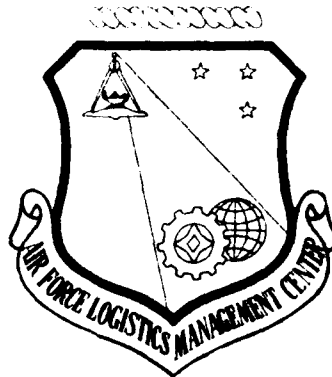MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A

AD-F630660

AIR FORCE LOGISTICS MANAGEMENT CENTER

AD-A153 698

CONTRACT WITH
THE INSTITUTE FOR CURRICULUM
AND INSTRUCTION (ICI)

FINAL REPORT
BY
MAJOR ROBERT DREWITT, USAF
MAJOR JAMES SONNENBERG, USAF

AFLMC PROJECT 801212
JUNE 1982

DTIC
SELECTED
MAY 1 4 1985

A

AIR FORCE LOGISTICS MANAGEMENT CENTER

GUNTER AFS, AL. 36114

85 05 10 08

AIR FORCE LOGISTICS MANAGEMENT CENTER

CONTRACT WITH
THE INSTITUTE FOR CURRICULUM
AND INSTRUCTION (ICI)

FINAL REPORT
BY
MAJOR ROBERT DREWITT, USAF
MAJOR JAMES SONNENBERG, USAF

AFLMC PROJECT 801212
JUNE 1982

AIR FORCE LOGISTICS MANAGEMENT CENTER

GUNTER AIR FORCE STATION, ALABAMA   36114

ABSTRACT

Increasing numbers of relatively inexperienced people are being assigned to crew chief positions. These people have generally received only initial task training and reduced emphasis on system and support concepts. As a result, the level of performance of these crew chiefs has been a concern of maintenance managers at all levels.

The Institute for Curriculum and Instruction (ICI), a private consulting organization, submitted an unsolicited proposal to HQ TAC/LGQ to demonstrate how their copyrighted training/learning strategies could improve crew chief performance. HQ TAC/LGQ, in turn, asked the AFLMC to evaluate the ICI proposal. The potential benefits to maintenance training led the AFLMC to agree to manage a pilot demonstration of ICI's strategies at Homestead AFB, FL and Moody AFB, GA. A contract was awarded in late September 1980, and training of maintenance instructors in the use of the strategies began in January 1981. Course plans were developed and test and control group crew chiefs identified. Beginning in early May 1981, evaluation of crew chief and equipment performance began.

Both objective and subjective data forms were identified for evaluation. Several organizational and environmental factors prevented the collection of complete test data. Evaluation of the objective data was, therefore, inconclusive. Evaluation of the subjective data yielded the following conclusions.

Confirmation tasks*, surveys, and taped interviews showed ICI's strategies to be better than conventional training methods, particularly for the inexperienced crew chiefs and the maintenance instructors. Supervisors rated the ICI-taught crew chiefs higher in willingness and ability than the control group crew chiefs. Further, the confirmation tasks showed these crew chiefs' results, procedures, and attitudes to be better than those taught by the conventional methods. Finally, the instructors became more confident of themselves and their students, they felt better about their jobs, and they felt they produced better graduates than the instructors who had not received ICI training.

We recommend ATC examine ICI's strategies for possible applications; e.g., instructor training programs, FTDs, tech training centers, etc. Further, we recommend that the other MAJCOMs, SOAs, or other agencies review ICI's program for possible use in their own training programs.

* These tasks are called confirmation tasks because they require the crew chief to integrate what he/she has learned and apply it to a specified level of performance.

EXECUTIVE SUMMARY

This study was conducted by the Air Force Logistics
Management Center (AFLMC) for Headquarters Tactical Air Command
(TAC), Director of Maintenance Training and Management. The
purpose of the study was to determine if the use of training/
learning strategies developed and copyrighted by the Institute
for Curriculum and Instruction (ICI) could significantly improve
crew chief performance in TAC. The primary objective of this
effort was for ICI to demonstrate the ability of these strategies
to better prepare Air Force mechanics to perform their jobs under
changing conditions. The study was limited to the training of
crew chiefs in the TAC Fighter Chief (FC) and Dedicated Crew
Chief (DCC) courses in Consolidated Aircraft Maintenance Training
(CAMT) at Moody AFB, GA and Homestead AFB, FL.

Two maintenance instructors from Moody and three from
Homestead were trained in the use of the ICI strategies during
January and February 1981. In May 1981, these instructors began
teaching their FC and DCC courses using ICI strategies. Students
in these courses were tracked to their flightline assignments,
and their performance on the flightline, along with the
performance of their assigned aircraft, evaluated against a
control group at each base to determine if the ICI approach
actually improved Air Force maintenance training.

A total of 35 ICI students was evaluated against
conventionally trained crew chiefs over a ten month period of
time. Both objective and subjective measures of performance were

used during the evaluation phase. The former were in the form of AFR 65-110 aircraft status rates, repeat/recurring discrepancies, delayed discrepancies, quality assurance evaluations and confirmation tasks (CT). The latter were in the form of written survey questionnaires; student and instructor course critiques; quality assurance evaluator comments on evaluation forms; and subjective, spontaneous taped interviews with students, instructors, and flightline supervisory personnel.

Both organizational and environmental factors were identified during the project which may have influenced the results of the first category of data. The time to conduct the evaluation, funding availability, changes in leadership positions, and non-availability of some of the data forms were examples. Some of the data in the first category (e.g., CTs) did, however, show some quantitative evidence that ICI could provide better training. Evaluation of the subjective data (e.g., surveys, critiques, and interviews) more clearly showed the advantages of using the training/learning strategies over conventional instructional methods.

Several conclusions were drawn from the pilot demonstration. First, to evaluate the effectiveness of training, environmental changes must be considered. We found, specifically with the experienced mechanics, that training may have no effect on individual performance particularly if the individual knows he/she will be returning to his/her pre-training environment. The younger crew chiefs, on the other hand, reacted very favorably to their training as did their supervisors. Second,

and tied closely to the previous comment, motivation and attitudes will directly affect training results. The new mechanics, for the most part, were both excited and apprehensive about their initial flightline assignment and, therefore, more eager to learn. The experienced crew chiefs, however, believed that, regardless of any classroom training they received, things would not change in the "real world" of the flightline. This belief definitely affected interest levels of the training and, perhaps, post-training performance. Third, curriculum design will affect both trainee motivation and receptiveness. The ICI curriculum for the experienced crew chiefs was oriented to teaching basics and did not adequately compensate for attitudinal or experience variations of the students. The inexperienced crew chiefs, on the other hand, clearly benefitted. Fourth, ICI-trained instructors were more confident of themselves and their students, they felt better about their jobs, and they produced better graduates, specifically inexperienced FCs, than the other instructors who had not received ICI training.

We believe ATC should examine ICI's strategies for possible applications, e.g., instructor training courses, FTDs, tech training centers, etc. Further, we recommend that the other MAJCOMs, SOAs or other Air Force agencies review ICI's program for possible use in their own training programs.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

CHAPTER 1

THE PROBLEM

Section A. BACKGROUND

1-1 In January 1980, HQ TAC/DOOS (Training Devices Division,
Fighter and Reconnaissance Operations) sponsored a briefing and
demonstration by ICI of their copyrighted training and learning
strategies. Mr. Lyle Ehrenberg, Director of ICI, presented an
explanation of the mental processes involved in learning and
several exercises using the strategies in various training/
learning situations. The HQ TAC/LGQ (Directorate of Maintenance
Training and Management) representative expressed some concerns
relating to aircraft maintenance training. Chief among these
concerns was the fact that low retention of experienced aircraft
mechanics, especially crew chiefs, has forced the assignment of
relatively inexperienced people to crew chief positions. These
people have generally received only initial task training and
reduced emphasis on systems and support concepts. After the
briefing, ICI submitted an unsolicited proposal to HQ TAC/LGQ to
train TAC crew chief instructors to use the ICI copyrighted
training/learning strategies. As a part of the Air Force-wide
training meetings being conducted by the AFLMC, the proposal was
offered to the AFLMC for study under the Maintenance Training
Improvement Program (MTIP). Since the pilot demonstration fit so
well into MTIP, and because of the potential improvements to
maintenance training, the AFLMC accepted the proposal and

1

volunteered to manage the project. A Statement of Work was
prepared, submitted and approved, and the contractor's proposal
and project plan were accepted on 17 September 1980. A contract
was subsequently awarded to ICI on 22 September 1980.

Section B. PROBLEM STATEMENT

1-2 Increasing numbers of relatively inexperienced people are
being assigned to crew chief positions. These people have
generally received only initial task training and reduced
emphasis on system and support concepts. As a result, the level
of performance of these crew chiefs has been a concern of
maintenance managers at all levels.

1-3 The purpose of the project, then, was to determine if the
use of the ICI training/learning strategies could significantly
improve crew chief performance in TAC. Specifically, ICI was to
demonstrate the ability of these strategies to better prepare Air
Force mechanics to perform their jobs.

CHAPTER 2

DEVELOPMENT

Section A. APPROACH

2-1 As mentioned in Chapter 1, ICI proposed to demonstrate their copyrighted training/learning strategies would significantly improve the quality of performance of airmen trained to be crew chiefs. Two Tactical Fighter Wings (TFW) were selected for the pilot demonstration: the 31TFW at Homestead AFB, FL and the 347TFW at Moody AFB, GA. The demonstration consisted of three phases. The first, instructor training, was conducted at Homestead AFB. The second, training of the crew chiefs, was conducted at both bases. The final phase, evaluation, was also conducted at both bases and will be discussed in the next chapter.

2-2 ICI training for the TAC maintenance instructors was conducted from 12 January 1981 through 27 February 1981 in three five-day sessions. Five maintenance instructors (MIs) received the training; three from Homestead AFB and two from Moody AFB. Following their training, these instructors began developing the course curricula and lesson plans on 2 March 1981 and completed them on 8 May 1981.

2-3 Crew chief training began in mid-May and was completed in August. No comparable advanced training was available for the experienced crew chiefs in control aircraft maintenance units

3

the same instructor survey. The question asked the instructor to indicate how confident he/she was in their typical trainee's willingness (W) and ability (A) to perform their crew chief responsibilities. Zero indicated no confidence and three indicated a great deal of confidence. The data showed the ICI-taught crew chiefs to be more able to perform their tasks but not as willing as the conventionally taught crew chiefs. Curriculum design, personal instructor knowledge of the student, and confidence of the instructor in the student's experience may have accounted for the differences.
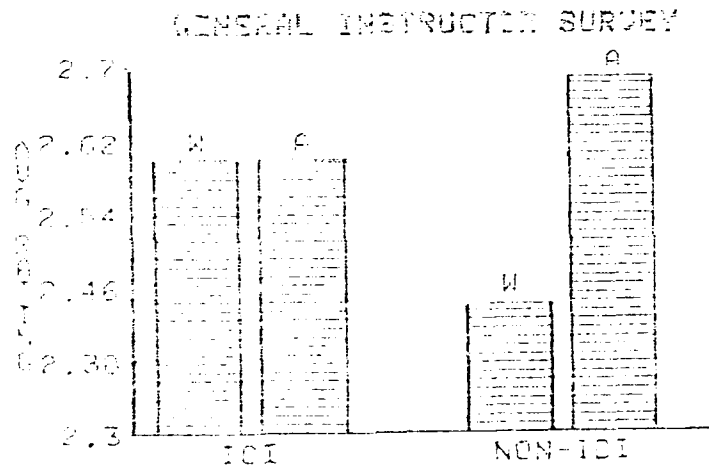
Figure 4-6

c. Finally, Figure 4-7 displays the comparison of ICI-taught and conventionally taught fighter chiefs using the confirmation tasks shown in Appendix E. R equates to results, P to procedures, and A to attitudes with all three categories rated higher for the ICI-taught inexperienced fighter chief. Once again, curriculum design, motivation, and the instructor's ICI-enhanced teaching abilities must be considered. The same rating definitions used for Figure 4-4 apply. The overall results of

17

that a desired characteristic in the performance of a task is not
present, and a four indicates it is present and is of high
quality (excellent).

4-6 Our final conclusion is that the ICI-trained instructors
were more confident of themselves and their students, felt better
about their jobs and felt they produced better graduates than the
other instructors who had not received ICI training. Figures
4-5, 4-6, and 4-7 support this conclusion.

   a. Figure 4-5 illustrates the results of question number one
of the general Instructor Survey. The question asked the
instructor to rate his/her training program relative to other
training programs he/she participated in. Ratings were assigned
to criteria describing the training program to be much less (zero
rating) or much more (five rating) organized, relevant, etc. than
previous training. The ICI training was rated higher.

GENERAL INSTRUCTOR SURVEY
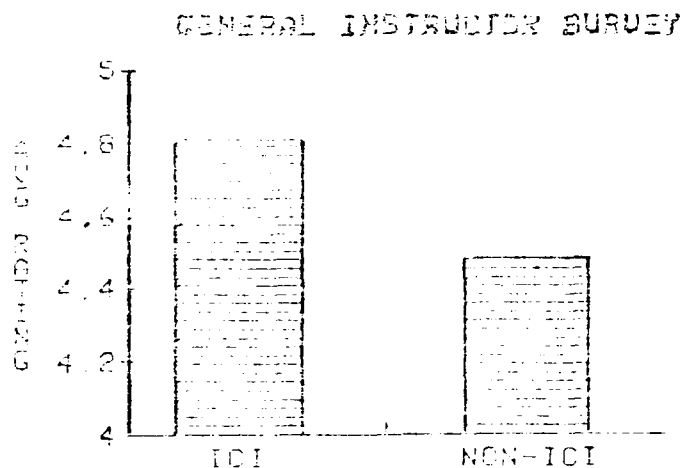
Figure 4-5

   b. Figure 4-6 shows the results of question number three of

how it affected interest levels, receptiveness, and motivation of
the trainees toward their training, and their post-training
performance. The ICI curriculum for the experienced mechanics
was oriented toward the teaching of basics and did not adequately
take into account their attitudinal or experience variations.
For the most part, they indicated that the material was redundant
and simplistic and lacked in leadership/personnel management and
communicative skills training. The new personnel, on the other
hand, rated their training higher, and felt they were benefitting
more from the course material. Figure 4-4 portrays the results
of the confirmation tasks and compares the fighter
(inexperienced) crew chiefs to the dedicated (experienced) crew
chiefs based on their results (R), procedures (P), and attitudes
(A). The results showed the fighter chiefs to have better
results and attitudes than the dedicated chiefs. Procedures for
the dedicated chiefs were, however, slightly better possibly due
to their longer flightline experience. A zero rating indicates

Figure 4-4

15
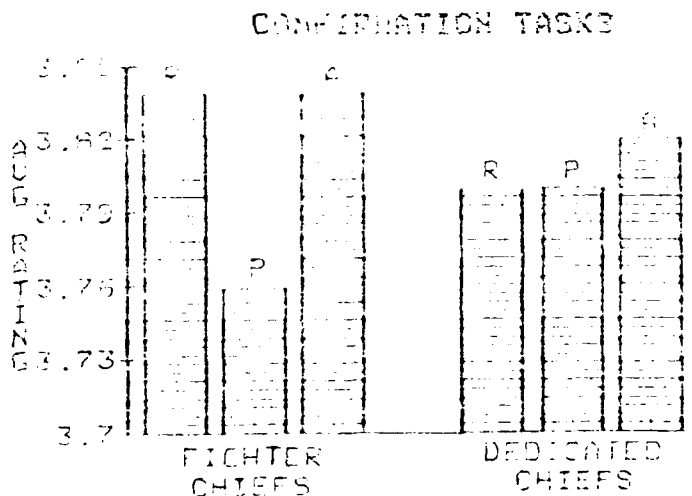
more confident. The second comparison proved to be statistically significant at the 90 percent level of confidence.

CREW CHIEF SURVEY   ASSISTANT CREW CHIEFS
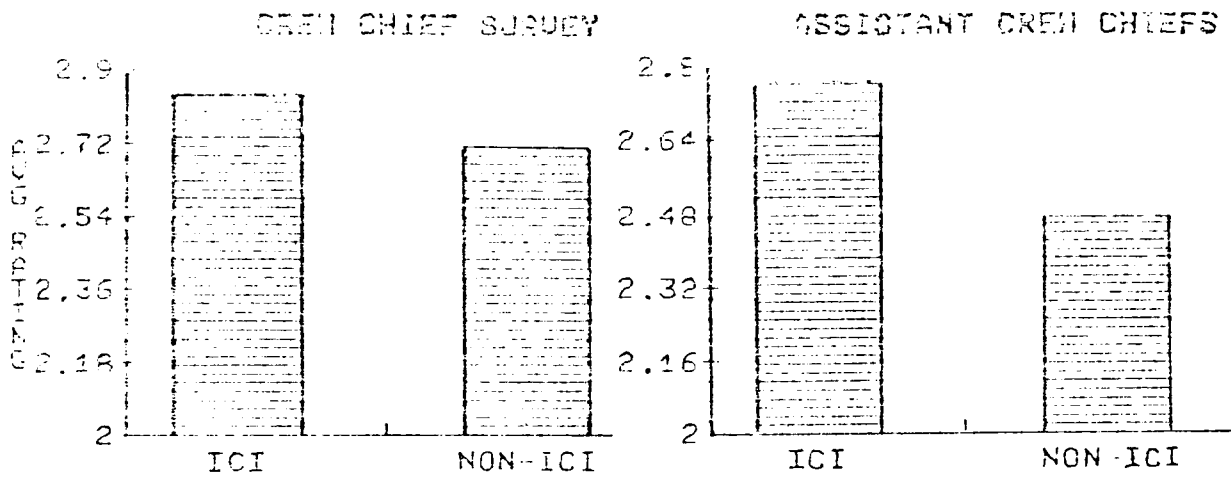
Figure 4-2

c. Finally, Figure 4-3 shows that the supervisors of the ICI-trained crew chiefs felt their crew chiefs to be more willing (W) and able (A) to perform their responsibilities. Results were taken from question number one of the general survey questionnaire. Zero indicates no confidence and three a great deal of confidence.

GENERAL SURVEY QUESTIONNAIRE
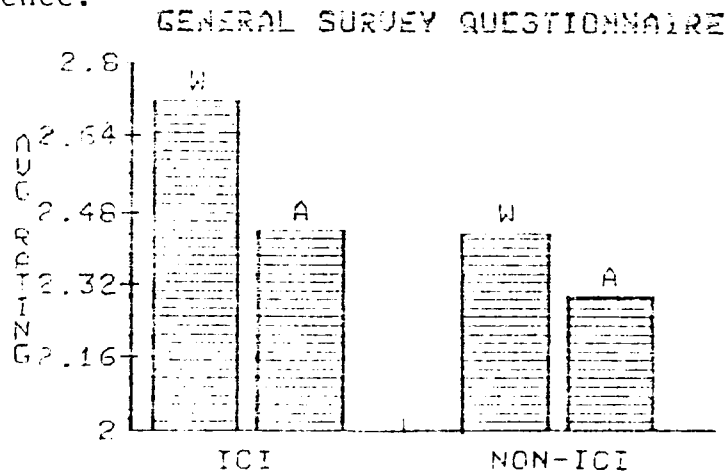
Figure 4-3

4-5 Our third conclusion deals with the actual curriculum and

confident than the non-ICI trained students. Further,
supervisors of ICI-trained crew chiefs rated their willingness
and ability to perform their assigned tasks higher than the
control group supervisors rated their crew chiefs. The same was
true for the instructors.

a. Figure 4-1 displays the results of question number one of
the Crew Chief Survey. The question asked the crew chief to rate
his/her training based on the occurrence (or non-occurrence) of
several events; zero indicating the event did not occur up to
four indicating the event always occurred. As shown, the ICI
training was rated higher.
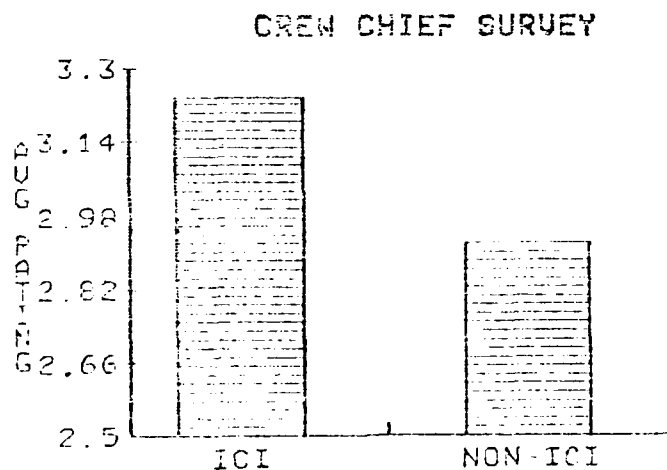
CREW CHIEF SURVEY

Figure 4-1

b. Figure 4-2 portrays the crew chiefs' responses to
question number two (same survey) which asked the crew chief to
indicate how confident he/she felt in performing a series of crew
chief responsibilities. A rating of zero indicated "I can't do
it," and a rating of three indicated "Sure I can do it well."
The results show the ICI-trained crew chiefs (total test group)
to be slightly more confident and the ICI-trained FCs to be far

13

4-3 The first conclusion made from our observations, is based upon changes in environmental conditions. The more experienced dedicated crew chiefs who were taken off the flightline, put into the classroom for CAMT, and returned to the flightline displayed no changes in performance. We felt this was due to several factors including pre-set attitudes, varying levels of experience, and the "artificiality" of the classroom vs the "real world" facts of the flightline. Several of these mechanics felt the training to be of no value, as indicated by their comments on written surveys and during taped interviews. The inexperienced personnel, on the other hand, reacted favorably to the training, most of them getting their first hands-on experience with the aircraft they soon would be working with regularly. Their supervisors also reacted favorably, stating they were observing a much more willing and confident individual than those trained using conventional methods. This leads to our second conclusion concerning motivation and attitudes and how they directly affect training results.

