

U.S. Postal Service  
Washington, DC

Operation and Maintenance Handbook  
Overhaul and Upgrade  
Mechanized Mail Processing Equipment  
MS-77

Transmittal Letter No. 1

June 1, 1984

A. EXPLANATION

The attached MS-77 is the first (original) issue of the Operation and Maintenance Handbook for the Overhaul and Upgrade Mechanized Mail Processing Equipment.

B. DISTRIBUTION

1. Initial. Copies of this complete issue are being initial distributed to all facilities having fixed mechanization and to Postal Employee Development Centers (PEDC's).
2. Additional Copies. Order additional copies directly from the appropriate servicing supply center on Form 7380 (Supply Center Requisition).

C. REVISIONS

All copies of the MS-77 preliminary handbook are hereby cancelled and should be discarded.

D. COMMENTS AND QUESTIONS

Recommendations for improving the guidelines, information and procedures contained in this handbook are solicited from all sources. Anyone wishing to make such recommendations should submit them to:

Director  
Maintenance Technical Support Center  
P.O. Box 1600  
Norman, OK 73070-6707

E. EFFECTIVE DATE

These instructions are effective on receipt.



Peter A. Jacobson  
Director  
Office of Maintenance Management

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# Chapter 1

## Introduction

### 110 Philosophy of Overhaul/Upgrade

#### 111 Overhaul of Mechanized Mail Processing Equipment

**111.1** Most items of fixed mechanized mail processing equipment must be kept in operational condition through adherence to the preventive maintenance program for that equipment. The life expectancy of any type of mechanized equipment can be prolonged by a periodic reworking of the structural members, selective or complete replacement of components, and the performance of repairs that are not generally accomplished within the guidelines of the equipment's normal maintenance program. Such work is, in essence, an overhaul.

**111.2** There are instances where mechanical failures occur for reasons other than external causes or design deficiencies. These failures can be traced to wear or to a deteriorated condition. The overhaul is to be given primary consideration before replacement of the failing equipment.

**111.3** Overhauls can vary in degree from complete reworkings of equipment to minimal, concentrated efforts to eliminate a major equipment failure cause. Each case should be reviewed closely to determine what is actually required to restore the equipment to reliable equipment.

#### 112 Upgrade of Mechanized Mail Processing Equipment

**112.1** From the date of installation, mechanized equipment generally remains unchanged through its service life. However, technology soon surpasses the configuration of the equipment as installed. A good portion of that technology, whether mechanical, electrical, or electronic could improve the reliability, operation and safety of the equipment. Consideration must be given (at some point) to incorporating these changes into the equipment.

**112.2** Similarly changes in equipment usage or facility function could dictate cost effective changes in the configuration of the equipment to either expand the processing capability, reduce the processing capability or convert the equipment to process other materials.

**112.3** In the above instances (new technology or changes in usage) the upgrading of equipment is a superior alternative to procuring new equipment if the upgrade is cost effective and obtains the same result.

### 113 General

Cost considerations are a daily requirement of the postal service and the responsibility of all employees. The use of overhauls and upgrades of equipment in lieu of new procurements is one way to reduce expenditures. Requests for new equipment should be submitted only after a full consideration is given to improving the existing equipment by overhaul or upgrade. This handbook provides a basis for determining the feasibility of overhauling or upgrading existing equipment. If an overhaul or upgrade is the selected alternative, this handbook will act as a guideline for its implementation.

#### 114 Objectives

**114.1** This handbook is designed to provide general guidance for determining the need for equipment overhaul or upgrade. It will also provide the procedures to be followed to expedite completion of that overhaul/upgrade from the time of the initial request.

**114.2** This handbook does not apply to equipment presently covered by such existing overhaul guidelines. (MPLSM, MARK II, etc.). Equipment covered by existing guidelines is to continue to be overhauled under those guidelines.

### 120 Responsibility

#### 121 Facility/District

Each facility/district will be responsible to make a initial determination regarding the need to overhaul/upgrade mechanized mail processing equipment in accordance with Chapters 2 and 3 of this handbook.

