MAINTENANCE TECHNICAL SUPPORT CENTER / MAINTENANCE POLICIES & PROGRAMS ENGINEERING / UNITED STATES POSTAL SERVICE

Maintenance Management Order

SUBJECT: Operational and Preventive Maintenance Guidelines for the Advanced Facer Canceler SYS ISS OCR PARS Modified (AFCS)

TO: All AFCS Capable Offices
All Area Offices

DATE: January 21, 2011

NO: MMO-006-11

FILE CODE: 2AC

wbro:mm10058aa

Task 13 in the Operational Checklist has been updated. Task 75 deleted and Summary Workload table updated.

This Maintenance Management Order (MMO) provides Operational and Preventive Maintenance Guidelines for the AFCS. This MMO supersedes MMO-099-09, Operational & Preventive Maintenance Guidelines for Advanced Facer Canceler System (AFCS), Production Based Maintenance Program, dated August 11, 2009.

The workhours indicated in the workload estimate (Attachment 1) are based on a 4 hour operations window 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 Material Safety Data Sheets (MSDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current MSDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current MSDS be requested. Refer to MSDS for appropriate personal protective equipment.

WARNING

The use of compressed or blown air is prohibited. An alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp rag, lint-free cloth, or brush must be used in place of compressed or blown air.

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

Robert E. Albert
Manager
Maintenance Technical Support Center
Maintenance Policies and Programs

Attachments:
1. Summary of Workload Estimate
2. Master Checklist: 03-AFCS-AE-001-M: Master Checklist
3. Master Checklist: 09-AFCS-AE-001-M: Operational Maintenance

ATTACHMENT 1

SUMMARY

WORKLOAD ESTIMATE

FOR

AFCS

SUMMARY
WORKLOAD ESTIMATE
FOR
AFCS

SUMMARY WORK LOAD ESTIMATES FOR AFCS

Number of mail pieces Processed for 1 Year >	**27,000,000**	**High end estimate**

Operation Days	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	Operational Maintenance + Total Servicing		
						1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
5 Days	793.48	238.05	1031.53	103.15	1134.68	1,481.35		
6 Days	921.75	276.53	1198.28	119.83	1318.10	1,734.10		

* **Repair maintenance estimates based on 30% of preventive maintenance.**

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

	OPERATIONAL MAINTENANCE 80 MIN. PER DAY PER MACHINE		
	One Tour	Two Tours	Three Tours
5 Day	346.67		
6 Day	416.00		

ATTACHMENT 2

AFCS MASTER CHECKLIST

03-AFCS-AE-001-M

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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	1.	**COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.** **THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.** **When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.**	1	All			
DATA COLLECTION: DCC	2.	**Analyze the DCC reports.** **NOTE** Prior to performing the power down and lockout, do an AFCS performance analysis. Access End of Day data from the previous runs on the DCC computer and analyze the following reports for any anomalies that may indicate degradation of machine performance. Ref. DCC Users Manual (NSN 7610-08-000-4047). 1. Production Data Report 2. E-Stops, Jams, and Malfunctions Report 3. OCR Sorting Data Report 4. Doubles Detector Data Report	3	10		3	
ACP UNIT 16: POWER DOWN	3.	**Power down SWSTP/ACP computers.** **CAUTION** **Before turning off the AFCS, power off the ID Tag Printers and the ACP.**	3	10		3	

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Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA					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.
		CAUTION **Do not power off ACP computers before shutting down the operating system. Failure to comply may result in corrupted software.** **If the system is frozen and computers must be shut down without properly exiting operating system, software and sort plans may need to be reloaded.** **NOTE** When necessary to power down the ACP, follow latest Software Management Order (currently SMO-008-09) found on MTSC web site: www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm. Also Vol. A of the MS-166 manual. http://mtsc.usps.gov/msbooks 1. Shut Down the SWSTP a. On the SWSTP main screen select the SYSTEM SOFTWARE tab. b. Select SYSTEM SHUTDOWN. c. The dialog box will ask: “Are you sure you want to shut down the system”? d. Select YES. 2. Shut down the ACP (M1) and recognition nodes: a. In the USPS AFCS OCR/Video Facing System User Interface, click MAINTENANCE button. b. The Maintenance window displays. Click SYSTEM SHUTDOWN button to bring up the Shutdown window. c. The System Shutdown window displays. Select ALL. The system will automatically exit all M1 and Rec Node software. A POWER DOWN prompt will be displayed on M1 when it is safe to power down M1 and the Rec Nodes.					

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		d. Power off the ACP (M1) system by pressing the Power button. e. Power off each recognition node by pressing the Power button. 3. Shut down M2/CD. a. Select START > SHUT DOWN. b. Click on the option to shutdown and click on YES. c. In the Bell and Howell Co-directory password window, type the password that is given: **xxxxxx** (all lower case). d. In the USPS-DLU password window, type the password **xxxxx** (lowercase). e. After the applications and Windows close, you will see: "It is now safe to turn off your computer". f. Power down with the power ON/OFF button on the front of M2 Character Data Computer.					
AFCS: POWER DOWN	4.	**Power down and lock out power.** 1. Perform normal shut down of inkjet printers in accordance with the most recent manual for the PC-70/80 and/or PC-37. 2. Power OFF the IJP UPS. 3. Press Off button on Operator Display Panel. 4. Power down machine, lock out power, and disconnect air supply as prescribed by current local lockout instructions providing lockout/restore procedures. 5. Disconnect and lock out the 3-phase, 208 VAC power that feeds the Main Power Distribution Unit prior to working on the Main Power Distribution Unit as prescribed by current local lockout instructions providing lockout/restore procedures.	4	All		3	

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					Run Hours	Pieces Fed (000)	Freq.
AFCS:MAIL SEARCH	5.	**Perform mail search.** **NOTE** Ensure proper operation of door gas springs. If any cover comes down without help, write work order and correct. 1. Open all necessary panels along mail travel path for a thorough mail search. 2. Remove any additional panels along mail travel path in order to have access to the lower belts in each section. 3. Starting at the Incline Hopper, perform mail search. 4. While performing mail search, remove any large pieces of dirt and debris. 5. Place all recovered mail in a tray. 6. Follow local procedures for returning mail to operations for processing.	10	All		1	
AFCS: VACUUM 1	6.	**Vacuum Singulator, Singulator leveler, and Buffer Feeder. Clean IMS GUI and OCP.** 1. Vacuum the following: a. Singulator feeder b. Singulator leveler c. Buffer Feeder 2. Clean the following: a. Image Management System Terminal b. Operator Control Panel	6	7		40	
AFCS: VACUUM 2	7.	**Vacuum the following areas:** **CAUTION** **While cleaning the Enricher module, use non-metallic ends on the vacuum.** 1. Edger channel 2. Extractor 3. Shingler	14	7		101	

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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.
		4. Fine Cull 5. Enricher/Canceller/ISS 6. Fans on back of ID Tag Verifier 7. Stackers					
VIBRATOR HOPPER UNIT #1: FILTER AND LUBRICATOR	8.	**Clean hopper air filter and fill lubricator.** **WARNING** **Various products requiring Material Safety Data Sheets (MSDS) may be utilized during the performance of this task. Ensure the current MSDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current MSDS be requested. Refer to MSDS for appropriate personal protective equipment.** 1. Drain, disassemble, and clean pneumatic air filter. 2. Reassemble after cleaning. 3. Fill lubricator to proper level (black line) using pneumatic oil with a viscosity of 140 to 170 SUS at 100° F.	10	7		6700	
FLAT OVERTHICK UNIT 4: BELTS AND REAR COVER	9.	**Check overthick conveyor belts.** 1. Remove cover on back of overthick conveyor. 2. Check all belts and rollers (above and below the deck) for wear and proper tension. 3. Check for mail. 4. Ensure all belts are tracking properly and have no frayed edges. 5. Install cover on back of overthick conveyor.	7	9		510	
INCLINE OVERTHICK UNIT 5: CLEAN BELT CHECK AND LUBRICATE	10.	**Clean, check, and lubricate Incline Overthick Unit 5:** 1. Clean Incline Conveyor power box. a. Open Incline Conveyor power box door.	55	9		6700	

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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.
		b. Vacuum inside of Incline Conveyor power box. c. Ensure all electrical connections are tight. d. Close Incline Conveyor power box door. 2. Clean Main Power Distribution Unit. a. Open Main Power Distribution Unit door. b. Vacuum the inside of the Main Power Distribution Unit. c. Ensure all electrical connections are tight. d. Close Main Power Distribution door. 3. Check Incline Conveyor belt and rollers. a. Check the Incline Conveyor belt for wear and proper tracking. b. Check the Incline Conveyor and beater drive belts for wear and proper tension. c. Check all shaft set screws for tightness. **WARNING** **Various products requiring Material Safety Data Sheets (MSDS) may be utilized during the performance of this task. Ensure the current MSDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current MSDS be requested. Refer to MSDS for appropriate personal protective equipment.** 4. Lubricate Incline Conveyor bearings. Lubricate bearing assemblies on Incline Conveyor and beaters using lithium based NLGI grade 2 grease. 5. Fill Incline Conveyor gear motors. Check oil level in Incline Conveyor and beater gear motors. Fill to proper level using AGMA #7 gear oil.					

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		6. Check overthick separator belts and rollers. a. Check the Overthick Conveyor belts for wear and proper tracking. b. Check the Overthick Conveyor and drum roller drive belts for wear and proper tension. c. Check all shaft set screws for tightness. 7. Lubricate overthick separator bearings. Lubricate the bearing assemblies on the Overthick Conveyor and drum rollers using lithium based NLGI grade 2 grease. 8. Fill overthick separator gear motor. Check the oil level in the drum roller gear motor. Fill to the proper level using AGMA #7 gear oil.					
EDGER CHANNEL UNIT 6: PHOTO-CELLS	11.	**Clean Edger/Extractor/Shingler photo cells.** Ensure all photo sensors are clean. Clean as needed with soft lint free cloth or micro fiber cloth.	2	7		40	
EDGER CHANNEL UNIT 6: BELTS AND ROLLERS	12.	**Visually check, and clean the Edger/ Extractor/Shingler.** Visually examine belts for wear (frayed edges, shiny surface) and rollers for dirt build up (above and below deck).	1	9		101	
SINGULATOR UNIT 9: BELTS AND HARDWARE	13.	**Check Singulator belts and hardware for the following:** **NOTE** The compensator arms coming in contact with the pickoff drive pulley may cause aluminum debris to enter the BDS causing false indications. 1. Feeder belts tracking correctly and not skewed. 2. Pickoff drive pulley seated properly and that it shows no sign of wear. 3. Compensator arms in their proper position. 4. Excessive dirt build-up in the P-SEN 17 and P-LED 17.	3	9		40	

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		5. Teflon stripper wear. 6. Stripper shoes for excessive wear and even wear. 7. Proper operation of the slide plate. 8. Unobstructed mail path.					
SINGULATOR UNIT 9: BELTS AND ROLLERS	14.	**Visually examine Singulator belts.** Check for wear (frayed edges, shiny surface) and rollers for dirt build-up (above and below deck). Clean rollers as needed.	1	9		101	
SINGULATOR UNIT 9: CHECK ALIGNMENT TOLERANCES	15.	**Check Singulator alignments.** **NOTE** If the following checks are out of tolerance, a Singulator alignment may be needed. If a Singulator alignment is performed, generate a work order and follow the procedures in the alignment MMO, currently MMO-080-02. http://www.mtsc.usps.gov/bulletins.cfm 1. Check Singulator drive pulley adjustment. Check clearance between mounting plate and pick off drive pulley (4.0 mm ± 0.2). 2. Check horizontal alignment of pick off drive and idler pulleys (top edges flush within ± 1 mm). 3. Check Singulator swing arm return spring for proper tension (650 - 700 grams with pink spring). 4. Check Singulator strippers for: a. 60 grams on non-adjustable spring. b. 125 - 150 grams on adjustable spring. c. Ensure strippers are worn evenly across their faces. If excessive wear appears at the nose, this indicates improper spring tension.	6	9		510	