4-4 The inexperienced personnel, for the most part, were both excited and apprehensive about their initial flightline assignment, and, therefore, more eager to learn. The experienced crew chiefs, however, believed that, regardless of any classroom training they received, things would not really be any different once they returned to the flightline. Surveys given to the crew chiefs, both the inexperienced and experienced, give this and the preceding conclusion some validity. ICI-trained crew chiefs generally rated their training program higher and felt more

12

CHAPTER 4

CONCLUSIONS

4-1 Four general conclusions can be drawn from evaluation of the data. Before discussing them, some preliminary statements must be made.

a. Quantitatively evaluating training effectivness or effects of changes in training methods is, at best, difficult, and has been the subject of educational interest for years.

b. The quantitative data collected was not conclusive; i.e., it did not indicate that ICI's training/learning strategies would greatly improve crew chief performance. Examples may be found in Appendices F, G, or H. We attribute this primarily to the factors bearing on the evaluation cited in Chapter 3.

c. Qualitative (or subjective) data then remains as the means of evaluating, or interpreting, the effectiveness of any training program, and it is this information upon which our conclusions are primarily based.

4-2 The following conclusions were drawn from results obtained after evaluation of the confirmation tasks, reaction surveys, and taped interviews. Simple averaging techniques were used on the rating-scale questions of the first two categories. Where possible, graphs will be included to portray comparisons between the groups' responses to these questions. A more detailed analysis of both the surveys and confirmation tasks (with copies of each) is contained in Appendices D and E respectively.

11

measuring results from changes in the maintenance training
program. Data was collected, therefore, to determine the
correlation of these indicators with induced changes in the crew
chief training program.

(4) Number of delayed discrepancies relating to crew chief controllable actions.

(5) Maintenance non-delivery/maintenance late take offs due to crew chief controllable factors.

c. Other factors listed below were also gathered and evaluated in reaching our conclusions and recommendations concerning the effectiveness of ICI's strategies:

(1) Quality assurance evaluation results of crew chiefs performing maintenance tasks.

(2) Supervisors' evaluations of crew chief performance, both written and oral (interviews).

(3) Reaction surveys, both written and oral, with the crew chiefs, the CAMT instructors, and others who were involved with the project.

(4) Observations of crew chiefs performing maintenance.

(5) Performance of crew chiefs on Career Development Course (CDC) exams, Promotion Fitness Exams (PFE), and Skill Knowledge Tests (SKTs).

3-4 The intent of the methodology and selection of data that was collected was twofold. First, the authors wanted to gather and evaluate every possible form of data that could indicate changes in performance of the ICI taught crew chiefs. Second, there are currently many conventional Air Force indicators being used to assess aircraft maintenance performance and to evaluate personnel performance. Some of these indicators could prove effective in

9

(5) Schedule, perform and/or supervise, and then document all flightline repairs.

(6) Assist, monitor, and confirm periodic maintenance. The confirmation tasks were designed for each of the responsibilities listed in items (1) through (6) above, and implemented through the combined efforts of the people who participated in the ICI training program - the CAMT instructors, representatives from TAC and AFLMC, and the staff of ICI. Included in the confirmation tasks were particular criteria and standards covering the responsibilities described above in items (1) through (6). These standards were desired level of performance and minimum acceptable level of performance.

b. Maintenance indicators - the following maintenance indicators were tracked to determine the extent the ICI training of crew chiefs may have had on:

(1) Flying/maintenance schedule effectiveness - the number of scheduled sorties/maintenance actions vs the number of sorties flown/maintenance actions completed.

(2) Mission capable rate - the ratio of hours that an aircraft is available to perform all or part of its designed operational capability to the total hours in a month, expressed as a percentage. The basis for this indicator is AFR 65-110, Standard Aerospace Vehicle and Equipment Inventory, Status, and Utilization Reporting Data.

(3) Repeat/recurring discrepancies by aircraft system that were crew chief controllable.

(1) The 306th AMU's performance, for whatever reasons, had been (and was still) declining at the time the pilot demonstration began. Pulling DCCs and FCs from the flightline into the classroom for the test may have both aggravated the situation and caused the initiation of some negative attitudes toward the project.

(2) Emphasis on the criteria for selection of participating crew chiefs varied significantly between the test and control AMUs.

Section C. METHOD OF ACCOMPLISHMENT

3-3 The following factors were evaluated to determine the effectiveness of the crew chief training program.

a. The crew chiefs were evaluated using confirmation tasks* which were designed to verify their willingness and ability to fulfill the following responsibilities in managing and directing the maintenance on their aircraft:

(1) Inspect and prepare the aircraft for flight.

(2) Launch the aircraft and monitor until airborne.

(3) Recover the aircraft, gather information needed to prepare for next flight of the day.

(4) Recover the aircraft after last flight of the day, gather needed information.

---

* These tasks are called confirmation tasks because they require the crew chief to integrate what he/she has learned and apply it to a specified level of performance.

7

changes in project emphasis, knowledge and interest.

d. All of the data originally outlined in the Evaluation Plan for the AFLMC/TAC Demonstration of ICI Training/Learning Strategies, April 1981, could not be obtained. For example, only partial information could be obtained on individual test scores on Career Development Courses, Promotion Fitness Exams, Specialty Knowledge Tests, etc. In addition, only 69.4 percent of a potential 245 confirmation tasks (CT) were completed.

e. The dynamic nature of the TAC mission, and some unplanned extraordinary maintenance events prevented keeping both DCCs and FCs paired and assigned to the same aircraft throughout the entire evaluation period. As a result, the data collected was not "pure" and may have affected both aircraft data and DCC/FC attitudes and performance.

f. Two factors unique to Moody AFB may have affected the evaluation results in addition to those cited above:

(1) Several unit deployments to Red Flag pulled both control and test crew chiefs away from their home station. This drastically reduced the number of personnel evaluations, in particular CTs, available for analysis.

(2) Temporary duty of Quality Assurance inspectors forced MIs to become evaluators of their own students subjecting the data to bias.

g. Homestead AFB also had two factors that may have affected the results:

CHAPTER 3

EVALUATION

Section A.   INTRODUCTION

3-1   As mentioned in Chapter 2, the pilot demonstration was
conducted at the 31TFW, Homestead AFB and the 347TFW, Moody AFB.
The test AMUs were the 68th at Moody AFB and the 306th at
Homestead AFB.   The control AMUs were the 70th at Moody AFB and
the 307th at Homestead AFB.   Thirty-five test and thirty-three
control crew chiefs were evaluated along with performance rates
and indicators of thirty-two aircraft.

Section B.   FACTORS BEARING ON THE EVALUATION

3-2   Several factors affected the scope, extent, and results of
the evaluation phase.   Some of these factors follow.

    a.   The time to conduct the evaluation phase was limited to
less than three months from the time the last ICI student
graduated to the beginning of the data assessment milestone of
the project.

    b.   Funding availability limited the size of the contract;
i.e., only five TAC CAMT MIs were trained in the use of the ICI
strategies.

    c.   Changes in leadership positions at both bases, from the
Deputy Commander for Maintenance, Maintenance Training and
Quality Assurance down to AMU Flight Chiefs, caused varying

5

(AMU). Therefore, to obtain valid test data, we decided to provide the ICI training to both experienced dedicated crew chiefs (DCCs) and inexperienced assistant, or fighter crew chiefs (FCs) in the test AMUs. Currently available Phase III (FC-type) training was given to both groups in the control AMUs. Results, then, could be extrapolated to compare the conventionally trained mechanics with the ICI-trained mechanics. Thirty-six test personnel were originally identified; eight DCCs and eight FCs from the 68th AMU at Moody AFB, and eight DCCs and twelve FCs from the 306th AMU at Homestead AFB. Thirty-six control personnel were also identified; eight DCCs and eight FCs from the 70th AMU at Moody AFB, and eight DCCs and twelve FCs from the 307th AMU at Homestead AFB.

Section B. RESULTS

2-4 Thirty-five personnel actually completed the ICI-taught classes. All sixteen selected at Moody AFB completed the training and nineteen of the original twenty at Homestead AFB graduated. After their graduation, all were assigned (or reassigned) to their respective AMUs. Of the thirty-six control personnel identified, three were not available for evaluation due to re-assignment, discharge, or cross training. Evaluation of the ICI-taught personnel began immediately after their graduation and will be addressed in detail in the next chapter.

the confirmation tasks are included for comparison purposes;
differences, again, not statistically significant.
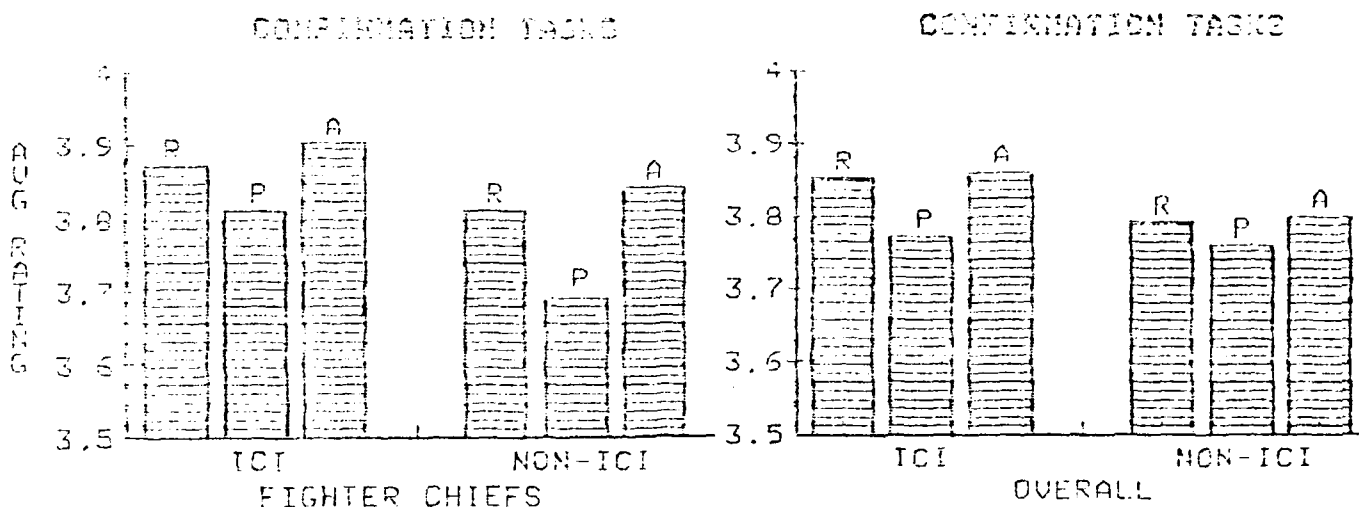
Figure 4-7

4-7 In summary, the objective, conventional indicators selected
for evaluation did not conclusively show that use of the
training/learning strategies developed and copyrighted by ICI
could improve dedicated crew chief performance in TAC. Nor did
the evaluation prove (or disprove) that these indicators used to
assess aircraft maintenance performance and to evaluate personnel
performance could effectively measure changes resulting from
maintenance training program modificaiton. If all the requested
data had been received, different conclusions may have been
reached. Subjectively, through surveys, taped interviews, and
the confirmation tasks, ICI's training/learning strategies
apparently produced crew chiefs, particularly inexperienced
fighter chiefs, who felt they were better trained. Simple
averaging of rating scale results on the surveys and confirmation

18

tasks slightly favored the ICI methods over conventional teaching techniques. Group differences were not, in all cases, statistically significant. Review of the narrative comments on the surveys (see Appendix D) and CTs, however, clearly favor ICI's strategies, from the students', supervisors', and instructors' viewpoints. ICI's training/learning strategies were found to be a fresh, innovative, and potentially effective approach to training. We see no reason why they could not be applied to any Air Force Specialty Code and be successful given the properly designed curriculum, availability of training equipment, and supervisory emphasis.

CHAPTER 5

RECOMMENDATIONS

5-1 Based almost entirely on subjective information, we recommend that Air Training Command seriously consider examining the ICI training/learning strategies for application to some form of training program; e.g., instructor courses, FTDs, tech training centers, etc.

5-2 Further, we recommend that the other MAJCOMs, SOAs, or other AF agencies review ICI's program for possible use in their own training programs.

ABBREVIATIONS

AF   – Air Force

AFB   – Air Force Base

AFLMC   – Air Force Logistics Management Center

AFR   – Air Force Regulation

AFSC   – Air Force Specialty Code

AGS   – Aircraft Generation Squadron

AMU   – Aircraft Maintenance Unit

ATC   – Air Training Command

CAMT   – Consolidated Aircraft Maintenance Training

CMA   – Completed Maintenance Action

CMI   – Completed Maintenance Inspection

CSI   – Completed Supervisory Inspection

CT   – Confirmation Task

DCC   – Dedicated Crew Chief

DSV   – Detected Safety Violation

FC   – Fighter Chief

FTD   – Field Training Detachment

IAW   – In Accordance With

ICI   – Institute for Curriculum and Instruction

MAJCOM   – Major Command

MI   – Maintenance Instructor

MTIP   – Maintenance Training Improvement Program

OJT   – On the Job Training

QVI   – Quality Verification Inspection

SE   – Supervisory Evaluation

ABBREVIATIONS (Cont'd)

SOA   – Separate Operating Agency

TAC   – Tactical Air Command

TDV   – Technical Data Violation

TE   – Task Evaluation

TFW   – Tactical Fighter Wing

TO   – Technical Order

ZD   – Zero Defects

APPENDIX A

BIBLIOGRAPHY

BIBLIOGRAPHY

REFERENCES CITED

Reports

Townsend, J., Maj USAF, Sonnenberg, J., Capt USAF and Coveris, N.
TSgt USAF. Evaluation Plan for the AFLMC/TAC Demonstration
of ICI Training/Learning Strategies. Air Force Logistics
Management Center, Gunter AFS, AL: April 1981.

Other Sources

Ehrenberg, Lyle M. ICI and Its Training/Learning Strategies.
Coral Gables, FL: Institute for Curriculum and Instruction,
1981.

_____. Mission-Ready Training -- A Suggested
Move Forward in Military Training. Coral Gables, FL:
Institute for Curriculum and Instruction, 1981.

_____. The Military's Current Training
System - Its Achilles Heel or Its Decisive Weapon. Coral
Gables, FL: Institute for Curriculum and Instruction,
1980-81.

_____. Six Questions for Judging Military
Training Programs. Coral Gables, FL: Institute for
Curriculum and Instruction, 1980.

Kelley, Clay E., Warrant Officer, USA. Report on Final Results,
Comprehension Confirmation Procedures (CCP), Fort Jackson, SC.
Headquarters, 15th Battalion, 4th Combat Support Training
Brigade, Fort Jackson, SC: November 1979.

APPENDIX B

ICI

&

ITS TRAINING/LEARNING STRATEGIES

ICI AND ITS TRAINING/LEARNING STRATEGIES

The Institute for Curriculum and Instruction (ICI) is a private con-
sulting organization which specializes in thinking/learning strategies and
correlated training/supervision strategies. During the past twenty years
it has trained thousands of instructors/supervisors in how to increase an
individual's or unit's skills and attitudes needed to achieve goals.

Until recently, ICI's work was primarily with educational institutions
of various kinds located throughout the country. Beginning in 1979, ICI has
focused much of its efforts on helping the military explore better ways to
train its personnel and to implement more unit-effective training. A success-
ful pilot project was completed with the U.S. Army Supply School at Fort
Jackson, S.C. in 1979. In 1981, three prototype projects were completed.
One was with the Tactical Air Command/Logistics Management Center for the
training of F-4 crew chiefs. A second dealt with the training of NCO in-
structors in the use of ICI Learning Strategies for students in the 94B MOS
at Ft. Lee. ICI's major effort was an Integrated Training Prototype (ITP)
with the TRADOC/4th CST Brigade, Ft. Jackson. The ITP demonstrated that it
is possible for new soldiers to develop and integrate soldiering skills
with MOS skills and confirm that they are mission-ready upon completion of
their advanced initial training (AIT). (A video tape which documents this
training is available through the 4th CST Brigade.)

The Institute's unique contribution to the field of training and
education is its Thinking/Learning Strategies. It is one of the few organ-
izations that provides instructors and supervisors with specific, proven
techniques which confirm that learners are using the appropriate thinking
processes throughout a training situation. This "learning focus" better
insures that instruction or supervision produces individuals who can sustain
what they have learned and apply it to achieving the missions they are
being trained for.

ICI's curriculum design strategies consist of those needed to:

1. produce a complete, accurate, justified analysis of the mission
    and the related tasks

2. provide instructors and supervisors with a sequential and cumulative
    training program that describes the thinking/learning skills the
    trainees must use to confirm they can assume the assigned responsi-
    bilities involved in successfully completng designated missions.

The evidence from research and the field suggests that by incorporating
the ICI Strategies into a military training program, several significant
benefits can accrue:

1. the Strategies strengthen the role of the instructor by making him/her
    better able to organize resources, pace instruction, remediate learning
    difficulties, and help trainees to integrate/apply what they are learning
    on a cumulative basis.

2. the Strategies help trainees overcome the difficulties they experience
    in learning new knowledge/skills by guiding them in how to use their
    minds to focus on mission outcomes, gather/retain needed information,
    process such information into relevant concepts and skills, and trans-
    fer their learning to consistent performance of their missions.

3. the Strategies build teamwork and the ability to work with others in-
    volved in fulfilling a mission by helping trainees learn how to plan,
    execute, and critique in pairs and small groups.

4. the Strategies make it possible to confirm the needed outcomes of
    training by focusing trainees and trainers not only on performing
    required tasks but on ACHIEVING THE MISSION!

Additional information about ICI and its strategies is available through its
office in Coral Gables, Florida.

APPENDIX C

MISSION-READY TRAINING -- A

MOVE FORWARD IN

MILITARY TRAINING

MISSION-READY TRAINING --
A SUGGESTED MOVE FORWARD IN MILITARY TRAINING

by

LYLE M. EHRENBERG, DIRECTOR
INSTITUTE FOR CURRICULUM AND INSTRUCTION
CORAL GABLES, FLORIDA

This paper presents the overview of an approach to military training that would help individuals/units better meet the demands placed on them by ever-present changes in technology, resources, personnel, and policies.

This brief sketch outlines what Mission-Ready Training would accomplish, how it builds upon the current system, its basic elements, potential benefits, and how the idea could be tested. The intent is to stimulate thought about the purpose of military training and what all the time, money, and effort devoted to it should produce.

INTRODUCTION

The concept of Mission-Ready Training is based on the premise that, in the military, any individual's or unit's purpose is to achieve assigned missions, not just perform tasks or jobs. (A mission is defined as any situation in which a person or a unit must coordinate two or more tasks to create the needed results.) An individual and/or unit can be called MISSION-READY when they are both willing and able to produce the desired end-results of a mission under varying conditions.

To be mission-ready requires more than technical knowledge and skill. It requires a "sense of mission", the ability to coordinate tasks, the willingness to persevere under difficult circumstances, and the expertise to adapt effectively to unexpected and/or undesirable conditions.

Individuals and units who are trained to be mission-ready have developed certain attitudes and thinking skills that make them different from those who have been through "performance-oriented" job-skills training which is ofte out of context of the mission. They look different, act differently, and "approach" their responsibilities differently, because they can think better and have a mind-set that reflects a commitment to quality. Such people or units are as "technically" competent as "job-trained" personnel tested on specific knowledge and skills. However, because they have formed the attitudes and used the thinking skills during their military training ("school" and OJT), they demonstrate a more complete understanding of their responsibilities and how what they do relates to broader missions.

When experienced commanders/unit leaders examine the results of mission-ready individuals and units, they find not only quality but also a minimum of side effects that can lead to more serious problems than those the mission was to solve. What they observe about the individual's/unit's mission efforts is that tasks were done in ways which built or reinforced the intangibles that foster and sustain excellence - pride, confidence, teamwork, sense of mission, and a "will do" attitude. Such quality in results/performance is generated by knowledge/attitudes/skills that can be summed up in the following "creed".

THE CREED OF THE MISSION-READY

> I AM READY TO ACHIEVE MISSIONS BECAUSE I AM BOTH WILLING AND ABLE TO WORK ALONE OR WITH OTHERS IN WAYS THAT CONSISTENTLY PRODUCE THE BEST POSSIBLE MISSION RESULTS FOR THE CONDITIONS, RESOURCES, AND POLICIES I ENCOUNTER.