#### 122 Region

**122.1** The Regional Maintenance Management Division will review, evaluate, and act upon requests from Facilities/Districts to overhaul equipment up to a cost of \$200,000 (parts and labor). All recommendations - approved or disapproved will be forwarded to Office of Maintenance Management for information. In cases of approved recommendations up to \$200,000, the region will provide funding and schedule the project.

**122.2** In instances where the overhaul/upgrade exceeds an estimated cost of \$200,000 (parts and labor), the Region will

review, evaluate, recommend approval or disapproval, and forward the request to Headquarter's Office of Maintenance Management.

### 123 Headquarters

**123.1** Headquarter's Office of Maintenance Management will have approval/disapproval responsibility for all overhaul/upgrade projects in excess of \$200,000 (parts and labor). The project will be reviewed, evaluated, the regional recommendation considered, and acted upon. All requests, either approved or disapproved by Headquarters, will be returned to the submitting region with an explanation of the decision.

**123.2** Headquarters approved projects will require funding and scheduling by the submitting region. Once approved, procurement action, if required, will be handled by the Procurement Services Office associated with the affected site.

### 124 Coordination

The submission and implementation of an overhaul/upgrade of mechanized mail processing equipment will be coordinated between the Facility Maintenance Manager, the Facility/District Manager, the Regional Maintenance Management Division, and where necessary due to cost, the Headquarters Office of Maintenance Management. Coordinators will be designated in each project request by the requesting Facility/District and Region (see 340).

### 125 Delegation of Authority

Once approval has been obtained for an equipment overhaul/upgrade project, the Facility Maintenance Manager or Coordinator is delegated the responsibility for the timely completion of the project under the terms approved.

## 130 Financial Authority

Overhauls are to be considered capital expenses and planned in the budget of the requesting Facility/District.

### 131 Up To \$200,000

The Region is authorized to approve overhaul/upgrade projects up to a cost of \$200,000. The funds are to be provided by the region.

### 132 Above \$200,000

Headquarters will be required to approve overhaul/upgrade projects above \$200,000. The funding will be the responsibility of the region.

## 133 Planning

It is expected that requests for equipment overhaul/upgrade projects will be submitted in advance of the following fiscal year's budget. In cases where multiple projects are planned, the projects should be spread out over several years, if possible.

## 140 Safety

Upgrades to improve the safety efficiency of equipment are to be given priority over operational improvement upgrades. In all plans for overhaul/upgrade projects, improved safety performance must be considered and incorporated into the request (see 317). Safety improvements must be reviewed by local/regional safety engineer to be in compliance with OSHA or American National Standards Institute (ANSI) guidelines. Immediate safety problems are to be corrected by means other than this program and in conjunction with the Facility/Regional safety officer.

## 150 Equipment Covered

The mechanized equipment covered by this handbook includes, but it is not limited to:

- Bulk Conveyors
- Container Loaders/Unloaders
- Edger Feeders
- Edge Stackers
- Extendable Conveyors (inbound and outbound)
- Monorail Conveyors
- Powered Portable Conveyors
- Parcel Sorting Machines (all types-including induction stations)
- Sack Shake Outs
- Sack Sorting Machines (all types-including induction stations)
- Tray Transport Systems
- Tow Conveyor Systems

## 160 Limitations

No upgrade of equipment under the control of the Engineering Change Board (ECB) is to be performed or approved unless the criteria cited in Publication 101 (Engineering Change Board Organization, Function, and Change Processing Procedures) has been met and ECB approval obtained. (see 318).

# Chapter 2

## Mechanized Mail Processing Equipment Condition Evaluation

### 210 Equipment Surveys

#### 211 Purpose

Mechanized equipment covered by this handbook should be surveyed with an aim of determining if and when an overhaul is required. The results of this survey will become the basis for the Documented Justification (310). Record the findings of this survey on Form 1694 (Exhibit "A"). Equipment handbooks and manufacturer specifications will be used as the guides in determining wear and performance conditions which would justify an overhaul where no readily recognizable deficiency is noted.

#### 212 Frequency of Equipment Surveys

Under normal circumstances, equipment should be surveyed for overhaul/upgrade every two years. More frequent surveys can be conducted if the equipment shows signs through its performance that the survey could help isolate areas of increasing malfunction or increased maintenance. Local mail processing management must assist in the Equipment Survey.

