SUBJECT: EQUIPMENT

CHAPTER TITLE: PREVENTIVE MAINTENANCE PROGRAM

Effective: 9/1/2000

SUBJECT: EQUIPMENT

CHAPTER TITLE: PREVENTIVE MAINTENANCE PROGRAM

I. INTRODUCTION

Effective: 9/1/2000

The Preventive Maintenance Program provides a system for inspecting and servicing equipment (transportation, rolling stock, etc.) on a schedule that reduces wear to parts and systems and prevents premature failure and break-downs. An effective Preventive Maintenance Program reduces equipment out of service time, due to repairs, enhances equipment safety, and significantly reduces costs.

The Department of Transportation's Preventive Maintenance Program consists of the following points:

- All transportation (cars, pick-ups, vans, etc.) and heavy or rolling stock (graders, dump trucks, etc.) equipment requires preventive maintenance service at specific intervals. Highways' Equipment Division establishes the intervals of preventive maintenance for each class of equipment. See Chapter 3 of this volume for a listing of the various classes of equipment.
- Organizations will report, once each week on Wednesday, the total miles or hours for all assigned equipment with a meter. This reporting is to Transportation's computer system known as the Remote Entry Management Informational System (REMIS). (A broken equipment meter does not excuse the reporting requirement. Organizations must repair broken meters immediately to permit continued reporting.)
- REMIS checks the miles or hours reported for each unit of equipment to determine if PM work is due. Preventive Maintenance Work Orders can then be computer printed and issued to the proper organizations.
- Each organization will schedule Preventive Maintenance Work Orders (PM), upon receipt, with the proper Highways' shop as soon as possible.

- Following completion of each PM, the organization assigned the equipment must report the PM's completion through entry to REMIS.
- Managers, at proper levels, receive control reports to aid in checking their subordinate organization's compliance with the Preventive Maintenance Program.

II. PREVENTIVE MAINTENANCE PROGRAM POLICIES

Effective: 5/4/2010

This section addresses the Preventive Maintenance Program in greater detail including the identification of responsibilities.

A. PREVENTIVE MAINTENANCE LEVELS

DOH Equipment Division is responsible for development of preventive maintenance levels. In developing these levels, Equipment Division considers each type of equipment and its operating conditions. The result, is a list of what activities and services must be performed at what miles, hours or calendar intervals.

All but the first PM level, defined below, offer computer printed work orders. The printing of Preventive Maintenance Work Orders is based on the miles or hours of total running time reported for the equipment.

1. Operator's Daily Inspection and Service

A daily inspection and servicing of heavy and tractor/mower equipment is the first level of preventive maintenance. The employee, before operating the unit, is responsible for this inspection. To aid in these inspections, a "Check List," Form OE-28 (or OE-28T for tractor/mower units) is retained with each vehicle (see DOH Administrative Operating Procedures, Forms Section).

2. **Level "A" P.M.**
This is the first level of shop maintenance. It includes the inspection of easily accessible parts, subject to wear, and safety items. Also included are chassis lubrication, minor adjustments and changing oil and filters for equipment classes with hour meters. (See Exhibit IV.C.4.)

3. **Level "B" P.M.**
This is the second level of shop maintenance. It includes all Level "A" coverage as well as changing oil and filters. (See Exhibit IV.C.5.)

4. **Level "C" P.M.**
This is the third level of shop maintenance. It includes all Level "A" and "B" coverage and changing all lubricants except hydraulic fluid. Also included are changing all filters, check brake linings and road testing. This level of PM is normally the most extensive. (See Exhibit IV.C.6.)

5. **Pre-Season P.M.**
This level of shop maintenance (see Exhibit IV.C.7.) specifies the services required before the work season. Chapter 3 of this volume lists the seasonal classes of equipment. Printing of the Pre-Season Preventive Maintenance Work Order occurs about one month before each unit of equipment goes "in season."