I KNOW I AM MISSION-READY BECAUSE I HAVE THE ATTITUDES, KNOWLEDGE, AND SKILLS TO FULFILL MY RESPONSIBILITIES AS A SPECIALIST, AS A MEMBER OF A UNIT, AND AS A HUMAN BEING.

I HAVE ENOUGH RESPECT FOR MYSELF, MY UNIT, AND FOR MY COUNTRY SO THAT I CONSISTENTLY TRY TO:

- maintain myself and my surroundings in ways which are appropriate for the particular duty and the mission

- follow orders as promptly as possible after making sure they are understood completely and accurately

- focus on my responsibility and not let distractions and disagreeable circumstances prevent me from producing the results that are needed to achieve the mission

- work with others in ways that help them and me get the mission achieved properly

- persevere when problems arise and stay "cool under fire" until workable solutions are put into action

- be ever-mindful of the safety and welfare of my associates, my superiors, my country, and myself

- seek and give help if/when it is needed to achieve the mission

- strive for excellence and not be satisfied with mediocre results

- demonstrate the behaviors the military associates with its traditions and values

- abide by the regulations and policies established by my unit, the military, and civilian authorities

— — — — — —

2. What priority rating would you give to training other instructors in the ICI strategies?

____Top   ____High   ____Medium   ____Low   ____Bottom

Please justify your rating:

3. What do you see as the major advantages of ICI strategies for:

Air Force Instructors?

Their Students?

ICI-TRAINED INSTRUCTOR/PROJECT MANAGER SURVEY

NAME: _____   INSTRUCTOR EXPERIENCE (Yrs): _____

UNIT: _____   F-4 CREW CHIEF (Yrs): _____

BASE: _____

The following items are designed to find out your reactions to the ICI Prototype Training Project for crew chiefs sponsored by AFLMC and HQ TAC. Please respond to each item as completely and accurately as you can.

1. How would you rate the ICI instructor training program relative to other Air Force training programs you have participated in? Rate each of the following criteria using the rating scale below.

| 1 - Much Less | 2 - Less | 3 - Same | 4 - More | 5 - Much More |

_____ Organization and sequencing of what was to be learned

_____ Amount of the training content that was directly relevant to your responsibilities

_____ The extent to which you can and intend to make practical applications of what you have learned

_____ Amount of training time spent on issues that relate to maintenance training

_____ The amount of confidence you developed from the training that you can produce better results in performing your duties.

Comments about your training:

showing how to ask the right questions, having a plan of attack on each job, and knowing what the outcome should be. Test crew chief responses to question number three included servicing, launch, recovery, troubleshooting and inspections. The control crew chiefs responded with similar answers. Question number four responses were, again, very similar between test and control crew chiefs. Examples of answers were nothing, paperwork and forms, and classroom training (vs flightline time).

Section D. General Survey Questionnaires

Fourteen of these surveys were completed by personnel assigned to positions, generally supervisory, where daily observation of the crew chiefs' training and performance could take place. The overall average Willingness rating for question number one was 2.6; 2.7 for the test AMUs and 2.4 for the control. The overall average rating for Ability was 2.4; 2.4 for the test AMUs and 2.3 for the control. At the 90 percent level of confidence, these differences were not significant. Question number two test AMU respondents based their confidence in their crew chiefs on their own experience, quality assurance evaluations, knowledge and eagerness of the crew chiefs and daily observations of performance. Control AMU responses indicated a relative lack of confidence due to lack of crew chief experience and personnel taking short cuts because of a shortage of skilled technicians. Question number three test responses included getting MIs with practical experience, more forms training and more hands on flightline exposure. Control answers were somewhat similar including more forms/781 series training, lubrication, heavy maintenance and inspection. No one responded to question four.

43

number four included personal experience, ability and knowledge, and the fact that the MIs are with the students 8-10 hours a day and know their abilities and limitations. Question number five respondents indicated changes should be made to TAC and ATC crew chief training programs including TAC and ATC getting together to standardize training, putting a greater priority on training (to obtain equipment and aircraft), and training a person all the way to a five-level.

Section C. Crew Chief Surveys

Thirty-four surveys were completed and returned: ten surveys (five test and five control) from Homestead AFB and twenty-four surveys (fifteen test and nine control) from Moody AFB. The overall average rating for the test (ICI trained) crew chiefs on question number one was 3.2. For the control crew chiefs, the average rating was 2.9, and not significantly less at the 90 percent level of confidence. The overall average rating for question number two test crew chiefs was 2.8 and 2.7 for control. The difference in average ratings, again, was not significant statistically. There was, however, a statistically significant difference between the test and control FCs. The test group's average rating was 2.77 and the control group's average rating 2.47, substantiating our conclusion that the younger inexperienced crew chiefs clearly benefitted from their ICI-taught classes. Control crew chiefs based their confidence on their education, training, and flightline experience. Test crew chiefs based their confidence on their "excellent" instruction,

42

course at some later date, incorporate the strategies into PME-type curricula (basic training or tech school) and train all MIs in using the strategies. Question number eight addressed recommended changes to TAC and ATC training programs. Responses were: use the ICI strategies, incorporate PTD and CAMT ("two programs are a waste of manpower and resources"), and begin ICI in tech training schools through Able Chief and FC.

Section B. General Instructor Surveys

Seven of these surveys were completed; four at Homestead AFB and three at Moody AFB. Although this particular survey was designed for the non-ICI-trained instructors, two of the Homestead AFB ICI-trained MIs completed it. The overall average rating for question number one was 4.6; 4.8 for the ICI-trained MIs and 4.5 for the others. This difference was not statistically significant at the 90 percent level of confidence. Two MIs indicated top priority should be given to providing formal instructor training to all MIs while the other five picked the High category on question two. Sample responses included "helpful but not mandatory" and "both myself and my students could have benefitted from formal training, specifically concerning confirmation of training results." The overall average rating for question number three, Willingness, was 2.7; 2.6 for the ICI trained MIs and 2.7 for the others. Ability averages were: overall, 2.5; ICI trained MIs, 2.6 and others 2.4. This difference, again, was not statistically significant at the 90 percent level of confidence. The responses to question

41

Section A. ICI Trained Instructor/Project Manager Survey

Three of these surveys were completed; one at Homestead AFB and
the other two at Moody AFB. The overall average rating for
question number one was 4.1. Question number two was answered
with similar responses, all indicating top priority should be
given to training other instructors in the ICI strategies.
Question number three listed advantages of the strategies to both
instructors and students. Sample responses included instructors
being able to confirm students' gaining knowledge and skills and
facilitating thinking vs reacting. Student advantages included
learning to self-critique and plot one's own progress, better
troubleshooting abilities with more accurate results and a higher
degree of self-confidence. Question number four addressed the
disadvantages. Comments such as getting the kinks out of a new
system, breaking old habits, and confusing terminology applied to
instructors. One disadvantage for students was cited - too much
time was devoted to explaining the test program and ICI
strategies vs actual instruction. The overall average rating for
question number five, Willingness was 2.7 and Ability 2.5.
Answers to question number six covered what the respondents were
basing their confidence (or lack of) on their answers to question
number five. Examples were FCs being more responsive and willing
to learn, DCCs being apprehensive about retraining, and students
not wanting to "rock the boat" doing things IAW TOs while holding
up production. Question number seven's recommendations/comments
concerning ICI's strategies varied; e.g., attend an ICI refresher

SURVEYS

Before discussing the results of the surveys, two comments must be made. First, two reviews of the surveys were done in order to check for consistency of content, potential bias, ambiguity of terminology, etc. We felt the reviews were necessary in order to ensure valid survey results and to give credibility to any conclusions drawn from these results. Both reviews, one done by the Chairman, Human Relations Department, New York University and the other by the Air Force Leadership and Management Development Center, indicated the surveys' content to be consistent between the groups surveyed and the surveys' results likely to be valid. Second, the graphs that appear in Chapter 4 were put there only to show comparisons. Unless indicated, the differences between the groups being compared were not statistically significant at the 90 percent level of confidence. Results were averaged, standard deviations determined, and estimations of the differences between the means of the two populations calculated using standard statistical formulas and tables to determine if the differences were significant at a 90 percent level of confidence.

Four types of surveys were given at each base. Section A will cover the ICI Trained Instructor/Project Manager Survey, Section B the General Instructor Survey, Section C the Crew Chief Survey, and Section D the general Survey Questionnaire. Copies of each of these surveys are provided at the end of this appendix. Graphic representation of selected survey results appears in Chapter 4.

APPENDIX D

SURVEYS

&

ANALYSIS

38

2. The training of a selected group of entering personnel who will be trained for the same type of missions (field artilleryman, medics, aircraft electricians, pilots, supply specialists, etc.). The training would be designed to start at the reception station stage and move in appropriate stages through OJT in the unit to which they are assigned.

3. The training of a selected group which represents all career levels in a particular MOS, AFSC, Rating, etc. The design would be based on the broad mission the speciality is needed for and would reflect the cumulative knowledge, skills, and attitudes involved at each level of mission-readiness.

Through such prototypes it should be possible to examine both the effects on mission results and the major time, resource, and administrative factors involved in designing and implementing mission-ready training in the three training patterns currently used by the military--unit training, "off-the-job" career training, and initial-entry to unit-assignment training.

In designing any of these prototypes, the essential first step would need to be selection of the missions and the analysis of each in terms of desired end-results. Just as critical at the initial stage, however, would be creating the mechanism whereby the NCO's and/or officers who would conduct/supervise the training prototypes are provided the time to work with the strategies needed to produce and confirm the attitudes, knowledge, and skills involved in mission-readiness.

Once these prerequisites are in place, the ensuing stages - designing/organizing the four elements, conducting the training, and evaluating the results - should be able to be completed in a relatively short period of time (one to two years) and at a cost which would be substantially lower than what is currently being spent on training programs of similar magnitude due to more efficient design/training methodologies.

— — — — — — — — —

Mission-Ready Training is not a panacea nor is it intended to replace that which is already producing desired results. It seems to be the logical next step to move the military closer to what it says it needs and wants from training - intelligent, responsible people who can work together under changing conditions in ways that consistently produce the best end-results that resources and policies will allow.

Some of the potential savings would be offset by increased costs to establish more "mission-contexed" training environments particularly in schools/training centers and/or in training for combat-support and combat-support service missions.

Another value of Mission-Ready Training is that it circumvents the current controversies over "self-paced" vs. "lock-step" modes of training. By focusing on desired mission results and the competencies, attitudes, and thinking skills that individuals and units need in order to produce such results consistently, the Mission-Ready training design brings together the best of both modes but adds new strategies which help NCO's and/or officers confirm that individuals and units:

1. have learned what has been "taught"
2. can sustain and transfer what has been learned
3. can adapt intelligently to changing circumstances
4. demonstrate the pride, confidence, and commitment required for mission mission-readiness

INITIAL STEPS

Evolving to a Mission-Ready Training system cannot and should not be done rapidly. The desired results need to be demonstrated in selected "microcosms" so the critical change factors have not only been identified but also "worked through" in each of the typical environments in which military training takes place. Proper prototyping is the key, and each pilot should be done with two caveats in mind:

- prototypes must be done under "real" conditions, that is, no resources or personnel are involved which would not be readily available if the "test" training were implemented on a wide scale

- prototypes should not be "patchwork", that is, isolated courses or arbitrarily-selected job/task specialities should not be used, because all aspects of a mission would not be included

A minimum of three initial prototypes should be considered:

1. The training of all personnel currently assigned to a unit which has a major combat or combat-support mission (battalion, maintenance squadron, destroyer, field hospital unit, etc.).

An often-heard comment is that mission-related facilities, equipment, etc. are either not available or not needed during "off-the-job" stages of training. If more of such resources were made more available to schools (training centers), individuals and/or units could become mission-ready much more quickly thereby increasing their initial productivity on the job and decreasing the time and other costs involved in OJT.

Those who say that such mission-related resources are not needed during "off-the-job" training stages are implying that the critical attitudes of pride, confidence, teamwork, "sense of mission", etc. will develop out of context. There is no evidence to support this hypothesis nor the one that suggests that such attitudes can be developed later during more realistic OJT or unit training.

POTENTIAL BENEFITS

Designing the training system around these four basic elements should produce substantial savings for the military. These would result from:

1. lower rates of attrition due to academic failure, lack of morale, etc.
2. reduced expenditures for unessential training aids and technology currently being used to substitute for inadequate training design and competence
3. reduced numbers of people taking "courses" which do not result in increased mission-readiness
4. reduced numbers of people needed to design, manage, and evaluate training since the process is less complicated and "atomized"
5. reduced waste, damage, or loss of materiel because of increased competency, stronger supervision, and a greater sense of responsibility for mission results
6. more efficient NCO's/officers because of increased ability to separate productive from unproductive training activities and to capitalize on opportunities for follow-on learning during or after mission performance.

The Difference in Scope

The Performance-Oriented Training process begins with a job/task analysis and ends with demonstrated performance of each task.

The Mission-Ready Training process includes job/task analysis but begins with an analysis of desired mission results and ends with confirmation that the mission can and will be achieved consistently.

The Difference in Training Methodology

Performance-Oriented Training methodology relies heavily on self-instructional materials, instructor "presentations", and instruction by AV technology. Training effectiveness is measured by performance on criterion-referenced tests of individual or clustered tasks.

Mission-Ready Training makes use of reference materials, presentations, and instructional technology but relies heavily on NCO's/officers who have been trained in how to develop attitudes and how to help each individual use thinking skills to form concepts, refine skills, and apply what has been learned. Training effectiveness is measured by comparing the results of real or simulated missions and how those results were produced with identified standards for excellence.

THE BASIC ELEMENTS OF MISSION-READY TRAINING

Mission-Ready Training basically requires only four ingredients, the first three of which further distinguish it from performance-oriented training:

1. a statement of clearly-defined, justified end results of the designated mission

2. a training program that:
   - provides a mission-related training context
   - develops the prerequisite knowledge and skills and the attitudes of pride, confidence, teamwork, and commitment by cumulative rotation of theory and then practice in the mission-related context
   - sequences the appropriate thinking/learning skills for conceptualizing, skill development, and learning transfer

3. individuals and/or units that are willing to make the effort to become mission-ready and instructors and/or supervisors who are skilled in strategies which produce and confirm the needed attitudes, knowledge, and skills.

4. the facilities and equipment or weapons (real or simulated) that are directly involved in achieving the mission. (All other training aids/resources are "nice" but not needed.)

In essence, Mission-Ready Training focuses on "where the rubber meets the road" -- a unit's mission -- and lets that mission drive the training. What provides the driving power are the individuals' attitudes and thinking skills needed to perform and coordinate the mission-related tasks. Throughout their training (initial/advanced, on-the-job), what they learn is never isolated but is always "in context" of achieving a mission. This continuing context makes it easier for them to sustain and to integrate new learning on a cumulative basis.

The key to Mission-Ready Training is the NCO's/officers who are responsible for training (regardless of where or when). They must be able to 1) set the tone by modeling mission-ready attitudes/performance, and 2) use teaching/supervision/leadership strategies that produce and sustain thinking skills, mission-ready attitudes, technical knowledge/skills, and most important, transfer of learning to consistent mission performance.

DIFFERENCES FROM CURRENT TRAINING

The major differences between Mission-Ready Training and the military's current Performance-Oriented Training are focus, emphasis, scope and training methodology. These differences result from what is added to rather than what is changed in the current system.

The Difference in Focus

Performance-Oriented Training both in schools and units concentrates on learning specific, job-related tasks.

Mission-Ready Training both in schools and units includes specific task learning but focuses on learning how to perform tasks in the context of achieving a mission.

The Difference in Emphasis

Performance-Oriented Training emphasizes achieving objectives which require people to perform job tasks according to specified criteria.

Mission-Ready Training includes criterion-referenced performance but emphasizes achieving end-results which require people to integrate/apply a clear concept of the mission, the coordinated tasks, and the mission-related attitudes.

I HAVE THE KNOWLEDGE WHICH MAKES IT POSSIBLE FOR ME TO:

- state the duties I am assuming and why each needs to be performed properly to be of benefit to the mission, to my unit, to the military, and to myself and others

- describe the desired results I need to produce from each assigned task and how those results relate to my total responsibilities, to the responsibilities of others, and to the desired end-results of missions of which I am a part

- specify the actions I and/or others I work with will take to produce the desired results, in what order, by whom, where, when, and with what resources

— — — — — — —

I AM CONFIDENT IN MY ABILITY TO PRODUCE RESULTS BECAUSE I HAVE THE INTELLIGENCE AND SKILLS TO:

- prepare properly for each task

- perform each task within the given time limits

- sequence my work and coordinate what I do with the tasks of others

- adapt my performance quickly and effectively to changing conditions

- monitor my progress and make needed corrections without losing what is going well

- learn more so I can continue to improve or be ready to assume added responsibilities I may seek or be given

4. What do you think are the major disadvantages of ICI strategies for:

. Air Force Instructors?

Their Students?

5. Use the rating scale below to indicate how confident you are in your typical trainee's willingness (W) and ability (A) to perform each of the following responsibilities:

0 - No Confidence	1 - Very little Confidence	2 - Some Confidence	3 - A great deal of Confidence

W   A

____ ____ Do a complete, accurate pre-flight inspection on time.

____ ____ Do a complete, accurate pre-flight servicing on time.

____ ____ Launch an F-4 properly, on time, and in difficult weather conditions.

____ ____ Recover an F-4 properly and on time for thru flight.

____ ____ Recover an F-4 properly and on time after last flight of day.

____ ____ Properly correct flightline and HPO discrepancies the crew chief is responsible for and in the time scheduled.

____ ____ Make sure all flightline and HPO maintenance done by others has been properly accomplished in the time alloted.

____ ____ Properly document all maintenance.

____ ____ Maintain all required forms properly.

____ ____ Take necessary actions to obtain needed parts, tools and equipment.

____ ____ Troubleshoot discrepancies the crew chief is responsible for.

____ ____ Work productively with the expeditor, other crew chiefs, and supervisors.

____ ____ Supervise the work of others assigned to his/her crew.

____ ____ Get needed information from the aircrew and those who help maintain his/her aircraft.

____ ____ Ask the right questions to find out more about how the F-4 works and why.

6. What are you basing your confidence (or lack of it) on? (Reference Item 5)

7. What recommendations or comments do you have concerning the use of the ICI Strategies?

8. What changes, if any, would you like to see made in the TAC and ATC programs for training crew chiefs?

INSTRUCTOR SURVEY

NAME: _____   INSTRUCTOR EXPERIENCE: _____

UNIT: _____   F-4 CREW CHIEF (Yrs): _____

BASE: _____

The following items are designed to find out your reactions to any instructor training which you may have received. Please respond to each item as completely and accurately as you can.

1. How would you rate your instructor training program relative to other training programs you have participated in? Rate each of the following criteria using the rating scale below.

1 - Much Less	3 - Same	5 - Much more
2 - Less	4 - More	6 - N/A (didn' receive instructor trng)

_____ Organization and sequencing of what was to be learned

_____ Amount of the training content that was directly relevant to your responsibilities

_____ The extent to which you can and intend to make practical applications of what you have learned

_____ Amount of training time spent on issues that relate to maintenance training

_____ The amount of confidence you developed from the training that you can produce better results in performing your duties

Comments about your training:

2. What priority rating would you give to providing formal instructor training to all maintenance instructors?

_____TOP   _____HIGH   _____MEDIUM   _____LOW   _____BOTTOM

Please justify your rating:

3. Use the rating scale below to indicate how confident you are in your typical trainee's willingness (W) and ability (A) to perform each of the following responsibilities:

0 - No Confidence	1 - Very little Confidence	2 - Some Confidence	3 - A great deal of Confidence

W   A

_____ _____ Do a complete, accurate pre-flight inspection on time.

_____ _____ Do a complete, accurate pre-flight servicing on time.

_____ _____ Launch an F-4 properly, on time, and in difficult weather conditions.

_____ _____ Recover an F-4 properly and on time for thru flight.

_____ _____ Recover an F-4 properly and on time after last flight of day.

_____ _____ Properly correct flightline and HPO discrepancies the crew chief is responsible for and in the time scheduled.

_____ _____ Make sure all flightline and HPO maintenance done by others has been properly accomplished in the time alloted.

_____ _____ Properly document all maintenance.

_____ _____ Maintain all required forms properly.

_____ _____ Take necessary actions to obtain needed parts, tools and equipment.

_____ _____ Troubleshoot discrepancies the crew chief is responsible for.

_____ _____ Work productively with the expeditor, other crew chiefs, and supervisors.

_____ _____ Supervise the work of others assigned to his/her crew.

_____ _____ Get needed information from the aircrew and those who help maintain his/her aircraft.

_____ _____ Ask the right questions to find out more about how the F-4 works and why.

4. What are you basing your confidence (of lack of) on? (Reference Item 3)

5. What changes, if any, would you like to see made in the TAC and ATC programs for training crew chiefs?

51

CREW CHIEF SURVEY

NAME: _____   DEDICATED CREW CHIEF _____

AMU: _____   FIGHTER CHIEF _____

BASE: _____

INSTRUCTOR: _____

TRAINING COMPLETED (DATE): _____

The following items are designed to find out your reactions to the training program you have just completed. Please respond to each item as completely and accurately as you can.

