RESEARCH NOTE 84-18

MAINTENANCE PERFORMANCE SYSTEM (ORGANIZATIONAL)
OPERATING MANUAL
MAINTENANCE MANAGEMENT INFORMATION SYSTEM FOR DIVISION 86

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The purpose of this effort is to develop the Maintenance Performance System-Organizational which is an integrated system for measuring maintenance performance, diagnosing performance problems, taking corrective actions, and providing training. This report provides instructions for operating the maintenance management information system of MPS-O.

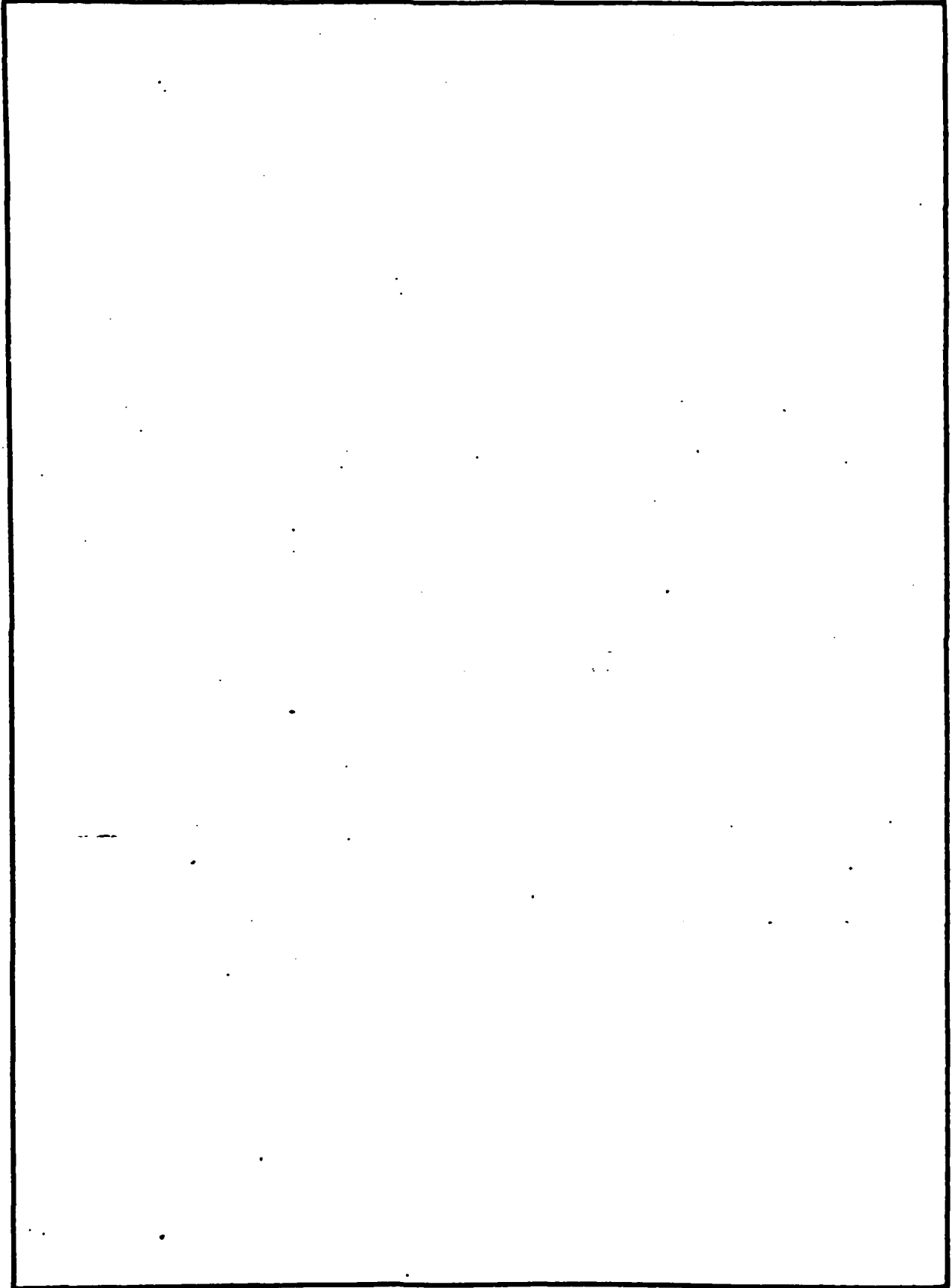DD FORM 1473 EDITION OF 1 NOV 65 IS OBSOLETE

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CHAPTER 1
INTRODUCTION

The Maintenance Management Information System Division 86 (MMIS-86) is a component of the overall Maintenance Performance System (Organizational) (MPS(O)). MMIS-86 provides unique information on organizational maintenance performance and training. The information is contained in reports distributed to commanders, maintenance and training managers, and maintenance supervisors.

This manual provides the instructions for operating MMIS-86. It is written for the system operator, and explains how to operate the system. A companion publication, the **User's Reference Manual, Maintenance Management Information System, Division 86,** contains information on the background of MMIS-86; the purpose, format, content, and interpretation of MMIS-86 reports; and a description of how data are processed to generate MMIS-86 reports.

MAINTENANCE MANAGEMENT INFORMATION SYSTEM 86 OVERVIEW

The purpose of MMIS-86 is to provide data on maintenance effectiveness, technical proficiency, and application of resources. Data for MMIS-86 are collected, stored, and processed to provide output in the form of reports. These reports give information on performance during a specific reporting period and relate it to performance during prior reporting periods. Data from prior reporting periods are averaged to serve as a comparative yardstick when judging current performance.

The MMIS-86 reports are distributed to commanders, maintenance managers, supervisors, and trainers. They use the reports to review maintenance performance, identify problems, and take corrective actions to improve maintenance performance and develop a sound organizational maintenance program.

Figure 1 graphically shows the flow of maintenance information and the MMIS-86.

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Figure 1. Maintenance information flow in the Maintenance Management Information System, Division 86.

MMIS-86 COVERAGE

MMIS-86 covers the crews and mechanics for selected equipment in a combat battalion. A feature of MMIS-86 is that it can be tailored to fit changes in personnel, equipment type and maintenance tasks. Procedures for modifying MMIS-86 coverage are in **Chapter 9. How to Modify MMIS-86.**

Specific personnel currently included in MMIS-86 are:

- Driver/crew of M60A1 tanks, AVLB's and M113-Family carriers
- MOS 31V, Tactical Communications Systems Operator/Mechanic
- MOS 45N, M60A1/A3 Tank Turret Mechanic
- MOS 45T, Fighting Vehicle Systems Turret Mechanic
- MOS 63B, Light Wheel Vehicle Mechanic
- MOS 63N, M60A1/A3 Tank System Mechanic
- MOS 63S, Heavy Wheel Vehicle Mechanic
- MOS 63T, Fighting Vehicle Systems Mechanic

Specific equipments currently covered in MMIS-86 are:

TRACKED VEHICLES:

- M60A1-Series Tank
    - M9, Dozer Tank
- M60A1L-AVLB
- M88A1-Medium Recovery Vehicle
- M113A1-Family Armored Personnel Carriers
    - M106A1, 107mm Mortar Carrier
    - M125A1, 81mm Mortar Carrier
    - M132A1, Flame Thrower Carrier
    - M577A1, Command Post Carrier
    - M901, ITV, TOW Carrier
- M578-Light Recovery Vehicle

WHEELED VEHICLES:

- M35-Family 2$\frac{1}{2}$ Ton Truck
- M54-Family 5 Ton Truck
- M151-$\frac{1}{4}$ Ton Truck
- Gama Goat Family
    - M561-1$\frac{1}{4}$ Ton Cargo
    - M792-1$\frac{1}{4}$ Ton Ambulance
- GOER-Family
    - M520, 8 Ton Cargo
    - M553 10 Ton Wrecker
    - M559 Fuel Tanker
    - M877, 8 Ton Cargo with Crane

COMMUNICATIONS EQUIPMENT:

- Radios
    - AN/VRC-12, Radio Set Components
    - AN/VRC 43 through 49, Radio Set Components
    - AN/VRC 64, Radio Set Components
- Other Communication Equipment
    - CVC Helmet
    - SB-22 and SB-993 Switchboards
    - TA-1 and TA-312 Telephones
    - KY-57 Communication Security

HOW THIS MANUAL IS ORGANIZED

This manual is divided into the nine chapters and appendix described below. Chapters 1 and 2 are general in nature. Chapters 3-9 are specifically addressed to the system operator and the actions necessary to operate the system.

Chapter 1. Introduction. This chapter gives the purpose of the manual, provides an overview of MMIS-86, and describes the organization of the manual.

Chapter 2. How to Start Up and Operate MMIS-86. This chapter lists resources required to initiate MMIS-86 and describes general procedures for operation of the system.

Chapter 3. How to Use MMIS-86 Forms. This chapter describes use of each form in detail--its purpose, persons recording data on the form, detailed instructions for form entries, and procedures for data collection.

Chapter 4. How to Use MMIS-86 Programs. Chapter 4 describes the type of computer system used in conjunction with MMIS-86 and provides instructions for its operation. It also describes the procedures for selecting an MMIS-86 program, changing to another program or battalion, and ending the program.

Chapter 5. How to Enter/Edit MMIS-86 Data. This chapter contains instructions for preparing forms for data entry, entering data from each form, reviewing stored data, and correcting any errors.

Chapter 6. How to Generate MMIS-86 Reports. Chapter 6 discusses the categorization of MMIS-86 reports by type and by reference number. It tells how often each report should be printed, and the report period duration. Special instructions for actions to be taken prior to generating reports and specific instructions for printing each type of report are also provided in this chapter.

Chapter 7. How to Distribute MMIS-86 Reports. Printed reports must be distributed. Chapter 7 describes how to copy and assemble sets of reports for each recipient. This chapter also lists, by duty position, which persons receive MMIS-86 reports and how often they will get them.

Chapter 8. How to Use Utilities Programs. Chapter 8 describes the procedures for using the various support programs. These programs are used to prepare blank diskettes, copy program or data diskettes, print out stored data for error checks, delete erroneous data, check file status and purge the data base.

Chapter 9. How to Modify MMIS-86. Over time, unit equipment may be replaced by a new model or different type. MOS of personnel performing

maintenance, type maintenance tasks performed, or organization for maintenance may also change. For example, an armor battalion may receive M60A3 or M1 tanks to replace M60A1's, with concurrent changes in mechanic MOS and in tasks performed. MMIS-86 can be modified to accommodate such changes.

Chapter 9 describes the system modification procedures used to add, modify or delete equipment, personnel, maintenance tasks and/or organization for maintenance. Modifying MMIS-86 is a major event, and the decision to do so must be made at the Battalion Maintenance Officer (BMO) level or higher, not by the system operator acting alone. As a result, Chapter 9 is issued separately from the remainder of the manual. When MMIS-86 modifications are approved, the instructions in Chapter 9 will be made available to the system operator for implementation of the necessary changes.

Appendix. Maintenance Task Lists by Equipment and MOS. This appendix is divided into ten sections--one for each equipment covered in MMIS-86. Each section has listings by MOS of the maintenance tasks performed by that MOS. These task lists are used when completing certain MMIS-86 forms.

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CHAPTER 2

HOW TO START UP AND OPERATE MMIS-86

MMIS-86 is designed to collect data systematically on maintenance performance, store and process these data in a computer, and produce a series of output reports for distribution to users. The system is designed to operate with minimum interference in normal unit operations, and to use existing information sources where possible.

A system operator collects the data using specially prepared forms. Some information, however, can only be provided by maintenance personnel, who will complete the forms for collection by the system operator.

The data collection forms are also used for entry of data into the system computer. Completed data collection forms are checked for legibility, validity and completeness, and annotated as necessary before data entry. The data from the forms are entered into the computer, which stores and processes the data, and prints summary reports. The reports are then distributed to users.

START UP REQUIREMENTS

Personnel

Starting up MMIS-86 requires a trained system operator. The duties of the operator are to:

- Collect and check data
- Enter the data in the computer
- Print and distribute reports
- Interact with information providers and users

Other personnel needs are minimal. Drivers or other combat vehicle crewmen, mechanics, and maintenance supervisors are required to make entries on specific MMIS-86 forms as a part of their daily maintenance routine.

Training

Before starting up MMIS-86, the system operator(s) must be trained in all phases of its operation.

Maintenance personnel who make entries on specific MMIS-86 forms must be trained on their duties before implementation of the system.

Prior to MMIS-86 start up, supervisors, managers, and commanders must be briefed on all aspects of MMIS-86 and the roles of various personnel involved in its operation.

Equipment

The MMIS-86 currently is designed to operate with an IBM 5120 computing system, consisting of an IBM 5110 Model 3 computer and an IBM 5103 printer. This system is discussed in Chapter 4. The computing system requires an MMIS-86 program diskette and diskettes for data storage and back up.

Other equipment needs are minimal—a chair and a desk or table for the system operator, and a file cabinet or drawers for storing the data forms, reports and other support materials.

Supplies

Implementation of MMIS-86 requires special data collection forms and blank diskettes. *Use of the forms is* explained in Chapter 3. Use of the diskettes is covered in Chapter 8.

Facilities

An adequate work area is the only facility required for operation of the MMIS-86. The area must have space for a desk, chair, table, and files. The work area must be clean, dry, reasonably dust-free, and have a dedicated power source or at least one that is free from voltage fluctuations.

Initial Data

The initial data required to implement MMIS-86 are rosters of personnel and data on their prior maintenance experience.

The roster will list the name of each person assigned in grades E1 through E7 who is working in a mechanic MOS in MMIS-86. These mechanic MOS's are: 31V, 45N, 45T, 63B, 63N, 63S, and 63T. The roster format will also show the individual's primary MOS and paygrade in parentheses after his name.

Personnel listed on the roster who are in paygrades E1 through E5 must complete a task experience summary appropriate to their MOS. The special form

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prepared for each MOS lists the tasks for each equipment or job tracked in MMIS-86. Each man must list how many times he has performed each task since completing AIT/OSUT, according to his best recollection or estimate.

The forms used for preparing the roster and recording task experience are covered in Chapter 3.

OPERATING THE MMIS-86

Form Completion

Operation of MMIS-86 requires completion of various special forms described in Chapter 3. Certain forms require entries by maintenance personnel, i.e., drivers or other crew members, mechanics, and supervisors. Other forms are completed by the system operator.

Data Collection

Completed forms are collected from the various personnel by the system operator. Forms are collected from a central point in each company, and in battalion maintenance and battalion communications platoons.

Data Checks

Prior to data entry, the system operator checks the collected forms for completeness and validity of the data. Immediate action must be taken to correct incomplete entries and resolve any questions of validity. Specific checks for each form are discussed in Chapter 3.

Data Entry

The data on the completed forms is entered into the computer by the system operator. General procedures for operating the computer and instructions on selecting MMIS-86 programs are covered in Chapter 4. When the appropriate program has been selected, the information from each form can be entered in the computer. Specific instructions for entry of data from each type form are provided in Chapter 5.

Report Generation

The computer stores and processes the raw data entered from the forms. At specified intervals the system operator has the computer generate reports

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summarizing the processed data. Instructions for generating the reports are provided in Chapter 6.

Report Distribution

After the reports are printed they are assembled in sets for each user. The report sets are then distributed to the appropriate recipients. Procedures for assembling and distributing the reports are explained in Chapter 7.

CHAPTER 3

HOW TO USE MMIS-86 FORMS

USE OF THE FORMS

The primary use of MMIS-86 forms is to collect information on maintenance performance in a simple and effective way. At the organizational level there are two categories of personnel performing maintenance either separately or in combination: the drivers/crews, and the mechanics. Special forms document actions by each category of maintenance personnel.

External factors beyond the control of maintenance personnel can affect maintenance performance. When examining MMIS-86 reports, the reader of the reports must be aware of these factors. They may include holiday periods, field exercises, special weather conditions, and the training status the unit was in during a given reporting period. MMIS-86 forms are used to record this type of information.

A baseline of numbers of personnel and prior experience must be established to judge individual and/or group maintenance performance and determine change over time. MMIS-86 forms are used to record the number of personnel by section: and how much maintenance experience personnel have had prior to their coverage under MMIS-86.

To permit tracking of maintenance performed on a specific vehicle and correlate repairs with the usage of the vehicle, MMIS-86 forms are used to identify each vehicle, who performed what maintenance on the vehicle, and when the maintenance was performed.

A description of data recorded on each form follows:

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TABLE 1
DATA RECORDED BY TYPE FORM

#	MMIS-86 Form Title	Data Recorded
1	Crew Maintenance	• Vehicle type and bumper number • Tasks performed • Crew man-hours
2	Mechanic Maintenance	• Vehicle type and bumper number • Tasks performed • Mechanic man-hours • Assistance (crew) man-hours
3	Maintenance Task Experience History (by MOS)	Maintenance experience by tasks prior to coverage in MMIS-86
4	Interpretation Comments	Special events or activities
5	Training Cycle Definition	Training status, i.e., red, green, amber or no status
6	Roster Update	Changes in assigned personnel
7	Vehicle Bumper Number	Bumper numbers of vehicles tracked in MMIS 86
8	Mechanic Certification or Task Qualification	• Vehicles/systems mechanic has been certified on • Tasks by vehicle mechanic has qualified on

COMPLETING THE FORMS

Completion Frequency

Forms used to record information on maintenance performance are completed daily or on a per-job basis. Other forms which provide other data are completed less frequently: either once a week or one time/periodically. Table 2 shows the frequency of completion by type form.

Persons Making Form Entries

Information on maintenance performance can best be provided by those persons directly involved with the work: drivers/crews, mechanics, and maintenance supervisors. Other information necessary to the operation of MMIS-86 can be entered on appropriate forms by the system operator. Table 3 shows the persons, by duty position, who make entries on the various MMIS-86 forms.

TABLE 2
COMPLETION FREQUENCY BY TYPE FORM

| | | Completion Frequency | | |
#	MMIS-86 Form Title	Daily or Per Job	Once a Week	One Time or Periodically
1	Crew Maintenance	X		
2	Mechanic Maintenance	X		
3	Maintenance Task Experience History (by MOS)			X
4	Interpretation Comments		X	
5	Training Cycle Definition		X	
6	Roster Update		X	
7	Vehicle Bumper Number			X
8	Mechanic Certification or Task Qualification			X

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TABLE 3
PERSONS MAKING FORM ENTRIES BY TYPE FORM

#	MMIS-86 Form Title	Persons Making Form Entries			
		Driver/ Crew	Mechanic	System Operator	Supervisor
1	Crew Maintenance	X			
2	Mechanic Maintenance		X		
3	Maintenance Task Experience History (by MOS)		X		
4	Interpretation Comments			X	
5	Training Cycle Definition			X	
6	Roster Update			X	
7	Vehicle Bumper Number			X	
8	Mechanic Certification or Qualification				X

COMPLETION INSTRUCTIONS

Instructions for completion of each of the eight MMIS-86 forms are provided on the pages which follow. These instructions include:

- A summary of who, when, what, and why forms are completed.
- A discussion of form completion requirements.
- Instructions for line entries.
- An example of a completed form on a facing page.

Information on how to complete a form must be given to all personnel making entries on that form (see Table 3). Note that Forms 1, 2, 3 and 8 are completed by persons other than the system operator. These forms, except for Form 3, have the instructions for line entries printed on the back of the form. Form 3 has instructions for completion printed at the beginning of the form.

Completion of Forms 1, 2, and 8 also requires reference to a task list. The task lists are in the Appendix, Maintenance Task Lists by Equipment and MOS. Copies of the task lists must be provided to personnel who complete these forms. If questions arise on exactly what actions are included in the performance of a given task, reference must be made to the list of key steps for the task contained in the **Task Performance Steps Reference Manual, Maintenance Management Information System**, a copy of which is available in each section.

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Instructions for Completing Form 1 - Crew Maintenance

SUMMARY

WHO: A vehicle commander supervising maintenance or a driver/crewman performing maintenance on an M60 tank, AVLB, or M113-family carrier must complete a Form 1.

WHEN: Each time maintenance is performed by the crew without the assistance of a mechanic.

WHAT: Record crew maintenance tasks performed and man-hours expended on each task by each crewman.

WHY: Used to calculate man-hours spent on maintenance by crews, and update vehicle maintenance histories.

DISCUSSION

There is a separate task list for each vehicle that must be used to complete line 4. (See Appendix, Maintenance Task Lists by Equipment and MOS.) Each driver/crew must have access to a copy of the task list for their equipment.

Up to four separate maintenance tasks can be entered on Form 1. If more than four tasks are performed at one time on a vehicle, a second Form 1 must be completed for the additional tasks.

INSTRUCTIONS FOR LINE ENTRIES

# Line Entry	Instructions
1. Julian date	**Write** the 4-digit Julian date on which the maintenance was **completed.**
2. Vehicle type	**Mark** the appropriate box.
3. Vehicle bumper number	**Write** the bumper number of your vehicle.
4. Task numbers	● **Look** at the task list you were given and find the letter or number matching the maintenance task(s) you performed.
	● **Write** the task letter or number in a box. If you did more than one task, use the other boxes. If a task is not on the list, **write 99** in a box for that task.
5. Names and man-hours	● **Write** your **last name and initial** on the first line. Add the last name and initial of any other crew member who also worked on the job.
	● **Write** the man-hours (to the nearest tenth of an hour) that each man spent on each task in the box directly below the appropriate task number.

1 CREW MAINTENANCE

(For completion instructions see reverse side)

1. _3, 2, 1, 0_ Julian date

2. M60 AVLB M113
   ☑ ☐ ☐   Equipment Type
   1   2   3

3. _A 14_ Vehicle bumper number

4. **Task Numbers**

A	5	9	

5. **Names & Man-Hours**

Thomas	3	1.5	.7
Roberts	3	1.5	.7
Glenn	3		.7

Example of a Completed Form 1.

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Instructions for Completing Form 2 – Mechanic Maintenance

SUMMARY

WHO: Mechanics performing maintenance on any vehicle or communication equipment covered by MMIS-86 must complete a Form 2.

WHEN: Each time maintenance is performed by a mechanic, record:
- Maintenance tasks performed.
- Man-hours expended on each task by each mechanic.
- Crew assistance man-hours expended on each task.

WHAT: Record mechanic maintenance tasks performed and man-hours expended on each task by each mechanic. Also include total crew assistance man-hours.

WHY: Used to calculate man-hours spent on maintenance by mechanics and crews, update mechanic task experience histories, and update vehicle maintenance histories.

DISCUSSION

There is a separate task list for each mechanic MOS that must be used to complete line 5. (See Appendix, Maintenance Task Lists by Equipment and MOS.) Each mechanic must have access to a copy of the task list(s) for equipment in his MOS.

Up to four separate maintenance tasks can be entered on Form 2. If more than four tasks are peformed at one time on a vehicle, a second Form 2 must be completed for the additional tasks.

