



Maintenance Management Order

SUBJECT: Preventive Maintenance (PM) Guidelines for Automatic Tray Sleever Updated (ATSU) and Automatic Tray Sleever II (ATS II)

DATE: November 10, 2011

NO: MMO-132-11

TO: All ATS II Offices
All ATSU Offices

FILE CODE: F10, F10A, F10B

same:mm10040ab

The Summary Workload Estimate has been updated.

This Maintenance Management Order (MMO) supersedes PM guidelines MMO-002-07 and MMO-003-07. This MMO updates Preventive Maintenance (PM) guidelines for the ATS II and the ATS conversion to the ATSU, and adds Infrared and Ultrasound monitoring procedures for the Automatic Tray Sleever II and the Automatic Tray Sleever Updated.

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

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

WARNING

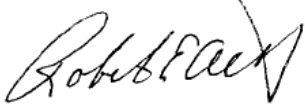
Various products which require Material Safety Data Sheets (MSDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current MSDS for each product used is on file and available by all employees. When reordering such a product, it is suggested that a current MSDS be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

WARNING

The use of compressed or blown air is prohibited. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used only on optical equipment when other cleaning methods can not be used.

Maintenance Managers are to use these Preventive Maintenance guidelines when preparing the route sheets for local maintenance personnel. It is the responsibility of each Maintenance Manager to ensure all WARNINGS, CAUTIONS, and NOTES are included with each applicable task as part of the preparation of any local route sheets.

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



Robert E. Albert
Manager
Maintenance Technical Support Center
Maintenance Operations

Attachments:

1. Summary Workload Estimate
2. ATSU & ATS II Master Checklist: 03-****-AA-001-M: Daily
3. ATSU & ATS II Master Checklist: 03-****-AA-002-M: Weekly
4. ATSU & ATS II Master Checklist: 03-****-AA-003-M: Monthly
5. ATSU & ATS II Master Checklist: 03-****-AA-004-M: Quarterly
6. ATSU & ATS II Master Checklist: 03-****-AA-005-M: Annual

ATTACHMENT 1
SUMMARY
WORKLOAD ESTIMATE
FOR
ATSU & ATS II

SUMMARY

WORKLOAD ESTIMATE
FOR
ATSU & ATSII

| Days | Routine Servicing (hrs/yr) | Repair* (hrs/yr) | Total Servicing & Repair Time (hrs/yr) | Nonproductive Time ** (hrs/yr) | Total Servicing Per Machine (hrs/yr) |
|--------------|-----------------------------------|-------------------------|---|---------------------------------------|---|
| 5 Day | 414.85 | 82.97 | 497.82 | 49.78 | 547.60 |
| 6 Day | 462.52 | 92.50 | 555.02 | 55.50 | 610.52 |
| 7 Day | 510.18 | 102.04 | 612.22 | 61.22 | 673.44 |

NOTES

*Repair estimates based on 20% of servicing.

**Based on 10% of servicing and repair.

Service Condition is based on a five, six, or seven day per week operation.

PM CHECKLIST TIME SUMMARY

| Checklist | Checklist Times (per year) for 5 day PM week (minutes) | Checklist Times (per year) for 6 day PM week (minutes) | Checklist Times (per year) for 7 day PM week (minutes) |
|------------------------------|---|---|---|
| 03-*****-AA-001-M: Daily | 14300 | 17160 | 20020 |
| 03-*****-AA-002-M: Weekly | 8216 | 8216 | 8216 |
| 03-*****-AA-003-M: Monthly | 1320 | 1320 | 1320 |
| 03-*****-AA-004-M: Quarterly | 1000 | 1000 | 1000 |
| 03-*****-AA-005-M: Annual | 55 | 55 | 55 |

ATTACHMENT 2

**ATSU & ATS II
MASTER CHECKLIST**

03-*****-AA-001-M

DAILY

Time Total: 55 Minutes

***** = ATSU, ATSII

Refer to MS-295 for ATSU if additional maintenance information is required.
Refer to MS-240 for ATS II if additional maintenance information is required.

| | | | | | | | | | | | | | | | |
|---|----------------|---|-------------------|---|---|---|---|---|--------------------------------|---|--------|--------------------|---|------|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | * | A | A | 0 | 0 | 1 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency DAILY | | | |

***** = ATSU, ATSII

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

| | | | | | | | |
|------------------------|----|--|----|-----|--|--|--|
| SAFETY STATEMENT | 1. | COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment. THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods can not be used. Report safety deficiencies to your supervisor immediately upon detection. | 5 | ALL | | | |
| SYSTEM | 2. | Lower H-Block. 1. Log in as Maintenance. 2. Select Manual Mode. 3. Select Manual Screen 1. 4. Select Lower H-Block. | 2 | 9 | | | |
| ELEVATOR/ SLEEVE CARTS | 3. | Remove sleever carts. Press a system stop button. After system stops, press the elevator down push button on both elevators to lower both elevators. Remove the sleever carts. | 2 | 7 | | | |
| SYSTEM | 4. | Shut down computer. Follow most recent SMO, currently SMO-014-08, for shutting down the computer. | 1 | 9 | | | |
| | 5. | Power down and lock out power. Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout instructions providing lockout/restore procedures. | 3 | ALL | | | |
| INSERTER | 6. | Clean ATSU / ATSII. Remove dust and debris from the ATSU / ATS II, including inserter area. Use a vacuum to clean the inside and outside of the ATSU / ATS II. | 10 | 7 | | | |

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|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|--------------------|---|---|------|---|
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| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 1 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency DAILY | | | | |