### 220 Basis For Determining Procedure Required

#### 221 Overhaul

From the condition survey (210) problem areas will be evident. If the problems relate to wear, misalignment, general deterioration, or material failures, an overhaul may be required. Additional areas which can be anticipated to affect the operation in the foreseeable future will also be included.

#### 222 Upgrade

Equipment surveyed and found to have design defects or potential safety hazards, or equipment which can be improved by incorporating new technology or a change in configuration will require upgrading.

#### 223 Combination of Overhaul and Upgrade

It is likely that any equipment found to require overhaul or upgrading will benefit from a combination of procedures. It is economically advisable to accomplish improvements in both areas under the same program. The combining of overhaul and upgrade into one project should receive full consideration.

U.S. POSTAL SERVICE  
**MECHANIZED EQUIPMENT OVERHAUL/UPGRADE WORKSHEET**

**Description**

Equipment Surveyed	
Age (in years)	Average Daily Usage (in hours on a 7 day base)
Date of Last Overhaul/Upgrade	Extent of Last Overhaul/Upgrade

**Failures Currently Experienced**  
*(Attach Applicable Workorder)*

**Result of Survey**  
*(Detail Findings)*

**Improvement Anticipated From Overhaul/Upgrade**

**Approved By**

Maintenance Manager	Facility Manager
---------------------	------------------

PS Form 1694, July 1982

**Exhibit "A"**

# Chapter 3

## Overhaul/Upgrade Request

A complete request for an overhaul/upgrade of mechanized mail processing equipment will include the materials cited in this section.

### 310 Justification

To expedite requests for the overhaul/upgrade of mechanized equipment, a history of the equipment and a formal request including the following items will be required. This will provide an immediate overview of the equipment to be overhauled/ upgraded and its problem for the reviewing and approving authorities. The format of this justification is shown on Form 1695 (Exhibit "B").

### 311 Age

Provide the age of the equipment in years. If possible use the date of original installation rather than the date of manufacture.

### 312 Usage

The average daily usage (in hours on a 7 day base week) is to be provided.\* This information, coupled with the age and current condition will provide the reviewing authorities with an idea of the life remaining in the equipment under the current condition and usage.

\*(Example calculation: 54 hrs. total 7 days run in one week = 7.7 hrs. per day)

### 313 Date and Extent of Last Overhaul/Upgrade

This date will reflect the last date the equipment received overhaul or upgrade in any degree. This date, with the extent of the work performed, will provide the reviewing authority with data that will assist that authority in determining the cost effectiveness of any additional overhaul/upgrade.

### 314 Summary Statement Of The Problems

Provide a statement of the problem and failures being experienced on the equipment under review. A determination as to cause must also be included.

### 315 Specific Goals Of The Overhaul/Upgrade

A detail listing of what is expected to be accomplished during the proposed overhaul/upgrade will be required. This will be your overhaul/upgrade plan. This plan is described in greater detail in Chapter 4 of this handbook.

### 316 Mail Processing Review and Recommendation

The Facility/District Manager will be required to review the request for any overhaul/upgrade and to make a recommendation as to approval or disapproval of the project. This review will reduce or eliminate later delays in release of the equipment for approved projects.

### 317 Safety Consideration

**317.1** During the preliminary equipment survey any potential safety hazards will be recorded and the correction of these potential hazards made part of the overhaul/upgrade project. Existing safety hazards are to be corrected immediately and not made part of the project.

**317.2** The Facility/Regional Safety Office will be required to have input in the planned project. It is expected that during an overhaul/upgrade project, safety refinements will be incorporated and accomplished to the satisfaction of the Facility/Regional Safety Office.

### 318 Engineering Change Board (ECB) Approval

No upgrading of equipment covered by the ECB (Publication 101, Appendix A) will receive approval of upgrading unless prior approval of the change is made by the ECB.

### 319 Cost Comparison Between Equipment Overhaul/Upgrade and Equipment Replacement

An estimated cost (parts and labor) to accomplish the overhaul/upgrade project requested must be supplied. In addition, the estimated cost to replace the equipment will be required. Estimation of replacement costs must include the costs associated with removal and disposal of the existing equipment and the material and labor costs associated with installation and testing of the new equipment.

