MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE

Maintenance Management Order

SUBJECT: Flats Sequencing System (FSS) Operational and Preventive Maintenance using eCBM

DATE: April 20, 2018

NO: MMO-023-18

TO: All FSS Sites

FILE CODE: H1
gcoo:mm15036at

Online Change Record		
Change #	**Date**	**Description of Change**
4	02/03/2021	In Attachment 2, in Task 1110 added a new Step 4 moving original Step 4 to Step 5, in Task 1150 added Step 7, in Task 1240 added a new Step 2 moving original Step 2 to Step 3, in Task 1770 added a new Step 3 moving original Step 3 to Step 4, in Task 2320 added Step 12 and Step 13, in Task 5110 added a new Step 9 moving original Step 9 to Step 10, in Task 5140 added a new Step 3 moving original Step 3 to Step 4, in Task 6510 added a new Step 10 moving original Step 10 to Step 11. In Attachment 3, in Task 8100 added Step 6.
3	08/31/2020	Deleted Task 7905 and updated the Workload Estimate.
2	06/18/2020	In Attach 2 edits made to Tasks 1025,1750,1770,2940, 4998, 5125, 5130, 5300, 5400, 5410, 5580, 5610 and in Attach 3 8010. In Attach 2 deleted Tasks 2970, 3070, 3100, 5020, 5615, and 7150. In Attach 3 replaced the contents of Task 8140 with the contents of Task 5020 and added Task 8115.
1	03/23/2020	Deleted Attachment 3, item 8120, step1a.

This Maintenance Management Order (MMO) **supersedes MMO-074-13** provides Operational and Preventive Maintenance Guidelines for the Flats Sequencing System (FSS). This bulletin applies to Acronym FSS, Class Code AA.

The workhours indicated in the workload estimate (Attachment 1) are based on an 18-hour operations window (IAW MMO-062-13) and reflect the *maximum* annual workhours required to maintain each system. Actual workhour requirements and the frequency of tasks are dependent on run time and pieces processed. Therefore, PM workhour requirements will vary day-to-day based on site specific machine utilization. Management may modify task frequencies to address local conditions.

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.

Preventive Maintenance (PM) guidelines provide maintenance employees with the recommended task based maintenance activities. The Electronic Conditioned Based Maintenance (eCBM) is an abbreviated task list that represents a portion of the PM checklist. The complete master PM checklist must be accessible to all maintenance

employees when performing PM and eCBM task based maintenance activities.

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. 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.

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

Frederick L. Jackson III
Manager
Maintenance Technical Support Center
HQ Maintenance Operations

Attachments
1. Summary Workload Estimate For FSS System
2. FSS Master Checklist 03-FSS-AA-001-M – PM
3. FSS Master Checklist 09-FSS-AA-001-M – Operational Maintenance

ATTACHMENT 1

SUMMARY WORKLOAD ESTIMATE

FOR FSS SYSTEM

SUMMARY

WORKLOAD ESTIMATE FOR FSS

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
5 Days	2255.94	676.78	2932.73	293.27	3226.00	5,028.67	6,831.33	7,732.67
6 Days	2608.03	782.41	3390.43	339.04	3729.48	5,892.68	8,055.88	9,137.48
7 Days	2960.11	888.03	3848.14	384.81	4232.96	6,756.69	9,280.42	10,542.29
*	**Repair maintenance estimates based on 30% of preventive maintenance.**							
**	**Based on 10% of total PM and repair.**							

OPERATIONAL MAINTENANCE			
	One Tour	Two Tours	Three Tours
5 Day	1802.67	3605.33	4506.67
6 Day	2163.20	4326.40	5408.00
7 Day	2523.73	5047.47	6309.33

ATTACHMENT 2

FSS MASTER CHECKLIST

03-FSS-AA-001-M - PM

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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	1000	**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.** **WARNING for SDS:** **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.** **NOTE:** Items numbered in the range from 1000 to 4998 are performed with entire FSS power locked out.	1	All			
ENTIRE FSS: SYSTEM	1025**	**Prepare the FSS for Maintenance.** 1. Prepare the FSS for maintenance using System Controller HMI Tray Tools Hardstop Maintenance screen to bring components to zero potential energy positions: a. Feeders VRL-F b. Dolly Induct Destacker	50	09			D

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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
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		c. Dolly Induct Stacker d. ITC 1 and 2 VPD e. ITC 1 and 2 VPPD 2. Prepare the following FSS subsystems for maintenance using the RMDC menu driven jog features and as prescribed by the current local lockout/restore procedures to bring components to zero potential energy positions: a. Carousel Level Diverter b. ITC 1 and 2 RCT Restacker c. ITC 1 and 2 Mail Rotate Box d. ITC 1 and 2 Verticalizer e. ITC 1 and 2 Stacker/Loader f. ITC 1 and 2 Separator g. ITC 1 and 2 Transfer Paddle h. ITC 1 and 2 Transfer Boxes i. ITC 1 and 2 ACT Loader j. ITC 1 and ITC 2 Street Tray Lift 3. Shutdown the following systems on each Infeed Line: a. Infeed Lines Printer b. FICS Labeler c. Image Processing Computers (IPC) 4. Shutdown the System Controller Computer using the following substeps: a. Login to the System Controller Computer using ACE Credentials b. Click Shutdown button on the HMI Navigation Panel c. Click YES on Shutdown Computer Confirmation dialog box d. Click Exit in Context Saving dialog box e. Verify System Controller PC powers off after windows finishes shutting down 5. Toggle Sort Controller power switch to OFF position. 6. Toggle Carousel Controller power switch to						

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		OFF position. 7. Toggle Tray Handling Controller power switch to OFF position. Reference MS-209 Volume H Section 5 System Controller Normal Shutdown					
ENTIRE FSS: SYSTEM	1030**	**Power Down and Lockout Power** Power down the machine and lock out its power source as prescribed by the current local lockout/restore procedures by an FSS trained employee.	20	All			D
ENTIRE FSS: SYSTEM	1040**	**Perform Mail Search.** 1. Open all hinged covers and doors on each automated feeder and infeed line module on Infeed Line 1 and 2, and perform mail search. 2. Continue mail search, checking the front side of mini-carousels, mail sweeper, upper drive module, upper justifier, lower justifier, lower drive module, rear side of mini-carousels, and on the floor. 3. Continue down the maintenance alley; perform a mail search beginning at bin 1, working around to bin 360. a. Remove any debris/mail found on ETAC and PATDs upper and lower. 4. Continue to the outside of carousel on left side of the sort module beginning at bin 1 continuing toward the tension module. a. Remove any debris/mail found on the FTAC, PATDs, and sort module covers upper and lower and on the floor. b. Search for mail on the mail recovery belt upper/lower and on the floor. 5. Continue with checking the upper and lower conveyor section in pre-staging, rear tension module, and floor. 6. Continue to the outside of carousel on right side of the tension module beginning at bin 91 continuing toward the level change module. a. Remove any debris/mail found on the FTAC, PATDs, and sort module covers upper and lower and on the floor.	45	07		4	

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:								Bulletin Filename: mm15036				Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		b. Search for mail on the mail recovery belt upper/lower and on the floor. 7. Continue to the level change, and check for mail on the mail catch plate underneath the upper bucket assemblies and on the floor. 8. Continue to the transfer dampener, and check for mail in the dampener and on the floor, finishing at Infeed Line 2. 9. Starting at Post Staging and working towards Pre-Staging, search all staging slices upper and lower for debris/mail, also check floor. 10. Check for mail in the Dolly Induct and on the floor around Dolly Induct. 11. At both ITC, starting at the RCT justifier and moving to the stacker loader, Index table, ACT load station, ACT Justifier, VPD, EBMX shelf, VPPD, Street Tray Labeler, FTU Drawbridge, Verticalizer and lift, RCT lift, and RCT Unloader. a. Check for mail on/under all conveyor systems. b. Check for mail on the floor. 12. Close all hinged covers and doors on each automated feeder and infeed line module on Infeed Line 1 and 2.					
ENTIRE FSS: ATMS SYSTEM	1090	**Clean ATMS System Barcode Scanners (22).** Clean Barcode Scanner lens using lint-free cloth or microfiber glove. 1. Upper and lower S-curves. 2. Pre-staging conveyors. 3. Tray Staging. 4. Post staging conveyors. 5. ETR conveyor. 6. Feeder input conveyor. 7. Dolly Induct. *1 minute per Barcode Scanner.	22*	07			W
CAROUSEL ASSEMBLY: SENSOR, BUCKET CHECKING	1100**	**Clean Upper BCS 1 and Lower BCS Sensor Arrays in Level Change Area.** 1. Wipe the following lenses with a lint-free cloth or microfiber glove.	3*	07			W

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
SYSTEM		a. Flap closed reflective photo eye. b. Four Mail Present photo eyes. c. Two Folded Flats reflective photo eyes. 2. Clean Lexan shield. 3. Clean proximity sensor. Refer to MS-209 Volume D, Section 7, Bucket Control System Photoeyes Cleaning and Reflector Cleaning. *1.5 minutes per BCS Array.					
CAROUSEL ASSEMBLY: RIGID MAIL DETECTOR	1110	**Align Spring Settings.** 1. Remove panel over the Rigid Mail Detector assembly. 2. Verify springs (Qty. 2) are attached and in good condition. 3. Use special tools to check alignment. a. Verify flap is 6 mm above buckets at rest using Small Mail Flap Gauge (PSN 5220-12-000-7391). b. Verify limit switch actuates 12 mm above buckets using Large Mail Flap Gauge (PSN 5220-12-000-7392). 4. Generate a work order for any discrepancies found. 5. Replace panel over the Rigid Mail Detector assembly. Refer to MS-209 Volume D, Section 11, Tall Flats Detector.	5	09			M
CAROUSEL ASSEMBLY: JUSTIFIER ASSEMBLY	1140**	**Inspect Upper and Lower Justifier Rollers, Idlers, Ramps, and Drive Belts (2).** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Lift handle up and rotate arm counterclockwise to lower justifier table. 2. Turn two locking handles one half turn counterclockwise, and pull justifier out until justifier latches on right hand side. 3. Ensure that the idler pulleys rotate freely and have no visible damage.	15*	09			W

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		4. Inspect drive belt by removing belt ramps. a. Loosen four screws securing ramp base to justifier. b. Slide ramp base out to reveal belt. c. Check for proper belt tension. 5. Inspect belt for end-of-life conditions. a. Cracks or cuts in excess of 2 mm in length. b. Abrasions in excess of 2 mm in length. c. Gouges in excess of 2 mm in length. d. Missing teeth. e. Frayed edges. 6. Inspect roller surface for: a. Wear or cracks. b. Deformities such as grooves or missing material. c. Clean rollers surface with locally approved cleaning solution. 7. Vacuum any accumulation of dust or debris. 8. Slide ramp base back into place, tighten four screws securing ramp base to justifier. 9. Push justifier table back in place. 10. Secure by turning two locking handles one-half turn clockwise. 11. Rotate arm clockwise to raise justifier table to operating position. 12. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 7, Timing Belt Checking Interface Module. Refer to MS-209, Volume D, Section 7, Timing Belt Checking Level Change Module. *7.5 minutes per Justifier.					
CAROUSEL ASSEMBLY: LEVEL DIVERTER ASSEMBLY	1150	**Check the Divert Conveyor.** 1. Remove Plexiglass covers from Divert Conveyor area. 2. Check V-belt for end-of-life conditions.	15	07	375		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Nicks. 3. Generate work orders to replace V-belt when conditions indicate replacement. 4. Check flat belt for end-of-life conditions. a. Cuts in excess of 10 mm. b. Abrasions in excess of 10 mm. c. Gouges in excess of 10 mm. d. Nicks. 5. Generate work orders to replace flat belt when conditions indicate replacement. 6. Check linear actuator belt for proper tension. a. Place belt tensioning tool (3130-08-000-4149) on the belt at mid-span of linear actuator. b. Turn torque wrench until belt tensioning tool is parallel with linear actuator and record torque value. c. Generate work order to adjust tension if reading is not between 105 in-lbs to 155 in-lbs. 7. Replace Plexiglass covers on Divert Conveyor area. Refer to MS-209, Volume D, Section 11, Belt Tension Adjustment for current specifications. Refer to MS-209, Volume D, FSM, Section 7, Level Diverter.					
CAROUSEL ASSEMBLY: UPPER AND LOWER CAROUSEL DRIVE MODULES	1160	**Inspect Drive Module Chains (2).** **WARNING: Follow current Confined Space MMO**. 1. Inspect drive chain and sprockets for following end-of-life conditions. a. Uneven wear between sprocket teeth. b. Missing or cracked sprocket teeth. c. Damaged chain links. d. Stretched chain where tensioner does	30*	09	375		

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		not take up excess slack. 2. Generate a work order for any discrepancies found. Refer to MS-209 Volume D, Section 7, Drive Chain and Sprockets Checking. * 15 minutes per drive chain.					
CAROUSEL ASSEMBLY: UPPER CAROUSEL DRIVE MODULE	1180	**Check the Tension and Tracking of the Mail Sweeper Belt and Check the Mail Sweeper Vane Wheels Condition.** 1. Remove four screws and four washers securing Upper Carousel Drive Module (UCDM) Panel. 2. Open UCDM-9 door. 3. Open mini-carousel top right front door until door latches open. 4. Check wheel for following conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Missing wheel flaps. 5. Using a calibrated belt tensiometer, PSN 3915-02-000-3404, verify belt tension is 20–25 lbs. 6. Close mini-carousel top right front door until door latches open. 7. Close UCDM-9 door. 8. Install UCDM panel and secure with four screws and four washers. 9. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Flats Extractor. Refer to MS-209, Volume D, Section 7, Mailpiece Extractor Belt Tension Checking Procedure.	10	07	375		
CAROUSEL ASSEMBLY: LEVEL CHANGE MODULE	1190	**Inspect the Condition of the S-Curve Tray Guide Rails.** 1. Inspect the tray guide rails are not damaged and are correctly aligned so that an RCT passes smoothly through conveyor.	2	09	2250		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		2. Inspect for missing or loose hardware. 3. Generate a work order for any discrepancies found.					
CAROUSEL ASSEMBLY: UPPER CAROUSEL DRIVE MODULE	1200	**Check Oil Level in the Main Carousel Drive Bearings.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Remove UCDM-19 panel. 2. Locate oil level gauge under oil level gauge cover. **NOTE:** The lower oil level indicator ring should be positioned 92 mm above the elbow fitting's centerline. The upper oil level indicator ring should be positioned 10 mm above the lower ring. 3. Verify oil level is between upper and lower ring oil level indicators. 4. If oil level is below lower ring, generate a work order to add oil. 5. Replace panel. Refer to MS-209 Volume D, Section 7 Oil Level Checking. Refer to MS-209 Volume D, Section 6 Oil Change.	10	07	1125		
CAROUSEL ASSEMBLY: LOWER CAROUSEL DRIVE MODULE	1210	**Check Oil Level in the Main Carousel Drive Bearings.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Remove UCDM-16 panel. 2. Remove Level Diverter front window 6. 3. Locate oil level gauge under oil level gauge cover. **NOTE:** The lower oil level indicator ring should be positioned 92 mm above the elbow fitting's centerline. The upper oil level indicator ring should be positioned 10 mm above the lower ring. 4. Verify oil level is between upper and lower ring oil level indicators. 5. If oil level is below lower ring, generate a	10	07	1125		

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		work order to add oil. 6. Replace window. 7. Replace panel. Refer to MS-209 Volume D, Section 7, Oil Level Checking. Refer to MS-209 Volume D, Section 6 Oil Change.					
CAROUSEL ASSEMBLY: SYSTEM	1220	**Clean FTAC Photoeyes.** Clean all photoeyes on the FTAC using lint-free cloth or micro fiber glove.	20	07	1125		
CAROUSEL ASSEMBLY: SYSTEM	1230**	**Check Chain Wiper (4).** 1. Remove and clean brush. 2. Reinstall brush and adjust wiper assembly so that the wiper is in slight contact with the chain. 3. Generate a work order to replace brush if brush does not contact chain. Refer to MS-209, Volume I, Parts Information, Cleaner, Chain for locations. Refer to MS-209, Volume D, Section 7, Chain Cleaner Brush Checking Procedure. *10 minutes per brush.	40*	07	2250		
CAROUSEL ASSEMBLY: EMPTY TRAY ACCUMULATION CONVEYOR	1235	**Check ETAC Belt Brushes, Clean ETAC Circuit Card Housing and ETAC and PATD Photo Eyes.** **Check / Adjust the ETAC Belt Brushes.** The upper ETAC brushes are located at PATD 1, 90, 91, 180 (Qty. 2 per PATD). The lower ETAC brushes are located at PATD 181, 270, 271 360 (Qty. 2 per PATD). 1. Verify brush is adjusted so it contacts the ETAC belt. 2. If brush cannot be adjusted so that it contacts the belt, generate a work order to replace brushes. **Clean ETAC circuit card housing and ETAC and PATD photo eyes.** 1. Vacuum top exterior of circuit card housing below ETAC belt return path to remove ETAC belt dust. 2. Clean all ETAC photoeyes using lint-free	60	07	375		

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		cloth or microfiber glove. 3. Clean all PATD photoeyes from FTAC side of Carousel using a long handled duster.					
CAROUSEL ASSEMBLY: TENSION MODULE	1240	**Check Upper and Lower U-Turn Photocells, O-Rings Belts, and Rollers.** 1. Open TM2 door or TM3 door as necessary to access tray present reflective photoeye. 2. Wipe the photo cell with a lint-free cloth or microfiber glove. 3. Check O-belt for end-of-life conditions. a. Abrasions in excess of 2 mm. b. Gouges in excess of 2 mm. c. Stretching so O-belt does not engage roller 2. **Verify reflector position.** 1. Verify reflector is mounted 105 mm to 115 mm from the end of frame and edge of mounting bracket. **Verify tray present photoeye position.** 2. Close TM2 and TM3 doors. 3. Verify photoeye is mounted 240 mm to 250 mm from the end of frame and edge of mounting bracket. 4. Generate a work order for any discrepancies found.	10	07	2250		
CAROUSEL ASSEMBLY: LOWER CAROUSEL DRIVE MODULE	1250	**Service the Gear Motor Gear Box.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Place 1 gallon drain pan under gear motor to catch draining gear oil. 2. Remove drain plug (8 mm) from the bottom of gear motor and allow the gear motor to drain completely. 3. Replace drain plug in bottom of gear motor. 4. Remove the fill plug (8 mm) from the top of the gear box, and remove the upper most oil control plug (8 mm) from the front side of the gear box. 5. Fill with CLP 460 oil until the oil level is at the	40	07	13500		

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					Run Hours	Pieces Fed (000)	Freq.
		bottom of the oil control plug hole. 6. Replace all removed plugs (8 mm) and clean up any leaked or spilt oil from the gear box and surrounding area. 7. Remove drain pan from under gear motor and dispose of used oil in accordance with local procedures. Refer to MS-208, Vol D, Section 7, R&R Gear Motor Chain.					
CAROUSEL ASSEMBLY: LOWER CAROUSEL DRIVE MODULE	1260	**Replace Gear Motor Chain and Sprocket.** 1. The drive chain is located in the LCDM (Lower Carousel Drive). 2. Remove, replace, and align the chain and drive sprocket in accordance with MS-209, Volume D, Section 12. a. Drive Sprocket – PSN 3020-12-000-3735. b. Chain with Connecting Link – PSN 3020-11-000-2782. c. Sprocket Alignment Tool – PSN 5220-12-000-7394. Refer to MS-209, Vol D, Section 12, R&R Gear Motor Chain.	300	09	9000		
CAROUSEL ASSEMBLY: LOWER CAROUSEL DRIVE MODULE	1270	**Replace Bearing Oil.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Before starting this procedure, ensure one of the three oil fill plugs is accessible. 2. Place 1 gallon catch pan directly below oil drain plug. 3. Remove one oil drain plug and let used oil drain into oil catch pan. **NOTE:** If metal debris is found, open a log with MTSC and include pictures of drain plugs and debris in log. 4. Visually check oil drain plug for presence of metal debris and, if present, remove and clean the other three remaining oil drain plugs after used oil is completely drained. 5. Clean and install all oil drain plugs. 6. Remove oil catch pan.	120	07	18000		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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. Clean up any spills. 8. Clean area around oil fill port opening. 9. Remove oil fill plug from oil fill port. 10. Add oil (Shell Omala HD220) slowly in three one quart increments. 11. Check site glass frequently to avoid overfilling. 12. Install and tighten oil fill plug, and wipe up all fluid spills. 13. Visually check oil drain plug to ensure there is no leakage. **CAUTION: Bearing Oil Sight Glass is very fragile and assembled to precise tolerances. Do not tamper with or attempt to disassemble sight glass.** Refer to MS-209 Volume D, Section 6, Oil Change. Refer to MS-209 Volume D, Section 7, Oil Level Checking.					
CAROUSEL ASSEMBLY: UPPER CAROUSEL DRIVE MODULE	1280	**Replace Bearing Oil.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Before starting this procedure, ensure one of the three oil fill plugs is accessible. 2. Place 1 gallon catch pan directly below oil drain plug. **NOTE:** If metal debris is found, open a log with MTSC and include pictures of drain plugs and debris in log. 3. Remove one oil drain plug and let used oil drain into oil catch pan. Visually check oil drain plug for presence of metal debris and, if present, remove three remaining oil drain plugs after used oil is completely drained. 4. Clean and install all oil drain plugs. 5. Remove oil catch pan. 6. Clean up any spills. 7. Clean area around oil fill port opening. 8. Remove oil fill plug from oil fill port.	120	07	18000		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		9. Add oil (Shell Omala HD220) slowly in three one quart increments. 10. Check site glass frequently to avoid overfilling. 11. Install and tighten oil fill plug, and wipe up all fluid spills. 12. Visually check oil drain plug to ensure there is no leakage. **CAUTION: Bearing Oil Sight Glass is very fragile and assembled to precise tolerances. Do not tamper with or attempt to disassemble sight glass.** Refer to MS-209 Volume D, Section 6, Oil Change. Refer to MS-209 Volume D, Section 7, Oil Level Checking.					
CAROUSEL ASSEMBLY: UPPER CAROUSEL DRIVE MODULE	1290	**Service the Gear Motor Gear Box.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Place 1 gallon drain pan under gear motor to catch draining gear oil. 2. Remove drain plug (8 mm) from the bottom of gear motor and allow the gear motor to drain completely. 3. Replace drain plug in bottom of gear motor. 4. Removed the fill plug (8 mm) from the top of the gear box, and remove the upper most oil control plug (8 mm) from the front side of the gear box. 5. Fill with CLP 460 oil until the oil level is at the bottom of the oil control plug hole. 6. Replace all removed plugs (8 mm) and clean up any leaked or spilt oil from the gear box and surrounding area. 7. Remove drain pan from under gear motor and dispose of used oil in accordance with local procedures.	40	07	13500		
CAROUSEL ASSEMBLY: UPPER CAROUSEL DRIVE MODULE	1300	**Replace Gear Motor Chain & Sprocket.** 1. The drive chain is located in the UCDM (Upper Carousel Drive). 2. Remove, replace and align the chain and	240	09	9000		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036			Occurrence eCBM		

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.
		drive sprocket in accordance with MS-209, Volume D, Section 12. a. Drive Sprocket – PSN 3020-12-000-3735. b. Chain with Connecting Link – PSN 3020-11-000-2782. c. Sprocket Alignment Tool –PSN 5220-12-000-7394. Refer to MS-209, Volume D, Section 12, R&R Gear Motor Chain.					
DOLLY INDUCT: ELECTRICAL CABINET	1400	**Replace Electrical Cabinet Filter.** 1. Remove and discard filter from cabinet. 2. Install new filter (PSN 4140-11-000-2236).	2	07	1125		
DOLLY INDUCT: SYSTEM	1410	**Clean Photoeyes.** Using a lint-free cloth or microfiber glove, wipe lens and reflector.	60	07	1125		
DOLLY INDUCT: PANEL, PNEUMATIC, DOLLY INDUCT	1430	**Clean Filter/Regulator.** 1. Place shutoff valve in EXH position leading to filter/regulator and verify pressure gauge indicates 0 PSI. 2. Open petcock and drain water into approved container. 3. Close petcock. 4. Remove bowl from regulator with O-ring. 5. Unscrew moisture separator and remove filter. 6. Clean bowl and filter with lint-free towel or microfiber glove. 7. Install filter and secure with moisture separator. 8. Install bowl with O-ring onto regulator. 9. Place shutoff valve in SUP position leading to filter/regulator. 10. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Filter/Regulator Cleaning, Dolly Induct Module.	2	07	2250		
EMPTY TRAY RETURN CONVEYOR::	1500	**Clean Filter/Regulator.** 1. Place shutoff valve in EXH position leading to filter/regulator and verify pressure gauge	6*	07	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
PANEL, PNEUMATIC, TAKE-UP		indicates 0 PSI. 2. Open petcock and drain water into approved container. 3. Close petcock. 4. Twist and remove bowl from regulator with O-ring. 5. Unscrew moisture separator, and remove and discard filter element. 6. Clean bowl and filter with a lint-free cloth or microfiber glove. 7. Install new filter element (4330-13-000-5452) and secure with moisture separator. 8. Replace O-ring. 9. Install bowl with O-ring onto regulator. 10. Place shutoff valve in SUP position leading to filter/regulator. 11. Generate a work order for any discrepancies found. *3 minutes per filter/regulator.					
EMPTY TRAY RETURN CONVEYOR: DRIVE MODULE ASSEMBLY	1510	**Clean and Lubricate the Drive Chains.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Clean drip pan before removing. 2. Remove four supporting chains and drip pan. 3. Remove eight screws and two chain guards. 4. Apply light coat of oil to drive chain. 5. Using shop rags, remove excess oil. 6. Install two chain guards and eight screws. 7. Install drip pan and four supporting chains. Refer to MS-209 Volume C, Section 7, Drive Module.	30	07	2250		
CONVEYOR, FULL RCT, POST-STAGING: PHOTOEYE	1530	**Clean Photoeyes.** Using a lint-free cloth or microfiber glove, wipe lens and reflectors.	10	07	1125		
FLATS	1540	**Clean Filter/Regulator.**	10*	07	2250		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
SEQUENCING SYSTEM (FSS): FSS MAIN PNEUMATIC DISTRIBUTION SYSTEM		1. Ensure shutoff valve is in EXH position and verify pressure gauge indicates 0 PSI. 2. Remove four screws and housing. 3. Remove and discard filter element. 4. Clean housing with a lint-free cloth or microfiber glove. 5. Install new filter element (4330-13-000-6770). 6. Replace O-ring. 7. Install four screws and housing. 8. Place shutoff valve in SUP position. 9. Generate a work order for any discrepancies found. *5 minutes per filter regulator.					
ELECTRICAL CABINET ASSEMBLY, ATMS MAIN: FILTER	1620	**Replace Electrical Cabinet Filter and Clean Cisco Switch.** 1. Remove and discard filter from cabinet. 2. Install new filter (4140-11-000-2236). 3. Clean top and sides Cisco network switch using a lint-free cloth or microfiber glove.	5	07	1125		
ELECTRICAL CABINET ASSEMBLY, CAROUSEL: FILTER	1640	**Replace Electrical Cabinet Filter.** 1. Remove and discard filter from cabinet. 2. Install new filter (PSN 4140-11-000-2236).	2	07	1125		
ELECTRICAL CABINET ASSEMBLY, CAROUSEL: K16 RELAY	1650	**Replace Carousel Electrical Cabinet (CEC) K16 Relay and Base** 1. Obtain a new K16 relay and base from stock (PSN 5945-11-000-4740). 2. Remove and replace K16 relay and base using MS-209, Volume D, Section 12.4.7 – Relay and Base Removal and Replacement procedure.	15	09	9000		
INFEED LINE: ASSEMBLY	1710	**Check Mail Path.** **Clean / Vacuum Base Plates.** 1. Check all infeed line belts for stuck labels, remove and discard.	40*	07	4		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		2. Vacuum base plates. 3. Clean all Infeed Line Photo-eyes with a lint-free cloth or microfiber glove. 4. Clean all Thickness Detectors with a lint-free cloth or microfiber glove. **When checking the Infeed line mail path:** 1. Check for and remove mail stuck between flat belts and roller bearings. 2. Check that guide rail hardware is in place and tight. 3. Look for dark wear marks along the white guide rail surface. Dark marks are indicative of mail repetitively hitting the guides at the same spot every time it is fed, and could cause damage to mail and/or guide rails. 4. Generate a work order for any discrepancies found. *20 minutes per Infeed Line.					
INFEED LINE: ASSEMBLY	1715	**Inspect Infeed Line Mail Guides.** 1. Inspect the guide rails, beginning at feeder, for loose connecting hardware and smooth transition at all rail splice joints. 2. At the Merge Module inspect for: a. Misaligned central merge rails. b. Bent pressure fingers. 3. Generate a work order for any discrepancies found. *2 minutes per Infeed Line.	4*	09	375		
INFEED LINE: ASSEMBLY	1720	**Check Main Infeed Line Drive Belts.** 1. Check all drive belts starting at the automated feeder. 2. Check each drive belt for end-of-life conditions: a. Missing or damaged teeth. (Torn or large or missing parts of teeth.) b. Nicks, tears, or abrasions greater than 2 mm on the outer surface or edge of the belts. Refer to MS-209, Volume D, Section 7, Infeed	10*	07	375		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		Line Checking Procedures. *5 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: ELECTRICAL CABINET	1730	**Replace Electrical Cabinet Filter (2).** 1. Remove and discard filter from lower right hand side of cabinet. 2. Install new filter (PSN 4140-11-000-2236). * 1.5 minute per Infeed Line.	3*	07	1125		
INFEED LINE: ASSEMBLY	1735	**Check all Infeed Line Pinch Wheels, Mail Transport Belts, and Mail Transport Belt Tensions.** **Check Pinch Wheels.** 1. Check the Pinch Wheels for: a. Cracks. b. Broken vanes. c. Grooves. d. Worn surfaces, including flat spots and / or missing material from the outer surfaces / edges of pinch wheel. **Check Flat Belts.** 1. Check for: a. Cracks. b. Splits. c. Tears. d. Joint separation. e. Worn through outer surface. f. Frayed edges. 2. Generate a work order for any discrepancies found. **Check Belt Tension (Mail Transport Belts).** **NOTE**: There are 2 types of belt tensioner in the in-feed line. 1. One style is a on a sliding shelf, to tension: a. Loosen shoulder bolt 1/2 turn. b. Move tensioner assembly until lever arm is perpendicular to mounting slot. c. Tighten shoulder bolt.	24*	07	375		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		2. One style is a deck insert, to tension: a. Loosen tensioner nut. b. Slide tensioner assembly in mounting slot until tensioner lever arm is perpendicular to mounting slot. c. Tighten tensioner nut. 3. Generate a work order for any discrepancies found. *12 minutes per Infeed Line. Refer to MS-209, Volume D, Section 7, Flat Belt Checking. Refer to MS-209, Volume D, Section 11, Front Flat Belt Tension Adjustment. Refer to MS-209, Volume D, Section 7, Low Pressure Wheel Checking.					
INFEED LINE: ASSEMBLY	1740	**Inspect all Mail Transport Belt Tensioners on each Infeed Line for Binding.** 1. Push in tensioner pulley, release flat belt tension, and lift flat belt away from tensioner pulley. 2. Move tensioner pulley in and out several times while feeling and listening to detect binding of the pivot point (shoulder bolt). 3. If binding is detected, generate a work order to disassemble and clean the bearing surfaces on the shoulder bolt. Also ensure hardened washers with black oxide finish are installed at the shoulder bolt's base. **NOTE:** Belt tensioner should pivot without binding prior to installing flat belt. 4. Install flat belt around tensioner pulley. 5. Generate a work order for any discrepancies found. *3 minutes per Infeed Line.	6*	09	375		
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1750	**Vacuum Under Feeder Conveyor Bed and Inside Electrical Panels Under Feeder (4).** Clean by vacuuming with a HEPA vacuum. 1. Move AI paddle to allow conveyor bed to be pulled out. 2. Open Flip panel door.	16*	07			W