Some of the DOT's seasonal equipment units do not have a meter attached to measure usage. Therefore, the Pre-Season and Post-Season (defined as follows) PMs assure the performance of proper maintenance before and after the operating season. Also, Pre-Season and Post-Season PMs are issued for metered seasonal equipment due to their operating characteristics. The Pre-Season and Post-Season PM for metered seasonal equipment is in addition to the Level "A", "B" or "C" PMs.

6. **Post-Season P.M.**
This level of shop maintenance (see Exhibit IV.C.8.) specifies services required after the work season. Printing of the Post-Season PM occurs at the beginning of the month each unit of equipment goes "out of season." Completion of this type of work order provides an inspection and servicing of equipment before the "out of season" months.

7. **Semi-Annual P.M.**
This level of shop maintenance (see Exhibit IV.C.9.) is for non-seasonal classes of equipment that are not operated for enough hours or miles to generate a Level "A", "B" or "C" PM. Equipment scheduled for this type of service may be classes that are towable, such as trailers, or are not normally attached to their prime mover when it is scheduled for service. The schedule for Semi-Annual PMs is every six months at the beginning of April and October.

B. **REMIS REPORTING RESPONSIBILITIES**
Effective: 9/1/2000

The foundation of the Preventive Maintenance Program's capability to computer print PM Work Orders is each organization's daily posting and weekly recording of the hour or mileage reading for all of its assigned "In Season" and "Active" status units of metered rental equipment. Recording the completion of each Preventive Maintenance Work Order is also an important part of the program. Both equipment reporting and Preventive Maintenance Work Order reporting are done by the supervisor in charge of the equipment units and entered into REMIS by the organization’s data entry clerk.

C. **PREVENTIVE MAINTENANCE EXECUTION RESPONSIBILITIES**
Effective: 9/1/2000

Personnel assigned to executing the Preventive Maintenance Program are the Equipment Supervisors, PM Warranty Coordinators, (DOH) County Supervisors, Shop Foremen and mechanics. These personnel must understand their responsibilities and must coordinate their efforts for the Preventive Maintenance System to function properly.

III. PREVENTIVE MAINTENANCE PROGRAM PROCESSES
Effective: 9/1/2000

This section addresses the process steps that must be taken to ensure the success of the Preventive Maintenance Program.

A. **REPORTING PREVENTIVE MAINTENANCE TO REMIS**

1. **Equipment Meter Readings and Meter Status Report (FORM DOT-65)**
Daily, the preceding work day's ending meter reading and meter status ("O" for operational and "N" for non) of each unit of assigned and **operated** transportation and rolling stock equipment are posted to the "Daily Work Report," Form DOT-12. If the unit of equipment has more than one metered engine, the engine operated the most, the "working engine," is the meter chosen for Form DOT-12 posting. This daily posting is not entered to REMIS, but is transcribed, by the organization's clerk, to the Equipment Meter Readings and Meter Status Report, Form DOT-65. (See DOT Volume VII, Forms Manual for completion instructions.) Any meters reported as non-operating must be noted to the proper supervisor for immediate repair or replacement.

Form DOT-65 provides a log for the daily posting of meter reading and status of each operated unit of rental equipment. The DOT-65 provides a ready reference of daily usage, by meter reading, of the organization's assigned equipment. Also, the DOT-65 provides the clerk with the information to enter the ending meter readings to REMIS for each reporting period. Each meter reporting period begins Wednesday at 12:01 A.M. and ends at 12:00 P.M. Tuesday of the following week.

Out of season, pooled ("P" status), repair ("R" status), sale line ("S" status) or excess ("E" status) equipment normally do not require the daily postings of meter readings and status. (See Chapter 4 of this volume for an explanation of equipment status.) However, any usage of equipment while in these categories requires the equipment's ending meter reading and meter status to be recorded on the associated DOT-12(s) and DOT-65.

Entry of Forms DOT-65 to REMIS occurs each Wednesday using the last meter reading reported for the period. Before entry, the organization's clerk must check the Form(s) DOT-65 to identify any "In Season" active units of equipment that have not been reported as used and posted to the DOT-65. The current meter reading for these assigned units must be obtained and posted to the DOT-65, before the organization's manager approves the form and before it is entered to REMIS.