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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.
SINGULATOR UNIT 9: LED CLEANING	16.	**Clean Singulator LED modules.** **WARNING** **PPE must be properly used as required by the current MSDS when using alcohol.** **Alcohol is a flammable liquid. Discard alcohol soaked materials according to local procedures to prevent spontaneous combustion.** Thoroughly clean transmit and receive ports of the P-LED 17 and P-SEN 17 modules using isopropyl alcohol on cotton tipped applicator.	1	7		2200	
SINGULATOR UNIT 9: AIR FILTER AND WATER SEPARATOR	17.	**Clean Singulator air filters and water separator.** Drain, disassemble, and clean the pneumatic air filters and water separator. Reassemble after cleaning.	8	7		6700	
BUFFER FEEDER UNIT 10: BELTS AND HARDWARE	18.	**Check Buffer Feeder belts and hardware for the following:** 1. Ensure the Buffer assembly rides smoothly without obstruction. 2. Buffer/Feeder movable hardware for wear. 3. Pickoff drive pulley seated properly and shows no sign of wear. 4. Feeder belts for wear and not skewed. 5. Compensator arms in their proper position. 6. Teflon stripper wear. 7. Stripper shoes for even wear and/or excessive wear. 8. Proper functioning of the slide plate.	2	9		40	
BUFFER FEEDER UNIT 10: ALIGNMENT AND TOLERANCE	19.	**Check Buffer Feeder alignments.** **NOTE** If the following checks are out of tolerance a Buffer Feeder alignment may be needed. If a Buffer Feeder alignment is performed, generate a work order and follow the	3	9		510	

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		procedures in alignment MMO, currently MMO-078-02. http://www.mtsc.usps.gov/bulletins.cfm 1. Check Buffer Feeder drive pulley adjustment. Check clearance between mounting plate and pick off drive pulley (4.0 mm ± 0.2). 2. Check horizontal alignment of pick off drive and idler pulleys (top edges flush within ± 1 mm). 3. Check Buffer Feeder swing arm return spring for proper tension (650 - 700 grams with pink spring). 4. Check Buffer Feeder strippers for: a. 60 grams on non-adjustable spring. b. 125 - 150 grams on adjustable spring. c. Ensure strippers are worn evenly across their faces. If excessive wear appears at the nose, this indicates improper spring tension.					
BUFFER FEEDER UNIT 10: SERVO AREA CLEANING	20.	**Clean Buffer Feeder servo motor and area.** 1. Clean the Buffer Feeder servo motor and servo control boxes. 2. Clean out remaining debris from the area under the Buffer Feeder.	2	7		510	
BUFFER FEEDER UNIT 10: LED CLEANING	21.	**Clean Buffer Feeder LED modules.** **WARNING** **PPE must be properly used as required by the current MSDS when using alcohol.** **Alcohol is a flammable liquid. Discard alcohol soaked materials according to local procedures to prevent spontaneous combustion.** Thoroughly clean transmit and receive ports of the P-LED 10 and P-SEN 10 modules using isopropyl alcohol on cotton tipped applicator.	1	7		2200	

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BUFFER FEEDER UNIT 10: CARRIAGE DRIVE CHAIN	22.	**Clean and lubricate buffer carriage drive chain.** **WARNING** **Various products requiring Material Safety Data Sheets (MSDS) may be utilized during the performance of this task. Ensure the current MSDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current MSDS be requested. Refer to MSDS for appropriate personal protective equipment.** **CAUTION** **When lubricating chains, gear motors, and bearing assemblies be sure to use the specified lubricant and do not overfill. Excessive grease in bearings can lead to premature bearing failure due to over lubrication.** Clean and lubricate drive chain for buffer carriage. Use lightweight general purpose chain lubricant.	4	7		6700	
BUFFER FEEDER UNIT 10: DLV PS AND CARD CAGE	23.	**Clean DLV power supply and card cage.** **CAUTION** **Extreme care should be taken that rules regarding electro-static-discharge (ESD) are strictly followed when handling all printed circuit boards, including those in logic racks, system computers, etc. This includes the use of wrist straps and ESD pads.** 1. Remove cover on +5, +12, -12, and 24-volt power supply located behind swing-out chassis. 2. Vacuum the power supply. 3. Ensure all electrical connections are tight, tighten as necessary. 4. Clean fan mounted in front of power supply	8	9		6700	

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		and check fan blade for free movement. 5. Reinstall the covers. 6. Carefully and correctly replace any wires removed during power supply cover removal. 7. Remove and vacuum all circuit cards. 8. Clean DLV card cage. 9. Clean card cage fan. 10. Reinstall all circuit cards.					
LEVELER UNIT 11: BELTS	24.	**Visually check horizontal and vertical belts for wear.** Check for frayed edges or shiny surface both above and below deck.	1	9		101	
FINE CULL UNIT 12: DOUBLES DETECTOR	25.	**Clean doubles detector lens.** Using lens cleaning cloth wipe the glass covering the image illumination and lens components.	1	7		40	
FINE CULL UNIT 12: PHOTOCELLS	26.	**Clean all photo sensors.** Clean photo sensors with a lint free cloth or micro fiber cloth.	1	7		40	
FINE CULL UNIT 12: BELTS GATES AND HARDWARE	27.	**Visual check and clean belts, gates, and hardware.** 1. Check hardware, rollers, and belts for wear, damage, and dirt build-up (above and below deck). 2. Check fine cull gate and inverter gate stop blocks for proper alignment. 3. Check both gates for free movement.	1	9		101	
FINE CULL UNIT 12: OVER-HEIGHT DETECTOR	28.	**Do the following in the Fine Cull section to ensure the over-height detector is set at the proper height:** 1. Using a metric ruler ensure the over-height detector is 160 mm as measured from the machines base plate (deck) to the center of the over-height sensor Q-3 lens/aperture plate (Cats Eye).	5	9		2200	

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		2. If an adjustment is needed initiate a work order and perform the adjustment of the over-height detector as described in the most current documentation available, currently MMO-027-10. http://www.mtsc.usps.gov/pdf/mmo/2010/mmo02710.pdf					
ACP UNIT 16: FILTER CLEANING MASTER AND REC	29.	**Clean master and rec node filters.** 1. Clean filters on master computers. a. Open door to master node. b. Vacuum filter inside door. c. Clean filter on master node fan assembly. 1) Remove filter assembly by turning the assembly to left and removing assembly. 2) Remove the filter from the filter assembly by removing the two screws holding the wire retainer to the plastic filter holder. 3) Wash the filter in warm water. 4) Continue with route and allow the filter to dry. Then reassemble and reinstall the filters as directed within the clean up task. 2. Clean filters on the rec nodes. a. Pull gently on the corner of the square filter holder to remove it. b. Remove the filters and wash in warm water. c. Continue with route and allow filter to dry. Then reassemble and reinstall the filters as directed within the clean up task. 3. Clean ACP cabinet fans. Clean dirt build-up on the fans.	22	7		510	
ACP UNIT 16: M1, M2, AND REC NODES INTERNAL CLEANING	30.	**Clean the ACP master computers, recognition nodes, and SWSTP computer.** 1. ACP master computer cleaning.	60	10		6700	