1. YOUR TRAINING PROGRAM (CAMT):
    Use the rating scale below to rate each of the following statements about your training.

0 - Did not happen	1 - Seldom happened	2 - Sometimes happened
3 - Often happened	4 - Always happened	

_____ My instructor was well prepared

_____ My instructor demonstrated what I was to learn

_____ My instructor made me do things over until I did them right

_____ My instructor not only told me what I needed to correct but made sure that someone showed me how

_____ My instructor told me why it was important for me to learn each thing I had to learn

_____ My instructor made me explain my ideas

_____ My instructor taught me what questions to ask to find out what I want to know when working on the flightline

_____ My instructor taught me to troubleshoot discrepancies

_____ I was encouraged to share ideas with my fellow trainees

_____ I was treated with respect by my instructor

52

_____ Time was wasted doing nothing or doing things that did not help me to learn

_____ The TOs and other materials were difficult for me to understand

Use the space below to add comments or suggestions about any aspect of your training program:

2. YOUR CONFIDENCE IN MAINTAINING AN F-4:
Use the rating scale below to indicate how confident you are in performing each of the following crew chief responsibilities:

0 - Can't do it	1 - Not sure I can do it
2 - Could probably do it satisfactorily	3 - Sure I can do it well

_____ Do a complete, accurate pre-flight inspection on time

_____ Do a complete, accurate pre-flight servicing on time

_____ Launch an F-4 properly, on time, and in difficult weather conditions

_____ Recover an F-4 properly and on time for thru flight

_____ Recover an F-4 properly and on time after last flight of day

_____ Properly correct flightline and HPO discrepancies the crew chief is responsible for and in the time scheduled

_____ Make sure all flightline and HPO maintenance done by others has been done properly and in the time scheduled

_____ Properly document all maintenance

_____ Maintain all the required forms properly

_____ Do what has to be done to obtain needed parts, tools, and equipment

_____ Troubleshoot discrepancies the crew chief is responsible for

_____ Work productively with the expediter, my supervisors, and other crew chiefs

_____ Supervise the work of others assigned to my crew

_____ Get needed information from the aircrew and those who help maintain my F-4

_____ Ask the right questions to find out more about how the F-4 works, and why

Use the space below to explain why you feel confident or not so confident:

3. What would you have liked to spend more time on in your training, and why?

4. What do you think you could have spent less time on? Why?

SURVEY QUESTIONNAIRE

NAME/RANK: _____   YRS EXPERIENCE ON F-4 _____

AMU: _____   AFSC _____

BASE: _____

POSITION: _____

The purpose of this survey is to obtain your reaction of the training and performance of_____ who is assigned to your unit. Please respond to each item as completely and accurately as you can.

1. Use the rating scale below to indicate how confident you are of _____ _____ ability (A) and willingness (W) to perform each of the following responsibilities:

0 – No confidence	1 – Very Little Confidence	2 – Some Confidence	3 – A great deal of Confidence

A   W

____ ____ Do a complete, accurate preflight inspection on time.

____ ____ Do a complete, accurate preflight servicing on time.

____ ____ Launch an F-4 properly, on time, and in difficult weather conditions.

____ ____ Recover an F-4 properly and on time for thru flight.

____ ____ Recover an F-4 properly and on time after last flight of day.

____ ____ Properly correct flightline and HPO discrepancies the crew chief is responsible for and in time scheduled.

____ ____ Make sure all flightline and HPO maintenance done by others has been done properly and in the time scheduled.

____ ____ Properly document all maintenance.

____ ____ Maintain all required forms properly.

____ ____ Take required actions to obtain needed parts, tools, and equipment.

____ ____ Troubleshoot discrepancies the crew chief is responsible for.

_____ _____ Work productively with the expeditor, other crew chiefs, and supervisors.

_____ _____ Supervise effectively the work of others assigned to his/her crew.

_____ _____ Get needed information from the Aircrew and those who help maintain his/her F-4.

_____ _____ Ask the right questions to find out more about how the F-4 works and why.

2. What are you basing your confidence (or lack of it) on?

3. What changes, if any, would you like to see made in CAMT and ATC training of crew chiefs?

4. Make any other comments you would like about this individual's performance and training below.

APPENDIX E

CONFIRMATION TASKS

&

ANALYSIS

CONFIRMATION TASKS

The graphs that appear in Chapter 4 were put there only to show comparisons. Unless indicated, the differences between the groups being compared were not statistically significant at the 90 percent level of confidence. Results were averaged, standard deviations and variances determined, and estimations of the differences between the means of the two populations calculated using standard statistical formulas and tables to determine if the differences were significant at a 90 percent level of confidence.

_____ DCC or _____ FC: _____ SKILL LEVEL _____ PRE _____ OR POST _____ CT DATE OF CT: _____

RATER: _____ AFB: _____ AMU: _____

Use the rating scale below and circle the one which indicates how well the C/C's results, procedures, and attitudes meet Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present; 1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair); 3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULTS	RATING	REMARKS
A. THE F-4 AIRCRAFT		
Criterion #1 - Oil servicing was completed properly prior to 30' deadline	0 1 2 3 4	
Criterion #2 - F-4 is properly positioned on flight line	0 1 2 3 4	
Criterion #3 - F-4 is properly serviced and is crew ready for launching	0 1 2 3 4	
Criterion #4 - F-4 is crew ready on time for the day's next launch	0 1 2 3 4	
B. THE FORMS		
Criterion #1 - all forms are complete	0 1 2 3 4	
Criterion #2 - all forms are accurate	0 1 2 3 4	
Criterion #3 - all forms are legible	0 1 2 3 4	
Criterion #4 - all forms are properly organized	0 1 2 3 4	
Criterion #5 - all forms are in proper location	0 1 2 3 4	
C. THE WORK AREAS/RESOURCES		
Criterion #1 - all tools, supplies, equipment are in proper condition for next use	0 1 2 3 4	
Criterion #2 - all tools, supplies, equipment are in proper location for next use	0 1 2 3 4	
Criterion #3 - no supplies were wasted	0 1 2 3 4	
Criterion #4 - all areas are free of FOD and other removable debris	0 1 2 3 4	

73

DCC CONFIRMATION TASK
RESPONSIBILITY #5 — RECOVER F-4 AND MAKE CREW READY
FOR NEXT FLIGHT OF THE DAY

INTRODUCTION AND OVERVIEW

The purpose for having you do this task is to assess your willingness and
ability to fulfill this crew chief responsibility. It will give you the oppor-
tunity to apply your knowledge of this responsibility. This complex task will
also make it possible for you to plan and perform all of the separate tasks
which insure the aircraft is ready for launching for its next flight of the day.

After you have completed this Confirmation Task, you will be asked to rate and
judge 1) the result you produced, 2) the actions you took, and 3) your attitudes
toward fulfilling this responsibility. Others will also be rating you on these
three issues. They will use the same questions and rating scales as you do.
This assessment will clearly indicate how well you met the Standards for
Excellence in fulfilling this responsibility.

DIRECTIONS FOR THE TASK

1. You will be assigned an F-4 aircraft in the AMU that is to be recovered
    from its sortie. You will be told what the F-4's next mission is and the
    time it is to be launched for its next flight that day.

2. Report to _____ at _____.

3. Bring with you anything you think you will need that would not be avail-
    able on the flight line.

4. After you are assigned the aircraft, do whatever you think is necessary
    to recover the aircraft and have it ready for its next launching that day.

5. When you have completed your responsibility, report to _____ for
    further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do the entire Confirmation Task yourself except for any part of
    it which requires another person. If or when another person is needed to
    do something, that person will be available.

2. You are not to ask anyone for help in how to perform the Confirmation Task.
    You can refer to notes you might make in preparing for this Task.

3. The usual equipment, tools, supplies, forms, and references that are needed
    will be available at the AMU.

STANDARDS FOR EXCELLENCE - LAUNCH PROCEDURES

	RATING
Criterion #1 - Checked to make sure all needed equipment was available when needed and was functioning properly	0 1 2 3 4
Criterion #2 - Assisted the air crew in their inspection of the F-4	0 1 2 3 4
Criterion #3 - Assisted in securing the air crew in the cockpit	0 1 2 3 4
Criterion #4 - Performed all designated inspections properly and confirmed results with air crew	0 1 2 3 4
Criterion #5 - Marshalled the F-4 onto the taxiway promptly and safely	0 1 2 3 4

STANDARDS FOR EXCELLENCE - ATTITUDINAL BEHAVIORS

	RATING
Criterion #1 - Started promptly and stayed focused throughout the launch procedure by not letting distractions interrupt his efforts	0 1 2 3 4
Criterion #2 - Consistently interacted with air crew and others in courteous, military manner	0 1 2 3 4
Criterion #3 - Consistently monitored his F-4 throughout the launch process to insure that no discrepancies have occurred	0 1 2 3 4
Criterion #4 - Consistently monitored the results of his performance and made corrections as needed to insure quality	0 1 2 3 4
Criterion #5 - Was attentive to the safety of self and others throughout the launch	0 1 2 3 4
Criterion #6 - Was attentive to his personal appearance and bearing so they were appropriate for his responsibility	0 1 2 3 4

ADDITIONAL COMMENTS:

Signature

CONFIRMATION TASK RATING SHEET FOR RESPONSIBILITY #2 - LAUNCH AN F-4

OCC or _____ FC: _____   SKILL LEVEL _____   PRE _____ OR POST _____ CT   DATE OF CT: _____

RATER: _____   AFB: _____   AGE: _____

Use the rating scale below and circle the one which indicates how well the C/C's results, procedures, and attitudes meet Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present; 1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair); 3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULTS	RATING	REMARKS
A. THE F-4 AIRCRAFT		
Criterion #1 - F-4 has proper configuration for the designated mission	0 1 2 3 4	
Criterion #2 - F-4 is airborne on time and remains in proper formation	0 1 2 3 4	
Criterion #3 - F-4 is airborne with all parts and equipment secure	0 1 2 3 4	
Criterion #4 - F-4 is airborne with all systems/equipment operating properly	0 1 2 3 4	
B. THE CREW CHIEF		
Criterion #1 - C/C is in a location which has made it possible for him to monitor taxying and take-off	0 1 2 3 4	
Criterion #2 - C/C has noted any flyable discrepancies identified during launch	0 1 2 3 4	
C. THE WORK AREAS/RESOURCES		
Criterion #1 - All tools, supplies, and/or equipment are in proper condition for next use.	0 1 2 3 4	
Criterion #2 - All tools, supplies, and/or equipment are in proper location for next use.	0 1 2 3 4	
Criterion #3 - Areas are free of all FOD and other removable debris and liquids	0 1 2 3 4	

70

DCC CONFIRMATION TASK
RESPONSIBILITY #2 - LAUNCH THE F-4

INTRODUCTION AND OVERVIEW

The purpose for having you do this task is to assess your willingness and ability to fulfill this crew chief responsibility. It will give you the opportunity to apply your knowledge of this responsibility. This complex task will also make it possible for you to plan and perform all of the separate tasks which need to be done to produce a properly launched aircraft.

After you have completed this Confirmation Task, you will be asked to rate and judge 1) the results you produced, 2) the actions you took, and 3) your attitudes toward fulfilling this responsibility. Others will also be rating you on these three issues. They will use the same questions and rating scales as you do. This assessment will clearly indicate how well you met the Standards for Excellence in fulfilling this responsibility.

DIRECTIONS FOR THE TASK

1. You will be assigned an F-4 aircraft in the AMU that is to be launched. You will be told what the F-4's mission is and the time it is scheduled to fly.

2. Report to _____ at _____ .

3. Bring with you anything you think you will need that would not be available on the flight line.

4. After you are assigned the aircraft, do whatever you think is necessary to make sure the aircraft is properly launched.

5. When you have completed your responsibility, report to _____ for further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do the entire Confirmation Task yourself except for any part of it which requires another person. If or when another person is needed to do something, that person will be available.

2. You are not to ask anyone for help in _how_ to perform the Confirmation Task. You can refer to notes you might make in preparing for this Task.

3. The usual equipment, tools, supplies, forms, and references that are needed will be available at the AMU.

Standards for Excellence - Pre-Flight Procedures

Criterion #1 - Properly performed each Inspection task in a proper sequence

Criterion #2 - Properly performed each servicing task in a proper sequence

Criterion #3 - Had tools, supplies, equipment at hand so time was not wasted in obtaining them when needed

Criterion #4 - Handled tools, supplies, equipment expertly

Criterion #5 - Inspected aircraft in a logical sequence

Criterion #6 - Serviced aircraft in a logical sequence

Standards for Excellence - Attitudinal Behaviors

Criterion #1 - Started promptly and stayed focused on the responsibility by not letting distractions interrupt his efforts.

Criterion #2 - When a problem occurred, kept working on a solution until problem was resolved.

Criterion #3 - Reviewed each task result to be sure it was as it should be.

Criterion #4 - Documented those things that needed attention but could be fixed at a later time (flyable write-ups)

Criterion #5 - Acted with concern for personal safety and that of others in the area.

Criterion #6 - Used language and/or mannerisms which encouraged cooperation and productivity of others who might be involved in fulfilling the responsibility

Criterion #7 - Did tasks in a way that showed concern for personal appearance appropriate for the conditions

ADDITIONAL REMARKS:

	RATING
Criterion #1	0 1 2 3 4
Criterion #2	0 1 2 3 4
Criterion #3	0 1 2 3 4
Criterion #4	0 1 2 3 4
Criterion #5	0 1 2 3 4
Criterion #6	0 1 2 3 4
Criterion #1	0 1 2 3 4
Criterion #2	0 1 2 3 4
Criterion #3	0 1 2 3 4
Criterion #4	0 1 2 3 4
Criterion #5	0 1 2 3 4
Criterion #6	0 1 2 3 4
Criterion #7	0 1 2 3 4

REMARKS

Signature of Rater

68

CONFIRMATION TASK RATING SHEET FOR RESPONSIBILITY #1 - F-4 PREFLIGHT INSPECTION/SERVICING

___ DCC or ___ FC: _____ SKILL LEVEL _____ PRE _____ OR POST _____ CT DATE OF CT: _____

RATER: _____ AFB: _____ AMU: _____

Use the rating scale below and circle the one which indicates how well the C/C's results, procedures, and attitudes meet Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present; 1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair); 3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULT	RATING	REMARKS
A. THE F-4 AIRCRAFT		
Criterion #1 - F-4 is parked in proper location, on time	0 1 2 3 4	
Criterion #2 - Parts and equipment are secure	0 1 2 3 4	
Criterion #3 - Parts and equipment are properly positioned	0 1 2 3 4	
Criterion #4 - Parts and equipment are in proper condition	0 1 2 3 4	
Criterion #5 - FOD is not present in or on aircraft	0 1 2 3 4	
B. THE FORMS		
Criterion #1 - Forms are complete, accurate, and legible	0 1 2 3 4	
Criterion #2 - Forms are properly organized	0 1 2 3 4	
Criterion #3 - Forms are in a proper location	0 1 2 3 4	
C. WORK AREAS/RESOURCES		
Criterion #1 - Tools, supplies, equipment, etc. are in proper condition for next use	0 1 2 3 4	
Criterion #2 - Tools, supplies, equipment, etc. are in proper location for next use	0 1 2 3 4	
Criterion #3 - Supplies were not wasted	0 1 2 3 4	
Criterion #4 - Areas are free of FOD and other removable debris	0 1 2 3 4	

67

DCC CONFIRMATION TASK

RESPONSIBILITY #1 – INSPECT AND PREPARE F-4 FOR FLIGHT

INTRODUCTION AND OVERVIEW

The purpose for having you do this task is to assess your willingness and ability to fulfill this crew chief responsibility. It will give you the opportunity to apply your knowledge of this responsibility. This complex task will also make it possible for you to plan and perform all of the separate tasks which need to be done to produce a properly inspected and flight-ready aircraft.

After you have completed this Confirmation Task, you will be asked to rate and judge 1) the result you produced, 2) the actions you took, and 3) your attitudes toward fulfilling this responsibility. Others will also be rating you on these three issues. They will use the same questions and rating scales as you do. This assessment will clearly indicate how well you met the Standards for Excellence in fulfilling this responsibility.

DIRECTIONS FOR THE TASK

1. You will be assigned an F-4 aircraft in the AMU that is to be prepared for a sortie. You will be told what the F-4's mission is and the time it is to be prepared for flight.

2. Report to _____ at _____.

3. Bring with you anything you think you will need that would not be available on the flight line.

4. After you are assigned the aircraft, do whatever you think is necessary to have the aircraft ready for flight up to the point that you call the supervisor for an exceptional release.

5. When you have completed your responsibility, report to _____ for further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do the entire Confirmation Task yourself except for any part of it which requires another person. If or when another person is needed to do something, that person will be available.

2. You are not to ask anyone for help in _how_ to perform the Confirmation Task. You can refer to notes you might make in preparing for this Task.

3. The usual equipment, tools, supplies, forms, and references that are needed will be available at the AMU.

	RATING	REMARKS

STANDARDS FOR EXCELLENCE – FOLLOW-UP PROCEDURES CONT'D.

	RATING	REMARKS
Criterion #3 – DCC did what was appropriate to confirm that supervisee clearly understood what he should continue to do to <u>maintain</u> desired aspects of needed results	0 1 2 3 4	
Criterion #4 – DCC did what was appropriate to confirm that supervisee clearly understood what should be done differently, how it should be done differently, and <u>why.</u>	0 1 2 3 4	
Criterion #5 – DCC did what was appropriate to <u>change</u> factors under his control or influence that affected the <u>performance and</u> <u>attitudes of</u> the supervisee	0 1 2 3 4	
Criterion #6 – DCC did what was appropriate to confirm that the supervisee <u>knew how</u> and was <u>willing to</u> apply the Five-Step Process for Excellence in performing assigned tasks	0 1 2 3 4	

STANDARDS FOR EXCELLENCE – ATTITUDINGAL BEHAVIORS

	RATING	REMARKS
Criterion #1 – DCC stayed focused on the follow-up task and did not get distracted by irrelevancies	0 1 2 3 4	
Criterion #2 – DCC consistently provided follow-up at intervals that were neither <u>too</u> frequent (harassing) or too seldom (non-supportive).	0 1 2 3 4	
Criterion #3 – DCC consistently avoided using language or mannerisms that were <u>threatening, demeaning,</u> or <u>provocative</u> to the supervisee	0 1 2 3 4	
Criterion #4 – DCC consistently tried to <u>model</u> the characteristics associated with an excellent F-4 crew chief	0 1 2 3 4	
Criterion #5 – DCC consistently tried to keep his follow-up objective by focusing on the need for desired results <u>rather than</u> on the <u>supervisee's personal characteristics</u>	0 1 2 3 4	
Criterion #6 – DCC consistently involved the supervisee in the <u>assess-</u> <u>ment/diagnosis/planning</u> for improvement process	0 1 2 3 4	

ADDITIONAL REMARKS:

Signature of Rater

65

CONFIRMATION TASK RATING SHEET FOR DCC SUPERVISION - FOLLOW-UP ON DELEGATED TASKS (RESPONSIBILITIES)

DCC: _____

SKILL LEVEL _____ PRE _____ OR POST _____ CT   DATE OF CT: _____

RATER: _____   AFB: _____   AMU: _____

Use the rating scale below and circle the one which indicates how well the DCC's follow-up results, procedures, and attitudes meet Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present;   1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair);   3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULT

	RATING	REMARKS
Criterion #1 - Supervisee consistently improves on and/or maintains expected results of assigned tasks	0 1 2 3 4	
Criterion #2 - Supervisee consistently produces desired results within given conditions and constraints	0 1 2 3 4	
Criterion #3 - Supervisee consistently tries to use the Five-Step Process for Excellence to continually improve on the results, performance, and attitudes expected of F-4 crew chiefs	0 1 2 3 4	
Criterion #4 - Supervisee demonstrates increased confidence in and willingness to use his ability to produce better maintenance of the F-4 to which he is assigned	0 1 2 3 4	
Criterion #5 - Supervisee demonstrates the characteristics associated with pride in being an F-4 crew chief	0 1 2 3 4	

STANDARDS FOR EXCELLENCE - FOLLOW-UP PROCEDURES

	RATING	REMARKS
Criterion #1 - DCC clearly communicated to the supervisee which aspects of his results met expectations and how those aspects contributed to achieving the broader responsibility/mission	0 1 2 3 4	
Criterion #2 - DCC clearly communicated to the supervisee which aspects of his results did not meet expectations and how those aspects interfered with achievement of the broader responsibility/mission	0 1 2 3 4	

64

STANDARDS FOR EXCELLENCE — DELEGATION PROCEDURES

	RATING	REMARKS
Criterion #1 - DCC indicated what was to be done and explained and/or confirmed understanding of the desired result of each assigned task	0 1 2 3 4	
Criterion #2 - DCC explained and/or confirmed understanding of how the results would affect the achievement of the broader C/C responsibility and the F-4 maintenance mission	0 1 2 3 4	
Criterion #3 - DCC explained and/or confirmed understanding of how assigned tasks were to be done:	0 1 2 3 4	
when:	0 1 2 3 4	
where:	0 1 2 3 4	
with what:	0 1 2 3 4	
with whom:	0 1 2 3 4	
constraints:	0 1 2 3 4	
contingencies:	0 1 2 3 4	

STANDARDS FOR EXCELLENCE — ATTITUDINAL BEHAVIORS

	RATING	REMARKS
Criterion #1 - DCC communicated to the supervisee as a fellow professional rather than as a "flunky" or "go-for"	0 1 2 3 4	
Criterion #2 - DCC used language that was correct, precise, non-demeaning and non-threatening	0 1 2 3 4	
Criterion #3 - DCC stayed focused on the assignment and did not confuse the issue by including irrelevancies	0 1 2 3 4	
Criterion #4 - DCC stayed with the delegation process until he was sure the supervisee clearly understood each aspect of the assignment	0 1 2 3 4	
Criterion #5 - DCC made sure the supervisee clearly understood what the DCC would do to support supervisee's efforts to produce desired results	0 1 2 3 4	

ADDITIONAL REMARKS:

63

CONFIRMATION TASK RATING SHEET FOR DCC SUPERVISION - DELEGATION OF TASKS (RESPONSIBILITIES #1-#6)

DCC: _____   SKILL LEVEL _____ PRE _____ OR POST _____ CT DATE OF CT: _____

RATER: _____   AF3: _____   AMU: _____

Use the rating scale below and circle the one which indicates how well the DCC's delegation results, procedures, and attitudes meet Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present; 1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair); 3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULT

	RATING	REMARKS
Criterion #1 - Supervisee can fully explain the results each assigned task is to produce.	0 1 2 3 4	
Criterion #2 - Supervisee can fully describe the Standards for Excellence for each result.	0 1 2 3 4	
Criterion #3 - Supervisee can fully explain how assigned results will affect the achievement of the broader mission.	0 1 2 3 4	
Criterion #4 - Supervisee can fully explain how each assigned task will be done and under what constraints.	0 1 2 3 4	
Criterion #5 - Supervisee can explain why "he" has been assigned each task and the benefits to him for producing desired results (and consequences of not producing them).	0 1 2 3 4	
Criterion #6 - Supervisee can state the priority of each assigned task relative to other duties.	0 1 2 3 4	

62

DCC CONFIRMATION TASK
SUPERVISION OF CREW CHIEF RESPONSIBILITIES

INTRODUCTION AND OVERVIEW

The purpose of assigning you this task is to assess your willingness and ability to fulfill a crew chief responsibility when some or most of the work will be performed by others. It will give you the opportunity to apply your supervision skills in a situation similar to one you will encounter in your AMU.