The Form DOT-65 meter readings are entered to REMIS in hours or miles as prescribed for each unit of equipment. Following entry of the DOT-65, the clerk signs and dates the form before filing.

a. Rolled Over Meters
When the equipment meter "rolls over" and returns to all zeros, continue reporting the meter with its full accumulation of hours or miles. For example, if a five digit odometer of a unit of equipment "rolled over," the next meter reporting must be 100,000 miles plus the current reading on the odometer. That is, a five digit "rolled over" odometer reading of 00099 miles would be entered to REMIS as 100,099.

b. REMIS Meter Reporting Edits
REMIS prevents the recording of gross errors on Form DOT-65 entries through a series of edits. Meter entries that are less than the current reading are rejected. Also, meter entries that are greatly higher than the current reading are rejected, while entries at somewhat lesser amounts may invoke a warning message that the reading may be too high. In these circumstances, the data entry clerk must get confirmation of the meter reading. If necessary, contact the PM Warranty Coordinator to initiate a meter reading correction. (See "Corrections to REMIS Reporting.")

2. **Preventive Maintenance Work Order Completions**
Preventive Maintenance Work Orders are computer printed and distributed weekly. (See "Printing and Distributing the PM Work Orders and PM Status Reports" section of this chapter.) Following the completion of service, the completed PM Work Order is returned to the assigned organization for data entry. District Administrators may choose the Equipment Supervisor, or designee, to coordinate the accomplishment and documentation of PM Work Orders for all district headquarters organizations that do not have repair capabilities.

The data entry clerk must enter, to REMIS, the PM completion date and meter reading within one work day following receipt of the completed PM. Following entry, the clerk signs (entered by) and files the Work Order. PM Work Orders not signed by a mechanic and not certified by a supervisor will not be entered to REMIS.

REMIS records the entry of the PM completion date against the most recent PM Work Order. Therefore, if a PM Work Order is performed, but its completion date is not entered until after the next PM Work Order is received, REMIS will record the PM completion date against the wrong (most recent) PM Work Order. Only Equipment Division personnel may correct this error. Organizational management must contact their PM Warranty Coordinator who coordinates the correction of PM completion dates with Equipment Division.

Another complication to entering the PM completion date may arise with the associated entry of the meter reading. REMIS prevents the entry of a PM completion date if the meter reading entry is considered too high in comparison to the last PM completion entry. If this edit is met, the accuracy of the PM completion meter reading must be checked. If the meter reading is correct, the PM Warranty Coordinator must be notified to coordinate the necessary action with Equipment Division. Clerks should review REMIS Inquiry before entering the PM Work Order Completion to assure the accuracy of the recorded meter reading.

Organizational management must be watchful for false PMs. False PMs can result from incorrect meter reading entries, revisions to the PM schedule or other system peculiarities. Do not schedule and perform false PMs. Instead, management must investigate the cause and resolve the problem upon receipt of suspect PM Work Orders. Identification comments will then be added by the organization's manager to false PM Work Orders before signing, dating and entering to REMIS.

3. **Corrections to REMIS Reporting**

Accurate entry of meter readings is critical to the proper functioning of the PM System. Immediate reporting of entry errors reduces the issuance of false PMs and prevents overlooked PMs and damage to equipment. The accuracy of the equipment's life-to-date, year-to-date and month-to-date mileage or hours of operation data depends on the careful entry of meter readings. Maintenance and equipment management personnel use this REMIS data to make equipment allocation and replacement decisions.

Report all entry errors of Forms DOT-65 or PM Completion to the organization’s PM Warranty Coordinator. Central headquarters divisions must contact Highways’ Highway Operations Division to report entry errors. These errors may consist of wrong meter readings or status reporting, wrong PM completion date or meter reporting, meter replacement or meter switch left on.

The PM Warranty Coordinator will complete and submit a "PM System Request," form to the Equipment Division. (See DOT Volume VII, Forms Manual.) Equipment Division will not make any changes or adjustments to the meter reading without receipt of the completed form. If a meter has been replaced, the final reading of the broken meter must be entered to REMIS through the Meter Reading and Status reporting process before requesting a meter reading correction for the newly installed meter. Likewise, enter the final "used" meter reading to REMIS before requesting a reading correction for a meter that the switch was left on.