### 320 Method of Performing

#### 321 In-House Labor

Where the local maintenance force is capable and minimal impact to the local maintenance program is anticipated, the use of an in-house labor force is recommended for completing an overhaul/upgrade.

U S P O S T A L S E R V I C E  
**MECHANIZED EQUIPMENT OVERHAUL/UPGRADE JUSTIFICATION SUMMARY SHEET**

**Description**

Equipment Surveyed	
Age (in years)	Average Daily Usage (in hours on a 7 day base)
Date of Last Overhaul/Upgrade	Extent of Last Overhaul/Upgrade

**Summary Statement of Problems**

**Goals of Overhaul/Upgrade**

**Approval/Recommendation**

Est. Cost of Overhaul/Upgrade	Recommendation of Maintenance Manager
Est. Cost to Replace	Recommendation of Safety Office
ECB Approval (if needed—upgrade only; attach copy)	Recommendation of Facility/District Manager

PS Form 1695, July 1982

**Exhibit "B"**

### **322 Contract Supervisor and Labor**

In the event that a negative impact on the local maintenance program is expected if in-house labor is used, the use of a labor contract can be considered. A request to contract out overhaul/upgrade labor must be accompanied by an impact statement detailing the negative aspects of in-house labor use. This impact statement will be entered on Form 1696 at item 3 (Exhibit "C").

### **323 Postal Service Overhaul/Upgrade Team**

Should the demand for overhaul/upgrading prove sufficient, a regional postal service overhaul/upgrading team may be assembled. The use of a regional team could reduce the need for contract labor and minimize the negative impact on the local maintenance program normally experienced by the use of in-house labor.

### **330 Time Frame**

#### **331 Projected Date Required**

For scheduling purposes, a projected commencement date will be established sufficiently in advance to allow for approval of the request, procurement of labor (if necessary), procurement of materials, budget allowances, and development of a specific program.

#### **332 Life Expectancy (estimated)**

Using the current and projected workload and the current condition of the equipment under consideration for overhaul/upgrade, the daily usages, and the age of the equipment estimate the remaining effective life of the equipment. With an

idea of the life remaining, a commencement date with the further most date can be obtained.

### **333 Time To Complete**

Based on the specific work to be performed, an estimate of the time needed to complete that work can be given. Considerations such as the size of the work force, hours of work daily (8 hrs, 16 hrs, 24 hrs.), and the amount of time that the equipment can be available for the proposed overhaul/upgrade must enter into the estimate. Equipment availability may be limited due to Mail Processing conditions. In such instances an overhaul may be necessary that would require work to be performed on one tour and the equipment returned for the processing of mail. An overhaul under these conditions is difficult but manageable. However, during the majority of the overhaul it will be required that the release of the equipment be uninterrupted until final acceptance.

### **334 Operations Impact**

In conjunction with the Facility/District Mail Processing Department, an impact statement on local Mail Processing operations during the time the equipment is not available for operation as a result of the project overhaul/upgrade, must be included.

### **340 Overhaul/Upgrade Coordinator**

The facility maintenance manager shall designate an overhaul/upgrade coordinator. The coordinator shall ensure that all other affected organizations are cognizant of the overhaul/upgrade effort, and committed to the schedule. He shall keep all affected organizations informed as to the current program status and related changes.

U.S. POSTAL SERVICE  
**GENERAL DATA FOR OVERHAUL—UPGRADE**

1. Equipment	▶	
2. Designated Overhaul/Upgrade Coordinator	▶	
3. Method of Performance <i>(If contract labor is requested, justify on reverse)</i>	▶	
4. Time Frame		
4A. Date Needed	▶	
4B. Life Expectancy	▶	
4C. Time to Complete	▶	
4D.  Operations Impact Statement for Time Equipment is <i>(or will be unavailable)</i>	▶	
5A. Scheduling Availability Data	▶	
5B. Time Period Available	▶	

**Approvals**

Maintenance Manager	Signature
Facility Manager	Signature

PS Form 1696, Feb. 1983

**Exhibit "C"**

# Chapter 4

## Planning An Overhaul/Upgrade For Mechanized Mail Processing Equipment

### 410 General

At the time an initial request to overhaul/upgrade equipment is submitted for authorization and funding, a detailed plan for the overhaul/upgrade work desired will be required. This chapter provides an outline for developing such a plan.

