display operator menu screen for proper change of state 7. Report all deficiencies to supervisor.					
BASE MODULE ASSEMBLY	9.	**Check vacuum generator vacuum.** Run several trays of letter mail. Monitor the vacuum gauge as the sleeves are removed. Vacuum gauge should read 15 inches of mercury or greater with ATU in operation and good, non-creased sleeves on the letter mail trays. If any deficiencies are noted, notify supervisor.	1	7			
ATU SYSTEM	10.	**Change to the operator mode.** Run several trays with tray labels in the lead and trail positions to verify machine operation.	1	7			
SYSTEM	11.	**Return ATU to service.** Return the ATU to normal operation.	2	9			
CLEAN UP	12.	**Clean up.** Ensure all tools**,** lubricants, rags**,** etc., are removed from the work area. Report all deficiencies to your supervisor.	2	All			

ATTACHMENT 5

ATU MASTER CHECKLIST

03-ATU-AA-004-M

QUARTERLY

Time Total: 82 Minutes

Refer to MS-243 if additional maintenance information is required.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
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 check 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 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.** **WARNING FOR EWP/PPE:** **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			
SYSTEM	2.	**Power down and lock out air and electrical power.** Stop ATU. Power down machine and lock out air and electrical power as prescribed by the current local lockout procedures.	2	All			
SYSTEM	3.	**Clean roller o-rings.** Use Chem pads to clean roller o-rings.	10	7			
SYSTEM	4.	**Clean GUI face (monitor).** Use a lint-free cloth to clean monitor.	2	7			
SLEEVE TAKEAWAY CONVEYOR	5.	**Clean sleeve takeaway conveyor and belt.** Use Chem pads to clean the sleeve takeaway conveyor belt.	5	7			
CYCLONIC SEPARATOR	6.	**Remove/replace the cyclonic separator dust skirt that connects the cyclonic separator to the waste container.**	3	7			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
		WARNING **Be cautious when working around or on equipment when power has been applied.**					
ATU SYSTEM	7.	**Restore air and electrical power.** Restore power to machine as prescribed by local lockout instructions providing lockout/restore procedures.	2	7			
TRAY CONVEYOR ROLLERS	8.	**Check tray conveyor DC power roller speed.** Go into the maintenance mode to check the power roller speeds. Check speed of the 5 tray conveyor DC power rollers. The speed of the in-feed tray power roller conveyors zone 1 and 2 set to 120 ft/min (± 5 ft/min). The speed of the out-feed power rollers and assist roller should be set to 150 ft/min (± 5 ft/min). The opposing pinch power rollers set to the maximum of 320 ft/min.	25	9			
SLEEVE TAKEAWAY CONVEYOR	9.	**Check the sleeve takeaway belt.** Align, adjust, and tighten, if needed, the sleeve takeaway belt.	5	9			
		WARNING **Be cautious when working around or on equipment when power has been applied and the equipment is running.**					
		NOTE The machine must have been running for a minimum of 15 minutes and remain running when using non-contact infrared to obtain a meaningful scan. Investigate cause of an abnormal temperature. If any deficiencies are noted, notify supervisor.					
IN-FEED CONVEYOR ASSEMBLY	10.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Infeed conveyor assembly 2. Electrical connections	2	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
		3. The motorized power rollers (2) 4. Cameras (2) 5. Fieldline input module (sensor actuator box – node 2) 6. Terminal connections 7. Connector plugs.					
INDEX CONVEYOR ASSEMBLY	11.	**Infrared scan**. Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Index conveyor assembly electrical connections assist roller 2. Roller control modules (3) 3. Chain drive shaft bearings 4. Chain idler shaft bearings 5. Field line input modules (3) – nodes 3, 4, and 6 6. Terminal connections and connector plugs.	2	9			
CAMERA INTERFACE	12.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Circuit Breakers 2. Ethernet Switch 3. Power Supply & electrical connections 4. Terminal connections and terminal plugs.	1	9			
MAIN CONTROL ENCLOSURE ASSEMBLY	13.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Main control enclosure assembly electrical connections 2. Servomotor controller assembly 3. Main disconnect switch (CB1) 4. Utility receptacle 5. DC power supplies (4) 6. AC line filter for servomotor controller	2	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
		7. Voltage presence detector 8. Saw motor controller 9. Voltage monitor 10. Surge suppressor 11. Fan 12. Stack light assembly 13. Emergency stop and safety relay 14. Jumpers 15. Power distribution blocks 16. Various circuit breakers 17. Fuses 18. Relays 19. Node 9.					
INDEX CONVEYOR	14.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Node 5 2. Node 6 3. Node 7 4. Terminal connections 5. Terminal plugs.	1	9			
EXIT (OUT-FEED) CONVEYOR ASSEMBLY	15.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Index conveyor assembly 2. Electrical connections 3. All parts of the exit (out feed) conveyor 4. Motorized power rollers (2), including terminal connections and connector plugs.	1	9			
INDEX CONVEYOR	16.	**Infrared scan.** Open the sleeve incline conveyor door to monitor and scan with non-contact infrared the following:	1	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency 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)	Weeks
		1. Index servo motor 2. Gear box 3. Chain drive shaft bearings, including terminal connections and terminal plugs.					