B. **PRINTING AND DISTRIBUTING THE PM WORK ORDERS AND PM STATUS REPORTS**
Effective: 9/1/2000

Chief financial officers (for DOH, District Comptrollers) are responsible for computer printing, each Thursday morning, their organization’s (District, for DOH) Preventive Maintenance Work Orders and Status Reports. For Central Headquarters, Transportation Information Services Division performs this function. These reports are then given to the organization (or District) PM Warranty Coordinator for proper distribution to all lower organizations. The Transportation Business Manager's office performs this distribution function for Central Headquarters. The weekly PM Work Orders are batched by organization and are distributed to the proper equipment maintenance supervisor (i.e., District Equipment Supervisor, County/Maintenance Supervisor, Equipment Division Shop Foreman or Division Director).

The Preventive Maintenance Status Report is a five-segment computer report that summarizes the past week's activity. Various levels of managers will use the PM Status Reports to monitor their organization's performance. Other than the PM Control Log segment, retained and used by the organization headquarters (or District) PM Warranty Coordinator, the four remaining segments of the PM Status Report will be distributed to the proper organizational managers with their PM Work Orders. The Exhibits section at the end of this chapter addresses the PM Status Reports in greater detail.

C. **PM AND WARRANTY COORDINATION**
Effective: 9/1/2000

Each PM Warranty Coordinator is responsible for coordinating all Preventive Maintenance Program and Warranty Program activities between his organization, subordinate organizations and the DOH Equipment Division. The PM Warranty Coordinator, in addition to distributing the PM Work Orders and Status Reports, is responsible for maintaining the PM Work Order Control Log. Also, the PM Warranty Coordinator maintains the vehicle manufacturer's warranty information and prepares and sends all "PM System Request" forms. See DOT Volume VII, Forms Manual, for this form and completion instructions.

The Warranty Coordinator's liaison function assures that the latest equipment warranty and preventive maintenance guidance from the Equipment Division is available to shop personnel. Also, his or her maintenance of the PM Work Order Control Log provides a history of preventive maintenance performance for each unit of the district's equipment. The Exhibits section of this chapter contains additional information on the PM Work Order Control Log.

D. **SCHEDULING PM WORK**
Effective: 9/1/2000

The responsibility for assuring timely scheduling and completion of PM Work Orders rests with organization managers (for Highways, the County Supervisor, District Shop Foreman or Division Director's designee). The PM Work Order is delivered with the vehicle to the equipment shop and is returned with the vehicle upon completion of services for computer entry and filing by the "owning" organization.

While conflicts with work schedules are a consideration, it must be recognized that the timely scheduling of PM Work Orders assures the highest level of reliability and the lowest level of down time for the equipment. Timely scheduling of PM Work Orders includes "on loan" equipment. If a PM Work Order is issued for performance when a unit of equipment is "on loan," the "loaned to" organization will be given the PM Work Order for completion.

With the weekly PM Work Orders, the PM scheduling manager receives portions of the Preventive Maintenance Status Reports. This PM status information is invaluable to these managers, particularly in identifying which vehicles are in critical need of having their preventive maintenance work performed. The PM Status Reports identify the PM Work Orders that have been generated, but have not been completed. This listing of PMs is grouped, in intervals of 30 days, by the number of days delinquent. Therefore, the delinquent PM listings provide an undeniable identification of the vehicles requiring PM performance.

Careful scheduling and management of PM Work Orders assures fulfillment of the Preventive Maintenance Program's intent. Failure to perform PM Work Orders timely, may result in an investigation from higher level management and Equipment Division to determine the cause for delay. If delays result from mismanagement, disciplinary action may be applied.