INSTRUCTIONS FOR LINE ENTRIES

# Line Entry	Instructions
1. Julian date	**Write** the 4-digit Julian date on which the maintenance was **completed.**
2. Vehicle/equipment type	**Mark** the appropriate box for the vehicle/equipment.
3. Vehicle bumper number	**Write** the bumper number of vehicle you worked on. For **radios**, leave blank.
4. MOS	**Mark** the box for your MOS. (Only **one** MOS per form.)
5. Task numbers	● **Look** at the task list for that type equipment and find the letter or number matching the maintenance task(s) you performed.
	● **Write** the task letter or number in the first box. If you did more than one task use the other boxes.
	● If a task is not on the list, **write 99** in a box for that task.
6. Names and man-hours	● **Write** your **last name** and **initial** on the first line. Add the last name and initials of any other mechanic (with the same MOS) who also worked on the job.
	● **Write** the man-hours (to the nearest tenth of an hour) that each man spent on each task, in the box directly below the task he worked on.
7. Assistance man-hours	**Write** the total driver/crew man-hours (to the nearest tenth of an hour) spent on each task in the box directly below the appropriate task number. For example, if three crew members each worked 3 hours on the first task of line #5, (i.e., 3 men x 3 hours each = 9) write 9 in the first box of line #7.

² MECHANIC MAINTENANCE
(For completion instructions see reverse side)

1. $\underline{3}$ $\underline{1}$ $\underline{8}$ $\underline{1}$ Julian date

2.

M60	AVLB	M113	M88	M578	M151	M35/M54	M561/M792	GOER	COMMO
☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7	8	9	10

3. $\underline{\quad A\ 21 \quad}$ Vehicle bumper number

4.

31V	45N/T	63B/S	63N/T	
☐	☐	☐	☑	MOS
1	2	3	4	

5. **Task Numbers**

2	3	7	

6. **Names & Man-Hours**

Muldeen	1	2	.5	
Adair		2		

7. **Assistance Man-Hrs**
   (Operators/Crew)

	4	1	

Example of a Completed Form 2.

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Instructions for Completing Form 3 – Maintenance Task Experience History

SUMMARY

WHO: Mechanics with duty MOS of 31V, 45N, 45T, 63B, 63N, 63S, or 63T complete this form.

WHEN: When MMIS-86 is implemented, all personnel complete the form. New personnel complete the form as part of their in processing.

WHAT: Records the experience an individual has had in performing each MMIS-86 task from the time he completed AIT/OSUT to the time his name is entered in MMIS-86.

WHY: Provides the base line for computing an individual's growth in experience over time, in numbers and types of MMIS-86 tasks performed.

INSTRUCTIONS FOR FORM COMPLETION
(printed at the top front of each form)

³ MAINTENANCE TASK EXPERIENCE HISTORY (63N/T)

HOW TO COMPLETE THIS FORM

- *Check the MOS shown in (   ) at the end of the form title above to be sure it matches your duty MOS.*

- *Print your name, primary MOS, and paygrade below.*

NAME __*Mulligan*__   PRIMARY MOS _63N_ PAYGRADE _E3_

- *Make the estimates requested below.* **THIS IS NOT A TEST** *so please be honest.*

- *Look at the first task on the list.*

- *Estimate how many times you have done this task since you completed AIT or OSUT.*

- *Enter the number in the space for that task. If you have never done the task, leave the space blank.*

- *Continue with the task estimates. Read down each column.*

M60A1 TANK/AVLB
MAINTENANCE TASK LIST

A. __12__ Perform periodic service (Q, S, A or L)
B. _____ Perform technical inspection

1. __25__ Remove defective/inoperative powerpack
2. __15__ Ground hop powerpack
3. __3C__ Install repaired powerpack
4. __25__ Remove powerpack to do other task(s)
5. __25__ Install powerpack after completing other task(s)

6. __6C__ Remove back deck
7. __6C__ Install back deck
8. __3C__ Replace fuel lines and/or fittings
9. __25__ Replace fuel filters
10. __12__ Replace oil cooler

11. __3C__ Replace oil filters
12. __2C__ Replace oil cooler lines
13. __1C__ Adjust accelerator, throttle controls, and linkage
14. _____ Replace accelerator, throttle controls, and/or linkage
15. _____ Troubleshoot electrical system

M60A1/AVLB (Continued)

16. _____ Repair wiring
17. _____ Replace sending units or gages
18. _____ Replace circuit breakers
19. __5__ Replace batteries, cables, and/or clamps
20. _____ Replace voltage regulator

21. __2__ Replace starter
22. __4__ Replace generator and/or seal
23. __1C__ Replace air cleaner blower motor
24. _____ Replace blower motor relay
25. __1__ Replace fan tower seal

26. __2C__ Adjust transmission linkage
27. _____ Replace transmission shifting control assembly
28. __12__ Replace final drive
29. __15__ Replace final drive seals
30. __1__ Replace master or slave cylinder

31. __5__ Replace main brake line
32. __1C__ Bleed brake lines
33. __2C__ Adjust brakes, controls, and/or linkage
34. __1__ Replace parking brake and/or cable
35. __8__ Adjust servo bands

Example of a Completed Form 3.

Instructions for Completing Form 4 – Interpretation Comments

SUMMARY

WHO: System Operator completes Form 4.

WHEN: Weekly or as often as necessary.

WHAT: Record occurrences or activities that may affect maintenance performance.

WHY: Users of MMIS-86 reports must be made aware of external factors affecting maintenance performance when interpreting the MMIS-86 reports.

DISCUSSION

Entries on this form record information that may be used by MMIS-86 users to interpret or clarify performance data. As you collect data and contact unit personnel, note any special events or circumstances and record them on this form. Some examples are field exercises, special training, adverse weather conditions, holidays, and command inspections.

The Julian date links the comment to a specific reporting period. Reporting periods are one-week intervals beginning on Saturday and ending on Friday. If the duration of an event is less than the reporting period, the comment should include the date(s) of the activity. For events of more than one week's duration, separate comments should be recorded for the beginning and end of the activity.

Entries on the form do not have to be sequential, but can be in any Julian date order. There are no restrictions on the number of comments per reporting period.

INSTRUCTIONS FOR LINE ENTRIES

Entry	Instruction
Julian date	Write Julian date for which comment applies.
Comment	Record event of interest and date(s) of occurrence.

4 INTERPRETATION COMMENTS

Julian Date	Comment
3.0.7.6	TRAINING HOLIDAY - 3076
3.0.8.4	19 CMF SQT - 3081 TO 3084
3.0.8.4	UNIT PARTY - 3084
3.0.8.7	UNIT MOVES DOWN RANGE - 3087
3.0.9.1	TEAM TACTICAL TRAINING - 3088 THRU 3091

Example of a Completed Form 4.

Instructions for Completing Form 5 - Training Cycle Definition

SUMMARY

WHO: System Operator completes Form 5.

WHEN: Periodically complete as needed to update information.

WHAT: Record the training cycle scheduled for each reporting period.

WHY: The training cycle is a factor that affects availability of personnel and, as a result, maintenance performance.

DISCUSSION

Obtain the cycles of training from the unit training schedule or by calling the S-3 Office and obtaining the cycles from a clerk. The cycles are Red, Green, Amber, or None (for no cycle).

INSTRUCTIONS FOR COMPLETING LINE ENTRIES

Entry	Instruction
Week ending Julian date	Enter the Julian date for the Friday of a week.
Training cycle	Enter the first letter of the training cycle, i.e., R, G, A, or N.

5 TRAINING CYCLE DEFINITION

Week ending Julian date	Training cycle	Week ending Julian date	Training cycle
1. 3 0 4 9	A	5. 3 0 7 7	6
2. 3 0 5 6	A	6. 3 0 8 4	R
3. 3 0 6 3	6	7. 3 0 9 1	R
4. 3 0 7 0	6	8. 3 0 9 8	A

Example of a Completed Form 5.

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Instructions for Completing Form 6 - Roster Update

SUMMARY

WHO: System Operator completes Form 6.

WHEN: At least once each week.

WHAT: Record changes in status of assigned personnel, i.e., new arrivals, departures, or changes in rank or duty MOS.

WHY: Used to update the roster. Unit available roster man-hours are calculated from information on the roster.

DISCUSSION

To start up the MMIS-86, the names of all unit personnel working in a mechanic duty MOS listed below must be recorded in the ADD section of Form 6.

- MOS 31V, Tactical Communications System Operator/Mechanic (NOTE: include personnel with primary MOS 36K or 05C working part-time in MOS 31V.)
- MOS 45N, M60A1/A3 Tank Turret Mechanic
- MOS 45T, FVS Turret Mechanic
- MOS 63B, Light Wheel Vehicle Mechanic
- MOS 63N, M60A1/A3 Tank Systems Mechanic
- MOS 63S, Heavy Wheel Vehicle Mechanic
- MOS 63T, FVS Mechanic

After MMIS-86 is operational, record subsequent changes in assignments, rank or duty MOS of these personnel on Form 6. Visit the unit orderly room at least once each week to check on changes. Then check with the section NCOIC or immediate supervisor to verify duty assignment and determine percentage of time the individual is working in an MOS. For example, an E6 at Skill Level 3 in MOS 63N may also perform repairs done by MOS 45N, Turret Mechanic. If his time was split evenly between these two MOS, he would be listed as 50% in MOS 63N/T and 50% in MOS 45N, using a separate ADD form for each entry.

A separate form must be prepared for each name to be recorded in the ADD section. Up to six names can be recorded in the DELETE or MODIFY sections.

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INSTRUCTIONS FOR COMPLETING LINE ENTRIES

ADD Name

#	Line Entry	Instructions
1	MOS	**Mark** appropriate duty MOS.
2	Name (Primary MOS-paygrade)	**Write** individual's last name, first initial, primary MOS, paygrade.
3	Section	For personnel in MOS 63B, 63N, 63S or 63T, **mark** section assignment.
4	% of time working in MOS	**Mark** the appropriate box. Usually it will be 100%, but for some individuals, such as a 36K also working as a 31V, it will be less than 100%.
5	Start date	**Record** the Julian date the individual was assigned to the unit, or when his coverage in MMIS-86 began.
6	ETD date	**Record** the Julian date for the individual's estimated time of departure from the unit or when his term of service is up.

DELETE

Line Entry	Instructions
Code #	**Enter** the individual's code number from the unit roster.
Effective Julian date	**Enter** the Julian date the individual departed the unit.
Name	Enter **only** if you don't have a roster available to look up his code number.

MODIFY

Line Entry	Instructions
Code #	**Enter** the individual's code number from the unit roster.
Effective Julian date	**Enter** the Julian date of the change to the individual's status.
Change	**Enter** the change, e.g., change in rank or duty MOS.

• ROSTER UPDATE

ADD name

1. ☐ 31V ☐ 45N/T ☐ 63B/S ☑ 63N/T   MOS
   (1)   (2)   (3)   (4)

2. <u>Osborne, J</u>   (<u>63N-E4</u>)
      Name   (Primary MOS-paygrade)

3. ☐ SVC ☐ RCVRY ☑ TRACK ☐ WHEEL ☐ TURR ☐ COMMO
   (1)   (2)   (3)   (4)   (5)   (6)

4. ☐ 25 ☐ 50 ☐ 75 ☑ 100   % of time working in MOS
   (1)   (2)   (3)   (4)

5. <u>3 1 5 9</u>   Start date

6. <u>7 0 3 1</u>   ETD date

DELETE

	Code#	Effective Julian date	Name
1.	320	3 1 5 7	
2.			
3.			
4.			
5.			
6.			

MODIFY

	Code#	Effective Julian date	Change
1.	410	3 1 6 0	E3 to E4
2.			
3.			

Example of a Completed Form 6.

Instructions for Completing Form 7 – Vehicle Bumper Number

SUMMARY

WHO: System operator completes Form 7.

WHEN: When MMIS-86 is implemented, all vehicles covered by MMIS-86 are entered on this form. Complete additional forms as needed when a unit changes the bumper number of any vehicle covered in MMIS-86.

WHAT: Record bumper numbers for all vehicles covered in MMIS-86.

WHY: Provides information for tracking specific vehicles in MMIS-86.

INSTRUCTIONS FOR LINE ENTRIES

ADD Bumper Number

#	Line Entry	Instructions
1	Vehicle Type	**Mark** the appropriate box.
2-9	Date	**Write** the Julian date a vehicle is added to MMIS-86.
	Bumper #	**Write** the vehicle's bumper number, e.g., A11.

MODIFY Bumper Number

#	Line Entry	Instructions
1	Vehicle Type	**Mark** the appropriate box.
2	Old #	**Write** the bumper number being changed.
	New #	**Write** the new bumper number.

DELETE Bumper Number

#	Line Entry	Instructions
1	Vehicle Type	**Mark** the appropriate box.
2	Date	**Write** the Julian date the vehicle was deleted.
	Bumper #	**Write** the deleted vehicle's bumper number.

7 VEHICLE BUMPER NUMBER

ADD Bumper number

M60	AVLB	M113	M88	M578	M151	M35/M54	M561/M792	GOER	
1. ☑	☐	☐	☐	☐	☐	☐	☐	☐	Vehicle Type
1	2	3	4	5	6	7	8	9	

	Date	Bumper #
2.	3 1 5 9	A11
3.	3 1 5 9	A12
4.	3 1 5 9	A13
5.	3 1 5 9	A14
6.	3 1 5 9	A21
7.	3 1 5 9	A22
8.	3 1 5 9	A23
9.	3 1 5 9	A24

MODIFY Bumper number

M60	AVLB	M113	M88	M578	M151	M35/M54	M561/M792	GOER	
1. ☑	☐	☐	☐	☐	☐	☐	☐	☐	Vehicle Type
1	2	3	4	5	6	7	8	9	

Old #
2. A15

New #
A31

DELETE Bumper number

M60	AVLB	M113	M88	M578	M151	M35/M54	M561/M792	GOER	
1. ☐	☐	☑	☐	☐	☐	☐	☐	☐	Vehicle type
1	2	3	4	5	6	7	8	9	

	Date	Bumper #
2.	3 1 5 9	A8

Example of a Completed Form 7.

Instructions for Completing Form 8 – Mechanic Certification or Task Qualification

SUMMARY

WHO: The BMO, BMT, and/or BMS use this form to certify any mechanic as proficient in selected tasks for a specific technical area. A mechanic's immediate supervisor uses this form to qualify the mechanic on individual tasks.

WHEN: The form is completed when the BMO, BMT, and/or BMS determines the mechanic is qualified on the selected tasks for a specific technical area or whenever a mechanic's immediate supervisor determines the mechanic is qualified on a task or tasks.

WHAT: Records mechanic certification and task qualification.

WHY: Provides individual mechanic certification and qualification history.

INSTRUCTIONS FOR LINE ENTRIES

#	Line Entry	Instructions
1	Julian date	**Write** the 4-digit Julian date on which certification or qualification is completed.
2	MOS	**Mark** the box for mechanic's MOS.
3	Mechanic's name	**Write** the mechanic's **last name** and **initial**.

NOTE: For certification, complete **only** lines 4, 5 and 8. For task qualification, complete **only** lines 6 through 8.

#	Line Entry	Instructions
4	Tech area	**Mark** the appropriate box.
5	Certification level	**Mark** the appropriate box.
6	Equipment type	**Mark** the appropriate box.
7	Task number	• **Look** at the task list for the type equipment you marked on line 6.
		• **Find** the maintenance task(s) that you have qualified the mechanic on.
		• **Write** the number of the task(s) in the boxes on line 7.
		• You may **qualify** the mechanic on up to eight corrective maintenance tasks.
8	Authorizer's signature	**Sign** your name authorizing certification or qualification.

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8 MECHANIC CERTIFICATION OR TASK QUALIFICATION

1. **3, 1, 5, 9,** Julian date

	31V	45N/T	63B/S	63N/T	
2.	☐	☑	☐	☐	MOS
	1	2	3	4	

3. _Gordon, J_ Mechanic's name

If CERTIFICATION, enter:

	TRACK	WHEEL	TURR	COMMO	
4.	☐	☐	☐	☐	System Code
	1	2	3	4	

5. [_____] Certification Code

If TASK QUALIFICATION, enter:

	M60	AVLB	M113	M88	M578	M151	M35/M54	M561/M792	GOER	COMMO	
6.	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Equipment Type
	1	2	3	4	5	6	7	8	9	10	

7. | 2 | 3 | 4 | 8 | 9 | 10 | 16 | 17 | Task Number

8. _____ Authorizer's Signature

Example of a Completed Form 8.

COLLECTING THE FORMS

The system operator must collect the completed forms each day to insure that the forms are completed and that the information recorded is current and valid. Maintenance personnel have heavy workloads. If they are not frequently reminded to complete the forms, they may neglect form completion. Further, the longer the time interval is between maintenance action and form completion, the more likely it is that information recorded on the form will not be accurate or valid.

Preparing for Form Collection

MMIS-86 Forms 1, 2, and 8 are prepared by persons other than the system operator. To facilitate collection of these forms, establish a special box or a well-marked location in each maintenance office where personnel can turn in these forms. Inform all personnel where the form collection point is, and instruct them to drop their forms there after they complete them. Establish a point of contact in each unit for follow-up action when forms are not turned in.

Collection Frequency

Table 4 shows the collection frequency by MMIS-86 form number.

TABLE 4
COLLECTION FREQUENCY OF MMIS-86 FORMS

COLLECTION FREQUENCY

MMIS-86 Form #	Daily/Per Job	Weekly	One Time/ Periodic
1	X		
2	X		
3			X
4		X	
5		X	
6		X	
7			X
8			X

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Collection Control

MMIS-86 Forms 1 and 2 are completed by drivers/crews or mechanics. Table 4 shows that these forms are to be collected daily or for each job. Collection of forms prepared by a large number of people, each of whom may prepare one or more forms a day, presents a collection control problem. To assist in controlling collection and insuring that all forms are collected, a pecial collection form, Form 99, Collection Control Check Sheet, is provided.

Collection Control Check Sheet Instructions

Complete a check sheet for each week. For each company or section, enter the name of person responsible for supervising form completion. Check off the forms on the control sheet as they are collected. A blank space shows that forms are missing and follow-up collection action must be taken. If, in the follow-up, it is learned that no forms are required for that day due to no work being performed, place a dash (-) in the appropriate spaces to show that follow-up action has been completed.

Suggested Daily Collection Sequence

A suggested sequence of daily form collection actions is listed below.

- Each work day, go to each company covered in MMIS-86 and to the battalion maintenance and communication platoon offices.

- Obtain information on past, present, and future maintenance activities. Enter relevant information on Form 4, Interpretation Comments.

- Pick up any forms deposited in the MMIS-86 collection box. Mark Form 99, Collection Control Check Sheet, in the appropriate spaces for forms found in the box.

- Begin follow-up action to collect forms missing from previous work day.

Periodic Form Collection

- Each Friday take a copy of the MMIS-86 roster to the HHC orderly room. Use it as a basis to identify mechanics newly assigned, with section assignment changes, or permanently departed from the unit. Record the information on Form 6, Roster Update.

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99 Collection Control Sheet
MMIS-86 Form By Day and Form Number

Week Ending |___|___|___|___|

Form 1 - Crew Maintenance

Contact In	Monday	Tuesday	Wednesday	Thursday	Friday
A Co.					
B Co.					
C Co.					
D Co.					
HHC					

Form 2 - Mechanic Maintenance

Contact In	Monday	Tuesday	Wednesday	Thursday	Friday
Commo					
Svc					
Turret					
Rcvry					
Track					
Wheel					

- For any mechanic identified as newly assigned, take action to get a Form 3, Task Experience History, completed.

- Periodically check for revisions of the unit training cycle or vehicle bumper numbers. Take action as needed to complete Form 5, Training Cycle Definition or Form 7, Vehicle Bumper Number.

CHECKING THE FORMS

After the forms are collected, they must be checked for completeness of entries and accuracy of the data. Immediate action must be taken to obtain missing data and correct any errors. For MMIS-86 forms completed by the system operator, checking his own entries is a mandatory part of form completion. Instructions for checking MMIS-86 forms prepared by others, i.e., Forms 1, 2, 3, and 8 are provided below.

Checking Form 1 (refer to page 17 for example).

- Only one equipment type can be marked in line 2.

- Vehicle bumper # in line 3 must correspond with vehicle type marked in line 2.

- At least one task number must be marked in line 4, and no more than four task numbers can be entered.

- Line 5 must have a man-hour entry corresponding to each task entry on line 4.

Checking Form 2 (refer to page 19 for example).

- Only one equipment type can be marked in line 2.

- Vehicle bumper # entered in line 3 must correspond with vehicle type marked in line 2. If "COMMO" is marked in line 2, line 3 should be blank.

- Only one MOS can be marked in line 4. MOS must correlate with equipment type marked in line 2.

- At least one task number must be entered in line 5, and no more than four task numbers can be entered.

- Line 6 must have at least one name entry, and a man-hour entry corresponding to each task entry on line 5.

- MOS for personnel entered in line 6 must correspond with MOS marked in line 4.

Checking Form 3 (refer to page 21 for example).

- Name, primary MOS, and paygrade entries must be complete.

- There must be indications that the respondent has looked at all tasks listed.

- Have form reviewed by supervisor if there are any questionable entries. Example: an E2 in MOS 63N enters '100' for times he has completed a task since AIT.

Checking Form 8 (refer to page 33 for example).

- Only one MOS can be marked on line 2.

- Only one technical area can be marked on line 4. Technical area must correlated with MOS marked on line 2.

- Only one equipment type can be marked on line 6. Equipment type must correlate with MOS marked in line 2.

- If equipment type is marked on line 6, at least one task must be entered on line 7, and no more than eight tasks can be entered.

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CHAPTER 4

HOW TO USE MMIS–86 PROGRAMS

The MMIS–86 is designed to transform large amounts of collected data into usable summaries. It does this with the aid of a computer. This chapter describes the computer and how to operate it, and provides the basic procedures for using MMIS–86 programs on the computer. These procedures include how to select, change, and end the programs. Figure 2 provides a graphic overview of MMIS–86 programs used on the computer.

COMPUTER SYSTEM DESCRIPTION

The MMIS–86 operates with an IBM 5120 computing system, which has two parts: the IBM 5110 Model 3 Computer and the IBM 5103 Printer. The operating instructions for both the computer and printer are in a book titled **IBM 5120 Computing System Operator Training,** 2nd Edition (March 1980). A copy of this book is provided with the computer. Use it to learn how to operate the computer before trying to use the MMIS–86 programs.

HOW TO USE MMIS–86 ON THE COMPUTER

Use of MMIS–86 on the computer requires an MMIS–86 program diskette and separate data diskettes for each unit covered by MMIS–86. An MMIS–86 program diskette and a supply of blank diskettes are provided when MMIS–86 is implemented. At the outset of MMIS–86 operation, use the program diskette and blank diskettes to prepare a data diskette for your battalion. See the instructions below and then refer to the section in Chapter 8, **HOW TO ESTABLISH FILES ON A BLANK DISKETTE** for instructions on how to prepare a data diskette.