### 420 Scope of Work

#### 421 Determining Work to Be Performed

In 210 of this handbook, an equipment survey is described. From this complete survey the work to be accomplished can be obtained.

#### 422 Extent Of Work to Be Performed

With the knowledge of the work primarily required, a second review of the equipment should be made to determine future problems which, if corrected during the planned overhaul/upgrade, would not require a second overhaul/upgrade in the future. The combining of overhaul and upgrade items into one program is also to be covered under extent of work.

#### 423 Narrative Detail Listing

A narrative detail listing of work required is necessary from a maintenance and procurement view. The detail listing of works required under the overhaul/upgrade will provide the material requirements and in the event the labor is to be contracted out, the listing will provide the specifics for the contract.

### 430 Overhaul/Upgrade Plan

#### 431 Scheduling

The scheduling of a planned overhaul/upgrade will require the cooperation of the Facility/District Mail Processing. Details such as when and how long the equipment will be available are best provided by Mail Processing. This information must also reflect considerations for vacation periods and training requirements if in-house labor is to be used. A tentative equipment availability date will be required with the overhaul/upgrade plan. This date is entered on item 4 of Form 1696.

#### 432 Tracking The Overhaul/Upgrade

Form 1692, Project Management Plan-Task Summary, (Exhibit

"D") is used to lay out the work required for the overhaul/upgrade (421). Once the work is assigned, Form 1693, Project Management Action Plan-Milestone Schedule, (Exhibit D-1) is to be used to track the planned and actual completion record of the work.

### 440 Materials Listing

**440.1** A list of materials required to accomplish the overhaul/upgrade will be needed. Once approval for the work planned is received, orders must be initiated by the overhauling/upgrading office in such a way that funding will be used in the fiscal year for which the approval is granted and the can be secured as early as possible ahead of the commencement date. The initial parts listing will consist of the following data: nomenclature, part or drawing number, National Stock Number (NSN), source of supply, quantity and an estimate of the total cost per line item. (Exhibit "E" - Form 1698).

**440.2** To obtain parts from Western Area Supply Center (WASC), a manual, special order will be generated. This special order must be prominently marked - "Approved Overhaul." The submitting office must ensure the accuracy of the NSN and part numbers used to avoid delays. In the event any of the ordered parts are not immediately available from WASC, the ordering facility will be notified as early as possible. At that point local purchase procurement procedures must be initiated for those parts.

**440.3** The material listing will also serve as a status report for tracking each order. The material listing (Form 1698) shown in Exhibit "E" includes spaces for order numbers, order initiating dates, due dates and dates received. This information will be entered after approval has been received for the overhaul/upgrade project and that data is available.

#### 441 Multiple Installations of Equipment

In facilities with multiple installations of the same equipment, it is advisable to plan for complete replacements of non-structural attachments, (trays, buckets, carriages, trolleys, chairs, etc.) during the initial overhaul/upgrade. If overhaul of the other equipment installations is anticipated, the removed materials can be reviewed and disposed of as described in Chapter 5. Those materials declared "good" or repairable under the terms of Chapter 5 can be stored and utilized in the overhaul of the other equipment. This reuse will reduce subsequent procurements of these materials.

# EXHIBIT "D"

## SAMPLE SCOPE OF WORK FOR OVERHAUL OF PSM/SSM

DATE: 5/6/80

### 1. WORK TO BE ACCOMPLISHED BY CONTRACTOR

The sack sorting machine overhaul will be divided into three (3) areas:

- a. Tray, carriage and chain replacement
- b. Structural repair and alignment including track
- c. Restoration of "B" Side Sack sorting machine carousel unit to its original position.

### 2. TRAY, CARRIAGE, AND CHAIN REPLACEMENT

The following will require the use of millwright-type workers. Surveying type skill will also be necessary for alignment of the sack sorting machine.

- a. At the motor-end (head-end or drive-end) of the sack sorting machine to be overhauled, all trays, and carriages (Drawing No. J40013 attached), 433 trays and 433 carriages will be removed.

The removed hardware (nuts and bolts) will be sorted into receptacles provided by the contractor for each item of hardware and turned over to the U.S. Postal Service at the completion of the sack sorting machine overhaul contract.