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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		
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		a. Disconnect and label all cables from the rear panel of the M1 and M2 computers. **CAUTION** **Ensure cables are free from any restrictions before extending computer out of cabinet.** b. Remove four (4) screws securing master node computer to the rack cabinet. c. Slide master node computer until latches engage. d. Release flexible black plastic latches on right and left cabinet rack slides. 1) Lift latch up on left side. 2) Push latch down on right side. **WARNING** **Two people are required to lift and carry the computer or injury to personnel and/or damage to equipment may result.** e. Carefully remove master node computer from right and left cabinet rack slides. Place computer on the work bench or take to the Dust Containment Unit for cleaning. f. To gain access to the inside of the computer, remove 6 screws that secure the top to the computer. **CAUTION** **Extreme care should be taken that rules regarding electro-static-discharge (ESD) are strictly followed when handling all printed circuit boards, including those in logic racks, system computers, etc. This includes the use of wrist straps and ESD pads.**					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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		
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		g. Each processor cooling fan has 4 screws securing the fan to the heat sink blades. Remove these screws to get better access to the heat sink blades. h. Using the Dust Containment Unit (NSN 4460-06-000-8366) or an ESD compatible vacuum (eBuy #58656); clean/vacuum the interior of the computer concentrating on the fan and heat sink areas around the central processing unit. i. Replace the master node round air filter (NSN 4130-06-000-8190). j. Replace the master node door air filter (NSN 4130-06-000-8191). k. After cleaning, replace processor cooling fan and computer cover then secure the M1 or M2 computer back into its rack mount in accordance with MS-166, VOL. B, Sec. 7 Para. 7.15.1. l. Repeat steps d through k with the M2 computer. m. Reconnect all cables to the back panel of the M1 and M2 computers. 2. Recognition nodes cleaning. a. Remove cables from the back of the Rec Node 1 (AC Power and Ethernet). **CAUTION** **Ensure cables are free from any restrictions before extending computer out of cabinet.** b. Remove four (4) screws securing the first Rec Node 1 in the rack. c. Slide Rec Node 1 forward until latches engage. d. Release flexible black plastic latches on right and left cabinet rack slides. 1) Lift latch up on left side. 2) Push latch down on right side.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		WARNING **Two people are required to lift and carry the rec node computer or injury to personnel and/or damage to equipment may result.** e. Carefully remove Rec Node 1 from right and left cabinet rack slides and place on workbench. f. Remove top of Rec Node 1 and using the Dust Containment Unit (NSN 4460-06-000-8366) or an ESD compatible vacuum (eBuy #58656), clean/vacuum inside. g. After cleaning, replace the top of the Rec Node 1, and reinstall it into rack mount. h. Replace the recognition node air filters in front panel (NSN 4130-06-000-8192). i. Replace cables on the back of the Rec Node. j. Remove next Rec Node down in the rack mount and repeat steps 2.a through 2.i until all three Rec Nodes have been cleaned and the SWSTP computer which is housed in what was the fourth Rec Node slot.					
ENRICHER/ISS UNIT 13: PHOTO CELLS	31.	**Clean Enricher photo cells.** Clean all photo sensors with a lint free cloth or micro fiber cloth.	5	7		40	
ENRICHER/ISS UNIT 13: BELTS AND ROLLERS	32.	**Check Enricher belts and rollers above and below deck for:** 1. Missing hardware. 2. Excessive dirt or debris on rollers and belts. 3. Belt damage or wear. 4. Belt tracking and belt debris. 5. Clean areas in and around both scanner units.	7	9		101	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	F	C	S					A	E	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.
ENRICHER/ISS UNIT 13: SCANNER APERTURE AND LENSES	33.	**Clean scanner apertures and lenses.** Clean scanner apertures and lenses with a lint free cloth or micro fiber cloth.	3	7		40	
ENRICHER/ISS UNIT 13: SCANNER FACEPLATE	34.	**Clean both scanners and faceplate apertures.** 1. Remove and check foam rollers and belts from in front of aperture. 2. Clean face plate and aperture of any dust, dirt, or residue accumulation. 3. Reinstall foam rollers, and ensure the rollers touch the faceplate 5 mm upstream of the aperture slot. 4. Clean the scanner lenses with a lens brush, NSN 7920-00-205-0565, and approved lens cleaner.	5	9		101	
ENRICHER/ISS UNIT 13: SCANNER LAMP POWER SUPPLY	35.	**Clean scanner lamp power supplies.** **NOTE** The two scanner lamp power supplies are located one on top of the other between the AAT and STCP card cages. Each power supply is on a slide out rack. 1. Trail scanner lamp power supply (top assembly): a. Slide the scanner lamp power supply out to the extended position. b. Remove the cover plate from the lamp adjustment panel to gain access to the trail scanner lamp power supply. c. Vacuum the power supply. d. Vacuum lamp adjustment panel. e. Ensure all connections are secure, tighten if necessary. f. Reinstall cover plate. g. Slide the scanner lamp power supply into the normal position. 2. Lead scanner lamp power supply (lower assembly):	8	9		6700	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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. Slide the scanner lamp power supply out to the extended position. b. Vacuum the power supply. c. Vacuum lamp adjustment panel. d. Slide the scanner lamp power supply into the normal position.					
ENRICHER/ISS UNIT 13: IJC CHECK PURGE AND CLEAN	36.	**Perform the following on the ink jet canceller:** **WARNING** **Chemical proof goggles (with side shields), aprons, and rubber gloves must be worn when handling cancellation ink.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** **CAUTION** **Do not over tighten the ink bottle. Over tightening the ink bottle may cause the bottle cap to break.** **CAUTION** **Do not wipe or blot the printhead orifices. Wiping or blotting may clog the orifices.** **CAUTION** **Never wipe the engine.** **CAUTION** **Use manufacturer recommended clean wipes and foam swabs when performing the cleaning tasks associated with the IJC.**	16	9		30	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		CAUTION **To avoid damaging the print engine, do not contact the bottle tip on the orifices.** **CAUTION** **If cleaning areas around the printer not associated with the printer, put a blank test card or equivalent over print engine plate to protect it from cleaning agents.** 1. Visually check the ink bottles on the ink system of the IJC deck plate assembly. If an ink bottle is empty, replace by: a. Remove ink bottle ship cap from new ink bottle, and install ship cap onto empty ink bottle. Discard empty ink bottle. b. Insert the new ink bottle into the ink bottle port, aligning the arrow with the mate line and tighten. 2. Clean print engine: a. Move springs away from the printhead and lock in the maintenance position. b. Remove the top cover from the printhead using a 5 mm hex wrench. c. Insert two folded clean wipes on each side of the print engine. Refer to latest documentation (currently MMO-061-06) for illustrations and information. www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm **WARNING** **Discard solvent soaked materials according to local procedures to prevent spontaneous combustion.** d. Spray print engine with 2 squirts of approved cleaning solvent (NSN 7930-07-000-4112). Let solvent soak for 30 minutes while continuing with other tasks.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA					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. After 30 minutes, continue with the following: a. Using cleaning swabs, clean dust and debris from the three holes and gap between print engines rub strip. Refer to latest documentation (currently MMO-061-06) for illustrations and information. www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm b. Remove clean wipes inserted in step 2.c, and clean this area, including the slots on both sides, with wipes and vacuum. Refer to latest documentation (currently MMO-061-06) for illustrations and information. www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm 4. Purge the printheads: a. Move springs away from the printhead and lock in the maintenance position. b. Using only recommended clean wipes, fold three clean wipes in half, and place flat under the front of the engine. Do not touch print engine. c. While holding clean wipes in place, lightly press purge bulb through a full depression on the ink system until ink is expelled from orifice. Continue to hold clean wipes under print engine for approximately 15 seconds. Remove and discard. d. Using new clean wipes, wipe ink from printhead rub strip and front of print engine. e. Use cleaning solution and wipes to remove any excess ink or debris from guide springs. f. Pull pin up on guide springs and rotate toward printhead orifices. Lower pin to lock springs in place. The short spring should just make contact with the rub strip, and the long spring should be flush to 1/8" from the surface of the rub strip.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		g. Reinstall top cover with 5 mm hex wrench.					
ENRICHER/ISS UNIT 13: IJC CONTROLLER FILTER	37.	**Replace filter on the IJC controller.** 1. Disconnect the power cord from the back of the controller. 2. Disconnect the P3 printhead data cable from the back of the controller. 3. Disconnect the J2 IJC2 interface cable. 4. Disconnect the J13 printhead power cable. 5. Remove controller from the Integrated Storage Controller Shelf (ISCS). 6. Place controller on a flat surface bottom facing up. 7. Remove the four screws securing filter cover. 8. Remove and discard the filter and replace with new filter. 9. Secure filter cover with the four screws. 10. Place controller back on the ISCS. 11. Connect J13. 12. Connect J2 IJC2 Interface. 13. Connect P3 printhead data cable. 14. Connect power cord.	8	9		13300	
ENRICHER/ISS UNIT 13: ID TAG VERIFIER FACEPLATE	38.	**Clean both ID Tag Verifiers.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** Clean both ID tag verifiers. Remove ink build-up in front of Reader. Pay particular attention to aperture and raised portion of the faceplate.	1	7		70	
ENRICHER/ISS UNIT 13: INDICIA DETECTOR FACEPLATE	39.	**Clean Indicia Detector faceplate.** Ensure windows on the outside of the faceplates are clear of any foreign substance and dirt.	8	7		3	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
ENRICHER/ISS UNIT 13: INDICIA DETECTOR INTERIOR	40.	**Clean Indicia Detectors Group A and B.** 1. Remove covers on Group A indicia detector both lead and trail. 2. Clean the ultraviolet lamps, luminescence detectors, and FIM sensors. 3. Access and clean the inside and outside surfaces of the luminescence and FIM detector windows. 4. Check the heat absorbing glass in front of the halogen lamps for breakage. 5. Check the faceplate for debris and build-up. Remove any debris and/or build-up. 6. Ensure cover gasket is not worn or damaged. 7. Replace covers. 8. Remove covers from the B indicia detectors, both lead and trail. 9. Repeat steps 2 through 7 for the B group.	20	9		510	
ENRICHER/ISS UNIT 13: AAT PS AND CARD CAGE	41.	**Clean AAT power supply and card cage:** **CAUTION** **Extreme care should be taken that rules regarding electro-static-discharge (ESD) are strictly followed when handling all printed circuit boards, including those in logic racks, system computers, etc. This includes the use of wrist straps and ESD pads.** 1. Open door over AAT card cage. Open card cage. 2. Vacuum filter in door of AAT card cage. 3. Remove power supply cover. 4. Vacuum AAT power supply located at the left side of the card cage. 5. Vacuum fan mounted on top of power supply and check fan blade for free movement. 6. Remove and vacuum all circuit cards.	15	9		6700	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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. Reinstall all circuit cards. 8. Ensure all electrical connections are secure, tighten as necessary. 9. Carefully and correctly, replace any wires removed during power supply cover removal. 10. Reinstall power supply cover. 11. Vacuum the card cage. 12. Vacuum the card cage fan. 13. Remove covers on Gray Scale Camera power supplies. 14. Vacuum the power supplies. There is no fan on 15 volt power supplies. 15. Carefully and correctly, replace any wires removed during power supply cover removal. 16. Reinstall both covers removed in step 13. 17. Close card cage and door over card cage.					
ENRICHER/ISS UNIT 13: AM1 AM2 PS AND CARD CAGE	42.	**Clean AM1 and AM2 power supplies.** **CAUTION** **Exercise care when removing front cover of AM1 power supply. Once last screw is removed, the cover will fall away from box and the power supply is connected to inside of the front cover.** **CAUTION** **Extreme care should be taken that rules regarding electro-static-discharge (ESD) are strictly followed when handling all printed circuit boards, including those in logic racks, system computers, etc. This includes the use of wrist straps and ESD pads.** **NOTE** AM2 power supply is mounted on top of the Power Distribution Assembly box. The AM1 power supply is mounted on the inside top of the power distribution panel.	28	9		6700	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		1. Clean power supplies. a. Open door over the +5, +12, -12, and +24 volt AM1 and AM2 power supplies located between the AM1 and AM2 card cages. b. Remove power supply cover on AM2. c. Vacuum the power supplies. d. Vacuum fan mounted on top of each power supply and check fan blade for free movement. e. Ensure all electrical connections are tight. Tighten as necessary. f. Carefully and correctly, replace any wires removed during power supply cover removal. g. Reinstall power supply covers. h. Close the power supply assembly door. 2. Clean AM1 and AM2 card cages. a. Open doors over AM1 and AM2 card cages. b. Vacuum filter in door of AM1 card cage. c. Vacuum AM1 card cage. d. Vacuum AM1 card cage fan. e. Vacuum filter in door of AM2 card cage. f. Remove and vacuum all circuit cards. g. Vacuum AM2 card cage. h. Vacuum AM2 card cage fan. i. Reinstall all circuit cards. j. Close doors over AM1 and AM2 card cages.					
ENRICHER/ISS UNIT 13: EN AC POWER DIST BOX 42V	43.	**Clean the 42 Volt power supply.** **WARNING** **Disconnect and lock out the 3-phase, 208 VAC power that feeds the Main Power Distribution Unit prior to working on the Main Power Distribution Unit.**	2	9		6700	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				Occurrence ECBM	

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		1. Lock out the 3-phase, 208 VAC power that feeds the Main Power Distribution Unit as prescribed by the current local lockout instructions providing lockout/restore procedures. 2. Clean 42 volt power supply. 3. Clean inside of EN AC Power Distribution Box. 4. Clean inside 42 volt power supply located inside power distribution box on left side of box. The 42 volt power supply does not have a fan. 5. Ensure all electrical connections are tight.					
ID TAG PRINTER: INK SUPPLY	44.	**Check the ink and make-up ink supply.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** Visually check the level of ink and make-up ink in replenishment bottles; replace if less than 1/8 full. Replace by: 1. Remove under filled bottle, insert new bottle, and replace cap. 2. Clean up any spilled or splattered ink. 3. Close all printer doors and covers.	2	7		3	
ID TAG PRINTER: NOZZLE	45.	**Clean and check ID Tag ink nozzle.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** 1. Check ID Tag printer nozzles. 2. Clean fence (lead and trail) in front of nozzle.	6	7		101	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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. Remove nozzle one at a time, lead and trail, and clean front of aperture plate. 4. Check nozzle and, if necessary, clean interior of nozzle with make-up ink.					
ID TAG PRINTER: FILTERS	46.	**Replace vacuum, make-up, and replenishment filters on the PC-70/80 (Steps A1-3) and if using the PC-37 replace the vacuum filter (Step B1-7).** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** **NOTE** Procedure for filter replacements on the PC-70/80 are contained in Steps A1. through 3. and the procedure to replace the Vacuum filter on the PC-37 is contained in Steps B1. though 7. **A Procedure for the PC-70/80:** 1. Replace both ID TAG printer vacuum filters: a. Disconnect two tubes on right side of filter. b. Disconnect filter from elbow fitting. c. Remove filter from mounting bracket. d. Install new filter in mounting bracket. e. Connect filter elbow fitting. f. Connect two tubes to right side of filter. 2. Replace both ID TAG printer make-up ink filters. a. Remove clamps at both ends of filter. b. Remove make-up ink tubes from both ends of filter.	13	7		2200	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		Occurrence ECBM			