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		3. Before pulling out the Magazine Conveyor vacuum underneath the bed. 4. Pull out the Magazine Conveyor and vacuum, making sure to vacuum in and around the Anti-Doubler area and the magazine brush. 5. Close magazine conveyor and flip panel door. 6. Open electrical panel doors below the magazine bed. 7. Vacuum electrical panel. 8. Clean V2 PCB fan. 9. Close electrical panel doors. *4 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1760	**Clean Vertical Destacker Plate (4).** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Remove any labels adhered to the plate. 2. Use approved cleaning product to remove glue or any material stuck to the Destacker Plate. *1 minute per Feeder.	4*	07			W
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1770**	**Check Vacuum Hoses and Perforated Belt (4).** **Check vacuum hoses.** 1. Open feeder and Extension module cover(s) to reveal MAC valve assembly. **Caution: Overtightening zip ties can cause damage to hoses.** 1. Ensure hoses are secured with zip ties to a solid surface. 2. Check hoses for wear. a. Cracks. b. Gouges. c. Punctures. **Check Perforated Belt.** 1. Check perforated belt for end-of-life conditions.	8*	07			W

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		a. Separation at splice. b. Nicks, tears, or abrasions greater than 2 mm on the outer surfaces or edges of the belts. c. Damaged edges. d. Cupping. e. Surface glazing. 2. Ensure perforated belt is installed stencil side out. 3. Close Feeder and Extension module cover(s). 4. Generate a work order for any discrepancies found. Refer to MS-209 Volume D, Section 7, Perforated Belt Checking. Refer to MS-209 Volume D, Section 11. Air Pressure Adjustment. *2 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1780**	**Clean Vacuum Canister (4).** **NOTE:** Clean vacuum filter. Replace filter (PSN 4330-05-000-7997) when impacted dirt and debris cannot be removed by vacuuming. 1. Remove the filter element from the vacuum pump, and clean by vacuuming with a HEPA vacuum. 2. Ensure O-ring is seated properly and seals properly. 3. Reinstall vacuum pump filter. *3 minutes per Feeder.	12*	07			W
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1800**	**Inspect Anti-Doubler Alignment (4).** 1. Inspect anti-doubler black rubber stops for excessive wear or damage. Replace excessively worn stops before performing the following steps. 2. Inspect anti-doubler manifold tubes for damage or holes due to wear. 3. Use minimum stop gauge tool (PSN 5220-13-000-2793) to verify distance between destacker plate and anti-doubler face is 0.5 mm to 1.5 mm.	20*	09			W

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		4. Use tool maximum stop gauge tool (PSN 5220-13-000-2792) to verify distance between destacker plate and anti-doubler face is 35 mm to 37 mm. 5. Use calibrated force gauge to verify force to pull anti-doubler from at rest position to 10 mm away from destacker plate is 0.7 lbs. to 1.1 lbs. 6. Use calibrated force gauge to verify force to pull anti-doubler from 10 mm to 20 mm away from destacker plate is 1.1 lbs. to 1.6 lbs. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Antidoubler Adjustment. *5 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1810	**Check Perforated Belt Synchronous Drive Belt Condition and Tension (4).** 1. Check the Timing Belt for: a. Cracks, splits, or tears. b. Joint separation. c. Frayed edges. 2. Check belt tension by applying deflective force perpendicular to belt, centered between any two pulleys, using digital force gauge (PSN 5210-04-000-9920). a. Check perforated belt drive belt tension using a digital force gauge. b. Apply deflecting force perpendicular to the belt, centered between any two pulleys. The reading must .75 N +/- .25 N at 6.35 mm deflection. c. Adjust tension until reading is .75N +/- .25 N at 6.35 mm deflection: 3. Generate work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Perforated Belt Tension Adjustment. *4 minutes per Feeder.	16*	07	375		
INFEED LINE ASSEMBLY:	1820	**Clean Both Light Curtain Sets (Emitter and Receiver) on all Feeders (8).**	4*	07	375		

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
AUTOMATED FEEDER ASSEMBLY		Using a lint-free cloth or microfiber glove, wipe down light curtain sets (emitter and receiver). Refer to MS-209 Volume D, Section 7, Automated Feeder Module. *1 minute per Feeder (2 Light Curtain Sets per Feeder).					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1830	**Check Trough Chute Position (4).** **NOTE:** The feeder photoeyes alignment tool (PSN 5220-17-000-1390) is used as a positioning gauge in this procedure. 1. Place feeder photoeyes alignment tool (PSN 5220-17-000-1390) in the control panel end of the destacker trough. 2. Ensure feeder photoeyes alignment tool is sitting completely flush. 3. Slide feeder photoeyes alignment tool along entire length of the trough and verify it does not bind when moving. 4. Ensure feeder photoeyes alignment tool remains flush on the polyurethane friction strip across destacker trough's entire length. 5. Generate a work order for any discrepancies found. *1 minutes per Feeder.	4*	07	375		
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1840	**Check Magazine Conveyor (4).** **Check Sprocket.** 1. Visually check sprockets for missing teeth and cracks. 2. Visually check drive chain area for metal shavings. Refer to MS-209, Volume D, Section 7, Chain Sprocket Checking. **Check Chain and Chain Tension.** 1. Visually check drive chains in the magazine conveyor for: a. Missing roller links, rollers, and cracks. b. Metal shavings. 2. Check chain tension.	40*	07	2250		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		3. Push chain at top center and measure deflection. The reading must .56 Nm at 5mm of deflection. a. Adjust if deflection is not 5 mm. b. Loosen nut on idler sprocket. c. Ensure chain engages all sprocket teeth. d. Raise idler sprocket until chain is snug. e. Tighten nut on idler sprocket. f. Push chain at top center using calibrated force gauge (PSN 5210-04-000-9920) to verify force and measure deflection. Ensure the reading is .56 Nm at 5mm of deflection. g. Repeat adjustment until deflection is within tolerance. Refer to MS-209 Volume D, Section 11, Chain Tension Adjustment. **Check Feeder Magazine Conveyor Torque Limiter.** 1. Remove cover and hardware necessary to gain access to the Magazine Conveyor Torque Limiter. 2. Remove setscrew from torque limiter. 3. Loosen Torque Limiter by turning counter clockwise with a wrench. 4. Install torque limiter tool assembly PSN 3915-13-000-1452. 5. Turn torque wrench clockwise to confirm torque limiter is set between 30 in-lbs. and 40 in-lbs. 6. Remove torque limiter tool assembly. 7. Apply thread adhesive to setscrew and re-install setscrew. 8. Replace all covers and hardware removed in to gain access to the Magazine Conveyor Torque Limiter. 9. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Torque					

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Limiter Adjustment. *10 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	1850	**Clean Central Vacuum Chamber Front Plate (4).** 1. Remove Central Vacuum Chamber front cover plate by removing four screws. 2. Use vacuum cleaner to clean cover plate assembly and vacuum chamber. 3. Clean FDR-V2 photoeye with a lint free cloth or glove. 4. Replace cover plate assembly, and hardware. *8 minutes per Feeder.	32*	07	1125		
INFEED LINE ASSEMBLY: EXTENSION MODULE ASSEMBLY	2010**	**Clean both Becker Vacuum Pump Filters.** Clean vacuum filters. Replace filters (4330-12-000-1778/4330-13-000-7023) when impacted by dirt, and debris cannot be removed by vacuuming. 1. Loosen thumbnuts and remove outer cover. 2. Remove paper filter and clean by vacuuming with a HEPA vacuum. 3. Remove hex-head cap screws and remove inner cover. 4. Remove metal/paper filter and clean by vacuuming with a HEPA vacuum. 5. Replace metal/paper filter. 6. Replace inner cover and secure with hex-head screws. 7. Replace paper filter. 8. Replace outer cover and secure with thumbnuts. 9. Generate a work order for any discrepancies found. *10 minutes per Infeed Line.	20*	07	375		
INFEED LINE ASSEMBLY: EXTENSION MODULE ASSEMBLY	2020**	**Check Vacuum Pump Vanes (2).** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Remove vacuum pump plastic front cover.	20*	09	2250		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		2. Remove cast iron front cover. 3. Remove all four carbon vanes and measure. a. Replace all carbon vanes if any of them are less than 24 mm wide. b. Ensure vane's tapered edge is towards the housing (not inserted in the spindle). 4. Lubricate bearings with Amblygon grease, PSN 9150-16-000-9933. 5. Install the cast iron front cover. 6. Install the vacuum pump plastic cover. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 7, Vacuum Pump Vane Checking. *10 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: EXTENSION MODULE ASSEMBLY	2030	**Clean Accumulation Tank (2) Assembly Debris and Central Vacuum Chamber Hoses (4).** 1. Remove cover to the accumulation tank. 2. Clean debris from inside tank. 3. Replace accumulation tank cover. 4. Remove hose connecting Central Vacuum Chamber to turbine and clean hose's interior. 5. Remove hose connecting Central Vacuum Turbine to muffler and clean hose's interior. 6. Replace both hoses. *20 minutes per Infeed Line.	40*	07	4500		
INFEED LINE ASSEMBLY: MERGE MODULE ASSEMBLY	2050	**Vacuum Electrical Panel (2).** 1. Open Merge Module front panel door. 2. Vacuum electrical panel. 3. Close Merge Module front panel door. *2 minutes per Infeed Line.	4*	07	375		
INFEED LINE ASSEMBLY: IMAGE ACQUISITION MODULE ASSEMBLY	2060**	**Clean Illumination Assembly and Aperture Plate (2).** 1. Open top by sliding the OCR camera cover. 2. Use a lint-free cloth or microfiber glove to remove debris from the illumination assembly.	6*	07	4		

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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.
		3. Close top by sliding the OCR camera cover. 4. Remove, clean, and replace aperture assembly. *3 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: IMAGE ACQUISITION MODULE ASSEMBLY	2070	**Clean Computer (2).** 1. Set up ESD workstation kit in accordance with current ESD MMO. 2. Loosen thumbscrew and remove three screws and case cover. 3. Using an ESD vacuum cleaner, clean dust and debris from inside computer. 4. Clean air filters on case front. Replace filters (5915-12-000-8336) if needed. 5. Install case cover and secure with screws. 6. Remove ESD workstation kit. 7. Generate a work order for any discrepancies found. *5 minutes per Infeed Line.	10*	10	1125		
INFEED LINE ASSEMBLY: IMAGE ACQUISITION MODULE ASSEMBLY	2080	**Clean the Camera Housing Fan Filter (2).** 1. Pull fan screen from scanner unit. Remove air filter from fan screen. 2. Vacuum dust or debris from filter. 3. Insert air filter back in fan screen. 4. Align fan screen on scanner unit and snap in place. Refer to MS-209, Volume G, Section 12, Remove and Replace Air Filter for additional information. *2 minute per Infeed Line.	4*	07	375		
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	2100	**Replace Label Applicator Vacuum Filter (2).** 1. Unlatch and slide label applicator out. 2. Remove vacuum filter cover. 3. Remove filter. 4. Install new filter (PSN 4130-04-000-4688) back into filter housing. 5. Install filter housing cap back onto filter housing and hand tighten. 6. Slide label applicator back into position and secure latch.	4*	07	2250		

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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.
		*2 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	2300**	**Clean Verifier and Light Bar (2).** Wipe ID reader lens and light bar with clean lint-free cloth or microfiber glove. *1 minute per Infeed Line.	2*	07	4		
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	2310**	**Clean and Inspect Labeler Application Roller, Cutter Blades, and Delrin Balls (2).** 1. Remove 3 M5 hardware bolts from the top cover label head assembly and remove head assembly. 2. Clean label application roller using Scrubs in a Bucket towelette. **WARNING: Exercise care around knife cutting edge to prevent injuries.** 3. Inspect Delrin balls for pitted or uneven wear. a. Replace pitted or worn Delrin ball to prevent jams and uneven blade wear. **WARNING: Lower Blade is very sharp and may cause injuries.** 4. Inspect for chipped or dull blades. a. Replace chipped or dull blades to prevent jams. 5. Inspect the wick for any damage, deformation, or residue. 6. Inspect cutter travel stop bumper and paddle stop bumper for any damage or deformation. 7. Replace head assembly and secure with 3 M5 hardware bolts. 8. Generate a work order for any discrepancies found. Wick PSN 9420-08-000-3593. Fixed Blade PSN 3405-07-000-0197. Moving Blade PSN 3405-07-000-0198. Delrin Ball PSN 3130-07-000-0196. Blade Carrier PSN 3405-08-000-3590. Cutter Travel Stop Bumper PSN 5340-13-000-2714.	16*	09			W

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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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Paddle Stop Bumper PSN 3915-07-000-0206. *8 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	2320	**Replace Filter Tube Assemblies (4).** **WARNING: The following procedure requires handling of hazardous or environmentally sensitive material. Refer to SDS handling requirements for hazardous or environmentally sensitive material.** 1. Open marking module top rear door. 2. Open marking module bottom rear doors. 3. Lift shelf locking latch, slide printer out approximately 4 inches, and release latch. 4. Slide printer out until shelf locking latch engages. 5. Pull ink bottle out of holder. 6. Tag and remove two ink hoses. 7. Remove filter tube assembly from bottle. 8. Properly dispose of filter. 9. Install new filter tube assembly (4330-03-000-6410) into ink bottle. 10. Slide ink bottle into holder. 11. Connect two ink hoses according to tagging. 12. Close marking module bottom rear doors. 13. Close marking module top rear door. *5 minutes per Infeed Line.	10*	09	9000		
INFEED LINE ASSEMBLY: INJECTOR MODULE ASSEMBLY	2330	**Clean Filter/Regulator and Replace Filter on Infeed Line 2 Main Pneumatic Panel.** **Clean the Filter/Regulator. Replace filter (PSN 4330-16-000-7800) when impacted dirt and debris cannot be removed by vacuuming.** 1. Place shutoff valve in EXH position leading to filter/regulator and verify pressure gauge indicates 0 PSI. 2. Remove filter housing. 3. Remove and replace O-ring. 4. Remove filter. 5. Clean filter housing with a lint-free cloth or microfiber glove.	5	07	2250		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		6. Install filter in filter housing. 7. Install filter housing. 8. Place shutoff valve in SUP position leading to filter/regulator. *Infeed Line 2 ONLY.					
INFEED LINE ASSEMBLY: MINI-CAROUSEL ASSEMBLY	2350	**Inspect Both Infeed Lines to Carousel Alignments.** **CAUTION: These procedures are for recording alignment measurements only. Do not attempt to adjust any of the settings. Adjusting the settings requires Flats Sorting Machine (FSM) software calibration be performed with assistance of an NST. Any adjustments can detrimentally impact the performance of the FSS.** **Mini-carousel horizontal alignment.** 1. Manually rotate mini-carousel until there are no paddles directly in front of the mini-carousel injection point. 2. Place mini-carousel alignment tool (PSN 5220-13-000-5493) in mini-carousel assembly until it rests on the frame, flush against all four surfaces of the upper and lower U-turns. 3. Verify the other half of the alignment tool is located between two paddles over the mini-carousel slide plate. 4. Insert injection axis alignment tool (PSN 5220-13-000-5492) between the injector pinch wheels. It should be resting against the mail trough and sticking out into the mini-carousel between the paddles. 5. Measure and record the distance between the inner surfaces of the two tools. The normal range is 41 ± 1 mm. Do not attempt to make any adjustments. **Mini-carousel Back-Wall photoeye.** 1. Inspect mini-carousel back wall photoeye and clean with a lint-free cloth or microfiber glove. 2. Inspect the photoeye bracket for damage and replace as necessary. 3. Inspect the polyurethane mini-carousel drive wheels atop each paddle for excessive wear	40*	09	4500		

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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.
		or damage. Generate a work order to replace wheels when wheel fit in the driver plate causes excessive vibration. 4. Place the mini-carousel alignment tool (PSN 5220-13-000-5493) in the assembly opposite injection point until it rests on the frame, flush against all four surfaces of the upper and lower U-turns. 5. The opposite edge of the alignment tool should sit between mini-carousel paddles. 6. Measure and record distance from centerline of photoeye beam to inside mini-carousel alignment tool edge. The normal range is 75 ± 1 mm. Do not attempt to make any adjustments. 7. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Infeed Line, Injector Module, Photoeye Adjustment. **Mini-carousel synchronization proximity switch.** 1. The mini-carousel synchronization proximity switch and back wall photoeye are used in conjunction to provide synchronization of the mini-carousel with the infeed line. 2. Manually rotate mini-carousel until paddle roller shaft head is directly under proximity switch. 3. Measure and record the mini-carousel synchronization proximity switch distance between proximity switch face and paddle roller shaft head. The normal range distance is 3 mm. Do not attempt to make any adjustments. If any measurements in this task are out of tolerance, do not attempt to make any adjustments. Generate a work order, and open a log with MTSC to schedule an appropriate time for correcting all misalignments and to immediately have an NST remotely run the TOP2000 calibration software. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Infeed Line, Synchronization Proximity Switch Adjustment.					

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					Run Hours	Pieces Fed (000)	Freq.
		Refer to MMO-039-12 for alignment measurement locations. *20 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: MINI-CAROUSEL ASSEMBLY	2400	**Clean all Paddles in Both Mini-Carousels.** 1. Remove labels and clean paddles. **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 2. Use locally approved cleaner to remove any adhesive build-up on the paddles. *15 minutes per Infeed Line.	30*	07			W
INFEED LINE ASSEMBLY: MINI-CAROUSEL ASSEMBLY	2410**	**Inspect the Mini-Carousel Sliding Plate (2).** 1. The slide plate should be free of all material build-up, cracks, punctures, and deformity which would impede the flow of mail. 2. The injector slide plate must form a seal with each mini-carousel paddle so that mail cannot slip beneath the paddle during operation. 3. Generate a work order for any discrepancies found. Slide Plate PSN 3915-17-000-2340. Slide Plate Spring PSN 5360-12-000-2038. Refer to MS-209 Volume D, Section 12, Remove and Replace Infeed Line. *2 minutes per Infeed Line.	4*	09			W
INFEED LINE ASSEMBLY: MINI-CAROUSEL ASSEMBLY	2420	**Inspect all Mini-Carousel Paddle Assemblies Condition and Operation.** 1. Inspect for cracks in paddles and worn out UHMW (plastic piece at the bottom paddle seal). 2. Missing hardware on paddle. 3. Verify that dampeners are not leaking hydraulic fluid. 4. Inspect carrier rollers for damage. 5. Inspect carrier plates for loose or missing hardware. 6. Exercise each Dampener plate to ensure smooth movement.	16*	09	375		

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		7. Generate a work order for any discrepancies found. Refer to MS-209 Volume D, Section 7, Preventive Maintenance Mini-carousel Checking. *8 minutes per Infeed Line.					
FEEDER INPUT CONVEYOR: PHOTOEYE	2510	**Clean Photoeyes.** Using a lint-free cloth or microfiber glove, wipe lens and reflector.	20	07	2250		
FEEDER OUPUT CONVEYOR: PHOTOEYE	2520	**Clean Photoeyes.** Using a lint-free cloth or microfiber glove, wipe lens and reflector.	20	07	2250		
FULL RCT CONVEYOR, PRE-STAGING:: RIGHT ANGLE TRANSFER, LOW COST (LCR)	2530**	**Clean and Check the Belts on both LCR T (2).** 1. Clean LCR T by removing the dust pan. 2. Use an approved HEPA vacuum cleaner to remove dirt and debris. 3. Check O-belt for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Stretching so O-belt does not engage roller. 4. Check divert belt for end-of-life conditions. a. Nicks, tears, or abrasions greater than 2 mm. b. Fraying around edges. c. Missing or damaged teeth. 5. Check for a smooth transition from home position to full extend. 6. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 7, Preventive Maintenance Divert Belt Checking and Belt Tension and Alignment. *10 minutes per LCR-T.	20*	07	1125		
FEEDER INPUT CONVEYOR: RIGHT ANGLE TRANSFER, LOW COST (LCR)	2535**	**Clean and Check all LCR T-Bone Assemblies and Belts (4).** 1. Clean LCR T by removing the dust pan. 2. Use an approved HEPA vacuum cleaner to	40*	07	1125		

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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.
		remove dirt and debris. 3. Check O-belt for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Stretching so O-belt does not engage roller. 4. Check divert belt for end-of-life conditions. a. Nicks, tears, or abrasions greater than 2 mm. b. Fraying around edges. c. Missing or damaged teeth. 5. Check for a smooth transition from home position to full extend. 6. Replace the dust pan. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Preventive Maintenance Divert Belt Checking and Belt Tension and Alignment. *10 minutes per LCR.					
FEEDER OUPUT CONVEYOR: RIGHT ANGLE TRANSFER, LOW COST (LCR)	2540**	**Clean and Check all LCR T-Bone Assemblies and Belts(2).** 1. Clean LCR T by removing the dust pan. 2. Use an approved HEPA vacuum cleaner to remove dirt and debris. 3. Check O-belt for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Stretching so O-belt does not engage roller. 4. Check divert belt for end-of-life conditions. a. Nicks, tears, or abrasions greater than 2 mm. b. Fraying around edges.	20*	07	1125		

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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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		c. Missing or damaged teeth. 5. Check for a smooth transition from home position to full extend. 6. Replace the dust pan. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Preventive Maintenance Divert Belt Checking and Belt Tension and Alignment. *10 minutes per LCR.					
VERTICAL RECIPROCATING LIFT, FEEDER (VRL-F): PHOTOEYE	2550	**Clean all Photoeyes on all 4 VRL-F.** Using a lint-free cloth or microfiber glove, wipe lens and reflector. Refer to MS-209 Volume C, Section 7 VRL-F. *5 minutes per VRL-F.	20*	07	1125		
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	2600	**Vacuum Entire ITC System (2).** 1. Remove mail fragments and FICS labels. 2. Vacuum using a HEPA vacuum. *60 minutes per ITC.	120*	07			W
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	2620	**Overall ITC Hardware Inspection (2).** Inspect the ITC for loose and missing hardware. Replace and tighten hardware as necessary. Common areas of loose/missing hardware on the ITC are the following: 1. Indexing Table. a. Transfer Box Back wall to the I-beam screw mount block are tight. b. Inspect left and right skis. c. Table Satellite Servo Electrical Panels four M5x20 hex head cap screws are tight and no cracks are present on panel frame. d. Inspect the Indexing Table Motor mounting bolts for the presence of acorn nuts and/or the presence of leaking red motor grease. 2. ACT Loader. a. Backstop X-Axis Cylinder Rod End jam nut should be tight or end will rotate and extend its stroke length causing	60*	09	375		

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		excessive stress on cylinder. Backstop X-Axis Cylinder Bumper Stop should be in good condition, replace as necessary. b. The Backstop Z-Axis Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on cylinder. c. The Auto Paddle Z-Axis Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on cylinder. d. ACT Anti-Backup springs are commonly found broken or missing, replace as necessary. e. Ensure empty ACT Bar Code Scanner (BCS) M4x12 and M4x10 mounting hardware is tight. f. Ensure all flexible cableway mounting hardware for Backstop, Auto Paddle, and Door Gripper Assembly is intact and tight. g. Ensure the four M8x25 hex head cap screws attaching the transfer plate to the cart and tension block assembly are tight. 3. Vertical Positioning Device (VPD). a. Inspect entire VPD shelf assembly for loose/missing hardware, and tighten and replace as necessary. b. Ensure VPD linear actuator flexible cableway mounting hardware is intact and tight. Replace and tighten as necessary. c. Ensure the six M8x16 hex head cap screws securing the shelf support brackets to the linear actuator cart block are tight. 4. VPPD. a. Inspect all left and right side VPPD shelf brackets for issues and replace them as necessary. b. Inspect Z-Axis actuator and X-Axis for loose or missing hardware replace if					

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		necessary. 5. EBMX. a. Ensure CASTR Dock Barcode Scanner M4x10 socket head cap screws mounting hardware are tight. b. Ensure CASTR Present sensor stop block M5x20 socket head cap screws are tight. c. Ensure M6x60 socket head cap screws that mount the wedge gusset to the lifter guide plates are tight and intact. d. Ensure M4x30 socket head cap screws and round standoff mounting the Tray Capture Bar to wedge gusset are tight and intact. e. Ensure M5x8 socket head flat screws that mount the skid plates to the EBMX frame are tight and intact. f. Ensure the caster cart dock hardware is tight and not missing, replace if necessary. g. Ensure M6x16 hex head cap screws attaching the lifter guide plates to the lifter slide are tight and intact. h. Ensure the M8x25 hex head cap screw and nut attaching the lifter assembly air cylinder to the lifter yoke are tight and intact. i. Ensure the M5x10 hex head cap screws attaching the lifter yoke to the lifter guide plates are tight and intact. j. Pull out each EBMX shelf wedge assembly and inspect wedges for loose or missing hardware. k. Ensure M3x10 socket head cap screw attaching the wedge tote to the spacer wedge is tight. l. Ensure retaining ring for wedge tote pivot pin is present. m. Ensure the leaf springs are not missing, not cracked or loose. Replace or tighten hardware if necessary.					