After you have completed this Confirmation Task you will be asked to rate and judge 1) the results produced, 2) the procedures you used to get the results produced, and 3) your attitude towards fulfilling the responsibility. Others will also be rating you on these three issues. They will use the same questions and rating scales as you do. This assessment will clearly indicate how well you met the standards for excellence for a DCC who fulfills this responsibility.

DIRECTIONS FOR THE TASK

1. You will be assigned an F-4 aircraft in the AMU. You will be told what the maintenance responsibility is and the time by which it is to be completed.

2. Report to _____ at _____.

3. After you obtain the information about the mission and preparation time, do whatever you think is necessary to insure that others do everything they should normally do so you can document that your maintenance responsibility has been fulfilled as well as you think it should be.

4. When you have completed the Confirmation Task, report to _____ for further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do all of the supervision yourself although others may be performing the maintenance tasks.

2. You will be given time to prepare for the supervision you will provide.

3. You may use any resource (material or person) to assist you in your preparation.

4. An observer will accompany you throughout the Confirmation Task and may tape record parts of your supervision in order to have accurate information for your and others assessment of your performance.

Confirmation Task Analysis

Group	Results $\overline{X}$	σ^2	σ	Procedures $\overline{X}$	σ^2	σ	Attitudes $\overline{X}$	σ^2	σ
Dedicated Crew Chiefs	3.80	.12	.34	3.80	.20	.45	3.82	.13	.36
– Control	3.77	.12	.35	3.82	.11	.34	3.83	.11	.33
– Test	3.82	.11	.34	3.78	.30	.54	3.81	.15	.39
Fighter Chiefs	3.84	.07	.26	3.76	.18	.43	3.84	.10	.31
– Control	3.81	.08	.28	3.69	.19	.44	3.77	.15	.39
– Test	3.87	.05	.23	3.81	.16	.40	3.90	.03	.18
Control Crew Chiefs	3.79	.10	.31	3.76	.16	.39	3.80	.13	.36
Test Crew Chiefs	3.85	.08	.28	3.77	.30	.55	3.86	.10	.31
Moody AFB									
Dedicated – Control	3.51	.19	.44	3.73	.18	.42	3.80	.15	.38
Dedicated – Test	3.64	.20	.45	3.74	.15	.39	3.79	.17	.41
Fighter – Control	3.51	.13	.35	3.46	.21	.46	3.59	.28	.53
Fighter – Test	3.54	.15	.39	3.60	.60	.77	3.83	.05	.23
Homestead AFB									
Dedicated – Control	3.91	.03	.17	3.89	.07	.26	3.85	.09	.29
Dedicated – Test	3.95	.02	.14	3.90	.05	.23	3.83	.15	.38
Fighter – Control	3.90	.03	.17	3.80	.16	.40	3.85	.08	.29
Fighter – Test	3.92	.02	.14	3.86	.06	.24	3.92	.0	.17

Standards for Excellence — Thru-Flight Recovery Procedures

	Criterion	Rating	Remarks
Criterion #1	Promptly and properly marshalled the F-4 to its designated parking area	0 1 2 3 4	
Criterion #2	Accurately noted all observable discrepancies prior to engine shut-down.	0 1 2 3 4	
Criterion #3	Made sure all AGE and other resources were available and operating properly when needed	0 1 2 3 4	
Criterion #4	Assisted air crew in deplaning safely and promptly	0 1 2 3 4	
Criterion #5	Obtained all needed data accurately by interrogating air crew and checking with expeditor after de-brief	0 1 2 3 4	
Criterion #6	Properly scheduled, performed/monitored, and confirmed all needed servicing	0 1 2 3 4	
Criterion #7	Properly scheduled, performed/monitored, and confirmed all needed repairs	0 1 2 3 4	

Standards for Excellence — Attitudinal Behaviors

	Criterion	Rating	Remarks
Criterion #1	Started promptly and stayed focused on the recovery procedure by not letting distractions interfere with the work	0 1 2 3 4	
Criterion #2	When problems occurred, consistently kept working on solutions until problems were resolved	0 1 2 3 4	
Criterion #3	Maintained a sense of urgency by consistently following up on requests for specialists, parts, equipment, etc.	0 1 2 3 4	
Criterion #4	Was attentive throughout the recovery to the safety of self and others	0 1 2 3 4	
Criterion #5	Consistently monitored results of procedures and made corrections needed to maintain quality	0 1 2 3 4	
Criterion #6	Consistently interacted with air crew, expeditor, specialists, and assistants in a courteous and military manner	0 1 2 3 4	
Criterion #7	Was attentive to his appearance and bearing so they were appropriate to the responsibility	0 1 2 3 4	

DCC CONFIRMATION TASK
RESPONSIBILITY #4 - RECOVER THE F-4 AFTER ITS LAST FLIGHT OF THE DAY

INTRODUCTION AND OVERVIEW

The purpose for having you do this task is to assess your willingness and ability to fulfill this crew chief responsibility. It will give you the opportunity to apply your knowledge of this responsibility. This complex task will also make it possible for you to plan and perform all of the separate tasks which need to be done to properly recover the aircraft after its last flight of the day.

After you have completed this Confirmation Task, you will be asked to rate and judge 1) the result you produced, 2) the actions you took, and 3) your attitudes toward fulfilling this responsibility. Others will also be rating you on these three issues. They will use the same questions and rating scales as you do. This assessment will clearly indicate how well you met the Standards for Excellence in fulfilling this responsibility.

DIRECTIONS FOR THE TASK

1. You will be assigned an F-4 aircraft in the AMU that is to be recovered from its last flight that day. You will be told what time the F-4 is scheduled to fly the next day.

2. Report to _____ at _____.

3. Bring with you anything you think you will need that would not be available on the flight line.

4. After you are assigned the aircraft, do whatever you think is necessary to recover the aircraft after its last flight of the day.

5. When you have completed your responsibility, report to _____ for further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do the entire Confirmation Task yourself except for any part of it which requires another person. If or when another person is needed to do something, that person will be available.

2. You are not to ask anyone for help in how to perform the Confirmation Task. You can refer to notes you might make in preparing for this Task.

3. The usual equipment, tools, supplies, forms, and references that are needed will be available at the AMU.

CONFIRMATION TASK RATING SHEET FOR RESPONSIBILITY #4 - POST-FLIGHT RECOVERY

SKILL LEVEL _____ PRE _____ OR POST _____ CT _____ DATE OF CT _____

DES OF __ FC: _____

RATER: _____

AFB: _____ AMU: _____

Use the rating scale below and circle the one which indicates how well the C/C's results, procedures, and attitudes meet Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present; 1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair); 3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULTS	RATING	REMARKS
A. THE F-4 AIRCRAFT		
Criterion #1 - Oil servicing was completed properly prior to 30' deadline	0 1 2 3 4	
Criterion #2 - F-4 is properly positioned for flight line maintenance	0 1 2 3 4	
Criterion #3 - F-4 is properly serviced for OR status.	0 1 2 3 4	
Criterion #4 - F-4 is ready on time for pre-flight inspection/servicing	0 1 2 3 4	
B. THE FORMS		
Criterion #1 - all forms are complete	0 1 2 3 4	
Criterion #2 - all forms are accurate	0 1 2 3 4	
Criterion #3 - all forms are legible	0 1 2 3 4	
Criterion #4 - all forms are properly organized	0 1 2 3 4	
Criterion #5 - all forms are in proper location	0 1 2 3 4	
C. THE WORK AREAS/RESOURCES		
Criterion #1 - all tools, supplies, equipment are in proper condition for next use	0 1 2 3 4	
Criterion #2 - all tools, supplies, equipment are in proper location for next use	0 1 2 3 4	
Criterion #3 - no supplies were wasted	0 1 2 3 4	
Criterion #4 - all areas are free of FOD and other removable debris	0 1 2 3 4	

76

STANDARDS FOR EXCELLENCE – POST-FLIGHT RECOVERY PROCEDURES

	RATING	REMARKS
Criterion #1 – Promptly and properly marshalled the F-4 to its designated parking area	0 1 2 3 4	
Criterion #2 – Accurately noted all observable discrepancies prior to engine shut-down	0 1 2 3 4	
Criterion #3 – Made sure all AGE and other resources were available and operating properly when needed	0 1 2 3 4	
Criterion #4 – Assisted air crew in deplaning safely and promptly	0 1 2 3 4	
Criterion #5 – Obtained all needed data accurately by interrogating air crew and checking with expeditor after de-brief	0 1 2 3 4	
Criterion #6 – Properly scheduled, performed/monitored, and confirmed all needed servicing	0 1 2 3 4	
Criterion #7 – Properly scheduled, performed/monitored, and confirmed all needed repairs	0 1 2 3 4	

STANDARDS FOR EXCELLENCE – ATTITUDINAL BEHAVIORS

	RATING	REMARKS
Criterion #1 – Started promptly and stayed focused on the recovery procedure by not letting distractions interfere with the work	0 1 2 3 4	
Criterion #2 – When problems occurred, consistently kept working on solutions until problems were resolved	0 1 2 3 4	
Criterion #3 – Maintained a sense of urgency by consistently following up on requests for specialists, parts, equipment, etc.	0 1 2 3 4	
Criterion #4 – Was attentive throughout the recovery to the safety of self and others	0 1 2 3 4	
Criterion #5 – Consistently monitored results of procedures and made corrections needed to maintain quality	0 1 2 3 4	
Criterion #6 – Consistently interacted with air crew, expeditor, specialists and assistants in a courteous and military manner	0 1 2 3 4	
Criterion #7 – Was attentive to his appearance and bearing so they were appropriate to the responsibility	0 1 2 3 4	

Signature

DCC CONFIRMATION TASK

RESPONSIBILITY #5 – MANAGE/DIRECT FLIGHT LINE MAINTENANCE ON ASSIGNED F-4

INTRODUCTION AND OVERVIEW

The purpose for having you do this task is to assess your willingness and ability to fulfill this crew chief responsibility. It will give you the opportunity to apply your knowledge of this responsibility. This complex task will also make it possible for you to plan and perform certain tasks which may need to be done to insure the F-4 is properly maintained while on the flight line.

After you have completed this Confirmation Task, you will be asked to rate and judge 1) the result you produced, 2) the actions you took, and 3) your attitudes toward fulfilling this responsibility. Others will also be rating you on these three issues. They will use the same questions and rating scales as you do. This assessment will clearly indicate how well you met the Standards for Excellence in fulfilling this responsibility.

DIRECTIONS FOR THE TASK.

1. You will be assigned an F-4 aircraft in the AMU that has certain discrepancies that need to be eliminated. You will be told when the F-4 is scheduled to fly next.

2. Report to _____ at _____.

3. Bring with you anything you think you will need that would not be available on the flight line.

4. After you are assigned the aircraft, do whatever you think is ncessary to eliminate the discrepancies and have the F-4 ready for preflight inspection and servicing.

5. When you have completed your responsibility, report to _____ for further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do the entire Confirmation Task yourself except for any part of it which requires another person. If or when another person is needed to do something, that person will be available.

2. You are not to ask anyone for help in how to perform the Confirmation Task. You can refer to notes you might make in preparing for this Task.

3. The usual equipment, tools, supplies, forms, and references that are needed will be available at the AMU.

CONFIRMATION TASK RATING SHEET FOR RESPONSIBILITY #5 - FLIGHT LINE MAINTENANCE

___ DCC or ___ FC: _____

RATER: _____

AFB: _____

SKILL LEVEL ___ PRE ___ OR POST ___ CT   DATE OF CT ___

AMU: _____

Use the rating scale below and circle the one which indicates how well the C/C's _results_, _procedures_, and _attitudes_ meet Standards for Excellence. Write comments in the Remarks section.

__0__ - Characteristic is _not present_;   1 - Characteristic is present but is very _inadequate_ (poor);
__2__ - Characteristic is present but is _inadequate_ (fair);   3 - Characteristic is present and _adequate_ (good);
__4__ - Characteristic is present and is of _high quality_ (excellent)

STANDARDS FOR EXCELLENCE — RESULTS	RATING	REMARKS
A. THE F-4 AIRCRAFT		
Criterion #1 - F-4 is in OR status for pre-flight inspection and servicing when needed	0 1 2 3 4	
Criterion #2 - All red X discrepancies have been eliminated correctly and as promptly as controllable conditions allowed	0 1 2 3 4	
Criterion #3 - As many delayed discrepancies have been corrected properly or properly scheduled as time permits	0 1 2 3 4	
B. THE FORMS		
Criterion #1 - All forms are complete, accurate, and legible	0 1 2 3 4	
Criterion #2 - All forms are properly organized	0 1 2 3 4	
Criterion #3 - All forms are in a proper location	0 1 2 3 4	
C. THE WORK AREAS/RESOURCES		
Criterion #1 - All tools, supplies, equipment are in proper _condition_ for next use	0 1 2 3 4	
Criterion #2 - All tools, supplies, equipment are in proper _location_ for next use	0 1 2 3 4	
Criterion #3 - No supplies were wasted	0 1 2 3 4	
Criterion #4 - All areas are free of FOD and other removable debris	0 1 2 3 4	
Criterion #5 - Crew chief can adequately explain what the proper result should be when a discrepancy has been eliminated properly	0 1 2 3 4	

STANDARDS FOR EXCELLENCE — FLIGHT-LINE MAINTENANCE PROCEDURES

	RATING	REMARKS
Criterion #1 — Determined the desired condition of the F-4 that should be possible to achieve under the existing conditions.	0 1 2 3 4	
Criterion #2 — Developed plans which best insured that each desired maintenance result for the F-4 would be produced to the extent that controllable conditions would allow	0 1 2 3 4	
Criterion #3 — Initiated each plan promptly and correctly	0 1 2 3 4	
Criterion #4 — Followed through to determine whether or not all needed actions were producing desired results	0 1 2 3 4	
Criterion #5 — Made sure faulty results were corrected while insuring that proper results were maintained	0 1 2 3 4	
Criterion #6 — Asked questions that provided him with specific, relevant, accurate information about the maintenance and functioning of the F-4	0 1 2 3 4	

STANDARDS FOR EXCELLENCE — ATTITUDINAL BEHAVIORS

	RATING	REMARKS
Criterion #1 — Started his work promptly and consistently tried to keep his focus on his responsibility	0 1 2 3 4	
Criterion #2 — When problems occurred, consistently worked on solutions until problems were resolved	0 1 2 3 4	
Criterion #3 — Consistently tried not to waste time or resources	0 1 2 3 4	
Criterion #4 — Consistently interacted with superiors, specialists, and peers in ways that were mutually productive	0 1 2 3 4	
Criterion #5 — Was consistently attentive to the safety/well-being of self and others.	0 1 2 3 4	
Criterion #6 — Consistently attempted to help others or upgrade his knowledge and skills when time and conditions allowed	0 1 2 3 4	
Criterion #7 — Was consistently attentive to his appearance and bearing so they reflected a sense of pride in being an excellent F-4 crew chief	0 1 2 3 4	
Criterion #8 — Consistently tried to model the behaviors he expected of assistants and others who worked on his F-4	0 1 2 3 4	

ADDITIONAL REMARKS:

Signature

80

DCC CONFIRMATION TASK
RESPONSIBILITY #6 - ASSIST, MONITOR, AND
CONFIRM HPO MAINTENANCE

INTRODUCTION AND OVERVIEW

The purpose for having you do this task is to assess your willingness and ability to fulfill this crew chief responsibility. It will give you the opportunity to apply your knowledge of this responsibility. This complex task will also make it possible for you to plan and perform certain tasks which are done at the dock to insure your F-4 will operate effectively.

After you have completed this Confirmation Task, you will be asked to rate and judge 1) the result you produced, 2) the actions you took, and 3) your attitudes toward fulfilling this responsibility. Others will also be rating you on these three issues. They will use the same questions and rating scales as you do. This assessment will clearly indicate how well you met the Standards for Excellence in fulfilling this responsibility.

DIRECTIONS FOR THE TASK

1. This task will be done in two phases: a pre-dock meeting and the HPO maintenance.

2. You will be assigned an F-4 aircraft in the AMU that is approaching a periodic maintenance check. You will be given the F-4's forms and the time the pre-dock meeting will take place.

3. Report to _____ at _____.

4. Bring with you anything you think you will need for the pre-dock meeting.

5. After the meeting, you are to report back to the AMU when the F-4 is scheduled to go to the dock and then do whatever you think is necessary to insure that all the scheduled and unscheduled maintenance has been completed properly.

6. When you have completed your responsibility, report to _____ for further instructions.

CONDITIONS AND CONSTRAINTS

1. You are to do the entire Confirmation Task yourself except for any part of it which requires another person. If or when another person is needed to do something, that person will be available.

2. You are not to ask anyone for help in how to perform the Confirmation Task. You can refer to notes you might make in preparing for this Task.

CONFIRMATION TASK RATING SHEET FOR RESPONSIBILITY #6 - HPO MAINTENANCE

DCC or _____ FC: _____

RATER: _____

SKILL LEVEL _____ PRE _____ OR POST _____ CT   DATE OF CT: _____

AFB: _____   AMU: _____

Use the rating scale below and circle the one which indicates how well the C/C's results, procedures, and attitudes meet
Standards for Excellence. Write comments in the Remarks section.