***** = ATSU, ATSII

| 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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|--------------------------------|-----|--|----|---|
| PNEUMATIC AIR SYSTEM ENCLOSURE | 7. | Check for water in pneumatic air system. Check for presence of water in regulator mist separator filter water canisters (filter bowls). Check for water in filter bowls: 1. Drain, if water present, by opening valve at bottom of filter bowls. Catch water in paper towel or rag. 2. Return water drain valves at the bottom of filter bowls to the closed position after water has been drained from the filter bowls. | 1 | 7 |
| MAIL SEARCH | 8. | Perform mail search of ATSU / ATS II including inserter. Perform mail search as follows: 1. Remove covers and panels. 2. Search for mail pieces. 3. Follow local procedures for returning mail to operations for processing. 4. Replace covers and panels. | 5 | 7 |
| INSERTER FUNNEL FLAPS | 9. | Check funnel flaps. Check funnel flaps for cracks, broken, loose, or missing hardware, or broken diagonal springs. Ensure free movement of funnel flaps. Report any discrepancies to the supervisor. | 1 | 7 |
| SPECIAL | 10. | Check belt tensions. Check belt tensions on any belt(s) replaced for 3 days following replacement. The belts are inserter belt/Y Axis, linear belt/horizontal/X Axis, and H-block belt/vertical/Z Axis. | 10 | 9 |

WARNING

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

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|----------|-----|--|---|-----|
| POWER UP | 11. | Restore electrical and pneumatic power to equipment. Restore power to equipment as prescribed by current local lockout/tagout procedures. | 3 | All |
|----------|-----|--|---|-----|

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|---|----------------|---|-------------------|---|---|---|---|--|--------------------------------|---|--------|--------------------|---|------|---|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 1 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency DAILY | | | |

***** = ATSU, ATSII

| 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 |

- | | | | | |
|--------------------------------|-----|---|---|-----|
| PNEUMATIC AIR SYSTEM ENCLOSURE | 12. | Check ATSU / ATS II input air pressure. Check input air pressure on regulator mist separator filter air adjustment gauge for 90 +0/-2 PSI. Check as follows: Read pressure on regulator mist separator filter gauge. Report any deficiencies to supervisor. | 1 | 7 |
| | 13. | Check soft start valve air pressure. Check air pressure on soft start valve: 1. With ATSU / ATS II ready to process trays, read pressure on soft start valve gauge. Pressure should be 90 +0/-2 PSI. 2. Press an E-Stop. Pressure should go to 0 PSI. 3. Report any deficiencies to the supervisor. 4. Reset E-Stop and restart machine. | 1 | 7 |
| | 14. | Check vacuum generator air pressure. Check vacuum generator regulator for 68 PSI. 1. Read vacuum generator regulator gauge. Pressure should be 68 +0/-2 PSI. 2. Report any deficiencies to the supervisor. | 1 | 7 |
| ELEVATOR/ SLEEVE CARTS | 15. | Install both sleever carts. Install sleever carts in both ATSU / ATS II elevators and return elevators to service. | 3 | 7 |
| SYSTEM | 16. | Perform functional check and return equipment to service. Return ATSU / ATS II to normal operation. Run a few trays to verify machine operation. | 3 | 9 |
| CLEAN UP | 17. | Clean up. Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. | 3 | All |

ATTACHMENT 3

**ATSU & ATS II
MASTER CHECKLIST**

03-****-AA-002-M

WEEKLY

Time Total: 158 Minutes

**** = ATSU, ATSII

Refer to MS-295 for ATSU if additional maintenance information is required.
Refer to MS-240 for ATS II if additional maintenance information is required.

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|---|----------------|---|-------------------|---|---|---|---|--------------------------------|------------|---|---------------------|---|---|------|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | * | A | A | 0 | 0 | 2 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | Bulletin Filename MM10040AB | | | Frequency WEEKLY | | | | |

***** = ATSU, ATSII

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

| | | | | |
|---------------------------|----|---|---|-----|
| SAFETY STATEMENT | 1. | COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment. | 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 can not be used. Report safety deficiencies to your supervisor immediately upon detection. | | |
| SYSTEM | 2. | Lower H-Block. 1. Log in as Maintenance. 2. Select Manual Mode. 3. Select Manual Screen 1. 4. Select Lower H-Block. | 2 | 9 |
| ELEVATOR/ SLEEVE CARTS | 3. | Remove sleever carts. Press a system stop button. After system stops, press the elevator down push button on both elevators to lower both elevators. Remove the sleever carts. | 2 | 7 |
| SYSTEM | 4. | Shut down computer. Follow most recent SMO, currently SMO-014-08, for shutting down the computer. | 1 | 9 |
| | 5. | Power down and lock out power. Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout instructions providing lockout/restore procedures. | 3 | All |

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|---|----------------|---|-------------------|---|---|---|---|--|--------------------------------|---|--------|---------------------|---|------|---|--|
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| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 2 | M | |
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***** = ATSU, ATSII

| 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 |

SYSTEM

6. **Clean sensors.** Wipe off faces of sensors (38) 15 9
and check that they are properly aligned and secure (including cables). Use care not to bump sensors out of alignment. Using a clean, dry, soft cloth, wipe dust off faces of sensor:
1. PE-1 – Half Tray
 2. PE-2 – EMM Tray
 3. PE-3 – Tray in Sleever
 4. PE-4 – Tray at Funnel
 5. PE-5 – Inserter Arm Down
 6. PE-6 – Inserter Arm Up
 7. PE-7 – Extend Overtravel, Inserter
 8. PE-8 – Home, Inserter
 9. PE-9 – Retract Overtravel, Inserter
 10. PE-10 – Zone 4 TPS 1
 11. PE-11 – Right Elevator Up
 12. PE-12 – Right Elevator Overtravel
 13. PE-13 – Right Cart Half Sleeves
 14. PE-14 – Right Cart Empty
 15. PE-15 – Left Elevator Up
 16. PE-16 – Left Elevator Overtravel
 17. PE-17 – Left Cart Half Sleeves
 18. PE-18 – Left Cart Empty
 19. PE-19 – Right Elevator Down
 20. PE-20 – Left Elevator Down
 21. PE-21 - Linear Slide Left Overtravel
 22. PE-22 – Linear Slide Home
 23. PE-23 – Linear Slide Right Overtravel
 24. PE-24 – H-Block Down Overtravel
 25. PE-25 – H-Block Up Overtravel