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		6. Verticalizer. a. Outer Bin Door Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on the cylinder over time. b. Slip-sheet Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on the cylinder over time. c. Street Tray Lift Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on cylinder over time. d. Ensure Street Tray Lift flexible cableway M5x16 socket head button screw mounting hardware is tight. Tighten and replace if necessary. e. Ensure the four M8x20 socket head cap screws mounting the Street Tray Lift carriage mount to the Street Tray Lift cart block are tight. f. Ensure the M8x16 socket head cap screws mounting the Street Tray Lift shelf to the Street Tray Lift cart block are tight. g. Ensure the M4x12 socket head cap screws mounting the Street Tray Lift Tray Clamp to its cylinder mounting block are tight. h. Ensure the bin rods M6x20 socket head cap screw mounting hardware is tight and bin rods are not bent. Tighten and replace if necessary. i. Ensure the Verticalizer Pillow Block M12x50 hex head cap screws and set screws are tight. Tighten and replace if necessary. 7. Street Tray Labeler. a. Ensure all hardware for the Street Tray Labeler is tight including the cylinder rod end M8 hex nuts and Venturi vacuum chambers. Inspect the condition of the suction cups and ensure they are					

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					Run Hours	Pieces Fed (000)	Freq.
		securely mounted. b. Ensure the M4x8 socket head button screw mounting hardware for the barcode scanner is tight. c. Ensure the M6x18 socket head button screw mounting hardware for the Street Tray Labeler Printer assembly sub plate is tight. 8. Generate a work order for any discrepancies found. *30 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT RESTACKER	2630	**Clean RCT Restacker Hood, Restacker Tilt, and Restacker Exit Gate Cylinder Rods on both ITC.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Verify RCT Restacker Hood cylinder clevis and hardware is secure. 2. Clean RCT Restacker Hood cylinder rod with locally approved cleaner. 3. Verify RCT Restacker Tilt cylinder clevis and hardware is secure. 4. Clean RCT Restacker Tilt cylinder rod with locally approved cleaner. 5. Verify RCT Restacker Exit Gate cylinder clevis and hardware is secure. 6. Clean RCT Restacker Exit Gate cylinder rod with locally approved cleaner. 7. Generate a work order for any discrepancies found. *5 minutes per ITC.	10*	09	2250		
INTEGRATED TRAY CONVERTER (ITC): RCT RESTACKER	2640	**Perform RCT Restacker Area Hardware Inspection on both ITCs.** Inspect the ENTIRE assembly for loose and missing hardware. Replace and tighten as necessary. Common areas of loose/missing hardware on the RCT Restacker are the following: 1. RCT Anti-Backup springs are commonly found broken or missing, replace as	10*	09	375		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		necessary. 2. Hood Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on the cylinder. 3. Inspect for cracks on the edges of the hood. Replace the hood as necessary. 4. Tilt Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on cylinder. 5. Ensure that the red rubber bumpers below the RCT Restacker work zone conveyor are tight and are present. 6. Generate a work order for any discrepancies found. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT JUSTIFIER ASSEMBLY	2680	**Clean ACT Justifier Entrance and Exit Gate Cylinder Rod, Shaker Grill Cylinder Rod, and Tilt Cylinder Rod on both ITC.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures. Refer to SDS for appropriate PPE.** 1. Use a flashlight to inspect the Entrance & Exit Gate mounting hardware (5 mm Hex key). 2. Inspect and clean the Entrance & Exit Gate cylinder rods using the following sub-step(s): a. Extend the Entrance & Exit Gate(s) cylinder rod by lifting the Entrance & Exit Gate(s) to its up position. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner, and inspect for any damage. 3. Verify Shaker Grill cylinder clevis and hardware are secure. 4. Inspect and clean the Shaker Grill cylinder rod using the following sub-step(s): a. Extend the Shaker Grill cylinder rod by lifting the Shaker Grill to its up position. b. Thoroughly clean the cylinder rod and all components with locally approved	16*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		cleaner, and inspect for any damage. **WARNING: ACT Justifier Work-zone conveyor is heavy. Obtain assistance to lift and lower the ACT Justifier Work-zone conveyor by hand and secure conveyor section while cleaning is in progress.** 5. Verify Tilt cylinder clevis and hardware is secure. 6. Inspect and clean the Tilt Cylinder rod(s) using the following sub-step(s): a. Extend the Tilt Cylinders Rod(s) by lifting/tilting the ACT Justifier work-zone conveyor assembly. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner, and inspect for any damage. 7. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *8 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT JUSTIFIER ASSEMBLY	2685**	**Detailed Hardware Inspection (ACT Justifier Area) on both ITC.** 1. Inspect the ENTIRE assembly for loose and missing hardware, replace and tighten as necessary. Common areas of loose/missing hardware on the ACT Justifier are the following: a. Tilt Cylinder Rod End jam nut on both Tilt Cylinders. b. Tilt Cylinder hinge pin and retaining ring on both Tilt Cylinders. c. M6x40 socket head cap screw securing the Entrance and Exit Gates to their respective cylinder rods. d. Clevis pin and hair pin that attach the Shaker Grill to its air cylinder. e. ACT Justifier servo motor M6x25 mounting bolts. 2. Remove four driven rollers from the ACT Justifier Work-zone section and tighten all ACT Justifier Carriage Plate hardware	40*	09	375		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		including: a. Shaft Collar. b. Shaft Supports. c. Carriage Roller Mount. 3. Replace four driven rollers. 4. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *20 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING DEVICE - EBMX (VPDE)	2690	**Inspect the VPD Conveyor Guides on both ITC.** 1. Inspect the guide rails for loose connecting hardware. 2. Verify guide rail is parallel to conveyor-side frame allowing a street tray to pass freely between guide rails without binding. 3. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 8 Guide Rail *1 minute per ITC.	2*	09	375		
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING DEVICE - EBMX (VPDE)	2695	**Inspect for Loose or Damaged VPD(E) Sensors on both ITC.** 1. Verify sensor(s) are secure by gently tugging on cable(s) and verify alignment. 2. Verify cabling is secured and undamaged. 3. Verify reflectors are not missing and undamaged. 4. Generate a work order for any discrepancies found. *5 minutes per ITC.	10*	09	2250		
INTEGRATED TRAY CONVERTER (ITC): ASSEMBLY, BUFFER MATRIX	2710	**Clean EBMX Shelf Wedge Cylinder Rod (8).** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Remove two rollers above cylinder. 2. Locate, inspect, and clean the Shelf Wedge cylinder assembly as follows:	30*	09	2250		

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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		a. Extend the Shelf Wedge by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner. Inspect for any damage. 3. Replace two rollers. 4. Generate a work order for any discrepancies found. *15 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): CASTR DOCK	2730	**Clean all Barcode Scanner(s) on both ITCs.** Clean Barcode Scanner lens using lint-free cloth or microfiber glove. 1. CASTR Dock. 2. FTU-E. 3. Street Tray Labeler. 4. Street Tray Conveyor. 5. ACT Loader. *5 minute per ITC.	10*	07			W
INTEGRATED TRAY CONVERTER (ITC): FLEXIBLE TURNING UNIT, EMPTY	2750	**Overhaul FTU-E on both ITCs.** 1. Before starting overhaul verify all parts are available. a. Polyurethane timing belt (PSN 3030-12-000-5075) b. Round belt (X6) (PSN 3030-12-000-5081) c. Pillow block flange bearing .50 bore (PSN 3130-12-000-5115) d. Pillow block flange bearing 1.0 bore (PSN 3130-12-000-5116) e. Track wheel (X4) (PSN 5340-12-000-5241) 2. Remove and replace drive belt, plastic roller wheels, and any other worn parts. 3. Refer to the procedures below for replacement of parts and alignments if necessary. Refer to MS-209 Volume C, Section 11, Alignment and Adjustment Procedures FTU. Refer to MS-209 Volume C, Section 12, Remove	240*	09	18000		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		and Replace FTU. *120 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): FLEXIBLE TURNING UNIT, FULL	2760	**Clean Light Curtain Sets (Emitter And Receiver) on both ITCs.** Using a lint-free cloth or microfiber glove, wipe down light curtains. 1. FTU-F. 2. Stacker Loader. *1 minute per ITC.	2*	07	375		
INTEGRATED TRAY CONVERTER (ITC): FLEXIBLE TURNING UNIT, FULL	2770	**Overhaul FTU-F on both ITCs.** 1. Before starting overhaul verify all parts are available. a. Polyurethane timing belt (PSN 3030-12-000-5075) b. Round belt (X6) (PSN 3030-12-000-5081) c. Pillow block flange bearing .50 bore (PSN 3130-12-000-5115) d. Pillow block flange bearing 1.0 bore (PSN 3130-12-000-5116) e. Track wheel (X4) (PSN 5340-12-000-5241) 2. Remove and replace drive belt, plastic roller wheels, and any other worn parts. 3. Refer to the procedures below for replacement of parts and alignments if necessary. Refer to MS-209 Volume C, Section 11 Alignment and Adjustment Procedures FTU. Refer to MS-209 Volume C, Section 12, Remove and Replace FTU. *120 minutes per ITC.	240*	09	18000		
INTEGRATED TRAY CONVERTER (ITC): LABELER, STREET TRAY	2800	**Clean Thermal Printer on both ITCs.** 1. Release print head and wipe with a lint-free cloth or microfiber glove. 2. Clean label feed roller with a lint-free cloth moistened with warm soapy water to clear off sticky material. **Inspect Thermal Print Head for damage or**	10*	09	375		

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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		wear on both ITC Street Tray Labelers. 1. Open Printer side cover. 2. Unlock latch and swing open Cutter Head. 3. Trip latch to lift Print Head. 4. Inspect print head for damage and visible wear. Replace as necessary. 5. Use latch to reset print head into place. 6. Close cutter head and lock latch. 7. Close printer side cover. 8. Generate a work order for any discrepancies found. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): LABELER, STREET TRAY	2820	**Clean Label Rotate, Label Apply, Label Remove, Tray Clamp, and Tray Stop Cylinder Rods on both ITC.** **WARNING: Discard materials soaked in cleaning fluid according to local procedures.** 1. Verify Label Rotate cylinder hardware is secure. 2. Locate, inspect, and clean the Label Rotate cylinder assembly and perform the following sub-step(s): a. Rotate labeler assembly by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner and inspect for any damage. 3. Verify Label Apply cylinder travel is smooth by manually extending and retracting rod. 4. Locate, inspect, and clean the Label Apply cylinder assembly and perform the following: a. Extend the Label Apply cylinder by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner, and inspect for any damage. 5. Verify Label Remove cylinder travel is smooth by manually extending and retracting rod. 6. Locate, inspect, and clean the Label Remove cylinder assembly and perform the following:	10*	09	2250		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		a. Extend the Label Remove cylinder by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner, and inspect for any damage. 7. Locate, inspect, and clean the Tray Clamp cylinder assembly and perform the following: a. Extend the Tray Clamp cylinder by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner and inspect for any damage. 8. Remove two rollers above Tray Stop cylinder. 9. Verify Tray Stop hardware is secure. 10. Locate, inspect, and clean the Tray Stop cylinder assembly and perform the following: a. Extend the Tray Stop cylinder by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner and inspect for any damage. 11. Replace two rollers. 12. Generate a work order for any discrepancies found. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): LABELER, STREET TRAY	2830	**Remove, Clean, and Replace Street Tray Labeler Label Cutter on Both ITCs. Remove, clean, and replace as needed:** 1. Open Street Tray labeler doors. 2. Open printer doors. 3. Release blade lock. 4. Lift and service blade. Replace if damage found. **NOTE:** A small wire plug with three wires near the cutter motor is for connecting an optional attachment that is not used on FSS. Do not attempt to plug this connector into the cutter assembly. 5. Clean the label cutter assembly and inspect blade for damage. 6. Close blade ensuring it is locked in place.	10*	09	375		

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		7. Close printer door. 8. Close Street Tray labeler doors. 9. Generate a work order for any discrepancies found. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT LIFT ASSEMBLY	2840	**Check the RCT Lift Pusher on both ITC.** 1. Ensure the white UHMW disc is not missing or loose. 2. Ensure the proximity sensors are not missing or loose on the pneumatic cylinder. 3. Generate a work order for any discrepancies found. *1 minutes per ITC.	2*	07	375		
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	2870	**Clean / Lube / Inspect Slip Sheet Track and Bearings on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Clean track with lint-free cloth or microfiber glove. 2. Apply a light coating of SAE 30 W oil to the track. 3. Inspect track for breaks, cracks, or unusual wear. 4. Disconnect air hoses from pneumatic actuator. 5. Manually slide slip-sheet open and closed checking for freedom of movement and minimal movement from side to side on track. 6. Reconnect air hoses to pneumatic actuator. 7. Generate a work order for any discrepancies found. *5 minutes per ITC.	10*	09	375		
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	2880	**Clean Street Tray Lift, Street Tray Clamp, Street Tray Exit Gate, Outer Bin Door, Inner Bin, and Slip-Sheet Cylinder Rods on both ITCs.** **WARNING: Discard materials soaked in cleaning fluid according to local procedures.** 1. Verify Lift cylinder clevis and hardware is	20*	07	2250		

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		secure. 2. Clean cylinder rod with locally approved cleaner. 3. Verify Clamp cylinder hardware is secure. 4. Clean Clamp cylinder rod with locally approved cleaner. 5. Remove two rollers above Exit Gate cylinder. 6. Verify Exit Gate hardware is secure. 7. Clean Outer Bin Door cylinder rod with locally approved cleaner. 8. Verify Outer Bin Door cylinder clevis and hardware is secure. 9. Clean Inner Bin Door cylinder rod with locally approved cleaner. 10. Verify Inner Bin Door cylinder clevis and hardware is secure. 11. Verify Slip-sheet clevis, bearings, and guides are clear of debris. 12. Verify Slip-sheet shock is secure and undamaged. 13. Clean Slip-sheet cylinder rod with locally approved cleaner. 14. Replace two rollers. 15. Generate a work order for any discrepancies found. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	2890**	**Inspect the RCT Unloader Ejector Rods and Ram Shaft Bearing on both ITCs.** **Inspect the RCT Unloader Ejector Rods.** 1. Inspect the entire assembly for loose and missing hardware. Replace and tighten hardware as necessary. 2. Inspect for bent/loose Ejector Rods and replace if necessary. 3. Ejector rods should spin freely within the Ejector Rod Base but should have minimal lateral movement. **Inspect Ram Shaft Bearing.** 1. Ensure that both Pivot Shaft Split Collars are intact and mounting hardware is tight. These	4*	09			W

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		should be grade 12.9 M6X18 socket head cap screws. 2. The Ram Cylinder Rod End jam nut should be tight or rod end will rotate and extend its stroke length causing excessive stress on the cylinder. 3. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Integrated Tray Converter. *2 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	2900	**Inspect MRB Linear Actuator Motor Mount Hardware on both ITCs.** 1. Inspect for broken, missing, and loose hardware where motor mounts to linear actuator. 2. Inspect motor mount for damage or cracking. 3. Inspect shaft coupling is tight. 4. Generate a work order for any discrepancies found. *2 minutes per ITC.	4*	09			W
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	2910	**Inspect the MRB Gate Assembly on both ITCs.** 1. Ensure that the middle MRB floor tines are level with the two outside floor tines using a straight edge laid across the floor within the MRB. 2. Generate a work order for any discrepancies found. *1 minutes per ITC.	2*	09	375		
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	2920	**Inspect Integrity of MRB Ram Clevis Bushing on both ITCs.** 1. Inspect Clevis Bushing for any binding or excessive play in the bushing. 2. Generate work orders for any discrepancies found. *2 minutes per ITC.	4*	09	375		
INTEGRATED TRAY CONVERTER (ITC): RCT	2930	**Perform MRB Hose/Cabling Security Inspection on both ITCs.** **Caution: Over-tightening zip ties can cause**	50*	09	375		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
UNLOADER ASSEMBLY		**damage to cables and hoses.** 1. Ensure that the cylinder and hose clamp for the Operator Side Rods Cylinders Extend (black) hoses are properly oriented. a. The cylinder clamps should be roughly 1 1/4 inch from the end of the cylinder bodies. b. Use zip ties to secure the Extend (black) hoses to the cylinder bodies. 2. Ensure that the Operator/Maintenance MRB Side Rods Extend (black) and Retract (yellow) hoses and in-line flow control valves are correctly routed and secured. 3. Ensure the Operator/Maintenance Side MRB Side Rods Extend and Retract proximity sensors are routed and secured to the MRB side wall. 4. Ensure that the MRB Shot Pin cylinder Extend (black) and Retract (yellow) hoses as well as Extend and Retract proximity sensor cables are bundled, secured with zip ties, and routed towards the Indexing Table side of the MRB Shot Pin cylinder. 5. Ensure the MRB Gate cylinder Extend (black) and Retract (yellow) hoses as well as Extend and Retract proximity sensor cables are bundled, secured with zip ties, and routed along the Gate cylinder towards the Ejector Rods. 6. Ensure the MRB Shot Pin cylinder and MRB Gate cylinder cable/hose bundles are secured together into one bundle with two hose clamps clamped together, and combined bundle into one hose clamp on the bundle bracket assembly. 7. Ensure the MRB Shot Pin cylinder, MRB Gate cylinder, and the Operator Side MRB Gate Brake cylinder cable/hose bundles run through corrugated sleeve. a. Ensure the corrugated sleeve is secured to the MRB side wall and rotated away from the MRB Side wall so it does not contact the Stacker Mail Fence in the Unload Position. 8. Ensure the Operator Side MRB Side Rod					

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Flats Sequencing System		mm15036	eCBM

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.
		Assembly cable/hose bundle is secured to the Gate Assembly cable/hose bundle on the MRB side wall and routed through the side of the MRB Pivot Arm stiffening tube. 9. Ensure the MRB Ram cylinder Extend (black) hose is secured to the MRB Ram cylinder using wire ties near the quick exhaust portion of the hose. a. Ensure the Retract (yellow) hose has a service loop with a bend radius sufficient prevent any kinking of the air hose. b. Ensure the cylinder mounted flow control valve is rotated towards the corrugated sleeve to eliminate an extra bend in the air hose. 10. Ensure the MRB Ram Up proximity sensor cable is routed with an adequate bend radius and secured with a cable clamp. a. The proximity sensor connectors should be mounted outside of the corrugated sleeve so the sensor can be secured by the cable clamp. 11. Ensure the MRB Ram cylinder cable/hose bundles are routed into corrugated sleeve and sleeve is secured to Gate assembly with cable clamps. a. The MRB Ram Up proximity sensor cable clamp is stacked and shares the same mounting hardware as the corrugated sleeve cable clamp. b. Ensure the corrugated sleeve is routed across and through the cable clamp on the Maintenance Side Gate Pivot Block. c. Ensure this clamp is installed at a gate angle permitting the sleeve to slide smoothly. d. Ensure the corrugated tube is routed through the wire tie attached to the bundle bracket assembly on the Maintenance Side MRB Gate Brake assembly. 12. Ensure the MRB Ram cylinder cable/hose bundle is routed to/through the corrugated sleeve attached to the Ultrasonic Sensor					

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					Run Hours	Pieces Fed (000)	Freq.
		Sensing Plate. a. The Maintenance Side MRB Gate Brake hose joins the MRB Ram cylinder bundle at this point. b. Ensure the MRB Ram cylinder cable/hose bundle is routed through the corrugated sleeve and secured to the MRB side wall using zip ties. 13. Ensure the Ultrasonic Sensor cable is routed and secured along the MRB side wall. 14. Ensure the Maintenance side MRB Side Rod Assembly cable/hose bundle, MRB Ram Cylinder cable/hose bundle, and Ultrasonic Sensor cable are secured together on the MRB side wall and routed through the side of the MRB Pivot Arm stiffening tube. 15. Ensure that the Operator Side and Maintenance Side cable/hose bundles are routed through the middle of the MRB Pivot Arm stiffening tube and hose grommet is present. 16. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Performance Optimization. *25 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	2940	**Clean RCT Unloader Stop, RCT Unloader MRB Mail Ram, MRB Mail Gate, MRB Mail Pawl, and MRB Mail Side Rods Cylinder Rods on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Verify RCT Unloader Stop cylinder hardware is secure. 2. Clean RCT Unloader Stop cylinder rod with locally approved cleaner. 3. Verify MRB Mail Ram cylinder clevis and hardware is secure. 4. Check MRB Mail Ram spring and dampeners. 5. Clean MRB Mail Ram cylinder rod with locally approved cleaner.	10*	09	2250		

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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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		6. Verify MRB Gate cylinder clevis and hardware is secure. 7. Clean MRB Gate cylinder rod with locally approved cleaner. 8. Verify MRB Pawl cylinder hardware is secure. 9. Clean MRB Pawl cylinder rod with locally approved cleaner. 10. Clean MRB Side Rod cylinder rods with locally approved cleaner. 11. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): STACKER LOADER ASSEMBLY	2960	**Inspect the Stacker/Loader Transfer Paddle/Gripper Tines and Transfer Paddle Jam Sensor on both ITCs.** **Inspect the Stacker/Loader Transfer Paddle.** 1. Inspect tines for straightness, loose hardware, and damage. 2. Move transfer paddle between separators and transfer box front door and check for interferences, straighten/replace if necessary. **Inspect the Stacker/Loader Gripper Tines.** 1. Inspect tines for straightness and damage, and ensure they are not loose. 2. Move gripper tines between MRB and transfer paddle tines and check for interferences, straighten/replace if necessary. **Inspect the Transfer Paddle Jam Sensor.** 1. Ensure the Transfer Paddle Z-Axis Jam Detect proximity sensor is securely mounted. 2. Generate a work order for any discrepancies found. *4 minutes per ITC.	8*	09	4		
INTEGRATED TRAY CONVERTER	2990	**Inspect Stacker/Loader Bolts and Brackets on both ITCs.** 1. Ensure all hardware on both Stacker A and	30*	09	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
(ITC): STACKER LOADER ASSEMBLY		Stacker B is tight and not missing. Inspect the Gripper Assembly Cart Block mounting hardware for loose or missing hardware. 2. Try to rock the Moving Arm forward/backward and side to side while holding the Fixed Arm steady, in order to detect broken hardware or worn linear bearing. Since the linear bearings are the only “non-fixed” linkages between components, any movement indicates broken hardware or worn linear bearings. 3. Inspect for any loose or missing M4x20 socket head cap screws that attach the Gripper Assembly Cart Block to the linear bearings for the G-Axis screw drive actuator. Tighten or replace hardware if necessary. 4. Ensure the M8x20 socket head cap screws that attach Gripper Assembly Moving Arm to its Cart Block are tight/intact. Tighten or replace hardware if necessary. 5. Inspect the Z-Axis cart block and lead nut mounting for broken or loose hardware or worn linear bearings. Tighten or replace hardware if necessary. 6. Inspect the G-Axis cart block and lead nut mounting for broken or loose hardware or worn linear bearings. Tighten or replace hardware if necessary. 7. Inspect the M6x30 socket head cap screws that attach the Stacker Z-Axis Cart Block to ensure the lead nut is tight and intact. Tighten or replace hardware if necessary. 8. Inspect M4x20 socket head cap screws that attach the Stacker Z-Axis Cart Block to the linear bearings of the Stacker Z-Axis screw drive actuator for loose or shearing. Tighten or replace hardware if necessary. 9. Inspect the Stacker X-Axis Cart Block mounting hardware for loose or sheared hardware. Tighten or replace if necessary. 10. Ensure all flexible cableway mounting hardware for the Gripper screw drive actuator and stacker Z-Axis linear actuator is intact and tight. 11. Generate a work order for any discrepancies					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		found. Refer to MS-209, Volume C, Section 7, Stacker. *15 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): STACKER LOADER ASSEMBLY	3000	**Inspect all Stacker Loader Motor Mounting Hardware, Cabling, and Cable Headers on both ITCs.** **Inspect hardware and motor mount.** On Stacker A and Stacker B. 1. Inspect for broken, missing, and loose hardware where motor mounts to linear actuator. 2. Inspect motor mount for damage or cracking. 3. Inspect shaft coupling is tight. **Inspect Cabling and Cable Headers on motors.** 1. Inspect cables for tears, nicks, gouges, and other deformities. 2. Verify tight connection and that the header is not cracked or chipped. 3. Generate a work order for any discrepancies found. *5 minutes per ITC.	10*	09	375		
INTEGRATED TRAY CONVERTER (ITC): STACKER LOADER ASSEMBLY	3010	**Clean Worm Drive on both Stacker Loader Z and G Axis on both ITCs.** **WARNING: PPE must be properly used as required by the current SDS when using alcohol. Alcohol is a flammable liquid. Discard alcohol soaked materials according to local procedures to prevent spontaneous combustion.** 1. Check for debris on worm screw; remove debris with a soft bristle brush. 2. Use isopropyl alcohol or locally approved alternative and wipe excessive dust from worm drive helical threads. *4 minutes per ITC.	8*	07			W
INTEGRATED TRAY CONVERTER (ITC): STACKER LOADER ASSEMBLY	3030	**Inspect all Stacker/Loader Sensors, Cables, and Belt Tensions on both ITCs.** **Check Z-Axis Crash Prevention Sensors and Servo Cables on Stacker A and Stacker B.** 1. Locate Z-axis Crash Prevention sensors.	30*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		2. GENTLY perform a pull test on each sensor wire to ensure that the sensor is securely mounted. 3. Ensure all sensor connections are tight and no cable damage is present. 4. Locate servo power and resolver cables and ensure all connections are tight, cables are properly routed and no cable damage is present. **Check Belt Tension for all three belts on both Stacker A and Stacker B (6 belts total).** **Stacker A and B X-axis Belt Tension.** 1. Manually move Stacker to one end of actuator. 2. Insert tension tool into center of linear actuator belt and attach torque wrench to belt tensioning tool (3130-08-000-4149). 3. Turn torque wrench until belt tensioning tool is parallel with linear actuator. 4. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment for current tension specifications. 5. Removed torque and tension tool. 6. Generate a work order for any discrepancies found. **Stacker A and B Z-Axis Belt Tension.** 1. Remove belt cover near motor. 2. Use a force gauge and ruler to measure the belt deflection. a. Hold belt tension gauge plunger against belt, midway between pulleys. b. Place ruler or tape measure against motor mounting plate along belt tension gauge. c. Move O-ring on gauge to 100 mm as measured on ruler or tape measure. d. Compress gauge against belt until O-ring on gauge reads 85 mm as measured on ruler or tape measure. e. Gauge should read 3 Kg-f to 3.5 Kg-f at					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		15 mm of belt deflection. 3. Generate a work order for any discrepancies found. 4. Replace belt cover. **Stacker A and B G-Axis Belt Tension.** 1. Use a force gauge and ruler to measure the belt deflection. a. Hold belt tension gauge plunger against belt, midway between pulleys. b. Place ruler or tape measure against motor mounting plate along belt tension gauge. c. Move O-ring on gauge to 100 mm as measured on ruler or tape measure. d. Compress gauge against belt until O-ring on gauge reads 85 mm as measured on ruler or tape measure. e. Gauge should read 3 Kg-f to 3.5 Kg-f at 15 mm of belt deflection. 2. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *15 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC) SYSTEM: STACKER LOADER ASSEMBLY	3040	**Check Transfer Paddle X-Axis and Z-Axis Linear Actuator Belt Tensions.** **Check Transfer Paddle X-Axis Belt Tension.** 1. Manually move transfer paddle to the Index Table end of actuator. 2. Insert tension tool at center of linear actuator belt and attach torque wrench to belt tensioning tool (PSN 3130-08-000-4149). 3. Turn torque wrench until belt tensioning tool is parallel with linear actuator. 4. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment for current tension specifications. 5. Removed torque and tension tool. **Check Transfer Paddle Z-Axis Belt Tension.**	12*	07	2250		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		1. Manually move transfer paddle to its lowest point of travel. 2. Insert tension tool at center of linear actuator belt and attach torque wrench to belt tensioning tool (PSN 3130-08-000-4149). 3. Turn torque wrench until belt tensioning tool is parallel with linear actuator. 4. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment for current tension specifications. 5. Removed torque and tension tool. 6. Generate a work order for any discrepancies found. *6 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): INDEXING TABLE	3044	**Clean all Four Transfer Box Back Wall Worm Drives on both ITCs.** **WARNING: PPE must be properly used as required by the current SDS when using alcohol. Alcohol is a flammable liquid. Discard alcohol soaked materials according to local procedures to prevent spontaneous combustion.** 1. Remove transfer box back wall by removing hardware M8X20. 2. Use a HEPA vacuum to remove any debris from the worm drive. 3. Start by rotating the Transfer Box Back wall pulleys belt. 4. Vacuum any debris from the worm drive. 5. Use isopropyl alcohol or locally approved alternative, and wipe excessive dust from worm drive helical threads. 6. Rotate the back wall pulley belt while applying lubricant to help in the distribution of the lubricant on the worm drive. 7. Reinstall back wall and test for proper operation of the back wall. *20 minutes per ITC.	40*	07	375		
INTEGRATED TRAY CONVERTER (ITC): INDEXING	3046	**Inspect all Indexing Table Transfer Box Sensor Wiring on both ITCs.** 1. Locate all sensors on the Indexing table.	24*	09			W