When starting up MMIS–86, make a copy of the program diskette and store it as a backup in case the original becomes worn, lost, or damaged. The data diskette must also be copied and updated periodically as more data are entered. The procedures for copying and replacing diskettes are described in a section of Chapter 8, **HOW TO COPY A DISKETTE.**

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EDIT STORED DATA

ENTER NEW FORMS

DATA ENTRY/EDIT OPTIONS

1. ADD NEW FORMS
2. EDIT FORMS
3. RETURN TO MAIN MENU

ENTER CHOICE #: < >

IBM 5110 MODEL 3 COMPUTER

MAIN MENU

1. ENTER/EDIT FORMS
2. GENERATE REPORTS
3. SWITCH TO ANOTHER BATTALION
4. UTILITIES MENU
5. END PROGRAM

ENTER CHOICE #: < >

PRINT OUTPUT REPORTS

PRINT OUT DATA BASE

IBM 5103 PRINTER

UTILITIES MENU

1. COPY DATA BASE
2. CREATE NEW DATA BASE
3. PRINT DATA BASE
4. FILE STATUS REPORT
5. PURGE DATA BASE
6. RETURN TO MAIN MENU

ENTER CHOICE #: < >

COPY DISKETTE

CREATE FILES

PURGE FILES

Figure 2.   Uses of MMIS-86 programs.

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HOW TO START AN MMIS-86 PROGRAM

To start any program:

1. Turn on the computer.

2. Insert the program diskette in Drive #1.

3. Insert a diskette in Drive #2.

4. Enter **PROC 3.** The display shown below will appear on the screen.

```
                         MPS(0)

            DATE:  <3216>   (4 AUG 83)

       ENTER TODAY'S DATE, IF DIFFERENT FROM ABOVE
            (OR PRESS "EXECUTE" TO CONTINUE)
```

5. Enter **today's Julian date,** if different, or press EXECUTE. The screen will display the MAIN MENU as shown below.

```
            DATE: 3216     (4 AUG 83)

                    MAIN MENU

            1. ENTER/EDIT FORMS
            2. GENERATE REPORTS
            3. SWITCH TO ANOTHER BATTALION
            4. UTILITIES MENU
            5. END PROGRAM



            ENTER CHOICE #: < >
```

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A choice of program 1, 2, or 4 requires that a data diskette also be available. Program 4 is also used to prepare data diskettes and to accomplish other support functions. When a data diskette is available, go to step 7 below.

6.   If a data diskette has not been prepared, prepare one from a blank diskette. Enter **4** and press EXECUTE. Refer to HOW TO ESTABLISH FILES ON A BLANK DISKETTE in Chapter 8 for further instructions.

7.   When a data diskette is available, enter: number of program desired. The screen will display the message shown below.

```
|---------------------------------------------------------------------|
|                                                                     |
|                                                                     |
|                                                                     |
|                                                                     |
|                                                                     |
|        INSERT CORRECT DATA DISKETTE INTO DRIVE 2.                    |
|        THEN PRESS "EXECUTE"                                          |
|                                                                     |
|                                                                     |
|                                                                     |
|                                                                     |
|                                                                     |
|---------------------------------------------------------------------|
```

8.   If not previously done, insert a data diskette in Drive #2.

The screen will display a key to the diskette contents and the date the diskette was last used or accessed. The screen will also ask for verification that this is the correct diskette. An example of this display is shown below.

```
|---------------------------------------------------------------------|
|                       DISKETTE CONTENTS:                            |
|                                                                     |
|                                                                     |
|       BATTALION : 1-99 ARMOR                                        |
|       DATE LAST ACCESSED: 3216      (4 AUG 83)                      |
|                                                                     |
|                                                                     |
|       IS THIS THE CORRECT DISKETTE? (Y/N):    < >                   |
|                                                                     |
|                                                                     |
|---------------------------------------------------------------------|
```

If it is the correct data diskette, go to step 11 below.

9. If it is not the correct data diskette, enter N.

10. Remove incorrect data diskette and repeat step 7 above.

11. If it is the correct data diskette, enter Y.

The screen will display the first message for the program selected in step 7 above. The procedures for each program are described in separate parts of this manual. If program selected is:

1 - ENTER/EDIT FORMS, refer to **Chapter 5. SELECTING A PRO-GRAM FOR DATA ENTRY/EDITING.**

2 - GENERATE REPORTS, refer to **Chapter 6. HOW TO GENERATE MMIS-86 REPORTS.**

3 - SWITCH TO NEW BATTALION, refer to that section later in this chapter.

4 - UTILITIES MENU, refer to **Chapter 8. HOW TO USE UTILITIES PROGRAMS.**

5 - END PROGRAM, refer to the last section in this chapter, **HOW TO END PROGRAM.**

HOW TO SWITCH TO ANOTHER PROGRAM

The last step in any program, except END PROGRAM, provides an option to return to the MAIN MENU. Any other program can then be selected. To select another program from the MAIN MENU, enter: number of program desired. The first procedure for the new program will appear on the screen.

HOW TO SWITCH TO ANOTHER BATTALION

Use of any MMIS-86 program with a data diskette involves exchanges of data between the data diskette and the internal computer memory. Before changing any data diskette in Drive #2, it is essential that program 3, SWITCH TO A NEW BATTALION, be completed. Changing diskettes without completing program 3 can seriously compromise MMIS-86 operation. Data files can be seriously damaged and may be made unusable.

To switch to a new battalion, return to the MAIN MENU.

1. Enter 3 and press EXECUTE

The screen will display the message shown below.

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```
INSERT CORRECT DATA DISKETTE INTO DRIVE 2.
THEN PRESS "EXECUTE"
```

2.   Remove diskette in Drive #2 and put it in its jacket.

3.   Insert diskette for new battalion into Drive #2 and press EXECUTE.

The screen will display the key to the contents of the new diskette and ask for verification that it is the correct diskette. If it is the correct data diskette, go to step 5 below.

4.   If it is not the correct data diskette, enter N and press EXECUTE. Repeat steps 2 and 3 above.

5.   If it is the correct data diskette, enter Y and press EXECUTE.

The MAIN MENU will appear on the screen. Select a program and continue. When you are finished using all programs, return to the MAIN MENU to end the program.

HOW TO END PROGRAM

1.   Return to MAIN MENU.

2.   Enter 5.

A display will appear on the screen as shown below.

```
                          END OF PROGRAM
```

3. Remove the program diskette and put it in its jacket.

4. Remove the data diskette and put it in its jacket.

5. Turn off the computer and printer.

6. Cover the computer and printer.

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CHAPTER 5

HOW TO ENTER/EDIT MMIS-86 DATA

Entry of MMIS-86 data requires knowledge of how to operate the IBM 5120 Computing System and use MMIS-86 program procedures. If you do not yet know how to do these, read Chapter 4 of this manual and the book, **IBM 5120 Computing System Operator Training**, Second Edition (March 1980), before proceeding.

This chapter describes the following procedures:

- Preparing for data entry
- Selecting a data entry program
- Entering data into computer
- Reviewing and editing stored data

PREPARING FOR DATA ENTRY

Organizing the Forms

To prepare for data entry, first sort the forms by type form. Group all forms of one kind, e.g., all Form 1's, so that you do not have to shift unnecessarily from one form entry program to another during data entry.

Coding Names

Every form on which a mechanic's name appears must be prepared for data entry by adding his unique code number. Names must be coded on the following forms:

- Form 2 – Mechanic Maintenance
- Form 3 – Task Experience History
- Form 6 – Roster Update (Delete and Modify Names)
- Form 8 – Mechanic Certification or Task Qualification

To assign a code number to a mechanic, first enter his name in the computer by using the ADD Section of Form 6. The computer assigns a unique code number to each name. When the roster is printed, this code number will appear in front of the man's name. To add names, see INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 6 in this chapter. (The instructions for printing a roster are in Chapter 6. HOW TO GENERATE REPORTS.)

Sequence of Data Entry

Names must be assigned code numbers for data entry. To assign code numbers to names, data from the ADD section of Form 6 must be entered before names can be coded on other forms.

Vehicle bumper numbers must be entered from Form 7 before any other forms containing bumper numbers can be entered.

After entry of data from Forms 6 and 7, other forms can be entered in any sequence.

SELECTING A PROGRAM FOR DATA ENTRY/EDITING

To select a program for data entry or editing, first bring up the MAIN MENU by completing HOW TO SELECT AN MMIS–86 PROGRAM or HOW TO SWITCH TO ANOTHER PROGRAM in Chapter 4.

1.   When the MAIN MENU appears, enter 1 as choice of program, as shown in the example below, and press EXECUTE.

```
     DATE: 3216    (4 AUG 83)

                 MAIN MENU

          1. ENTER/EDIT FORMS
          2. GENERATE REPORTS
          3. SWITCH TO ANOTHER BATTALION
          4. UTILITIES MENU
          5. END PROGRAM



          ENTER CHOICE #: <1>
```

The first display of the data entry/edit program will appear on the screen as shown below.

```
                 ENTER/EDIT FORMS

          ENTER FORM #: < >   (1-8)

      (OR PRESS EXECUTE TO RETURN TO MAIN MENU)
```

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2. Enter: **number of form.**

The screen will display the data entry/edit options and the status of the file for the form selected. An example of a display for Form 1 is shown below. A similar display is provided for all forms except Forms 6 and 7.

```
------------------------------------------------------------------
|         FORM 1      DATA ENTRY/EDIT OPTIONS                     |
|                                                                |
|            1. ADD NEW FORMS                                    |
|            2. EDIT FORMS                                       |
|            3. RETURN TO MAIN MENU                              |
|                                                                |
|                                                                |
|            ENTER CHOICE #: < >                                 |
|                                                                |
|            FILE STATUS                                         |
|        # OF FORMS NOW ON FILE        :      92                 |
|        LAST REF # USED               :      92                 |
|        FILE CAPACITY                 :    8665                 |
|        # OF RECORDS AVAILABLE        :    8573                 |
------------------------------------------------------------------
```

The FILE STATUS block shows the status of files for the form. It lists the number of forms presently on file and, if applicable, the last reference number used. The block also shows the total capacity of the file and the number of records available, i.e., the number of forms that can be added before the file is full. If action is needed to purge or remove old records because the file is close to its capacity, see Chapter 8.

3. To **add** data from new forms, enter 1.

4. To **review and change** data on forms previously entered, enter **2.**

A display of the form selected in Step 2 above will appear on the screen and data entry or editing can begin. See the next section ENTERING DATA FROM FORMS to add data, or see REVIEWING AND EDITING STORED DATA which begins on page 56 to review and change prior entries.

5. To return to the MAIN MENU, enter **3.**

ENTERING DATA FROM FORMS

General instructions applicable to entry of data from all forms are given below. Specific instructions for entry of data from each form are contained in separate sections which follow later in this chapter.

To enter data from forms, first complete Steps 1-3 in SELECTING A PROGRAM FOR DATA ENTRY/EDITING above. After Step 3, a display similar to the form will appear on the screen. The word "ADD" or "ADD/EDIT" will appear in the upper right center of the display.

An example of an "ADD" display for Form 1 is shown below.

```
-------------------------------------------------------------------
|                                                                 |
| FORM 1. CREW MAINTENANCE              ADD        REF # <   93>   |
| 1. <     >   Julian date                                        |
| 2. < >       Equipment type                                     |
| 3. <     >   Vehicle bumper number                              |
| 4. Task numbers:           |   |    |    |    |    |             |
| 5. CREW MEMBER _____|___|____|____|____|____|             |
|    Crewman #1              |   |    |    |    |    |             |
|    Crewman #2              |   |    |    |    |    |             |
|    Crewman #3              |   |    |    |    |    |             |
|    Crewman #4              |   |    |    |    |    |             |
|    Totals:                 |   |    |    |    |    |             |
|                                                                 |
-------------------------------------------------------------------
```

At the beginning of any data entry program, the cursor will be positioned at the first data entry field on the screen display. Begin entering data. Press EXECUTE after completing each entry and wait for the cursor to resume flashing. The cursor will automatically move to the next field or display unless the data entered did not meet criteria established in the program.

For an invalid entry, a beep will sound and the screen will generally display an error message. Do not press ATTN key. The entry must be corrected to continue data entry. Refer to CORRECTING MISTAKES IN DATA ENTRY below.

CONSTRAINTS ON DATA ENTRIES

There are three types of constraints on data entries: length, range, and compatibility.

The permissible length of any data entry is defined by the space between ( ) shown on the display. An entry will not be accepted or stored if it extends beyond these symbols.

Constraints on the range of data entries are:

- Dates must be 4-digit Julian dates between X001 and X365 (X366 in leap years), i.e., an entry of 0000 or 9999 would not be accepted.

- On Form 6, the effective date of a deletion cannot be more than seven days in advance of the date the data is entered, e.g., for entry on 3111, effective date of deletion cannot be later than 3118.

- Bumper number entries are a combination of one letter and numbers. Letters are A, B, C or D for tank companies and H for HHC.

On Forms 1 and 2, compatibility requirements are:

- Vehicle type must agree with bumper #.

- MOS must relate to vehicle type (Form 2 only). As an example, for M60 tank, the only acceptable MOS's are 45N/T and 63N/T.

- Task numbers must correspond with vehicle type.

- Duty MOS of mechanics must agree with MOS entered on Line 4 (Form 2 only).

For ease of form completion, many forms require marking a box in lieu of writing in data. See examples below.

When entering data, enter the code number below the box marked. For the examples above, entries would be: for Line 2, 1, and for Line 4, 4.

CORRECTING MISTAKES IN DATA ENTRY

If a *mistake is made* during data entry, e.g., a wrong character is entered, the mistake can be corrected if EXECUTE has not been pressed or if an error message appears. Move the cursor back to the error and correct it by retyping the entry, inserting a character, or deleting a character as necessary.

If a mistake is found in an entry after EXECUTE has been pressed and the cursor has moved to another field, do not move the cursor back to the erroneous entry. Each MMIS-86 entry routine has an error correction procedure at the end of it. First complete all entries from the form and then go back and correct the mistake.

After the last data entry on a form has been made, there will be a temporary interruption, or "blink," in the display. The form display will reappear showing all data entered and totals where appropriate. At the bottom of the display there will be an "Action" line. An example of the "Action" line is shown below.

```
Action: < >  A-Accept data, C-Change, T-Terminate
```

Review the data entries shown on the display for mistakes.

If the entries are all correct, go to Step 6 below to accept the data for storage.

If one or more entries are not correct, go to Step 2 below to change entries.

1. To delete all entries, enter T. The DATA ENTRY/EDIT OPTIONS menu will appear on the screen.

2. To change one or more entries, enter C. The "Action" line will be replaced on the display by the "change" line. An example of the "change" line is shown below.

```
ENTER LINE # TO CHANGE:  < >    OR PRESS "EXECUTE" IF ALL OK
```

3. Enter Line number of entry to be changed. The cursor will go to the beginning of the first field in that line number.

4. Enter correct data. The "change" line will reappear at the bottom of the display. Repeat Steps 3 and 4 above to make additional changes, if necessary.

5. When all corrections have been made, press EXECUTE, pause, and press EXECUTE a second time.

The "Action" line will reappear at the bottom of the display.

6. To **accept** the data for storage when all entries are correct, enter **A**. A blank form display will reappear on the screen.

Once data are accepted and stored, erroneous entries can be corrected only through an edit option of the ENTER/EDIT FORMS program. See REVIEWING AND EDITING STORED DATA.

COMPLETING DATA ENTRY

After data entry has been completed and the data accepted for storage, a blank form display will reappear on the screen, with a new reference number, if applicable.

1. To **continue** entering data from the same form, repeat data entry procedures.

2. To **change** to another program when data entry is complete: Press EXECUTE. The DATA ENTRY/EDIT OPTIONS and FILE STATUS display will appear on the screen.

REVIEWING AND EDITING STORED DATA

You may need to review data stored in the diskette files to check for errors. All stored data for any form can be retrieved for review by using the PRINT DATA BASE option of the UTILITIES MENU. To do this, see instructions in **Chapter 8.**

Correcting errors in stored data, or **editing,** can only be done through use of one of the DATA ENTRY/EDIT OPTIONS. To edit Forms 4, 5, or 7 see the specific instructions for each form which follow later in this chapter.

To edit Forms 1, 2, 3 or 8, follow the instructions below. Complete Steps 1, 2, and 4 of SELECTING A PROGRAM FOR DATA ENTRY/EDITING. A display similar to the form will appear on the screen. The word "EDIT" or "ADD/EDIT" will appear in the upper right center of the display. An example of the EDIT display for Form 1 is shown below.

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```
|                                                                        |
|FORM 1. CREW MAINTENANCE                    EDIT       REF # <    >|
|                                                                        |
|1. <    >   Julian date                                                 |
|2. <  >     Equipment type                                              |
|3. <    >   Vehicle bumper number                                       |
|4. Task numbers:                     |    |    |    |    |    |          |
|5. CREW MEMBER _____|____|____|____|____|____|         |
|   Crewman #1                        |    |    |    |    |    |          |
|   Crewman #2                        |    |    |    |    |    |          |
|   Crewman #3                        |    |    |    |    |    |          |
|   Crewman #4                        |    |    |    |    |    |          |
|   Totals:                           |    |    |    |    |    |          |
|                                                                        |
```

Data Retrieval

Data in the file can now be reviewed, changed, or deleted, **one form at a time.** To retrieve data for review, do **one** of the following:

1.   For Forms 1, 2, or 8, enter one of the following:

     - **B** (for backward) to call up the first (earliest) form in the file.

     - **F** (for forward) to call up the form most recently entered.

     - **The reference number** assigned to the form. The reference number can be found by using the PRINT DATA BASE option of the UTILITIES MENU to print out the stored data.

2.   For Form 3, enter the **code number** assigned to a man's name.

After following one of the steps above, the screen will display the form selected, with data stored in the file for that form.

Data Editing

At the bottom of the EDIT display there is an "ACTION" line.

Review the data shown on the display and edit it as necessary by taking one of the actions described below.

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4. To **accept** all entries as shown and **continue** the editing process on the same form, enter **A**. A blank form display will reappear on the screen. Select another form for review.

5. To **change** any entry, enter **C** and make required corrections. Press EXECUTE twice after last change. A blank form display will reappear on the screen. Select another form for review or end editing.

6. To **accept** all entries as shown and **terminate** the editing process on a form, enter **T**. The DATA ENTRY/EDIT OPTIONS display will appear on the screen. Select appropriate option. NOTE: **Data previously stored on the file remains unchanged.**

7. To **continue** to the next form in the file, enter **F** or **B**. The next form in the file sequence will be displayed on the screen. Review data entries and take action.

8. To **delete** all data shown, enter **DEL**. A blank form display will reappear on the screen. Select another form for review or end editing.

9. To **end** editing when a blank display is shown, press EXECUTE. The DATA ENTRY/EDIT OPTIONS display will appear on the screen. Select appropriate option.

INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 1

Entering Data

Complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter. At Step 3, enter 1.

A display of Form 1 will appear on the screen as shown in the example below.

```
|FORM 1. CREW MAINTENANCE                    ADD        REF # <        > |
|                                                                       |
|1. <     >  Julian date                                                |
|2. <  >     Equipment type                                             |
|3. <     >  Vehicle bumper number                                      |
|4. Task numbers:              |    |    |    |    |    |               |
|5. CREW MEMBER_____|____|____|____|____|____|               |
|   Crewman #1                 |    |    |    |    |    |                |
|   Crewman #2                 |    |    |    |    |    |                |
|   Crewman #3                 |    |    |    |    |    |                |
|   Crewman #4                 |    |    |    |    |    |                |
|   Totals:                    |    |    |    |    |    |                |
|                                                                       |
|                                                                       |
```

INSTRUCTIONS FOR LINE ENTRIES

Line #	Entry	Instructions
1	Julian date	Enter **Julian date.**
2	Vehicle type	Enter **number** for type vehicle checked.
3	Vehicle bumper number	Enter **letter and number,** e.g., H66.
4	Task number	• Enter **first task letter or number.**
		• Repeat for each additional entry.
		• If less than four task entries, press EXECUTE twice after last entry.

Line #	Entry	Instructions
5	Man-hours	● Enter **man-hours** for first name.
		● Repeat man-hour entry for each name listed.
		● If there are less than four entries, pause and press EXECUTE a second time to continue.

Editing Data

See REVIEWING AND EDITING STORED DATA.

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INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 2

Entering Data

Complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter. At Step 3, enter 1.

A display of Form 2 will appear on the screen as shown in the example below.

```
-------------------------------------------------------------------------
|FORM 2. MECHANIC MAINTENANCE                    ADD        REF # <    >|
|                                                                       |
|1. <      >  Julian date                                               |
|2. <  >      Equipment type                                            |
|3. <      >  Vehicle bumper number                                     |
|4. <  >      MOS                                                        |
|5. Task numbers:              |    |    |    |    |    |               |
|6. CODE|NAME_____|____|____|____|____|____|               |
|       |                      |    |    |    |    |    |               |
|       |                      |    |    |    |    |    |               |
|       |                      |    |    |    |    |    |               |
|7. Assistance man-hours       |    |    |    |    |    |               |
|                                                                       |
|                                                                       |
-------------------------------------------------------------------------
```

INSTRUCTIONS FOR LINE ENTRIES

Line #	Entry	Instructions
1	Julian date	Enter Julian date.
2	Equipment type	Enter number for type equipment checked.
3	Vehicle bumper number	• Enter letter and number. For equipment without bumper numbers, line is skipped.
4	MOS	Enter number for MOS checked.
5	Task numbers	• Enter first task letter or number.
		• Repeat for each additional task entry.
		• If less than four task entries, press EXECUTE twice after last entry.
6	Code #	• Enter code number.
	Man-hours	• Wait for screen to display name corresponding to code number. Compare to listing on form.
		• Enter man-hours corresponding to each task entry on line 5. If man-hour box is blank, press EXECUTE to continue.
		• Repeat procedure for each name and man-hours listed.
		• NOTE: Each task must have at least one man-hours entry.
		• Press EXECUTE twice after last entry.
7	Assistance man-hours	• Enter man-hours corresponding to each task entry on line 5.

Editing Data

See REVIEWING AND EDITING STORED DATA.

INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 3

Entering Data

Complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter. At Step 3, enter 1.

A display of Form 3 will appear on the screen as shown in the example below.

```
|FORM 3.  MAINT. TASK EXPERIENCE HISTORY        ADD
|<   > Code #    Name:                                 MOS:
|Equipment #: <   >                    Any History?  <  >  (Y/N/0)
|CORRECTIVE MAINTENANCE TASKS:
|
|
|                                                        60. PM
|                                                        TASKS:
|                                                           :
|                                                           :
|                                                           :
|                                                           :
|
|
```

INSTRUCTIONS FOR LINE ENTRIES

Line #	Entry	Instructions
-	Code #	• Enter code number of individual whose history is to be entered.