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					Run Hours	Pieces Fed (000)	Freq.
		c. Connect make-up ink tubes to each end of replacement filter. d. Replace clamps on each end of filter. 3. Replace both ID tag printer replenishment ink filters. a. Remove clamps at both ends of filter. b. Remove ink tubes from both ends of filter. c. Connect ink tubes to each end of replacement filter. d. Replace clamps on each end of filter. **B Procedure for replacing the vacuum filter on both PC-37 IJPs:** **NOTE** For more detailed information and illustration refer the most current PC-37 Manual found on the MTSC web page. http://mtsc.usps.gov/equipment/FICS/Files/361518-01AB.pdf 1. Turn the fitting located on top of the vacuum filter counterclockwise one turn, and remove the fitting from the filter. 2. Pull the vacuum tube (attached to the top of the vacuum filter) off of the barbed fitting located behind the vacuum filter. 3. Remove the vacuum filter from the top of the ink module by turning the filter counterclockwise until it becomes loose. 4. Discard the old vacuum filter and attached tubing. 5. Make certain that the O-ring is in place on the filter, then thread the new vacuum filter into the top of the ink module until it is finger tight, do not over tighten. 6. 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.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		Occurrence: ECBM			

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		7. Install the fitting removed in step #1 into the top of the new vacuum filter.					
ID TAG PRINTER: FILTER AND MUFFLER	47.	**Replace ID tag printer (PC70/80) final ink filter, replace mufflers. If using a PC-37 IJP replace, Primary Ink Filter and check the Input Air Filter. Clean ID-Tag Printer Cabinets on all models PC-70/80/37.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** **NOTE** For more detailed information and illustrations refer to Videojet Excel PC/PI Alphanumeric manual, Service Manual for the PC-70 or Videojet Excel PC 80 Service Manual. **A Procedures for the PC-70/80:** 1. Replace trail and lead printer final ink filter at top of ink cylinder as follows: a. Open doors on Trail ID tag printer cabinet. b. Place absorbent towels in area beneath ink module. c. Remove ink line and filter from ink cylinder. d. Install new filter. e. Secure snugly, but do not over-tighten. Reattach ink line. f. Close doors on Trail ID Tag printer cabinet. g. Replace Lead printer final ink filter at top of ink cylinder by repeating steps a through f above but for the Lead Printer.	41	9		13300	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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		
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		2. Clean ID tag printer cabinets (lead and trail): a. Open doors on both ID tag printer cabinets. b. Vacuum clean electronics side. c. Clean ink side using lint free rags and appropriate solvent. d. Close doors on both ID Tag Printer cabinets. 3. Replace ink jet printer muffler: Replace IJP muffler as follows (lead and trail): a. Remove muffler from bottom of IJP cabinet. b. Install new muffler. 4. Close printer doors. **B Procedures for the PC-37 Printers:** **NOTE** For more detailed information and illustration refer the most current PC-37 Manual found on the MTSC web page. http://mtsc.usps.gov/equipment/FICS/Files/361518-01AB.pdf 1. Replace Primary Ink Filter (lead and trail). a. Place absorbent towels below the ink module to catch any ink that may spill when removing the primary ink filter. b. Remove the fitting from the bottom of the primary ink filter by turning with a 7/16-inch wrench. c. Unscrew the primary ink filter from the bottom of the ink module. d. Wipe excess ink from the bottom of the ink module mounting hole. e. Discard the old primary ink filter. f. Install the new primary ink filter into the					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		bottom of the ink module until finger tight. Do not over tighten. Hand tighten only. g. Install the fitting into the bottom of the primary ink filter. 2. Complete the following steps to check and/or replace the input air filter: a. Use a wrench to loosen the black nut at the top of the elbow fitting. b. Use a dull, pointed instrument to pull the input air filter out of the bottom of the air manifold. c. Check the input air filter for dirt and damage. Replace the input air filter if necessary. If questionable, replace the filter to ensure proper printer operation. d. Install the new or existing input air filter into the bottom of the air manifold. e. Thread the elbow fitting back into the bottom of the air manifold, and tighten the nut to secure the fitting. Do not over-tighten.					
ID TAG PRINTER: BOTTLE FILTERS	48.	**Replace Bottle Filter Assemblies in both Lead and Trail IJP ink bottles for PC 70/80 and 37PC printers.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** **NOTE** This procedure is applicable to Ink Bottle Filters on the PC 70/80 and PC 37 Ink Jet Printers used in both the Lead and Trail positions. 1. In the Lead IJP, pull the bottle (ink or make-up) which you are replacing the	4	9			60 Wks

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:								Bulletin Filename: MM10058AA				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.
		filter tube assembly away from the fluid pan. 2. Pull the cap off of the bottle, and slide the attached bottle filter tube assembly out of the bottle. Place the bottle aside. 3. Remove the fitting from the top of the cap by turning counterclockwise one full turn. 4. Pull the line with attached rubber tube off of the top of the cap. 5. Discard the old filter tube assembly. 6. Install the fitting onto the top of the cap on the new bottle filter tube assembly. 7. Install the line with attached rubber tube (removed in step 4) onto the top of the cap on the new bottle filter tube assembly. 8. Insert the bottle filter tube assembly into the bottle, and push the cap down to secure the assembly. Place the bottle into the fluid pan. 9. Repeat steps 1 - 8 to replace the filter tube assembly in the other bottle. 10. Proceed to repeat all of these steps for the Trail IJP ink bottles.					
STACKER UNIT 14/15: GATES AND HARDWARE	49.	**Visual check of stacker units.** 1. Check each gate for damage, free movement, or excessive wear. 2. Check for missing hardware. 3. Check stop blocks for proper alignment and wear.	1	9		101	
STACKER UNIT 14/15: PWA 50 BOARDS	50.	**Clean P-WA50 boards.** Vacuum clean the eight P-WA50 printed circuit boards.	2	7		6700	
AFCS: POWER UP	51.	**Power on tasks: restore equipment to**	10	All		3	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		operational condition. **WARNING** **Be cautious when working around or on equipment when power has been applied.** 1. Close all doors and panels in areas where access is not needed to perform the following Power On tasks. 2. Restore equipment to service as prescribed by the current local procedure providing lockout/restore procedures, including air and the power feed to the Main Power Distribution Cabinet, if necessary. 3. Press POWER ON button on operator control panel. **NOTE** The doubles detector unit activates automatically when the AFCS is powered up. An audio announcement states what version of software is installed; then the doubles detector is operational. 4. Restore Power to the IJP UPS. **NOTE** For more detailed information and illustrations refer to Videojet Excel PC/PI Alphanumeric manual, Service Manual for the PC-70 or Videojet Excel PC 80 Service Manual. **NOTE** For more detailed information and illustration refer the most current PC-37 Manual found on the MTSC web page. http://mtsc.usps.gov/equipment/FICS/Files/361518-01AB.pdf 5. Restore ID tag printer power. Perform					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		normal power up of the ID tag printers in accordance with the most recent COTS manual for the PC-70/80 and/or for the PC-37.					
ACP: POWER UP	52.	**Restore ACP and SWSTP power.** 1. Power ON the UPS. **NOTE** Wait 30 seconds before powering on M1 computer. This allows the Ethernet switch to complete boot up process. 2. Perform normal power up of the ACP and SWSTP computers in accordance with the latest documentation (currently SMO-008-09). Also see following for illustrations and information: www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm and Vol. A of the MS-166 Manual. http://www.mtsc.usps.gov/msbooks	5	10		3	
AFCS: EMERGENCY STOP SWITCHES	53.	**Check emergency stop switches.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** **WARNING** **Failure of any emergency stop switch must be corrected before returning the machine to operation.** **NOTE** Check emergency stop switches. Check only one emergency stop switch with machine running. Check all other emergency stop switches with machine stopped. 1. Press the emergency stop switch. 2. Ensure that the red lamp in the body of the emergency stop switch flashes and the red emergency stop lamp on the operator control	5	7			M

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		panel flashes. Replace any burnt out lamps. If replacement of bulb does not correct problem, notify supervisor. 3. Reset the emergency stop switch. 4. Ensure the emergency stop lamps quit flashing on the operator control panel and on the emergency stop switch. 5. Repeat steps 1 through 4 for each emergency stop switch listed in table below. **Quantity** **Unit/Module Emergency Stop Switches** a. Incline Conveyor - 3 b. Overthick Separator - 1 c. Edging Channel - 2 d. Flats Extractor - 2 e. Shingler - 1 f. Singulator - 1 g. Buffer Feeder - 1 h. Stacker Module #1 - 1 i. Stacker Module #2 - 1 j. Operator Control Panel - 1 k. Indicia Group 1 - 1 l. Inverter #1 - 1 m. Drying Line - 1 n. ID Tag Printers - 1 o. Scanner - 1						
AFCS: INTERLOCK SWITCHES	54.	**Check interlock switches.** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught**	7	7			M