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
TABLE		2. GENTLY perform a pull test on each sensor wire to ensure that the sensor is securely mounted to its cylinder body/mounting bracket. Tighten mounting hardware as needed. 3. Ensure all sensor connections are tight and no cable damage is present. Tighten cable connections and replace cables as necessary. 4. Ensure the Indexing Table Satellite Servo Electrical Panels Door Closed proximity sensors are securely mounted to the panel frame. 5. Ensure the Transfer Box Door proximity sensors are securely mounted to the cylinder body. 6. Ensure the Transfer Box Bridge Finger proximity sensors are securely mounted to the cylinder body. 7. Ensure the Indexing Table Home proximity sensor is securely mounted to the Indexing Table frame and its Flag is securely mounted to the Indexing table base plate. 8. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *12 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): INDEXING TABLE	3050	**Inspect the Indexing Table Transfer Box - Door Cylinder Mounting, Timing Belt Tension, and Timing Pulley Coupling.** **Inspect door cylinder mounting.** 1. Inspect mounting hardware for loose or stripped hardware. Replace if necessary. **Inspect timing belt tension.** 1. Inspect timing belt for sag or slippage. 2. If belt needs tensioning, loosen the two servo motor screws and slide until there is no sag or slippage. 3. Tighten both servomotor screws. **Timing pulley coupling.** 1. Inspect the pulley coupling mounting	16*	09			W

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		hardware. 2. Inspect for loose or missing hardware. 3. Inspect the timing belt for proper alignment on the coupling. 4. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 12, Remove and Replace Back Wall, Remove and Replace Timing Belt. *****8 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): INDEXING TABLE	3060	**Inspect all four Indexing Table Transfer Box-Bridge Finger Actuator Mounts on both ITCs.** 1. Remove transfer box back wall. 2. Remove transfer box base plates. 3. Clean dust and debris from under Transfer Box. 4. Inspect bridge finger actuator mounting, tighten if necessary. 5. Install transfer box base plates. 6. Install transfer box back wall. 7. Generate a work order for any discrepancies found. *120 minutes per ITC.	240*	09	1125		
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	3090	**Inspect the Door Handler and Gripper Cylinder Mounting and Sensors on both ITCs.** **Inspect Door Handler and Door Gripper Cylinder mounting.** 1. Inspect cylinder mounting for loose, missing and broken hardware. 2. Replace and tighten as necessary. **Inspect Door Handler and Door Gripper Cylinder Sensors.** 1. Inspect cylinder extend/retract sensors, adjust/tighten if necessary. 2. Verify the Door Gripper Extend proximity sensor is mounted with its connector end facing the ACT Lift and positioned so that the end of the sensor is flush with its mounting bracket.	4*	09			W

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		3. Generate a work order for any discrepancies found. *2 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	3110	**Clean Auto-paddle Z-Axis, Door Handler, Door Gripper, Backstop X-Axis, Backstop Z-Axis, and ACT Loader Exit Gate Cylinder Rods on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Verify Auto-Paddle Z-Axis cylinder clevis and hardware is secure. 2. Inspect and clean the Auto-Paddle Z-Axis cylinder rod as follows: a. If the Auto-Paddle Z-Axis cylinder rod is not extended, disconnect both air hoses from the pneumatic cylinder in order to lift the Auto-Paddle by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner. Inspect for any damage. c. Re-attach previously removed air hoses to the pneumatic cylinder. 3. Verify door handler cylinder clevis and hardware is secure. 4. Inspect and clean the door handler cylinder rod as follows: a. Extend the door handler cylinder rod by removing both air hoses from the pneumatic cylinder allowing the assembly to lower. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner. Inspect for any damage. c. Re-attach previously removed air hoses to the pneumatic cylinder. 5. Verify door gripper cylinder clevis and hardware is secure. 6. Inspect and clean the door gripper cylinder rod as follows: a. Extend the door gripper cylinder rod by disconnecting both hoses from the	20*	09	2250		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		pneumatic cylinder, and spreading the door grippers to its open position. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner. Inspect for any damage. c. Reconnect the previously disconnected air hoses. **NOTE:** Do not remove the grease in the gripper assembly channel track during cleaning process. Wipe down the exterior components only. 7. Verify Backstop X-Axis Cylinder clevis and hardware is secure. 8. Inspect and clean the Backstop X-Axis Cylinder rod as follows: a. Extend the Backstop X-Axis Cylinder Rod by pulling the Backstop paddle away from the Indexing Table. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner and inspect for any damage. 9. Verify Backstop Z-Axis cylinder clevis and hardware is secure. 10. Inspect and clean the Backstop Z-Axis cylinder rod using the following sub-step(s): a. If the Backstop Z-Axis Cylinder Rod is not extended, disconnect both air hoses from the pneumatic cylinder in order to lift the Auto-Paddle by hand. b. Thoroughly clean the cylinder rod and all components with locally approved cleaner. Inspect for any damage. c. Re-attach previously removed air hoses to the pneumatic cylinder. 11. Remove two rollers to the right off exit gate. 12. Verify exit gate cylinder clevis and hardware is secure. 13. Inspect and clean the exit gate cylinder rod as followings: a. Extend exit gate cylinder rod by rotating the exit gate to its down position. b. Thoroughly clean the cylinder rod and all components with locally approved					

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		cleaner. Inspect for any damage. 14. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	3120	**Check ACT Loader Backstop Air Cylinder Bumper on both ITCs.** 1. Check bumper for any cracks. 2. Generate a work order to replace bumper if any cracks found or bumper is missing. Refer to MS-209, Volume C, Section 7, Bumper Checking. *1 minute per ITC.	2*	07	2250		
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	3130	**Check the ACT Load Auto Paddle X-Axis Belt Tension on both ITCs.** 1. Open ACT loader door and remove ACT loader screen. 2. Manually move cart to one end of actuator. 3. Insert tension tool into center of linear actuator belt and attach torque wrench to belt tensioning tool (3130-08-000-4149). 4. Turn torque wrench until belt tensioning tool is parallel with linear actuator. 5. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment for current tension specifications. 6. Remove torque and tension tool. 7. Install ACT loader screen and close ACT loader door. 8. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment. *4 minutes per ITC.	8*	07	2250		
INTEGRATED TRAY CONVERTER (ITC): PANEL, ELECTRICAL,	3140	**Replace Air Filter (2).** 1. Remove and discard filter from lower right hand side of cabinet 2. Install new filter (4140-11-000-2236).	2*	07	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
MAIN, TOP LEVEL		*1 minute per ITC.					
INTEGRATED TRAY CONVERTER (ITC): MAIN AIR PANEL	3150	**Clean Filter/Regulator and Replace Filter on Both ITC.** 1. Clean the Filter/Regulator. a. Place shutoff valve in EXH position leading to filter/regulator, and verify pressure gauge indicates 0 PSI. b. Remove filter housing. c. Remove and replace O-ring. d. Remove and discard filter. e. Clean filter housing with lint-free cloth or microfiber glove. f. Install new filter (4330-13-000-5452) in filter housing. g. Check O-ring for cracks or dry-rot. Replace if necessary. h. Install O-ring. i. Install filter housing. j. Place shutoff valve in SUP position leading to filter/regulator. 2. Generate a work order for any discrepancies found. *5 minutes per ITC.	10*	07	2250		
FLATS SEQUENCING SYSTEM (FSS): CONTROL STATION RACK	3550	**Replace Cabinet Chassis Filter and Clean all 4 System Control Station Computer(s).** **Clean Cabinet Chassis filter**. 1. Remove and discard filter from cabinet. 2. Install new filter. 3. Clean top and sides of Cisco network switch using a lint-free cloth or microfiber glove. **Clean all 4 System Control Station Computer(s)**. 1. Set up ESD workstation kit in accordance with current ESD MMO. 2. Remove six screws and case cover. 3. Using an ESD vacuum cleaner, clean dust and debris from inside controller. 4. Install case cover and secure with six screws.	30	10	1125		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		5. Remove ESD workstation kit.					
ENTIRE FSS: SYSTEM	4998**	**Power Up and Restore System to Operational Mode.** Restore the system to operational mode as prescribed by the current local lockout/restore procedures. Observe all indicators during power up for correct operation.	25	10			D
ENTIRE FSS: SYSTEM	4999	**Perform At-Risk Element Analysis.** 1. Using the Maintenance Analysis Tool, analyze At-Risk Performance information using the At-Risk All Templates selection. 2. Determine root-cause of At-Risk performance and generate a work order for any discrepancies found.	10	10	6		
ENTIRE FSS: SYSTEM	5000	**Conduct System Performance Test Using Abbreviated Test Deck.** 1. Load abbreviated maintenance test deck into ACTs: a. Separate abbreviated maintenance test deck into four stacks of 90 mailpieces. b. Load each 90 mailpiece stack into an ACT, preparing four ACTs. c. Load four ACTs on dolly. 2. Inhibit Flats Identification Code Sort (FICS) peripherals during first pass, using System Controller HMI option. 3. Perform a manual sweep of pass 1 or 2 and reject trays if they do not unstage on their own from Staging. 4. Start Pass 2 feeding on Feeders 1 and 2 before starting Feeders 3 and 4. MS-209, Volume H, Section 4, Abbreviated Maintenance Test Deck. 7690-12-000-7431, Test Deck, FSS Maint Performance (1200 PCS). 5220-15-000-0526, Abbreviated Test Deck Label Kit.	30	09		4	
ENTIRE FSS: SYSTEM	5010**	**Test all FSS E-Stop Switches and Pull Cords.** Testing the first E-Stop will cause the system to shut down and all machine motion to stop. Test the remaining FSS E-Stops without restarting the	150	09			M

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		system and verify that all other E-Stop switches and pull cord switches generate a status message and/or E-Stop indication**.** 1. Pull cord locations. a. Post Staging (3 pull cords). b. Staging (8 pull cords). c. ETR Tote Check (1 pull cord). d. Carousel Maintenance Alley (2 pull cords). 2. Ensure FSS is running normally. 3. Activate a FSS E-Stop pushbutton or pull cord. 4. Observe all FSS mechanical motion stops. 5. Observe E-Stop indicator lamp turns on. 6. Observe FSS E-Stop indication displays on System Controller HMI, RMDC, or scrolling marque display for activated E-Stop. 7. Release activated E-Stop pushbutton or pull cord. 8. Observe E-Stop indicator lamp turns off. 9. Observe FSS mechanical motion remains stopped. 10. Verify E-Stop indication is no longer displayed on scrolling message display or software screen. 11. Repeat steps 2 through 10 for all other FSS E-Stop switches and pull cords. 12. Generate a work order for any discrepancies found.					
ENTIRE FSS: SYSTEM	5015	**Perform FSS ACT Count.** Ensure there are 115 to 125 Empty ACT on the FSS when all tray movement is stopped. The ACTs will be counted on the following conveyors: • Feeder Input Conveyor (FIC) • Feeder Output Conveyor (FOC • Feeder Spur Conveyors (4) • ITC Spur Conveyors (2) • ITC ACT Lifts (2)	5	07	6		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		• ITC ACT Conveyors (2)					
ENTIRE FSS: SYSTEM	5040	**Check Air Pressure at FSS Main Pneumatic Panel.** 1. Check FSS Main Pneumatic Panel pressure reading. 2. Adjust regulator until it is between 88 and 92 PSI if necessary. Refer to MS-209, Volume F, Section 11 Pneumatic Distribution.	1	07	375		
CAROUSEL ASSEMBLY: SYSTEM	5050**	**Run Blocked Item Retrieval Tool.** 1. Perform RMDC Login procedure. 2. Select Maintenance>> on main navigation panel. 3. Select Flats Sorting>> on maintenance navigation panel. 4. Select Carousel Tools on flats sorting navigation panel. **NOTE:** A sort plan must be loaded in order to perform this procedure. 5. Press STOP pushbutton on FSS Main control panel. 6. Select Blocked Items Retrieval tab from Carousel Tools page. 7. Select Upper Carousel or Lower Carousel radio button from Start with area. 8. Select Refresh button from Start with area. 9. If Get blocked items succeeded prompt appears at bottom of screen, remove flats or debris from all buckets on the Blocked Items List. 10. Perform Logout procedure if No blocked items for retrieval prompt appears at bottom of screen. Refer to MS-209, Volume H, Section 10 Control System–Blocked Items Retrieval.	12	09	6		
CAROUSEL ASSEMBLY: SENSOR, BUCKET CHECKING SYSTEM	5060**	**Run Bucket Control System Test.** 1. Select Maintenance>> button on main navigation panel. 2. Select Flats Sorting>> button on maintenance navigation panel.	7	09	6		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036			Occurrence eCBM		

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.
		3. Select Carousel Tests button on flats sorting navigation panel. 4. Press STOP pushbutton on FSS Main control panel. 5. Select Bucket Control Systems tab from carousel test page. 6. Select Start Test button from Bucket Control System Test area. 7. Select Yes button from Diagnostic Test Confirmation dialog box. 8. Observe starting the carousel prompt displays on screen. 9. Observe BCS test ended successfully prompt displays on screen. 10. Observe BCS Test Results field. 11. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10, Control System, Bucket Control System.					
CAROUSEL ASSEMBLY: SENSOR, BUCKET CHECKING SYSTEM	5065**	**Inspect Alignment of all Photoeyes on the Three Bucket Checking Sensor Arrays.** 1. Use Level Change Module Oscilloscope to confirm the proper alignment and timing of all photoeyes on all three BCS arrays using MS-209, Volume D, Section 11, Bucket Control System Timing Alignment and Adjustment procedure steps 40-93. Only perform waveform checks and not adjustments. 2. Generate a work order for any discrepancies found. *10 minutes per BCS Array.	30*	09	375		
CAROUSEL ASSEMBLY: SYSTEM	5070**	**Run Bucket Opening Solenoids Test.** 1. Select Maintenance>> button on main navigation panel. 2. Select Flats Sorting>> button on maintenance navigation panel. 3. Select Carousel Tests button on flats sorting navigation panel. 4. Press STOP pushbutton on FSS Main control panel. 5. Select Bucket Opening Solenoids tab from	2	09			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		carousel test page. 6. Press START TEST. 7. Select YES 8. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10, Control system, Bucket Opening Solenoid.					
CAROUSEL ASSEMBLY: PHOTOEYE	5090	**Clean and Verify Flat Mailpiece Laying on Top Photoeye Array Calibration (2).** 1. Wipe photoeyes with a lint-free cloth or microfiber glove. 2. Inspect calibration of the sensors by laying a thin white test deck flat atop the buckets to test if the photoeye changes state. 3. Generate a work order for any discrepancies found. *5 minutes per PE Detector Array.	10*	09	375		
CAROUSEL ASSEMBLY: SYSTEM	5100**	**Test Functionality of all Carousel Lockable Interlocks.** Stop the FSS Carousel by pressing the STOP pushbutton on the FSS Main Operator Control Panel. 1. Once the FSS Carousel has stopped, open one door / panel with a solenoid lockable interlock. 2. Ensure proper identification of the door / panel opened on the software HMI. 3. With the door open, attempt to restart the FSS Main Carousel by pressing the START button. 4. Ensure that the FSS Main Carousel and Mini-Carousels do not start. 5. Shut the door. 6. Repeat steps 1 –5 for the remaining solenoid lockable interlocks to ensure they report on the software HMI. 7. Generate a work order for any discrepancies found.	70	09			M
CAROUSEL ASSEMBLY: LEVEL DIVERTER	5110**	**Test Functionality of all the Level Divert Interlocks.**	10	09			M

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
ASSEMBLY		1. Stop the FSS Carousel by pressing the STOP pushbutton on the FSS Main Operator Control Panel. 2. Once the FSS Carousel has stopped, open door with (SI1- Level Divert Non-Locking) interlock. **NOTE:** SI 1 only, does not report, Drive Un-operational fault is the displayed alarm on System Controller and will not start. 3. Open the SI 1 door. 4. Press Start. 5. Confirm THS does not start and the software HMI reports correct message. 6. Open any other Level Divert interlocked door. 7. Confirm software HMI reports correct message. 8. Repeat steps 6 – 7 for all remaining level divert interlocks. 9. Close SI1 door. 10. Generate a work order for any discrepancies found.					
CAROUSEL ASSEMBLY: SYSTEM	5120	**Run Carousel Chain Tension Test.** 1. Select Maintenance button on main navigation panel. 2. Select Flats Sorting button on maintenance navigation panel. 3. Select Carousel Tests button on flats sorting navigation panel. 4. Press START pushbutton on FSS Main control panel. **NOTE**: Carousel must run for 2 minutes prior to starting test 5. Select Chain Tension tab from Carousel Tests page. 6. Select Test Control tab. 7. Select Log Results check box from Test Control area. 8. Select Run button from Test Control area. 9. Generate a work order for any discrepancies	20	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		found. Refer to MS-209, Volume H, Section 10, Chain Tension and Test Control.					
CAROUSEL ASSEMBLY: SYSTEM	5125	**Inspect Carousel Dampeners and Upper BCS 2.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Remove 3 Buckets from both the Upper and Lower Carousel and jog open area to the dampener and Upper BCS 2 positions. **Carousel Dampener Switches (3)** 1. Locate the three Dampeners. They are to the left of each infeed line in the carousel, and at the transfer device. . 2. Navigate to each Dampener and manually drop each one to activate the switch and ensuring that it operates correctly by confirming HMI Alarm message using the RMDC. **Clean Upper BCS 2.** 1. Wipe the following Upper BCS 2 lenses with a lint-free cloth or microfiber glove. a Flap closed reflective photo eye. b Four Mail Present photo eyes. c Two Folded Flats reflective photo eyes. 2. Clean Lexan shield. 3. Clean proximity sensor. Refer to MS-209, Volume D, Section 7, Bucket Control System Photoeyes Cleaning and Reflector Cleaning. **Inspect Upper BCS 2 Springs** **NOTE**: The springs are located on top of BCS 2. 1. Inspect Upper BCS 2 springs: a. Use a flashlight and verify springs (Qty. 2) are attached to the top of BCS 2. 2. Generate a work order for any discrepancies found.	20*	09			W

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
CAROUSEL ASSEMBLY: SYSTEM	5130**	**Remove 6 Buckets from both the Upper and Lower Carousel to Inspect and/or Clean the Lower Bucket Flap Closer and its Bucket Stabilization Rollers, the Transfer Device Alignment, all 3 Dampeners and their Bucket Stabilization Rollers, the Upper Bucket Closing Cam and its Bucket Stabilization Rollers, and the Justifiers and their Bucket Stabilization Rollers.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. Level Change - Remove 6 Buckets from each Carousel and jog the carousels as needed to facilitate the following inspections. Perform MS-209, Volume D, Section 12, Remove and Replace Bucket procedure. Refer to MS-209, Volume D, Section 10, Carousel Jog procedure. **Level Change – Inspect Lower Bucket Flap Closer and its Bucket Stabilization Rollers.** 1. Check ramp for following conditions: a. Broken ramp. b. Worn or rolled top edge. c. Cuts or grooves in top edge. 2. Check Bucket Stabilization Rollers: a. Ensure wheels spin freely. b. Inspect for gouges in wheels. c. Inspect for wheel shavings. **Lower Carousel Drive Module - Inspect Transfer Device Index Adjustment.** 1. With carrier plate in front of transfer device, use transfer device locator tool (PSN 5220-12-000-7420) to verify transfer device alignment. **NOTE:** Ensure no carrier plate wheels are in the un-level rail sections of the Level Change. Loosen two screws on alignment tool and adjust bottom plate to align with pin, if needed.	180	09	1125		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		2. With device pin fully extended, ensure the face of device pin falls within the depth of the channel but does not contact the transfer device locator tool. 3. Remove transfer device locator tool from carrier plate. **Infeed Line and Transfer Device Dampeners – Inspect all three Dampeners and their Bucket Stabilization Roller Assemblies.** 1. Inspect injector dampener alignments by viewing from above the buckets. **NOTE:** If necessary to improve visual access, remove two or three paddles from the Mini Carousel. 1. Ensure dampener rails are centered in the bucket openings. 2. Test the dampeners to ensure the mechanical switch is working properly. 3. Inspect dampener rails for excessive wear. 4. Remove dirt, dust accumulation, and debris from dampeners 5. Clean and lubricate dampener pivot points. 6. Inspect functionality and alignment of Dampener switch. 7. Measure force needed to cause dampener to drop to the low position. a. Using a force gauge at the lowering handle, press the handle to lower the dampener. b. The dampener should fall at a meter reading between 16 – 22 pounds. Refer to MS-209, Volume D, Section 12, Remove and Replace Carousel--Remove and Replace Lower Carousel Drive Module--Remove and Replace Shock Absorber. **Lower Carousel Drive Module - Inspect Upper Bucket Flap Closer and its Bucket Stabilization Roller Assembly.** 1. Inspect ramp and closing cam for following					

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		conditions: a. Broken ramp or cam. b. Worn or rolled top edge. c. Cuts or grooves in top edge. 2. Inspect closing cam alignment using flap closing ramp gauge (PSN 5220-12-000-7393). Refer to MS-209, Volume D, Section 7 Closing Cam Checking, and Ramp Checking Procedures. 1. Inspect Bucket Stabilization Rollers. a. Ensure wheels spin freely. b. Inspect for gouges in wheels. c. Inspect for wheel shavings. Refer to MS-209, Volume D, Section 12, Remove and Replace Roller. **Level Change and Extension Modules - Verify proper alignment of the upper and lower justifiers.** 1. Inspect the upper bucket guide and the roller ramp alignment. a. The proper distance between the upper guide and the top of the buckets should be 5 ± 2.0 mm. b. The rollers should barely touch the buckets, the gap to be between 0 mm and 1 mm. 2. Ensure the roller ramp is NOT bowed (when viewed from the top) and that it is NOT in contact with the buckets (5.0 ± 2.0 mm clearance). 3. Look from above the justifiers and ensure the rollers are centered in the bucket openings. 4. Ensure the gaps on both sides of the rollers are equal and the gap is consistent along the entire length of the rollers. 5. Raise a bucket by hand until it contacts the upper guide and ensure no bucket flap is in contact with any justifier roller. 6. Measure force needed to cause Justifier to drop to the low position.					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		a. Using a force gauge at lowering handle, press handle to lower the Justifier. b. The Justifier should fall at a meter reading between 16 – 20 pounds. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Justifier. 1. Jog Carousel as needed and re-install the 12 removed buckets. 2. Generate a work order for any discrepancies found.					
CAROUSEL ASSEMBLY: UPPER CAROUSEL DRIVE MODULE	5140**	**Verify Proper Alignment of the Mail Sweeper.** 1. Open door 14 and bypass locking interlock 14 so that the sweeper is visible while the carousel is running. **WARNING: Use extreme caution around moving carousel components. Moving carousel components can cause lethal injuries. All personnel in the vicinity must be warned of the potential lethal injuries. The interlock shall not remain over-ridden for any period longer than the time required to complete troubleshooting and/or verification of proper equipment operation.** 2. Start the carousel, and using a flashlight confirm the sweeper finger tips are approximately 1 – 3 mm above the bucket tops while running. 3. Close door 14. 4. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11 Alignment and Adjustment Procedures–Carousel–Upper Carousel Drive Module–Flats Extractor.	2	09	1125		
CAROUSEL ASSEMBLY: EMPTY TRAY ACCUMULATION CONVEYOR	5145	**Inspect ETAC Tray Transport Belts, ETAC Belt Guides, and PATD Belts** 1. Block a conveyor photo eye just past ETR Tote Check to create a jam so ETAC belts do not repopulate. 2. Special sweep the Carousel twice so all RCT are removed from Carousel. 3. Inspect ETAC belt for end-of-life conditions: a. Belt continually stretches and is starting	200	09	375		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		to cup. b. Surface cover is worn off. c. Gouges in excess of 2 mm. d. Cracks or cuts in excess of 1/3 of the way across the belt width. e. Missing or damaged teeth so the belt is not engaging properly. f. Belt edge wear caused by poor tracking which can cause phantom "Jams Above Stop Device". Remove all small frays found. g. Holes in excess of 6 mm. h. Kevlar or steel cords starting to show through the top or bottom of belt. i. Split or pop up of belt splice fingers. 4. Inspect each ETAC belt guide for end-of-life conditions: a. Height misalignment. b. Gap between belt guides. c. Lateral misalignment. d. Missing or damaged belt guide. e. Belt guide edge wear caused by poor belt tracking or possibly a jam. 5. Inspect ETAC main drive shaft and shaft collars for movement or damage. Verify there are no metal shavings under the motor or loose hardware on the ETAC drive assembly. 6. Inspect the ETAC belt idler tensioning pulleys for rust, metal shavings, or signs of excessive wear. 7. Ensure drive pulleys are properly aligned in the channel. 8. Inspect PATD belts for end-of-life conditions: a. Belt is starting to cup. b. Surface cover is worn off. c. Gouges in excess of 2 mm. d. Cracks or cuts in excess of 1/3 of the way across the belt width.					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		e. Missing or damaged teeth so the belt is not engaging properly. f. Belt edge wear. g. Holes in excess of 6 mm. 9. Remove ETR Tote Check jam condition so ETAC belts and PATDs repopulate. 10. Generate a work order for any discrepancies found. **NOTE:** The daily test deck can be started once PATDs are repopulated. Refer to MS-209, Volume D, Section 7, Belt Checking, Tension Drive Module.					
CAROUSEL ASSEMBLY: EMPTY TRAY ACCUMULATION CONVEYOR	5150	**Inspect ETAC Belt Tracking and Tension (8).** 1. Verify belts are tensioned and tracking correctly. a. There should not be any slack in the belt. b. Belt should be travelling within the center of the black plastic guides. 2. Generate a work order for any discrepancies found. Refer to the MS-209 Volume D, Section 11, ETAC Tension Drive Module.	10*	09	1125		
CAROUSEL ASSEMBLY: SYSTEM	5160**	**Lower Carousel Sagging Buckets Inspection.** 1. Remove the lower front panels from sort module 16. 2. Mark a bucket with brightly colored tape (used to tell when laps have occurred). 3. Run the Carousel at slow motion (50%) for five minutes while observing the outside edge of all buckets. 4. Verify that all buckets travel smoothly without bouncing excessively and without sagging. 5. Replace the lower front panels of the sort module. 6. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, FSM, Section 12, Remove and Replace Bucket.	10	09	1125		
CAROUSEL	5170	**Perform Ultrasonic Contact Probe**	24*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
ASSEMBLY: EMPTY TRAY ACCUMULATION CONVEYOR		**Measurement on ETAC Motor Gear Case.** 1. Make a permanent mark on the gear box with paint or indelible marker where periodic Ultrasonic Contact Probe measurements will always be made. 2. Use Ultrasonic Contact Probe to determine gear motor noise level. 3. Record measured noise levels along with the date in a permanent log book for all 4 ETAC motors. 4. Analyze noise level trends and generate maintenance work orders as necessary.					
DOLLY INDUCT: DESTACKER, DOLLY INDUCT	5300	**Check Destacker BRAT Belts.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog belt to check entire belt for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 2 mm. d. Missing teeth. 2. Generate a work order for any discrepancies found.	5	09	4500		
DOLLY INDUCT: SYSTEM	5310**	**Test Functionality of the Start-Up Warning Horns/Lamps.** 1. Using the RMDC perform the functional test of the Start-up Warning Horns/Lamps. 2. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Control Systems, Section 10, Dolly Induct Light Test.	2	09			M
DOLLY INDUCT: SYSTEM	5320**	**Test Functionality of the Dolly Induct Interlock Loop and Light Curtain.** 1. Open a door in the Dolly Induct interlock loop. 2. Press the start button on the Dolly Induct electrical cabinet ensuring nothing starts in the Dolly Induct system. 3. Close previously opened panel or door.	3	09			M