0 - Characteristic is not present;   1 - Characteristic is present but is very inadequate (poor);
2 - Characteristic is present but is inadequate (fair);   3 - Characteristic is present and adequate (good);
4 - Characteristic is present and is of high quality (excellent)

STANDARDS FOR EXCELLENCE - RESULTS	RATING	REMARKS
A. THE F-4 AIRCRAFT		
Criterion #1 - F-4 is properly positioned on the flight-line in OR status at the scheduled time ready for pre-flight inspection/ servicing	0 1 2 3 4	
Criterion #2 - All scheduled periodic maintenance has been completed correctly	0 1 2 3 4	
Criterion #3 - All unscheduled maintenance has been completed correctly	0 1 2 3 4	
Criterion #4 - All the F-4's parts and equipment are in their proper place	0 1 2 3 4	
Criterion #5 - There is no FOD in or around the F-4	0 1 2 3 4	
B. THE FORMS		
Criterion #1 - All forms are complete, accurate, and legible	0 1 2 3 4	
Criterion #2 - All forms are properly organized	0 1 2 3 4	
Criterion #3 - All forms are in a proper location	0 1 2 3 4	
C. THE CREW CHIEF		
Criterion #1 - The crew chief can adequately explain the need for each unscheduled maintenance item in terms of its effect on the F-4's FMC status	0 1 2 3 4	
D. THE DOCK PERSONNEL		
Criterion #1 - The dock chief and specialists indicate the crew chief properly assisted and monitored the dock maintenance of his F-4.	0 1 2 3 4	

82

STANDARDS FOR EXCELLENCE — HPO MAINTENANCE PROCEDURES

		RATING
Criterion #1	– Participated in pre-dock meeting to assist in preparing a plan that best insures that all scheduled and unscheduled maintenance produces desired results	0 1 2 3 4
Criterion #2	– Delivered the F-4 to the dock on time and in a proper configuration for the planned maintenance	0 1 2 3 4
Criterion #3	– Promptly and correctly took the actions that properly eliminated delayed discrepancies he had scheduled	0 1 2 3 4
Criterion #4	– Assisted when necessary and monitored all scheduled and other unscheduled maintenance until desired results were confirmed	0 1 2 3 4
Criterion #5	– Asked questions of dock chief and specialists that produced specific, relevant, accurate information about the maintenance and functioning of the F-4	0 1 2 3 4
Criterion #6	– Returned the F-4 to the flight-line promptly and safely and and in OR status, if controllable conditions allowed	0 1 2 3 4

STANDARDS FOR EXCELLENCE — ATTITUDINAL BEHAVIORS

		RATING
Criterion #1	– Started his work promptly and consistently tried to keep his focus on his responsibility	0 1 2 3 4
Criterion #2	– When problems occurred, consistently worked on solutions until problems were solved	0 1 2 3 4
Criterion #3	– Consistently tried not to waste time or resources	0 1 2 3 4
Criterion #4	– Consistently interacted with dock chief, specialists, and peers in ways that were mutually productive	0 1 2 3 4
Criterion #5	– Was consistently attentive to the safety/well-being of self and others	0 1 2 3 4
Criterion #6	– Consistently attempted to help others or upgrade his knowledge and skills when time and conditions allowed	0 1 2 3 4

ADDITIONAL REMARKS:

Signature of Rater

APPENDIX F

REPEAT/RECURRING & DELAYED

DISCREPANCIES

Repeat/Recurring Discrepancies					
Homestead AFB	Jan-May	Mean	Jun-Oct	Mean	
Control AMU	49/40	9.8/8.0	89/67	17.8/13.4	+8.0/+5.4
Test AMU	51/36	10.2/7.2	46/64	9.2/12.8	-1.0/+5.6
Moody AFB					
Control AMU	7/19	1.4/3.8	19/6	3.8/1.2	+2.4/-2.6
Test AMU	21/9	4.2/1.8	16/8	3.2/1.6	-1.0/-0.2
Control AMUs	56/59	5.6/5.9	108/73	10.8/7.3	+5.2/+1.4
Test AMUs	72/45	7.2/4.5	62/72	6.2/7.2	-1.0/+2.7
Delayed Discrepancies					
Homestead AFB	Jan-May	Mean	Jul-Oct	Mean	
Control AMU	153[1]	38.2	277	55.4	+17.2
Test AMU	322[1]	80.5	372	74.4	-6.1
Moody AFB					
Control AMU	238	47.6	183[2]	45.8	-1.8
Test AMU	169	33.8	143[2]	35.8	+2.0
Control AMUs	391	43.4	460	51.1	+7.7
Test AMUs	491	54.6	515	57.2	+2.6
(1) January data not provided					
(2) July data not provided					

APPENDIX G

QUALITY ASSURANCE EVALUATIONS

Quality Assurance Evaluations

Type Evaluation	Homestead AFB				Moody AFB			
	Control		Test		Control		Test	
	DCC	FC	DCC	FC	DCC	FC	DCC	FC
QC	39	54	40	63	22	19	24	14
TE								
ZD	1	3	2		16	17	16	14
Pass			1		1	4	10	4
Fail	1					2	2	
QVI								
Exc	4							
Sat	3		2		1			
Unsat	11		14				1	1
CSI								
ZD			3		3			
Unsat	1							
CMI								
ZD					1			
Unsat							1	
CMA								
ZD								1
Sat			1		1			
SE								
ZD					1	1	1	
Pass							1	
DSV	1		3	1		1	1	
TDV			1	2				

END

FILMED

DTIC

MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS 1963-A

APPENDIX H

AIRCRAFT STATUS DATA

PRICK TEST
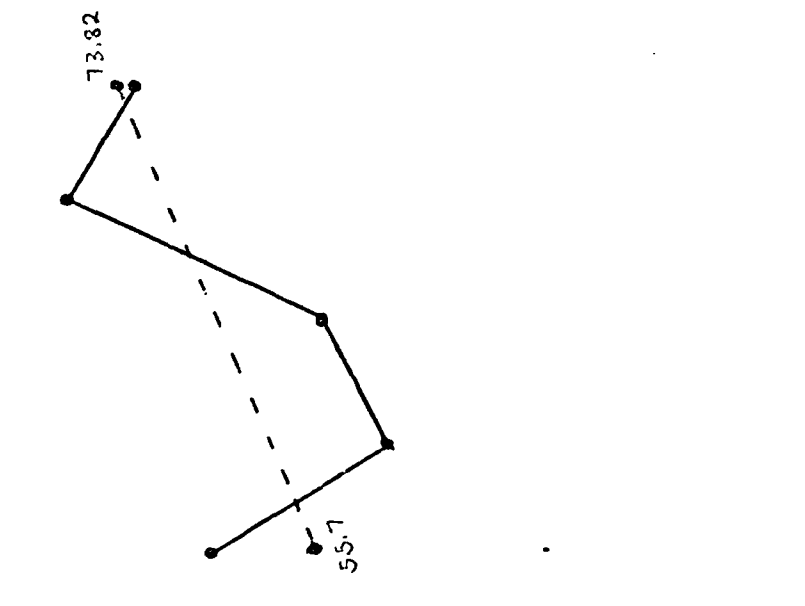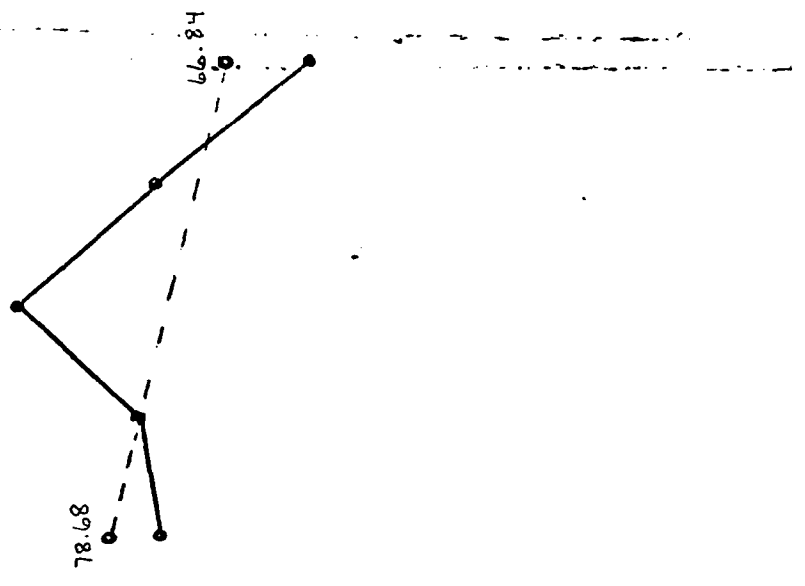
TEST

	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
Possessed Hours	5952	5316	5233	5011	5692		5725	5939	5340	5246	5952
MC Hours	3979.7	2602.9	2951.8	4034.6	4183.3		4082.7	4461.8	4660.2	3780.9	3154.3
MC Rate	66.9	48.4	54.5	80.5	73.5		71.3	75.1	87.3	72.1	53.0
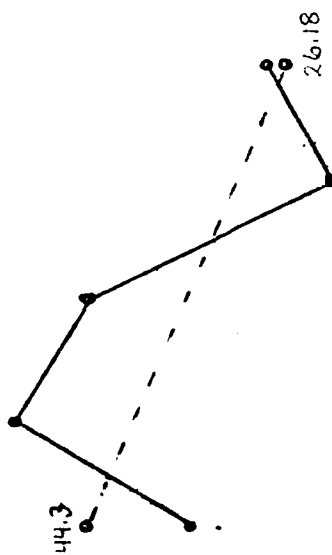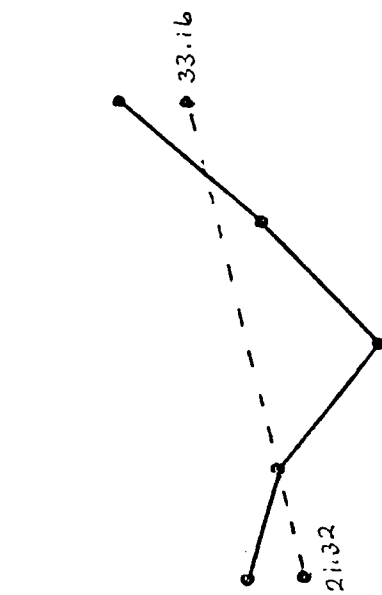
POSSESSED HOURS
MC HOURS
MC RATE ———

PERCENTAGE

90 80 70 60 50 40 30 20 10 0

73.82   55.7   78.68   66.84

PRIOR TEST   NMC STATUS   TEST

	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
POSSESSED HOURS	5952	5376	5233	5011	5692		5725	5939	5340	5246	5952
NMC HOURS	1972.3	2773.1	2384.2	976.4	1508.7		1642.3	1477.2	679.8	1465.1	2497.2
NMC RATE	33.1	51.6	45.5	19.5	26.5		28.7	24.9	12.7	27.9	42.0

PERCENTAGE
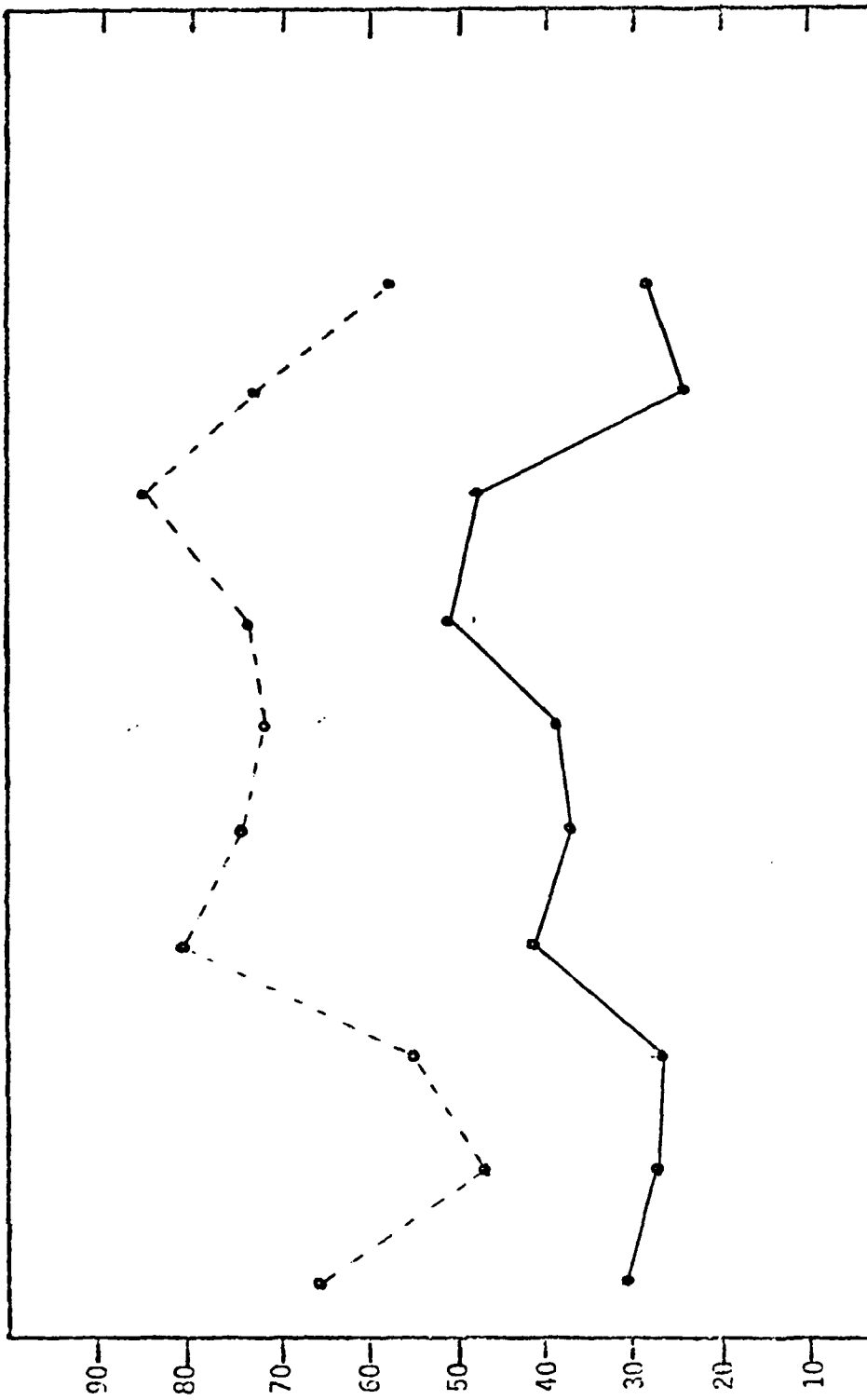
90

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Possessed Hours	5952	5376	5233	5011	5692	5725	5939	5340	5246	5952		
FMC Hours	1820.2	1537.8	1471.6	2058.9	2173.0	2242.5	3037.7	2654.8	1297.3	1671.6		
FMC Rate	30.7	28.6	28.1	41.1	38.2	39.2	51.1	49.7	24.7	28.1		
Flyable Rate	46.8	48.4	54.5	80.5	73.5	71.3	75.1	87.3	72.0	58.1		

PERCENTAGE

91
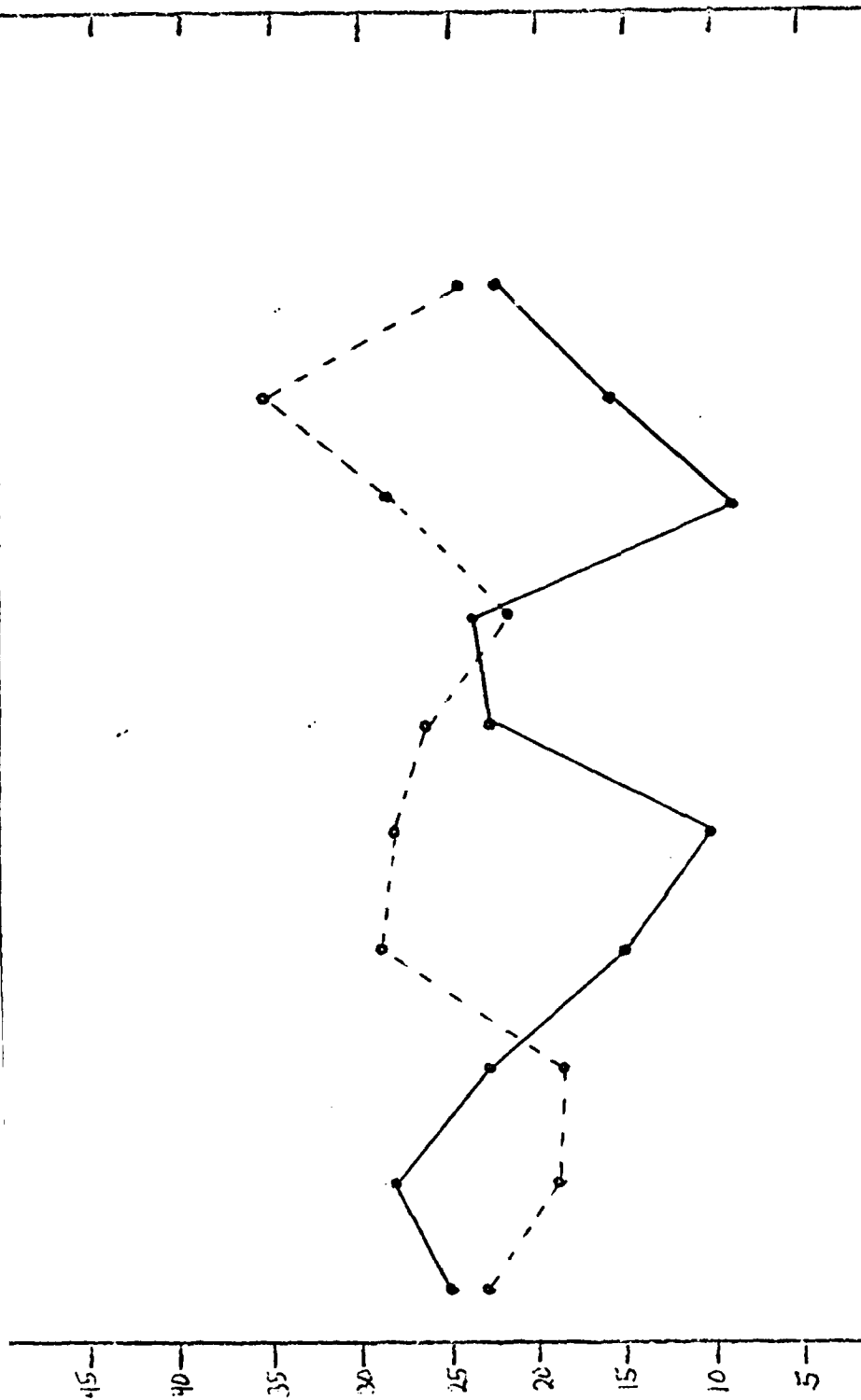
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCM HOURS	1520.1	1526.3	1209.7	782.6	618.4	1349.5	1444.8	495.3	853.5	1308.7		
NMCM RATE ———	25.5	28.4	23.1	15.6	10.9	23.6	24.3	9.3	16.3	22.0		
PMCM HOURS	1386.0	1639.6	995.0	1446.8	1601.0	1506.9	1322.7	1519.2	1860.7	1437.5		
PMCM RATE – – –	23.3	19.3	19.0	23.9	28.1	26.3	22.3	28.4	35.5	24.2		

PERCENTAGE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCS HOURS	162.3	287.7	710.6	11.3	246.4	213.0	29.2	5.7	265.0	557.2		
NMCS RATE	2.7	5.4	13.6	0.2	4.2	3.7	0.5	0.1	5.1	9.5		
PMCS HOURS	313.9	9.0	99.8	147.5	241.7	120.6	72.7	286.8	452.7	142.9		
PMCS RATE	5.3	0.2	1.9	2.9	4.2	2.1	1.2	5.4	8.6	2.4		