The contractor's personnel, stored materials, and equipment must never interfere with operation of the U.S. Postal Service personnel and/or equipment adjacent to the sack sorting machine being overhauled.

Particular concern must be adhered to by the contractor so that he does not exceed the maximum floor loads throughout the facility in his handling of equipment. The floor loads can be obtained from the contracting officer's representative.

The contractor will obtain the new carriages and trays for the sack sorting machine contract work from centrally located areas on the first floor.

While the old sack sorting machine is being removed from and the new chain is installed, the machine will advance and the new trays and carriages will be installed with the old yokes.

New nuts and bolts will be provided by the U.S. Postal Service to the contractor for installing carriages, trays, and yokes.

- b. The chain is ready for replacement when the trays and carriages are removed.

Sack sorting machine chain removal (1,299 links) is accomplished by relieving sack sorting machine air pressure, securing the chain, removing cotter pins, and extracting the connecting pins.

The new chain installation is accomplished by installing the connecting pins and the cotter pins, releasing the secured chain, and restoring the air pressure so the machine can be advanced.

Storage of the old existing chain at a designated area approved by the contracting officer's field representative of no more than 40 links of chain will be permitted on the mezzanine level. There should never be more than 40 chain links on the mezzanine at any one time. When the chain links accumulate to more than 40 in number, they are to be removed from the mezzanine to a designated area located at exterior of the building at the central south side (adjacent to bay door No. 74).

The new chain for this sack sorting machine overhaul contract is presently stored approximately 80 ft. from the head drive end of the sack sorting machine. (Column G&H 3&4).

- c. The sprockets on both ends of the machines must be leveled.

- d. With new trays, carriages and chains installed, and the sprockets leveled, the sprockets will then be examined and the sprockets teeth will be aligned and adjusted to ensure no binding between the teeth and sack sorting machine chain link.

### 3. STRUCTURAL REPAIR AND ALIGNMENT

The following work will require the use of welding and millwright-type personnel. It will also be necessary to have surveying-type personnel for alignment of the sack sorting machine.

Contractor will have to break some welds and reweld for proper alignment.

The track for the sack sorting machine is supported by vertical steel angles, called stanchions, as indicated on attached drawing No. H-043-857, Sheet 4 of 4, Section DD.

It is the contractor's responsibility to realign the track and rework 25 of these steel stanchions placed approximately 10 ft. intervals at each end on each side of the machine, for a total of 100 stanchions. The contractor must rework, realign, and put the stanchions in an as-new condition. New work is indicated on contract drawing No. H-043-857 and model stanchion marked "A" on the sack sorting machine, adjacent to the head end. This new model stanchion "A" can be seen during the site visit.

Alignment of the sack sorting machine will entail the maintaining of a 25-inch space (Postal Service will provide a jig for this requirement). It will also entail the resupporting, repositioning, and re-anchoring of the stanchions in the reinforced concrete floor, and welding in intermediate spacers as per drawing No. H-043-857, Sheet 4 of 4, Detail "F".

The stanchions will require re-anchoring at a minimum of 50 points that must have the written approval of the contracting officer's field representative.

Drawing No. H-043-857 and model marked "B" on the sack sorting machine, adjacent to the head end of the sack sorting

machine, shows spacers that will be used to maintain the 25-inch space. These spacers are installed in 100 locations, in addition to the stanchions, designated by the U.S. Postal Service. Exact locations will be marked prior to commencement of the contract

The overall alignment of the main track will be performed using qualified surveying skills and professional surveying equipment.

#### **4. RESTORATION OF THE "B" SIDE SACK SORTING MACHINE CAROUSEL UNIT TO ITS ORIGINAL POSITION**

This work will require millwright-type skills.

The "B" side (tail end) sack sorting machine carousel unit must be restored to its original position by the Contractor. This is accomplished by removing existing welded stops, cranking the manual take-up, and installing new steel angled stops.