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		in moving parts. **WARNING** **Failure of any safety interlock switch must be corrected before returning the machine to operation.** Check all safety interlock switches. With the machine stopped, individually check each safety interlock switch. 1. Open appropriate panel, door, or top cover. 2. Ensure that red emergency stop lamp or red malfunction lamp on the operator control panel flashes. Replace any burnt out lamps. If replacement of bulb does not correct problem, notify supervisor. 3. If applicable, ensure that the red jam lamp on the selected module flashes. 4. Close the panel, door, or top cover. 5. Ensure that the emergency stop lamp (or malfunction lamp) and red jam lamp (if applicable) quit flashing. 6. Repeat steps 1 through 5 for each interlock stop switch listed in table below. **Quantity** **Unit/Module Interlock Switches** a. Incline Power Box — 1 door switch b. Edging Channel — 2 panel switches c. Singulator — 2 cover switches d. Buffer Feeder — 2 door switches e. Buffer Feeder — 2 cover switches f. Buffer Carriage — 1 cover switch g. Leveler — 1 cover switch h. Indicia Group 1 — 1 cover switch i. Inverter/Leveler — 1 cover switch j. Indicia Group 2 — 1 cover switch					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		k. Enricher 8 cover switches l. Enricher 12 door switches m. Stacker #1 1 cover switch n. Stacker #2 1 cover switch					
AFCS: PC 70/80 IJP REFRESH	55.	**Perform the Ink Renewal Refresh procedure on the PC 70/80/37.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** **WARNING** **When disposing of ink or ink saturated waste, refer to procedures outlined in current Material Safety Data Sheets (MSDS).** **NOTE** Procedure for Refresh of the PC-70/80 is contained in step 1 sub-steps a. through u. and the procedure for "Refresh of the PC-37 is contained in step 2 sub-steps a. through n. 1. **Procedure for the PC – 70/80 Ink Jet Printer:** a. Perform this procedure first on the AFCS Trail PC-70/80 IJP. b. If needed place a fresh bottle of Ink in the Fluid Pan. c. Press the "Head" key to turn the Printhead off. d. Press F1 once to enter 01 SERVICE. e. Press F5 once, to enter 02 SERVICE. f. Check readout to ensure High Voltage is "OFF" and Ink is "OFF". g. Remove sleeve and direct the properly	20	10		2200	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		grounded printhead into the service tray. h. Prevent ink from entering return block by using a Teflon strip between the high voltage grounding plate and the ink block to divert ink stream. i. Press F5 once to enter 03 SERVICE. j. Press F1 to enter “FLOWTIME”. If the “Make-up Add Time” is not at zero (.00) then press F3 once to enter 01 Prime and set “Make-up Add Time to .00 then press “ENTER”. k. Press SHIFT and F4 together to start “AUTO REFRESH”. l. Auto Refresh runs for 30 minutes and turns off automatically. **NOTE** During the 30 minute refresh time continue on with other eCBM tasks while periodically checking for faults on the printer during refresh. m. After the 30 minute Auto Refresh, remove Teflon strip and ensure the nozzle head is clean. n. In sequence slowly press OFF, then CANCEL, then F1 to get back into 01 SERVICE. o. Press F5 to go to 02 SERVICE and press F1 to turn the Ink on. **WARNING** **Be sure High Voltage is OFF when adjusting nozzle drive.** p. Press F5 to go to 04 Service. Press F1 to enter “N0ZZLE DRIVE”.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		q. Place the magnifier holder on the Printhead, or brace the magnifier by hand. Position the magnifier over the Change Tunnel. r. Using the cursor keys to raise or lower Nozzle Drive, align the break-off in the center of the Charge Tunnel. Press ENTER. s. Return the bar code printer to normal operation. **NOTE** If complications arise in adjusting the ink stream and/or break-off, correct by generating a work order and performing an Ink Calibration. t. Perform steps b. through s. for the Lead IJP. 2. **Procedure for the PC – 37 Ink Jet Printer:** a. Perform this procedure first on the AFCS Trail PC-37 IJP. b. If needed place a fresh bottle of Ink in the Fluid Pan. c. Remove sleeve and direct the properly grounded printhead into the service tray. d. Prevent ink from entering return block by using a Teflon strip between the high voltage grounding plate and the ink block to divert ink stream. e. Press the Service key to enter the Service mode. f. Press the F2 key to select INK SYSTEM. g. Press the F2 key to select INK UPKEEP. h. Press the Up Arrow key once to move the cursor to the YES/NO field next to AUTO REFRESH. i. Press the Yes/No key to select YES. The					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		message “FOR REPLACING FLUID INSIDE THE MODULE” appears on the screen. j. Ink will start to spray form the ink-head. With the cursor in the YES/NO field next to START REFRESH, press the Yes/No key to begin the Refresh procedure. The message “AUTO REFRESH RUNNING REFER TO MANUAL” appears on the display screen. k. The ink refresh procedure requires an ink pressure of greater than 30 PSI (2.07 bar). Check the ink pressure regulator to ensure that it is set to at least 30 PSI (2.07 bar). If the ink pressure is set below 30 PSI (2.07 bar), ink may not spray from nozzle. Typical operating pressure is about 40 PSI (2.76 bar). l. When Auto Refresh is complete return to the SERVICE MODE. u. After the refresh remove Teflon strip and ensure the nozzle head is clean. m. Observe Ink Stream with magnifying glass and make necessary minor adjustments. n. Perform steps b. through m. for the Lead IJP.					
AFCS: LIGHT BARRIER TEST	56.	**Perform light barrier test. Check Facer Canceller light barriers:** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** 1. Set PE CELL test switch (upper switch) on P-FAM3 printed circuit board to up position. 2. Press START FACER/CAN pushbutton on	2	9		2200	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:								Bulletin Filename: MM10058AA				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.
		operator control panel. 3. If machine starts, then light barriers are OK. a. Stop the test by pressing the STOP pushbutton on the operator control panel. b. Return the PE CELL test switch to its normal (down) position. 4. If the machine does not start, and the red jam lamp on the Operator Control Panel illuminates, then one or more light barriers are operating in a degraded mode. 5. Observe the alphanumeric display on the Operator Control Panel and record the location of the degraded light barrier(s). 6. Report these locations to supervisor upon completion of the route sheet. 7. Return the PE CELL test switch to its normal (down) position. 8. Check to ensure that the machine will restart. a. Press START FACER/CAN pushbutton on operator control panel. b. Observe machine starts and runs normally. 9. Press the STOP pushbutton on the Operator Control Panel.					
AFCS: MAINT REVIEW CHECK	57.	**Perform the Advanced Facer Canceller Systems (AFCS) Maintenance Review Checklist.** Perform the AFCS Maintenance Review Checklist procedures as outlined in most recent maintenance review checklist, currently MMO-069-06, http://mtsc.usps.gov/bulletins.cfm . As a result of performing this procedure, it may be necessary to do more in-depth alignments and procedures. If that becomes the case, generate a work order to accomplish those tasks. Use the most current documents covering alignments and adjustments. Presently the following documents apply:	360	10		6700	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		1. Alignments and Adjustments Volume B section 6 of the MS-166. http://mtsc.usps.gov/msbooks/dynamicindex.cfm?hbk_msno=166 2. MMO-078-02 – Buffer/Feeder 3. MMO-080-02 - Singulator 4. MMO-001-09 – Culler http://mtsc.usps.gov/bulletins.cfm					
VIBRATOR HOPPER UNIT 1: OIL	58.	**Check vibrator hopper oil rate.** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** **NOTE** Check vibrator hopper. BDS must not be in maintenance mode. 1. Start machine. 2. While machine is running, check for excessive oil at vibrator hopper. 3. Adjust air pressure at regulator valve to 30 - 40 PSI and rate of the oil drop formation to 3 - 4 drops per minute as necessary. 4. Stop the Facer Canceler after the vibrator hopper checks have been completed.	3	7		510	
SHINGLER UNIT 8: PROX SWITCHES	59.	**Check Shingler proximity switches:** **WARNING** **Be cautious when working around or on equipment when power has been applied.** Actuate three proximity switches and observe the LED function of each switch.	1	9		101	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
SINGULATOR UNIT 9: LEDS	60.	**Check Singulator LED modules:** **WARNING** **Be cautious when working around or on equipment when power has been applied.** **NOTE** Compensator arms coming in contact with pickoff drive pulley may cause aluminum debris to enter BDS causing false indications. 1. Check alignment of the P-SEN 17 and P-LED 17 modules. 2. Ensure all LEDs on P-SEN 17 activate correctly with proper alignment and no blockage.	2	9		3	
SINGULATOR UNIT 9: SERVO SPEED CREEP CYCLE	61.	**Check Singulator servomotor speed, creep, and pick-off cycle.** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** 1. Check Singulator servomotor speed. Press START CULLER pushbutton at Operator Control Panel: **NOTE** Speed of Singulator pick-off belts should be 10 percent faster than the take-away belts they feed. a. Measure the speed of the Singulator take-away belts using a digital tachometer set in the inches per second	21	9		2200	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		(IPS) mode. b. Record position of rotary test switch S4 on P-FSC89 printed circuit board. Rotate test switch S4 to position E. Singulator pick-off belts should rotate. c. Raise P-SEN 17 assembly. d. Measure the speed of the Singulator pick-off belts by placing the digital tachometer between the idler and drive pulleys. DO NOT measure the speed directly on the pulleys. The pick-off belts should be 10 percent faster than the Singulator take-away belts. (Example: 146 in/sec [measured take-away belt speed] X 1.10 [10 percent increase] = 160.6 in/sec [desired pick-off belt speed].) e. If the speed is not correct, adjust the COMMAND GAIN potentiometer on the servomotor controller until the correct speed is obtained. After the adjustment (if any was needed), lower the P-SEN 17 card. 2. Check Singulator servomotor creep. **NOTE** The CURRENT LIMIT potentiometer on the servomotor controller should be fully clockwise for the following check. a. Rotate S4 to position F. The Singulator pick-off belts should not rotate or creep. b. If Singulator pick-off belts rotate or creep, adjust VELOCITY OFFSET potentiometer on servomotor controller until belts come to a complete stop. c. Stop Culler. 3. Check Singulator servomotor pick-off cycle. **NOTE** The following check requires a Pacific Scientific Compensation Calibration Fixture						