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| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 2 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency WEEKLY | | | | |

***** = ATSU, ATSII

| 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 |

26. PE-26 – H-Block Home
27. PE-27 – Right Cart EMM Sleeves
28. PE-28 – Left Cart EMM Sleeves
29. PE-29 – Zone 4 TPS 2
30. PE-30/32 – Right Cart in Position
31. PE-31/33 – Left Cart in Position
32. PE-34 – Exit TPS
33. PE-35 – H-Block Up Sensor
34. PE-36 – Left Cylinder Sleeve Former Up
35. PE-37 – Right Cylinder Sleeve Former Up
36. PE-40 – Stand Alone Conveyor Full (optional, customer supplied)

| | | | | |
|--------------|----|---|---|---|
| INSERTER | 7. | Clean slide rails. Check that linear/horizontal (Y Axis) slide rails are clean and oiled. Use fine Scotch Brite Pads to remove corrosion. Apply a light coat of Petrochem HYSN FGH-32-001 synthetic oil, Grainger item number 6HXX2, or equivalent 10W ISO 32 Synthetic oil to linear slide rails. Report any scoring to the supervisor. | 4 | 7 |
| | 8. | Check for scoring and wear of slide rails. Replace slide rails as necessary due to excessive scoring and wear. | 1 | 9 |
| INSERTER ARM | 9. | Check inserter arm adjustments. Check inserter arm down position for proper adjustment and that the cylinder shaft clevis pin locknut is tight. With the inserter arm down, there should be 1/4" to 7/16" between the lowest spot from the inserter arm to the rollers. | 5 | 9 |

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| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 2 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency WEEKLY | | | | |

***** = ATSU, ATSII

| 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 |

H-BLOCK

10. **Clean horizontal/vertical slide assemblies.** 3 7

Check that the H-Block/horizontal (Y Axis) linear/horizontal (X Axis), and H-Block/vertical (Z Axis) assembly slide rails are clean and oiled. Apply a light coat of Petrochem HYSN FGH-32-001 synthetic oil, Grainger item number 6HXX2, or equivalent 10W ISO 32 Synthetic oil. Refer to Figures A and B.

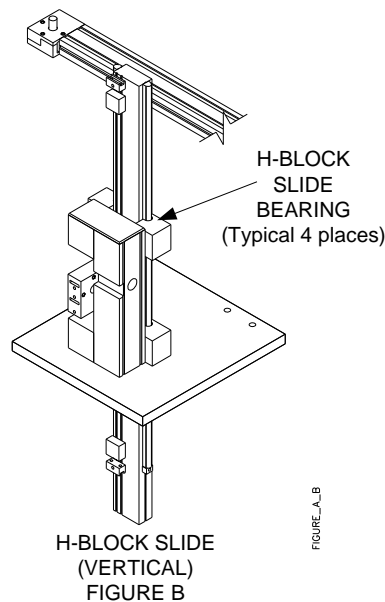
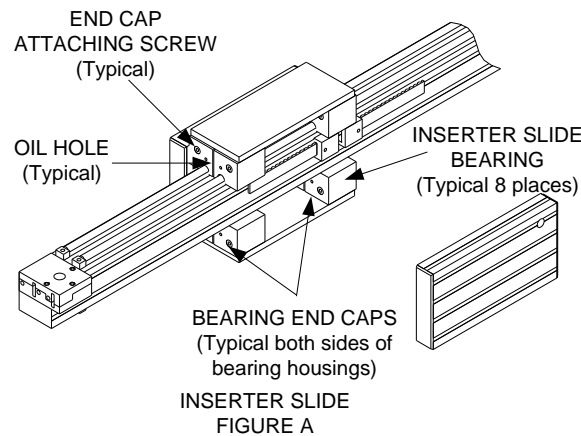


FIGURE A_B

| | | | | | | | | | | | | | | | | |
|---|----------------|---|-------------------|---|---|---|---|---|--------------------------------|--|--------|---|---------------------|------|---|---|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | * | | | A | A | 0 | 0 | 2 | M |
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***** = ATSU, ATSII

| 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 |

| | | | | |
|--|-----|---|----|---|
| SYSTEM | 11. | Check for scoring and wear of horizontal slide assemblies. Slide felt pads are on the inserter/horizontal slide assembly (Y Axis) and on the H-Block/vertical Slide assembly (Z Axis). Slide felt pads should have adequate oil to maintain a light coat of oil on the rails. If needed, apply oil to felt pads through oil holes in the bearing housing end caps. Use any locally approved 10W spindle oil available. Replace horizontal slide assemblies, as necessary, due to excessive scoring and wear. | 2 | 9 |
| H-BLOCK/ VERTICAL (Z AXIS) ASSEMBLY BEARINGS | 12. | Check H-block slide assembly for bearing alignment. Check H-block/vertical (Z Axis) slide assembly for proper bearing alignment. Check for proper bearing alignment; grasp sleeve former assembly and manually try to move back and forth, there should be no play (looseness) in the slide assembly. Adjust as necessary. | 5 | 9 |
| H-BLOCK, LINEAR, & INSERTER SLIDES, (X, Y, & Z AXIS SLIDES) | 13. | Check axis belts. Check axis belts for wear and proper tension. Ensure belt does not move along its axis of motion. Check axis belts as follows: 1. Check belts for any signs of wear, chafing, or cracking. 2. Check belt tensioners for signs of looseness or play. 3. Check and adjust belt tension, as required, replace if needed. | 10 | 9 |
| SLEEVE FORMER ASSEMBLY | 14. | Check sleeve former vacuum cups. Check sleeve former vacuum cups for cracks, tears, broken or torn screens, and cleanliness. Clean cups with damp cloth. Replace damaged cup(s). | 1 | 7 |