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		4. Repeat the steps above for all Dolly Induct panels and doors. 5. While Dolly Induct is started and in motion, break the beam of the light curtain. 6. Transfer conveyor motion stops but Stacker and De-stacker motion continues. 7. Generate a work order for any discrepancies found.					
DOLLY INDUCT: SYSTEM	5325	**Check Air Pressure at Dolly Induct Pneumatic Panel.** 1. Check Dolly Induct Pneumatic Panel pressure reading. 2. Adjust regulator until it is between 75 and 85 PSI if necessary. Refer to MS-209 Volume C, Section 11 Dolly Induct Pneumatic Panel.	1	07	375		
DOLLY INDUCT: DESTACKER, DOLLY INDUCT	5330	**Inspect Linear Actuator Belt Condition and Belt Tension.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog shelf to upper and lower stops and inspect belt as it rotates around linear actuator. 2. Jog shelf to a position slightly above the maintenance pin position and insert safety pin. 3. Remove windows to gain access to middle of belt. 4. Place belt tensioning tool (PSN 3130-08-000-4149) on the belt at mid-span of linear actuator. 5. Turn torque wrench until belt tensioning tool is parallel with linear actuator and record torque value. Refer to MS-209, Volume C, Section 11, Belt Tension Checking for current specifications. 6. Remove belt tensioning tool and torque wrench from belt.	60*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Destacker, Front Belt Tension Adjustment. Refer to MS-209, Volume C, Section 11, Destacker, Rear Belt Tension Adjustment. **Lubricate Actuator (2).** 1. Remove wiper cover screws to gain access to wipers. 2. Inspect and clean wipers. Replace as necessary. 3. Saturate two top wipers with SAE 30 W oil at two cap holes and apply oil onto exposed wipers. 4. Lubricate two bottom wipers. a. Remove two screws, bottom caps, and bottom wipers. b. Remove two bottom wipers from two bottom caps. c. Inspect and clean wipers. Replace as necessary. d. Saturate two bottom wipers with SAE 30 W oil and install springs and wipers into two bottom caps. e. Install wiper, cap, and secure with screw for two bottom wipers. 5. Remove safety pin. 6. Install windows removed to access the middle of linear actuator belt. Refer to MS-209, Volume C, Section 7, Linear Actuator Cleaning Front and Rear Wiper Cleaning. *30 minutes per Destacker Linear Actuator.					
DOLLY INDUCT: STACKER, DOLLY INDUCT	5340	**Inspect Linear Actuator Belt Condition and Belt Tension.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog shelf to upper and lower stops and	60*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036					Occurrence: eCBM

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		inspect belt as it rotates around linear actuator. 2. Jog shelf to a position slightly above the maintenance pin position and insert safety pin. 3. Remove windows to gain access to middle of belt. 4. Place belt tensioning tool (PSN 3130-08-000-4149) on the belt at mid-span of linear actuator. 5. Turn torque wrench until belt tensioning tool is parallel with linear actuator and record torque value. Refer to MS-209, Volume C, Section 11, Belt Tension Checking for current specifications. 6. Remove belt tensioning tool and torque wrench from belt. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Destacker, Front Belt Tension Adjustment. Refer to MS-209, Volume C, Section 11, Destacker, Rear Belt Tension Adjustment. **Lubricate Actuator (2).** 1. Remove wiper cover screws to gain access to wipers. 2. Inspect and clean wipers. Replace as necessary. 3. Saturate two top wipers with SAE 30 W oil at two cap holes and apply oil onto exposed wipers. 4. Lubricate two bottom wipers. a. Remove two screws, bottom caps, and bottom wipers. b. Remove two bottom wipers from two bottom caps. c. Inspect and clean wipers. Replace as necessary. d. Saturate two bottom wipers with SAE 30W oil and install springs and wipers into two bottom caps.					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	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 (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		e. Install wiper, cap, and secure with screw for two bottom wipers. 5. Remove safety pin. 6. Install windows removed to access the middle of linear actuator belt. Refer to MS-209, Volume C, Section 7, Linear Actuator Cleaning Front and Rear Wiper Cleaning. *30 minutes per Stacker Linear Actuator.					
EMPTY TRAY RETURN CONVEYOR:: PANEL, PNEUMATIC, ACCUMULATION	5345	**Check and Adjust Air Pressure.** 1. Ensure air pressure gauge reads between 12 and 15 PSI. 2. If necessary, adjust air pressure: a. Ensure shutoff valve is in SUP position. b. Push up on adjusting knob release to adjust. c. Adjust air pressure to between 12 and 15 PSI. d. Pull down on adjusting knob release to lock. *3 minutes per panel.	9*	07	2250		
EMPTY TRAY RETURN CONVEYOR:: CONVEYOR, ZERO PRESSURE ACCUMULATION, RH, 108 FT	5400	**Inspect Zero Pressure Accumulation Conveyor Belts.** 1. Inspect entire V-bottom drive belt for end-of-life conditions that exist on more than 20% of the belt. Observe belt for at least one complete revolution. a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Nicks in excess of 2 mm. 2. Inspect alignment of belt, make sure belt is centered. 3. Inspect belt tension; verify gauge is not in red section. 4. Inspect lacing; verify lacing pin is secure and that the belt is not tearing at joint. 5. Inspect return roller and clean as needed. 6. Generate a work order for any discrepancies	5	09	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:								Bulletin Filename: mm15036				Occurrence: eCBM			

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.
		found. V Belt (108 Foot) PSN 3030-12-000-5077. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures, 108-Foot ETR Accumulation Conveyor. Refer to MS-209, Volume C, Section 12, Removal Replacement Procedures, V-Bottom Drive Belt.					
EMPTY TRAY RETURN CONVEYOR:: CONVEYOR, ZERO PRESSURE ACCUMULATION, RH, 186 FT	5410	**Inspect Zero Pressure Accumulation Conveyor Belts.** 1. Inspect entire V-bottom drive belt for end-of-life conditions that exist on more than 20% of the belt. Observe belt for a least one full revolution. a. Cuts in excess of 2 mm. b. Abrasions in excess of 2 mm. c. Gouges in excess of 2 mm. d. Nicks in excess of 2 mm. 2. Inspect alignment of belt, make sure belt is centered. 3. Inspect belt tension; verify gauge is not in red section. 4. Inspect lacing; verify lacing pin is secure and that the belt is not tearing at joint. 5. Inspect return roller and clean as needed. 6. Generate a work order for any discrepancies found. V Belt (186 Foot) PSN 3030-12-000-5078. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures, 186-Foot ETR Accumulation Conveyor. Refer to MS-209, Volume C, Section 12, Removal Replacement Procedures, V-Bottom Drive Belt Repair.	5	09	375		
INFEED LINE: ASSEMBLY	5500**	**Clean and Adjust all Synchronizer and Infeed Line Photoeyes.** Clean and adjust photoeyes. 1. Inspect for debris/mail and remove. 2. Clean photocell emitter and receiver using a lint-free cloth or microfiber glove.	22*	09			W

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		3. Adjust photoeyes sensitivity: a. Ensure photoeye is set to D before performing adjustment procedure. b. Turn sensitivity control potentiometer counterclockwise until amber LED turns on. c. Turn potentiometer clockwise until amber LED turns off. d. Turn potentiometer additional 1/8 turn clockwise. e. Place a single sheet of paper at detection distance from photoeye. f. Observe green LED remains on and amber LED indicates photoeye status change. Repeat adjustment until specified indications are observed. g. Remove paper. Refer to MS-209, Volume D, Section 11 Alignment and Adjustment. *11 minutes per Infeed Line.					
INFEED LINE: ASSEMBLY	5510**	**Test the Functionality of both Infeed Line Interlock Loops.** 1. Start the Infeed line and ensure that all horns and lights activate upon startup. 2. With Infeed Line running, open a door in the Infeed Line interlock loop. 3. Verify all motion stops. 4. Verify correct message appears on Operator Control Panel and software HMI. 5. Press the start button on the Infeed Line operator panel ensuring the Infeed Line does not start. 6. Close previously opened door. 7. Repeat steps 1 – 6 for all panels and doors, for both Infeed Lines. 8. Generate a work order for any discrepancies found. *5 minutes per Infeed Line.	10*	09			M
INFEED LINE ASSEMBLY:	5550**	**Check Vacuum Accumulation Tank Vacuum Level (4).**	4*	07	4		

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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
AUTOMATED FEEDER ASSEMBLY		Check Vacuum Tank vacuum pressure. Proper set point is 18.9 inches of Hg, adjust if necessary. *1 minute per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	5560**	**Test MAC Valve Functionality (12).** 1. Use mechanical switch on back of valve to verify valve action. Press top solenoid switch, then bottom solenoid switch in succession several times to exercise valve. 2. MAC valves commonly leak at internal seals. To check for leaks: a. Turn on Infeed line. b. Verify vacuum pressure is 18.9 inHg. c. Place plastic enveloped test mail on Destacker backplate (upstream and downstream valves) or anti-doubler nozzle face (anti-doubler valve). d. Press in the upper mechanical switch on back of valve to activate valve. e. Observe vacuum pressure and ensure it is higher than 17.0 inHg. If vacuum pressure falls below 17.0 inHg: 1.) Inspect seal between test mail and backplate or nozzle face. 2.) Confirm hose integrity by disconnecting MAC valve side hose, then blocking it and confirming vacuum pressure is higher than 17.0 inHg. 3.) Press in the lower mechanical switch on back of valve to deactivate valve. 3. Generate a work order for any discrepancies found. If necessary, generate work order to rebuild or replace MAC valve. Refer to MS-209, Volume D, Section 12, Remove and Replace Destacker. *2 minutes per MAC valve.	24*	09			W
INFEED LINE ASSEMBLY: AUTOMATED FEEDER	5570**	**Inspect the Perforated Belt Pulleys and Belt Tracking (4).** 1. Turn each pulley by hand and ensure there	20*	09			W

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
ASSEMBLY		is no grinding felt when turning the belt. 2. Inspect pulleys for wear and mail debris caught between pulley and belt. 3. Verify bearings are recessed within the pulley and not separating from the pulley, if bearing damage noted, replace the pulley immediately. 4. Verify belt pulleys are securely fastened to the baseplate in each of the infeed modules. 5. Perform Perforated Belt Continuous procedure; set speed selection to 5% on diagnostic screen. 6. To adjust tracking, loosen screw, rotate adjusting nut left or right until belt runs in center of tracking pulley, tighten screw. 7. Perform Perforated Belt Continuous procedure; set Speed Selection to 20% on diagnostic screen and readjust as necessary. 8. Perform Perforated Belt Continuous procedure; set Speed Selection to 50% on diagnostic screen and readjust as necessary. 9. Perform Perforated Belt Continuous procedure; set Speed Selection to 100% on diagnostic screen and readjust as necessary. 10. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Perforated Belt Tracking Adjustment. *5 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	5580	**Inspect Magazine Assembly Belt Condition and Belt Tracking (4).** 1. Perform Magazine Belt Continuous tool procedure on HMI and set Magazine Belt to run at 50% speed. 2. Inspect for: a. Cracks. b. Splits. c. Tears. d. Joint separation. e. Worn through outer surface.	20*	09	1125		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		3. Verify belt runs straight without sliding off either side of magazine conveyor or rubbing. 4. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10, Troubleshooting Procedures, Diagnostic Tools Procedures. *5 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	5590**	**Test Functionality of all four Feeder Interlock Loops.** 1. Start the Feeder, allow it to complete homing sequence and ensure that all horns and lights activate upon startup. 2. With the feeder running, open a door in the feeder interlock loop. 3. Verify all feeder motion stops. 4. Verify correct message appears on Operator Control Panel and software HMI. 5. Press the start button on that feeder operator panel ensuring nothing starts on that feeder. 6. Close previously opened door. 7. Generate a work order for any discrepancies found. Repeat the steps above for all panels and doors on all four feeders. *6 minutes per Feeder.	24*	09			M
INFEED LINE ASSEMBLY: PNEUMATIC DISTRIBUTION SYSTEM ASSEMBLY	5600	**Check Feeder Main, Anti-doubler, and Feeder Paddle Air Regulator Pressure (4).** 1. Adjust Feeder main air pressure to 80 PSI (+/-5) indicated on gauge just right of the feeder power panel: a. Rotate regulator knob clockwise to increase air pressure. b. Rotate regulator knob counterclockwise to decrease air pressure. 2. Adjust anti-doubler air pressure to 7- 9 PSI on anti-doubler pressure regulator gauge while activating the manual release button: a. Press and hold manual air valve release button on right side of pressure regulator until gauge stabilizes.	6*	07	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036			Occurrence eCBM		

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. Rotate regulator knob clockwise to increase air pressure. c. Rotate regulator knob counterclockwise to decrease air pressure. 3. Adjust Automated Feeder arm door handler air pressure to 50 - 55 PSI on the door handler pressure regulator gauge: a. Press AI FEED button on Feeder control panel. b. Rotate regulator knob clockwise to increase air pressure. c. Rotate regulator knob counterclockwise to decrease air pressure. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures. *1.5 minutes per Feeder.					
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	5610	**Confirm Sensing Distance of Mail Presence Sensors (3).** **NOTE**: Requires 2 Maintenance personnel. 1. Clean destacker trough photoeyes (FDR-V1, V2, V3) with a lint-free cloth or microfiber glove and ensure no debris is blocking the photoeyes path. 2. Verify alignment of the destacker trough photoeyes (FDR-V1, V2, V3) using special tool (PSN 5220-17-000-1390). 3. Verify alignment of the V4 photoeye. a. Set gain dial on photoeye to maximum. b. Set mode switch on photoeye to "D". c. Verify light beam is centered on reflector on anti-doubler assembly. d. Adjust sensor mounting bracket to center light beam. 4. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures, Infeed Line, Automated Feeder Module, Destacker, Diffuse Photoeye Adjustment, Reflective Photoeye Adjustment. *3 minutes per Feeder.	12*	09	375		
INFEED LINE	5620**	**Test Functionality of the Z-Axis Paddle Jam**	8*	09			M

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
ASSEMBLY: AUTOMATED FEEDER ASSEMBLY		**Proximity Switch (4).** 1. Verify proximity switch is flush with bottom of clamping bracket, and LED on switch is illuminated. 2. Manually lift automatic feed arm Z-Axis paddle and verify proximity switch LED goes out. 3. Gently lower automatic feed arm Z-Axis paddle to rest position. 4. Generate a work order for any discrepancies found. *2 minutes per Feeder.					
INFEED LINE ASSEMBLY: EXTENSION MODULE ASSEMBLY	5800**	**Test Infeed Line Thickness Detectors (4).** **Create Thickness Detector test deck**. 1. Gather 20 FSS test deck flats of uniform thickness plus or minus approximately .5 mm. 2. Record nominal thickness. 3. Retrieve FSS one test deck flat thicker than 20-piece deck by 2 mm or greater, and add to deck. 4. Retrieve one FSS test deck flat thinner than 20-piece deck by 2 mm or greater, and add to deck. 5. Set Thickness Detector test deck aside for later use. **Test Extension Module Thickness Detectors.** 1. Place infeed line in reject mode. 2. Select **Thickness Sensors** tab from Feeder Tests page. 3. Select **Feeder 1** or **Feeder 3** from Feeder drop-down menu. 4. Place test deck on feeder table. 5. Select **Start Test** button. 6. Select **Yes** button from Diagnostic Test Confirmation dialog box. 7. Observe Thickness Test Results area. 8. Select **Stop Test** button.	12*	09	375		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		Test Merge Module Thickness Detectors. 1. Place infeed line in reject mode. 2. Select **Thickness Sensors** tab from Feeder Tests page. 3. Select **Feeder 2** or **Feeder 4** from Feeder drop-down menu. 4. Place test deck on feeder table. 5. Select **Start Test** button. 6. Select **Yes** button from Diagnostic Test Confirmation dialog box. 7. Observe Thickness Test Results area. 8. Select **Stop Test** button. 9. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10, Control System, Thickness Sensor Test. Refer to MS-209 Volume D, Section 11, Alignments and Adjustment Procedures–Laser Thickness Sensor Adjustment. *6 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: IMAGE ACQUISITION MODULE ASSEMBLY	5860**	**Inspect Image Lift Quality (2).** 1. Ensure Infeed Line is in Reject mode with IPC, OCR, Labeler, and Printer disabled. 2. Log on to IPC if not already logged in as maint1 or above. 3. Capture an image. a. Select Capture>Grey Image Offline on toolbar in IPC System Menu window. b. Select Grey Image Offline. c. Select OK at Capturing Grayscale images prompt. d. Select capture image option icon on Capture Gray Image window. e. Check Compress check box on Save Image Options dialog box. f. Check every check box. g. Record address in Path field. h. Slide ruler to farthest left position and	14*	10	4		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		select OK. **NOTE:** Use image quality test card, PSN 3915-04-000-5688, in next step. 4. Feed image quality test card at appropriate Infeed line feeder module and retrieve image quality test card from appropriate infeed line reject cart. 5. View image of image quality test card and compare captured image from to image test card by inspecting the following captured image on earlier recorded address path: a. Visible and complete bottom and top. b. Clear and non-elongated circle areas of image. c. Straight lines (no breaks). d. A 250 mm long line. e. Clear and readable font size 2.8. 6. Select File>Exit in toolbar on Capture Gray Image window. 7. Log in as operations. a. Select System>Logoff on toolbar in IPC System Menu. b. Select operations from Username drop-down menu in Logoff & Login As dialog box. c. Type appropriate password in Password field and select OK. d. Select Yes at "Are you sure you want to logoff" and login as operations prompt in Confirmation dialog box. 8. Stop the infeed line. 9. Clear infeed line reject mode. 10. Enable IPC, OCR, Labeler, and Printer. 11. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 10, Image Quality Check. *7 minutes per Infeed Line.					
INFEED LINE ASSEMBLY:	5870**	**Clean Camera Lens and Aperture then Perform White Level Calibration (2).**	10*	10			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
IMAGE ACQUISITION MODULE ASSEMBLY		**WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Open camera cover. 2. Inspect for debris/mail and remove. 3. Clean camera lens using camera lens cleaning quality lens paper and a locally approved camera lens cleaning solvent. 4. Clean aperture making sure all residues are removed. 5. Close camera cover. 6. From the IPC computer, go to DiagnosticFSC1050Camera. 7. Select OK for Camera Diagnostic question. 8. In the Camera Diagnostic Window, click on Diagnostic/Calibration. 9. Select yes to start Calibration. 10. When a dialog appears with the "Please insert reference stick and press OK" message, complete the following steps: a. Place the white calibration stick between the aperture plate and the belt assembly, and Click **OK**. b. When the "Please move the reference stick and press OK" dialog box appears, move the stick approximately 3 mm up, and click **OK**. c. When the "Please remove reference stick and press OK" dialog box appears, remove the stick and click **OK**. d. At the Scanner Event Message: "Calibration finished" dialog click **OK**. e. At the "Calibration is successful" dialog, click **OK**. f. Close the camera diagnostic menu by clicking the X in the upper-right corner. 11. When the IPC System Menu becomes available, logoff maint1 user (select System, then select Logoff) and login as Operations user with the appropriate password. 12. Generate a work order for any discrepancies found.					