E. **MECHANIC'S COMPLETION OF THE PM WORK ORDER**
Effective: 9/1/2000

All mechanics are responsible for understanding the inspection and service requirements for each preventive maintenance level. Mechanics must perform and accurately report all inspection and service work listed on the PM Work Order. Inadequate inspection and service practices undermine the purpose of preventive maintenance and result in unreliable equipment and unnecessary down time and repair expense.

Preventive Maintenance Work Orders include various combinations of requirements. PM Work Orders require visual inspections, lubrication, fluid, filters and parts changes, checks, adjustments and operational checks. (See the Exhibits section for an example of a PM Work Order and completion instructions.) The following, briefly addresses the importance of performing these requirements.

- Visual Inspections - This requirement takes little time, but its importance in preventing costly breakdowns is often underrated. Mechanics must look for loose fasteners, leaks, cracks, damaged parts, wear/chafing of wiring and hoses, tire inflation/wear, etc. Minor corrections, such as tightening a leaking fitting or repositioning and taping a wire bundle, can be made in minutes and often prevents a breakdown and the need for a costly field repair.

- Lubrication - This requirement is essential to reducing parts and system wear and premature failure. The mechanic must use the correct type and weight of lubricant(s) and the proper add/change procedures to prevent parts damage.
- Fluid, Filter and Parts Changes - The periodic changing of fluids, filters and required parts results in extended life and significantly reduces the failure rate of critical parts.
- Checks and Adjustments - The checking and adjusting of belts, control linkages, etc., assures vehicle safety and prevents failures that might result in extensive damage (that is, sticking throttle, inoperative brakes).
- Operational Checks - Operational inspections can reveal the need for adjustments, repairs, filter changes, parts replacements, etc. Mechanics should make minor corrections under the PM Work Order to assure the operational safety and effectiveness of the vehicle and to reduce the need for more costly field repairs.

If a mechanic discovers a serious or an involved problem while performing preventive maintenance, consultation with his supervisor is required. The supervisor may decide to start a regular "Repair Work Order," Form OE-27 (See DOT Volume VII, Forms Manual). The cause for this repair work order is, "PM Detected Repair," Code 512. Also, the PM Work Order number is noted in the "Cause of Work" section of Form OE-27. Afterward, apply normal execution and recording of the "Repair Work Order."

Also, the PM mechanic is reminded that all oils and lubricants are issued from inventory and charged to the unit of equipment being serviced. This inventory usage is accomplished through the completion and computer entry of a Gas and Lube Credit Card Issue, Form DOT-7. The PM mechanic is responsible for either completing Form DOT-7 or giving the needed information to his supervisor or designee for their completion. For a complete address of the Gas and Lube Inventory System, see Volume V of the DOT Administrative Procedures.

In addition to performing all services, it is critical for the mechanic to complete the PM Work Order and accompanying forms accurately. This assures the accuracy of equipment service information and prevents misscheduling of the next PM.

PM Work Orders are completed as follows: See Exhibits examples and completion instructions and for examples of the various levels of PM Work Orders.

1. Place a checkmark, noting where the work was performed, on the line that reads: "Field PM: Yes ( ) No ( )." A "No" entry signifies that the work was performed at a shop facility.
2. Upon completion of each listed inspection or service, place a checkmark next to the completed item.
3. Enter the meter reading in the "Current Meter Reading _____" block and place a checkmark to identify the meter is for "( ) Miles" or "( ) Hours."
    a. When two or more engines with meters are on a single unit of equipment (E.D.), report the meter on the engine operated the most (the "working engine").
    b. If the meter "rolled over" (reset to zero) or was "replaced" since the last PM, note this on the completed PM Work Order next to the meter reading.

Since REMIS is only able to watch the PM requirements of one meter per unit of equipment, identification of the "working engine" of multi-engine equipment is critical. The "working engine" is the engine regularly operated the most for any given class of equipment. For example, the "working engine" of a Class 410 Hydraulic Excavator would be the one located in the upper structure. The running time of the upper structure engine is six to eight times more than the prime mover engine located in the lower chassis. The meter reading of the "working engine" is the one reported to REMIS for the PM System.

