



Maintenance Management Order

SUBJECT: Operational and Preventive Maintenance (PM)
Guidelines for AFSM100 (Automated Flat Sorting
Machine) - Automated Induction (AFSM100-Ai)

DATE: June 14, 2006

NO: MMO-063-06

TO: All AFSM100-Ai Offices

FILE CODE: H8C, H8D

cdav:mm06044ac

MAINTENANCE MANAGEMENT ORDER

MAINTENANCE MANAGEMENT ORDER

This Maintenance Management Order (MMO) provides Operational and Preventive Maintenance Guidelines for the AFSM100 Automated Induction System. It is recommended that this MMO be performed during the AFSM100 PM window and completed 45 minutes prior to the start of the AFSM100 operation. The intent is to provide the Ai operation window for mail preparation prior to the start of the AFSM100. This will allow the Ai system to be sufficiently charged with ACT trays to maintain AFSM100 performance. The inability to provide sufficient ACT trays will cause the AFSM100 to starve for mail and reduce system throughput.

The work hours indicated in the Workload Estimate Attachment 1 reflect the maximum annual work hours required to maintain each system. 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.

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.

Direct any questions or comments concerning this bulletin to the HelpDesk, Maintenance Technical Support Center, P.O. Box 1600, Norman OK 73070-1600; telephone FTS 2000 (405) 573-2123 or toll free (800) 366-4123.

Earl J. Jones
Manager
Maintenance Technical Support Center
Maintenance Policies and Programs

- Attachments:
1. Summary of Workload Estimate
 2. Master Checklist: 03-AFSM100-**-001-M: Daily
 3. Master Checklist: 03-AFSM100-**-002-M: Weekly
 4. Master Checklist: 03-AFSM100-**-003-M: Monthly
 5. Master Checklist: 03-AFSM100-**-004-M: Semi-Annual
 6. Master Checklist: 09-AFSM100-**-005-M: Operational Maintenance

MAINTENANCE MANAGEMENT ORDER**MAINTENANCE MANAGEMENT ORDER**

ATTACHMENT 1

SUMMARY

WORKLOAD ESTIMATE

FOR

AFSM100 - AUTOMATED INDUCTION SYSTEM

MAINTENANCE MANAGEMENT ORDER

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**SUMMARY
WORKLOAD ESTIMATE
FOR
AFSM100 - AUTOMATED INDUCTION**

Operation	Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Routine Servicing + Repair Time (hrs/yr)	Non-productive Time** (hrs/yr)	Total Servicing Per Machine (hrs/yr)	Operational Maintenance	TOTAL
						2 Tours (hrs/yr)	
5	434	130	564	56	620	130	750
6	496	149	645	64	709	156	865
7	557	167	724	72	796	182	978

NOTES

*Repair estimates based on 30% of servicing.

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

MAINTENANCE MANAGEMENT ORDER

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ATTACHMENT 2

MASTER CHECKLIST

03-AFSM100--001-M**

DAILY

TIME TOTAL: 71 Minutes

** CLASS CODES AD & AE

MAINTENANCE MANAGEMENT ORDER

MAINTENANCE MANAGEMENT ORDER

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER		TYPE	
		0	3	A	F	S	M	1	0	0	*	*	0	0	1
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency DAILY				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

MAINTENANCE MANAGEMENT ORDER

MAINTENANCE MANAGEMENT ORDER

SAFETY STATEMENT

- | | | | |
|----|--|---|-----|
| 1. | <p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> | 5 | All |
|----|--|---|-----|

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.

AI MACHINE

- | | | | |
|----|---|----|-----|
| 2. | <p>Perform system shutdown. Perform proper shut down of Ai Control PC prior to powering down Ai Power Distribution Cabinet.</p> | 4 | 8 |
| 3. | <p>Power down and lockout power. Power down the machine and lockout its electrical power as prescribed by the current local lockout instructions providing lockout/restore procedures.</p> | 2 | All |
| 4. | <p>Mail search all Ai Modules.</p> <ol style="list-style-type: none"> 1. Perform mail search of all modules beginning at Tilter and working toward prep stations, follow Upper and Lower ACT conveyors. Check for mail at each feeder module including VRL units. Search for mail under Incline and Spur conveyors trapped between cover and belts. 2. During mail search, observe general condition of conveyor assemblies, squeeze rails, indicator lenses, and E-Stop switches. Check for missing motorized drive roller O ring belts. 3. Remove any debris found on conveyors and/or conveyor photocells. | 15 | 6 |

U.S. Postal Service		IDENTIFICATION													
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		0	3	A	F	S	M	1	0	0	*	*	0	0	1
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency DAILY				