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		(CCF). a. Rotate test switch S4 on the P-FSC89 printed circuit board to position A. b. Turn the SINGULATOR SERVO circuit breaker on the power distribution panel OFF. c. Insert the CCF between connectors J3/P3 and J4/P4 on the servomotor controller. d. Ensure that the slide switch on the CCF is in the DISABLED (center) position. e. Turn the SINGULATOR SERVO circuit breaker ON. f. Press the START CULLER pushbutton on the operator control panel. The red "TURN CW" LED on the CCF should illuminate. g. Set the slide switch on the CCF to the OTHER (up) position. The green "OK" LED should illuminate. If not, adjust VELOCITY LOOP GAIN potentiometer on the servomotor controller in the direction indicated by the red LEDs until the green "OK" LED is illuminated. h. Stop Culler. i. Turn the SINGULATOR SERVO circuit breaker OFF. j. Remove the CCF and reconnect connectors J3/P3 and J4/P4. k. Turn the SINGULATOR SERVO circuit breaker ON. l. Return rotary test switch S4 to its original position recorded above.					
BUFFER FEEDER UNIT 10: LEDS	62.	**Check Buffer Feeder LED modules.** **WARNING** **Be cautious when working around or on equipment when power has been**	1	9		3	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		applied. 1. Check alignment of the P-SEN 10 and P-LED 10 modules. 2. Ensure all LEDs on the P-SEN 10 activate correctly with proper alignment and no blockage. 3. Actuate the two proximity switches and observe the LED function for each switch. 4. Check the P-OTC-89 and ensure the top 8 LEDs are off.					
BUFFER FEEDER UNIT 10: SERVO SPEED CREEP CYCLE	63.	**Check Buffer Feeder servomotor speed, creep, and pick-off cycle.** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** 1. Check Buffer Feeder servomotor speed. Press Start Facer Canceller at Operator Control Panel. **NOTE** The speed of the Buffer Feeder pick-off belts should be 10 percent faster than the take-away belts they feed. a. Measure the speed of the feeder take-away belts using a digital tachometer set in the inches per second (IPS) mode. b. Record the position of rotary test switch S2 on the P-FSC89 printed circuit board. Rotate test switch S2 to position E. Buffer Feeder pick-off belts should rotate. c. Measure the speed of the Buffer Feeder pick-off belts by placing the digital tachometer between the idler and drive	23	9		2200	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		pulleys. Do not measure the speed directly on the pulleys. The pick-off belts should be 10 percent faster than the feeder take-away belts. (Example: 146 in/sec [measured take-away belt speed] X 1.10 [10 percent increase] = 160.6 in/sec [desired pick-off belt speed].) d. If the speed is not correct, adjust the COMMAND GAIN potentiometer on the servomotor controller until the correct speed is obtained. After the adjustment (if any was needed), lower the P-SEN 10 card. 2. Check Buffer Feeder servomotor creep. **NOTE** The CURRENT LIMIT potentiometer on the servomotor controller should be fully clockwise for the following check. a. Rotate S2 to position F. The Buffer Feeder pick-off belts should not rotate or creep. b. If the Buffer Feeder pick-off belts rotate or creep, adjust the VELOCITY OFFSET potentiometer on the servomotor controller until the belts come to a complete stop. c. Stop Facer Canceler. 3. Check Buffer Feeder servomotor pick-off cycle. **NOTE** The following check requires a Pacific Scientific Compensation Calibration Fixture (CCF). a. Rotate test switch S2 on the P-FSC89 printed circuit board to position A. b. Turn the FEEDER SERVO circuit breaker on the Power Distribution Panel OFF. c. Insert the CCF between connectors J3/P3					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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 J4/P4 on the servomotor controller. d. Ensure that the slide switch on the CCF is in the DISABLED (center) position. e. Turn FEEDER SERVO circuit breaker ON. f. Press the START FACER/CAN push-button on the Operator Control Panel. The red TURN CW LED on the CCF should illuminate. g. Set slide switch on CCF to OTHER (up) position. Green OK LED should illuminate. If not, adjust the VELOCITY LOOP GAIN potentiometer on the servomotor controller in the direction indicated by the red LEDs until the green OK LED is illuminated. h. Stop the Facer Canceler. i. Turn FEEDER SERVO circuit breaker OFF. j. Remove the CCF and reconnect connectors J3/P3 and J4/P4. k. Turn FEEDER SERVO circuit breaker ON. l. Return rotary test switch S2 to its original position.					
BUFFER FEEDER UNIT 10: DLV PS ADJUSTMENTS	64.	**Make necessary adjustments to DLV power supply.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** This power supply is located behind the swing out DLV chassis. Use a DMM in following steps: 1. Measure the +5V by connecting the negative probe to GND E point (black wire) and the positive probe to any Red E point. Check and adjust to +5.0 volts ± 0.1 as necessary. 2. Measure the +12V by connecting the negative probe to GND E point (black wire) and the positive probe to point J14-9 (violet wire). Check and adjust to +12.0 volts ± 0.1	5	9		13300	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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 necessary. 3. Measure the -12V by connecting the negative probe to GND E point (black wire) and the positive probe to point J14-10 (green wire). Check and adjust to -12.0 volts ± 0.1 as necessary. 4. Measure the +24V by connecting negative probe to GND E point (black wire) and the positive probe to point J14-3 (orange wire). Check and adjust to +24.0 volts ± 0.1 as necessary.					
ENRICHER/ISS UNIT 13: SCANNER LAMP PS VOLTAGES	65.	**Check scanner lamp voltages.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** **WARNING** **Scanner lamps are extremely hot and bright. Protect eyes and do not touch lamps or lamp assemblies.** **NOTE** Each scanner (lead and trail) has its own individual scanner lamp power supply. Make necessary adjustments to scanner lamp power supplies. Use a DMM in following steps: 1. Trail scanner lamp power supply (top assembly). a. Slide the scanner lamp power supply out to the extended position. b. Remove the cover plate from the Lamp Adjustment Panel to gain access to the Trail scanner lamp power supply. c. Turn scanner lamps on with the LAMP ON switch on AAT card cage. d. Measure the +15.25 VDC by connecting the negative probe to the negative	5	9		13300	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		output of the power supply and the positive probe to the positive. Check and adjust as necessary to +15.25 ± 0.1 VDC. e. Turn lamps off by using the switch on the AAT card cage. f. Reinstall the top cover removed earlier. g. Slide the scanner lamp power supply in to the normal position. 2. Lead scanner lamp power supply (lower assembly). a. Slide the scanner lamp power supply out to the extended position. b. Turn scanner lamps on with the LAMP ON switch on AAT card cage. c. Measure +15.25 VDC by connecting the negative probe to the negative output of the power supply and the positive probe to the positive. Check and adjust as necessary to +15.25 ± 0.1 VDC. d. Turn lamps off by using the switch on the AAT card cage. e. Slide the scanner lamp power supply in to the normal position.					
ENRICHER/ISS UNIT 13: VERIFIER AMPLITUDE	66.	**Check both LAT-722/LAT 88 signal amplitude:** **WARNING** **Be cautious when working around or on equipment when power has been applied.** Check ID Tag Verifier LAT 772, PVV8 printed circuit card for maximum amplitude with a freshly sprayed bar (dry) in front of aperture (should be -100 mv minimum). Without a bar at the aperture, the signal amplitude should be 10% to 20% of amplitude with bar present.	10	10		2200	
ENRICHER/ISS UNIT 13: INDICIA DETECTORS ROLLERS	67.	**Check belt tracking and indicia detector foam roller position.** **WARNING**	3	9		101	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts. **WARNING** **Do not look directly into the ultra violet emitting light source. Wear appropriate safety glasses to filter ultra violet rays.** 1. Press START button. 2. Check from down-stream side of each indicia detector faceplate to see that UV light does not leak past the UV window separator web and foam roller into the stamp window (will cause multi indicia errors). 3. Press the STOP button.					
ENRICHER/ISS UNIT 13: INDICIA CALIBRATION	68.	**Check calibration of indicia detectors:** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** **WARNING** **Do not look directly into the ultra violet emitting light source. Wear appropriate safety glasses to filter ultra violet rays.** **NOTE** Ultraviolet lamps must be turned on for at least 15 minutes before checking the calibration. Foam rollers must be in the proper position (adjust if necessary). Indicia head windows must be clean.	15	10		510	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		NOTE All four (4) detector circuits (Red, Green, Meter, and FIM) must be checked and adjusted as necessary. 1. Ensure that the machine is not running. 2. Set the TEST SELECT switch on the Operator Control Panel to the calibration mode (code 30). 3. Ensure that the threshold switches on the P-BAT4 card are set as follows: a. Phosphor Red – 15 b. Phosphor Green – 15 c. Red Fluorescent (Meter Mark) - 6 4. Set the PMU values on the P-BAT4 card to the values noted on the calibration cards for each indicia type. 5. Press the START FACER/CAN Pushbutton on the Operator Control Panel. **NOTE** When feeding the calibration cards, make sure the slide at the buffer feeder is open to prevent excessive wear on the cards. 6. Feed a calibration card (Phosphor Red, Phosphor Green, Meter Mark, or FIM), one card per calibration check, into the machine with the three coding holes up. 7. The display on the appropriate P-BAT3 card will show the following: a. Red STAMP – RcaX b. Green STAMP – GcaX c. METER – McaX d. FIM – FcaX **NOTE** LEDs by each potentiometer will be lighted to indicate the one to be adjusted.					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		8. Where X = the calibration number between 1 and 8. A display of an "UP ARROW" indicates the signal must be amplified more. (Turn corresponding potentiometer clockwise.) A display of a "DOWN ARROW" indicates the signal should be amplified less. (Turn the corresponding potentiometer counter-clockwise.) The desired setting is 5. 9. Repeat steps 6, 7, and 8 as required to obtain the desired setting on all cards for each indicia type. 10. Stop the Facer Canceler after the calibration checks have been completed. 11. Set the TEST SELECT switch on Operator Control Panel to the Normal Mode (code 00).					
ENRICHER/ISS UNIT 13: AAT POWER DIST VOLTAGES	69.	**Check and adjust AAT power supply voltages.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** Make necessary adjustments to AAT power supply. Use a DMM in following steps : 1. Measure +5V by connecting negative probe to GND E point and positive probe to +5V bus bar on back plane (red wire). Check and adjust to +5.0 volts ± 0.1 as necessary. 2. Measure the +12V by connecting the negative probe to GND E point and the positive probe to pin 2 (violet wire). Check and adjust to +12.0 volts ± 0.1 as necessary. 3. Measure the -12V by connecting the negative probe to GND E point and the positive probe to pin 3 (green wire). Check and adjust to -12.0 volts ± 0.1 as necessary.	6	9		13300	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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. Measure the +24V by connecting the negative probe to GND E point and the positive probe to pin 4 (orange wire). Check and adjust to +24.0 volts ± 0.1 as necessary.					
ENRICHER/ISS UNIT 13: AM1 AM2 ATT PS ADJUST	70.	**Check and adjust AM1 & AM2 voltages.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** 1. Make necessary adjustments to AM1 power supply. Use a DMM in following steps: **NOTE** AM2 power supply is mounted on the top of the Power Distribution Assembly box. The AM1 power supply is mounted on the inside top of the Power Distribution Panel. a. Open Power Distribution Panel, gain access to AM1 power supply. b. Support panel as necessary to reduce strain on wiring. c. Measure the +5V by connecting the negative probe to GND E point (black wire) and the positive probe to any Red E point). Check and adjust to +5.0 volts ± 0.1 as necessary. d. Measure the +12V by connecting the negative probe to GND E point (black wire) and the positive probe to point J19-7 (violet wire). Check and adjust to +12.0 volts ± 0.1 as necessary. e. Measure the -12V by connecting the negative probe to GND E point (black wire) and the positive probe to point J19-8 (green wire). Check and adjust to -12.0 volts ± 0.1 as necessary. f. Power down the AM1 power supply (PS) by placing CB-3 (AM1 Circuit Breaker) on the EN AC Power Panel in the OFF	18	9		13300	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE	EQUIPMENT ACRONYM									CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		position. g. Remove the jumper between AM1 PS terminals OP-2 and OP-3 and retighten screws holding the orange wires to terminals. h. Apply power to the AM1 power supply (PS) by placing CB-3 (AM1 circuit breaker) on the EN AC Power Panel in the ON position. **NOTE** DC voltages measured at test points J19-5 and J19-6 MUST be within ± 0.05 VDC of each other for power supplies to operate correctly when this procedure is completed. i. Measure the first +24V by connecting the negative probe to GND E point and the positive probe to point J19-6 (orange wire). Check and adjust to +24.0 volts ± 0.1 as necessary using OP2 +24V adj. j. Measure the second +24V by connecting the negative probe to GND E point and the positive probe to point J19-5 (orange wire). Check and adjust to +24.0 volts ± 0.1 as necessary using OP3 +24V adj. k. Power down the AM1 power supply (PS) by placing CB-3 (AM1 circuit breaker) on the EN AC Power Panel in the OFF position. l. Replace the jumper between AM1 PS terminals OP-2 and OP-3 and securely tighten screws holding jumper and orange wires to terminals. m. Return the Power Distribution Panel to the normal closed position and secure. Ensure panel does not pinch or nick any power assembly wiring when closed. n. Apply power to the AM1 power supply (PS) by placing CB-3 (AM1 circuit breaker) on the EN AC Power Panel in					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		the ON position. 2. Make necessary adjustments to AM2 power supply. Use a DMM in following steps: a. Slide out the Power Distribution Assembly to gain access to the AM2 power supply. b. Remove cover, fan guard as necessary to gain access to the AM2 power supply terminals and adjustments. c. Measure the +5V by connecting the negative probe to GND E point and the positive probe to the +5V bus bar on back plane (red wire). Check and adjust to +5.0 volts ± 0.1 as necessary. d. Measure the first +12V by connecting the negative probe to GND E point and the positive probe to pin 2 (violet wire). Check and adjust to +12.0 volts ± 0.1 as necessary using first +12V adj. e. Measure the second +12V by connecting the negative probe to GND E point and the positive probe to pin 5 (violet wire). Check and adjust to +12.0 volts ± 0.1 as necessary using second +12v adj. f. Measure the +24V by connecting the negative probe to GND E point and the positive probe to pin 4 (orange wire). Check and adjust to +24.0 volts ± 0.1 as necessary. g. Reinstall cover, fan guard as necessary. h. Return the Power Distribution Assembly to the normal closed position and secure. Ensure panel does not pinch or nick any power assembly wiring when closed.					
ENRICHER/ISS UNIT 13: GSC POWER SUPPLIES VOLTAGES	71.	**Check and adjust GSC power supply.** **WARNING** **Be cautious when working around or on equipment when power has been applied.**	15	9		13300	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		Make necessary adjustments to Gray Scale Camera power supply: **NOTE** Each Gray Scale Scanner has its own individual power supply. 1. Press POWER OFF pushbutton on Operator Control Panel. 2. At EN AC power distribution box place AAT circuit breaker to OFF position. 3. Open covers as necessary. **NOTE** Attach identifying tags to each Gray Scale power supply (GSPS) or Power Supply Monitor Assembly (PSMA) cable as it is removed in the following steps to ensure correct reconnection later in this procedure. 4. Disconnect AC cable (P1) from J1 and PSMA Adapter cable (P2) from J2 of each GSPS. 5. Disconnect PSMA Adapter cable (P1) from J1 of each GSPS. 6. Disconnect PSMA sense cable (P3 for Lead GSC PSMA and P2 for Trail GSC PSMA) mounted on cover housing of each GSPS. 7. Remove mounting screws holding each GSPS Assembly and PSMA to mounting bracket while supporting GSPS. 8. Remove two screws that secure each GSPS housing cover, removing PSMA and housing cover. 9. Place each GSPS on scanner base plate and connect PSMA Adapter cables (P1) to J1 and PSMA Sense cables (P3 for Lead GSC PSMA and P2 for Trail GSC PSMA) to J2 on each PSMA. 10. Connect AC cable (P1) to J1 and PSMA Adapter cable (P2) to J2 of each GSPS. 11. At EN AC power distribution box, place the					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		AAT circuit breaker to ON position. 12. Press POWER ON pushbutton on Operator Control Panel. **WARNING** **Dangerous voltages are present. Use care when performing procedures or damage to equipment and/or injury to personnel may result.** **NOTE** When adjusting voltage on Gray Scale power supply, turn potentiometer very slowly. Quick voltage increases or decreases will cause power supply to shut down. If this occurs, remove power from Gray Scale power supply and wait several minutes for circuit to reset before reapplying power. 13. Check and adjust, as necessary, the Lead GSPS as follows: a. Measure the -15V by connecting the negative probe to COM and the positive probe to -OUT (-15V). Check using DMM and adjust as necessary (using R26) to -15.0 volts ± 0.5. b. Measure the +15V by leaving the negative probe at COM and moving the positive probe to +OUT (+15V). Check and adjust as necessary (using R21) to +15.0 volts ± 0.5. 14. Check and adjust, as necessary, the Trail GSPS as follows: a. Measure the -15V by connecting the negative probe to COM and the positive probe to -OUT (-15). Check using DMM and adjust as necessary (using R26) to -15.0 volts ± 0.5. b. Next, measure the +15V by leaving the negative probe at COM and moving the positive probe to +OUT (+15). Check and adjust as necessary (using R21) to					