F. **MECHANIC'S COMPLETION OF THE PM STICKER, FORM OE-91**
Effective: 9/1/2000

The PM Sticker is primarily used for maintenance control of engines other than the "working engine." This sticker also reminds the operator as to when the next PM is due. However, the PM Sticker is also used for the "working engine" at the completion of each PM Work Order.

After performing all PM services and completing the PM Work Order, the mechanic completes and attaches the PM Sticker(s) to the vehicle. See DOT Volume VII, Forms Manual, for an example of Form OE-91. The mechanic must attach Form OE-91 on the inspected vehicle in a location seen daily by the operator.

The PM Sticker serves as a "backup" to the Preventive Maintenance System to assure that each vehicle receives the proper preventive maintenance. Also, units with multiple engines use Form OE-91 to monitor those engines that are not the "working engine." If there is a significant difference between the PM Work Order and the PM Sticker, concerning when the next PM is due, an immediate investigation must be made to identify the source of the error and to effect correction.

Form OE-91, PM Sticker is completed as follows: See DOT Volume VII, Forms Manual, for an example of the PM Sticker and completion instructions.

1. The meter reading for the "Next Scheduled PM" is calculated as:

Current meter reading	+	PM interval for the equipment's class	=	Next Scheduled PM Meter Reading

2. The date for the "Next Scheduled PM" is always one year from the date of PM performance.
3. If the equipment has more than one engine, complete a PM Sticker for each engine serviced, including a notation for which engine the sticker represents. Remember, report the meter of the "working engine" only, on the PM Work Order. The PM requirements of all other engines on the unit of equipment are monitored by the Form OE-91 Sticker.

After completing the PM service and attaching the necessary Forms OE-91 to the vehicle, the mechanic certifies that he performed the work. The mechanic signs his name, classification and completion date in the spaces on the PM Work Order to certify his completion. Following completion, the mechanic presents the PM Work Order to the Shop Foreman or County Supervisor.

G. **CERTIFICATION OF PM WORK ORDER ACCOMPLISHMENTS**
Effective: 9/1/2000

Following the mechanic's completion of the PM Work Order, the Shop Foreman or the organization supervisor (County Supervisor, for DOH) must **certify** the work. This means that the Shop Foreman or organization supervisor has reviewed the work and accepts it as meeting all requirements. The supervisor then acknowledges his or her acceptance of the work by signing and dating the PM Work Order in the spaces provided. The organization supervisor, if lacking in technical expertise, may delegate inspection of the PM work to a lead mechanic. If review of the completed PM Work Order identifies incomplete or substandard work, the Shop Foreman/Supervisor must advise the mechanic of the proper procedures. Repeat offenses may require the supervisor to start progressive disciplinary action.

The PM Work Order may then be given to the clerk responsible for entering the PM Completion into the REMIS System. Normally, this clerk is assigned to the organization of ownership of the serviced equipment. Any notations, such as a "changed" or "rolled over" meter should be carefully pointed out to the clerk. The PM Warranty Coordinator must be notified to effect meter reading correction under these circumstances.

SUBJECT: EQUIPMENT

CHAPTER TITLE: PREVENTIVE MAINTENANCE PROGRAM

IV. EXHIBITS

Effective: 9/1/2000

A. PREVENTIVE MAINTENANCE MANAGEMENT CONTROL REPORTS

The Preventive Maintenance Status Report series affords management with its most effective tool for monitoring the Preventive Maintenance Program. The reports are in five segments with printing by the chief financial officers (Comptrollers, for Highways) and distribution by the PM Warranty Coordinators. They provide summary and detailed information about the performance of PMs for the preceding week. Managers, at each level, use the information to determine their organization's level of PM performance and to identify problems (that is, overdue PMs) for correction. Immediately following, is a description of each segment of the PM Status Report. This is followed by sample displays of the reports, headed by the same number and title as is on the description.

1. PM Control Report No. 1

PM Control Report No. 1 is the cover page of the weekly PM Maintenance Status Reports. This report provides managers with the total number of PMs generated for the organization(s) and period specified. The information of this report identifies the total PM workload for the upcoming week.