U.S. POSTAL SERVICE PROJECT MANAGEMENT ACTION PLAN TASK SUMMARY		MSC		PROJECT NO. PSM/4		PROJECT TITLE PSM/SSM OVERHAUL		PHONE NO.	
PROJECT MANAGER				PHONE NO.		PROGRAM DIRECTOR			
SEE INSTRUCTIONS ON REVERSE				PART I - PLANNING			PART II - IMPLEMENTATION		
TASK NO.	TASK TITLE	SCHEDULE		PERFORMING ORGANIZATION	TASK OFFICER	PHONE NO.	DATE SCHEDULE CONFIRMED	DATE OF TASK ORDER	REMARKS
		START	COMPLETE						
1.	Rebuild Carriages	8-11	9-10	USPS/ Contractor Name	USPS Maint. Tour Supvr.	6032	8-8	8-8	
2.	Assemble Tip-ups Remove Sorter Chains and Carriages	8-15	9-8	USPS/ Contractor Name			8-15	8-15	
3.		9-2	9-4	USPS/ Contractor Name			8-26	8-26	
4.	Overhaul Inductions	8-29	9-22	USPS/ Contractor Name					
5.	Overhaul Electrical	8-29	9-22	USPS/ Contractor Name					
6.	Clean Track and Drive	9-4	9-8	USPS/ Contractor Name					
7.	Inspect Track and Drive Repair/Replace Damaged Track	9-8	9-8	USPS/ Contractor Name					
8.		9-9	9-11	USPS/ Contractor Name					
9.	Tip-up Installation	9-11	9-16	USPS/ Contractor Name					
10.	Chain Lubricator Inst. Carriage and Chain Replacement	9-11	9-15	USPS/ Contractor Name					
11.	Ind. Station - Clean and Paint	9-11	9-18	USPS/ Contractor Name					
12.		9-18	9-21	USPS/ Contractor Name					
13.	Sorter Start-up & Timing Live Mail Run	9-22	9-26	USPS/ Contractor Name					
14.	Overhaul Completion	9-26	9-30	USPS/ Contractor Name					

SAMPLE

DATE SIGNED	PROJECT MANAGER (Signature)	DATE SIGNED	PROGRAM DIRECTOR (Signature)	PAGE NO.	NO. OF PAGES
				1	1

PS Form  
Oct. 1978 1692 (MAP Form 2)

U.S. POSTAL SERVICE PROJECT MANAGEMENT ACTION PLAN MILESTONE SCHEDULE		MSC	PROGRAM TITLE PSM/SSM OVERHAUL										PROGRAM DIRECTOR			
SEE INSTRUCTIONS ON REVERSE		PROJECT NO.	PROJECT TITLE										PHONE	PROJECT MANAGER		
TASK NO.	TASK TITLE FY 80	8-11	8-15	8-29	9-2	9-5	9-8	9-11	9-14	9-17	9-20	9-23	9-26	9-30	PHONE	
1.	Rebuild Carriages	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2.	Assemble Tip-ups	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3.	Remove Sorter Chain & Carriages	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
4.	Overhaul Induction Stations	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
5.	Overhaul Electrical	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6.	Clean Track and Drive	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
7.	Inspect Track and Drive	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
8.	Repair/Replace Damaged Track	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
9.	Tip-up Installation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
10.	Chain Lubricator Installation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
11.	Carriage and Chain Replacement	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
12.	Induction Station Clean & Paint	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
13.	Sorter Start-up & Timing	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
14.	Live Mail Run and Completion	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	INDICATE PROJECT START AND COMPLETION															

SAMPLE

DATE SIGNED	PREPARED BY PROJECT MANAGER (Signature)	DATE SIGNED	APPROVED BY PROGRAM DIRECTOR (Signature)	PAGE NO.	NO. OF PAGES
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PS Form  
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Exhibit "D-1"



#### **442 Special Tools and Equipment**

Any special tools and equipment required for the overhaul/upgrade can be listed and tracked on the materials listing.

#### **450 Procurement**

##### **451 Planning**

**451.1** Once approval to commence the overhaul/upgrade project has been received, orders for those items which will be routed through procurement must be initiated. These items will include materials, labor (if contract), and special tools. These orders must conform with Management Instruction AS-710-80-2, Local Review of Technical Data Packages, and subsequent instructions to ensure expeditious handling.

**451.2** Lead times, first article approvals and contracted delivery schedules will affect the receipt of the required materials. Everything that can be done to reduce the possibility of problems at the initial levels of procurement must be accomplished. This will include but not be limited to drawing verification, specifying alternate materials if possible, previous reliable suggested sources of supply, and accurate cost data.