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		Refer to procedure MS-209, Volume G, Section 11, Adjust Camera White Level. *5 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: IMAGE ACQUISITION MODULE ASSEMBLY	5875	**Run UPS Self-Test (2).** 1. Open Image Acquisition module back doors. 2. Press TEST button on UPS control panel. 3. Verify indicator LED status is normal. 4. Close Image Acquisition module back door. 5. Generate a work order for any discrepancies found. *1 minute per Infeed Line.	2*	09			M
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5880**	**Clean Cutting Blades and Inspect Silicon Oil Reservoir (2).** **WARNING: Exercise care around knife cutting edge to prevent injuries.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Brush loose dirt and debris from the cutter head. 2. Use cotton swabs saturated with locally approved cleaning solvent to remove adhesive and build-up from the top blade, lower blade, paddle, and paddle holes. 3. Press the silicon oil priming button until oil reaches the wick to prove the oil system is functional. 4. Verify labeler functionality by manually cutting several labels and inspecting the label size and cut quality. 5. Inspect labeler oil reservoir level and replenish as needed (4930-07-000-0214). 6. Generate a work order for any discrepancies found. *4 minutes per Infeed Line.	8*	09	4		
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5890**	**Clean IJP Print Head and Inspect Fluid Levels (2).** 1. Remove print head from sleeve. 2. Install print head in maintenance bracket. 3. Drain ink from print head umbilical.	20*	09	4		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		4. Shut down printer. 5. Clean and inspect print head. 6. Clean and inspect sleeve. 7. Clean back plate. 8. Install print head back into sleeve. 9. Inspect level of Ink and Make-Up fluid. 10. Inspect for Low Fluid Level indicator message on printer display. 11. Inspect for expiration date on installed bottles or bottles being installed. 12. Replace ink or make-up fluid as necessary. 13. Return printer to print mode. *10 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5900**	**Inspect Label Application and Print Quality (2).** 1. Load sortplan Test_195. 2. Put Infeed Line in REJECT Mode and select checkbox to apply a FICS label to all mail pieces. 3. Remove all labels from 5 test deck mail pieces. 4. Load test deck mail pieces onto feeder ledge of infeed lines (backwards, with blank side facing perforated belt). 5. Run the 5 test deck mail pieces and retrieve them from the culling bin. 6. Inspect label placement and print quality using FICS ID Tag Template (PSN 9905-13-000-7059). 7. Generate a work order for any discrepancies found. 8. Restore Infeed Line settings. *2.5 minutes per Infeed Line.	5*	09	4		
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5910**	**Test Verifier Performance (2).** 1. Log onto the RMDC and select Maintenance>> Flats Sorting>> Infeed Line Test>> then select the Verifier Tab from the Infeed Line Tests page. 2. Select Infeed Line 1 from Verifier tab Infeed Line drop-down menu.	4*	10	4		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		3. Select Start Diagnostic Session button from Verifier tab. 4. Observe Start diagnostic session on Infeed 1 Verifier succeeded prompt on bottom of verifier page. 5. Select Self-Test radio button from Verifier Diagnostic Tests area. 6. Select Log Test Results check box from Verifier Diagnostic Tests area. Observe checkmark appears in box. 7. Select Start Test button from Verifier Diagnostic Tests area. 8. Observe Infeed1 Verifier Self-Test stopped prompt displays on bottom of verifier page. 9. Observe Test Result field in Verifier Diagnostic Tests area. PASS indicates successful completion of test. FAIL indicates unsuccessful test. 10. Select End Diagnostic Session button from Verifier tab. 11. Run test on Infeed Line 2. 12. Generate a work order for any discrepancies found. Refer to MS-209, Vol. H, Section 10, Verifier Self-Test. *2 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5920	**Inspect Vacuum Level on ID Tag Printer (2).** 1. Inspect vacuum gauge for a reading of 12-13 inHg. 2. Inspect print quality if any adjustments are made. 3. Generate a work order for any discrepancies found. *1 minute per Infeed Line.	2*	09			W
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5930	**Inspect Positive Air on ID Tag Printer (2).** 1. Use a screwdriver and a flow meter (6680-02-000-1861). 2. Ensure the air flow is measured at the print head with the ink on. 3. Adjust the positive air needle valve (identified	4*	09	375		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		as “P” for positive air) to 1.5–2.0 SCFH measured at the print head. *2 minute per Infeed Line.					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5940	**Replace Vacuum Filter on ID Tag Printer (2).** 1. Shutdown print head by pressing the Start/Stop key on the keyboard. 2. Wait for the print head shutdown procedure to complete (about 2 minutes). The vacuum gauge will read 0 when the print head shutdown procedure is complete. 3. Press the AC power switch (located on the lower right side of the printer cabinet) to the OFF (O) position to turn the AC power OFF. 4. Turn the vacuum sense tube’s fitting located on top of the vacuum filter counterclockwise one turn, and then remove the fitting from the filter. 5. Remove vacuum tube from the barbed fitting located behind the vacuum filter. **WARNING: Some ink may spill from the bottom of the vacuum filter once it has been removed. Have absorbent towels on hand to clean any ink spillage.** **WARNING: When disposing of ink or ink saturated waste, refer to procedures outlined in current Safety Data Sheet (SDS).** 6. Remove the vacuum filter from the top of the ink module by turning the filter counterclockwise until it becomes loose. 7. Discard the old vacuum filter and attached tubing. 8. Ensure “O” ring is seated on filter, then thread the new vacuum filter (4330-06-000-8106) into the top of the ink module until it is finger tight. 9. Do not over tighten. 10. Push the tube (supplied with the filter) onto the stem on top of the vacuum filter, and insert the opposite end of the tube onto the barbed fitting located behind the vacuum filter. 11. Install the fitting removed in step #3 into the	10*	09	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		top of the new vacuum filter. 12. Press the AC power switch to the ON (|) position to turn the AC power ON. 13. Confirm vacuum pressure is set correctly. *5 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	5960	**Replace Primary Ink Filter (2).** **WARNING: When disposing of ink or ink saturated waste, refer to procedures outlined in current Safety Data Sheet (SDS) and in accordance with local procedures.** 1. Perform normal shut down procedure for IJP. 2. Disconnect compressed air to the printer. 3. Place absorbent towels below the ink module to catch any ink that may spill when removing the primary ink filter. 4. Unscrew transfer line fitting from bottom of 5 micron absolute ink filter using a 7/16-inch wrench. 5. Unscrew ink filter with O-Ring from bottom of ink module. Discard filter and O-Ring. 6. Wipe excess ink from the bottom of the ink module mounting hole with absorbent towels and appropriate cleaning solution. 7. Discard the old primary ink filter. 8. Install O-Ring provided with replacement filter (4330-06-000-8107) on large threaded fitting of new ink filter. 9. Install new primary ink filter in the bottom of the ink module until finger tight. 10. Install transfer line fitting into bottom of ink filter and tighten finger tight. 11. Power IJP normally. *6 minutes per Infeed Line.	12*	09	4500		
INFEED LINE ASSEMBLY: INJECTOR MODULE ASSEMBLY	5970	**Check Air Pressure at Injector Module (Infeed Line 2 only).** 1. Check Main Infeed Line pressure reading. 2. Adjust regulator until it is between 75-85 PSI if necessary. Refer to MS-209 Volume D, Section 11 Air Pressure Adjustment.	1	07	375		
INFEED LINE	5975	**Disassemble and Replace Bushings on the**	60*	09	4500		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
ASSEMBLY: INJECTOR MODULE ASSEMBLY		**Culling Arm (2).** 1. Remove pinch wheels around diverter actuating arm. 2. Remove the diverter actuating arm. 3. Remove the diverter trough. 4. Replace the pivot bushings/washers. 5. Reassemble the trough and actuator arm. 6. Replace pinch wheels. 7. Cycle actuator several times using maintenance jogging tools to ensure proper operation. 8. Generate a work order for any discrepancies found. *30 minutes per Infeed Line.					
INFEED LINE ASSEMBLY: INJECTOR MODULE ASSEMBLY	5980**	**Inspect the Inject Air Nozzles Pressure Set Point (2).** 1. Open the bottom front Injector doors and override interlock switch by pulling out plunger. 2. Select Maintenance button -> Flats Sorting button -> Infeed Line Tools button from HMI main navigation panel. 3. On the Infeed Line Tab, select START button in the Injector Blower section. 4. At the Injector module, on the digital display, verify the air pressure is set at 24 +/- 2 PSI. 5. On the HMI Infeed Line Tab, select STOP button in the Injector Blower section. 6. Close the bottom front Injector doors. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume D, Section 11, Alignment and Adjustment Procedures–Infeed Line–Injector Module–Nozzle Pressure Adjustment. *1 minute per Infeed Line.	2*	09	1125		
INFEED LINE ASSEMBLY: INJECTOR MODULE ASSEMBLY	5990	**Test Performance of Culling Arm/Gate (2).** 1. Load Abbreviated Maintenance Test Deck. 2. Select Maintenance button -> Flats Sorting button -> Infeed Line Tools button from main navigation panel.	6*	09	2250		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		3. Open top rear door and override interlock switch by pulling out plunger. 4. Press START pushbutton on FSS Main control panel. **NOTE:** Use specific feeder control panel to energize feeder to be tested. 5. Press FEEDER ON pushbutton on feeder control panel. Feeder performs homing sequence when AI FEED is selected. 6. Press INFEED LINE ON then INFEED LINE START on feeder control panel. 7. Select Infeed Line tab -> Infeed Line 1 or Infeed Line 2 from Infeed Line drop-down menu -> 3Hz Beating radio button from Reject Module area. 8. Select Set Position button. 9. Observe Test started successfully prompt appears on page. When tool starts, Set Position button changes to stop button. 10. Observe diverter alternates between straight and unloading positions. 11. Select Stop button to end unloading diagnostic after test deck has been fed. 12. Observe Test stopped successfully prompt appears on page. When tool stops, Stop button changes to Set Position button. **NOTE:** Use specific feeder control panel to de-energize appropriate feeder. 13. Press INFEED LINE STOP then INFEED LINE OFF pushbutton on feeder control panel. 14. Press FEEDER OFF pushbutton on feeder control panel. 15. Press STOP pushbutton on FSS Main control panel. 16. Close top rear door. 17. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10, 3Hz Beating. *3 minutes per Infeed Line.					
VERTICAL	6220	**Lubricate VRL-Feeder Actuator, Inspect Linear**	100*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
RECIPROCATING LIFT, FEEDER (VRL-F): ASSEMBLY		**Actuator Belt Condition, Belt Tension, and Motor Mount and Hardware (4).** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog shelf to upper and lower stops and inspect belt as it rotates around linear actuator. 2. Jog shelf to a position slightly above the maintenance pin position and insert safety pin. 3. Remove windows to gain access to middle of belt. 4. Place belt tensioning tool (3130-08-000-4149) on the belt at mid-span of linear actuator. 5. Turn torque wrench until belt tensioning tool is parallel with linear actuator and record torque value. Refer to MS-209, Volume C, Section 11, Belt Tension Checking for current specifications. 6. Remove belt tensioning tool and torque wrench from belt. Refer to MS-209, Volume C, Section 11, Destacker, Front Belt Tension Adjustment. Refer to MS-209, Volume C, Section 11, Destacker, Rear Belt Tension Adjustment. **Lubricate VRL-Feeder Actuator (4).** 1. Remove wiper cover screws to gain access to wipers. 2. Inspect and clean wipers. Replace as necessary. 3. Saturate two top wipers with SAE 30W oil at two cap holes and apply oil onto exposed wipers. 4. Lubricate two bottom wipers. a. Remove two screws, bottom caps, and bottom wipers. b. Remove two bottom wipers from two					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		bottom caps. c. Inspect and clean wipers. Replace as necessary. d. Saturate two bottom wipers with SAE 30W oil and install springs and wipers into two bottom caps. e. Install wiper, cap, and secure with screw for two bottom wipers. 5. Install windows removed to access the middle of linear actuator belt. Refer to MS-209, Volume C, Section 7, Linear Actuator Cleaning Front and Rear Wiper Cleaning. **Inspect motor mount and hardware.** 1. Inspect the following motor mounting hardware: a. Flange plate and motor and gear case. b. Motor to support plate. c. Leveling feet to motor support plate. d. Jam nuts on both leveling feet tightened against the weld nut. 2. Remove safety pin. 3. Generate a work order for any discrepancies found. *25 minutes per VRL-F.					
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	6500	**Inspect for Air Leaks in ITC Pneumatics.** 1. Inspect for compressed air leaks using an Ultra-Sonic Airborne Probe, listen for the following: a. Valves. b. Filters. c. Manifolds. d. Hoses and hose connectors. 2. Generate a work order for any discrepancies found. *10 minutes per ITC.	20*	09	1125		
INTEGRATED TRAY	6505	**Check Air Pressure at ITC Main Air Panel (2)**	2*	07	375		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
CONVERTER (ITC): SYSTEM		1. Check ITC Main Air Panel pressure reading. 2. Adjust regulator until it is between 75 and 85 PSI if necessary. Refer to MS-209 Volume C, Section 11 ITC Main Air Panel. *1 minute per ITC.					
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	6510**	**Test the Functionality of Both ITC Interlock Loops and all Light Curtains.** 1. Start ITC, allow it to complete all homing sequences, and ensure that all horns and lights activate upon startup. 2. Break Stacker/Loader light screen beam and ensure all motion stops on ITC system. 3. Verify the correct message is displayed on the maintenance panel HMI. 4. Ensure that nothing restarts when Start button is pressed. 5. Repeat steps 1 thru 4 for the FTU Drawbridge light screen and interlock. 6. Press the Reset button and restart ITC system. 7. Break Caster light screen beam. **NOTE:** Only VPPD, EBMX, and VPD Motion should stop. 8. Verify the correct message is displayed on the maintenance panel HMI. 9. For the remaining interlocks open each interlocked panel or door one at a time and verify the correct message is displayed on the Maintenance Panel HMI. Restart the ITC after each door is checked. 10. Close all opened doors. 11. Generate a work order for any discrepancies found. *8 minutes per ITC. Refer to MMO-138-15 for problems with non-defeatable style interlocks (174K302G01).	16*	09			M
INTEGRATED TRAY CONVERTER (ITC): RCT	6550	**Inspect the RCT Restacker Front/Rear Stop, Conveyor Tilt Cylinder, RCT Lid Cylinder, and RCT Restacker Lid Cylinder- Rod Clevis on both ITCs.**	6*	09			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
RESTACKER		**Inspect Front/Rear Stop cylinder extend/retract sensors. Adjust and tighten if necessary.** 1. Manually move stops to ensure that they move freely. 2. Ensure that proximity sensors activate and are secure. 3. Inspect for loose or missing hardware on the stops, connecting rod, and actuator. 4. Ensure that pneumatic connections are secure in fittings of the actuator. **Inspect Conveyor Tilt Cylinder. Adjust if necessary.** 1. Inspect for loose or missing attaching hardware. 2. Inspect for excessive play in clevis pins and that the end clips are not missing. 3. Ensure that the proximity sensors are tight and functioning. **Inspect the RCT Restacker Lid Cylinder.** 1. Verify Tilt Cylinder Rod End jam nut is tight, or rod end will rotate and extend its stroke length causing excessive stress on cylinder. 2. Manually open and close lid verifying extend/retract sensors come on. 3. Verify there are no air leaks on the cylinder pneumatics. **Inspect the RCT Restacker Lid Cylinder- Rod Clevis.** 1. Ensure that clevis pin is tight and not excessively worn. 2. Ensure that the clips at the end of the clevis pin are not loose or missing. 3. Inspect that clevis pin housings are not visibly cracked or broken. 4. Generate a work order for any discrepancies found. *3 minutes per ITC.					
INTEGRATED TRAY CONVERTER	6560	**Test RCT Restacker Hood, Restacker Tilt, and Restacker Exit Gate Cylinder Rods Cycle Times on both ITCs.**	12*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
(ITC): RCT RESTACKER		**NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog RCT Restacker Hood Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 2. Ensure UP actual time is between 740 ms and 940 ms. 3. Ensure DOWN actual time is between 560 ms and 760 ms. 4. Use the RMDC to jog Restacker Tilt Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 5. Ensure UP actual time is between 2100 ms and 2400 ms. 6. Ensure DOWN actual time is between 1980 ms and 2280 ms. 7. Use the RMDC to jog Restacker Exit Gate Cylinder Down and up 3 times waiting a few seconds between cycles. 8. Ensure DOWN actual time is between 340 ms and 640 ms. 9. Ensure UP actual time is between 660 ms and 960 ms. 10. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *6 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LIFT ASSEMBLY	6600	**Inspect the ACT Lift Drive Belts, Flights, and Home Sensor.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Remove all ACTs from lift 2. Remove left windows 1 and 3 and right windows 1 and 3. 3. Perform MS-209, Volume H, Section 10, Servo Z-Axis Jog procedures, as needed, to inspect entire length of belt. 4. Inspect belt for end-of-life conditions: a. Cuts in excess of 2 mm.	40*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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. Abrasions in excess of 5 mm. c. Gouges in excess of 2 mm. d. Missing teeth. 5. Inspect belt tension of all 4 belts. a. Place belt tensioning tool (3130-08-000-4149) on belt at midspan between flights. b. Place torque wrench on belt tensioning tool. c. Turn torque wrench until belt tensioning tool is vertical and record torque value. d. Verify value is between 40-80 in-lbs. e. Remove belt tensioning tool and torque wrench from belt. 6. Inspect for missing or damaged flights. 7. Inspect for loose or missing hardware. 8. Inspect for misaligned flights. 9. Ensure ACT Lift Flight Detection photoeye is securely mounted. Home the ACT Lift to verify the home sensor is working properly. 10. Inspect for damage to cabling and connecting brackets. 11. Install left windows 1 and 3 and right windows 1 and 3. 12. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Belt Checking. *20 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LIFT ASSEMBLY	6610	**Inspect ACT Lift Sensors on both ITCs.** 1. Locate all sensors on the ACT Lift. 2. GENTLY perform a pull test on each sensor wire to ensure the sensor is securely mounted. 3. Ensure all sensors connections are tight and no cable damage is present. 4. Ensure the ACT in Transition photoeye and reflector is properly aligned and reporting to CRSC 31 input C. 5. Ensure ACT Present photoeye and reflector	40*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		is properly aligned and reporting to CRSC 31 input A1. 6. Ensure the ACT Lift Flight Detection photoeyes are properly reporting to CRSC 31 input A2 (right) and B2 (left). 7. Ensure the ACT Present/Unload photoeye and reflector is properly aligned and reporting to CRSC 31 input B1. 8. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *20 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT LIFT ASSEMBLY	6615	**Inspect the RCT Lift Drive Belts, Flights, and Home Sensor.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Remove all RCTs from lift. 2. Remove left windows 1 and 3 and right windows 1 and 3. 3. Perform MS-209, Volume H, Section 10, Servo Z-Axis Jog procedures, as needed, to inspect entire length of belt. 4. Inspect belt for end-of-life conditions: a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 2 mm. d. Missing teeth. 5. Inspect belt tension of all 4 belts. a. Place belt tensioning tool (PSN 3130-08-000-4149) on belt at midspan between flights. b. Place torque wrench on belt tensioning tool. c. Turn torque wrench until belt tensioning tool is vertical and record torque value. d. Verify value is between 40-80 in-lbs. e. Remove belt tensioning tool and torque wrench from belt.	40*	09	375		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		6. Inspect for missing or damaged flights. 7. Inspect for loose or missing hardware. 8. Inspect for misaligned flights. 9. Ensure RCT Lift Flight Detection photoeye is securely mounted. Home the RCT Lift to verify the home sensor is working properly. 10. Inspect for damage to cabling and connecting brackets. 11. Install left windows 1 and 3 and right windows 1 and 3. 12. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Belt Checking. *20 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): MAIN AIR PANEL	6620	**Perform Relief Valve Pull Test on both ITCs.** **WARNING: Potential eye hazard exists. Wear appropriate safety goggles or face shield to prevent eye injury.** 1. Verify air pressure setting of 80 psi. 2. Pull Relief Valve ring for at least 5 seconds while system is fully pressurized. 3. Release Relief Valve ring to allow valve to return to its original position and observe air pressure returns to 80 psi. 4. Generate a work order for any discrepancies found. *1 minute per ITC.	2*	07	4500		
INTEGRATED TRAY CONVERTER (ITC): ACT JUSTIFIER ASSEMBLY	6670	**Inspect ACT Justifier Sensors on both ITCs.** 1. Locate all sensors on the ACT Justifier. 2. GENTLY perform a pull test on each sensor wire to ensure that the sensor is securely mounted. 3. Ensure all sensor connections are tight and no cable damage is present. 4. Ensure the Tilt Cylinder Up and Down proximity sensors are properly positioned. 5. Ensure the Entrance Gate Up and Down	10*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		proximity sensors are properly positioned. 6. Ensure the Exit Gate Up and Down proximity sensors are properly positioned. 7. Generate a work order for any discrepancies found. Refer to MS-209 Volume H, Section 10, Troubleshooting. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT JUSTIFIER ASSEMBLY	6680	**Inspect ACT Fit in ACT Justifier Work Zone and ACT Exit Transition on both ITCs.** **Inspect ACT fit in ACT Justifier Work Zone.** 1. Verify for a secure fit of an ACT at the ACT Justifier work-zone section. 2. Place an empty ACT centered on the conveyor rollers of the ACT Justifier work-zone section and against the ACT Justifier Exit Gate. 3. Verify guide rails have a 3 mm gap between the empty ACT and guide rail on both sides of the ACT. 4. Ensure the mounting hardware is tight on the ACT Exit Gate (Non-adjustable). 5. Verify the ACT Entrance Gate has a 2 mm gap between the Entrance Gate and ACT side when ACT is resting against the ACT Exit Gate. **NOTE**: The jog procedure used in this task is computer menu driven. **Inspect ACT Justifier ACT Exit Transition.** 1. Inspect the waterfall off the ACT Justifier so the ACT does not drag on the Exit Gate during transition to conveyor. 2. Jog the ACT Exit Gate down. 3. Slowly roll an empty ACT by hand back and forth over the ACT Exit Gate to check for any dragging caused by the height of the ACT Justifier work-zone conveyor being too low compared to the ACT Exit Gate. 4. If there is dragging felt, then the height of the ACT Justifier work-zone conveyor requires an adjustment to raise the conveyor bed higher than the ACT Exit Gate.	4*	09	2250		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		5. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. Refer to MS-209, Volume H, Section 10, Diagnostic Tool Procedures. *2 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT JUSTIFIER ASSEMBLY	6690	**Test ACT Justifier Entrance and Exit Gate Cylinder Rod, Shaker Grill Cylinder Rod, and Tilt Cylinder Rod Cycle Times on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog ACT Justifier Entrance Gate Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 2. Ensure UP actual time is between 120 ms and 420 ms. 3. Ensure DOWN actual time is between 160 ms and 460 ms. 4. Use the RMDC to jog ACT Justifier Exit Gate Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 5. Ensure UP actual time is between 120 ms and 420 ms. 6. Ensure DOWN actual time is between 180 ms and 480 ms. 7. Use the RMDC to jog ACT Justifier Tilt Cylinders UP and DOWN 3 times waiting a few seconds between cycles. 8. Ensure UP actual time is between 1040 ms and 1340 ms. 9. Ensure DOWN actual time is between 820 ms and 1120 ms. 10. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *6 minutes per ITC.	12*	09	2250		
INTEGRATED TRAY CONVERTER (ITC): VERTICAL	6750	**Inspect the VPD(E) Lift Belt on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven.	6*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
POSITIONING DEVICE - EBMX (VPDE)		1. Perform MS-209, Volume H, Section 10, Servo Z-Axis Jog procedure to move VPDE Self to the bottom of the actuator. 2. Inspect belt for end-of-life conditions: a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 2 mm. 3. Perform MS-209, Volume H, Section 10, Servo Z-Axis Jog procedure to move VPDE Self to the top of the actuator. 4. Inspect belt for end-of-life conditions: a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 2 mm. 5. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Belt Checking. *3 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING DEVICE - EBMX (VPDE)	6760	**Lubricate VPD(E) Actuator and Inspect Belt Tension on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog shelf to upper and lower stops and inspect belt as it rotates around linear actuator. 2. Jog shelf to a position slightly above the maintenance pin position and insert safety pin. 3. Remove windows to gain access to middle of belt. 4. Place belt tensioning tool (PSN 3130-08-000-4149) on the belt at mid-span of linear actuator. 5. Turn torque wrench until belt tensioning tool is parallel with linear actuator and record torque value.	30*	09	2250		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		Refer to MS-209, Volume C, Section 11, Belt Tension Checking for current specifications. 6. Remove belt tensioning tool and torque wrench from belt. 7. Generate a work order for any discrepancies found. **Lubricate Actuators.** 1. Remove wiper cover screws to gain access to wipers. 2. Inspect and clean wipers. Replace as necessary. 3. Saturate two top wipers with SAE 30W oil at two cap holes and apply oil onto exposed wipers. 4. Lubricate two bottom wipers. a. Remove two screws, bottom caps, and bottom wipers. b. Remove two bottom wipers from two bottom caps. c. Inspect and clean wipers. Replace as necessary. d. Saturate two bottom wipers with SAE 30W oil and install springs and wipers into two bottom caps. e. Install wiper, cap, and secure with screw for two bottom wipers. 5. Remove safety pin. 6. Install windows removed to access the middle of linear actuator belt. Refer to MS-209, Volume C, Section 7, Linear Actuator Cleaning Front and Rear Wiper Cleaning. *15 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING DEVICE - EBMX (VPDE)	6780	**Inspect Vertical Positioning Device Servo Alignment on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog the VPD assembly to its current ACT Entrance position (VPDE – Z – ACT Entrance Position).	20*	09	4500		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence eCBM

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.
		2. Wait 60 seconds to allow servo motor brakes to engage before opening any interlock or breaking a light curtain. 3. Move an ACT in and out of the VPD to verify there is a slight downward transition (2 to 5 mm waterfall) from the ACT Justifier conveyor onto the first zone of the VPD conveyor shelf. 4. If there is a sufficient waterfall from the ACT Justifier conveyor onto the VPD shelf at its current ACT Entrance position, then no adjustments are necessary. **VPD ACT Exit Position Waterfall Inspection.** 1. Jog the VPD assembly to its current ACT exit position (VPDE – Z – ACT Exit Position). 2. Wait 60 seconds to allow servo motor brakes to engage before opening any interlock or breaking a light curtain. 3. Move an ACT in and out of the VPD to verify there is a sufficient downward transition (2 to 5 mm waterfall) from the VPD conveyor shelf onto the ATMS FIC section. 4. If there is a sufficient waterfall from the VPD conveyor shelf onto the ATMS FIC section at its current ACT Exit position, then no adjustments are necessary. 5. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10. Refer to MS-209, Volume C, Section 9, Performance Optimization. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ASSEMBLY, BUFFER MATRIX	6800	**Inspect the Buffer Matrix Wedge Assemblies (8) – Guides, Cylinder Extend and Mounting on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Remove cart from cart dock. 2. Turn off air supply at ITC pneumatic panel. 3. Pull out each EBMX shelf wedge assembly and inspect wedges for loose or missing hardware.	10*	09			W

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		4. Ensure retaining ring for wedge tote pivot pin is present. 5. Ensure the leaf springs are not missing, cracked, or loose. 6. Clean the wedge slide assembly if binding occurs. 7. Verify guides are straight, straighten if necessary. 8. Manually extend and retract the wedges on each shelf checking for full extension and retraction, and for binding. 9. Ensure that each of the shelf Wedge Extend and Retract proximity sensors are securely mounted to their mounting brackets. 10. Jog each Shelf Wedge assembly In (Retract) and Out (Extend). 11. Proximity sensor LEDs should toggle when actuated. 12. Turn on air supply at ITC pneumatic panel. 13. Replace cart back into cart dock. 14. Generate a work order for any discrepancies found. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ASSEMBLY, BUFFER MATRIX	6820	**Test all EBMX Shelf Wedge Cylinder Rod Cycle Times on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog EBMX Shelf Wedge Cylinder OUT and IN 3 times waiting a few seconds between cycles. 2. Ensure OUT actual time for all 4 shelves match within a nominal range of 300 ms. 3. Ensure IN actual time for all 4 shelves match within a nominal range of 300 ms. 4. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *4 minutes per ITC.	8*	09	2250		
INTEGRATED	6830	**Check the Buffer Matrix Street Tray Count on**	2*	07	4		

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
TRAY CONVERTER (ITC): ASSEMBLY, BUFFER MATRIX		**both ITCs.** Verify that there are 14 empty trays in the system, they can be anywhere between the EBMX and the VPPD. Replenish if necessary. *1 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): CONVEYOR, STREET TRAY	6850	**Inspect Street Tray Labeler Barcode Scanner.** 1. Place a discarded Street Tray label from the discard tray into the Street Tray Label pocket of the printer. 2. Navigate to the Maintenance > Status > Scanner section of the EL-1700 Maintenance Panel, and press LABELER button to activate the Street Tray Labeler barcode scanner. 3. Verify the Street Tray Labeler barcode scanner's red laser line is centered horizontally on the Street Tray Label. 4. If the Street Tray Labeler barcode scanner is properly aligned, all three strings will have data within their fields, and no adjustment is necessary. 5. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9 Performance Optimization. *2 minutes per ITC.	4*	09	375		
INTEGRATED TRAY CONVERTER (ITC): CASTR DOCK	6860	**Inspect For Entire CASTR Dock Area on both ITC for Loose or Damaged Sensors.** 1. Verify hardware is secure. 2. Verify CASTR Present proximity sensor toggles when CASTR is inserted. 3. Generate a work order for any discrepancies found. *1 minute per ITC.	2*	09	2250		
INTEGRATED TRAY CONVERTER (ITC): CONVEYOR, STREET TRAY	6870	**Inspect for Loose or Damaged Sensors on all Street Tray Conveyors on both ITCs.** 1. Ensure all Street Tray Conveyor Loop zone photoeyes are properly positioned and securely mounted. 2. Ensure all connections at the CRSC cards are secure.	12*	09	2250		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		3. Ensure there is no cable damage. 4. Generate a work order for any discrepancies found. *6 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): FLEXIBLE TURNING UNIT, EMPTY	6880	**Inspect Street Tray Conveyor FTU-E Barcode Scanner on both ITCs.** 1. Place an empty street tray onto the FTU-E, and rotate the FTU-E by hand so that the barcode is facing the barcode scanner on the FTU-E. 2. Navigate to the **Maintenance > Status > Scanner** section of the EL-1700 Maintenance Panel, and press the **S.TRAY EMPTY** button to activate the FTU-E barcode scanner. 3. Verify the CASTR barcode scanner's red laser lines are centered horizontally on the street tray barcode. 4. The FTU-E barcode scanner is properly aligned. All three strings will have data within their fields and no adjustments are necessary. 5. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *2 minutes per ITC.	4*	09	375		
INTEGRATED TRAY CONVERTER (ITC): CONVEYOR, STREET TRAY	6890	**Inspect CASTR Manifest Barcode Scanner.** 1. Insert a street tray onto the full street tray conveyor so that street tray barcoded label (not printed manifest barcode) is visible through the window cutout on the street tray conveyor tunnel. 2. Navigate to the **Maintenance > Status > Scanner** portion of the EL-1700 Maintenance Panel, and press **S.TRAY FULL** button to activate CASTR Manifest barcode scanner. 3. Verify the CASTR Manifest barcode scanner's red laser line scans the entire street tray barcoded label. 4. If the CASTR Manifest barcode scanner is properly aligned all three strings will have data within their fields and no adjustments	4*	09	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		are necessary. 5. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *2 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING AND PUSHING DEVICE (VPPD)	6910	**Inspect VPPD Z-Axis and X-Axis Linear Actuator Belt Tensions on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. **Inspect VPPD Z-Axis Linear Actuator Belt Tension.** 1. Perform MS-209, Volume H, Section 10, Servo Z-Axis Jog procedure and jog shelf conveyor to bottom of linear actuator just above lower mechanical stop without resting on stop. 2. Remove VPPD front right 1 window, and VPPD rear right 1 window. 3. Place belt tensioning tool (PSN 3130-08-000-4149) on belt at mid-span of linear actuator and place torque wrench on belt tensioning tool. 4. Turn torque wrench until belt tensioning tool is parallel with linear actuator and check torque value. 5. Refer to MS-209, Volume C, Section 7, Belt Tension Checking for current specifications. 6. Remove belt tensioning tool and torque wrench from linear actuator belt. **Inspect VPPD X-Axis Linear Actuator Belt Tension.** 1. Place belt tensioning tool (PSN 3130-08-000-4149) on belt at mid-span of linear actuator and place torque wrench on belt tensioning tool. 2. Turn torque wrench until belt tensioning tool is parallel with linear actuator and check torque value. 3. Refer to MS-209, Volume C, Section 7, Belt Tension Checking for current specifications.	60*	09	2250		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		4. Remove belt tensioning tool and torque wrench from linear actuator belt. 5. Install VPPD front right 1 window, and VPPD rear right 1 window. 6. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustments. *30 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING AND PUSHING DEVICE (VPPD)	6920**	**Inspect the VPPD Pusher Actuator Belt, Lift Belt, and Pusher Assembly on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use software Jog function to facilitate inspection of full belt length. 2. Inspect Left Z-Axis linear actuator belts for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 5 mm. d. Missing teeth. 3. Inspect Right Z-Axis linear actuator belts for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 5 mm. d. Missing teeth. 4. Inspect left and right X-Axis linear actuator belts for end-of-life conditions. a. Cuts in excess of 2 mm. b. Abrasions in excess of 5 mm. c. Gouges in excess of 5 mm. d. Missing teeth. 5. Inspect the pusher assembly for loose or missing hardware. **WARNING: Ensure the VPPD Street Tray Skid Plate edge is not sharp enough injure personnel.**	30*	09			M