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|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|---------------------|---|---|------|---|
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| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 2 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency WEEKLY | | | | |

***** = ATSU, ATSII

| 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 |

ELEVATORS

15. **Check elevator belts.** Check both elevators, 8 15 9 vertical belts per elevator, for wear and proper tension; if required, readjust. Check that lift plates are level. Check belts as follows:
1. Check belts for signs of wear, chafing, or cracking.
 2. Check and adjust belt tension as required.
 3. Ensure master and slave lift plates are level (not skewed). Adjust belts if necessary.

SYSTEM ROLLER O-RINGS

16. **Clean roller o-rings.** Use Chempads to clean 30 7 roller o-rings.

WARNING

The use of compressed or blown air is prohibited. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used only on optical equipment when other cleaning methods can not be used.

CONTROL CONSOLE

17. **Clean control console vent filters.** Clean and 10 7 treat filters as follows:
1. Remove filters and vacuum.
 2. Wash filters in warm soapy water. Rinse and dry thoroughly.
 3. Treat filters with Filter Spray Adhesive, P/N A-FLTAD.
 4. Reinstall filter.

WARNING

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

SYSTEM

18. **Restore electrical and pneumatic power to equipment.** Restore power to equipment as 3 All prescribed by current local lockout/tagout procedures.

| | | | | | | | | | | | | | | | | |
|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|--------|---------------------|---|------|---|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
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| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 2 | 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) | Weeks |

| | | | | | | | |
|------------------------|-----|---|----|---|--|--|--|
| H-BLOCK/ SLEEVE FORMER | 19. | Check calibration of sleeve former vacuum generators. Check calibration values on sleeve former vacuum generators VS1, 2, & 3. Digital readouts are on front of sleeve former vacuum generators. Power required. | 5 | 9 | | | |
| SYSTEM SENSORS | 20. | Check sensor operation. Check that all 38 sensors are operating correctly. Sensors are listed in item 6 above. | 15 | 9 | | | |
| ELEVATOR/ SLEEVE CARTS | 21. | Check sleever cart present sensors. Check sleeve cart present sensor operations as follows, with both sleeve carts still removed from ATSU / ATS II: 1. With ATSU / ATS II in Auto Mode (ready to process trays), open console rear door to access back panel MCP2. 2. Check that K2 and K3 LEDs on CRS1 and CRS2 are off. 3. Verify "LEFT/RIGHT CART NOT IN POSITION" alarm displays on monitor. 4. Reinstall sleever carts in both elevators. 5. Check that K2 and K3 LEDs on CRS1 and CRS2 are lit. 6. Close rear console door. | 5 | 9 | | | |
| SYSTEM | 22. | Test ATSU / ATS II operation. Exercise all machine functions to ensure proper operation. Log into Maintenance Mode, Select Manual Mode, and exercise all functions of the machine to ensure correct operation. Run the 3 axis servos and both elevators in the Manual Mode, and observe for smooth operation. Use ATSU / ATS II Manual Mode screens to operate functions. | 10 | 9 | | | |
| SYSTEM | 23. | Perform functional check and return equipment to service. Return ATSU / ATSII to normal operation. Run a few trays verifying machine operation. | 3 | 9 | | | |

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|---|----------------|---|-------------------|---|---|---|---|--|--------------------------------|---|--------|---|---------------------|------|---|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 2 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency WEEKLY | | | |

***** = ATSU, ATSII

| 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 |

CLEAN UP

24. **Clean up.** Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. 3 All

ATTACHMENT 4

**ATSU / ATS II
MASTER CHECKLIST**

03-****-AA-003-M

MONTHLY

Time Total: 110 Minutes

**** = ATSU, ATSII

Refer to MS-295 for ATSU if additional maintenance information is required.
Refer to MS-240 for ATS II if additional maintenance information is required.

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|---|----------------|---|-------------------|---|---|---|---|---|--------------------------------|--|------------|---|----------------------|---|---|------|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | | | CLASS CODE | | NUMBER | | | TYPE |
| | 0 | 3 | * | * | * | * | * | * | | | A | A | 0 | 0 | 3 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency MONTHLY | | | |

***** = ATSU, ATSII

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

| | | | | | | | |
|----------------------------|----|--|----|-----|--|--|--|
| SAFETY STATEMENT | 1. | COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment. THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods can not be used. Report safety deficiencies to your supervisor immediately upon detection. | 5 | All | | | |
| SYSTEM | 2. | Lower H-Block. Procedure to lower the H-Block: 1. Log in as Maintenance 2. Select Manual Mode. 3. Select Manual Screen 1. 4. Select Lower H-Block. | 2 | 9 | | | |
| ELEVATOR/ SLEEVER CARTS | 3. | Remove sleever carts. Press a system stop button. After system stops, press the elevator down push button on both elevators to lower both elevators. Remove the sleever carts. | 2 | 7 | | | |
| SYSTEM | 4. | Shut down computer. Follow most recent SMO, currently SMO-014-08, for shutting down the computer. | 1 | 9 | | | |
| SYSTEM | 5. | Power down and lock out power. Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout instructions providing lockout/restore procedures. | 3 | All | | | |
| GENERAL | 6. | Check ATSU / ATS II. Visually check entire machine. Check for loose bolts, air fittings, and air leaks. Tighten as necessary. Report any discrepancies to the supervisor. | 15 | 7 | | | |