** CLASS CODES AD & AE

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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MAINTENANCE MANAGEMENT ORDER

- | | | | | |
|---|----|--|----------------|-----|
| VERTICAL RECIPROCATING LIFT – PREP/FEEDER (VRL-P/VRL-F) | 5. | General. Remove dust and debris. Vacuum and clean any accumulation of dust or debris from the VRL Lift Table. | 2
MIN
EA | 6 |
| HALF PREP STATION & PREP STATIONS | 6. | General. Remove dust and debris. Vacuum and clean any accumulation of dust or debris from the Work Table, Pivot Table motor, Pivot Table motorized drive rollers, and accumulation chutes. | 3
MIN
EA | 6 |
| UPPER & LOWER ACT TRANSPORT | 7. | General. Remove dust and debris. Vacuum and clean any accumulation of dust or debris from the Flexible Turning Units (FTUs) on the Upper and Lower ACT Transports. (This requires a thin attachment that allows access between the rollers on the FTU.) | 2
MIN
EA | 6 |
| | 8. | Restore Ai to service. Restore power to the Ai system as prescribed by the local lockout/tagout procedure. Observe all indicators during power up for correct operation. | 5
MIN | 8 |
| CLEAN UP | 9. | Clean up. Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. | 5
MIN | All |

MAINTENANCE MANAGEMENT ORDER

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		0	3	A	F	S	M	1	0	0	*	*	0	0	1
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** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

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MAINTENANCE MANAGEMENT ORDER

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ATTACHMENT 3

MASTER CHECKLIST

03-AFSM100--002-M**

WEEKLY

TIME TOTAL: 118 Minutes

** CLASS CODES AD & AE

MAINTENANCE MANAGEMENT ORDER

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U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER		TYPE	
		0	3	A	F	S	M	1	0	0	*	*	0	0	2
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency WEEKLY				

** Class Codes: AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

SAFETY STATEMENT

1. **COMPLY WITH ALL SAFETY PRECAUTIONS.** All

Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.

THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.

When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.

WARNING

Perform following steps 2 through 16 in conjunction with DAILY PM after machine is powered down and locked out.

2. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in Tilter Module area: 1 MIN 6
Clean Tilter Module photocell and reflector.
3. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in Load Station: 1 MIN 6
Clean Side Flexing Conveyor photocell and reflector.
4. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in the Half Prep station: 8 MIN 6
 1. Clean Pivot Table photocell and reflector.
 2. Clean linear actuator photocells. Remove the Half Prep station side cover.

MAINTENANCE MANAGEMENT ORDER

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U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	F	S	M	1	0	0	*	*	0	0	2
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency WEEKLY				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

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3. While side cover is off, visually check linear actuator belt for cracks, missing teeth, etc.
4. Install Half Prep station side cover.
5. Annotate deficiencies and notify supervisor.
5. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:

	1	6
	MIN	

Incline Conveyor including photocells and reflectors.
6. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:

	1	6
	MIN	

Bundle Distribution Conveyor including photocells and reflectors.
7. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:

	1	6
	MIN	
	EA	

Accumulation Chute Conveyor.
Clean photocells and reflectors.
8. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:

	8	6
	MIN	
	EA	

Prep Station

 1. Clean Work Table photocell and reflector.
 2. Clean Pivot Table photocell and reflector.
 3. Clean Pivot Table release photocell.
 4. Clean Linear Actuator photocells. Remove the Half Prep station side cover.
 5. While side cover is off, visually check linear actuator belt for cracks, missing teeth, etc.
 6. Install Half Prep station side cover.
 7. Annotate deficiencies and notify supervisor.
9. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:

	10	6
	MIN	

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		0	3	A	F	S	M	1	0	0	*	*	0	0	2
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency WEEKLY				

** Class Codes: AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

Lower ACT Transport Conveyor

1. Clean Slim Line Right Angle Divert (SRD) photocells and reflectors.
 2. Clean FTU photocells and reflectors.
 3. Clean barcode scanners glass screens.
 4. Clean Lower ACT Conveyor photocells and reflectors.
10. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:
- Vertical Reciprocating Lift-Prep (VRL-P)
1. Clean VRL-P photocells and reflectors.
 2. Clean VRL-shelf photocell.
 3. Visually check VRL-P linear actuator belt for cracks, missing teeth, etc.
- Ai-Feeder Module
1. Clean ACT Carrier photocells.
 2. Clean Manual Paddle photocell and reflector.
 3. Clean light curtain barriers.
11. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:
- Vertical Reciprocating Lift - Feeder (VRL-F)
1. Clean VRL-F photocells and reflectors.
12. **Check the Upper and Lower X-Axis and Z-Axis Linear Actuator belts.**
1. Remove A1 Feeder Paddle covers.
 2. Visually check Upper and Lower X-Axis and Z-Axis Linear Actuator belts for cracks, missing teeth, etc.
 3. Replace A1 Feeder Paddle covers.
13. **Clean the following components** using a micro fiber glove and vacuum remove any dust or debris in each:

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		0	3	A	F	S	M	1	0	0	*	*	0	0	2
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency WEEKLY				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

MAINTENANCE MANAGEMENT ORDER

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- 2. Clean VRL-shelf photocell.
- 3. Visually check linear actuator belt for cracks, missing teeth, etc.
- 14. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:
 - ACT Elevated Buffer Loop (Over Feeders)
 - 1. Clean Elevated Buffer Loop conveyor photocells and reflectors.
 - 2. Clean Low Cost Right Angle Divert (LCR) photocells and reflectors.
 - 3. Clean FTU photocells and reflectors.
 - 4. Clean barcode scanners glass screens.
- 15. **Clean the following components** using a micro fiber glove and vacuum any dust or debris in each:
 - Upper ACT Transport
 - 1. Clean Upper ACT Transport Conveyor photocells and reflectors.
 - 2. Clean barcode scanners glass screens.
- AI CONTROL PC 16. **Remove and clean the Ai Control PC air filter.** Replace if impacted dirt and debris can not be removed by vacuuming.

NOTE

Perform steps 17 and 18 in conjunction with DAILY PM after machine is restored to operation.

- 17. **Perform a repair and compress on the Ai database.**
- AI FEEDER MODULES 18. **Run ACT Cycle Test**
 - 1. Place all feeders in maintenance mode from the MIS computer.
 - 2. Perform the Ai Cycle ACT test (thumbwheel test 07) on each Ai Feeder to validate functionality. This test will require an empty

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		0	3	A	F	S	M	1	0	0	*	*	0	0	2
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency WEEKLY				

** Class Codes: AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

ACT for each feeder.

- Place all Ai Feeders back in operations mode from the MIS computer.

MAINTENANCE MANAGEMENT ORDER

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ATTACHMENT 4

MASTER CHECKLIST

03-AFSM100--003-M**

MONTHLY

TIME TOTAL: 110 Minutes

** CLASS CODES AD & AE

MAINTENANCE MANAGEMENT ORDER

MAINTENANCE MANAGEMENT ORDER

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	F	S	M	1	0	0	*	*	0	0	3
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency MONTHLY				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

SAFETY STATEMENT

1. **COMPLY WITH ALL SAFETY PRECAUTIONS.** All
- Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.**

THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.

When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.

WARNING

Perform following steps 2 through 5 in conjunction with DAILY PM after machine is powered down and locked out.

INCLINE CONVEYORS

2. **General - Incline Conveyor.** 15 MIN 6
1. Remove bottom plexiglass covers from the Incline Conveyors.
 2. Remove dust and debris. Vacuum and clean any accumulation of dust or debris from the Incline Conveyor cover and bottom side of the conveyor.
 3. Install bottom plexiglass covers.

SPUR CONVEYORS

3. **General - Spur Conveyors.** 8 MIN EA 6
1. Remove bottom plexiglass cover from the Spur Conveyor
 2. Remove dust and debris. Vacuum and clean any accumulation of dust or debris from Spur Conveyor cover and bottom side of Spur Conveyor.

MAINTENANCE MANAGEMENT ORDER

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U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	F	S	M	1	0	0	*	*	0	0	3
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency MONTHLY				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

NOTE

C and D configurations only. Local sites will determine Ai system configuration.

AI SYSTEM E-STOPS

- | | | | |
|--|---|-----------|---|
| 10. | AFSM100-Ai E-Stops. | 5
MIN | 6 |
| <ol style="list-style-type: none"> 1. Start the Bundle Distribution Conveyor and each Prep Station. 2. Actuate the E-Stop switch on the Load Station Control Panel. 3. Observe that the Bundle Distribution Conveyor and all Prep Stations stop. 4. Observe that the lamp inside the E-Stop switch illuminates. 5. Observe Control Panel E-Stop Light illuminates and LCD display reports E-Stop which has been pressed. 6. Observe Sort Module Minitron displays E-Stop message for E-Stop which has been pressed. 7. Observe that red lights on the light stacks illuminate. 8. Reset E-Stop switch. | | | |
| 11. | Repeat all steps in item 10 for each of the following Emergency Stop switches: | 15
MIN | 6 |
| <ol style="list-style-type: none"> 1. Half Prep Station - Pivot Table E-Stop switch. 2. VRL-P - Control Panel E-Stop switch. 3. Prep Station #1 - Control Panel E-Stop Switch and Pivot Table E-Stop switch. 4. Prep Station #2 - Control Panel E-Stop Switch and Pivot Table E-Stop switch. 5. Prep Station #3 - Control Panel E-Stop Switch and Pivot Table E-Stop Switch. 6. Prep Station #4 - Control Panel E-Stop Switch and Pivot Table E-Stop switch. 7. Bundle Distribution Conveyor - Left Side Bundle Distribution Conveyor E-Stop switches. | | | |