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		6. Inspect Street Tray Skid Plate for a sharp edge caused by Street Trays sliding across it. Immediately replace Skid Plate when edge is sharp enough to injure personnel. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Z-Axis Linear Actuator Belt and VPPD. *15 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICAL POSITIONING AND PUSHING DEVICE (VPPD)	6930	**Inspect Vertical Positioning and Pushing Device Servo Positions on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. **VPPD – Z – Street Tray Exit Position Shelf Inspection.** 1. Insert an empty CASTR into CASTR Dock and press RESET button on the Operator Panel. 2. Home the VPPD assembly. **NOTE:** Do not break a light curtain or open an interlock for at least 60 seconds after performing Step 2 to allow the servo motor brakes to engage and accurately hold the position. 3. Jog the VPPD assembly to one of the current Street Tray Exit Shelf X positions (VPPD – Z – Street Tray Exit Position Shelf) as recorded from ITC Configuration Editor. 4. Move an empty Street Tray on and off the VPPD shelf onto the CASTR shelf to verify there is a sufficient downward transition (2 to 5 mm waterfall) from the VPPD shelf onto the CASTR shelf. 5. No adjustment is necessary if there is a sufficient waterfall from the VPPD conveyor shelf onto the CASTR shelf. 6. Repeat steps 3 – 5 for all 3 other shelf positions. **VPPD – Z – Street Tray Entrance Position Inspection.** 1. Jog VPPD to the Street Tray Entrance Position and move an empty Street Tray in and out of the VPPD to verify there is a sufficient downward transition (2 to 5 mm	16*	09	4500		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		waterfall) from the Street Tray Conveyor onto the VPPD shelf. 2. No adjustment is necessary if there is a sufficient waterfall from the Street Tray Conveyor onto the VPPD shelf. 3. Generate a work order for any discrepancies found. *8 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): LABELER, STREET TRAY	6950	**Inspect for Loose or Damaged Sensors on the Label Apply, Label Remove, and Label Rotate Cylinders on both ITCs.** 1. Ensure the Label Apply Actuator In (retract) proximity sensor is properly positioned and securely mounted to cylinder body. Verify sensors are secure by gently tugging on cable. 2. Ensure the Label Remove Actuator In (retract) proximity sensor is properly positioned and securely mounted to cylinder body. Verify sensors are secure by gently tugging on cable. 3. Ensure the Label Rotate at Delivery and Acquire positional proximity sensors are properly positioned and securely mounted. Verify sensors are secure by gently tugging on cable. 4. Verify sensor(s) are secure by gently tugging on cable(s). 5. Generate a work order for any discrepancies found. *2 minutes per ITC.	4*	09	2250		
INTEGRATED TRAY CONVERTER (ITC): LABELER, STREET TRAY	6960**	**Test Label Rotate, Labeler Apply, Label Remove, Tray Clamp and Tray Stop Cylinder Rods Cycle Times on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog Label Rotate Cylinder CW and CCW 3 times waiting a few seconds between cycles. 2. Ensure CW actual time is between 1000 ms and 1300 ms. 3. Ensure CCW actual time is between 960 ms and 1260 ms.	10*	09	2250		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence eCBM

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.
		4. Use the RMDC to jog Label Apply Cylinder OUT and IN 3 times waiting a few seconds between cycles. 5. Ensure OUT actual time is between 500 ms and 800 ms. 6. Ensure IN actual time is between 200 ms and 500 ms. 7. Use the RMDC to jog Label Remove Cylinder OUT and IN 3 times waiting a few seconds between cycles. 8. Ensure OUT actual time is between 500 ms and 800 ms. 9. Ensure IN actual time is between 180 ms and 480 ms. 10. Use the RMDC to jog Tray Clamp Cylinder OUT and IN 3 times waiting a few seconds between cycles. 11. Ensure OUT actual time is between 520 ms and 820 ms. 12. Ensure IN actual time is between 160 ms and 460 ms. 13. Use the RMDC to jog Tray Stop Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 14. Ensure UP actual time is between 500 ms and 800 ms. 15. Ensure IN actual time is between 300 ms and 600 ms. 16. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	6970	**Inspect the Verticalizer Front Door, Street Tray Lift, and Rear Wall on both ITCs.** **Inspect the Verticalizer Front Door.** 1. Ensure guides and rail are free of debris. 2. Ensure attaching hardware is not missing or loose. 3. Ensure pneumatic clevis pin is in place and tight.	8*	09			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Inspect Verticalizer Street Tray Lift. 1. Inspect for missing, broken, or loose hardware, replace or tighten as needed. 2. Verify all sensors work, are aligned and undamaged. Replace or align as needed. 3. GENTLY perform a pull test on each sensor wire to ensure that the sensor is securely mounted to its cylinder body/mounting bracket. 4. Inspect for damage to cables, replace as needed. **Inspect the Verticalizer Rear Wall.** 1. Inspect for missing, broken, or loose hardware, replace or tighten as needed. 2. Verify the Back-Wall is not cracked, bent, or damaged. 3. Verify the Back-Wall transitions smoothly. 4. Generate a work order for any discrepancies found. *4 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	6980	**Verticalizer Rear Wall – Clean Worm Drive on both ITC.** **WARNING: PPE must be properly used as required by the current SDS when using alcohol. Alcohol is a flammable liquid. Discard alcohol soaked materials according to local procedures to prevent spontaneous combustion.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog Verticalizer to the 0 position. 2. Jog the slip sheet to the down position. 3. Access the Verticalizer by lowering the FTU drawbridge. 4. Location of the worm drive runs horizontal on the bottom of the base plate. 5. Remove mounting bolts, 5 mm hex head, for the Verticalizer back wall. 6. Remove the Verticalizer mounting base plate. Remove base plate mounting bolts 3	10*	09	375		

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	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		mm hex key. 7. Use a soft bristle brush to remove dirt and debris from the worm drive. 8. Use isopropyl alcohol or locally approved alternative to wipe excessive dust from worm drive helical threads. 9. Reinstall base plate and Verticalizer back wall and all hardware. 10. Re-home and check for proper operation. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	7060	**Verify Verticalizer Back-Wall Max Position on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Perform ITC Fast PLC Restart procedure to reset PLCs and ensure ITC completes its homing sequence. 2. Login to ITC Maintenance Panel. 3. Touch MAINTENANCE button>>DIAGNOSTICS button>>VERTICALIZER icon and ensure icons below X-Axis and G-Axis indicate Homed positions. 4. Jog SLIP SHEET down and jog BIN RODS up. **NOTE:** Do not move transfer box back wall from this position once set. 5. Touch DIAGNOSTICS button>> INDEXING TABLE AND TRANSFER BOX icon. 6. Touch transfer box 4 icon to select and ensure icon below X-Axis indicates Homed position. 7. Jog Transfer Box 4 DOOR down. 8. Jog Transfer Box 4 X-AXIS to the 850 position (back wall just outside the transfer box). 9. Jog VERTICALIZER X-axis to the 850 position. 10. Lower the FTU-F drawbridge to access the Verticalizer backwall. 11. Confirm Verticalizer rear wall is just touching	14*	09	375		

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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		transfer box back wall. If Verticalizer rear wall is not at the right position generate a work order. 12. Raise FTU-F drawbridge. 13. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures, ITC, Verticalizer, Rotate Box, Verticalizer X-Axis Critical Alignment. *7 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	7070	**Test Street Tray Lift, Street Tray Clamp, Street Tray Exit Gate, Outer Bin Door, Inner Bin, and Slip-Sheet Cylinder Rods Cycle Times On Both ITC.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog Street Tray Lift Cylinder DOWN and UP 3 times waiting a few seconds between cycles. 2. Ensure DOWN actual time is between 1660 ms and 1960 ms. 3. Ensure UP actual time is between 1240 ms and 1540 ms. 4. Use the RMDC to jog Street Tray Clamp Cylinder OUT and IN 3 times waiting a few seconds between cycles. 5. Ensure OUT actual time is between 120 ms and 420 ms. 6. Ensure IN actual time is between 280 ms and 580 ms. 7. Use the RMDC to jog Street Tray Exit Gate Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 8. Ensure UP actual time is between 580 ms and 880 ms. 9. Ensure DOWN actual time is between 440 ms and 740 ms. 10. Use the RMDC to jog Verticalizer Outer Bin Door Cylinder OPEN and CLOSE 3 times waiting a few seconds between cycles. 11. Ensure OPENING actual time is between	12*	09	2250		

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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		640 ms and 940 ms. 12. Ensure CLOSING actual time is between 820 ms and 1120 ms. 13. Use the RMDC to jog Verticalizer Inner Bin Door Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 14. Ensure UP actual time is between 700 ms and 1000 ms. 15. Ensure DOWN actual time is between 2000 ms and 2300 ms. 16. Use the RMDC to jog Slip-sheet Cylinder OPEN and CLOSE 3 times waiting a few seconds between cycles. 17. Ensure OPENING actual time is between 420 ms and 720 ms. 18. Ensure CLOSING actual time is between 640 ms and 940 ms. 19. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *6 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): VERTICALIZER ASSEMBLY	7080	**Inspect Verticalizer – A – Home Offset on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog the Door of the Transfer Box located at the Verticalizer down. 2. Jog the Bridge Fingers of the Transfer Box located at the Verticalizer into the Verticalizer. 3. No adjustment is necessary if there is no contact between the Transfer Box Bridge Fingers and the Verticalizer floor. 4. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *5 minutes per ITC.	10*	09	4500		
INTEGRATED TRAY	7090	**Lubricate Street Tray Lift Linear Actuator on both ITCs.**	18*	09	2250		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
CONVERTER (ITC): VERTICALIZER ASSEMBLY		**WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog Street Tray Lift to the top of its travel. 2. Secure Street Tray Lift assembly with Ratcheting Safety Strap (5340-12-000-7427) as a safeguard to prevent assembly from falling while working under it. 3. Remove screw and cap from upper wipers. 4. Inspect and clean wipers. Replace as necessary. 5. Saturate wipers with SAE 30 W oil. 6. Install cap and secure with screw. 7. Lubricate two bottom wipers: a. Remove two screws and caps. b. Remove two wipers and springs from caps. c. Inspect and clean wiper. Replace as necessary. d. Apply SAE 30 W oil onto two wipers until fully saturated. e. Install two springs and wipers into caps. f. Install two caps and secure with screws. 8. Remove Ratcheting Safety Strap. 9. Generate a work order for any discrepancies found. **NOTE:** Hand tighten only when securing cap with screw. Refer to MS-209 Volume C, Section 12, Remove and Replace Wiper. *9 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC) SYSTEM: RCT UNLOADER ASSEMBLY	7100	**Inspect MRB and Ejector Rod Linear Actuator Belt Tensions.** **NOTE**: The jog procedure used in this task is computer menu driven. **MRB Linear Actuator Belt Tension.** 1. Jog MRB to the unload position slightly	20*	09	2250		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		above the Stacker Loader deck. 2. Insert tension tool into center of linear actuator belt and attach torque wrench to belt tensioning tool (3130-08-000-4149). 3. Turn torque wrench until belt tensioning tool is parallel with linear actuator. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment for current tension specifications. 4. Remove torque and tension tool. 5. Generate a work order for any discrepancies found. **Ejector Rod Linear Actuator Belt Tension.** 1. Jog Ejector Rods to a position slightly above the bottom mechanical stop. 2. Insert tension tool into center of linear actuator belt and attach torque wrench to belt tensioning tool (3130-08-000-4149). 3. Turn torque wrench until belt tensioning tool is parallel with linear actuator. Refer to MS-209, Volume C, Section 11, Belt Tension Adjustment for current tension specifications. 4. Remove torque and tension tool. 5. Generate a work order for any discrepancies found. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7170	**Inspect / Test MRB Proximity Sensor Operation on both ITCs.** **Inspect all sensors on the Mail Rotate Box.** 1. Rotate Mail Rotate Box to 1200-1300 position above Stacker bed. 2. GENTLY perform a pull test on each sensor wire to ensure that the sensor is securely mounted. 3. Ensure all sensor connections are tight and no cable damage is present. 4. Ensure the Mail Ram Up proximity sensor is securely mounted inside of the Gate Assembly.	8*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		5. Ensure the Mail Ram Up Flag is securely mounted onto the Ram Tines. 6. Ensure the MRB Gate cylinder retract and extend proximity sensors are properly positioned and securely mounted to the cylinder body. 7. Ensure the MRB Shot Pin extend and retract proximity sensors are properly positioned and securely mounted to the cylinder body. 8. Ensure the MRB Side Rods extend and retract proximity sensors are properly positioned and securely mounted to Side Rods bushing block. 9. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. Refer to MS-209 Volume C, Section 7, RCT Unloader. *4 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7180	**Inspect Alignment of MRB Floor Tines on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog the Mail Rotate Box over the Stacker/Loader table then manually slide pawl/shot pin in and out and verify smooth transition. 2. Ensure that the middle MRB floor tines are level with the two outside floor tines using a straight edge laid across the floor within the MRB. 3. The middle two floor tines may be bent up or down as needed to attain levelness across all four tines. 4. Grasp the end of the tines and firmly bend them up or down as needed. 5. Generate a work order for any discrepancies found. *2 minutes per ITC.	4*	09	375		
INTEGRATED TRAY CONVERTER (ITC): RCT	7190**	**Test and Clean the MRB Mail Support Side Rods Cylinder Rods on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in**	20*	09	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
UNLOADER ASSEMBLY		**accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog MRB to the 1200 mm Maintenance Position. 2. Inspect for loose and damaged hardware. 3. Inspect all pneumatic and proximity switch connections. 4. Clean side rods, bar, and cylinder with cleaner/degreaser and shop rag. 5. Manually retract mail capture assembly and clean remaining side rod, cylinder, and bar surfaces with cleaner/degreaser and shop rag. 6. Wipe down all cleaned surfaces with a clean shop rag to remove any excess cleaner/degreaser. 7. Ensure MRB Side Rods on both the Maintenance Side and Operator side close and open in unison. a. Jog MRB Side Rods IN and OUT several times. b. Observe both sets of rods and adjust flow control valves on the Maintenance side until the rods move in unison. 8. Use the RMDC to jog RCT Unloader MRB Mail Side Rods Cylinder IN and OUT 3 times waiting a few seconds between cycles. 9. Listen for leaks, take corrective action if necessary. 10. Ensure OUT actual time is between 400 ms and 700 ms. 11. Ensure IN actual time is between 720 ms and 1020 ms. 12. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Preventive Maintenance, Cleaning Procedures, Integrated Tray Converter, RCT Unloader Assembly, RCT Unloader. Refer to MS-209 Volume C, Section 7, Preventive Maintenance, Side Rods Checking, and Side					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Rods Cylinder Jog. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): EJECTOR ROD ASSEMBLY	7200	**Inspect Ejector Rod Assembly Hardware on Both ITC.** 1. Inspect the entire assembly for loose and missing hardware. Replace and tighten hardware as necessary. 2. Inspect the entire assembly for excessive play and replace parts as needed. 3. Inspect the ejector rod actuator mounting screws and actuator cover. 4. Inspect ejector rod bearing plate and ejector rod hardware. 5. Inspect ejector rod lower bearing clamp and ejector rod base mounting bolts. Ensure these screws are present and tight. 6. Use approved lubrication on all gate and ram pivot points. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 7, Preventive Maintenance. *4 minutes per ITC.	8*	09	375		
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7210	**Inspect for Loose or Broken MRB Hardware on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog the Mail Rotate Box over the Stacker/Loader table to the 1200 position. 2. Ensure the MRB Shot Pin mounting hardware is tight and has been upgraded to grade 12.9. 3. Ensure the MRB Gate Crank Arm mounting hardware is tight and has been upgraded to grade 12.9. 4. Ensure the Operator Side and Maintenance side Gate Pivot Block mounting hardware is tight and has been upgraded to grade 12.9. 5. Ensure the side rod cylinder bracket mounting hardware on both the Operator and Maintenance Side Rods assemblies is tight	40*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		and has been upgraded to grade 12.9. 6. Ensure the Gate Cylinder Trunnion Mount mounting hardware is tight and has been upgraded to grade 12.9. 7. Ensure the MRB Side Plate Pivot Connection mounting hardware on the Operator and Maintenance Side of the MRB is tight and has been upgraded to grade 12.9. 8. Ensure the MRB Side Plate Spacer mounting hardware on the Operator and Maintenance Side of the MRB is tight and has been upgraded to grade 12.9. 9. Ensure the MRB Gate Bumper Brackets mounting hardware on the Operator and Maintenance Side of the MRB is tight and has been upgraded to grade 12.9. 10. Ensure that the Radial Bumper is intact on the MRB Gate Bumper brackets on the Operator and Maintenance Side of the MRB. 11. Ensure that both pivot shaft split collars are intact and mounting hardware is tight. 12. Ensure that the ram cylinder conical spring is intact and replace if necessary. 13. Ensure that the clamping collar and expanding locking nut that attach the Mail Capture Driver to the Side Rod air cylinder are tight on both Side Rod Assemblies on the Operator and Maintenance Side of the MRB. 14. Ensure the Gate Cylinder rod end jam nut and clamping collar are tight or the rod end will extend its stroke length causing excessive stress on cylinder. 15. Generate a work order for any discrepancies found. *20 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7220	**Inspect Stacker/Loader Justification Plate Alignment on both ITCs.** 1. Home the Indexing Table. 2. Locate the mail fence on the Stacker/Loader table. 3. Observe the waterfall between the downstream end of the Stacker/Loader mail	4*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		fence and the inner wall of the Index Table Transfer Box. 4. Lay a straight-edge device such as a steel ruler or level to the downstream end of the Stacker/Loader mail fence to measure the waterfall from the fence to the inner wall of the Indexing Table Transfer Box. 5. If the measurement is within the 3-5 mm tolerance, no adjustments are necessary. 6. Generate a work order for any discrepancies found. *2 minute per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7230	**Verify Transfer Paddle Position Calibration on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. With the Index Table homed, lower the door on Transfer Box 1 and home the back-wall using the Indexing Table Diagnostics screen from the Maintenance Panel. 2. Jog the back-wall of Transfer Box 1 to the 850 position X-Axis. This position should be just outside the transfer box. 3. Home the X and Z axes of the transfer paddle from the Transfer Paddle Diagnostics Screen from the Maintenance Panel. 4. With the Transfer Paddle X and Z axes homed, jog the Transfer Paddle Z-Axis to the 350 position. 5. Slowly jog the Transfer Paddle X-Axis to the 850 position. The Transfer Box back wall and the Transfer Paddle should be able to gently hold a piece of paper between them without crushing or deforming it, but at the same time not allowing the piece of paper to fall freely. 6. If the piece of paper is held in place as described above, then these axes are properly aligned with each other. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures--ITC--Stacker/Loader--Transfer Paddle Critical	10*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036				Occurrence eCBM	

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.
		Alignments. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7240	**Clean, Lube, and Test RCT Work Zone Tray Stop on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Manually extend stop. 2. Clean actuating rod with a lint-free cloth or microfiber glove. 3. Apply a light coating of SAE 30 W oil to actuating rod. 4. Manually extend and retract stop to check that it move freely. 5. Ensure proximity sensors activate and are secure. 6. Generate a work order for any discrepancies found. *2 minutes per ITC.	4*	07	375		
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7250	**Lubricate Ejector Rod Actuator Wipers on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Open RCT Unloader door. 2. Jog Ejector Rods close to the top of their travel. 3. Secure Ejector Rod assembly with Ratcheting Safety Strap (PSN 5340-12-000-7427) as a safeguard to prevent assembly from falling while working under it. 4. Remove screw and cap from upper wipers. 5. Inspect and clean wipers. Replace as necessary. 6. Saturate wipers with SAE 30W oil. 7. Install cap and secure with screw. 8. Lubricate two bottom wipers:	18*	09	2250		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		a. Remove two screws and caps. b. Remove two wipers and springs from caps. c. Inspect and clean wiper. Replace as necessary. d. Apply SAE 30W oil onto two wipers until fully saturated. e. Install two springs and wipers into caps. f. Install two caps and secure with screws. 9. Remove Ratcheting Safety Strap. 10. Close RCT Unloader door. Refer to MS-209, Volume C, Section 12, Remove and Replace Ejector Rod Assembly. *9 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7260	**Inspect MRB Servo Alignment on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Perform fast PLC restart on ITC using MS-209, Volume C, Section 5. 2. Start the ITC after the PLC fully boots up to the HMI, and allow the ITC to complete its homing sequence. 3. Extend the RCT Stop by hand and place an empty RCT at the RCT Unload position on RCT conveyor. 4. Jog the Mail Ram Up and then extend the MRB Side Rods into the MRB using the Mail Rotate Box Diagnostics Screen. 5. Jog the Mail Rotate Box to the 10 position over the top of the RCT. 6. This position should be over the RCT with the bottom of the MRB parallel to the top of the RCT. Ensure that there is no contact between the bottom of the MRB and top of the RCT at this position. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures. **Mail Rotate Box Unload Position Alignment.** 1. Jog MRB Side Rods out using the Mail Rotate Box Diagnostics Screen.	20*	09	4500		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		2. Jog the Mail Rotate Box to its Unload Position. This position should be over the stacker bed with the bottom of the MRB parallel to and approximately 5 mm above the top of the stacker bed. 3. Verify there is at least a 1 mm gap between the bottom of the MRB Side Rods and the stacker ledge. 4. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 11, Alignment and Adjustment procedures. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER ASSEMBLY	7270	**Test RCT Unloader Stop and MRB Mail Pawl Cylinder Rods Cycle Times on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog RCT Unloader Stop Cylinder OUT and IN 3 times waiting a few seconds between cycles. 2. Ensure OUT actual time is between 300 ms and 600 ms. 3. Ensure IN actual time is between 380 ms and 680 ms. 4. Use the RMDC to jog RCT Unloader MRB Mail Pawl Cylinder IN and OUT 3 times waiting a few seconds between cycles. 5. Ensure IN actual time is between 120 ms and 420 ms. 6. Ensure OUT actual time is between 120 ms and 420 ms. 7. Use the RMDC to jog MRB to position 1300. 8. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *3 minutes per ITC.	6*	09	2250		
INTEGRATED TRAY CONVERTER (ITC): RCT UNLOADER	7280**	**Test RCT Unloader MRB Ram Cylinder Rod, MRB Gate Cylinder Rod, and Side Rods Cylinder Rods Cycle Times on both ITCs.** **NOTE**: The jog procedure used in this task is	10*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
ASSEMBLY		computer menu driven. **MRB Ram Cylinder Rod.** 1. Jog the MRB to its 400 position. 2. Ensure that the Mail Ram pressure regulator is set correctly. **NOTE:** This regulator is located on the side of the RCT Unloader cabinet and is the regulator on the right side. 3. Use the RMDC to jog RCT Unloader MRB Mail Ram Cylinder IN and OUT 3 times waiting a few seconds between cycles. 4. Ensure air pressure equalizes to about 25-30 PSI. 5. Inspect the MRB Ram Cylinder Cycle Time. 6. Use the RMDC to jog RCT Unloader MRB Mail Ram Cylinder IN and OUT 3 times waiting a few seconds between cycles. 7. Ensure IN actual time is between 660 ms and 860ms. 8. Ensure OUT actual time is between 240 ms and 440 ms. **MRB Gate Cylinder Rods Cycle Times.** 1. Jog the MRB to its 400 position (X-Axis). Ensure that the Mail Gate extends at the correct speed. 2. Use the RMDC to jog MRB Mail Gate Cylinder Down and up 3 times waiting a few seconds between cycles. 3. Ensure DOWN actual time is between 1020 ms and 1220 ms. 4. Ensure UP actual time is between 840 ms and 1040 ms. **Side Rods Cylinder Rods Cycle Times.** 1. Jog the MRB to its 1200 position. 2. Perform maintenance adjustments only on maintenance side of MRB unless otherwise directed. 3. Ensure MRB Side Rods on both the Maintenance Side and Operator side close and open in unison.					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		a. Jog MRB Side Rods IN and OUT several times. b. Observe both sets of rods and adjust flow control valves on the Maintenance side until the rods move in unison. 4. Use the RMDC to jog RCT Unloader MRB Mail Side Rods Cylinder IN and OUT 3 times waiting a few seconds between cycles. 5. Ensure OUT actual time is between 400 ms and 700 ms. 6. Ensure IN actual time is between 720 ms and 1020 ms. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures, ITC, Rotational Box Adjustment, Gate, Side Rods Adjustment. Refer to MS-209, Volume H, Section 10, Diagnostic Tool Procedures, ITC, Mail Rotate Box, Servo X-Axis Jog Procedure. Refer to MS-209, Volume H, Section 10, Diagnostic Tool Procedures, ITC, Mail Rotate Box, Mail Ram Cylinder Jog Procedure. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): STACKER LOADER ASSEMBLY	7400	**Inspect Stacker/Loader Gap Creation Belts and Separator Belts on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog the Gap Creation Belts forward and inspect entire belt for end-of-life conditions. a. Nicks, tears, or abrasions greater than 2 mm. b. Fraying around edges. c. Missing or damaged teeth. d. Excessively worn, slick, or faded outer surface. 2. Generate a work order for any discrepancies found. **Inspect Separator Tine Belts.** 1. Jog the Separator up to 475 position, inspect	8*	09			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
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Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		entire belt for end-of-life conditions. a. Nicks, tears, or abrasions greater than 2 mm. b. Fraying around edges. c. Excessively worn, slick, or faded inner and outer surface. 2. Generate a work order for any discrepancies found. Refer to MS-209, Volume H, Section 10, Diagnostic Tool Procedure, ITC, Separator, Servo Z-Axis Jog. Refer to MS-209, Volume H, Section 10, Diagnostic Tool Procedure, ITC, Belt Conveyor, Servo X, Axis Jog. *4 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): STACKER LOADER ASSEMBLY	7410**	**Inspect Stacker/Transfer Tine Straightness on both ITCs.** **NOTE:** This procedure is written for one Stacker and should be performed on both Stacker Assemblies. **NOTE**: The jog procedure used in this task is computer menu driven. 1. Jog Stacker A X-Axis to the center of the stacker/loader table. 2. Jog Stacker A Z-Axis up to the 500 position. 3. Inspect stacker tines for bends using a torpedo/bullet level to check for plumb. 4. Run the level up and down the entire length of each stacker tine and horizontal level should remain between leveling lines. 5. Bend stacker tines back into position until they are plumb again, if tines break or are unable to be bent back into the correct position, they should be replaced. 6. Generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 9, Performance Optimization. *10 minutes per ITC.	20*	09	375		
INTEGRATED TRAY	7420**	**Verify Stacker Minimum and Maximum Positions Calibration on both ITCs.**	40*	09	375		