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 3 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency MONTHLY | | | | |

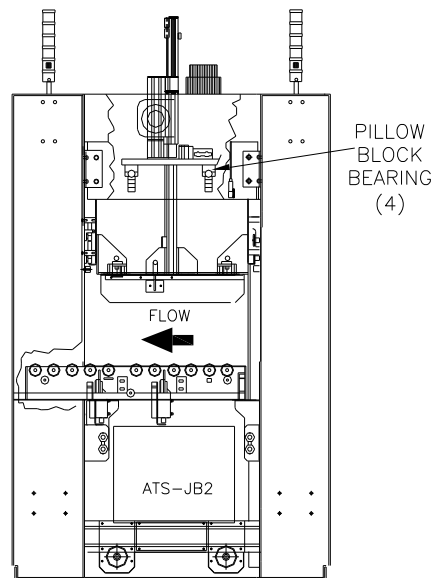
***** = ATSU, ATSII

| 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 |

H-BLOCK

7. **Lubricate H-Block carriage pillow block bearings.** Lubricate 4 horizontal (H-block) carriage pillow block bearings. Refer to Figure C. Lubricate as follows:

1. Remove small plastic plug from side of each bearing housing.
2. If using the pump spray bottle, spray Petrochem HYSN FGH-32-001 synthetic oil, Grainger item number 6HXK2, or equivalent 10W ISO 32 Synthetic oil into orifice in bearing housing (1 or 2 trigger depressions).
3. If using a gallon bottle, apply Petrochem HYSN FGH-32-001 synthetic oil into orifice in bearing housing until slight seepage is visible.
4. Replace plastic plug.



LEFT SIDE VIEW
Figure C

FIGURE_C

| | | | | | | | | | | | | | | | | |
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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 3 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency MONTHLY | | | | |

***** = ATSU, ATSII

| 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 |

SYSTEM

8. **Lubricate Macron slide and elevator belts.** 10 7

Lubricate teeth and backsides of Macron slide belts for the linear belt/horizontal (X Axis), the H-block belt/vertical (Z Axis), the 8 vertical elevator belts/ vertical (Z Axis), and, inserter belt (Y Axis) with 3-in-1 Oil. Clean oil from the rails and apply locally approved 10W spindle oil. Procedure for lubricating Macron slide belts:

NOTE

Ensure there is no overspray on the sensors.

1. Rotate vertical elevator belts on bottom section of actuator (inside each of 4 elevator cabinets) 45 degrees. Apply 3-in-1 Oil, using pump sprayer, to belt teeth up to drive assembly and down to belt tensioner.
2. Rotate the H-block belt/vertical (Z Axis) 45 degrees and apply 3-in-1 Oil, using a pump sprayer, to the belt teeth up to the drive assembly and down to the belt tensioner.
3. Let belt relax and spray the backside of the belt up to the drive assembly and down to the belt tensioner.
4. Wipe off any excess lubricant. If any 3-in-1 Oil gets on the Z Axis rails, wipe it off and apply any locally approved 10W spindle oil to the rails.
5. Lubricate the linear belt/horizontal (X Axis) and the inserter belt (Y Axis) in the same manner (steps 2 through 4 above).

ELEVATORS

9. **Check and oil crossover chains.** Apply Mobil 30 9

SHC 630 synthetic gear oil, Grainger item number 6Y778, or equivalent Grade 90, ISO 220, Synthetic Gear Oil, to elevator crossover chains and check tension. Remove crossover chain cover, and ensure there is no slack in the horizontal crossover chain. If there is slack, loosen two nylock nuts securing both idler sprocket lift arm assemblies. Raise both idlers equally until the slack is removed from the horizontal cross over chain. Tighten two locknuts

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 3 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency MONTHLY | | | | |

***** = ATSU, ATSII

| 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 |

securing idler sprocket lift arm assembly.

ELEVATOR/
SLEEVE CARTS

10. **Install both sleever carts.** Install sleever carts in both ATSU / ATS II elevators. 3 7

WARNING

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

SYSTEM

11. **Restore electrical and pneumatic power to equipment.** Restore power to equipment as prescribed by current local lockout/tagout procedures. 3 All

CAUTION

Do not activate E-Stop switches, access door interlock switches, or Stop switch during the homing sequence. If these switches are activated before the green stack light is illuminated, the H-Block will suddenly drop, and damage will occur to the machine.

SYSTEM

12. **Perform E-Stop switches, access door interlock switches, and stop switch, and GUI functionality tests.** 25 7

NOTE

The ATSU / ATS II has two Stop switches, six E-Stop switches, and six access door interlock switches.

1. Operate both Stop switches, one at a time with the machine running.
 - a. Observe graphic user interface (GUI) display operator menu screen for proper change of state.

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 3 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency MONTHLY | | | | |

***** = ATSU, ATSII

| 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 |

- b. Restart machine and check second stop switch.
 2. Check each E-Stop switch.
 - a. Activate an E-Stop after ATSU / ATS II has started and green stack light is on.
 - 1) Machine stops.
 - 2) Red stack light illuminates.
 - 3) Observe graphic user interface (GUI) display operator menu screen for proper change of state.
 - b. De-activate the E-Stop.
 - c. Start machine.
 - 1) Green stack light illuminates.
 - 2) Observe graphic user interface (GUI) display operator menu screen for proper change of state.
 - d. Repeat sub-steps a thru c until all E-Stops have been checked.
 3. Check all access door interlock switches one at a time while the machine is running and not processing letter mail trays.
 - a. Activate an access door interlock switch after the ATSU / ATS II has started and the green stack light is on.
 - 1) Machine stops.
 - 2) Red stack light illuminates.
 - 3) Observe graphic user interface (GUI) display operator menu screen for proper change of state.
 - b. Close door to de-activate the access door interlock switch.
 - c. Start machine.
 - 1) Green stack light illuminates.
 - 2) Observe graphic user interface (GUI) display operator menu screen for proper change of state.