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	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		+15.0 volts ± 0.5. 15. At EN AC power distribution box, place AAT circuit breaker to OFF position. 16. Press POWER OFF pushbutton on Operator Control Panel. 17. Disconnect AC cables (P1) from J1 and PSMA Adapter cables (P2) from J2 on each GSPS. 18. Disconnect PSMA Adapter cables (P1) from J1 and PSMA sense cables (P3 for Lead GSC PSMA and P2 for Trail GSC PSMA) from J2 of each PSMA. 19. Reinstall screws that secure GSPS Housing Cover and PSMA. 20. Ensure power and monitoring cables for Lead GSPS are reconnected to Lead GSPS. 21. Ensure power and monitoring cables for Trail GSPS are reconnected to Trail GSPS. 22. Reinstall GSPSs and PSMAs to each respective mounting bracket. 23. Connect PSMA adapter cables P1 to J1 and PSMA sense cables (P3 for Lead GSC PSMA and P2 for Trail GSC PSMA) to J2 on the PSMA. 24. Connect AC cables (P1) to J1 and PSMA cables (P2) to J2 on each GSPS. 25. At EN AC power distribution box, place AAT circuit breaker to ON position. 26. Press POWER ON pushbutton on Operator Control Panel.					
STACKER UNIT 14/15: SWITCHES AND BLADES	72.	**Check stacker switches and blades:** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.**	5	7		510	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		1. Press the START FACER/CAN pushbutton on the Operator Control Panel. 2. Ensure the feeder belts are running. 3. Check all seven stacker switches using the red indicator lamps on the top of the stacker cover as follows: a. Pull the blade back to the 75% position. Ensure that the red lamp flashes. If lamp does not flash, replace bulb. If problem is not corrected, notify supervisor. b. Pull the blade back to the 100% position. Ensure that the red lamp continues to flash and the feeder servo stops. If lamp does not flash, replace bulb. If problem is not corrected, notify supervisor. 4. Press the STOP pushbutton on the Operator Control Panel. 5. Visually examine all seven stackers for bent or broken blades, defective/noisy bearings, or pulleys. Remove any string or other debris.					
AFCS OPERATIONS: DOUBLE DETECTOR CHECK	73.	**Perform operational check of doubles detector.** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** 1. Set thumbwheel switch on operator control panel to 18. 2. Press Unit 9 Operational Control Panel START FACER/CAN button. 3. No error messages should appear on panel. Refer to the latest documentation (currently MMO-029-05) for illustrations and information display and symbol meanings.	1	9		3	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm					
AFCS OPERATIONS: DOUBLES TEST DECK	74.	**Run double detector test deck.** **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools, and test equipment from being caught in moving parts.** Run the doubles detector test deck, NSN 3915-07-000-4327. Refer to the latest documentation (currently MMO-029-05) for illustrations and information. www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm	4	10		510	
	75.						
AFCS OPERATIONS: SWSTP	76.	**Clear Image Disk and Run Statistics.** **WARNING** **Be cautious when working around or on equipment when power has been applied.** The following will be done using the flat panel GUI (Graphic User Interface): 1. At the top of the page click on STP Operation tab. 2. Click on ISS Disk Operation. 3. If not logged in as Maintenance you will be prompted to do so. 4. Click on "Clear Image Disk". 5. Answer “YES” in the pop-up window. 6. Click the “OK” button in the next pop-up window. 7. Go to top of page and click on the	1	9		3	

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	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		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.
		Maintenance tab. 8. Click on "Clear Run Statistics". 9. Answer “YES” in the pop-up window. 10. Click the “OK” button in the next pop-up window. 11. Go to the top of the page and click the tab “Run Display”.					
AFCS OPERATIONS: MAINT CLOCK	77.	**Perform following to stop maintenance clock:** **WARNING** **Be cautious when working around or on equipment when power has been applied.** 1. Select 00 on the operators control panel and start machine. 2. Push the STOP button for normal shutdown.	1	9		3	
PREDICTIVE: STACKERS ENRICHER FINE CULL (INFRARED)	78.	**Perform Predictive Maintenance.** **NOTE** While performing all of the PdM tasks, make a note of any area where excessive vibration, noise, and/or heat are detected. Initiate a work order to cover any annotated area that requires additional investigation. 1. Prepare machine. a. Perform power down procedures. **CAUTION** **Ensure all ink jet printers are shut down in accordance with normal shut down procedures. Failure to properly shut down may cause damage to printers.** **NOTE** For more detailed information and illustrations refer to Videojet Excel PC/PI	110	9		8000	

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		Alphanumeric manual, Service Manual for the PC-70 or Videojet Excel PC 80 Service Manual. **NOTE** For more detailed information and illustration refer the most current PC-37 Manual found on the MTSC web page. http://mtsc.usps.gov/equipment/FICS/Files/361518-01AB.pdf 1) Perform normal shut down of inkjet printers in accordance with the most recent manual for the PC-70/80 and/or PC-37. 2) Do an orderly shut down of the ACP computer system. Shut down system as outlined in Item #3 of this document "Power down SWSTP/ACP computers" and/or follow the latest Software Management Order (currently SMO-008-09) found on MTSC web site: www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm. Also Vol. A of the MS-166 manual. http://mtsc.usps.gov/msbooks 3) Power down and lock out power. Power down the machine and lock out its electrical power as prescribed by the current local lockout instructions providing lockout/restore procedures. b. Open covers and remove panels. Open all machine doors including Main AC Power Panel. Open or remove all machine panels. Override interlock switches. **WARNING** **Be cautious when working around or on equipment when power has been applied. This task requires that the machine be running. Take precautions to prevent hair, clothing, jewelry, tools,**					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	3	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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 test equipment from being caught in moving parts. c. Restore the AFCS/OCR equipment to service as prescribed by the current local procedure providing lockout/restore procedures, including air and the power feed to the Main Power Distribution Cabinet, if necessary. d. Press POWER ON button on operator control panel. **NOTE** For more detailed information and illustrations refer to Videojet Excel PC/PI Alphanumeric manual, Service Manual for the PC-70 or Videojet Excel PC 80 Service Manual. **NOTE** For more detailed information and illustration refer the most current PC-37 Manual found on the MTSC web page. http://mtsc.usps.gov/equipment/FICS/Files/361518-01AB.pdf e. Restore ID tag printer power. Perform normal power up of the ID tag printers in accordance with the most recent manual for the PC-70/80 and/or the PC-37. f. Perform normal power up of the ACP and SWSTP computers in accordance with the latest documentation (currently SMO-008-09). Also refer to the following for illustrations and information: www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm and Vol. A of the MS-166 Manual. http://www.mtsc.usps.gov/msbooks **NOTE** Machine must have been running for a minimum of 15 minutes prior to doing the ultrasonic and infrared scans. 2. Ultrasonic scan tasks.					

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Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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. Ultrasonic scan conveyor section. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the conveyor section for excessive vibration and noise. This includes the Incline Conveyor, Incline Overthick Separator, and Flat Overthick Separator. Check for compressed air leaks at valves, filters, and manifold. b. Ultrasonic scan edger channel. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Edging Channel for excessive vibration and noise. c. Ultrasonic scan flats extractor. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Flats Extractor for excessive vibration and noise. d. Ultrasonic scan Shingler. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Shingler for excessive vibration and noise. e. Ultrasonic scan singulator. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Singulator for excessive vibration and noise. Check for compressed air leaks at valves, filters, and manifold. f. Ultrasonic scan transport. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Transport for excessive vibration and noise. g. Ultrasonic scan buffer feeder. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Buffer Feeder for excessive vibration and noise. h. Ultrasonic scan stackers. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Stacker modules (#1 and #2) for excessive vibration and noise. i. Ultrasonic scan Scanners/ISS. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the					

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Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		Scanner + ISS for excessive vibration and noise. Check for compressed air leaks at valves, filters, and manifold. j. Ultrasonic scan Printer/ISS. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Printer/ISS for excessive vibration and noise. k. Ultrasonic scan Canceler. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Canceller for excessive vibration and noise. l. Ultrasonic scan Indicia #2. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Indicia #2 for excessive vibration and noise. m. Ultrasonic scan Leveler. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Leveler for excessive vibration and noise. n. Ultrasonic scan Twister. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Twister for excessive vibration and noise. o. Ultrasonic scan Indicia #1. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Indicia #1 for excessive vibration and noise. p. Ultrasonic scan Fine Cull. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Fine Cull for excessive vibration and noise. q. Ultrasonic scan Leveler. Use ultrasonic detector to monitor all bearing assemblies, top and bottom, of the Leveler for excessive vibration and noise. 3. Tasks to perform the infrared scans. **NOTE** The machine must have been running for minimum of 15 minutes, (normally while doing the ultrasonic scans) and remain running when using non-contact infrared to obtain correct scans. Investigate cause of					

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Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		abnormal temperature and notify supervisor of necessary corrective action. a. Infrared scan Main Power Box. Use non-contact infrared to monitor the Main Power Distribution Panel for abnormal temperature. Scan all terminal connections and connector plugs. b. Infrared scan Incline Power Box. Use non-contact infrared to monitor the Incline Power Box assembly for abnormal temperature. Scan all terminal connections and connector plugs. c. Infrared scan Conveyor. Use non-contact infrared to monitor the Conveyor section for abnormal temperature. This includes the Incline Conveyor, Flat Overthick Separator, and Incline Overthick Separator. Scan all motors, terminal connections, and connector plugs. d. Infrared scan Edging Channel. Use non-contact infrared to monitor the Edging Channel for abnormal temperature. Scan motor, terminal connections, and connector plugs. e. Infrared scan Flats Extractor. Use non-contact infrared to monitor the Flats Extractor for abnormal temperature. Scan motors, terminal connections, and connector plugs. f. Infrared scan Shingler. Use non-contact infrared to monitor the Shingler for abnormal temperature. Scan motors, terminal connections, and connector plugs. g. Infrared scan Singulator. Use non-contact infrared to monitor the Singulator for abnormal temperature. Scan motors, terminal connections, and connector plugs. h. Infrared scan Buffer Feeder. Use non-contact infrared to monitor the Buffer Feeder for abnormal temperature. Scan motors, terminal connections, and connector plugs. i. Infrared scan DLV AC Box. Use non-					

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Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		contact infrared to check the DLV AC Box for abnormal temperature. Scan all terminal connections and connector plugs. j. Infrared scan DLV card cage. Use non-contact infrared to check the DLV Card Cage for abnormal temperature. Scan all terminal connections and connector plugs. k. Infrared scan stackers. Use non-contact infrared to monitor the Stacker modules (#1 and #2) for abnormal temperature. Scan motor, terminal connections, and connector plugs. l. Infrared scan AAT card cage. Use non-contact infrared to monitor the AAT Card Cage for abnormal temperature. Scan all terminal connections and connector plugs. m. Infrared scan lamp power supplies. Use non-contact infrared to monitor the lamp power supplies for abnormal temperature. Scan all terminal connections and connector plugs. n. Infrared scan printer. Use non-contact infrared to monitor the printer fan motors for abnormal temperature. Scan all terminal connections and connector plugs. o. Infrared scan Canceler. Use non-contact infrared to monitor the Canceler for abnormal temperature. Scan all terminal connections and connector plugs. p. Infrared scan EN AC box. Use non-contact infrared to monitor the EN AC box power distribution for abnormal temperature. Scan all terminal connections and connector plugs. q. Infrared scan AM Card Cage #1. Use non-contact infrared to monitor the AM Card Cage #1 for abnormal temperature. Scan all terminal connections and connector plugs. r. Infrared scan AM DC power supply. Use non-contact infrared to monitor the AM DC power supply for abnormal temperature. Scan all terminal connections and connector plugs.					