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
CONVERTER (ITC): STACKER LOADER ASSEMBLY		**NOTE:** This procedure is written for one Stacker and should be performed on both Stacker Assemblies. **NOTE**: The jog procedure used in this task is computer menu driven. 1. Access ITC Configuration File Editor and print out all MRB positions and all Stacker Min and Max positions. **Stacker Max Position Inspection.** 1. Jog one of the Stackers as follows: a. Home G-Axis. b. Jog Z-Axis to its lowest position. c. Jog X-Axis to its maximum position (as determined in step 1). d. Jog G-Axis to 75 position. 2. Jog MRB to Unload Position (as determined in step 1). 3. Jog Mail Ram Up and manually extend Side Rods into MRB. 4. Slowly Jog Z-Axis up to 400 position. Stacker Tines should straddle MRB Side Rods. 5. Ensure there is at least a 5 mm gap on both sides of the thickest section of both MRB Mail Capture Rod drivers. 6. Repeat steps 2 – 6 for the other Stacker. **Stacker Min Position Inspection.** 1. Home the Transfer Paddle X-Axis. 2. Jog the Transfer Paddle X-Axis to the “1200” position. DO NOT MOVE FROM THIS POSITION. 3. Jog one of the Stackers as follows: a. Jog Z-Axis to its lowest position (as determined in step 1). b. Jog X-Axis to the “1200” position. c. Home the G-Axis. d. Jog the G-Axis to the “0” position. 4. Slowly Jog Z-Axis up to 400 position. Stacker Tines should mesh within the					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:								Bulletin Filename: mm15036				Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Transfer Paddle Tines. 5. Ensure the Indexing Table side face of the movable stacker tines are flush with the Indexing Table side face of the transfer paddle when both are at the “1200” position. 6. Repeat steps 2 – 6 for the other Stacker. 7. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment Procedures, ITC, Stacker/Loader, Stacker A or B Critical Alignments. *20 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): INDEXING TABLE	7470	**Verify all four Transfer Box Back-Wall Max Positions on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Perform ITC Fast PLC Restart procedure to reset PLCs. 2. Record values listed for Transfer Box back wall Max Position on View/Modify Settings screen of the ITC ConfigEditor. 3. Login to ITC Maintenance Panel. 4. Touch MAINTENANCE button>>Touch DIAGNOSTICS button>>Touch VERTICALIZER icon>>ensure icons below X-Axis and G-Axis indicate Homed positions. 5. Use left maintenance panel arrow to move slip sheet down then use maintenance panel arrows to move bin rods up. 6. Touch DIAGNOSTICS button>>Touch INDEXING TABLE AND TRANSFER BOX icon. 7. Touch transfer box 4 icon to select and ensure icon below X-Axis indicates Homed position. 8. Touch INITIAL button, then MANUAL button. 9. Use maintenance panel arrows to jog door down. 10. Use maintenance panel arrows to move transfer box 4 to Transfer Box back wall Max Position value recorded in ITC Configuration View/Settings page, placing back wall slightly	28*	09	375		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		inside the Verticalizer. **Position Verticalizer bin rods:** 1. Touch DIAGNOSTICS button and return to DIAGNOSTICS page>>Touch VERTICALIZER icon. 2. Use maintenance panel arrows to move bin rods down until bin rods can travel into the transfer box back wall with no binding or interference between the two assemblies. 3. The Verticalizer bin rods must be just inside the front face but not extrude past transfer box back wall. If necessary, move the Transfer Box Backwall X-Axis by hand until the ideal max position is met. 4. Record X-Axis position of the Transfer Box back wall. 5. Compare ITC Configuration Transfer Box back wall Max Position setting on View/Modify Settings screen to X-Axis value recorded earlier; if settings do not match generate a work order for any discrepancies found. Refer to MS-209 Volume C, Section 11 Alignment and Adjustment Procedures--ITC--Indexing Table--Transfer Box Alignment and Adjustment. *14 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): INDEXING TABLE	7480	**Inspect Indexing Table Servo Alignment on both ITCs.** 1. Home the Indexing Table. 2. Place an empty ACT with its door removed at the ACT Loader work zone position. 3. Inspect the following five conditions are met to ensure Indexing Table home position is correct: a. Transfer Paddle through Transfer Box Door. b. Transfer Paddled Meshed with Transfer Box Back Wall. c. Transfer Box Bridge Fingers at Stacker/Loader Position. d. Transfer Box Bridge Fingers at ACT Loader Position. e. Auto Paddle Fingers Meshed with	10*	09	4500		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Transfer box back wall. 4. If all five positions from the previous step are acceptable, then the Indexing Table – C – Home Offset position should be considered acceptable. If not generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 11, Alignment and Adjustment procedures. Refer to MS-209, Volume H, Section 10, Diagnostic Test Procedure, ITC, Indexing Table, Servo Rotate Axis Home procedure. Refer to MS-209, Volume C, Section 9, Performance Optimization. *5 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7490	**Clean, Lube, and Test ACT Loader Tray Stop on both ITCs.** **WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures.** 1. Remove roller above pneumatic cylinder. 2. Manually extend the actuator rod by placing the tray stop in the up position. 3. Clean actuating rod with a lint-free cloth or microfiber glove. 4. Apply a light coating of SAE 30 W oil to actuating rod. 5. Manually lower and raise stop to check that it moves freely. 6. Check that proximity sensors activate and are secure. 7. Generate a work order for any discrepancies found. *3 minutes per ITC.	6*	07	375		
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7500	**Inspect the ACT Load Auto Paddle Height on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Home the Indexing Table. 2. Lower the Transfer Box Door and extend the Transfer Box Bridge Fingers for the transfer	6*	09			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036		Occurrence eCBM			

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.
		box located at the ACT Loader position. 3. Lower the Auto paddle. 4. Jog the Auto paddle in and out of the transfer box. 5. The tips of the Auto paddle tines should travel within the grooves of the Transfer Box Bridge Fingers and Transfer Box Floor with minimal contact. a. If the tips of the Auto paddle tines travel correctly within the grooves of the Transfer Box Bridge Fingers and Transfer Box Floor, then no adjustments are needed. b. If the tips of the Auto paddle tines contact the Transfer Box Bridge Fingers or Transfer Box Floor, then adjustments are required. 6. If the Auto paddle tines are contacting the Transfer Box Bridge Fingers or Floor due to an incorrect height of the tines, adjust the tine height by locating and loosening the jam nut on the Auto paddle Z-Axis Cylinder. 7. Rotate the adjustment block counterclockwise to raise the position of the Auto paddle tines or clockwise to lower the position of the Auto paddle tines. 8. Tighten jam nut after adjustments are made. Refer to MS-209 Volume H, Section 10, Diagnostic Test Procedure and Diagnostic Tool Procedure. *3 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7510	**Check the ACT Tray Stop on both ITCs.** 1. Manually move stops to check that they move freely. 2. Check that proximity sensors activate and are secure. 3. Check for loose or missing hardware on the stops, connecting rod, and actuator. 4. Check that pneumatic connections are secure in fittings of the actuator. 5. Generate a work order for any discrepancies	2*	07			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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.
		found. *1 minute per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7530	**Inspect ACT Loader Barcode Scanner on both ITCs.** 1. Place an empty ACT into the ACT Loader work-zone section and push it against the Anti-Backup Stop. 2. Navigate to the Scanner Status Screen and press ACT Loader to activate the barcode scanner. 3. Verify the ACT barcode scanner's red laser line is centered horizontally on the ACT label. 4. If the ACT Loader barcode scanner is properly aligned, all three strings will have data within their fields and no adjustment is necessary. 5. Generate a work order for any discrepancies found. Refer to MS-209, Volume C, Section 9, Performance Optimization. *8 minutes per ITC.	16*	09	375		
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7540	**Inspect All ACT Loader Area Sensors on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Locate all sensors on the ACT Loader. 2. GENTLY perform a pull test on each sensor wire to ensure the sensor is securely mounted. 3. Ensure all sensor connections are tight and no cable damage is present. 4. Jog the Auto-paddle Door Handler Up and Down to verify proximity sensors are properly positioned, their indicators toggle, and report to the PLC. 5. Jog the Door Handler Door Gripper Open (extend) and Closed (retract) to verify proximity sensors are properly positioned, their indicators toggle, and report to the PLC. 6. Ensure the Door Gripper Door Present proximity sensor is aligned by placing a door into the Door Gripper fingers. Verify the	30*	09	2250		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		Proximity sensor LED is lit when door is held by Door Gripper fingers. 7. Jog the Auto-paddle Up and Down to verify proximity sensors are properly positioned, their indicators toggle, and report to the PLC. 8. Ensure the Auto-paddle Jam Detect proximity sensor and sensing plate is securely mounted. 9. Jog the Backstop Up and Down to verify proximity sensors are properly positioned, their indicators toggle, and report to the PLC. 10. Ensure the Backstop Jam Detect proximity sensor and sensing plate is securely mounted. 11. Jog the Backstop X-Axis Cylinder to verify extend and retract proximity sensors are properly positioned, their indicators toggle, and report to the PLC. 12. Ensure the ACT Anti-Backup Stop proximity sensor is properly positioned by moving the Anti-Backup Stop in and out to toggle the proximity sensor. 13. Ensure the ACT Pop-Up Stop Up Down proximity sensors are properly positioned by moving the Pop-Up Stop up and down to toggle the proximity sensors. 14. Ensure the Empty ACT Check photoeye is properly positioned by placing an empty ACT in the load zone and verifying it shows as unblocked. 15. Generate a work order for any discrepancies found. Refer to MS-209 Volume H, Section 10, Diagnostic Tool Procedures. Refer to MS-209 Volume C, Section 9 Performance Optimization. *15 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7550	**ACT Loader Cylinders Cycle Times on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. Use the RMDC to jog Auto-paddle Z-Axis Cylinder UP and DOWN 3 times waiting a few seconds between cycles.	20*	09	2250		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036					Occurrence: eCBM

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		2. Ensure UP actual time is between 840 ms and 1140 ms. 3. Ensure DOWN actual time is between 800 ms and 1100 ms. 4. Use the RMDC to jog Door Handler Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 5. Ensure UP actual time is between 480 ms and 780 ms. 6. Ensure DOWN actual time is between 760 ms and 1060 ms. 7. Use the RMDC to jog Door Gripper Cylinder OPEN and CLOSE 3 times waiting a few seconds between cycles. 8. Ensure Open actual time is between 100 ms and 340 ms. 9. Ensure closing actual time is between 100 ms and 340 ms. Verify Backstop X-Axis clevis and hardware is secure. 10. Use the RMDC to jog Backstop X-Axis Cylinder OUT and IN 3 times waiting a few seconds between cycles. 11. Ensure Out actual time is between 120 ms and 1320 ms. 12. Ensure In actual time is between 1240 ms and 1540 ms. 13. Use the RMDC to jog Backstop Z-Axis Cylinder UP and DOWN 3 times waiting a few seconds between cycles. 14. Ensure UP actual time is between 680 ms and 980 ms. 15. Ensure DOWN actual time is between 660 ms and 960 ms. 16. Use the RMDC to jog ACT Loader Exit Gate Cylinder OUT and IN 3 times waiting a few seconds between cycles. 17. Ensure Out actual time is between 420 ms and 720 ms. 18. Ensure In actual time is between 560 ms and 860 ms . 19. Generate a work order for any discrepancies					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence eCBM

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.
		found. *10 minutes per ITC.					
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7560	**Verify ACT Door Removal Position on both ITCs.** 1. Record Auto Paddle Door Attach Position listed in ITC Configuration Editor. 2. Place an empty ACT on the ACT conveyor between the ACT stop and the anti-backup stop. 3. Position Auto-paddle to the position recorded from View/Modify Settings screen. 4. Perform ITC Motion Power down procedure and open ACT loader door. 5. Tag and disconnect yellow air hose from the auto-paddle door gripper assembly. Allow assembly to gently lower onto ACT door. 6. Position auto-paddle manually until door gripper comes down on top of ACT door latch and can squeeze latch without hindrance. 7. Record X-Axis auto-paddle position from Auto-Paddle Page. 8. Reconnect air hose according to tagging and close ACT loader door. 9. Compare Auto Paddle Door Attach Position setting to recorded auto-paddle X-axis value. 10. If Auto Paddle Attach Position and X-Axis values are the same, Auto Paddle Door Attach Position is set correctly and no change needed. 11. Generate a work order for any discrepancies found. *7 minutes per ITC.	14*	09	375		
INTEGRATED TRAY CONVERTER (ITC): ACT LOADER, ASSEMBLY	7570	**Inspect ACT Loader Auto-Paddle Servo Positions on both ITCs.** **NOTE**: The jog procedure used in this task is computer menu driven. 1. The following section covers the steps necessary to check that the Auto paddle – X – Min Position is correctly set and the steps necessary to change if necessary. 2. Home the transfer box back wall for the transfer box located at the ACT Loader using	20*	09	4500		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036		Occurrence: eCBM			

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		Electronic Handbook MS-209 – Volume H – Section 10 – Diagnostic Test Procedure – ITC – Indexing Table – Transfer Box Servo X-Axis Home procedure. 3. Record the home position value for the transfer box back wall from the Indexing Table Diagnostic screen or RMDC. 4. Home the Auto Paddle using Electronic Handbook MS-209 – Volume H – Section 10 – Diagnostic Test Procedure – ITC – ACT Loader – Auto paddle Servo X-Axis Home procedure. 5. Jog the Auto Paddle to a position over the empty transfer box so the tines can mesh with the transfer box back wall fins using Electronic Handbook MS-209 – Volume H – Section 10 – Diagnostic Tools Procedures – ITC – ACT Loader – Auto Paddle Servo X-Axis Jog procedure. 6. Jog the Auto Paddle Down into the transfer box back wall. 7. Record the X-Axis position of the Auto Paddle from the ACT Loader Diagnostics screen. 8. Generate a work order for any discrepancies found. Refer to MS-209 Volume H, Section 10, Trouble shooting ACT loader. *10 minutes per ITC.					
TRAY STAGING DEVICE:SYSTEM	7810**	**Perform Baseline Procedure and Clean all Staging Photoeyes and Inspect Belts on all Quadrants.** 1. Baseline the staging quadrants to synchronize the Staging Job List and Staging tray information in the System Controller Database with the physical tray locations and tray tracking information stored in the CRSC at each Staging slice. 2. While staging quadrant is empty (of trays) and before cycling Staging Quadrant power: a. Clean all spine and belt tab sensing photoeyes. **Inspect TSD Belts for Missing Tabs on all Quadrants.**	200*	09	1125		

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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.
		1. Home all slices and look for: a. Missing tabs. b. Cracked tabs. c. Split tabs. 2. Generate a work order for any discrepancies found. *50 minutes per Quadrant.					
FLATS SEQUENCING SYSTEM (FSS): CONTROL STATION RACK	7900**	**Run Intel SDD Toolbox Utility on the System Controller PC Hard Drive.** 1. Ensure Operations is finished running mail and the last run of the day has ended. 2. The sort controller, carousel controller, and tray handling controller must be turned off before performing this procedure. 3. To access the windows desktop from the FSS Human Machine Interface (HMI) hold down **Shift + Shift + Esc** keys at the same time. 4. From the Windows Taskbar right click the **FSS Controller** application and choose **Close**. 5. Right click on the **FSS HMI** application and choose Close. 6. Right click and close all of the other running applications shown on Windows Task Bar. 7. From the windows desktop, double click the **Intel SSD Toolbox** icon. 8. Perform the following visual checks to ensure the SD is operating properly: a. Ensure the **Drive Health** is green. b. Ensure the **Estimated Life Remaining** is green. c. Ensure the **Last Run** date under the Optimizer indicates that the Optimizer was successfully completed. The Intel Optimizer is scheduled to run every Saturday at 7:00 a.m. 9. Once checks have been completed, click **X** to close the application and shut down the System Controller. 10. Restart the System, Sort, Carousel, and Tray handling controllers according to normal	10	10			W

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model:										Bulletin Filename: mm15036					Occurrence: eCBM

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	Thresholds: Pieces Fed (000)	Thresholds: Freq.
		startup.					
FLATS SEQUENCING SYSTEM (FSS): CONTROL STATION RACK	7910**	**Backup Configuration File(s).** 1. Close FSS Controller and HMI application. 2. Insert the USB stick into computer USB port. 3. Go to C:\FSS\Installer and launch FSS installer application. 4. Select **yes** radio button from United States Postal Service Terms of Usage page. 5. Select **Advanced Installation Tools** radio button from Installation Mode page and select **Next** button. 6. Select Create a Backup radio button from Installation Mode page and select **NEXT** button. 7. Select **Browse** button and navigate to the USB drive and select **NEXT** button. 8. Follow on screen instructions to complete backup. 9. Eject and disconnect USB stick from computer. Refer to MS-209 Volume H, Section 4, Control System Backup Configuration Settings to USB for complete instructions.	5	10			W
FLATS SEQUENCING SYSTEM (FSS): CONTROL STATION RACK	7930	**Run UPS Self-Test.** 1. Open control station cabinet front and back doors. 2. Press TEST button on UPS control panel. 3. Close control station cabinet front and back doors. 4. Generate a work order for any discrepancies found.	1	09			M

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence eCBM

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.
FLATS SEQUENCING SYSTEM (FSS): REMOTE MAINTENANCE DIAGNOSTIC COMPUTER (RMDC)	7950	**Test Life Expectancy of Battery.** **WARNING: Dispose of battery in accordance with local battery disposal and recycling procedures.** 1. Ensure RMDC battery is fully charged. 2. Unplug RMDC external power cord and note current time. 3. Wait 15 minutes for windows to accurately estimate remaining battery life and hover mouse pointer over system tray battery icon. 4. If software estimates battery life is greater than 4 hours; then battery is good – Stop test. 5. If software estimates battery life is less than 4 hours, generate a work order to replace battery.	5	9			Q
FINAL-CLEANUP	9990	**Clean Up.** Ensure all tools, lubricants, rags, etc., are removed from the work area. Annotate deficiencies found and repairs performed in the Maintenance logbook. Notify supervisor and/or generate work orders per local procedures to document/initiate corrective maintenance activity for deficiencies found.	5	All			

*** --- the tasks marked with an asterisk are per unit tasks.**

**** --- the tasks marked with two asterisks are critical tasks.**

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	F	S	S						A	A	0	0	1	M

Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	eCBM

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

FSS MASTER CHECKLIST

09-FSS-AA-001-M

Operational Maintenance

See Attachment 1.

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	9	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence 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)	Freq.
SAFETY STATEMENT	1000	**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			T
ENTIRE FSS: SYSTEM	8000	**Examine Machine Logbook.** Examine Machine Log Book and bring forward any unresolved problems from the previous tour. Perform task at beginning of tour.	5	09			T
ENTIRE FSS: SYSTEM	8010**	**Observe Warning Horn And Beacons.** Watch for proper operation of warning horn and beacons on system start-ups. Perform task at beginning of tour.	2	09			T
ENTIRE FSS: SYSTEM	8020	**Observe all Machine Lamps for Proper Operation.** Watch for proper functionality of all indicator lamps during normal machine operations. Correct deficiencies as they are found. Perform task at beginning of tour.	1	09			T
ENTIRE FSS: SYSTEM	8030	**Be Cognizant of all HMI Alarms and**	1	10			T

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	9	F	S	S						A	A	0	0	1	M
Equipment Nomenclature: Flats Sequencing System	Equipment Model										Bulletin Filename: mm15036		Occurrence: 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)	Freq.
		Notifications on FSS HMI Screens. Throughout the run, monitor the HMI Alarms and Notifications. Take action to prevent small issues from cascading into larger problems. Perform task every 30 minutes.					
ENTIRE FSS: SYSTEM	8040	**Inspect Various Performance and Diagnostic Screens at the System Controller or RMDC.** 1. Monitor RUN STATUS screen for real-time throughput, Machine Acceptance Rate (MAR), mechanical reject rates, recycling rates, OCR read rate, and vital tray statistics. 2. Monitor RUN STATUS: AUTOMATED SWEEP tab for a continuously decreasing tray count in each staging quadrant while RCT are exiting staging and for real-time updates on the carousel's sweep status. 3. Monitor CAROUSEL TOOLS: BUCKETS tab to check for excessive blocked or unavailable carousel bucket slots. 4. Monitor FSM STATISTICS: INFEED TIME TRACKING tab to check for mail tracking issues in the infeed lines. 5. Monitor TRAY OPERATIONS screen and update stale trays in the tables. 6. Monitor RUN STATUS:OPERATIONAL MAINTENANCE tab to check for operational issues on FSS. Perform task every 60 minutes.	6	10			T
ENTIRE FSS: SYSTEM	8050	**Inquire if Operators Have Observed or Experienced Excessive Problems.** Investigate as necessary and initiate corrective action as appropriate. Perform task every 60 minutes.	5	09			T
INFEED LINE ASSEMBLY: INJECTOR MODULE ASSEMBLY	8060	**Inspect Mail In Reject Cart on both Infeed Lines.** Examine mail in reject cart hourly. Use MAIL PIECE REPORT Screen to determine reject cause such as:	2*	10			T

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	9	F	S	S						A	A	0	0	1	M
Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence 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)	Freq.
		• Over-length. • Under-length. • Gap errors. • Double feeds. • Flat on Top of Bucket Detected (Infeed Line 2 Only). Take corrective action such as removing debris from the mail path, cleaning photoeyes, or making mechanical adjustments where appropriate. Be alert for unusual sounds, odors, or other indications of potential failure conditions in the machine. *1 minute per Infeed Line Perform task every 60 minutes**.**					
INFEED LINE ASSEMBLY: MARKING MODULE ASSEMBLY	8070	**Inspect IJP Print Quality and Label Placement.** Examine mail in output bins to ensure the IJP print quality and Label Placement is correct. Perform task every 4 hours.	1	09			T
INFEED LINE ASSEMBLY: IMAGE ACQUISITION MODULE ASSEMBLY	8080	**Inspect Image Quality on IPC Monitor on both Infeed Lines. Set Up IPC to Display Every 15th Image and Inspect Image Quality Hourly.** • Inspect for streaks caused by debris on the aperture. • Look for illumination problems. Large numbers of exceedingly light or dark images could be an indication of problems. *1 minute per Infeed Line. Perform task every 60 minutes.	2*	09			T
ENTIRE FSS: SYSTEM	8090	**At Beginning of each Run.** 1. At Dolly Induct ensure all ACT transition smoothly. 2. Watch ACT Stacks to ensure they are not wobbling or shaking excessively. 3. Watch each ACT transition on and off the shelves. Each transition should be slightly downhill and the ACT should not bounce. 4. Listen for abnormal noises from the Linear	5	09			T

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Equipment Nomenclature: Flats Sequencing System	Equipment Model:								Bulletin Filename: mm15036				Occurrence: 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)	Freq.
		Actuators and MDR. Be alert for unusual sounds, odors, or other indications of potential failure conditions in the machine. 5. Listen for air leaks. 6. Observe ACT progress to and from feeders. 7. Monitor the Staging fill level. When any quadrant of staging reaches 70% full of Pass 1 trays, Operations should be notified of the potential risk if induction of mail continues. 8. After operations presses END INDUCTION, ensure all ACT are processed before sweep initiates. Perform task every 160 minutes.					
ENTIRE FSS: SYSTEM	8100	**After Last Mail Piece in First Pass is Picked Off Perform the Following Steps on both Infeed Lines:** 1. Open infeed line covers. 2. Remove loose debris. 3. Ensure camera hood is clear of debris. 4. Inspect belt tracking and wear. 5. Remove debris from labeler and IJP area. 6. Close Infeed Line covers. *3 minutes per Infeed Line. Perform task every 160 minutes.	6*	09			T
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	8110	**After Last Mail Piece in Second Pass is Picked Off (While ITC Are Idle):** Remove all fly-outs from ITC indexing table area, MRB pivot point, and Verticalizer area on both ITC. *5 minutes per ITC. Perform task every 160 minutes.	10*	09			T
INFEED LINE ASSEMBLY: AUTOMATED FEEDER ASSEMBLY	8115	**"Clean, Inspect, and Align Feeder V4 Photoeye (4).** 1. Clean V4 photoeye and reflector (front linkage of the anti-doubler assembly) with a lint-free cloth or microfiber glove and ensure no debris is blocking the photoeye path.	4	9			T

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Equipment Nomenclature Flats Sequencing System	Equipment Model										Bulletin Filename mm15036					Occurrence TOURLY

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					Run Hours	Pieces Fed (000)	Freq.
ENTIRE FSS: SYSTEM	8120	**After Each Sweep (With RMDC In Hand):** 1. Walk around left side of carousel onto elevated platform over pre-staging. a. Observe RCT progress down all four FTAC. The trays should move smoothly on each conveyor bed and not snag on tray guides. b. Observe RCT progress through Pre-Staging and into Staging. c. Observe ETR for smooth RCT movement. **When all four FTAC clear:** 2. Walk through Staging onto Elevated Platform at Dolly Induct. a. Look for RCT jams on Staging Slices. b. Observe RCT progress down all four Staging Spines. The trays should move smoothly and not snag on tray guides or belt tabs. c. Observe RCT movement through Post-Staging to ITC. d. Observe ACT transitions to and from Dolly Induct shelves. e. Observe ACT progress towards feeders from Dolly Induct. f. Monitor STAGING: TRAY RELEASE FUNCTIONS, SLICE FUNCTIONS, and STAGING JOBS tabs. The Job IDs on the overall Staging Map should match the Job IDs for each individual slice. Perform task every 80 minutes.	18	10			T
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	8130	**During Transition And Dispatch, Observe for the Following at each ITC:** 1. Excessive fly-outs at RCT unloader and separator. 2. Listen for abnormal noises from: a. Rubbing Stacker tines. b. Actuator bearings and belts.	8*	09			T

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					Run Hours	Pieces Fed (000)	Freq.
		c. Slamming pneumatic driven components on the Mail Rotate Box, Verticalizer, and RCT Re-Stacker. 3. Be alert for unusual sounds, odors, or other indications of potential failure conditions in the machine. 4. Observe all tray motion within ITC. Watch each tray transition on and off of the shelves. Trays should move smoothly and not snag on tray guides. Each transition should be slightly downhill and the tray should not bounce. 5. Inspect the print quality of the Street Tray Labeler and observe the Labeler Pick and Place device. 6. Log in to the ITC and ensure the ACT and Street Tray fill levels are set correctly. *4 minutes per ITC Perform task every 80 minutes.					
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	8132	**Inspect the ACT Lift Entry and Exit Guide Rails on both ITCs.** 1. ACT should enter and exit smoothly without binding. 2. Inspect alignment, adjust/tighten if necessary. 3. Ensure the tray guides are not damaged, loose and are correctly aligned. 4. If the guides are not correctly aligned, realign them by placing an ACT tote between the rails, then adjust and tighten hardware. Perform task once per tour.	4	09			T
INTEGRATED TRAY CONVERTER (ITC): SYSTEM	8134	**Inspect the ACT Justifier Entry and Exit Conveyor ACT Guide Rails on both ITCs.** 1. Inspect alignment, adjust/tighten if necessary. 2. ACT should enter and exit smoothly without binding. Refer to MS-209, Volume C, Section 11, ACT Justifier. Perform task once per tour.	4	09			T
INTEGRATED TRAY	8136	**Inspect the RCT Lift Entry and Exit Guide Rails**	8	09			T

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					Run Hours	Pieces Fed (000)	Freq.
CONVERTER (ITC): RCT LIFT ASSEMBLY		**on both ITCs.** 1. Remove window to gain access. 2. Inspect for loose or missing hardware. 3. Inspect for damage to the rails and connecting brackets. 4. Install access window. 5. Generate a work order for any discrepancies found. Perform task once per tour.					
EMPTY TRAY RETURN CONVEYOR:: CONVEYOR, ZERO PRESSURE ACCUMULATION	8138	**Inspect ETR Conveyor Zones.** Inspect each ZPA zone lifter to ensure rollers only turn when actuated.	10	09			T
ENTIRE FSS: SYSTEM	8140	**Alarm Trending.** 1. From the RMDC HMI select Site Servers > MDSS. 2. Navigate to Performance > Alarm Trending. 3. On the Alarm Trending page, select the Filter Data button. 4. Select Machine, Subsystem (ALL), and appropriate dates for a 14 day time frame. 5. Click on Count to display the highest number of alarms. 6. Investigate the highest count alarms displayed. 7. Investigate the trend of each issue by clicking the graph icon. 8. Generate a work order for any discrepancies found.	10	10			T
ENTIRE FSS: SYSTEM	8150	**Log Problems Discovered and Work Performed. Record any Problems or Work Completed in the Machine Log Book.** Report problems and any unresolved problems to the SMO and generate a work order for any discrepancies found. Perform task at the end of the tour.	10	09			T

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Equipment Nomenclature	Equipment Model	Bulletin Filename	Occurrence
Flats Sequencing System		mm15036	TOURLY

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