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 3 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency MONTHLY | | | |

***** = ATSU, ATSII

| 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 |

d. Repeat sub-steps a thru c until all access door interlocks have been checked.

2. Report any discrepancies to the supervisor.

13. **Perform functional check and return equipment to service.** Return the ATSU / ATS II to normal operation. Run a few trays to verify machine operation. 3 9

- CLEAN UP 14. **Clean up.** Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. 3 All

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | | | CLASS CODE | | NUMBER | | | TYPE |
| | 0 | 3 | * | * | * | * | * | | | | A | A | 0 | 0 | 3 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency MONTHLY | | | |

***** = ATSU, ATSII

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

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ATTACHMENT 5

**ATSU & ATSII
MASTER CHECKLIST**

03-****-AA-004-M

QUARTERLY

Time Total: 250 Minutes

**** = ATSU, ATSII

Refer to MS-295 for ATSU if additional maintenance information is required.
Refer to MS-240 for ATS II if additional maintenance information is required.

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

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

| | | | | | | | |
|-------------------------|----|--|----|-----|--|--|--|
| SAFETY STATEMENT | 1. | COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment. THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods can not be used. Report safety deficiencies to your supervisor immediately upon detection. | 5 | All | | | |
| SYSTEM | 2. | Lower H-Block. Procedure to lower the H-Block: 1. Log in as Maintenance. 2. Select Manual Mode. 3. Select Manual Screen 1. 4. Select Lower H-Block. | 2 | 9 | | | |
| ELEVATOR/ SLEEVER CARTS | 3. | Remove sleever carts. Press a system stop button. After system stops, press the elevator down push button on both elevators to lower both elevators. Remove the sleever carts. | 2 | 7 | | | |
| SYSTEM | 4. | Shut down computer. Follow most recent SMO, currently SMO-014-08, for shutting down the computer. | 1 | 9 | | | |
| SYSTEM | 5. | Power down and lockout power. Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout/restore procedures. | 3 | All | | | |
| GENERAL | 6. | Check electronic equipment. Check all power supplies, circuit boards, and transformer connections for overheating. Check connections for tightness. Check and clean computer. | 30 | 9 | | | |
| PNEUMATIC AIR | 7. | Replace mufflers. Replace OSHA lockout valve | 10 | 7 | | | |

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

| 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 |

SYSTEM air muffler and soft start valve air muffler.
ENCLOSURE

PNEUMATIC AIR 8. **Replace filters and baffle.** Replace air filter and 10 7
SYSTEM mist separator filters and baffles (kit).
ENCLOSURE

SYSTEM 9. **Check servo assemblies and couplings.** 45 9
Check 5 servo assemblies and couplings as follows:
1. Remove each servo motor coupling access plates to gain access to coupling screws.
2. Tighten both shaft set screws to specified torque value.
a. Torque the motor shaft side set screw to 325 in/lbs.
b. Torque the pulley shaft side set screw to 170 in/lbs.
3. Replace damaged parts as necessary.

ELEVATOR 10. **Check sleever carts.** Check all sleever carts for 20 7
EQUIPMENT loose or worn hardware, including universal cart mechanism. Report any deficiencies to the supervisor.

ELEVATORS 11. **Lubricate elevator ball screws and guides.** 10 7
Lubricate the left and right elevator ball screws and the four elevator lift guides. Apply a light coating of Petrochem HYSN FGH-32-001 synthetic oil, Grainger item number 6HXK2, or equivalent 10W ISO 32 Synthetic oil.

H-BLOCK 12. **Inspect the H-Block assembly vacuum 10 9
ASSEMBLY ejectors, multi-port distribution block assembly, and associated wiring.**
1. Inspect vacuum ejectors connections to the multi-port distribution block assembly for cracks and signs of excessive heat.
2. Verify the vacuum ejectors connect to the correct port of the multi-port distribution block assembly.
3. Inspect the wiring associated with the vacuum ejectors for cracks, cuts, and nicks that might lead to a short circuit condition.
4. Verify cables are properly dressed and

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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

| 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 |

secured and not in contact with any moving parts.

- ELEVATOR/
SLEEVE CARTS 13. **Install both sleever carts.** Install sleever carts in both ATS II / ATSU elevators. 3 7

WARNING

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

- SYSTEM 14. **Restore electrical and pneumatic power to equipment.** Restore power to equipment as prescribed by current local lockout/tagout procedures. 3 All

NOTE

The machine must have been running for a minimum of 15 minutes and remain running when using the non-contact infrared to obtain a meaningful scan. Investigate the cause of an abnormal temperature and notify your supervisor of necessary corrective action.

- INSERTER ASSEMBLY 15. **Infrared Scan.** Use non-contact infrared to monitor and scan the following for abnormal temperatures: 5 9
1. JB1
 - a. Momentum module (MM2) top hat and base
 - b. PNP/NPN converter (only ATSU)
 - c. Relay
 - d. Fuse blocks
 - e. Jumpers
 2. Inserter housing assembly
 3. Inserter servo motor (MS3)
 4. Inserter conveyor assembly, 3 power rollers
 5. Ancillary input conveyor assembly, 2 power rollers

| | | | | | | | | | | | | | | | | |
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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

| 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 |

6. Transformer box (optional)
7. Terminal connections
8. Connectors
9. Jumpers

WARNING

Do not cross the vertical plane of the sides of ATSU / ATS II. Moving ATSU / ATS II parts can cause injury or death.