2. **PM Control Log, Report No. 2**
The PM Control Log is the second page of the weekly PM Status Report. This log lists, by organization, all equipment for which a PM Work Order is now due. This report lists each unit of equipment, its description, the PM printing and due date and the PM Work Order number. The report also lists the level of maintenance required, the meter reading and provides blank spaces for information posting.

The PM Control Log, maintained by the PM Warranty Coordinator, provides the District or Division with a record of all PM Work Orders for their organization(s). The PM Warranty Coordinator completes this log by entering the completion date and the meter reading for each PM Work Order.

3. **PM Status by Organization - Operational Classes, Report No. 1A**
This report is a summary listing of the number of PM Work Orders generated, but not yet completed, for non-seasonal equipment for selected organizations. The number of incomplete PM Work Orders for each organization is listed in the following categories: Current (30 days or less from date of issue), Over 30 (more than 30 days and up to 60 days from date of issue), Over 60 (more than 60 days and up to 90 days from date of issue), Over 90 (more than 90 days and up to 120 days from date of issue), Over 120 (more than 120 days and up to 150 days from date of issue).

4. **PM Status by Organization and E.D. - Operational Classes, Report No. 3A**
This report lists the specific PM Work Orders that are current and overdue for non-seasonal equipment for a given organization. Each unit of equipment is listed by class and E.D. (Equipment Division) number, the date the organization received each E.D., the PM Work Order Number and the PM print date.

The report also identifies the PMs as, due or overdue, the required level of maintenance and the meter reading when Work Order printing occurred.

5. **PM Status by Organization - Seasonal Classes, Report No. 1B**
This report lists the number of PM Work Orders generated, but not completed, similarly to Report No. 1A; however, Report No. 1B only addresses seasonal equipment. The PM Work Orders not completed are grouped by organization and by class of equipment for the previously defined categories of Current, Over 30 days, Over 60 days, Over 90 days and Over 120 days.

Distribution of Report No. 1B, by the PM Warranty Coordinator, is to the proper organizational managers. Distribution of this report's summary is to the proper organization manager (DOH District Administrator, DOH Division Director, "C" manager, etc.) This report aids shop managers in prioritizing and scheduling preventive maintenance. It also aids upper managers in checking the PM Work Order performance of subordinate organizations. This report permits review of preventive maintenance performance to focus on the seasonal classes of equipment.

6. **PM Status by Organization and E.D. - Seasonal Classes, Report No. 3B**
This report displays the PM Work Orders that are current or overdue by organization and by class of E.D. similarly to Report No. 3A. However, Report No. 3B only addresses seasonal equipment. This report lists each unit of equipment by class and E.D. number, the date the organization received each E.D., the PM Work Order Number and the date of PM printing. The report also lists the PMs as, due or overdue, the required level of maintenance and the meter reading when Work Order printing occurred.

PM Status Reports Distribution:
Each organization manager's jurisdiction determines the distribution of the pages of the PM Status Reports. For example, a DOH County Supervisor, in addition to the PM Work Orders, would typically receive a copy of the Control Report 1, Report 3A and Report 3B for his or her organization. However, the DOH District Adminsitrator would receive a copy of all Control Report 1(s), Report 1A and Report 1B for the district.

The PM Status Reports aid shop managers in setting priorities and scheduling preventive maintenance work. These reports aid upper managers in checking the PM Work Order performance of subordinate organizations. The goal of each manager must be to reduce the number of PM Work Orders issued but not completed.

B. **SAMPLE OF CONTROL REPORTS**
Effective: 9/1/2000

1. **PM Control Report No. 1**

B. **SAMPLE OF CONTROL REPORTS**

2. **PM Control Log, Report No. 2**

B. **SAMPLE OF CONTROL REPORTS**

3. **PM Status by Organization - Operational Classes, Report No. 1A**

B. **SAMPLE OF CONTROL REPORTS**

4. **PM Status by Organization and E.D. - Operational Classes, Report No. 3A**

B. **SAMPLE OF CONTROL REPORTS**

5. **PM Status by Organization - Seasonal Classes, Report No. 1B**

B. **SAMPLE OF CONTROL REPORTS**

6. **PM Status by Organization and E.D. - Seasonal Classes, Report No. 3B**

C. **SAMPLE WORK ORDERS**
Effective: 9/1/2000

Following, are samples of a computer generated Preventive Maintenance Work Order with completion instructions, then samples of the first pages of all of the variations of computer-generated work orders referenced in this chapter.