The screen will display name and MOS corresponding to code number. The cursor will be flashing at "Any History ( ) ? (Y/N/0)."

For new arrivals from AIT or other personnel with no prior task experience history, enter 0 (a zero, not the letter O).

For personnel who have completed portions of a Form 3, but not for the equipment shown, enter N. For example, a 63B/S has completed a Form 3, but has never worked on an M151.

For personnel who have completed a Form 3 for the equipment shown, enter Y. The screen will display listings for entry of maintenance tasks.

1-n*   Maint. Tasks   ● For line with data, enter number.

                                 ● For line with blank or zero, press EXECUTE.

                                 ● Repeat for each line.

*Number of tasks vary by type equipment.

When an MOS works on more than one type vehicle, the screen will display another cycle of Maint Task listings for each type vehicle appropriate to that MOS.

Repeat data entry procedures for additional vehicle task listings.

Editing Data

See REVIEWING AND EDITING STORED DATA.

INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 4

Entering Data

Complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter. At Step 3, enter 1.

A display of Form 4 will appear on the screen as shown in the example below.

```
------------------------------------------------------------------------
|FORM 4.   INTERPRETATION COMMENTS                ADD                    |
|                                                                        |
|<      >  Julian date                                                   |
|                                                                        |
|Comment:                                                                |
| <                                                                      |
|                                                                  >     |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
------------------------------------------------------------------------
```

INSTRUCTIONS FOR LINE ENTRIES

Entry	Instructions
Julian date	Enter **Julian date**.
Comment	Enter **comment.** Comment cannot exceed 124 characters, including letters, numbers, and spaces.

NOTE: The screen will only display 62 characters on a line. When entering a comment, if it exceeds 62 characters, the cursor will automatically go to a second line for entry of the remainder of the comment. If a word ends at the 62nd character **exactly,** enter a space at the start of the second line before typing the remainder of the comment. **Do not hyphenate** at the end of Line 1 or the start of Line 2.

Editing Data

To review entries on Form 4, use PRINT DATA BASE OPTION. See Chapter 8.

To edit Form 4, complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/EDITING at the beginning of this chapter. At Step 3, enter 2.

A display of Form 4 will appear on the screen as shown in the example below.

```
FORM 4.   INTERPRETATION COMMENTS          EDIT

<    >  Julian date

Comment:
 <
```

To select a comment for editing, enter one of the following:

- B (for backward) to select earliest comment on file.

- F (for forward) to select most recent (latest) comment on file.

- Julian date of comment.

The comment selected will appear on the screen.

Make entry on the bottom line of screen to accept, change, or delete comment, to continue or terminate edit process.

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INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 5

Entering Data

Complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter. At Step 3, enter 1.

A display of Form 5 will appear on the screen as shown in the example below.

```
|FORM 5.   TRAINING CYCLE DEFINITION        ADD/EDIT          |
|                                                             |
|Week ending       Training                                   |
|Julian date       cycle                                      |
|1. <      >        <     >                                    |
|2. <      >        <     >                                    |
|3. <      >        <     >                                    |
|4. <      >        <     >                                    |
|5. <      >        <     >                                    |
|6. <      >        <     >                                    |
|7. <      >        <     >                                    |
|8. <      >        <     >                                    |
|                                                             |
|                                                             |
```

INSTRUCTIONS FOR LINE ENTRIES

Line #	Entry	Instructions
1-8	Week ending Julian date	Enter Julian date for Friday of week being reported.
	Training cycle	• Enter first letter of work designating training cycle, i.e., R, A, G, or N for red, amber, green, or none, respectively. • Repeat procedure for each line. • After last entry, pause and press EXECUTE a second time to continue.

Editing Data

If training cycle designation is changed after entry of initial data, repeat procedure for entering data and enter correct training cycle designation. This will override prior entry.

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INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 6

Entering Data

Complete Steps 1 and 2 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter.

The DATA ENTRY/EDIT OPTIONS and FILE STATUS display for Form 6 will appear on the screen as shown in the example below.

```
          FORM 6     DATA ENTRY/EDIT OPTIONS

              1. ADD NEW NAMES TO ROSTER
              2. EDIT ROSTER DATA
              3. DELETE NAMES FROM ROSTER
              4. RETURN TO MAIN MENU

                 ENTER CHOICE #: < >

   FILE STATUS: # OF NAMES NOW ON ROSTER    :    68
                # OF DELETED NAMES          :     6
                LAST CODE NUMBER USED       :   167
                FILE CAPACITY               :   200
                # OF RECORDS AVAILABLE      :   132
```

To **add** names, enter 1.

A display of the ADD section of Form 6 will appear on the screen. An example of this display is shown below.

```
   FORM 6.  ROSTER UPDATE                        ADD

      < 168> Code #
   1. <   >   MOS
   2. <                      >     Name(Primary MOS-paygrade)
   3. < >   Section
   4. <100> % of time working in MOS
   5. <      > Start Date
   6. <      > ETD Date
```

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INSTRUCTIONS FOR ADD NAMES

Line #	Entry	Instructions
1	MOS	Enter number for MOS.
2	Name (Primary MOS-paygrade)	• Enter last name and initial of first name. • Enter primary MOS and paygrade inside parentheses. As an example: (63B-E2).
3	Section	Enter number for section
4	% of Time working in MOS	The usual percentage, 100, is entered as part of the routine. If the percent of time is less than 100, enter number corresponding to percent marked on form.
5	Start date	Enter Julian date.
6	ETD date	Enter Julian date.

To delete names, enter 3.

A display of the DELETE section of Form 6 will appear on the screen. An example of this display is shown below.

```
--------------------------------------------------------------
|FORM 6.    ROSTER UPDATE                    DELETE           |
|                                                             |
|                                          Effective          |
|   Code #                Name             Julian Date        |
|1. <     >    <                 >    <       >               |
|2. <     >    <                 >    <       >               |
|3. <     >    <                 >    <       >               |
|4. <     >    <                 >    <       >               |
|5. <     >    <                 >    <       >               |
|6. <     >    <                 >    <       >               |
|7. <     >    <                 >    <       >               |
|8. <     >    <                 >    <       >               |
|                                                             |
|                                                             |
--------------------------------------------------------------
```

INSTRUCTIONS FOR DELETE NAMES

Line #	Entry	Instructions
1-8	Code #	• Enter **code number** for man to be deleted.
		• Wait for screen to display name corresponding to code #.
	Effective Julian Date	• Enter **Julian date.** Date cannot be entered unless it is within seven days of date data is being entered.
		• Repeat procedure for each line.
		• If there are less than six entries, pause and press EXECUTE a second time to continue.

To **edit** roster entries, enter **2.**

The edit display of Form 6 will appear on the screen as shown in the example below.

```
-------------------------------------------------------------------
|    |                                                            |
|    |  FORM 6.   ROSTER UPDATE                    EDIT           |
|    |                                                            |
|    |     <     > Code #                                         |
|    |  1. <   >  MOS                                             |
|    |  2. <                              >   Name(Primary MOS-paygrade) |
|    |  3. < >    Section                                         |
|    |  4. <100>  % of time working in MOS                        |
|    |  5. <    > Start Date                                      |
|    |  6. <    > ETD Date                                        |
|    |  7. < >    Status:  A-active, D-deleted                    |
|    |  8. <    > Effective termination date if deleted           |
|    |     < >    History on file?                                |
|    |                                                            |
-------------------------------------------------------------------
```

INSTRUCTIONS FOR EDIT NAMES

1. Enter **code number** of name of person whose roster listing is to be reviewed and/or changed.

The data entries on file for that form will appear on the screen display, with an action line at the bottom.

2. To **accept** data and **continue** reviewing Form 6, enter **A** and continue.

3. To **change** any entry, enter **C**. Make changes required and continue. NOTE: A name erroneously deleted **can be readded** to the roster by changing the entry in line 6 from **D** to **A**. However, a name **cannot be deleted** by changing **A** to **D**.

4. To **accept** data and **stop** editing Form 6, enter **T**. Switch to another program.

INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 7

Entering Data

Complete Steps 1 and 2 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter.

The DATA ENTRY/EDIT OPTIONS for Form 7 will appear on the screen as shown in the example below.

```
| FORM 7     DATA ENTRY/EDIT OPTIONS               |
|                                                  |
|            1. ADD BUMPER NUMBERS                 |
|            2. MODIFY BUMPER NUMBERS              |
|            3. DELETE BUMPER NUMBERS             |
|            4. PURGE BUMPER NUMBERS              |
|            5. RETURN TO MAIN MENU               |
|                                                  |
|                                                  |
|            ENTER CHOICE #: < >                   |
|                                                  |
```

To **add** bumper numbers, enter **1.**

A display of the ADD section of Form 7 will appear on the screen. An example of this display is shown below.

```
|FORM 7.    VEHICLE BUMPER NUMBERS              ADD             |
|                                                               |
|1. <  >     Vehicle type                                       |
|    Date        Bumper #                                       |
|2. <    >      <    >                                          |
|3. <    >      <    >                                          |
|4. <    >      <    >                                          |
|5. <    >      <    >                                          |
|6. <    >      <    >                                          |
|7. <    >      <    >                                          |
|8. <    >      <    >                                          |
|9. <    >      <    >                                          |
|                                                               |
```

INSTRUCTIONS FOR ADD BUMPER NUMBERS

#	Line	Instructions
1	Vehicle Type	Enter **number** for vehicle type.
2-9	Date Bumper #	• Enter **Julian date.**
		• Enter **letter** and **number,** e.g., **A11.**
		• If there are less than eight entries, pause and press EXECUTE a second time to continue.

To **change** a bumper number, enter **2.**

A display of the MODIFY section of Form 7 will appear on the screen. An example of this display is shown below.

```
FORM 7.   VEHICLE BUMPER NUMBERS              MODIFY


    1. <  >   Vehicle type
    2. <  >   Old bumper #
    3. <  >   New bumper #
```

INSTRUCTIONS FOR MODIFY BUMPER NUMBERS

#	Line	Instructions
1	Vehicle Type	Enter **number** for vehicle type.
2	Old #	Enter **old letter and number.**
3	New #	Enter **new letter and number.**

Expect a delay for processing after completing MODIFY entries.

To delete a bumper number, enter **3**. (The data for a deleted bumper number will remain on file, but not appear on any reports.

A display of the DELETE section of Form 7 will appear on the screen. An example of this display is shown below.

```
-----------------------------------------------------------------------
|                                                                     |
|       FORM 7.    VEHICLE BUMPER NUMBERS           DELETE            |
|                                                                     |
|       1. <  >       Vehicle type                                    |
|            Date        Bumper #                                     |
|       2. <     >       <       >                                    |
|       3. <     >       <       >                                    |
|       4. <     >       <       >                                    |
|       5. <     >       <       >                                    |
|       6. <     >       <       >                                    |
|       7. <     >       <       >                                    |
|       8. <     >       <       >                                    |
|       9. <     >       <       >                                    |
|                                                                     |
-----------------------------------------------------------------------
```

INSTRUCTIONS FOR DELETE BUMPER NUMBERS

#	Line	Instructions
1	Vehicle Type	Enter number for vehicle type.
2-9	Date Bumper #	• Enter Julian date deletion is effective.
		• Enter letter and number.
		• If there are less than eight entries, pause and press EXECUTE a second time to continue.

Expect a delay for processing after completing DELETE entries.

To purge a bumper number, enter **4**. (The data for a purged bumper number will be erased from all files.)

A display of the PURGE section for Form 7 will appear on the screen. An example of this display is shown below.

```
--------------------------------------------------------------------
|FORM 7.  VEHICLE BUMPER NUMBERS                 PURGE             |
|                                                                  |
|1. {  }     Vehicle type                                          |
|2. {     }  Bumper #                                              |
|   { }      Current status (Assigned or Deleted)                 |
|   {     }  Julian date last assigned                            |
|   {     }  Julian date last deleted                             |
|   {     }  Julian date FIRST assigned                           |
|                                                                  |
|WARNING: Do not purge bumper numbers which were entered on any   |
|         forms 1 or 2, or those forms will become invalid.       |
|                                                                  |
|                                                                  |
|                                                                  |
--------------------------------------------------------------------
```

INSTRUCTIONS FOR PURGE BUMPER NUMBERS

#	Line	Instructions
1	Vehicle Type	Enter number for vehicle type.
2	Bumper #	• Enter letter and number. The screen will display the data on file for that vehicle, with an action line at the bottom of the screen.
		• Read the warning. To purge data, enter **PUR**.
		• To change to another vehicle, enter **C**.
		• To terminate procedure, enter **T**.

Expect a delay for processing after completing PURGE entries.

Editing Data

Edit bumper number data by reviewing stored data and using above procedures to add, modify or delete stored data.

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INSTRUCTIONS FOR ENTERING/EDITING DATA FROM FORM 8

Entering Data

Complete Steps 1-3 of SELECTING A PROGRAM FOR DATA ENTRY/ EDITING at the beginning of this chapter. At Step 3, enter 1.

A display of Form 8 will appear on the screen as shown in the example below.

```
-----------------------------------------------------------------
|FORM 8.   MECHANIC CERTIF./QUALIF.          ADD        REF # <      >|
|                                                                    |
|1.  <      >    Julian date                                         |
|2.  <  >        MOS                                                 |
|3.  <      >    Code #                                              |
|4.  < >         Tech. area    \    for                             |
|5.  < >         Cert. level   /    certif.                          |
|6.  <  >        Equipment type                              \  for  |
|7.  <                            >   Maint. task numbers  /  qualif.|
|                                                                    |
|                                                                    |
|                                                                    |
|                                                                    |
|                                                                    |
-----------------------------------------------------------------
```

INSTRUCTIONS FOR LINE ENTRIES

Line #	Entry	Instructions
1	Julian date	Enter Julian date.
2	MOS	Enter number for MOS.
3	Code #	Enter code number.
4	Tech area	Enter number for area.
5.	Cert. level	Enter letter.

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Line #	Entry	Instructions
6.	Equipment type	Enter number for equipment type.
7	Maint. task numbers	Enter numbers or letters. (If less than eight entries, press EXECUTE twice after last entry.)

Editing Data

See REVIEWING AND EDITING STORED DATA.

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CHAPTER 6
HOW TO GENERATE MMIS–86 REPORTS

The MMIS-86 reports contain maintenance performance and training information of interest to commanders, maintenance and training managers, supervisors, and individual mechanics. The data is presented in tabular form, and is supplemented by information to aid interpretation plus a roster of personnel.

This chapter lists the various reports, provides instructions on how often to generate them, and describes the reporting periods. Also provided are the procedures for using the computer to process the data and print the reports. Information on how to distribute the reports to those who should receive them is contained in **Chapter 7. HOW TO DISTRIBUTE MMIS–86 REPORTS.**

There are 11 generic tables which present data for the various MOS and equipment covered in MMIS-86. The table title describes the type of information presented. Seven of the tables have different versions. The format is basically the same in each version, but the data presented are MOS- or equipment-specific. Each version of every table, the interpretation comments, and the roster has been assigned a specific reference number to identify it in the computer. The discussion in this chapter will refer to the output reports by these reference numbers. MMIS-86 reports, with their reference number, are shown below.

TABLE 5
MMIS–86 REPORTS

Table Number	Table Title	Versions by MOS/Equipment	Reference Number
1	Battalion Maintenance Man–Hour Summary		101
2	Maintenance Man–Hours	31V	201
		45N/T	202
		63B/S	203
		63N/T	204
3	Average Man–Hours Per Maintenance Task	M60	301
		AVLB	302
		M113	303
		M88	304
		M578	305
		M151	306
		M35/54	307
		M561/792	308
		GOER	309
		Commo	310

Table Number	Table Title	Versions by MOS/Equipment	Reference Number
4	Combat Vehicle Maintenance Summary	M60	401
5	Maintenance Tasks by Vehicle	M60	501
		AVLB	502
		M113	503
		M88	504
		M578	505
		M151	506
		M35/54	507
		M561/792	508
		GOER	509
6	Maintenance Task Performance Data	M60	601
		AVLB	602
		M113	603
		M88	604
		M578	605
		M151	606
		M35/54	607
		M561/792	608
		GOER	609
7	Certification, Qualification and Experience Summary by Section		701
8	Certification, Qualification, & Experience Summary by Individual	31V	801
		45N/T	802
		63B/S	803
		63N/T	804
9	Qualification & Experience Summary by Task	31V	901
		45N/T	902
		63B/S	903
		63N/T	904
10	Individual Qualification & Experience Profile	31V	1001
		45N/T	1002
		63B/S	1003
		63N/T	1004
11	Qualification and Certification Bulletin		1101
–	Interpretation Comments		1
–	Roster		2

REPORT CATEGORIES

The summary tables provide either maintenance or training management information. **Maintenance management** reports are of primary interest to managers and supervisors of maintenance operations. **Training management** reports primarily interest commanders and managers responsible for training and personnel proficiency.

The interpretation comments and the roster are neither maintenance nor training management reports. **Interpretation comments** are used by all managers when analyzing other reports, and are generated each time maintenance or training management reports are printed. The **roster** is in a special category, and is generated and distributed separately from all other reports.

REPORTING PERIODS

Reporting periods are in weekly intervals ending on a Friday. When generating reports, the entry for the closing date of the reports must be a date for a Friday. If a date is entered that is not one for a Friday, the computer will display an error message on the screen, together with the date for the closest Friday after the incorrect date entered.

Table 2 and the Interpretation Comments show data summaries by weekly reporting periods for up to six months preceding the end of the most recent period. After six months, the oldest period, i.e., the one at the top of the table, is dropped each time a report is generated for a new period.

Training management reports show only current data totals. When a training management report is generated, all new data, i.e., data entered since the last report, is added to the information contained in the previous edition of that report.

Examples of each report are in the **User's Reference Manual, Maintenance Management Information System, Division 86.**

REPORT GENERATION FREQUENCY

Rosters are printed **every week.**

Interpretation comments and maintenance management reports are generated **every four weeks.** The interpretation comments are contained in report reference number 1. Maintenance management reports are those with reference numbers 101 through 609.

Interpretation comments and training management reports, reference numbers 701-1004, are generated **every six weeks.** Training management report, reference number 1101, is generated **every four weeks.**

A sample report generation schedule is shown in Table 6.

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TABLE 6
SAMPLE REPORT GENERATION SCHEDULE

Julian Date	Roster (Ref # 2)	Management Reports (Ref Nos 1, 101–609)	Training Reports Ref Nos 1, 701–1004	1101
3147	X			
3154	X			
3161	X			
3168	X	X		X
3175	X			
3182	X		X	
3189	X			
3196	X	X		X
3203	X			
3210	X			
3217	X			
3224	X	X	X	X
3231	X			
3238	X			
3245	X			
3252	X	X		X
3259	X			
3265	X		X	

HOW TO PRINT REPORTS

To print reports, first bring up the MAIN MENU by completing **HOW TO SELECT AN MMIS-86 PROGRAM** or **HOW TO SWITCH TO ANOTHER PROGRAM** in Chapter 4. Select GENERATE REPORTS from the MAIN MENU by entering **2**, as shown in the example below.

```
------------------------------------------------------------------------
I                                                                      I
I             DATE: 3223      (11 AUG 83)                              I
I                                                                      I
I                      MAIN MENU                                       I
I                                                                      I
I             1. ENTER/EDIT FORMS                                      I
I             2. GENERATE REPORTS                                      I
I             3. SWITCH TO ANOTHER BATTALION                           I
I             4. UTILITIES MENU                                        I
I             5. END PROGRAM                                           I
I                                                                      I
I                                                                      I
I                                                                      I
I             ENTER CHOICE #: <2>                                      I
I                                                                      I
------------------------------------------------------------------------
```

The **REPORT SELECTION** display will appear on the screen as shown below.

```
------------------------------------------------------------------------
I                     REPORT SELECTION                                  I
I 1. <   >     Existing report set # to use (blank for new set)         I
I 2. <     > Closing date                                               I
I    SELECT REPORTS BY REFERENCE NUMBER, SINGLY OR IN GROUPS.           I
I 3. <         >        9. <        >         15. <          >          I
I 4. <         >       10. <        >         16. <          >          I
I 5. <         >       11. <        >         17. <          >          I
I 6. <         >       12. <        >         18. <          >          I
I 7. <         >       13. <        >         19. <          >          I
I 8. <         >       14. <        >         20. <          >          I
I                                                                       I
I21. < > Save? (Y/N)      Save as set # <   > (1-20)                    I
I                                                                       I
IAction:  < >  A-accept data, C-change, T-Terminate                    I
------------------------------------------------------------------------
```

Line 1 asks for an existing report set number. To establish report set numbers, see instructions for step 6 below.

1. If there is an existing report set number, enter **number**. Go to step 5 below.

2. If there is no existing report set number, enter **blank** (press EXECUTE).

3. Enter **closing date**. Date must be Julian date for Friday ending a reporting period. If an existing report set number was used, revise the closing date by use of the ACTION line to change line 2 entry.

The Julian date selection will be confirmed by a display of the equivalent Gregorian date or an error message will be displayed showing the Julian date of the nearest Friday.

4. If an existing report set is not used, for lines 2-21, enter **reference numbers**, either singly or in groups, of reports to be printed. See Table 7 for report reference numbers to be generated by week. If there are less than 20 line entries, press EXECUTE twice after last entry.

TABLE 7
REPORT REF# GENERATION BY WEEK

Every Week Report Ref #	Every 4 Weeks Report Ref #	Every 6 Weeks Report Ref #
2	1	1
	101	101
	201-204	701
	301-310	801-804
	401	901-904
	501-509	1001-1004
	601-609	
	1101	

5. Use ACTION line to review selections and accept, change or delete entries. When using an existing report set, use change entry to make closing date current.

6. To accept report selections for printing, enter **A**.

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After you accept your report selections, you have an opportunity to save your selections as a set for future use. For example, Table 7 shows a number of reports that are to be generated every four weeks. You can save these as a set, eliminating the need to reenter all the reference numbers. After completing step 6, the cursor will flash at line 21, Save? (Y/N).

7. If you do **not** want to save your selections as a set for future use, enter **N**.

8. To save the selections as a set for future use, enter **Y**.

You must then assign a number between 1 and 20 to the report set in order to retrieve it in the future.

9. Enter **number** for set, and record the number on Table 6.

After completing step 7 or 9, the instructions shown below will appear on the screen.

```
DIRECTIONS FOR PRINTING REPORTS

 o TURN ON PRINTER
 o ALIGN PAPER AT TRACTOR TOP
 o PRESS "EXECUTE" WHEN READY
```

10. Follow directions and press EXECUTE to begin printing reports.

Reports will be printed in numerical sequence, beginning with the lowest numbered report, regardless of the order of selection in step 2 above. (If several reports are being generated and/or the data files are large, processing the data and printing the reports may take a long time. The computer may be left unattended during this processing time.)

When the report generation is complete, the MAIN MENU will reappear on the screen. Select appropriate program.