DUAL ELEVATOR ASSEMBLY 16. **Infrared Scan.** 4 9

From a ladder or work platform use non-contact infrared to monitor and scan the following dual elevator assemblies:

1. Dual elevator assembly, Horizontal servo motor (MS1) and Vertical servo motor (MS2)
2. MS2 – Z Axis servo motor power/ brake cable that runs in the plastic carrier chain
3. Six port distribution block

DUAL ELEVATOR ASSEMBLY 17. **Infrared Scan.** 5 9

Use non-contact infrared to monitor and scan the following for abnormal temperatures:

1. Elevator conveyor assembly - 3 power rollers
2. Exit conveyor - power roller
3. Terminal connections
4. Connectors
5. Jumpers
6. Air system assembly pressure switch
7. JB7
 - a. Momentum module 7 base and top hat
 - b. Terminal blocks
 - c. Fuse blocks
 - d. Relays
 - e. Terminal strip connectors

| | | | | | | | | | | | | | | | | |
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| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

| 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 |

f. PNP/NPN converter (only on ATSU)

| | | | | | | | |
|---------------------------|-----|---|----|-----|--|--|--|
| ELEVATOR/ SLEEVE CARTS | 18. | Remove sleever carts. Press a system stop button. After system stops, press the elevator down push button on both elevators to lower both elevators. Remove the sleever carts. | 2 | 7 | | | |
| SYSTEM | 19. | Shut down computer. Follow most recent SMO, currently SMO-014-08, for shutting down the computer. | 1 | 9 | | | |
| SYSTEM | 20. | Power down and lockout power. Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout/restore procedures. | 3 | All | | | |
| SYSTEM | 21. | Infrared Scan. Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. JB3 (only on ATSU) a. JB3 relays b. Left stack light assembly 2. Left back panel assembly (JB6) a. Momentum module 4 base and top hat b. Terminal blocks c. Fuse blocks d. PNP/NPN converters (only on ATSU) 3. JB4 & Right stack light assembly (only on ATSU) 4. Right back panel assembly (JB5) a. Momentum module 3 base and top hat b. Terminal blocks c. Fuse blocks d. PNP/NPN converters (only on ATSU) 5. JB2 a. Momentum modules 5 & 6 bases and top hats | 25 | 9 | | | |

| | | | | | | | | | | | | | | | |
|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|------------------------|---|---|------|---|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

| 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 |

- b. Ethernet hub
- c. Fuse blocks
- d. Relay
- e. PNP/NPN converter (only on ATSU)
- f. Terminal blocks

ELEVATOR/
SLEEVE CARTS 22. Replace left and right sleeve carts. 3 7

WARNING

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

SYSTEM 23. **Restore electrical and pneumatic power to equipment.** Restore power to equipment as prescribed by current local lockout/tagout procedures. 3 All

DUAL ELEVATOR ASSEMBLY 24. **Run ATSU / ATS II in Manual Mode Operation.** 15 9

1. While monitor displays main welcome menu, press ALT-A keys. Password Screen appears.
2. Enter maintenance password and click OK.
3. Select Manual Mode.
4. Alternately operate Left and Right Elevators up and down for 10 minutes.

SYSTEM 25. **Shut down computer.** Follow most recent SMO, currently SMO-014-08, for shutting down the computer. 1 9

SYSTEM 26. **Power down and lockout power.** Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout/restore procedures. 3 All

DUAL ELEVATOR ASSEMBLY 27. **Infrared Scan.** 5 9
Use non-contact infrared to monitor and scan the following for abnormal temperatures:

| | | | | | | | | | | | | | | | | |
|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|--------|------------------------|---|------|---|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

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

1. Left elevator
 - a. Servo motor (MS5)
 - b. Coupler
 - c. Ball nut and screw
 - d. Pillow bearing blocks (in both left elevator cabinets)
2. Right elevator
 - a. Servo motor (MS6)
 - b. Coupler
 - c. Ball nut and screw
 - d. Pillow bearing blocks (in both right elevator cabinets)

WARNING

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

| | | | | |
|------------------|-----|---|---|-----|
| SYSTEM | 28. | Restore electrical and pneumatic power to equipment. Restore power to equipment as prescribed by current local lockout/tagout procedures. Replace left and right sleeve carts. | 3 | All |
| CONSOLE ASSEMBLY | 29. | Infrared Scan. Use non-contact infrared to monitor and scan the following for abnormal temperatures: 1. Back panel 1 assembly <ol style="list-style-type: none"> a. Fan 1 b. Main power circuit breaker (MCB) c. 3 phase circuit breakers d. Motor contactor (C1) e. Power filter (F1) f. Servo amplifiers SA1 thru SA5 <ol style="list-style-type: none"> 1) Linear slide - SA1 2) H-block - SA2 | 5 | 9 |

| | | | | | | | | | | | | | | | | |
|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|--------|------------------------|---|------|---|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

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

3) Inserter – SA3

4) Right Elevator – SA4

5) Left Elevator SA5

g. PS1 power supply

h. Fuse blocks

i. Relays

j. Terminal blocks

k. Connectors

l. Jumpers

2. Back panel 2 assembly

a. Fan 2

b. Ethernet hub

c. Safety relays

d. Control relay with base

e. Fuse blocks

f. PS2 power supply

g. Momentum module 1 base and top hat

h. PNP/NPN converter (only on ATSU)

i. Terminal connections

j. Connectors

k. Jumpers

INSERTER
ASSEMBLY30. **Ultrasound Scan.** 2 9

Using ultrasound detector scan the following:

1. Inserter housing Y Axis assembly air cylinder

2. Air lines

3. Connections

4. Fittings

DUAL ELEVATOR
ASSEMBLY31. **Ultrasound Scan.** 5 9

Using ultrasonic detector scan the following:

1. Dual elevator assembly

| | | | | | | | | | | | | | | | | |
|---|----------------|---|-------------------|---|---|---|---|--|--------------------------------|---|--------|------------------------|---|------|---|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 4 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency QUARTERLY | | | | |

***** = ATSU, ATSII

| 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 |

2. Air system assembly
3. Manifold valve
4. Solenoid valve
5. Soft start valve
6. OSHA lockout valve
7. Regulator
8. Sleeve former assembly
9. Inline flow control valve
10. Left vacuum assembly
11. Right vacuum assembly
12. Air cylinder assembly
13. Multi-stage ejector vacuum assembly
 - a. Airlines
 - b. Fittings
 - c. Connections

| | | | | |
|----------|-----|---|---|-----|
| SYSTEM | 32. | Perform functional check and return equipment to service. Return ATSU / ATS II to normal operation. Run a few trays verifying machine operation. | 3 | 9 |
| CLEAN UP | 33. | Clean up. Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. | 3 | All |

ATTACHMENT 6

**ATSU & ATS II
MASTER CHECKLIST**

03-****-AA-005-M

ANNUAL

Time Total: 55 Minutes

**** = ATSU, ATSII

Refer to MS-295 for ATSU if additional maintenance information is required.
Refer to MS-240 for ATS II if additional maintenance information is required.

| | | | | | | | | | | | | | | | | | |
|---|----------------|---|-------------------|---|---|---|---|---|--------------------------------|--|--------|---------------------|---|------|---|---|--|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | | | |
| | 0 | 3 | * | * | * | * | * | * | | | A | A | 0 | 0 | 5 | M | |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency ANNUAL | | | | | |

***** = ATSU, ATSII

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

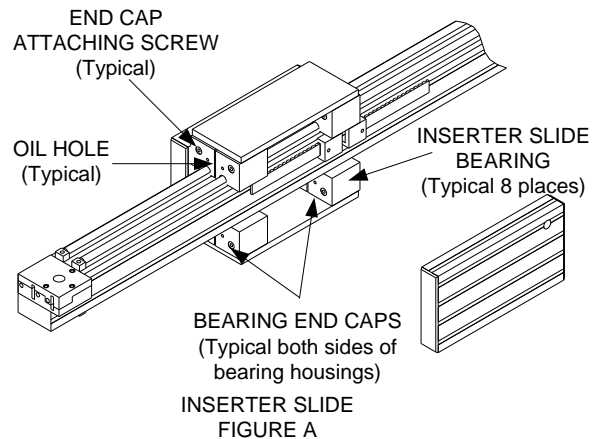
| | | | | | | | |
|------------------------|----|--|----|-----|--|--|--|
| SAFETY STATEMENT | 1. | COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment. THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods can not be used. Report safety deficiencies to your supervisor immediately upon detection. | 5 | All | | | |
| SYSTEM | 2. | Lower H-Block. 1. Log in as Maintenance. 2. Select Manual Mode. 3. Select Manual Screen 1. 4. Select Lower H-Block. | 2 | 9 | | | |
| ELEVATOR/ SLEEVE CARTS | 3. | Remove sleever carts. Press a system stop button. After system stops, press the elevator down push button on both elevators to lower both elevators. Remove the sleever carts. | 2 | 7 | | | |
| SYSTEM | 4. | Shut down computer. Follow most recent SMO, currently SMO-014-08, for shutting down the computer. | 1 | 9 | | | |
| SYSTEM | 5. | Power down and lockout power. Power down the machine and lock out its electrical and pneumatic power as prescribed by the current local lockout instructions providing lockout/restore procedures. | 3 | All | | | |
| SYSTEM | 6. | Replace felt pads on H-Block (vertical) and inserter slide Macron bearings. Replace lubricating end caps (NSN 5340-06-000-0110) on both ends of all slide bearing housings (8 | 30 | 7 | | | |

| | | | | | | | | | | | | | | | |
|---|----------------|-----------------|-------------------|---|---|---|---|--------------------------------|------------|---|---------------------|---|---|------|---|
| U.S. Postal Service Maintenance Checklist | IDENTIFICATION | | | | | | | | | | | | | | |
| | WORK CODE | | EQUIPMENT ACRONYM | | | | | | CLASS CODE | | NUMBER | | | TYPE | |
| | 0 | 3 | * | * | * | * | * | | | A | A | 0 | 0 | 5 | M |
| Equipment Nomenclature Automatic Tray Sleever Upgrade Automatic Tray Sleever II | | Equipment Model | | | | | | Bulletin Filename MM10040AB | | | Frequency ANNUAL | | | | |

***** = ATSU, ATSII

| 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 |

bearings on inserter slide; 4 bearings on H-Block vertical slide). Caps are attached by a single Phillips head screw. See Figure A.



WARNING

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

| | | | | |
|-------------------------------------|-----|--|---|-----|
| ELEVATOR/ SLEEVE CARTS SYSTEM | 7. | Install both sleever carts. Install sleever carts in both ATSU / ATS II elevators. | 3 | 7 |
| | 8. | Restore electrical and pneumatic power to equipment. Restore power to equipment as prescribed by current local lockout/tagout procedures. | 3 | All |
| SYSTEM | 9. | Perform functional check and return equipment to service. Return ATSU /ATS II to normal operation. Run a few trays verifying machine operation. | 3 | 9 |
| CLEAN UP | 10. | Clean up. Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. | 3 | All |

MAINTENANCE MANAGEMENT ORDER

MAINTENANCE MANAGEMENT ORDER