SLEEVE CONVEYOR ASSEMBLY	17.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Sleeve conveyor assembly 2. Drive motor 3. Gear box 4. Belt drive shaft 5. Belt idler shaft bearings 6. Electrical connections.	1	9			
SAW ASSEMBLY	18.	**Infrared scan.** Use non-contact infrared to monitor and scan the saw assembly electrical connections and equipment including the saw motor for abnormal temperatures.	1	9			
STRAP REDUCTION EQUIPMENT	19.	**Infrared scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Strap reduction systems 2. In-line cutter 3. Blower motors 4. Blower 5. Terminal connections and terminal plugs.	1	9			
		WARNING **Be cautious when working around or on equipment when power has been applied and the equipment is running.** **NOTE** The machine must have been running for a minimum of 15 minutes and remain running					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
		when using the Ultrasonic detector to obtain a meaningful scan. Investigate the cause of an abnormal sound and notify your supervisor of necessary corrective action. **NOTE** Manually activate all air valves, thrusters, and actuators to properly do the Ultrasonic scan on the equipment.					
STRAP REDUCTION EQUIPMENT	20.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Volume reduction equipment 2. Cutter motor 3. Coupler 4. Cutter 5. Blower motor 6. Blower 7. 4 inch piping 8. Mufflers 9. Connection joints 10. Cyclonic separator for air leaks and wear through.	2	9			
ACTUATOR CONTROL VALVE ASSEMBLY	21.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Actuator control valve assembly 2. Tee connections going to it from the yellow hose 3. Fittings on the actuator control valve assembly 4. Valve island connections 5. Air lines 6. Connections 7. Fittings.	1	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
STRAP CUTTER ASSEMBLY	22.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Strap cutter assembly 2. Rod-less cylinder (horizontal actuator) 3. Air lines 4. Connections 5. Fittings.	1	9			
SLEEVE GRIPPING ASSEMBLY (SLEEVE GRIPPING ACTUATOR)	23.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Sleeve gripping assembly 2. Sleeve gripping assembly actuator 3. Vertical actuator 4. Air lines 5. Connections 6. Fittings.	1	9			
TRAY RAM VALVE ASSEMBLY	24.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Tray ram valve assembly 2. Yellow hose connection coupler 3. Tray ram valve connections 4. Air lines 5. Fittings.	1	9			
STRAP TAKE-AWAY ASSEMBLY (STRAP PULLER)	25.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Strap take-away assembly 2. Rod-less cylinder (horizontal actuator) 3. Linear thruster (vertical actuator) 4. Air lines 5. Connections 6. Fittings.	1	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
TRAY STOP ASSEMBLY	26.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Tray stop assembly 2. Linear thruster 3. Air lines 4. Connections 5. Fittings.	1	9			
AIR MANAGEMENT SYSTEM ASSEMBLY	27.	**Ultrasonic scan.** Use Ultrasonic detector to scan following: 1. Air management system assembly 2. Facility air lockout valve 3. Connections to the filter/regulator combination unit 4. Smooth start exhaust valve 5. Muffler 6. Adjustable pressure switch 7. Air pressure gauge 8. Yellow hose connections throughout the machine.	1	9			
CLEAN UP	28.	**Clean up.** Shut down machine. Close all panels and doors. Reset all interlock switches. Prepare machine for operation and verify machine is in operational status.	2	All			
ATU SYSTEM	29.	**Change to the operator mode.** Run several trays with tray labels in the lead and trail positions to verify machine operation.	1	7			
	30.	**Return ATU to service.** Return the ATU to normal operation.	2	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	4	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency 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)	Weeks

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ATTACHMENT 6

ATU MASTER CHECKLIST

03-ATU-AA-005-M

SEMI-ANNUAL

Time Total: 21 Minutes

Refer to MS-243 if additional maintenance information is required.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	5	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
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 check 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 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.** **WARNING FOR EWP/PPE:** **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			
		WARNING **Be cautious when working around or on equipment when power has been applied.**					
DC POWER SUPPLIES	2.	**Check DC power supplies.** Check power supply outputs. Check PS-1**,** PS-2**,** PS-3, and PS-4 outputs for 24 ±0.2 VDC**.**	10	9			
		WARNING **Eye protection (goggles or face shield) must be worn.**					
STRAP REDUCTION SYSTEM	3.	**Replace cyclone dust skirt.**	5	7			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	5	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
ATU SYSTEM	4.	**Change to the operator mode.** Run several trays with tray labels in the lead and trail positions to verify machine operation.	1	7			
SYSTEM	5.	**Return ATU to service.** Return the ATU to normal operation**.**	2	9			
CLEAN UP	6.	**Clean up.** Ensure all tools**,** lubricants**,** rags**,** etc**.,** are removed from the work area**.** Report all deficiencies to your supervisor**.**	2	All			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	5	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency 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)	Weeks