PERCENTAGE

NMCS RATE ———
PMCS RATE – – –
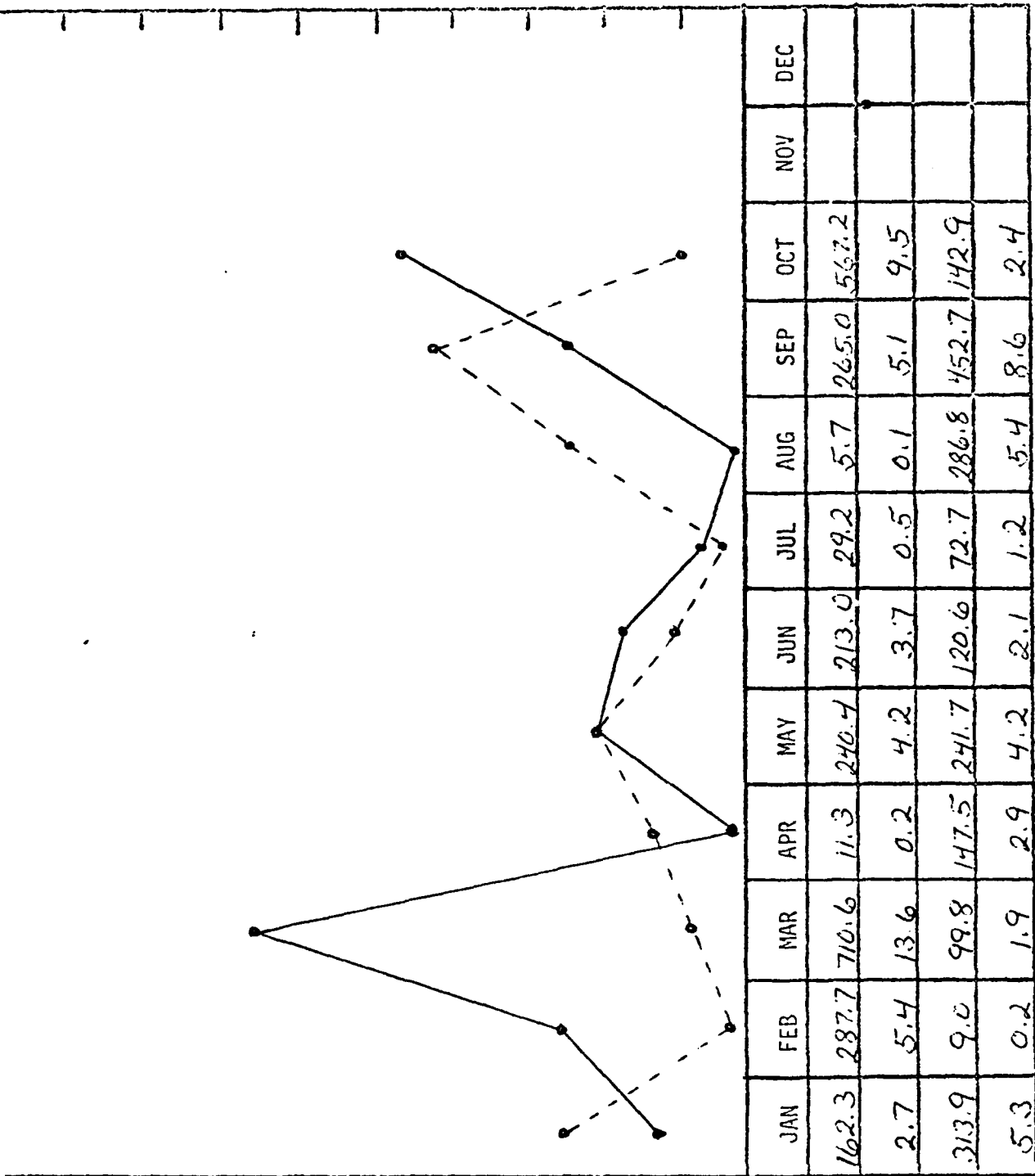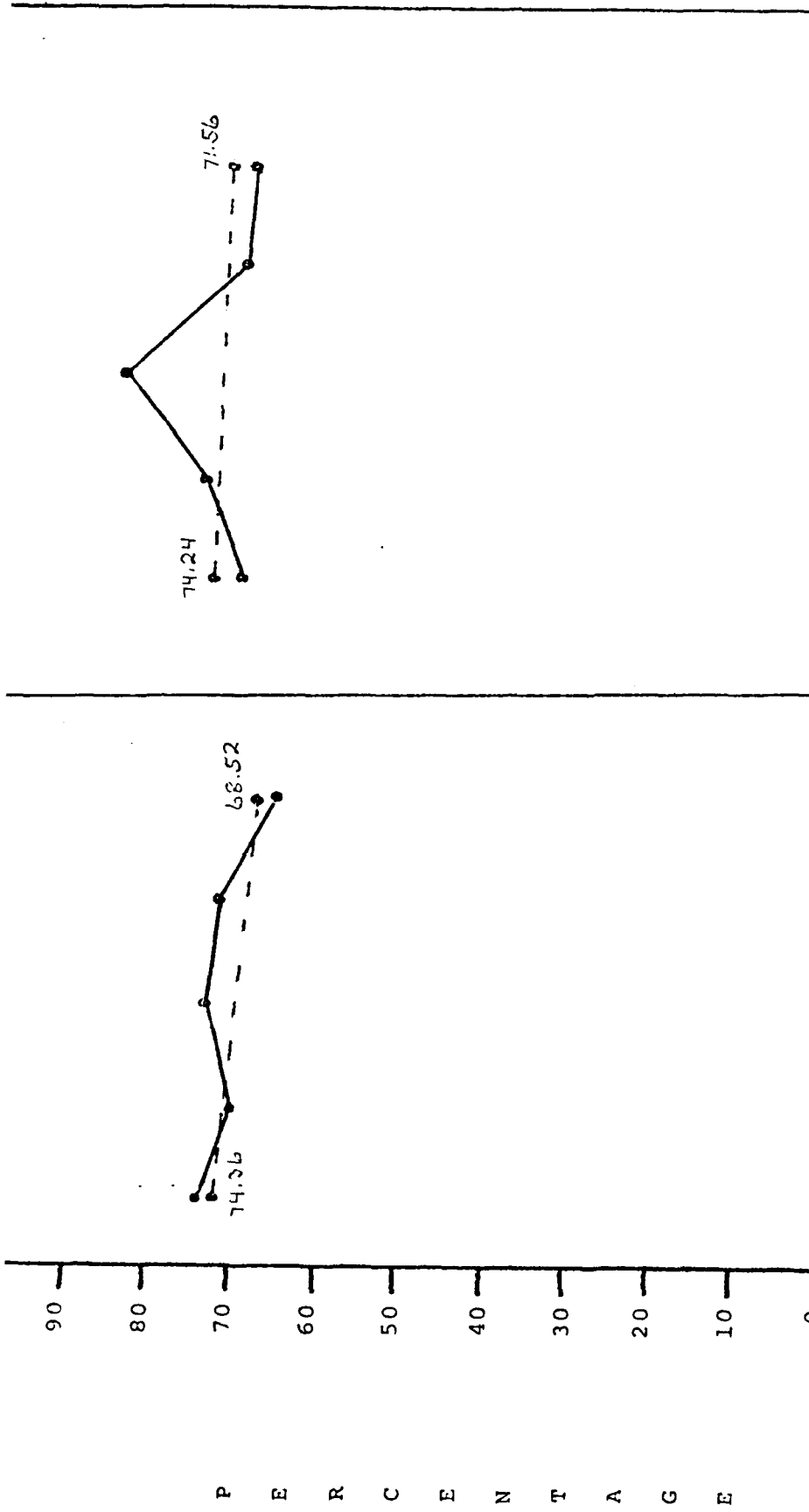
	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
POSSESSED HRS	5208	4764	5208	5501	5435		5751.5	5943	5952	5766	5452
MC HOURS	3900.3	3306.5	3809.1	3978.7	3620.7		4017.0	4376.6	4950.2	3975.9	4043.0
MC RATE	74.9	70.3	73.1	72.3	66.6		69.8	73.7	83.2	69.0	68.8

PERCENTAGE
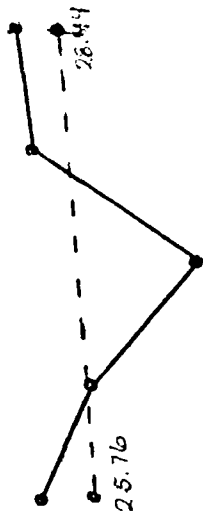
74.36 68.52 74.24 71.56

PERCENTAGE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
POSSESSED HOURS	5208	4704	5208	5501	5435	5751.5	5943	5952	5760	5952
NMC HOURS	1307.7	1396.5	1398.4	1522.3	1814.3	1734.5	1564.2	1001.8	1784.1	1859.0
NMC RATE	25.1	29.7	26.9	27.7	33.4	30.2	26.3	16.8	31.0	31.2
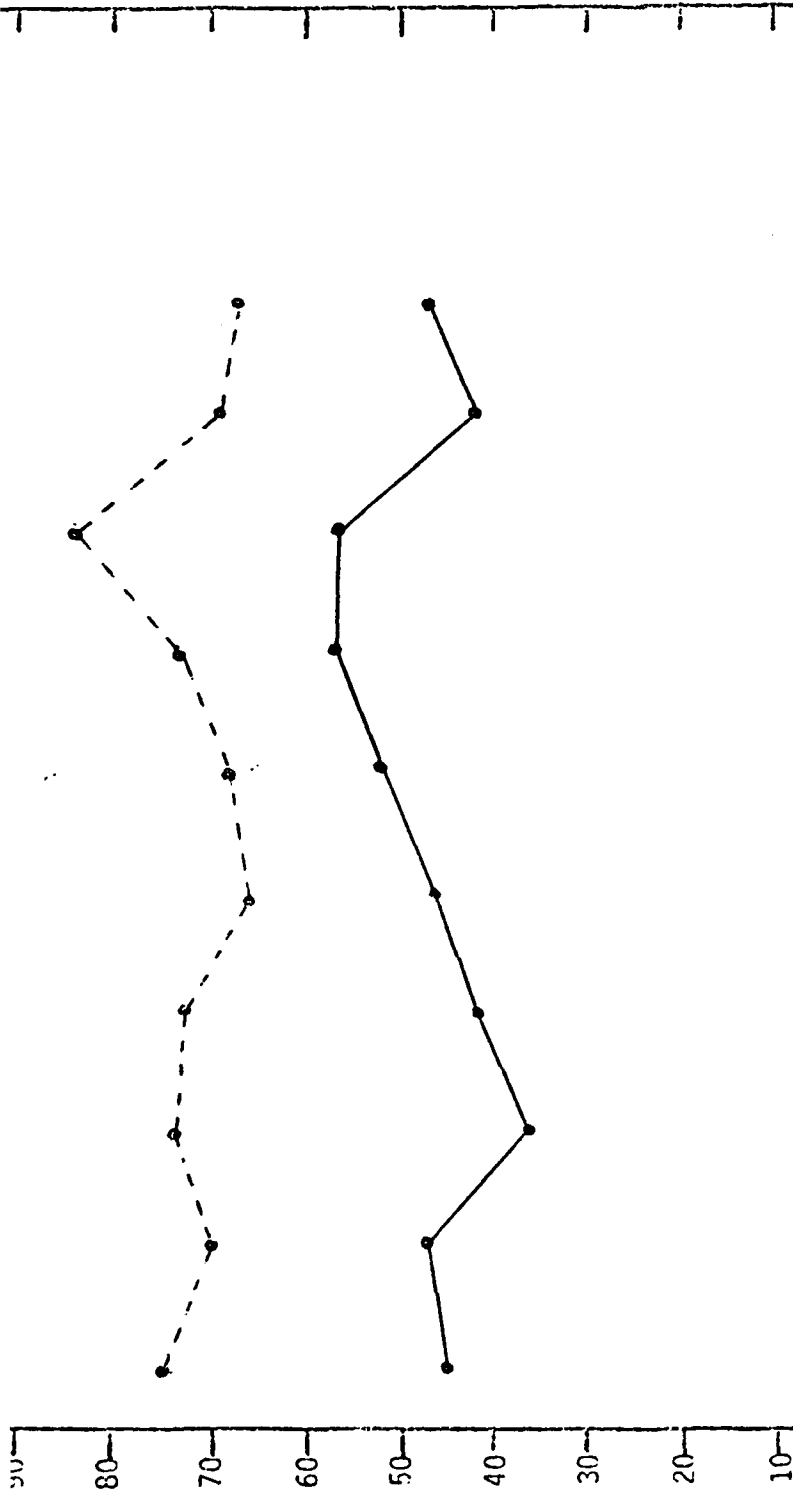
25.68   31.52   25.76   26.44

95

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Possessed Hours	5208	4704	5208	5501	5435	5756.5	5943	5952	5760	5952		
FMC Hours	2373.8	2294.5	1887.0	2259.0	2554.6	2954.0	3479.2	3473.1	2393.7	2796.1		
FMC Rate —	45.6	48.8	36.2	41.1	47.0	51.4	58.5	58.4	41.6	47.0		
Flyable Rate ---	74.9	70.4	73.1	72.3	66.6	68.5	73.7	83.2	69.0	68.8		

PERCENTAGE
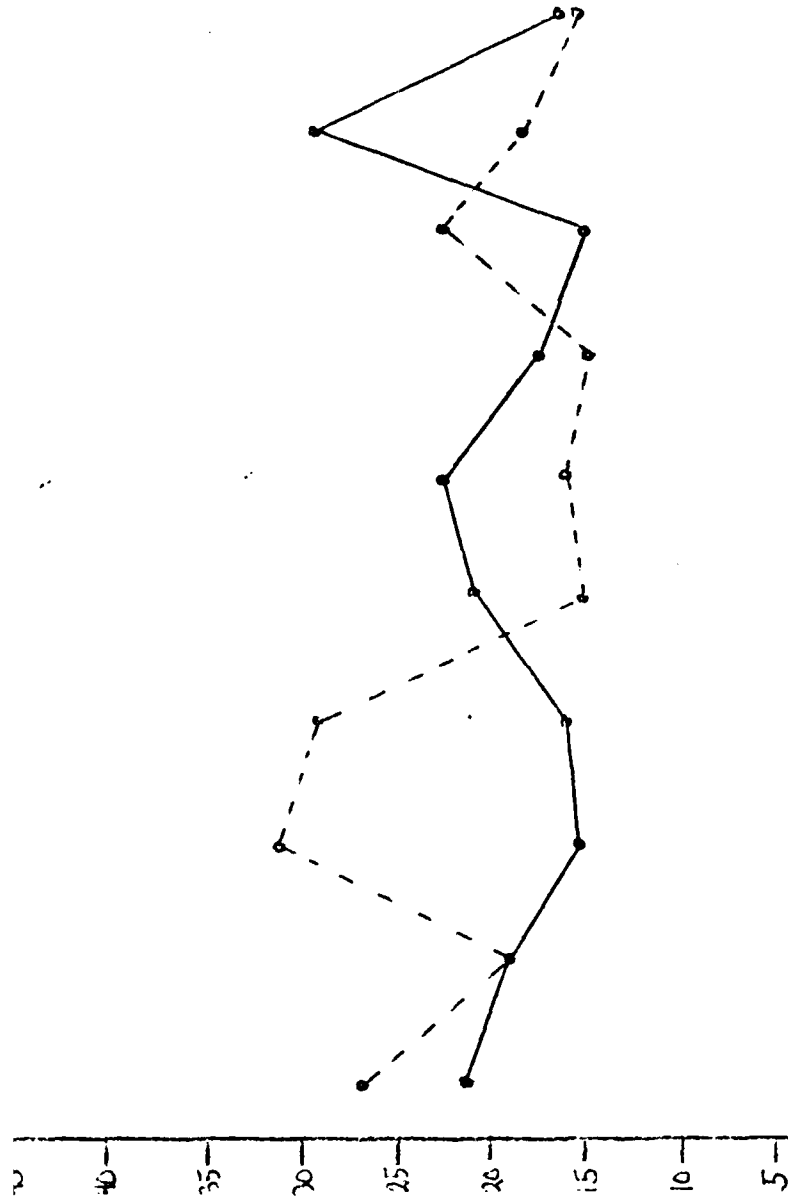
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCM HOURS	1133.9	891.8	804.7	912.8	1143.4	1302.6	1044.4	905.8	1681.1	939.3		
NMCM RATE ——	21.8	19.0	15.5	16.6	21.7	22.6	17.6	15.2	29.2	15.3		
PMCM HOURS	1417.3	391.6	1662.8	1597.0	831.9	928.5	899.6	1410.7	1084.9	907.2		
PMCM RATE - - -	27.2	19.0	31.9	29.0	15.3	16.1	15.1	23.7	18.8	15.3		

PERCENTAGE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCS HOURS	127.3	208.8	18.1	311.6	496.4	271.3	405.4	50.9	34.7	391.3		
NMCS RATE	2.4	4.4	0.3	5.7	9.1	4.7	6.8	0.9	0.6	6.6		
PMCS HOURS	49.0	101.2	246.1	121.2	215.9	49.7	—	53.3	169.3	114.7		
PMCS RATE	0.9	2.2	4.7	2.2	4.0	0.9	—	0.9	2.9	1.9		

PERCENTAGE

98
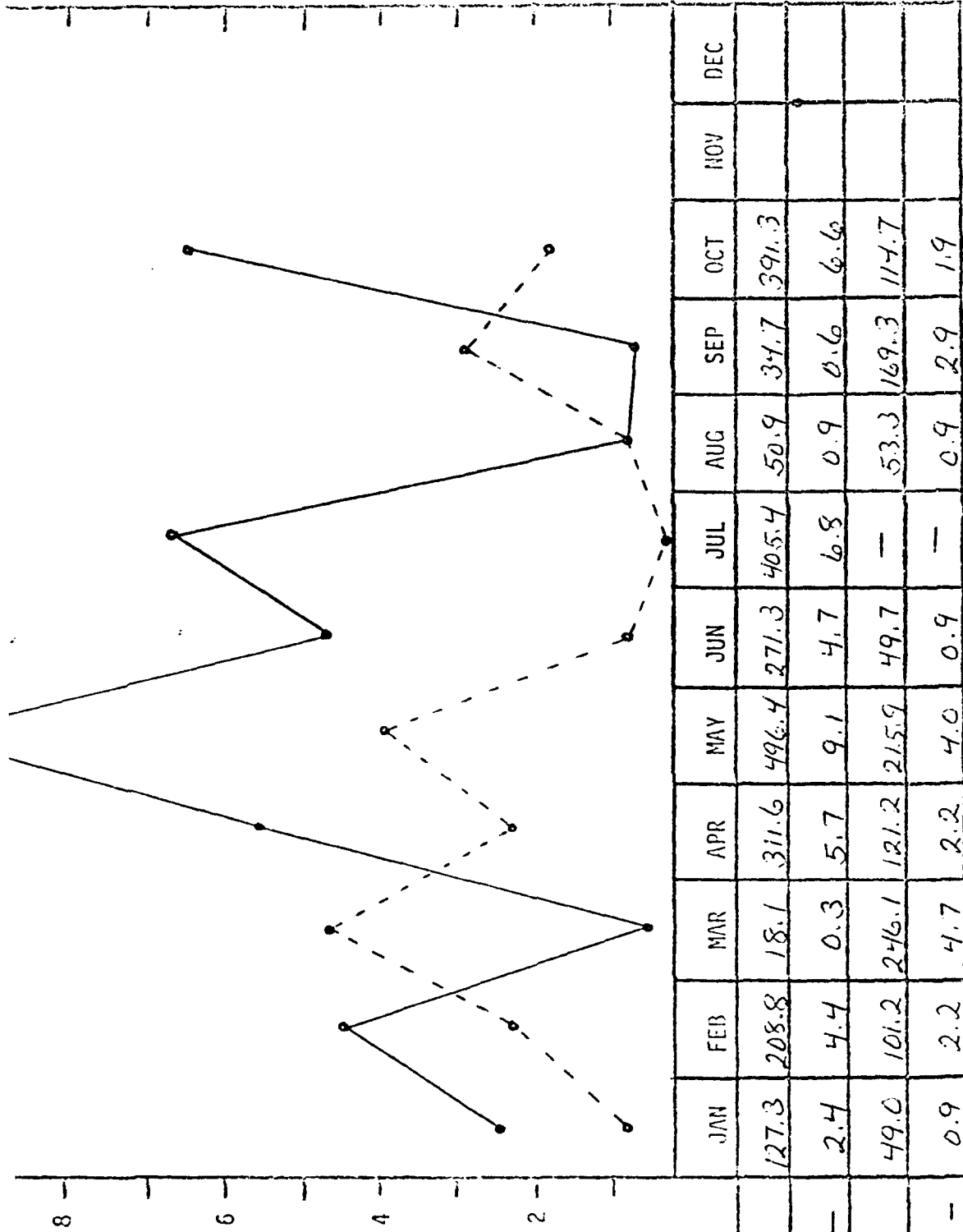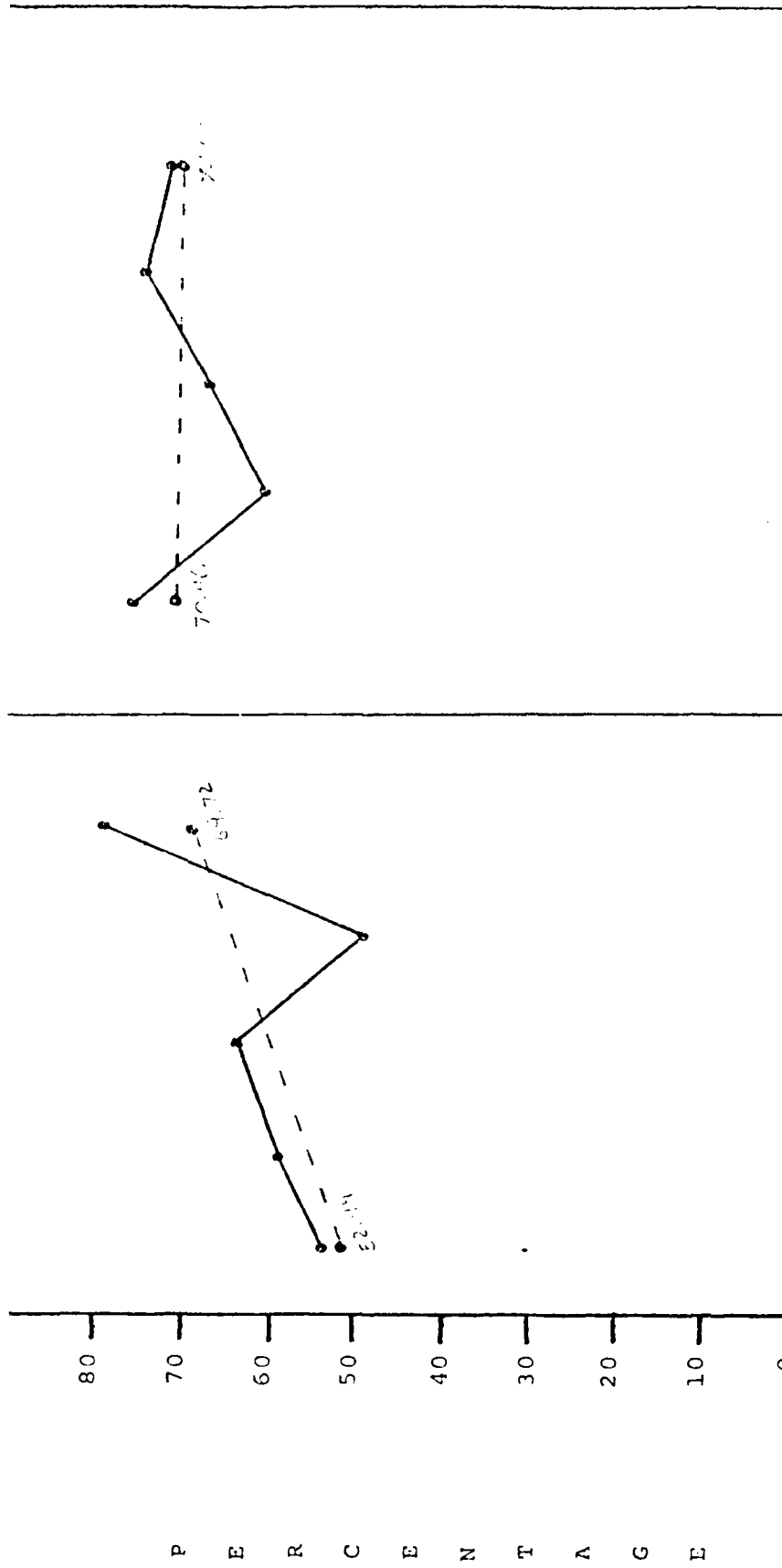
	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
ASSESSED HRS	2726	2578	2698	2880	4441		4326	3694	3969	3600	5303
MC HOURS	1444.4	1533.9	1725.7	1415.2	3546.5		3355.4	1898.0	2735.6	2736.2	4197.3
MC RATE	53.0	59.5	64.0	49.1	79.8		77.7	61.3	68.9	76.0	72.3