RESTART PROCEDURE FOR TABLE 10

It takes a long time (2-3 hours) to generate Table 10, Individual Experience Profiles. A modification to Table 10 permits restarting it in the event of printer problems, a power outage, etc.

If you need to interrupt the program (usually to fix a paper jam in the printer), press the ATTN key. After correcting the problem, terminate the program and restart it by entering **GO END** and press EXECUTE. Then enter **RUN** and press EXECUTE.

The program will ask for the MOS code number and the starting name at which to resume printing. Thus, if the program was interrupted while printing JOHNSON of MOS 31V, you would restart by specifying MOS #1, name JOHNSON. the program will reprint JOHNSON and all other 31Vs which follow alphabetically, then go on to the remaining higher-numbered MOSs which had been requested, printing the entire alphabet for each.

CHAPTER 7
HOW TO DISTRIBUTE MMIS-86 REPORTS

This chapter provides information on how MMIS 86 reports are copied, assembled into sets, and distributed to selected users. Generation of MMIS 86 reports is described earlier in Chapter 6.

REPORT RECIPIENTS

Recipients of reports range in rank from the battalion commander to the individual mechanic. Each person, by duty position, who receives a report has been assigned an abbreviated distribution identifier as shown in the list below. The identifier appears in the distribution line at the bottom of every report that person is to receive.

Report Recipients	Distribution Identifier
Battalion Level	BN:
Commander	CDR
Executive Officer	XO
S3	S3
Motor Officer	BMO
Maintenance Technician	BMT
Motor Sergeant	BMS
Section NCOIC	SEC
Mechanic	MECH
Company Level	CO:
Commander	CDR
Executive Officer	XO

The distribution line is divided into two sections: one for battalion-level recipients coded BN, and a second for company-level recipients coded CO. An example of the distribution line for report reference number 1, Interpretation Comments, is shown below.

REF# 1   BN: CDR XO S3 BMO BMT BMS SEC   CO: CDR XO

Table 8 shows the recipients for interpretation comments and maintenance management reports. Table 9 lists the recipients for interpretation comments and training management reports and the roster.

TABLE 8
RECIPIENTS OF MAINTENANCE MANAGEMENT TABLES

Recipients

Table Number and Title	BATTALION							COMPANY	
	CDR	XO	S3	BMO	BMT	BMS	SEC	CDR	XO
Interpretation Comments	●	●	●	●	●	●	●	●	●
1 Battalion Maintenance Man-Hour Summary	●	●		●				●	●
2 Maintenance Man-Hours				●		●	●		
3 Average Man-Hours Per Maintenance Task					●	●			
4 Combat Vehicle Maintenance Summary		●		●				●	●
5 Maintenance Tasks by Vehicle					●	●			●
6 Maintenance Task Performance Data by Vehicle					●	●			●

TABLE 9
RECIPIENTS OF TRAINING MANAGEMENT TABLES

Recipients

Table Number and Title	BATTALION							
	CDR	XO	S3	BMO	BMT	BMS	SEC	MECH
Interpretation Comments	●	●	●	●	●	●	●	
7 Certification, Qualification and Experience Summary by Section	●	●	●	●		●		
8 Certification, Qualification and Experience Summary by Individual				●	●	●		
9 Qualification and Experience Summary by Task				●		●	●	
10 Individual Qualification and Experience Profile							●	●
11 Qualification and Certification Bulletin	●	●	●	●		●	●	

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DISTRIBUTING REPORTS

The report distribution schedule follows the report generation schedule shown in Table 6 in Chapter 6.

Distributing the Roster

Distribute the roster every Friday to the Battalion Motor Sergeant and section NCOICs.

Distributing Reports

Reports are distributed every four or six weeks to commanders and managers in the battalion headquarters and in the companies. Specific recipients are shown in the distribution line of each report. For Tables 4, 5 and 6, separate one copy of these reports by company, e.g., A, B, C, D or HHC. Give each company only the reports appropriate to that company. For Tables 2, 8, 9, and 10, separate by maintenance section. Give each section leader the reports appropriate to his section. Also give each section leader the individual copies of Table 10 for distribution to his personnel. Distribute the reports to each recipient or his designated representative no later than Wednesday of the week following the report cutoff date.

COPYING AND ASSEMBLING REPORT SETS FOR DISTRIBUTION

Tables 10 and 11 illustrate the scheme for copying and assembling the various report sets for distribution. After generating reports according to the instructions in Chapter 6, refer to these tables and follow the instructions below to copy and assemble the various report sets for distribution.

- Separate the computer printout into individual sheets.

- Make copies of specific report reference numbers as indicated in the left-hand columns of the table.

- Look at the assembly section of the table to determine which copies go to which recipient.

- Assemble the report sets and staple them. After assembly, check each set against Table 12, Maintenance Management Report Assembly Checklist, or 13, Training Management Report Assembly Checklist.

<div align="center">

TABLE 10

COPYING AND ASSEMBLING MAINTENANCE MANAGEMENT REPORT SETS

</div>

Copying Reports		Assembling Report Sets							CO: (A, B, C, D, HHC)[2]	
		Battalion								
Ref #	# of Copies	CDR	XO	S3	BMO	BMT	BMS	MAINT. SECT.[1]	CDR	XO
1	20	X	X		X	X	X	X	X	X
101	5	X	X		X				X	X
401	4		X		X				X	X
201	3				X		X	X		
202	3				X		X	X		
203	3				X		X	X		
204	3				X		X	X		
301–310	2					X	X			
501 & 601	3					X	X			X
502 & 602	3					X	X			X*
503 & 603	3					X	X			X*
504 & 604	3					X	X			
505 & 605	3					X	X			
506 & 606	3					X	X			X
507 & 607	3					X	X			X
508 & 608	3					X	X			X*
509 & 609	3					X	X			X*
1101	11	X	X	X	X		X	X		
Total Number of Reports		3	4	1	11	29	37	3	3	17*

[1]Separate reports by section. A section receives only reports that apply to its personnel or equipment.

[2]Separate reports by company. A company receives only reports that apply to its personnel or equipment.

*HHC only.

TABLE 11
COPYING AND ASSEMBLING TRAINING MANAGEMENT REPORT SETS

Copying Reports		Assembling Report Sets						
Ref #	# of Copies	BN CDR	BN XO	S3	BMO	BMS	MAINT. SECT.[1]	INDIV MECH[2]
1	11	X	X	X	X	X	X	
701	5	X	X	X	X	X		
801	3				X	X	X	
802	3				X	X	X	
803	3				X	X	X	
804	3				X	X	X	
901	2					X	X	
902	2					X	X	
903	2					X	X	
904	2					X	X	
1001	2						X	X
1002	2						X	X
1003	2						X	X
1004	2						X	X
Total Number of Reports		2	2	2	9	16	4	1

[1]Separate reports by section. A section receives only reports that apply to its personnel.
[2]One per mechanic.

TABLE 12

MAINTENANCE MANAGEMENT REPORT ASSEMBLY CHECKLIST

Report Reference Numbers and Total Numbers of Reports in Set

	Reports	
Recipient	Ref #	Total
BN: CDR	1, 101, 1101	3
XO	1, 101, 401, 1101	4
S3	1101	1
BMO	1, 101, 401, 201-7, 1101	4
BMT	1, 301-10, 501-9, 601-9	29
BMS	1, 201-7, 301-10, 501-9, 601-9, 1101	36
SECT	1, 201-204, 1101	*
CO: CDR (A, B, C, D, HHC)	1, 101, 401	3 each
XO (A, B, C, D)	1, 101, 401, 501, 506-7, 601, 606-7	9 each
XO (HHC)	1, 101, 401, 501-3, 506-9, 601-3, 606-9	17

*Varies by section.

TABLE 13

TRAINING MANAGEMENT REPORT ASSEMBLY CHECKLIST

	Reports	
Recipient	Ref #	Total
BN: CDR	1, 701	2
XO	1, 701	2
S3	1, 701	2
BMO	1, 701, 801-4, 901-904	10
BMS	1, 701, 801-4, 901-4	10
SECT	1, 801-804, 901-904, 1001-1004	*
MECH	1001-1004	1**

*Varies by section.
**One per individual mechanic.

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CHAPTER 8
HOW TO USE MMIS-86 UTILITIES PROGRAMS

The MMIS-86 utilities programs are used for special purposes such as preparing and copying diskettes, printing out stored data, checking status of files, and purging files. Two of these programs require use of the IBM Customer Support Diskette. All others are accessed through the UTILITIES MENU of the MMIS 86 Program Diskette. Use these programs to:

- Initialize new or previously used diskettes before using them in MMIS 86.
- Establish MMIS 86 files on an initialized diskette.
- Copy data diskettes and the program diskette.
- Print all or parts of stored data.
- Check the status of data files.
- Purge the data base.

HOW TO START A UTILITIES PROGRAM

To select a utility program, first bring up the MAIN MENU by completing **HOW TO SELECT AN MMIS-86 PROGRAM** or **HOW TO SWITCH TO ANOTHER PROGRAM** in Chapter 4. When the MAIN MENU appears, enter **4** as choice of program, as shown in the example below, and press EXECUTE.

```
-----------------------------------------------------------------
|                                                               |
|         DATE: 3223     (11 AUG 83)                            |
|                                                               |
|                  MAIN MENU                                    |
|                                                               |
|            1. ENTER/EDIT FORMS                                |
|            2. GENERATE REPORTS                                |
|            3. SWITCH TO ANOTHER BATTALION                     |
|            4. UTILITIES MENU                                  |
|            5. END PROGRAM                                     |
|                                                               |
|                                                               |
|            ENTER CHOICE #: <4>                                |
|                                                               |
-----------------------------------------------------------------
```

A display of the UTILITIES MENU will appear on the screen as shown in the example below.

```
-----------------------------------------------------------------------
|                                                                     |
|                      UTILITIES MENU                                 |
|                                                                     |
|                  1.  COPY DATA BASE                                 |
|                  2.  CREATE NEW DATA BASE                           |
|                  3.  PRINT DATA BASE                                |
|                  4.  FILE STATUS DISPLAY                            |
|                  5.  PURGE DATA BASE                                |
|                  6.  RETURN TO MAIN MENU                            |
|                                                                     |
|                      ENTER CHOICE #: < >                            |
|                                                                     |
|                                                                     |
-----------------------------------------------------------------------
```

Any utilities program can now be selected.

HOW TO INITIALIZE A DISKETTE

A new or previously used diskette must be initialized before it can be used in MMIS 86. To initialize a diskette:

1. Insert the IBM Customer Support diskette in Drive #1.

2. Enter **LINK 'INITIAL',D80** and press EXECUTE. (Note the use of quotation marks, that there is no space between the comma and D80, and that D80 contains a zero, not the letter O).

The screen display will appear as shown in the example below.

```
-----------------------------------------------------------------------
|                                                                     |
|                                                                     |
|   DISKETTE INITIALIZATION FUNCTION.                                 |
|                                                                     |
|   OPTIONS:                                                          |
|                                                                     |
|        1.   DESCRIPTION OF FUNCTION.                                |
|        2.   RETURN TO SYSTEM.                                       |
|        3.   ENTER INITIALIZATION COMMAND.                           |
|                                                                     |
|   ENTER OPTION NUMBER IN POSITION ONE AND PRESS EXECUTE TO          |
|   CONTINUE.                                                         |
|                                                                     |
-----------------------------------------------------------------------
```

3. (POSITION ONE is marked by the cursor flashing.) Enter **3** and press EXECUTE.

The screen display will appear as shown in the example below.

```
INIT VOL-ID,OWNER-ID,FORMAT,SEQUENCE NUMBER




ENTER APPROPRIATE INITIALIZATION COMMAND AND PRESS EXECUTE.

INIT
```

4. Enter „**8** (comma comma 8) as initialization command and press EXECUTE.

The screen display will appear as shown in the example below.

```
ADDITIONAL FILE LABELS CAN BE PLACED ON THIS DISKETTE.  THE
NUMBER OF FILE LABELS CAN BE FROM 71 TO 1007.  ENTER ONE  OF THE
FOLLOWING AT POSITION ONE AND PRESS EXECUTE.



OPTIONS:

BLANK ALLOTS 71 FILES   4 ALLOTS 487 FILES   7 ALLOTS 799 FILES
1 ALLOTS 175 FILES      5 ALLOTS 591 FILES   8 ALLOTS 903 FILES
2 ALLOTS 279 FILES      6 ALLOTS 695 FILES   9 ALLOTS 1007 FILES
3 ALLOTS 383 FILES
```

5. Select BLANK ALLOTS 71 FILES by pressing EXECUTE.

The screen will display directions as shown in the example below.

```
-------------------------------------------------------------------
|                                                                 |
|                                                                 |
|                                                                 |
| INSERT DISKETTE TO BE INITIALIZED IN DESIRED DRIVE.  ENTER ONE  |
| DIGIT DRIVE NUMBER TO BE USED IN THE FIRST POSITION AND         |
| PRESS EXECUTE TO CONTINUE.                                      |
|                                                                 |
|                                                                 |
|                                                                 |
|                                                                 |
|                                                                 |
-------------------------------------------------------------------
```

6. Remove Customer Support Diskette from Drive #1.

7. Insert new or previously used diskette in Drive #2.

8. Enter 2 and press EXECUTE.

The initialization procedure will begin. If the diskette inserted in Drive #2 is one that was previously used, the procedure will be interrupted. The screen will display the options shown in the example below.

```
-------------------------------------------------------------------
|                                                                 |
|                                                                 |
|                                                                 |
|   OPTIONS:                                                      |
|                                                                 |
|       1.   CONTINUE WITH DISKETTE INITIALIZATION.               |
|       2.   RETURN TO SYSTEM.                                    |
|       3.   RESTART FUNCTION.                                    |
|                                                                 |
|   ENTER OPTION NUMBER IN POSITION ONE AND PRESS EXECUTE TO      |
|   CONTINUE.                                                     |
|                                                                 |
|                                                                 |
|                                                                 |
-------------------------------------------------------------------
```

9. **Check contents of diskette.** Continuation of initialization will remove all material on diskette.
10. To continue initialization, enter 1 and press EXECUTE.

After initialization is complete, the screen will display a message as shown in the example below.

```
DISKETTE INITIALIZATION COMPLETE.


THERE ARE NO DEFECTIVE CYLINDERS ON THIS DISKETTE.







PRESS EXECUTE TO CONTINUE.
```

11. Remove the support diskette from Drive #1.
12. Remove the initialized diskette from Drive #2.
13. Press EXECUTE.
14. Insert MMIS–86 program diskette in Drive #1 to continue.

HOW TO ESTABLISH MMIS–86 FILES ON A BLANK DISKETTE

Before data can be entered, the MMIS 86 file structure must first be established on a blank diskette. If the diskette to be used as a data diskette is not a new IBM diskette, refer to **HOW TO INITIALIZE A DISKETTE** above before continuing.

To establish files on a blank diskette, use the MMIS 86 Program diskette to start the utilities program. Select CREATE NEW DATA BASE (option 2) from the UTILITIES MENU.

1. Enter **2** and press EXECUTE.

The screen will present a display as shown in the example below.

```
CREATE DATA BASE. OPTIONS ARE:

      1. CREATE DATA BASE
      2. RETURN TO MAIN MENU

      ENTER CHOICE #: < >
```

2. To continue establishing files, enter 1 and press EXECUTE.

The screen will display directions as shown in the example below.

```
• REMOVE DATA DISKETTE FROM DRIVE 2

• INSERT A BLANK DISKETTE INTO DRIVE 2

• THEN PRESS "EXECUTE".
```

3.   Follow the directions.

The screen will present a message asking for designation of the battalion for which the diskette is being prepared. An example of this display is shown below.

```
---------------------------------------------------------------------



Battalion ID : <                                      >




---------------------------------------------------------------------
```

4.   Enter: battalion designation (up to 30 characters) and press EXECUTE.
     An example of such an entry is shown below.

```
---------------------------------------------------------------------




Battalion ID : <1-99 ARMOR                            >



---------------------------------------------------------------------
```

5. Review entry and accept, change or terminate as appropriate.

The CREATE NEW DATA BASE program will begin. (Completion of the procedure takes about 3½ minutes.)

If the diskette in Dr've #2 is not a blank diskette, the procedure will interrupt, a beep will sound and the screen will display an error message. If this happens, refer to HOW TO INITIALIZE A DISKETTE.

HOW TO COPY A DISKETTE

An IBM diskette should last for at least one hundred hours of normal use, if cared for properly according to the instructions in the IBM manual. However, the diskettes will eventually wear out. Other things can inadvertently happen which will harm them, such as excessive heat, exposure to random magnetic radiation, or physical damage. Diskettes can also be lost, or disappear.

To insure against loss or damage to a diskette, make a copy of each one as a backup, and keep the copies in a safe place. Copy the program diskette and the data diskette. The copy of the data diskette should be updated each week. In other words, the "insurance" or backup copies of the diskettes should be as up-to-date as the day-to-day operating copies. After copying any diskette, put the date it was copied on the diskette label in pencil.

To copy an MMIS 86 Program diskette, go to the instructions for step 4.

To copy a data diskette, select COPY DATA BASE (option 1) from the UTILITIES MENU.

1. Enter 1 and press EXECUTE.

The screen will display the options as shown in the example below.

```
COPY DATA BASE OPTIONS

1. COPY DATA BASE
2. RETURN TO MAIN MENU

ENTER CHOICE #: ( )
```

2. To continue copy procedure, enter 1 and press EXECUTE.

The screen will display a message asking what kind of diskette will be used as a copy. See example below.

```
-----------------------------------------------------------------------
|                                                                     |
|                                                                     |
|                                                                     |
|         WHAT KIND OF DISKETTE WILL YOU COPY ONTO?                   |
|                                                                     |
|         1. A BLANK OR NEWLY INITIALIZED DISKETTE.                   |
|         2. AN EXISTING BACKUP FOR THE SAME COMPANY.                 |
|                                                                     |
|                  ENTER CHOICE #: < >                                |
|                                                                     |
|                                                                     |
|                                                                     |
-----------------------------------------------------------------------
```

The screen will display directions for either choice selected. The instructions are the same for either type of diskette. An example of the directions for a backup diskette is shown below.

```
-----------------------------------------------------------------------
|                                                                     |
|                                                                     |
|                                                                     |
|       • BE SURE THAT THE WORKING COPY OF THE DATA                   |
|         DISKETTE IS IN DRIVE 2 (AS USUAL)                           |
|                                                                     |
|       • REMOVE PROGRAM DISKETTE FROM DRIVE 1 AND                    |
|         INSERT THE BACKUP DISKETTE.                                 |
|                                                                     |
|       • THEN PRESS "EXECUTE".                                       |
|                                                                     |
|                                                                     |
-----------------------------------------------------------------------
```

3. Follow the directions. Any deviation will produce an error message with the option to restart the procedure or return to the MAIN MENU.

The COPY DATA BASE program will begin. Time for completion is dependent on amount of data on file.

To copy an MMIS 86 program diskette:

4. Insert IBM Customer Support diskette in Drive #1.

5. Enter **LINK 'DDCOPY'** and press EXECUTE.

The screen will display:

```
------------------------------------------------------------------

|                                                                |
|                                                                |
|        DISKETTE TO DISKETTE COPY FUNCTION                      |
|                                                                |
|                                                                |
|        OPTIONS ARE:                                            |
|                                                                |
|           1. COPY ONE FILE                                     |
|           2. COPY ALL FILES                                    |
|           3. COPY A GROUP OF FILES                             |
|                                                                |
|        SELECT OPTION, PRESS EXECUTE                            |
|                                                                |
|                                                                |

------------------------------------------------------------------
```

6. Remove Customer Support diskette from Drive #1.

7. Enter **2** and press EXECUTE.

The screen will read:

```
------------------------------------------------------------------

|                                                                |
|                                                                |
|                                                                |
|        HOW MANY DISKETTE DRIVES WILL YOU BE USING             |
|                                                                |
|        OPTIONS ARE:                                            |
|                                                                |
|           1. ONE DISKETTE DRIVE                               |
|           2. TWO DISKETTE DRIVES                              |
|                                                                |
|        SELECT OPTION, PRESS EXECUTE                           |
|                                                                |
|                                                                |

------------------------------------------------------------------
```

8. Enter **2** and press EXECUTE.

The screen will read:

```
INSERT DISKETTE BEING COPIED FROM
INTO SELECTED DISKETTE DRIVE

ENTER DRIVE NUMBER, PRESS EXECUTE
```

9. Insert MMIS-86 Program diskette in Drive #1.

10. Enter **1** and press EXECUTE.

The screen will read:

```
INSERT DISKETTE BEING COPIED TO
INTO SELECTED DISKETTE DRIVE

ENTER DRIVE NUMBER, PRESS EXECUTE
```

11. Insert blank diskette in Drive #2.

12. Enter 2 and press EXECUTE.

The copy procedure will begin. When it is finished, the screen will read:

```
------------------------------------------------------------------
|                                                                |
|                                                                |
|                                                                |
|                  DISKETTE COPY COMPLETED                       |
|                                                                |
|                  OPTIONS ARE:                                  |
|                                                                |
|                      1. RESTART FUNCTION                       |
|                      2. RETURN TO SYSTEM                       |
|                                                                |
|                  SELECT OPTION, PRESS EXECUTE                  |
|                                                                |
|                                                                |
|                                                                |
------------------------------------------------------------------
```

13. Enter 2 and press EXECUTE.

Return to the MAIN MENU.

HOW TO PRINT OUT STORED DATA

To search for errors in stored data, or to examine the stored data for any other reason, all or parts of the data can be retrieved and copied on the printer.

To print stored data, select PRINT DATA BASE (option 3) from the UTILITIES MENU.

1. Enter 3 and press EXECUTE.

The screen will ask for form number and dates as shown in the example below.

```
------------------------------------------------------------------
|                    PRINT DATA BASE                             |
|                                                                |
|1. < >      Form #              < >  Normal or Compressed (form 2) |
|2. <    >   Start date                                          |
|3. <    >   End date                                            |
|4. < >      MOS # (leave blank for all MOSs)                    |
|5. < >      Equipment # (leave blank for all)                   |
|6. <    >   Code # (Form 3 or 8 only; blank for all code #s)   |
|                                                                |
|                                                                |
|                                                                |
|                                                                |
------------------------------------------------------------------
```

2. Enter **number** of form from which data were originally entered.

3. For printing data from Form 2 only, enter **N** (for Normal) or **C** (for Compressed) data. (Form 2 data over 2 months old is compressed.)

4. Enter **Julian date** for start of period containing data to be examined.

5. Enter **Julian date** for end of period containing data to be examined.

6. Enter **Code number** for MOS to be examined, or leave blank for all.

7. Enter **Code number** for equipment to be examined, or leave blank for all.

8. For printing data from Form 3 or 8 only, enter **code number** for individual mechanic.

9. Use ACTION LINE to review entries and accept, change or terminate form and data entries.

The screen will display directions as shown in the example below.

```
TO PRINT DATA BASE:

  ◦ TURN ON PRINTER
  ◦ ALIGN PAPER WITH PRINT HEAD
  ◦ PRESS "EXECUTE" WHEN READY
```

8. Follow the directions.

The PRINT DATA BASE program will begin. Time for completion is dependent on amount of data on file and period of coverage.