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ATTACHMENT 7

ATU MASTER CHECKLIST

03-ATU-AA-006-M

ANNUAL

Time Total: 63 Minutes

Refer to MS-243 if additional maintenance information is required.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	6	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency 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)	Weeks
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 check 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 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.** **WARNING FOR EWP/PPE:** **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			
SYSTEM	2.	**Power down and lock out air and electrical power.** Stop ATU. Power down machine and lock out air and electrical power as prescribed by the current local lockout procedures.	2	All			
STRAP REDUCTION SYSTEM ASSEMBLY	3.	**Check blower interior for wear.** Visually check the interior of the blower and impeller for damage (chipped or cracked) or wear. 1. Check blower impeller (fan blade) for chips or excessive wear. The impeller thickness should not be thinner than 1/8" in any area**.** If impeller thickness is less than 1/8", replace impeller. 2. Install new impeller if worn, chipped, or cracked. 3. Check and clean muffler for debris hanging up in it.	20	7			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	6	M
Equipment Nomenclature: Automatic Tray Unsleever	Equipment Model:										Bulletin Filename: MM14070AG					Frequency: 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)	Weeks
ATU CHECK	4.	**Check ATU.** 1. Check entire machine. 2. Check for loose bolts**,** air fittings**,** and other problems. Check all system hardware for tightness including: a. Blower. b. Cutter. c. Cyclone and its support stand. d. Tubing and fitting couplings. e. Adjust, align, tighten, or repair components as necessary.	20	9			
BASE MODULE ASSEMBLY	5.	**Check and tighten.** Check and tighten index conveyor's four flange bearings and the six sprocket wheels on the Index Conveyor's Drive and Idler shafts.	5	9			
VOLUME REDUCTION EQUIPMENT	6.	**Check blower tubing for wear leakage.** 1. Check exterior of all tubing and elbows for holes. 2. Replace components with holes.	3	7			
		WARNING **Eye protection (goggles or face shield) must be worn.**					
		WARNING **Face the ladder and use both hands when ascending or descending the ladder. Keep your body centered between the rails of the ladder at all times. Failure to do so may cause injury or death.**					
VOLUME REDUCTION EQUIPMENT	7.	**Replace cyclone dust bag.**	5	7			
		WARNING **Be cautious when working around or on equipment when power has been applied.**					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	T	U						A	A	0	0	6	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG				Frequency 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)	Weeks
ATU SYSTEM	8.	**Restore air and electrical power.** Restore power to machine as prescribed by local lockout instructions providing lockout/restore procedures.	2	7			
	9.	**Validate machine operation.** Change to the operator mode and run several trays with tray labels in the lead and trail positions to verify machine operation.	1	7			
SYSTEM	10.	**Return ATU to service.** Return the ATU to normal operation.	2	9			
CLEAN UP	11.	**Clean up.** Ensure all tools, lubricants**,** rags**,** etc**.,** are removed from the work area. Report all deficiencies to your supervisor.	2	All			

ATTACHMENT 8

ATU OPERATIONAL MAINTENANCE PROCEDURES

OPERATIONAL TOUR

09-ATU-AA-001-M

Time Total: 13 Minutes

TIME PER TOUR

ITEM	TIME	MULTIPLIER	TOTAL
1	1	1	1
2	1	1	1
3	1	3	3
4	1	3	3
5	5	1	5
			13

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	9	A	T	U						A	A	0	0	1	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency Tourly

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)	Weeks
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.** **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 cannot be used. Report safety deficiencies to your supervisor immediately upon detection.** **WARNING FOR EWP/PPE:** **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			
MACHINE LOG	2.	**At the beginning of the tour examine machine log.** Examine log and bring forward any unresolved problems from the previous tour. **NOTE** Operational checks must be made with machine processing mail in a normal operating mode.	1	9			
SYSTEM GENERAL	3.	**Every two hours check for unusual sounds, odors.** Be alert for unusual sounds, odors, or other indication of potential failure of the ATU.	1	9			
SYSTEM SAFETY INDICATORS	4.	**Every two hours check warning horn and beacons.** Check for proper operation of warning horns and beacons on start-ups.	1	9			
ADMINISTRATIVE	5.	**At the end of tour compile the following information:** • Any work orders generated • Make entries in Machine Logbook of any	5	9			

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	9	A	T	U						A	A	0	0	1	M
Equipment Nomenclature Automatic Tray Unsleever	Equipment Model										Bulletin Filename MM14070AG					Frequency Tourly

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)	Weeks
		discrepancies found during the tour Turn this information into Maintenance Supervision. Brief personnel coming on duty					