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Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA		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.
		s. Infrared scan AM Card Cage #2. Use non-contact infrared to monitor the AM Card Cage #2 for abnormal temperature. Scan all terminal connections and connector plugs. t. Infrared scan Leveler. Use non-contact infrared to monitor the Leveler for abnormal temperature. Scan motor, terminal connections, and connector plugs. u. Infrared scan ACP. Use non-contact infrared to monitor the plugs in the back of the ACP, UPS, and the Power Strip used to power all components of the ACP. 4. Restore equipment to ready status. a. Perform power down procedures. **CAUTION** **Ensure all ink jet printers are shut down in accordance with normal shut down procedures. Failure to properly shut down may cause damage to printers.** **NOTE** For more detailed information and illustrations refer to Videojet Excel PC/PI Alphanumeric manual, Service Manual for the PC-70 or Videojet Excel PC 80 Service Manual. **NOTE** For more detailed information and illustration refer the most current PC-37 Manual found on the MTSC web page. http://mtsc.usps.gov/equipment/FICS/Files/361518-01AB.pdf 1) Perform normal shut down of inkjet printers in accordance with the most recent manual for the PC-70/80 and/or PC-37. 2) Do an orderly shut down of the ACP computer system. Shut down system as outlined in Item #3 if this					

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA				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.
		document “Power down SWSTP/ACP computers” and/or follow the latest Software Management Order (currently SMO-008-09) found on MTSC web site: www.mtsc.usps.gov/bulletin/bb_equip/Bulletin_equipmentlist_result.cfm. Also Vol. A of the MS-166 manual. http://mtsc.usps.gov/msbooks 3) Power down and lock out power. Power down the machine and lock out its electrical power as prescribed by the current local lockout instructions providing lockout/restore procedures. b. Replace all panels and doors. Ensure tools and materials are removed from work area. Replace all machine panels. Close all machine doors and covers. **WARNING** **Be cautious when working around or on equipment when power has been applied.** c. Restore the AFCS/OCR equipment to service as prescribed by the current local procedure providing lockout/restore procedures, including air and the power feed to the Main Power Distribution Cabinet, if necessary. d. Press POWER ON button on operator control panel. e. Restore ID tag printer power. Perform normal power up of the ID tag printers in accordance with the most recent manual for the PC-70/80 and/or the PC-37. f. Perform normal power up of the ACP and SWSTP computers in accordance with the latest documentation (currently SMO-008-09). Also refer to the following for illustrations and information: www.mtsc.usps.gov/bulletin/bb_equip/Bul					

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Equipment Nomenclature: AFCS	Equipment Model:										Bulletin Filename: MM10058AA					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.
		letin_equipmentlist_result.cfm and Vol. A of the MS-166 Manual. http://www.mtsc.usps.gov/msbooks g. Select 00 on the operators control panel and start machine. h. Push the STOP button for normal shutdown.					
FINAL CLEAN UP	79.	**Clean up**. 1. Ensure all tools, lubricant, rags, etc., are removed from the work area. 2. Ensure all equipment panels and covers are in place. 3. If the master and recognition node filters were removed and cleaned, ensure they are properly replaced. 4. Update tasks completed in eCBM section of the eMARS server and follow local procedures to submit completions. 5. Report all deficiencies to supervisor and generate a work order, per local standard operating procedures, to document and initiate corrective maintenance activity. Annotate deficiencies found and repairs made in the equipment logbook.	15	ALL			

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					Run Hours	Pieces Fed (000)	Freq.

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ATTACHMENT 3

AFCS MASTER CHECKLIST

09-AFCS-AE-001-M

OPERATIONAL MAINTENANCE TASKS

80 Min

Based on a 4 hour operation.

Index #	Base Time	Multiple	Totals
1	1	1	1
2	1	1	1
3	1	4	4
4	2	1	2
5	2	4	8
6	1	4	4
7	1	4	4
8	2	4	8
9	1	1	1
10	1	1	1
11	5	1	5
12	2	1	2
13	5	1	5
14	3	4	12
15	5	4	20
16	2	1	2
			80

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
	WORK CODE		EQUIPMENT ACRONYM								CLASS CODE		NUMBER			TYPE
	0	9	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model								Bulletin Filename MM10058AA				Occurrence Tour			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	1.	**COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.** **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.**	1	All			T
AFCS OPM: LOG UPDATE	2.	**Read machine log at beginning of the operational tour.** Check log book for unresolved or suspected problem entries from previous tour. Bring forward any unresolved problems.	1	9			T
AFCS OPM: OPERATION SUPERVISOR	3.	**At start of OPM and every hour after, check with operational supervisors.** Verify that the mail processing personnel are not experiencing significant problems operating the AFCS. Verify that mail processing personnel are not having frequent jams, phantom stops, or any other problems which affect system performance.	4	9			T
AFCS OPM: OPERATIONAL INDICATORS	4.	**Observe the machine on start up at beginning of the operational tour.** 1. The lamps should be seen and the horns heard in vicinity of the machine after either START CULLER or START FACER/CAN pushbuttons have been pressed. Horns and lamps should not be covered to muffle sound or inhibit illumination.	2	9			T

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Equipment Nomenclature: AFCS	Equipment Model:								Bulletin Filename: MM10058AA				Occurrence: Tour			

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					Run Hours	Pieces Fed (000)	Freq.
		2. Ensure that an intermittent horn on fine cull and overthick modules sound for approximately 5 seconds after Start pushbutton is pressed before machine starts. 3. Ensure flashing lamps on fine cull and overthick modules flash continuously from the time either Start pushbutton is pressed until the machine starts.					
AFCS OPM: SINGULATOR	5.	**At start of OPM and every hour after, check feeder operation.** 1. Observe feeder for proper operation. Feed should be smooth and constant. Be observant of foreign matter accumulation. 2. Ensure feeder belts are tracking properly and that compensator arms are not rubbing on pickoff drive pulley which could cause aluminum debris to adversely affect BDS system.	8	9			T
AFCS OPM: BUFFER FEEDER	6.	**At start of OPM and every hour after, check feeder operation.** Observe feeder for proper operation. Feed should be smooth and constant. Be observant of foreign matter accumulation.	4	9			T
AFCS OPM: BYPASS STACKER	7.	**At start of OPM and every hour after, check by-pass stacker.** Check for proper by-pass mail in the by-pass stacker. If excessive check indicia detector.	4	9			T
AFCS OPM: SORT STACKERS	8.	**At start of OPM and every hour after, check sort stackers.** Observe sort stackers for proper mail placement; ensure mail pieces are entering the stackers in a uniform manner. Obtain about 25 mail pieces from each stacker, one sort stacker at a time, and check each mail piece for: 1. Acceptable Cancellation Mark, compare with CANCELLATION STANDARDS placard (MTSC P/N 030084). 2. Validity of mail piece placement corresponding to the mail category assigned	8	9			T

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Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		Occurrence Tour			

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 that stacker by the sort scheme. 3. Acceptable ID Tag. Ensure the ID Tag is printed clear and verifiable. 4. Return mail pieces to sort stacker.					
AFCS OPM: ID TAG PRINTER	9.	**After two hours of run time, check ID tag printers.** Check to ensure there is no build-up of dried ink, dirt, debris, or foreign matter at the printhead. If needed clean printhead aperture (using lens cleaner and cotton tipped applicator or adjust printer as necessary when printed ID Tag becomes unverifiable.	1	9			T
AFCS OPM: ID TAG READERS	10.	**After two hours of run time, check ID tag readers.** Check ID Tag Verifier faceplate and window for accumulation of dried ink, dirt, debris or foreign matter accumulation. If needed clean faceplate and window using lens cleaner and cotton tipped applicator or a micro fiber glove or cloth.	1	9			T
AFCS OPM: INDICIA DETECTOR	11.	**After two hours of run time, check indicia detector.** Check Indicia Detector faceplate and windows for dirt, debris, or foreign matter accumulation. If needed, clean faceplate and sapphire windows using lens cleaner and cotton tipped applicator.	5	9			T
AFCS OPM: SCANNERS	12.	**After two hours of run time, check scanner:** 1. Check scanner aperture slot for accumulation of dust, debris, or foreign matter. Clean as necessary. 2. Check camera lens for accumulation of dust, debris, or foreign matter. Clean, as necessary, using lens cleaner and a cotton tipped applicator or micro fiber glove or cloth. 3. Check scanner lamp lens assemblies for accumulation of dust, debris, or foreign matter. Clean, as necessary, using lens cleaner and a cotton tipped applicator, micro fiber glove, or cloth.	2	9			T

U.S. Postal Service **Maintenance Checklist**	IDENTIFICATION															
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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.
AFCS OPM: IJC	13.	**After two hours of run time, check the IJC:** Locate 10 cancelled pieces of mail (5 lead, 5 trail) and validate that each mailpiece contains the following: 1. The cancellation mark contains the correct city and state that the facility is located in. 2. The cancellation mark contains the facility's correct sectional center facility (SCF) three digit code. 3. The cancellation mark contains the correct date and time. 4. The cancellation mark contains the correct machine number. 5. The print quality is acceptable in accordance with the IJC cancellation standard placard (PSN 7610-08-000-4151). If the cancellation mark is not in accordance with the IJC CANCELLATION STANDARDS Placard (PSN: 7610-08-000-4151), do the following: 6. Check ink bottles, if empty, replace. 7. If needed, purge the printheads**.**	5	9			T
AFCS OPM: INTERIM REPORT	14.	**At start of OPM and every hour after, check interim reports.** 1. Print an interim Site Summary report from the DCC. 2. Analyze the report for each AFCS. Be alert for abnormal data about Pieces Fed, Pieces Accepted, Bypass %, Over length %, and Multi-Indicia %. 3. Check the report for excessive Jam, Machine Stop, and Mal fault listings. Correct or report any abnormality to the maintenance supervisor.	12	9			T
AFCS OPM: MACHINE OPERATION GENERAL	15.	**At start of OPM and every hour after, observe machine operation.** Determine the source of any strange or unusual noises or odors. Check any abnormalities found, and take necessary corrective action, either	20	9			T

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	0	9	A	F	C	S					A	E	0	0	1	M
Equipment Nomenclature AFCS	Equipment Model										Bulletin Filename MM10058AA		Occurrence Tour			

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.
		immediately, or write a work order for action after Operations is done with processing of the mail.					
AFCS OPM: COMPILE RUN INFORMATION	16.	**At the end of the operation, compile the following information:** 1. Interim reports taken during the operational run with any abnormalities noted and/or highlighted. 2. Route sheet information. 3. Any work orders generated. 4. Make entries in machine logbook of any discrepancies found during the mail run. 5. Turn in this information to maintenance supervision and brief the maintenance personnel coming on duty.	2	9			T