HOW TO CHECK FILE STATUS

The status of files should be checked periodically to see how full they are. The FILE STATUS REPORT display shows how many of each type form have been entered, the maximum capacity of each file and the last reference number or code number used where applicable. Compare the number of forms on file to the maximum capacity. Generally, it is time to purge the files when they are 90% full. For example, the maximum file capacity for Form 1 is 8665. When the number of Form 1's on file reaches 7800 or more, i.e., capacity remaining is 865 (10%) or less, it is time to purge the files. See HOW TO PURGE DATA BASE.

The FILE STATUS display also shows the number of names deleted from the roster and the Julian date the files were last purged.

To check the status of files, select FILE STATUS REPORT (option 4) from the UTILITIES MENU.

1. Enter 4 and press EXECUTE.

The file status will be displayed on the screen as shown in the example below.

```
---------------------------------------------------------------
|FILE STATUS                                    3216 (4 AUG 83) |
|                                                               |
|FORM    ON FILE     MAX   REF NO        FORM   ON FILE    MAX   REF NO |
| 1          92     8665      92                                |
| 2         348     3300     348         2S         0   10000   |
| 3         329      500                                        |
| 4          77      175                                        |
| 5           8       35                                        |
| 6          68      200     167                                |
| 8           0     1000                                        |
|                                                               |
|# DELETED MEN ON ROSTER:    6        LAST PURGE DATE: 0000     |
|                                                               |
|PRESS "EXECUTE" TO RETURN TO MAIN MENU                         |
---------------------------------------------------------------
```

To print a copy of the display:

2. Turn on printer.

3. Depress CMD key on left side of keyboard.

4. Press key for Copy Display on right side of top row of keyboard.

5. When finished, press EXECUTE to return to MAIN MENU.

HOW TO PURGE DATA BASE

This program creates a copy of the data diskette from which all older data are removed. For Forms 1, 2, 4, and 5, all forms more than 2 months old (based on the diskette's data access date) are purged. Names deleted from the roster (Form 6) more than 2 months ago are purged, as are the corresponding Form 3's. and 8's.

Purging makes no changes to the existing data diskette. Its purpose is to create another diskette without obsolete data. After purging, the existing diskette is retired from use by storing it in the files or "archives." It may be used to rerun reports showing earlier data if necessary, but not for data entry.

Purging should be done every 2 months. If the purge procedure is interrupted, such as by power failure, simply restart after re-initializing the output diskette (the one being created). No data will be lost or duplicated.

To purge a data diskette of old data, select PURGE DATA BASE (option 5) from the UTILITIES MENU.

1. Enter 5 and press EXECUTE.

The program will read the data diskette label and ask for directions as shown in the example below.

```
                        PURGE DATA BASE

        DATA DISKETTE IS FOR 1 99  ARMOR
        LAST UPDATED ON 3122 (2 MAY 03)
        DATA OLDER THAN 2 MONTHS WILL BE REMOVED.

                        OPTIONS ARE:

                1. CONTINUE WITH PURGE
                2. RETURN TO MAIN MENU

                ENTER CHOICE #:  ( )
```

2. To continue with purge, enter 1 and press EXECUTE.

The screen will display directions as shown in the example below.

```
= REMOVE PROGRAM DISKETTE FROM DRIVE 1

= INSERT A BLANK DISKETTE INTO DRIVE 1

= THEN PRESS "EXECUTE".
```

3. Follow the directions. Any deviation produces an error message with the option to restart the purge or return to the MAIN MENU.

When the program is finished, the screen will display completion directions.

4. Follow the directions.

5. Return to MAIN MENU.

CHAPTER 9
HOW TO MODIFY MMIS-86

MMIS-86 may be modified to accommodate changes in type equipment, personnel, maintenance tasks or section designation. The purpose of this chapter is to provide instructions for implementing each of these modifications, when they become necessary.

SYSTEM SUMMARY

Before modifying any portion of MMIS-86, you must understand the relationships between MOS, equipment and tasks covered in MMIS-86 and the various data input forms and output report tables.

MOS Summary

Table 14 below summarizes the MOS covered in MMIS-86. It shows whether or not the sections containing personnel in those MOS are merged for report purposes, and the input forms and output report tables which apply to each MOS. Before modifying an MOS, you must decide whether you want to merge sections, i.e., show 'ALL' on report tables or not merge sections, i.e., show MOS separately by section assigned. You must also identify the input (data collection) forms and report tables affected. For example, any modification of MOS 31V would affect MMIS-86 Forms 2, 3, 6 and 8, plus Report Tables 1, 2, 7, 8, 9, 10 and 11.

TABLE 14. MOS SUMMARY

MOS NUMBER AND MOS	MERGE SECTIONS?	INPUT FORMS AFFECTED				REPORT TABLES AFFECTED						
1 31V	Y	2	3	6	8	1	2	7	8	9	10	11
2 45N/T	Y	2	3	6	8	1	2	7	8	9	10	11
3 63B/S	N	2	3	6	8	1	2	7	8	9	10	11
4 63N/T	N	2	3	6	8	1	2	7	8	9	10	11

Equipment Summary

Table 15 below summarizes the equipment covered in MMIS-86. It shows whether or not bumper numbers are needed for data input and output, and the input forms and report tables which apply to each equipment. Before modifying an equipment, you must identify the input forms and report tables affected. For example, replacing M60 with M1 tanks would affect MMIS-86 Forms 1, 2, 3, 7 and 8, and Report Tables 1, 3, 4, 5 and 6.

TABLE 15. EQUIPMENT SUMMARY

EQUIP # AND EQUIPMENT	BMPR NBRS?	INPUT FORMS AFFECTED	REPORT TABLES AFFECTED
1 M60	Y	1 2 3 7 8	1 3 4 5 6
2 AVLB	Y	1 2 3 7 8	3 5 6
3 M113 FAM	Y	1 2 3 7 8	3 5 6
4 M88	Y	2 3 7 8	3 5 6
5 M578	Y	2 3 7 8	3 5 6
6 M151	Y	2 3 7 8	3 5 6
7 M35/54	Y	2 3 7 8	3 5 6
8 M561/792	Y	2 3 7 8	3 5 6
9 GOER FAM	Y	2 3 7 8	3 5 6
10 COMM EQP	N	2 3 8	3

Maintenance Task List Summary

Table 16 below summarizes the maintenance task lists by MOS and equipment covered in MMIS-86. It shows the task list identification number (needed for access during modification procedure), and the total numbers of preventive maintenance (PM) and corrective maintenance (CM) tasks currently on each list.

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TABLE 16. MAINTENANCE TASK LIST SUMMARY

LIST #	DESCRIPTION	PM TASKS	# CM TASKS
1	CREW, M113 FAMILY	A	13
2	CREW, AVLB	A	37
3	CREW, M60	A	32
4	31V, COMM EQP		33
5	45N/T, M60	AB	36
6	45N/T, M113 FAMILY	AB	31
7	63B/S,63N/T,M151	AB	53
8	63B/S,63N/T,M35/54	AB	47
9	63B/S,63N/T,M561/792	AB	33
10	63B/S, GOER FAM	AB	11
11	63N/T, M60	AB	42
12	63N/T, AVLB	AB	49
13	63N/T, M113 FAM	AB	43
14	63N/T, M88	AB	51
15	63N/T, M578	AB	36

HOW TO START MMIS-86 MODIFICATION

To modify any portion of MMIS-86:

1. Turn on the computer.

2. Insert the program diskette in Drive #1.

3. Enter **LOAD 'SYSTEM.DEF.MENU'** and press EXECUTE.

4. Enter **RUN** and press EXECUTE. The display shown in the example below will appear on the screen.

```
                    SYSTEM MODIFICATION MENU

                 1. MODIFY EQUIPMENTS
                 2. MODIFY MOSs
                 3. MODIFY TASK LISTS
                 4. MODIFY MAINTENANCE SECTIONS
                 5. PRINT SYSTEM SUMMARY
                 6. PRINT INDIVIDUAL TASK LISTS
                 7. END PROGRAM

                 ENTER CHOICE # : < >
```

5. Before modifying any portion of MMIS-86, print a System Summary for use as a reference during modification procedures. Enter 5 and press EXECUTE. The display shown in the example below will appear on the screen.

```
∘ TURN ON PRINTER.
∘ ALIGN PAPER AT PAPER GUIDE.
∘ PRESS "EXECUTE" WHEN READY.
```

6. Follow the instructions. A System Summary will be printed.

You may now select any modification routine. The instructions for each routine are presented in the remainder of this chapter, in the order listed on the System Modification Menu.

HOW TO MODIFY EQUIPMENT LIST

MMIS-86 has capacity for up to 15 types of equipment. Refer to the System Summary to identify equipment currently covered.

Equipment modification routines are:

- **Add** new equipment

- **Edit** equipment

- **Delete** equipment

The **add** routine permits coverage of new types of equipment. Examples of equipment that could be added to MMIS-86 are the M1 Abrams Tank or the M2/3 Bradley Fighting Vehicle System (FVS). The **edit** routine permits modification or correction of the existing equipment list. The **delete** routine permits dropping equipment no longer in use in the unit. Examples of equipment that could be deleted are the M60 Tank (when replaced by the M1) or the M151 Truck (when replaced by the HUMMER).

Modification of the equipment list may also require changes in:

- Input (data collection) forms

- MOS list

- Task lists

Form Modification

Modification of the equipment list may require changes in MMIS-86 forms. For example, addition of a new type of equipment, e.g., the M2/3 FVS, would affect.

- Form 1, line 2.

- Form 2, line 2.

- Form 3, Maintenance Task Experience History.

- Form 7, line 1.

- Form 8, line 6.

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MOS List Modification

Modification of the equipment list may require changes in the MOS list. For example, addition of the M1 Abrams Tank would require assignment of personnel with MOS 45E and 63E. See **HOW TO MODIFY MOS** for instructions.

Task List Modification

Modification of equipment list may also require changes in task lists. For example, addition of the M1 Abrams Tank would require new maintenance task lists. See **HOW TO MODIFY TASK LISTS** for instructions.

Equipment Modification Routines

To select a routine for modifying equipment, bring up the SYSTEM MODIFICATION MENU.

1. Enter 1 as choice, as shown in the example below.

```
       SYSTEM MODIFICATION MENU

       1. MODIFY EQUIPMENTS
       2. MODIFY MOSs
       3. MODIFY TASK LISTS
       4. MODIFY MAINTENANCE SECTIONS
       5. PRINT SYSTEM SUMMARY
       6. PRINT INDIVIDUAL TASK LISTS
       7. END PROGRAM

       ENTER CHOICE # : <1>
```

The equipment modification options will be displayed on the screen as shown in the example below.

```
EQUIPMENT MODIFICATION OPTIONS

1. ADD NEW EQUIPMENTS
2. EDIT EQUIPMENTS
3. DELETE EQUIPMENTS
4. RETURN TO SYSTEM MODIFICATION MENU

ENTER CHOICE #: < >

NUMBER OF EQUIPMENTS NOW ON FILE : 10
NUMBER OF MOSs NOW ON FILE       :  4
```

2. To **add** new equipments, go to page 118 for instructions.

3. To **edit** equipments, go to page 119 for instructions.

4. To **delete** equipments, go to page 120 for instructions.

5. To **return** to SYSTEM MODIFICATION MENU, enter **4**.

Adding New Equipments. Note the number of equipments now on file, then enter 1 as choice of EQUIPMENT MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
-------------------------------------------------------------------
|                                                                 |
|                                                                 |
|            EQUIPMENT SPECIFICATIONS          ADD                |
|                                                                 |
|     1. {   }  Equipment # (1-15)                                |
|     2. {         }  Equipment                                   |
|     3. { }  Bumper numbers? (Y/N)                               |
|     4. { }  Valid for data entry form 1? (Y/N)                  |
|     5. { }  Valid for report table 1, lower half? (Y/N)         |
|     6. { }  Valid for report table 4? (Y/N)                     |
|                                                                 |
|                                                                 |
|                                                                 |
-------------------------------------------------------------------
```

INSTRUCTIONS FOR ADD NEW EQUIPMENTS ENTRIES

#	Line	Instructions
1	Equipment #	Enter **code number.** (Code number must differ from code numbers now on file, and be less than 15. For example, if the number of equipments on file is 10, the code number for a new equipment would be 11.)
2	Equipment	Enter **equipment identifier** – any combination of letters and numbers up to eight characters.
3	Bumper numbers? (Y/N)	● If new equipment has a bumper number, such as vehicles, enter **Y.** ● If new equipment does not have a bumper number, such as radios, enter **N.**
4	Valid for data entry Form 1? (Y/N)	● If crew maintenance on new equipment will be recorded (Form 1), enter **Y.** ● If crew maintenance will **not** be recorded, enter **N.**
5	Valid for report Table 1, lower half? (Y/N)	● If new equipment is to be valid for Table 1, enter **Y.** ● If new equipment is **not** to be valid for Table 1, enter **N.**
6	Valid for report Table 4? (Y/N)	● If new equipment is to be reported on Table 4, enter **Y.** ● If new equipment is **not** to be reported on Table 4, enter **N.**

Edit Equipments. To edit equipments, enter **2** as choice of EQUIPMENT MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
------------------------------------------------------------------
|                                                                |
|                                                                |
|           EQUIPMENT SPECIFICATIONS              EDIT           |
|                                                                |
|     1. <   >  Equipment # (1-15)                               |
|     2. <       >  Equipment                                    |
|     3. < >  Bumper numbers? (Y/N)                              |
|     4. < >  Valid for data entry form 1? (Y/N)                 |
|     5. < >  Valid for report table 1, lower half? (Y/N)        |
|     6. < >  Valid for report table 4? (Y/N)                    |
|                                                                |
|                                                                |
|                                                                |
------------------------------------------------------------------
```

INSTRUCTIONS FOR EDIT EQUIPMENTS ENTRIES

#	Line	Instructions
1	Equipment #	• Enter **code number** for equipment you want to edit. (See System Summary for code numbers). The specifications on file for that equipment will appear in the blanks of the remaining lines on the display, with an edit line at the bottom of the screen.
		• To change any entry, enter C, then enter **line number** to be changed and enter **new specification.**
		• To accept specifications, enter A.
		• To end editing, enter **T**. NOTE: **Do not** enter T if any changes were made in specifications, as the changes will not be transferred to stored data.

Delete Equipments. To delete equipments, enter **3** as choice on EQUIPMENT MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
---------------------------------------------------------------
|                                                             |
|                                                             |
|                                                             |
|          EQUIPMENT SPECIFICATIONS          DELETE           |
|                                                             |
|     1. <   >  Equipment # (1-15)                            |
|     2. <          >  Equipment                              |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
---------------------------------------------------------------
```

INSTRUCTIONS FOR DELETE EQUIPMENTS ENTRIES

#	Line	Instructions
1	Equipment #	• Enter code number for equipment you want to delete. (See System Summary for code numbers.) The equipment title will appear in line 2, with an edit line at the bottom of the screen.
		• To delete equipment shown, enter DEL.
		• To end deletion routine without deleting equipment, enter T.
		• To select another equipment for deletion, enter C, then enter number for another equipment.

HOW TO MODIFY MOS

MMIS-86 can cover a maximum of ten MOS. Refer to the System Summary to identify MOS currently covered.

MOS modification routines are:

- **Add** new MOSs

- **Edit** MOSs

- **Delete** MOSs

The **add** routine permits coverage of new MOS. For example, MOS 45E and 63E could be added to MMIS-86 if your battalion is issued the M1 Abrams Tank. The **edit** routine permits modification or correction of existing MOS. For example, the listing for MOS 63N/T could be changed to 63 E/T for battalions with M1 tanks and M2/3 FVS. The **delete** routine permits dropping MOS from the system.

Modification of the MOS list may also require changes in:

- Input (data collection) forms

- Task lists

- Maintenance section designations

Form Modification

Modification of the MOS list may require changes in MMIS-86 forms. For example, changing MOS 45N and 63N to 45E and 63E would affect:

- Form 2, line 4

- Form 3, Maintenance Task Experience History

- Form 6, line 1

- Form 8, line 2.

Task List Modification

Modification of the MOS list may also require changes in task lists. For example, addition of MOS 45E and 63E would require new maintenance task lists for those MOS. See **HOW TO MODIFY TASK LISTS** for instructions.

Maintenance Section Modification

Modification of the MOS list may involve changes in maintenance section designation. See **HOW TO MODIFY MAINTENANCE SECTIONS** for instructions.

MOS Modification Routines

To select a routine for modifying MOS, bring up the SYSTEM MODIFICATION TION MENU.

1. Enter **2** as choice, as shown in the example below.

```
   SYSTEM MODIFICATION MENU

   1. MODIFY EQUIPMENTS
   2. MODIFY MOSs
   3. MODIFY TASK LISTS
   4. MODIFY MAINTENANCE SECTIONS
   5. PRINT SYSTEM SUMMARY
   6. PRINT INDIVIDUAL TASK LISTS
   7. END PROGRAM

   ENTER CHOICE # : <2>
```

The MOS modification options will be displayed on the screen as shown in the example below.

```
---------------------------------------------------------------------
|                                                                   |
|                  MOS MODIFICATION OPTIONS                         |
|                                                                   |
|              1. ADD NEW MOSs                                      |
|              2. EDIT MOSs                                         |
|              3. DELETE MOSs                                       |
|              4. RETURN TO SYSTEM MODIFICATION MENU                |
|                                                                   |
|                 ENTER CHOICE #: < >                               |
|                                                                   |
|        NUMBER OF EQUIPMENTS NOW ON FILE : 10                      |
|        NUMBER OF MOSs NOW ON FILE       :  4                      |
|                                                                   |
---------------------------------------------------------------------
```

2. To add new MOSs, go to page 124 for instructions.

3. To edit MOSs, go to page 125 for instructions.

4. To delete MOSs, go to page 126 for instructions.

5. To return to SYSTEM MODIFICATION MENU, enter 4.

Add New MOS. Note the number of MOS now on file, then enter 1 as choice of MOS MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
---------------------------------------------------------------
|                                                             |
|                                                             |
|             MOS SPECIFICATIONS                    ADD       |
|                                                             |
|        1. <   >. MOS # (1-10)                               |
|        2. <         >  MOS                                  |
|        3. < >   Merge sections on reports? (Y/N)            |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
---------------------------------------------------------------
```

INSTRUCTIONS FOR ADD NEW MOSs ENTRIES

#	Line	Instructions
1	MOS #	Enter **code number.** (Code number must differ from code numbers of MOS now on file, and be less than 10. For example, if number of MOS on file is 4, the code number of a new MOS would be 5.)
2	MOS	Enter **MOS identifier**, e.g., 63E.
3	Merge sections on reports?	• Low density MOS, e.g., 31V or 45N/T, should be merged on reports, and show as ALL. High density MOS, e.g., 63N/T, should be reported by section.
		• To merge sections on reports, enter **Y.**
		• To report MOS by section, i.e., not merge, enter **N.**

Edit MOSs. To edit MOSs, enter **2** as choice of MOS MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
 ------------------------------------------------------------------
|                                                                  |
|                                                                  |
|                                                                  |
|              MOS SPECIFICATIONS                       EDIT       |
|                                                                  |
|       1. <   >   MOS # (1-10)                                    |
|       2. <          >   MOS                                      |
|       3. < >   Merge sections on reports? (Y/N)                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
 ------------------------------------------------------------------
```

INSTRUCTIONS FOR EDIT MOS ENTRIES

#	Line	Instructions
1	MOS #	• Enter **code number** for MOS you want to edit. (See System Summary for code numbers.) The specification on file for that MOS will appear in the blanks of the remaining lines on the display, with an edit line at the bottom of the screen.
		• To change any entry, enter C, then enter **line number** to be changed and enter new **specification**.
		• To accept specifications, enter A.
		• To end editing, enter **T.** NOTE: **Do not** enter T if any changes were made in specifications, as the changes will not be transferred to stored data.

Delete MOSs. To delete MOS, enter **3** as choice of MOS MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
 ----------------------------------------------------------------
|                                                                |
|                                                                |
|                                                                |
|            MOS SPECIFICATIONS              DELETE              |
|                                                                |
|    1. (   )  MOS # (1-10)                                       |
|    2. (         )  MOS                                          |
|                                                                |
|                                                                |
|                                                                |
|                                                                |
 ----------------------------------------------------------------
```

INSTRUCTIONS FOR DELETE MOSs ENTRIES

#	Line	Instructions
1	MOS #	• Enter code number for MOS you want to delete. (See System Summary for code numbers.) The MOS title will appear in line 2, with an edit line at the bottom of the screen.
		• To delete MOS shown, enter DEL.
		• To end deletion routine without deleting MOS, enter T.
		• To select another MOS for deletion, enter C, then enter code number for another MOS.

HOW TO MODIFY TASK LISTS

MMIS-86 has task lists for each equipment and for each MOS working on an equipment. Refer to the System Summary for description of task lists and total numbers of PM and CM tasks on each list.

Task list modification routines are:

- **Add** entire task lists

- **Edit** individual corrective maintenance (CM) tasks

- **Delete** entire task lists

- **Copy** entire task list

- **Modify** description or preventive maintenance (PM) tasks only.

The **add** routine permits listing tasks for new equipment and MOS, e.g., M1 tank and MOS 63E. The **edit** routine permits modification or correction of existing task lists. The **delete** routine permits dropping task lists for equipment or MOS's no longer authorized in the unit, e.g., M60 tank when replaced by the M1 tank. The **copy** routine transfers an entire task list to another one. The **modify** routine permits correction of task list descriptions or changes in PM tasks.

Task List Modification

The task lists currently in MMIS-86 are the result of detailed task analyses for each equipment and MOS. Modifications to these task lists or addition of new task lists require the same "front-end" task analysis. This task analysis must be done by the Battalion Motor Officer or other person responsible for managing MMIS-86.

For information, the task analysis involves at least five steps:

- Preparation of a preliminary task list

- Verification by subject matter experts (SME)

- Definition of a final task list

- Development of performance steps

- Final review

Prepare preliminary task lists using all available sources of task information, such as:

- Soldier's Manuals

- Critical task lists (TRADOC proponent)

- Technical manuals

Submit these preliminary task lists to SME for verification. Ask maintenance managers, maintenance technicians, and personnel in each MOS working on the equipment to review the lists for additions and/or corrections.

Revise the preliminary task list based on the results of SME review and frequency of performance criteria.

Develop performance steps for each new task. Performance steps are needed to clearly define what is and what is not included in the performance of a task. Performance steps, thus, summarize the extent of a task, and are similar to those in the Soldier's Manuals.

Submit the revised task lists and related performance steps to SME for final verification. After verification, modify the task lists used by crews and mechanics in MMIS-86 form completion and modify the task list routines.