MAINTENANCE MANAGEMENT ORDER

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		0	3	A	F	S	M	1	0	0	*	*	0	0	3
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency MONTHLY				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

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MAINTENANCE MANAGEMENT ORDER

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ATTACHMENT 5

MASTER CHECKLIST

03-AFSM100--004-M**

SEMI-ANNUAL

TIME TOTAL: 65 Minutes

** CLASS CODES AD & AE

MAINTENANCE MANAGEMENT ORDER

MAINTENANCE MANAGEMENT ORDER

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER		TYPE	
		0	3	A	F	S	M	1	0	0	*	*	0	0	4
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency SEMI-ANNUAL				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

MAINTENANCE MANAGEMENT ORDER

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SAFETY STATEMENT

1. **COMPLY WITH ALL SAFETY PRECAUTIONS.** All

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WARNING

Perform following steps 2 through 6 in conjunction with DAILY PM after machine is powered down and locked out.

BUNDLE DISTRIBUTION

2. **Tilter Module.** 10 MIN 6

1. Visually check hydraulic motor/pump and cylinders for visible oil leaks.
2. Clean hydraulic motor/pump breather cap.
3. Notify supervisor of oil leaks.

LOAD STATION

3. **Side Flexing Conveyor.** 2 MIN 8

1. Visually check Side Flexing Conveyor link belt for wear.
2. Visually check Side Flexing Conveyor wear strips for abnormal wear.
3. Replace as necessary.

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		0	3	A	F	S	M	1	0	0	*	*	0	0	4
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency SEMI-ANNUAL				

** CLASS CODES AD & AE

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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MAINTENANCE MANAGEMENT ORDER

BUNDLE DISTRIBUTION CONVEYOR	4.	Bundle Distribution Conveyor. Visually check Bundle Distribution Conveyor wear strips for abnormal wear. Replace as necessary.	3 MIN	8			
ACCUMULATION CHUTES	5.	Accumulation Chute. Check Accumulation Chute Air Components. Pull bottom cover off and check for air leaks. Vacuum dust debris from bottom cover.	10 MIN EA	8			
AI SYSTEM	6.	General. Visually check the following motors and gear cases for oil leaks. Annotate any deficiencies and notify supervisor: 1. Half Prep Station Linear Actuator Motor/Gear case. 2. Load Station Side Flexing Conveyor Motor/Gear case. 3. Incline Conveyor Drive Motor/Gear case. 4. Bundle Distribution Conveyor Drive Motor/Gear case. 5. Prep Station Linear Actuator Motor/Gear case. 6. Lower ACT Transport FTU Motor/Gear case. 7. Upper ACT Transport FTU Motor/Gear case. 8. VRL-P Drive Motor/Gear case. 9. VRL-F Drive Motor/Gear case. 10. AI Feeder Module Upper X-Axis, Lower X-Axis, and Z-Axis Drive Motor/Gear cases.	10 MIN	6			

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Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency SEMI-ANNUAL				

** CLASS CODES AD & AE

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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ATTACHMENT 6

MASTER CHECKLIST

09-AFSM100--005-M**

OPERATIONAL MAINTENANCE

TIME TOTAL: 15 Minutes

** CLASS CODES AD & AE

NOTE

Time allocated is 15 minutes per tour for two tours.

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U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	9	A	F	S	M	1	0	0	*	*	0	0	5
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency TOUR				

** CLASS CODES AD & AE

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Weeks

Minimum Skill level for the Operational Checklist is MPE Level 8.

Safety Statement

Comply with all safety precautions. Refer to local AFSM100 operational maintenance Job Safety Analysis. Wear appropriate personal protective equipment as applicable for each task. Check for suspicious dust or unusual debris when opening equipment for inspection and maintenance. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.

General

The intent of this operational checklist is to monitor equipment condition and identify and correct minor deficiencies during the operational tour.

Ask the operations supervisor if there are any equipment problems. Investigate reported problems. Check Maintenance logbook for any outstanding issues.