##### **452 Budgeting**

Whenever possible, the expense of an overhaul/upgrade project must be planned for in the next (or subsequent) year's budget. It is anticipated that by initiating the procedures in this handbook, emergency or short notice overhauls/upgrades will be greatly reduced or eliminated.

#### **453 Coordination**

As maintenance will designate an overhaul/upgrade project coordinator (340), it is expected that procurement will similarly designate a Facility/PSO coordinator to deal specifically with overhaul/upgrade procurements. The Maintenance and Procurement coordinators will keep each Department informed of status, developments, and problems. The result will be a constant awareness of the program and a quick resolution of difficulties.

##### **454 Follow-up**

Up to the time that a "due date" has been obtained from procurement for any given order, a close follow-up program will be necessary. This will limit the possibility of delays resulting from incorrect, misplaced, or held up orders. This follow-up will resume with the arrival of the due date and continue until the materials are received. Materials received for an overhaul/upgrade program are to remain isolated and under the close control of the maintenance stockroom until used in the overhaul/upgrade.

##### **455 Maintenance Responsibility**

Maintenance will provide procurement with complete, accurate information (NSN part numbers, cost estimates, drawings, etc.). The maintenance coordinator will follow-up on the status of orders and provide procurement with any requested information.

# Chapter 5

## Disposition of Materials as a Result of Equipment Overhaul/Upgrade

### 510 Salvageable Materials

#### 511 Reuse

Once materials have been removed as a result of an equipment overhaul/upgrade project, each unit (tray, bucket, trolley, etc.) should be reviewed to determine which units, if any, can be reused without restriction. These "good" units can be held as stock. In facilities with multiple installations of the same type of equipment (or part compatible equipment), these "good" units can be used in future equipment overhaul/upgrades within that facility to reduce procurement costs.

#### 512 Excessing

If materials removed from overhaul/upgrade equipment are "good" but no longer of use to the removing facility either due to configuration change or high stock level of that unit, the

removed units can be excessed and made available to other facilities using the same or compatible equipment. Excessing of materials to be accomplished using normal excessing procedures.

#### 513 Repair

Materials not considered "good" (readily reusable) should be reexamined to determine if the units are repairable. Prior to repairing, the cost effectiveness of that repair should be considered. Where the repair cost is excessive, the units should be scrapped (see the following).

### 520 Scrap Materials

Materials which cannot be salvaged under the guidelines in 510 must be scrapped. Scrapping is to be accomplished in accordance with established procurement policies.

# Chapter 6

## Post-Overhaul/Upgrade Equipment Maintenance

### 610 Maintenance Deficiencies

Specific equipment items which require overhaul could be the result of neglect due to deficiencies in the preventive maintenance program for that equipment. These possible maintenance deficiencies must be isolated and corrected. Correcting such deficiencies in the maintenance program at the time the problems are isolated will prolong the life of the overhauled equipment when completed.

### 620 Preventive Maintenance Program Review and Update

#### 621 Overhauled Equipment

**621.1** At the time the determination is made as to what

equipment items are to be overhauled, the preventive maintenance program (check lists, frequencies, condition codes, etc.) for that equipment is to be reviewed. This maintenance program review will determine if sufficient attention, if any, has been given to those items requiring overhaul.

**621.2** If changes in the program are required, the changes must be made in accordance with the procedures in the national handbook or system by which the office operates.

#### 622 Upgraded Equipment

In cases of equipment upgrades, changes to the preventive maintenance program must be made to reflect that upgrade. These changes must be made and checklists developed in accordance with the national handbook or system by which the office operates and accurately reflect the changes in the upgraded equipment.

# APPENDIX SUBMISSION CHECKLIST

# OVERHAUL/UPGRADE SUBMISSION CHECKLIST

ITEM	FORM	REFERENCE
Survey	PS 1694	210
Justification	PS 1695	310
Detail Listing	Narrative	412
Method of Performance	PS 1696	320
Program Plan	PS 1692	431
Program Tracking	PS 1693	433
Material Listing	PS 1698	440
Time Frame	PS 1696	330
Scheduling	PS 1696	432