Form Modification

Modification of task lists requires changes in the lists and forms used by crews, mechanics and supervisors. For example, addition of the M2/3 Bradley FVS would require the following changes:

- Addition of crew task list (used to complete Form 1)

- Addition of task list for MOS 45N/T (used to complete Forms 2 and 8)

- Addition of task list for MOS 63N/T (used to complete Forms 2 and 8)

- Additions to Form 3, Maintenance Task Experience History, for MOS 45N/T and 63N/T.

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Task List Modification Routines

NOTE: Before modifying any task list, you should print individual task lists for reference. See **HOW TO PRINT INDIVIDUAL TASK LISTS** for instructions.

To select a routine for modifying task lists, bring up the SYSTEM MODIFICATION MENU.

1. Enter **3** as choice, as shown in the example below.

```
       SYSTEM MODIFICATION MENU

    1. MODIFY EQUIPMENTS
    2. MODIFY MOSs
    3. MODIFY TASK LISTS
    4. MODIFY MAINTENANCE SECTIONS
    5. PRINT SYSTEM SUMMARY
    6. PRINT INDIVIDUAL TASK LISTS
    7. END PROGRAM

    ENTER CHOICE # : <3>
```

The task list modification options will be displayed on the screen as shown in the example below.

```
       TASK LIST MODIFICATION OPTIONS

    1. ADD ENTIRE TASK LISTS
    2. EDIT INDIVIDUAL CM TASKS
    3. DELETE ENTIRE TASK LISTS
    4. COPY ENTIRE TASK LIST
    5. MODIFY DESCRIPTION OR PM TASKS ONLY
    6. RETURN TO SYSTEM MODIFICATION MENU

    ENTER CHOICE #: < >

NUMBER OF EQUIPMENTS NOW ON FILE : 10
NUMBER OF MOSs NOW ON FILE       :  4
```

2. To **add** entire task lists, go to page 131 for instructions.

3. To **edit** individual CM tasks, go to page 132 for instructions.

4. To **delete** entire task lists,go to page 137 for instructions.

5. To **copy** entire task lists, go to page 138 for instructions.

6. To **modify** description or PM tasks only, go to page 139 for instructions.

Add Entire Task Lists. Enter 1 as choice of TASK LIST MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
---------------------------------------------------------------------------
|                    MODIFY TASK LIST                      ADD              |
|LIST # <  >  Description: <                                            > |
|PM tasks: <      > (ABCD)                       # CM tasks <   >          |
|     CM TASK #                    TASK STATEMENT                          |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|       <   >        <                                            >       |
|                                                                         |
|                                                                         |
---------------------------------------------------------------------------
```

INSTRUCTIONS FOR ADDING NEW TASK LISTS ENTRIES

Line	Instructions
List #	Enter identification number. (Number cannot be number of any task list now on file. See System Summary for task list identification numbers.)
Description	Enter description of task list. For example, 63E, M1.
PM Tasks	Enter letters for PM tasks desired, i.e., A (for Periodic Service) and B (for Technical Inspection).
CM Task #	Enter number.*
Task Statement	● Enter descriptor for task, i.e., replace inoperative powerpack. ● Repeat CM Task # and Task Statement for each task.

---

*Number tasks consecutively.

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Edit Individual CM Tasks. Enter 2 as choice of TASK LIST MODIFICATION
OPTIONS. The display shown in the example below will appear on the screen.

```
---------------------------------------------------------------------
|                                                                   |
|              INDIVIDUAL CM TASK EDIT OPTIONS                      |
|                                                                   |
|         1. ADD TASKS                                              |
|         2. CHANGE TASKS                                           |
|         3. INSERT TASKS                                           |
|         4. DELETE TASKS                                           |
|         5. RETURN TO TASK MOD. OPTION LIST                        |
|                                                                   |
|         ENTER CHOICE #: < >                                       |
|                                                                   |
|                                                                   |
---------------------------------------------------------------------
```

- To add tasks, go to page 133 for instructions.

- To change (amend) tasks, go to page 134 for instructions.

- To insert tasks, go to page 135 for instructions.

- To delete tasks, go to page 136 for instructions.

Add tasks. Enter 1 as choice of CM TASK EDIT OPTIONS. The display shown in the example below will appear on the screen.

```
-------------------------------------------------------------------
|                     MODIFY TASK LIST                  EDIT/ADD    |
|   LIST # <  >                                                     |
|   PM tasks:                                          # CM tasks:  |
|   LINE        CM TASK #              TASK STATEMENT               |
|    1.          <   >         <                                 }  |
|    2.          <   >         <                                 }  |
|    3.          <   >         <                                 }  |
|    4.          <   >         <                                 }  |
|    5.          <   >         <                                 }  |
|    6.          <   >         <                                 }  |
|    7.          <   >         <                                 }  |
|    8.          <   >         <                                 }  |
|                                                                   |
-------------------------------------------------------------------
```

INSTRUCTIONS FOR ADD CM TASK ENTRIES

Line	Instructions
List #	Enter identification number for task list to be changed. The screen will display the number of PM and CM tasks for that list. (See System Summary for task list identification numbers.)
1-8	• Enter number of CM task to be added. (Number must be greater than number of tasks currently on list.) • Enter task statement for new task.

Change tasks. Enter **2** as choice of CM TASK EDIT OPTIONS. The display
shown in the example below will appear on the screen.

```
 ----------------------------------------------------------------------
 |              MODIFY TASK LIST                        EDIT/CHANGE |
 |  LIST # <  >                                                     |
 |  PM tasks:                                        # CM tasks:    |
 |  LINE      CM_TASK_#              TASK STATEMENT                  |
 |   1.        <  >         <                                    }   |
 |   2.        <  >         <                                    }   |
 |   3.        <  >         <                                    }   |
 |   4.        <  >         <                                    }   |
 |   5.        <  >         <                                    }   |
 |   6.        <  >         <                                    }   |
 |   7.        <  >         <                                    }   |
 |   8.        <  >         <                                    }   |
 |                                                                  |
 ----------------------------------------------------------------------
```

INSTRUCTIONS FOR CHANGE CM TASK ENTRIES

Line	Instructions
List #	Enter identification number for task list to be changed. (See System Summary for task list identification numbers.)
1-8	• Enter number of CM task to be changed. The task statement will be displayed. • Enter change in task statement.

Insert tasks. Enter **3** as choice of CM TASK EDIT OPTIONS. The display shown in the example below will appear on the screen.

```
-----------------------------------------------------------------------
|                                                                     |
|                         MODIFY TASK LIST                EDIT/INSERT |
|       LIST # <  >                                                   |
|       PM tasks:                                    # CM tasks:      |
|       LINE      CM TASK #            TASK STATEMENT                  |
|        1.        <  >        <                                    > |
|        2.        <  >        <                                    > |
|        3.        <  >        <                                    > |
|        4.        <  >        <                                    > |
|        5.        <  >        <                                    > |
|        6.        <  >        <                                    > |
|        7.        <  >        <                                    > |
|        8.        <  >        <                                    > |
|                                                                     |
-----------------------------------------------------------------------
```

INSTRUCTIONS FOR INSERT CM TASK ENTRIES

Line	Instructions
List #	Enter identification number for task list to be changed. The number of PM and CM tasks currently on the list will be displayed. (See System Summary for task list identification numbers.)
1-8	● Enter number for CM task to be inserted.
	● Enter task statement for inserted task. After acceptance of insert entries, the task(s) will be inserted on the list, and all other tasks on the list will be renumbered automatically.

135

Delete tasks. Enter 4 as choice of CM TASK EDIT OPTIONS. The display
shown in the example below will appear on the screen.

```
---------------------------------------------------------------------
|                        MODIFY TASK LIST                  EDIT/DELETE |
|   LIST # <  >                                                        |
|   PM tasks:                                         # CM tasks:       |
|   LINE     CM TASK #              TASK STATEMENT                      |
|    1.        <  >        <                                    >       |
|    2.        <  >        <                                    >       |
|    3.        <  >        <                                    >       |
|    4.        <  >        <                                    >       |
|    5.        <  >        <                                    >       |
|    6.        <  >        <                                    >       |
|    7.        <  >        <                                    >       |
|    8.        <  >        <                                    >       |
|                                                                      |
---------------------------------------------------------------------
```

INSTRUCTIONS FOR DELETE CM TASK ENTRIES

Line	Instructions
List #	Enter identification number for task list to be changed. (See System Sumary for task list identification numbers.)
1-8	Enter number for task to be deleted. The task statement will be displayed. After acceptance of delete entries, all tasks remaining on the list will be renumbered automatically.

Delete Entire Task Lists. Enter **3** as choice of TASK LIST MODIFICATION
OPTIONS. The display shown in the example below will appear on the screen.

```
---------------------------------------------------------------------
|                                                                   |
|                                                                   |
|                       MODIFY TASK LIST                  DELETE     |
| LIST # <   >  Description: <                                   >  |
|                                                                   |
|                                                                   |
|                                                                   |
|                                                                   |
|                                                                   |
|                                                                   |
---------------------------------------------------------------------
```

INSTRUCTIONS FOR DELETE ENTIRE TASK LIST ENTRIES

Line	Instructions

List #   Enter **identification number** for task list to be deleted. The
                screen will display the description of that list with an edit line at
                the bottom. (See System Summary for task list identification
                numbers.)

                ● To delete entire task list, enter **DEL**.

                ● To change to another list without deletion, enter **C**.

                ● To end (terminate) routine without deleting task list, enter **T**.

Copy Entire Task Lists. Enter 4 as choice of TASK LIST MODIFICATION
OPTIONS. The display shown in the example below will appear on the screen.

```
----------------------------------------------------------------------
|                                                                    |
|                                                                    |
|                     MODIFY TASK LIST                    COPY       |
|                                                         ----       |
|   Copy task list from  #: <  >                                     |
|                                                                    |
|   Copy task list to    #: <  >                                     |
|                                                                    |
|                                                                    |
|                                                                    |
| .                                                                  |
|                                                                    |
|                                                                    |
----------------------------------------------------------------------
```

INSTRUCTIONS FOR COPY ENTIRE TASK LIST ENTRIES

Line	Instructions
Copy task list from #	Enter identification number for task list you want to copy from. (See System Summary for task list identification number.)
Copy task list to #	Enter identification number of task list you want to copy to. NOTE: If this is a new task list, you must first add task list identification number to system.

138

Modify Task List Description or PM Tasks. Enter 4 as choice of TASK LIST MODIFICATION OPTIONS. The display shown in the example below will appear on the screen.

```
-----------------------------------------------------------------------
|                                                                     |
|       MODIFY TASK LIST DESCRIPTION OR PM TASKS                      |
|                                                                     |
|       LIST NUMBER: <   >                                            |
|       DESCRIPTION: <                                           >    |
|       PM TASKS   : <    >  A,B,C,D                                  |
|                                                                     |
|       TASK     TASK STATEMENT                                       |
|        A      <                                              >      |
|        B      <                                              >      |
|        C      <                                              >      |
|        D      <                                              >      |
|                                                                     |
-----------------------------------------------------------------------
```

INSTRUCTIONS FOR MODIFY DESCRIPTION OR PM TASK ENTRIES

Line	Instructions
List Number	• Enter **identification number** for task list to be modified. The screen will display the description of that list and the PM tasks on it, with an edit line at the bottom. (See System Summary for task list identification numbers.)
	• To change any line, enter C, **number** of line to be changed, then **change** to be made.
	• To accept entries, enter **A.**
	• To terminate procedure without making any changes, enter **T.**

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HOW TO MODIFY MAINTENANCE SECTION LIST

Changes in unit organization for maintenance may require changes in MMIS-86 maintenance section designations. MMIS-86 can accommodate a maximum of six section designations, with up to three characters each. Two lists of possible section designations are shown below.

Designation By Company Section	Designation By Bn Maint Section
A	SVC (Service)
B	RVY (Recovery)
C	WHL (Wheel)
D	TRK (Track)
HHC	TRT (Turret)
BN	COM (Communications)

To modify section designations, bring up the SYSTEM MODIFICATION MENU.

1. Enter 4 as choice, as shown in the example below.

```
        SYSTEM MODIFICATION MENU

    1. MODIFY EQUIPMENTS
    2. MODIFY MOSs
    3. MODIFY TASK LISTS
    4. MODIFY MAINTENANCE SECTIONS
    5. PRINT SYSTEM SUMMARY
    6. PRINT INDIVIDUAL TASK LISTS
    7. END PROGRAM

        ENTER CHOICE # : <4>
```

The current section designations will appear on the screen with an edit line at the bottom as shown in the example below.

```
-----------------------------------------------------------------
|              MODIFY MAINTENANCE SECTIONS                      |
|                                                                |
|    SEC:#     SECTION NAME      ABBREV.                         |
|     1.     {SERVICE    }      {SVC}                            |
|     2.     {RECOVERY   }      {RVY}                            |
|     3.     {WHEELS     }      {WHL}                            |
|     4.     {TRACK      }      {TRK}                            |
|     5.     {TURRET     }      {TRT}                            |
|     6.     {COMMO      }      {COM}                            |
|                                                                |
|                                                                |
|                                                                |
|    Action: { }   A-Accept data, C-Change, T-Terminate         |
|                                                                |
-----------------------------------------------------------------
```

2. To modify a section designation, enter C, line number to be changed, and new designation.

3. To accept entries, enter A.

4. To terminate routine without making any changes, enter T.

HOW TO PRINT INDIVIDUAL TASK LISTS

To print individual task lists, first bring up the SYSTEM MODIFICATION MENU. Enter 6 as choice, as shown in the example below.

```
-----------------------------------------------------------------
|                                                                |
|               SYSTEM MODIFICATION MENU                        |
|                                                                |
|         1. MODIFY EQUIPMENTS                                   |
|         2. MODIFY MOSs                                         |
|         3. MODIFY TASK LISTS                                   |
|         4. MODIFY MAINTENANCE SECTIONS                         |
|         5. PRINT SYSTEM SUMMARY                                |
|         6. PRINT INDIVIDUAL TASK LISTS                         |
|         7. END PROGRAM                                         |
|                                                                |
|            ENTER CHOICE # : {6}                                |
|                                                                |
-----------------------------------------------------------------
```

The display shown in the example below will appear on the screen.

```
-----------------------------------------------------------------
|                                                               |
|                                                               |
|                                                               |
|             PRINT MAINTENANCE TASK LISTS                      |
|                                                               |
|             TASK LIST # :  <   >                              |
|             DESCRIPTION :                                     |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
-----------------------------------------------------------------
```

1. Enter **identification number** for task list you want to print. (See System Summary for task list identification numbers.)

The task list description will appear on the screen with an edit line.

2. To change task list to be printed, enter C and **identification number** for another task list.

3. To terminate procedure without printing a task list, enter **T**.

4. To print task list, enter **A**. The display shown in the example below will appear on the screen.