Annotate deficiencies found and corrective action taken during the performance of this maintenance checklist in the Maintenance logbook. Initiate action to correct unresolved deficiencies by notifying the Maintenance Supervisor and/or by generating Work Order(s) as per local SOP.

Ai Control PC

1. Verify that the correct number of ACTs is on the Ai System.
2. Check for warnings on AFSM-Ai diagram. Evaluate Ai Control PC bottom screen for faults such as photocell low gain warnings, red or yellow indicators, and low VAC warnings.
3. Observe the PLC Communications screen to verify that all PLCs are responding to the Ai Control PC with the heartbeat messages. (Should be toggling from 1 to 0.)

Ai - Feeder Modules and VRL-F

1. Observe warning lamps, warning horns, and startup delay operate properly.
2. Observe ACTs as they enter and exit VRL-F. Ensure there is a smooth transition from the Feeder Spurs to the VRL-F and from the VRL-F to the Elevated Buffer Loop.
3. Observe the ACTs on the VRL lift table as it descends to the ACT Carrier. Observe the transition from the VRL to the ACT Carrier. This should be a smooth transition and ACT to fall squarely on the ACT Carrier.
4. Observe the movement of the ACT Carrier as the ACT is positioned, the Ai - Feeder Paddle as the ACT door is removed, the mail is extracted from the ACT, and the door is replaced.
5. Observe Ai - Feeder Module operation for proper paddle motion, belt motion, mailpiece presentation, and pickoff. Listen for unusual noise and observe for excessive vibration.

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	9	A	F	S	M	1	0	0	*	*	0	0	5
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency TOUR				

** CLASS CODES AD & AE

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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6. Observe the Ai - Feeder Module Safety Light Curtain functions properly when tripped. The Ai paddle dump valve should dump the current air on the system and paddle should glide to a rest on the feeder table.

Ai Load Station

1. Observe warning lamps, warning horns, and startup delay operate properly.
2. Observe the Ai Tilter module movement as the operator raises and lowers the tilter. Listen for unusual noise and observe for excessive vibration.
3. Observe the Side Flexing Conveyor link belt for condition and tracking. Listen for unusual noise emanating from the drive motor or gear case.
4. Observe the Incline Conveyor belts for condition and tracking. Listen for unusual noise emanating from the drive motor or gear case.
5. Observe the Half Prep station operation as empty ACTs enter the Pivot Table, the Pivot Table transition to the lower loop, and full ACTs exit the Pivot Table. Listen for unusual noise and observe for excessive vibration as the Pivot Table transitions up and down.

VRL-P

1. Observe ACTs as they enter and exit the VRL-P. Ensure there is a smooth transition from the Upper and Lower ACT Transport Conveyors.
2. Observe the VRL-P lift table movement is smooth as it transitions from each level. Erratic movement could be due to linear actuator belt tension or condition.

Bundle Distribution

1. Observe warning lamps, warning horns, and startup delay operate properly.
2. Observe Bundle Distribution Conveyor belt for condition and tracking. Look for missing rollers on belt. Listen for any unusual noise emanating from the drive motor or gear case.
3. Observe the Bundle Distribution Conveyor pop-up diverts function properly. Listen for air leaks or any unusual noise emanating from under the conveyor.
4. Observe the Spur Conveyor Belts condition and tracking. Ensure that none of the belts are binding. Listen for unusual noise emanating from the drive motor or gear case.
5. Observe the Accumulation Chute brakes are functioning as mail bundles pass through each photocell. Listen for air leaks from the brake air pucks. Look for missing rollers on the Accumulation Chute belt.

MAINTENANCE MANAGEMENT ORDER

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U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	9	A	F	S	M	1	0	0	*	*	0	0	5
Equipment Nomenclature AFSM100 - Automated Induction		Equipment Model AFSM100 - Ai						Bulletin Filename MM06044AC			Frequency TOUR				

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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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Prep Stations

Observe the Prep Station operation as empty ACTs enter the Pivot Table, the Pivot Table transitions to the lower loop, and full ACTs exit the Pivot Table. Listen for unusual noise and observe for excessive vibration as the Pivot Table transitions up and down.

Upper and Lower ACT Transport

Observe general operation of the Upper and Lower Transport system. Observe the Upper and Lower Transport system for missing O ring belts and the transition of ACTs from zone to zone.

Conclusion

Annotate deficiencies found and repairs performed in the Maintenance logbook. Notify supervisor and/or general work orders per local SOP to document/initiate corrective maintenance activity for deficiencies found.

MAINTENANCE MANAGEMENT ORDER

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