1. **Preventive Maintenance Work Order – Page 1**

C. **SAMPLE WORK ORDERS**

2. **Preventive Maintenance Work Order – Page 2**

C. **SAMPLE WORK ORDERS**

3. **Preventive Maintenance Work Order Completion Instructions**

a. FIELD PM – Place a checkmark in the proper block: "YES" or "NO". A PM done in the shop requires the "NO" box to be checked.

b. PM ORG NO – Enter the four-digit organization number of the organization whose mechanics performed the PM service.

c. NAMES – Enter the names of the mechanic(s) performing the PM service.

d. CURRENT METER READING – Enter the meter reading of the "working engine" to the nearest whole unit (drop tenths) of the E.D. serviced.

e. MILES HOURS – Place a checkmark in the box to represent the type of meter on the E.D.

f. VISUAL INSPECTION:, LUBRICATE:, CHANGE:, CHECK/ADJUST: & OPERATIONAL CHECK: - A checkmark is placed in the box next to each of the systems and parts listed, *after* the required type of service or inspection for that system or part has been performed.

g. NORMAL PM INTERVAL – No entry required; however, the number of hours or miles listed is used to calculate the next "Next Scheduled PM Meter Reading" for the PM Sticker, Form OE-91.

h. CO/SHOP SUPERVISOR – The signature of the manager (County Superintendent, Shop Foreman, etc.) responsible for the mechanic's performance of the completed PM.

i. CLASSIFICATION – Enter the work title of the certifying manager.

j. DATE – Enter the date the work was certified and the completed PM Work Order was signed.

k. NAME – The signature of the mechanic primarily responsible for performing the PM service.

l. CLASSIFICATION – Enter the work

classification of the mechanic.

C. **SAMPLE WORK ORDERS**

3. **Preventive Maintenance Work Order Completion Instructions (Continued)**

m. COMPLETED – Enter the date the PM service and work order were completed.

n. ENTERED INTO SYSTEM BY – The signature of the employee that entered the PM Completion Date and Meter Reading into REMIS.

o. WAGE CODE – Enter the wage code of the mechanic performing the PM Work Order.

NOTE: Items "o." through "v." – Multiple lines are provided to permit the recording of separate periods of work and several mechanics' efforts in the completion of each PM Work Order.

p. NAME – Enter the name of the mechanic performing the listed work.

q. TIME SPENT – Enter the number of hours, to the nearest quarter hour, spent by the mechanic for each period of work.

r. STOP/START TIME – Enter the time of day each reported period of work was started and stopped.

s. DATE – Enter the date each reported period of work was performed.

t. REPAIRS REQUIRED – List the repairs found to be necessary for each reported period of work. Only minor corrections/repairs may be made without starting a Repair Work Order, Form OE-27.

u. ACTUAL TOTAL HOURS – Enter the sum of hours for all reported work periods (total hours to complete the PM Work Order).

v. REPAIR WORK ORDER NO. – Enter the number of any Repair Work Order required to be performed due to needed repairs discovered during the PM service.

C. **SAMPLE WORK ORDERS**

4. **Level "A" PM Work Order – Page 1**

C. **SAMPLE WORK ORDERS**

5. **Level "B" PM Work Order – Page 1**

C. **SAMPLE WORK ORDERS**

6. **Level "C" PM Work Order – Page 1**

C. **SAMPLE WORK ORDERS**

7. **Pre-Season PM Work Order – Page 1**

C. **SAMPLE WORK ORDERS**

8. **Post-Season PM Work Order – Page 1**

C. **SAMPLE WORK ORDERS**

9. **Semi-Annual Work Order – Page 1**