```
-----------------------------------------------------------------
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|             o TURN ON PRINTER.                                |
|             o ALIGN PAPER AT PAPER GUIDE.                     |
|             o PRESS "EXECUTE" WHEN READY.                     |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
-----------------------------------------------------------------
```

5. Follow instructions to print task list.

APPENDIX

MAINTENANCE TASK LISTS BY EQUIPMENT AND MOS

M60A1 TANK

CREW MAINTENANCE TASK LIST
(Use with Crew Maintenance Form)

A. PERFORM PMCS

1. REPLACE TRACK ASSEMBLY OR TRACK BLOCK
2. REPLACE TRACK PADS
3. REPLACE END CONNECTORS AND/OR CENTER GUIDES
4. ADJUST TRACK TENSION
5. REPLACE ROAD WHEEL

6. REPLACE ROAD WHEEL/SUPPORT ROLLER BEARINGS AND SEALS
7. REPLACE ROAD WHEEL ARM
8. REPLACE SUPPORT ROLLER
9. REPLACE TORSION BAR
10. REPLACE SHOCK ABSORBERS

11. REPLACE COMPENSATING IDLER WHEEL HUB AND ARM
12. REPLACE COMPENSATING IDLER ASSEMBLY
13. REPLACE DRIVE SPROCKET
14. REMOVE BACK DECK
15. INSTALL BACK DECK

16. REMOVE DEFECTIVE/INOPERABLE POWERPACK
17. INSTALL REPAIRED POWERPACK
18. REMOVE POWERPACK TO DO OTHER TASK(S)
19. INSTALL POWERPACK AFTER COMPLETING OTHER TASK(S)
20. REPLACE FINAL DRIVE

21. REPLACE FINAL DRIVE SEALS
22. REPLACE FUEL FILTERS
23. REPLACE OIL FILTERS
24. REPLACE AIR CLEANER FILTER
25. REPLACE BATTERIES, CABLES AND/OR CLAMPS

26. REMOVE OR INSTALL DRIVER'S PERISCOPE, M24 (IR)
27. REMOVE OR INSTALL DRIVER'S PERISCOPE, M27
28. REMOVE OR INSTALL LOADER'S PERISCOPE, M37
29. REMOVE OR INSTALL TC/GUNNER'S PERISCOPE, M32/36 (IR)
30. REPAIR BREECH BLOCK

31. REPAIR BREECH OPERATING MECHANISM
32. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

AVLB

CREW MAINTENANCE TASK LIST
(Use with Crew Maintenance Form)

A. PERFORM PMCS

1. REPLACE TRACK ASSEMBLY OR TRACK BLOCK
2. REPLACE TRACK PADS
3. REPLACE END CONNECTORS AND/OR CENTER GUIDES
4. ADJUST TRACK TENSION
5. REPLACE ROAD WHEEL

6. REPLACE ROAD WHEEL/SUPPORT ROLLER BEARINGS AND SEALS
7. REPLACE ROAD WHEEL ARM
8. REPLACE SUPPORT ROLLER
9. REPLACE TORSION BAR
10. REPLACE SHOCK ABSORBER

11. REPLACE COMPENSATING IDLER WHEEL HUB AND ARM
12. REPLACE COMPENSATING IDLER ASSEMBLY
13. REPLACE DRIVE SPROCKET
14. REMOVE BACK DECK
15. INSTALL BACK DECK

16. REMOVE DEFECTIVE/INOPERABLE POWERPACK
17. INSTALL REPAIRED POWERPACK
18. REMOVE POWERPACK TO DO OTHER TASK(S)
19. INSTALL POWERPACK AFTER COMPLETING OTHER TASK(S)
20. REPLACE FINAL DRIVE

21. REPLACE FINAL DRIVE SEALS
22. REPLACE FUEL FILTERS
23. REPLACE OIL FILTERS
24. REPLACE AIR CLEANER FILTER
25. REPLACE BATTERIES, CABLES AND/OR CLAMPS

26. REMOVE OR INSTALL DRIVER'S PERISCOPE, M24 (IR)
27. REMOVE OR INSTALL DRIVER'S PERISCOPE, M27
28. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
29. REMOVE BRIDGE ASSEMBLY
30. INSTALL BRIDGE ASSEMBLY

31. REPLACE LOCKING CYLINDER
32. REPLACE RELIEF VALVE CARTRIDGE
33. CHECK RELIEF VALVE PRESSURE SETTINGS
34. REPLACE OVERHEAD/TONGUE CYLINDER
35. REPLACE HYDRAULIC LINES AND FITTINGS

36. REPLACE HYDRAULIC PUMP
37. ADJUST POWER TAKEOFF CLUTCH
99. OTHER

M60A1 TANK

MECHANIC MAINTENANCE TASK LIST (45N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REPLACE SLIP RING INTERFERENCE SWITCH
2. REPLACE NO-BAK
3. REPLACE BACK DECK CLEARANCE SWITCH
4. REPAIR MAIN GUN FIRING CIRCUIT
5. REPLACE STABILIZATION SYSTEM CONTROL BOX

6. *REPLACE STABILIZATION SYSTEM COMPONENTS*
7. ADJUST STABILIZATION SYSTEM
8. REPLACE SUPERELEVATION ACTUATOR
9. REPLACE SUPERELEVATION ACTUATOR CABLE
10. REPLACE ELEVATION SYSTEM

11. BLEED TURRET HYDRAULIC SYSTEM
12. REPLACE MANUAL ELEVATION PUMP
13. CHARGE MANUAL ELEVATION SYSTEM
14. REPLACE ANTI-BACKLASH CYLINDER
15. ADJUST BACKLASH

16. REPLACE MAIN ACCUMULATOR
17. REPLACE ACCUMULATOR PRESSURE GAUGE
18. CHARGE MAIN ACCUMULATOR
19. REPLACE TC'S POWER CONTROL HANDLE
20. REPAIR GUNNER'S HANDLE PALM SWITCHES

21. REPAIR TC'S HANDLE PALM SWITCHES
22. REPLACE GUNNER'S CONTROL BOX
23. REPLACE/ADJUST LOADER'S SAFETY SWITCH
24. REPLACE SOLENOID VALVE
25. PERFORM SYNCHRONIZATION CHECK - RAMP METHOD

26. PERFORM SYNCHRONIZATION CHECK - INDOOR METHOD
27 REPLACE AZIMUTH INDICATOR
28. REPLACE M13A2/M13A1D BALLISTIC COMPUTER
29. REPLACE RANGEFINDER AND/OR END HOUSING
30. PURGE AND CHARGE SIGHTS

31. REPLACE M32/M36 LIGHT CONTROL SOURCE
32. REPLACE TURRET POWER DISTRIBUTION BOX
33. ADJUST CUPOLA CRADLE ASSEMBLY
34. REPLACE/REPAIR CRADLE JACK SCREW ASSEMBLY
35. TROUBLESHOOT TURRET ELECTRICAL SYSTEM

36. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M60A1 TANK/AVLB

MECHANIC MAINTENANCE TASK LIST (63N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REMOVE DEFECTIVE/INOPERATIVE POWERPACK
2. GROUND HOP POWERPACK
3. INSTALL REPAIRED POWERPACK
4. REMOVE POWERPACK TO DO OTHER TASK(S)
5. INSTALL POWERPACK AFTER COMPLETING OTHER TASK(S)

6. REMOVE BACK DECK
7. INSTALL BACK DECK
8. REPLACE FUEL LINES AND/OR FITTINGS
9. REPLACE FUEL FILTERS
10. REPLACE OIL COOLER

11. REPLACE OIL FILTERS
12. REPLACE OIL COOLER LINES
13. ADJUST ACCELERATOR, THROTTLE CONTROLS, AND LINKAGE
14. REPLACE ACCELERATOR, THROTTLE CONTROLS, AND/OR LINKAGE
15. TROUBLESHOOT ELECTRICAL SYSTEM

16. REPAIR WIRING
17. REPLACE SENDING UNITS OR GAGES
18. REPLACE CIRCUIT BREAKERS
19. REPLACE BATTERIES, CABLES, AND/OR CLAMPS
20. REPLACE VOLTAGE REGULATOR

21. REPLACE STARTER
22. REPLACE GENERATOR AND/OR SEAL
23. REPLACE AIR CLEANER BLOWER MOTOR
24. REPLACE BLOWER MOTOR RELAY
25. REPLACE FAN TOWER SEAL

26. ADJUST TRANSMISSION LINKAGE
27. REPLACE TRANSMISSION SHIFTING CONTROL ASSEMBLY
28. REPLACE FINAL DRIVE
29. REPLACE FINAL DRIVE SEALS
30. REPLACE MASTER OR SLAVE CYLINDER

M60A1 TANK/AVLB

31. REPLACE MAIN BRAKE LINE
32. BLEED BRAKE LINES
33. ADJUST BRAKES, CONTROLS, AND/OR LINKAGE
34. REPLACE PARKING BRAKE AND/OR CABLE
35. ADJUST SERVO BANDS

36. ADJUST STEERING CONTROLS AND LINKAGE
37. REPLACE FIXED FIRE EXTINGUISHERS
38. ADJUST/RESET FIXED FIRE EXTINGUISHER CONTROL VALVES
39. REPLACE ROAD WHEEL/SUPPORT ROLLER BEARINGS AND SEALS
40. REPLACE SHOCK ABSORBER

41. REPLACE SHOCK ABSORBER BUSHINGS
42. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS

AVLB ONLY

43. REPLACE OR ADJUST BRIDGE STOW LOCKS
44. REPLACE HYDRAULIC CONTROL VALVE
45. BLEED HYDRAULIC SYSTEM

46. REPLACE HYDRAULIC LIFT CYLINDER
47. REPLACE HYDRAULIC LINES AND FITTINGS
48. REPLACE HYDRAULIC PUMP
49. REPLACE HYDRAULIC PRESSURE GAGE

M60A1 TANK/AVLB

99. OTHER

M113 CARRIER FAMILY

CREW MAINTENANCE TASK LIST
(Use with Crew Maintenance Form)

A. PERFORM PMCS

1. REPLACE TRACK SHOES (PADS)
2. REPLACE TRACK ASSEMBLY OR TRACK BLOCK
3. ADJUST TRACK TENSION
4. REPLACE ROADWHEEL
5. REPLACE IDLER ARM AND SPINDLE

6. REPLACE AIR CLEANER
7. REPLACE FUEL FILTER
8. REPLACE FUEL GAGE
9. REPLACE OIL FILTER
10. ADJUST LATERALS (STEERING CONTROL)

11. REMOVE OR INSTALL PERISCOPE, M17
12. REMOVE OR INSTALL PERISCOPE, M19 (IR)
13. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M901 ITV

MECHANIC MAINTENANCE TASK LIST (45N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REPLACE HYDRAULIC FILTER
2. SERVICE HYDRAULIC ACCUMULATOR
3. SERVICE HYDRAULIC SYSTEM
4. BLEED-DOWN HYDRAULIC PRESSURE
5. REMOVE OR INSTALL ACCESS COVERS

6. REPAIR LAUNCHER GUIDE RAILS
7. REPAIR MISSILE LATCH MANUAL CONTROL HANDLE
8. REPAIR MISSILE LATCH ACTUATOR STRAIGHT SHAFT
9. REMOVE/INSTALL ELEVATION CYLINDER
10. REMOVE/INSTALL ERECTION ARM COVER

11. REMOVE/INSTALL ERECTION DRIVE MOTOR
12. REMOVE/INSTALL LOAD POSITION STOP
13. REMOVE/INSTALL STOW POSITION STOP
14. REMOVE/INSTALL HIGH STOWAGE ERECTION ARM STOP
15. REMOVE/INSTALL CHAINS

16. ADJUST DECELERATION LINKAGE
17. REMOVE/INSTALL AZIMUTH POINTER AND LIGHT
18. REMOVE/INSTALL MGS BOX ASSEMBLY
19. REMOVE/INSTALL AZIMUTH DRIVE MOTOR
20. REMOVE/INSTALL AZIMUTH BRAKES

21. REMOVE/INSTALL HYDRAULIC ACCUMULATOR
22. REMOVE/INSTALL SAFETY RELIEF VALVE
23. REMOVE/INSTALL PRESSURE RELIEF VALVE
24. PURGE ITA
25. PURGE SQUAD LEADER'S PERISCOPE

26. REMOVE/INSTALL FIRE INTERRUPT/INTERCOM ASSEMBLY
27. REMOVE/INSTALL AZIMUTH SWITCH ASSEMBLY
28. ADJUST AZIMUTH SWITCH ASSEMBLY
29. REMOVE/INSTALL AZIMUTH CAM
30. REMOVE/INSTALL DRIVER'S/GUNNER'S LEVEL INDICATOR LAMP ASSEMBLY

31. TROUBLESHOOT TURRET ELECTRICAL SYSTEM
99. OTHER

M113 CARRIER FAMILY

MECHANIC MAINTENANCE TASK LIST (63N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REMOVE DEFECTIVE/INOPERATIVE POWER PLANT
2. INSTALL REPAIRED POWER PLANT
3. REMOVE POWER PLANT TO DO OTHER TASK(S)
4. INSTALL POWER PLANT AFTER COMPLETING OTHER TASK(S)
5. REPLACE FUEL FILTERS

6. REPLACE FUEL PUMP
7. REPLACE FUEL PRESSURE SENDING UNIT
8. REPLACE FUEL TANK
9. REPLACE HAND THROTTLE CONTROL
10. REPLACE FUEL SHUTOFF CONTROL

11. REPLACE COOLING FAN TOWER
12. REPLACE RADIATOR
13. REPLACE RADIATOR HOSE
14. REPLACE COOLANT PUMP
15. REPLACE STARTER

16. REPLACE STARTER SOLENOID
17. REPLACE GENERATOR
18. REPLACE BELTS AND/OR PULLEYS
19. ADJUST BELTS
20. TROUBLESHOOT ELECTRICAL SYSTEM

21. REPAIR WIRING
22. REPLACE SENDING UNITS OR GAGES
23. REPLACE BATTERIES, CABLES, AND/OR CLAMPS
24. REPLACE VOLTAGE REGULATOR
25. ADJUST VOLTAGE REGULATOR

26. ADJUST TRANSMISSION LINKAGE
27. REPLACE TRANSMISSION CROSS SHAFT
28. REPLACE OIL FILTERS
29. REPLACE OIL COOLER
30. REPLACE OIL COOLER HOSE AND FITTINGS

M113 CARRIER FAMILY

31. REPLACE FINAL DRIVE
32. ADJUST LATERALS (STEERING CONTROL)
33. REPLACE PIVOT STEER ASSEMBLY
34. REPLACE FIXED FIRE EXTINGUISHER
35. REPLACE ROAD WHEEL ARM AND HUB

36. REPLACE ROAD WHEEL BEARINGS
37. REPLACE IDLER WHEEL ARM AND SPINDLE
38. REPLACE U-JOINT
39. REPLACE EXHAUST GASKETS OR OTHER EXHAUST COMPONENTS
40. REPLACE PERSONNEL HEATER

41. REPLACE BILGE PUMP
42. REPLACE WATERTIGHT SEALS
43. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M88 VTR

MECHANIC MAINTENANCE TASK LIST (63N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REMOVE DEFECTIVE/INOPERATIVE POWER PLANT
2. GROUND HOP POWER PLANT
3. INSTALL REPAIRED POWER PLANT
4. REMOVE POWER PLANT TO DO OTHER TASK(S)
5. INSTALL POWER PLANT AFTER COMPLETING OTHER TASK(S)

6. REMOVE BACK DECK
7. INSTALL BACK DECK
8. REPLACE OR REPAIR FRONT MOTOR MOUNT ASSEMBLY
9. REPLACE FUEL LINES AND/OR FITTINGS
10. REPLACE FUEL FILTERS

11. REPAIR FUEL SHUTOFF CONTROL VALVE
12. ADJUST ACCELERATOR, THROTTLE CONTROLS AND LINKAGE
13. REPLACE ACCELERATOR, THROTTLE CONTROLS AND/OR LINKAGE
14. REPLACE OIL COOLER
15. REPLACE OIL FILTERS

16. REPLACE OIL LINES
17. TROUBLESHOOT ELECTRICAL SYSTEM
18. REPAIR WIRING
19. REPLACE SENDING UNITS OR GAGES
20. REPLACE CIRCUIT BREAKERS

21. REPLACE BATTERIES, CABLES AND/OR CLAMPS
22. REPLACE ELECTRICAL FUEL SHUTOFF
23. REPLACE VOLTAGE REGULATOR
24. REPLACE MAIN ENGINE STARTER
25. REPLACE STARTER RELAY AND HOUSING ASSEMBLY

26. REPLACE MAIN ENGINE GENERATOR
27. REPLACE APU ASSEMBLY
28. REPLACE APU GENERATOR STARTER
29. REPLACE APU FUEL PUMP AND/OR FILTER
30. ADJUST TRANSMISSION LINKAGE

31. REPLACE TRANSMISSION SHIFTING CONTROL ASSEMBLY
32. REPLACE OR REPAIR HYDRAULIC LINES AND FITTINGS
33. REPLACE FINAL DRIVE
34. REPLACE FINAL DRIVE SEALS (O RINGS)
35. ADJUST BRAKES, CONTROLS AND/OR LINKAGE

36. ADJUST STEERING CONTROLS AND LINKAGE
37. REPLACE FIXED FIRE EXTINGUISHERS
38. ADJUST/RESET FIRE EXTINGUISHER HEADS
39. REPLACE TRACK ADJUSTING ARM
40. ADJUST TRACK TENSION

41. REPLACE TRACK ASSEMBLY OR TRACK BLOCK
42. REPLACE END CONNECTOR AND/OR CENTER GUIDES
43. REPLACE ROAD WHEEL OR BEARINGS/SEALS
44. REPLACE ROAD WHEEL ARM
45. REPLACE SUPPORT ROLLER OR BEARINGS AND SEALS

46. REPLACE SHOCK ABSORBER OR BUSHINGS
47. REPLACE DRIVE SPROCKET
48. REPLACE OR REPAIR HOIST CABLES
49. REPLACE OR REPAIR WINCH CABLES
50. REPLACE SPADE RELEASE CABLES

51. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M578 VTR

MECHANIC MAINTENANCE TASK LIST (63N/T)
(Use with Mechanic Maintenance Form)

  A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
  B. PERFORM TECHNICAL INSPECTION

  1. REMOVE DEFECTIVE/INOPERATIVE POWER PLANT
  2. INSTALL REPAIRED POWER PLANT
  3. REMOVE POWER PLANT TO DO OTHER TASK(S)
  4. INSTALL POWER PLANT AFTER COMPLETING OTHER TASK(S)
  5. REPLACE AIR CLEANER BLOWER ASSEMBLY

  6. REPLACE FUEL FILTERS
  7. REPLACE FUEL LOW PRESSURE LINES AND/OR FITTINGS
  8. REPLACE OIL FILTERS
  9. REPLACE RADIATOR
10. REPLACE WATER HOSES AND PIPES

11. REPLACE FAN
12. REPLACE FAN BELTS
13. TROUBLESHOOT ELECTRICAL SYSTEM
14. REPAIR WIRING
15. REPLACE SENDING UNITS OR GAGES

16. REPLACE BATTERIES, CABLES, AND/OR CLAMPS
17. REPLACE VOLTAGE REGULATOR
18. REPLACE GENERATOR
19. REPLACE FINAL DRIVE
20. ADJUST SHIFTING CONTROLS AND LINKAGE

21. ADJUST MECHANICAL BRAKE CONTROLS AND LINKAGE
22. REPLACE FIXED FIRE EXTINGUISHERS
23. REPLACE ROAD WHEEL ARM AND HUB
24. REPLACE ROAD WHEEL
25. REPLACE IDLER ARM AND HUB

26. REPLACE DRIVE SPROCKET HUB
27. ADJUST TRACK TENSION
28. REPLACE TRACK ASSEMBLY
29. REPLACE TRACK SHOES (PADS)
30. ADJUST STEERING CONTROL AND LINKAGE

31. REPLACE LOCKOUT CYLINDER ASSEMBLY
32. REPLACE BOOM CABLE
33. REPLACE BOOM HYDRAULIC CYLINDER
34. REPLACE HYDRAULIC LINES AND FITTINGS
35. REPLACE PERSONNEL HEATER ASSEMBLY

36. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M151 ¼ TON TRUCK

MECHANIC MAINTENANCE TASK LIST (63B/S/N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. ADJUST VALVES
2. ADJUST CLUTCH PEDAL FREE TRAVEL
3. REPLACE CLUTCH, PRESSURE PLATE AND THROWOUT BEARING
4. REPLACE CARBURETOR
5. REPLACE FUEL LINES AND VENT TUBES

6. REPLACE FUEL FILTERS
7. REPLACE FUEL PUMP
8. REPLACE FUEL TANK
9. REPLACE EXHAUST GASKETS
10. REPLACE MUFFLER AND/OR TAIL PIPE

11. REPLACE RADIATOR
12. REPLACE COOLANT HOSES AND CLAMPS
13. REPLACE BELTS AND/OR PULLEYS
14. ADJUST BELTS
15. REPLACE GENERATOR

16. REPLACE STARTER
17. REPLACE IGNITION DISTRIBUTOR
18. REPLACE CAPACITOR, ROTOR CONTACT POINTS AND/OR SPARK PLUGS
19. ADJUST CONTACT POINTS
20. ADJUST IGNITION TIMING

21. REPLACE AND/OR ADJUST ELECTRONIC IGNITION
22. REPAIR WIRING
23. REPLACE BATTERIES, CABLES AND/OR CLAMPS
24. REPLACE CIRCUIT BREAKERS
25. REPLACE LIGHT BULBS AND WIRES

26. REPLACE SENDING UNITS OR GAGES
27. REPLACE UNIVERSAL JOINTS
28. REPLACE DIFFERENTIAL, FRONT OR REAR
29. REPLACE DIFFERENTIAL SEAL
30. REPLACE TRANSMISSION SEALS

M151 ¼ TON TRUCK

31. REPLACE SLEEVE, SHAFT AND CROSS WHEEL DRIVE SEALS, FLANGE AND SPINDLE
32. REPLACE WHEEL BEARING
33. ADJUST WHEEL BEARING
34. ADJUST SERVICE BRAKES
35. ADJUST PARKING BRAKES

36. REPLACE SERVICE BRAKES
37. REPLACE SERVICE BRAKE LINES AND HOSES
38. REPLACE MASTER CYLINDER
39. REPLACE WHEEL CYLINDER
40. REPLACE PARKING BRAKES

41. ADJUST TOE IN
42. REPLACE UPPER AND LOWER BALL JOINTS
43. REPLACE UPPER AND LOWER SUSPENSION ARMS
44. REPLACE SPRINGS
45. REPLACE SHOCK ABSORBERS

46. REPLACE FRONT SHOCK BUSHINGS
47. REPLACE OR REPAIR TIRES
48. REPLACE WINDSHIELD WIPER MOTOR
49. REPLACE *WINDSHIELD WIPER ARM AND BLADE*
50. REPLACE WINDSHIELD

51. REPLACE PERSONNEL HEATER ASSEMBLY
52. TROUBLESHOOT ELECTRICAL SYSTEM
53. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M35/M54 2½/5 TON TRUCK

MECHANIC MAINTENANCE TASK LIST (63B/S/N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. ADJUST CLUTCH CONTROLS AND LINKAGE
2. REPLACE CLUTCH CONTROLS AND LINKAGE
3. REPLACE ELECTRICAL INTANK FUEL PUMP
4. TIGHTEN FUEL LINES AND FITTINGS
5. ADJUST/REPLACE ACCELERATOR CONTROLS AND LINKAGE

6. REPLACE FUEL OR OIL FILTERS
7. REPLACE EXHAUST GASKETS
8. REPLACE AIR CLEANER
9. REPLACE RADIATOR
10. REPLACE RADIATOR HOSE AND CLAMPS

11. REPLACE WATER PUMP
12. ADJUST FAN BELT
13. REPLACE FAN BELT
14. REPLACE STARTER
15. REPLACE BATTERY, CABLES AND/OR CLAMPS

16. REPLACE 25 AMP VOLTAGE REGULATOR
17. REPLACE GENERATOR/ALTERNATOR
18. REPLACE LIGHTS AND SWITCHES
19. REPLACE SENDING UNITS OR GAGES
20. REPAIR WIRING/CABLES

21. REPLACE HORN AND/OR WIRING
22. REPLACE EMERGENCY WARNING BUZZER
23. REPLACE UNIVERSAL JOINT
24. ADJUST SERVICE BRAKES
25. REPLACE HAND BRAKE SHOE

26. REPLACE SERVICE BRAKE SHOE
27. REPLACE MASTER CYLINDER
28. REPLACE WHEEL CYLINDER
29. REPLACE BRAKE LINES, FITTINGS OR HOSES
30. REPLACE HYDRAULIC CYLINDER (HYDROVAC)

M35/M54 2½/5 TON TRUCK

31. REPAIR AIR SYSTEM LINES AND FITTINGS
32. REPLACE AIR COMPRESSOR
33. REPLACE AIR COMPRESSOR DRIVE BELT
34. REPLACE/REPACK WHEEL BEARINGS AND OUTER SEALS
35. REPLACE INNER AXLE SEALS

36. REPLACE/REPAIR TIRES
37. REPLACE/TIGHTEN LUG STUDS AND NUTS
38. ADJUST STEERING GEAR
39. REPLACE PITMAN ARM
40. REPLACE DRAG LINK COMPONENTS

41. REPLACE STEERING KNUCKLE BOOT
42. REPLACE SPRING SHACKLES AND BOLTS
43. REPLACE WINDSHIELD WIPER MOTOR
44. REPLACE WINDOWS, DOORS, OR MIRRORS
45. REPLACE OR REPAIR WINCH CABLES, SHEAR PIN, OR DRIVE SHAFT

46. TROUBLESHOOT ELECTRICAL SYSTEM
47. ADJUST, TIGHTEN, OR REPLACE MINOR COMPONENTS
99. OTHER

M561/M792 1¼ TON TRUCK

MECHANIC MAINTENANCE TASK LIST (63B/S/N/T)
(Use with Mechanic Maintenance Form)

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REPLACE OIL FILTER ELEMENT
2. REPLACE AIR BOX DRAIN TUBE
3. ADJUST ACCELERATOR LINKAGE
4. ADJUST ENGINE STOP CABLE
5. REPLACE AIR CLEANER ELEMENT

6. REPLACE EXHAUST GASKETS
7. REPLACE MUFFLER AND/OR TAILPIPE
8. ADJUST BELTS
9. REPLACE BELTS
10. REPLACE RADIATOR

11. REPLACE STARTER MOTOR
12. REPAIR WIRING
13. REPLACE BATTERIES, CABLES AND/OR CLAMPS
14. REPLACE LIGHTS
15. REPLACE HORN ASSEMBLY

16. ADJUST TRANSMISSION CONTROL AND LINKAGE
17. REPLACE UNIVERSAL JOINT
18. ADJUST PARKING BRAKE HANDLE AND LINKAGE
19. REPLACE MASTER CYLINDER
20. ADJUST AND BLEED SERVICE BRAKES

21. REPLACE FRONT OR REAR STEERING GEAR BOX
22. REPLACE TRACTOR AND CARRIER STEERING KNUCKLE
23. REPLACE TRACTOR AND CARRIER TIE ROD ASSEMBLIES
24. REPAIR TRACTOR FRONT TORQUE TUBE BEARING
25. REPLACE TRACTOR FRONT AND CARRIER SHOCK ABSORBERS

26. REPLACE INNER AND OUTER CENTRAL AXLE SHOCK ABSORBERS
27. REPLACE STEERING WHEEL
28. REPLACE WINDSHIELD WIPER MOTOR
29. REPLACE PERSONNEL HEATER
30. REPLACE BILGE PUMP

31. REPLACE WATERTIGHT SEALS
32. TROUBLESHOOT ELECTRICAL SYSTEM
33. ADJUST, TIGHTEN OR REPLACE MINOR COMPONENTS
99. OTHER

GOER

A. PERFORM PERIODIC SERVICE (Q, S, A OR L)
B. PERFORM TECHNICAL INSPECTION

1. REPLACE GENERATOR
2. REPLACE AND/OR ADJUST BELTS
3. REPLACE STARTER
4. REPAIR WIRING
5. REPLACE PRIMARY FUEL FILTER ELEMENT

6. REPLACE SECONDARY FUEL FILTER ELEMENT
7. ADJUST SERVICE BRAKES
8. REPLACE KING PINS
9. REPLACE/REPAIR HORN
10. TROUBLESHOOT ELECTRICAL SYSTEM

11. ADJUST, TIGHTEN OR REPLACE MINOR COMPONENTS

COMMO EQUIPMENT

MECHANIC MAINTENANCE TASK LIST (31V)
(Use with Mechanic Maintenance Form)

  A. PERFORM PERIODIC SERVICE
  B. PERFORM TECHNICAL INSPECTION

  1. REPLACE ANTENNA ELEMENT, AT-1095 OR AS-1730
  2. REPLACE ANTENNA MATCHING UNIT, MX-6707
  3. REPLACE RF CABLE, CG-1773
  4. REPLACE CABLE, CX-4722/4723
  5. TEST RECEIVER/TRANSMITTER, RT-246 OR RT-524

  6. TEST RECEIVER, R-442
  7. REPLACE AMPLIFIER, AM-2060
  8. REPLACE MOUNTING, MT-1029 OR MT-1898
  9. REPLACE AUDIO FREQUENCY AMPLIFIER, AM-1780
10. REPLACE INTERCOM CONTROL SET, C-2296/7/8

11. REPLACE RADIO CONTROL SET, C-2299
12. REPLACE FREQUENCY SELECT CONTROL, C-2742
13. REPLACE POWER CABLE, CX-4655 (VRC-64)
14. REPLACE SUPPRESSOR, MX-7778A
15. TEST/REPAIR HELMET, CVC

16. TEST/REPAIR SWITCHBOARD, SB-22 OR SB-993
17. TEST/REPAIR TELEPHONE, TA-312 OR TA-1
18. TEST LOUDSPEAKER
19. TEST MICROPHONE OR HANDSET
20. SERVICE WIRE, WD-1 AND/OR REEL, DR-8

21. TEST/REPLACE KY-57
22. TEST ANTENNA ELEMENT, AT-1095 OR AS-1730
23. TEST ANTENNA MATCHING UNIT, MX-6707
24. TEST RF CABLE, CG-1773
25. TEST CABLE, CX-4722/4723

26. TEST AMPLIFIER, AM-2060
27. TEST MOUNTING, MT-1029 OR MT-1898
28. TEST AUDIO FREQUENCY AMPLIFIER, AM-1780
29. TEST INTERCOM CONTROL SET, C-2296/7/8
30. TEST RADIO CONTROL SET, C-2299

31. TEST FREQUENCY SELECT CONTROL, C-2742
32. TEST POWER CABLE, CX-4655 (VRC-64)
33. TEST SUPPRESSOR, MX-7778A

99. OTHER