PERCENTAGE
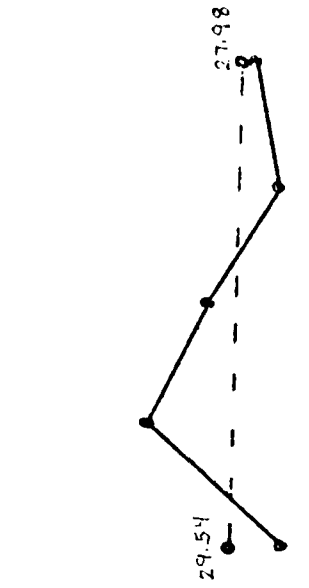
	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
ASSESSED HRS	2726	2518	2498	2880	4441		4320	3094	3969	3600	5808
NMC HOURS	1281.6	1044.1	972.3	1465.4	899.6		964.6	1196.0	1234.2	863.7	1610.7
NMC RATE	47.0	40.5	36.0	50.9	20.3		22.3	38.7	31.1	24.6	27.7

NMC STATUS

Oper Test — Test

PERCENTAGE

100
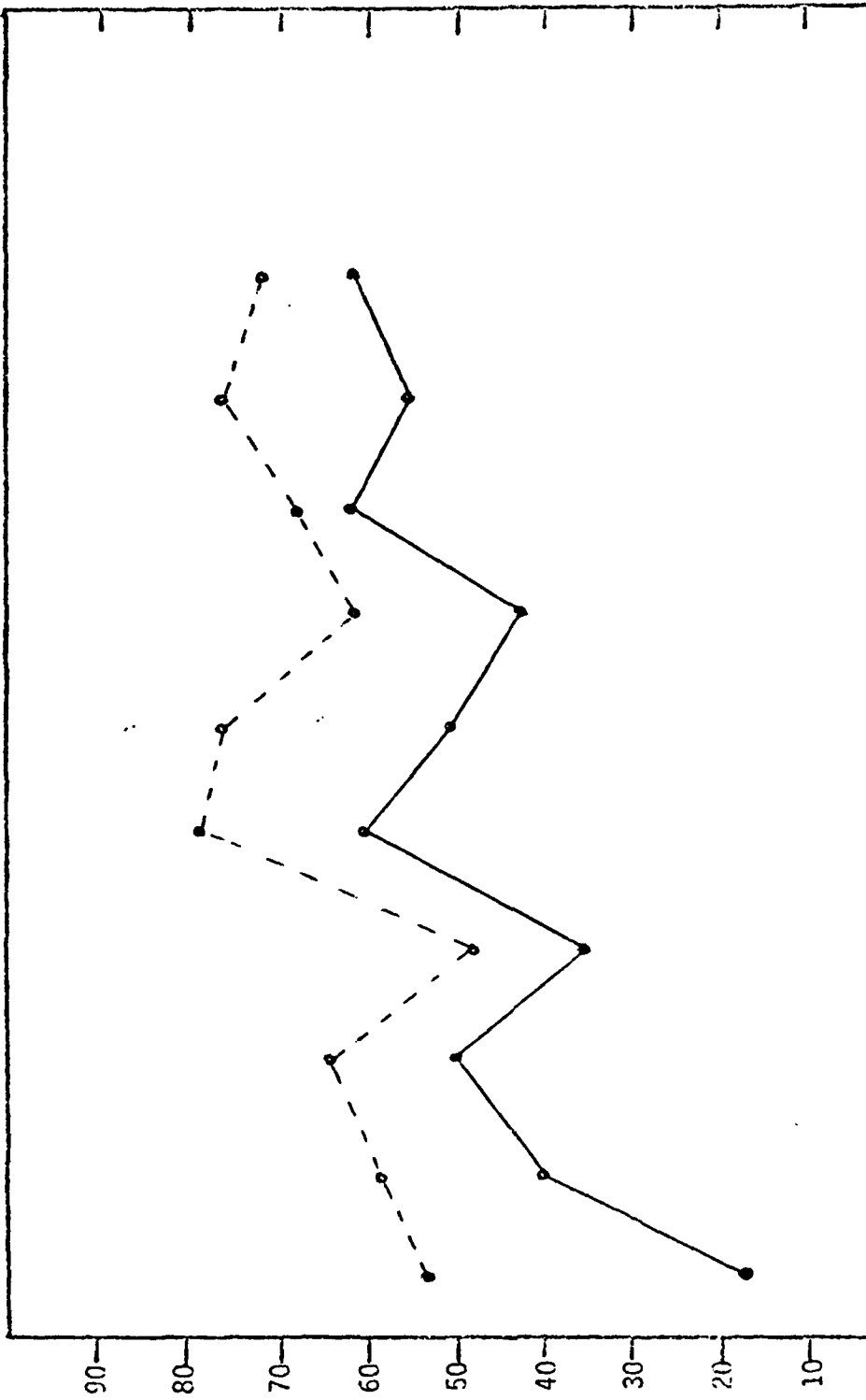
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Possessed Hours	2726	2578	2698	2880	4441	4320	3047	3969	3600	5808		
FMC Hours	496.2	1037.4	1358.6	1026.1	2669.1	2171.8	1300.5	2446.5	2016.3	3636.0		
FMC Rate —	18.2	40.1	50.4	35.6	60.1	50.3	42.0	61.6	56.0	62.6		
Flyable Rate - - -	53.0	59.5	64.0	49.1	79.7	77.7	61.3	68.9	76.0	72.3		

PERCENTAGE

90 80 70 60 50 40 30 20 10
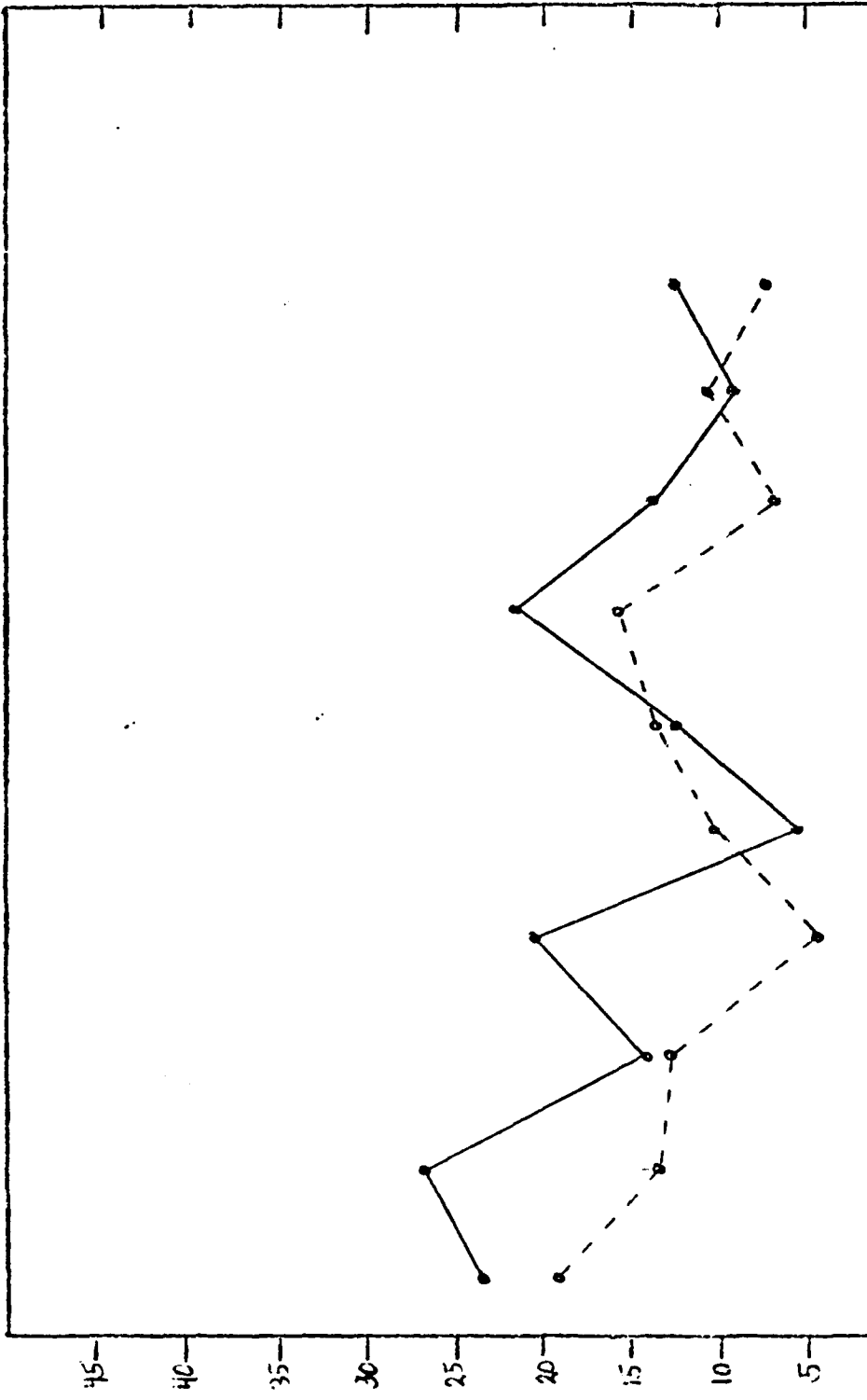
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCM HOURS	674.4	691.2	380.4	590.4	230.8	553.6	673.9	580.8	356.7	732.1		
NMCM RATE	23.6	26.8	14.1	20.5	5.2	12.8	21.8	14.6	9.9	12.6		
PMCM HOURS	524.0	356.4	349.1	119.4	449.7	541.3	495.5	260.5	383.7	434.1		
PMCM RATE	19.2	13.8	12.9	4.1	10.1	13.7	16.0	6.6	10.7	7.5		

NMCM HOURS

NMCM RATE ———

PMCM HOURS

PMCM RATE – – –

PERCENTAGE
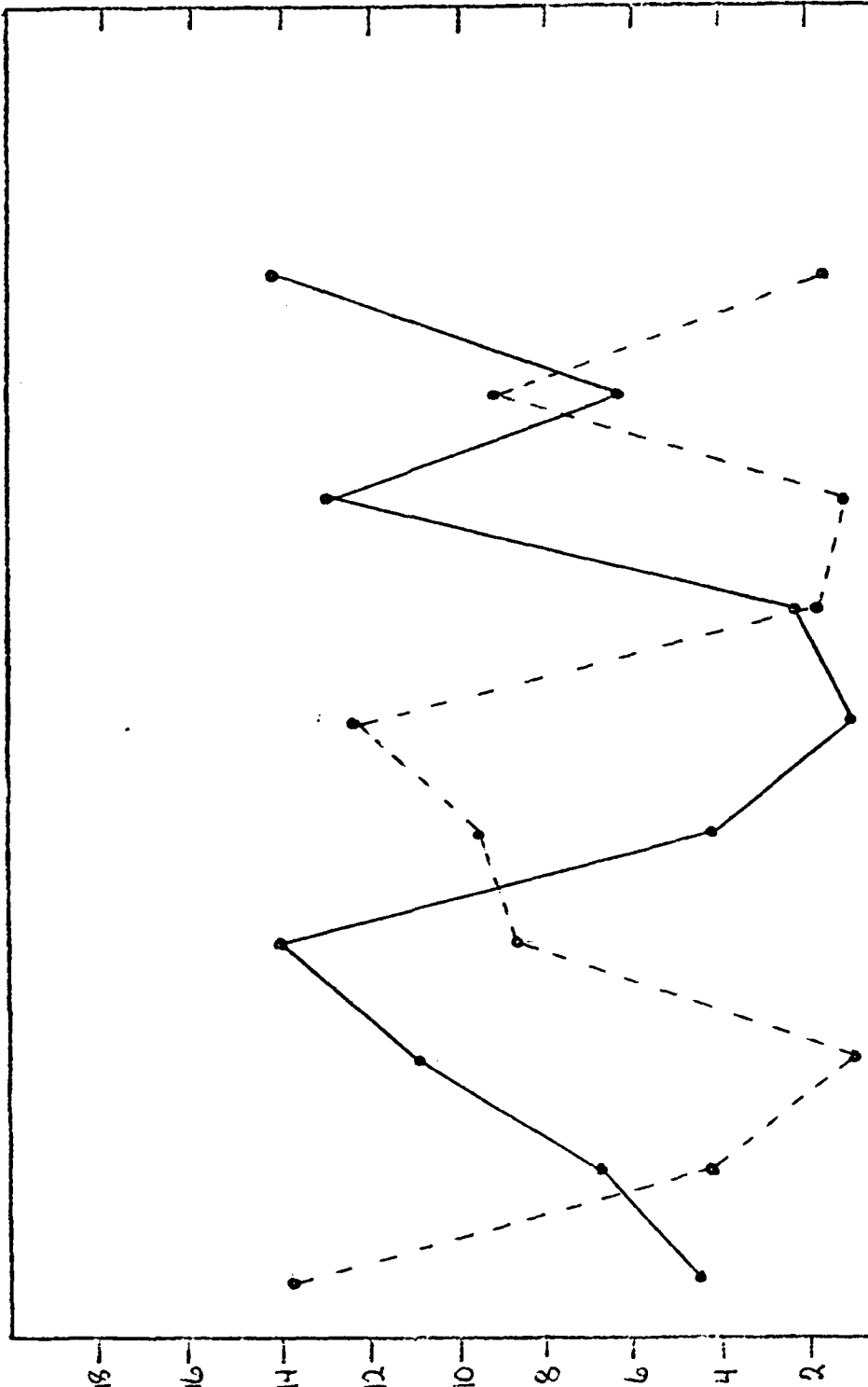
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCS HOURS ——	119.3	173.5	297.9	403.1	182.8	22.7	69.8	518.1	249.7	824.4		
NMCS RATE ——	4.4	6.7	11.0	14.0	4.1	0.5	2.3	13.1	6.9	14.2		
PMCS HOURS	380.2	105.8	18.6	250.8	418.7	544.0	60.5	23.3	336.2	103.8		
PMCS RATE ---	13.9	4.1	0.7	8.7	9.4	12.6	2.0	0.6	9.3	1.9		

PERCENTAGE

TEST   PRIOR TEST

	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
POSSESSED HRS	5952	4938	5952	5675	5610		5760	4464	4464	4320	5208
MC HOURS	4712.0	3862.5	5340.6	5146.5	4924.0		5009.1	3072.4	3840.4	3935.1	4199.8
MC RATE	79.2	78.8	89.7	90.7	86.8		87.0	68.8	86.0	91.1	80.6
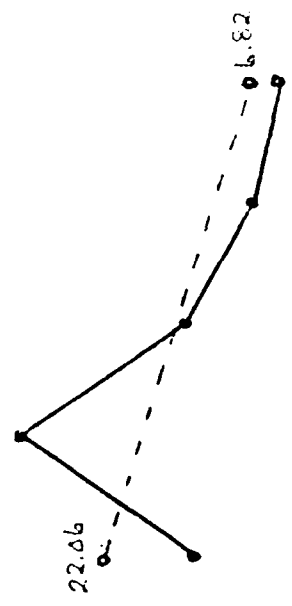
PERCENTAGE

90 80 70 60 50 40 30 20 10 0

MC RATE ——

104

	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	OCT
POSSESSED HRS	5952	4938	5952	5675	5670		5760	4464	4464	4320	5208
NMC HOURS	1240.0	1045.2	614.4	525.5	746.2		750.9	1391.5	623.6	364.9	261.2
NMC RATE	20.8	21.2	10.3	9.3	13.2		13.0	31.2	14.0	3.9	5.1

105
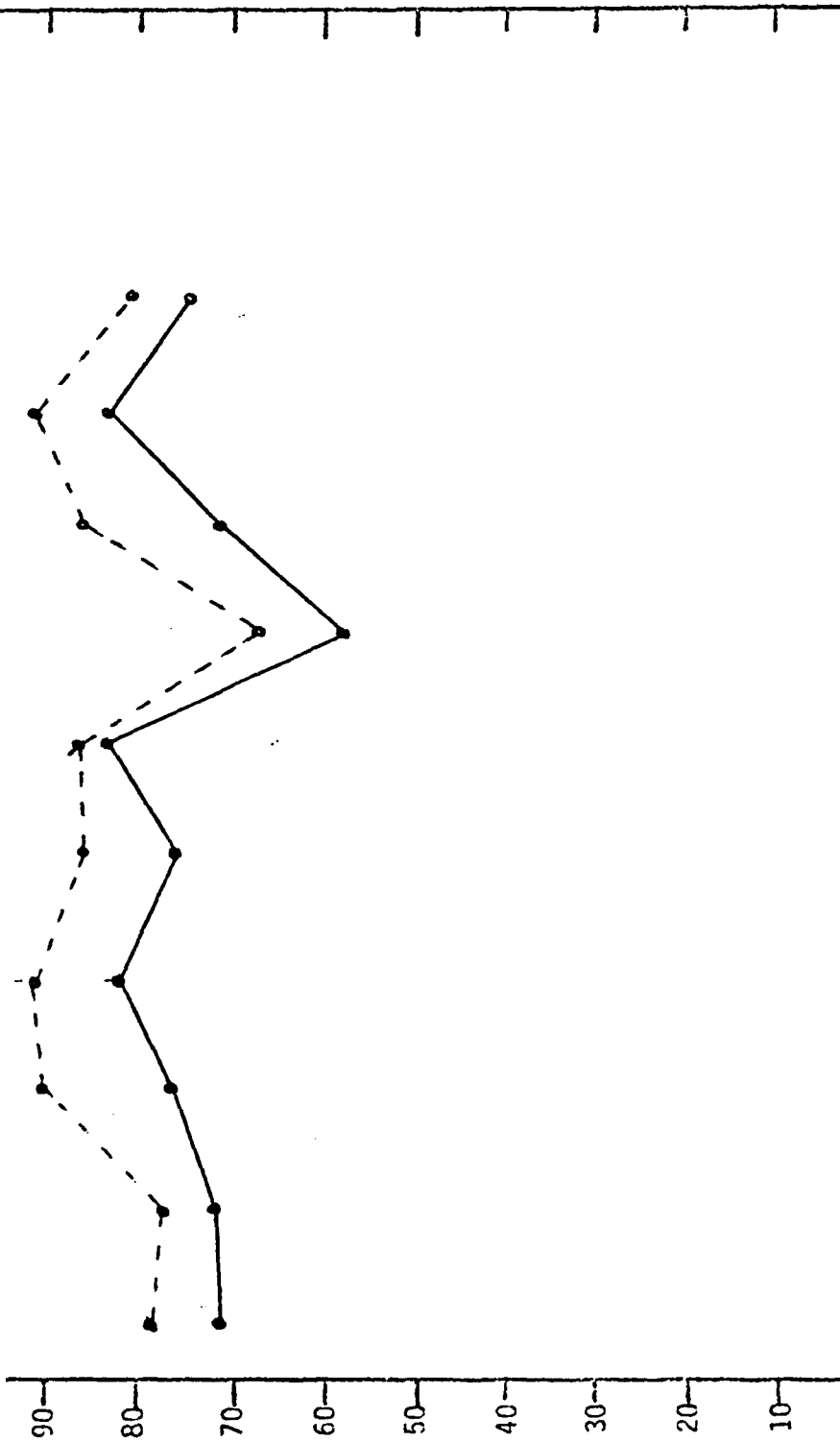
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Possessed Hours	5952	4938	5952	5675	5670	5760	4464	4464	4320	5208		
FMC Hours	4232.1	3518.7	4670.5	4663.5	4317.4	4862.3	2606.8	3193.7	3633.7	3980.8		
FMC Rate ———	71.1	71.3	78.5	82.2	76.7	84.4	58.4	71.5	84.1	76.4		
Flyable Rate - - -	79.2	78.9	89.8	90.7	86.9	86.9	68.8	86.0	91.1	80.6		

P E R C E N T A G E

106
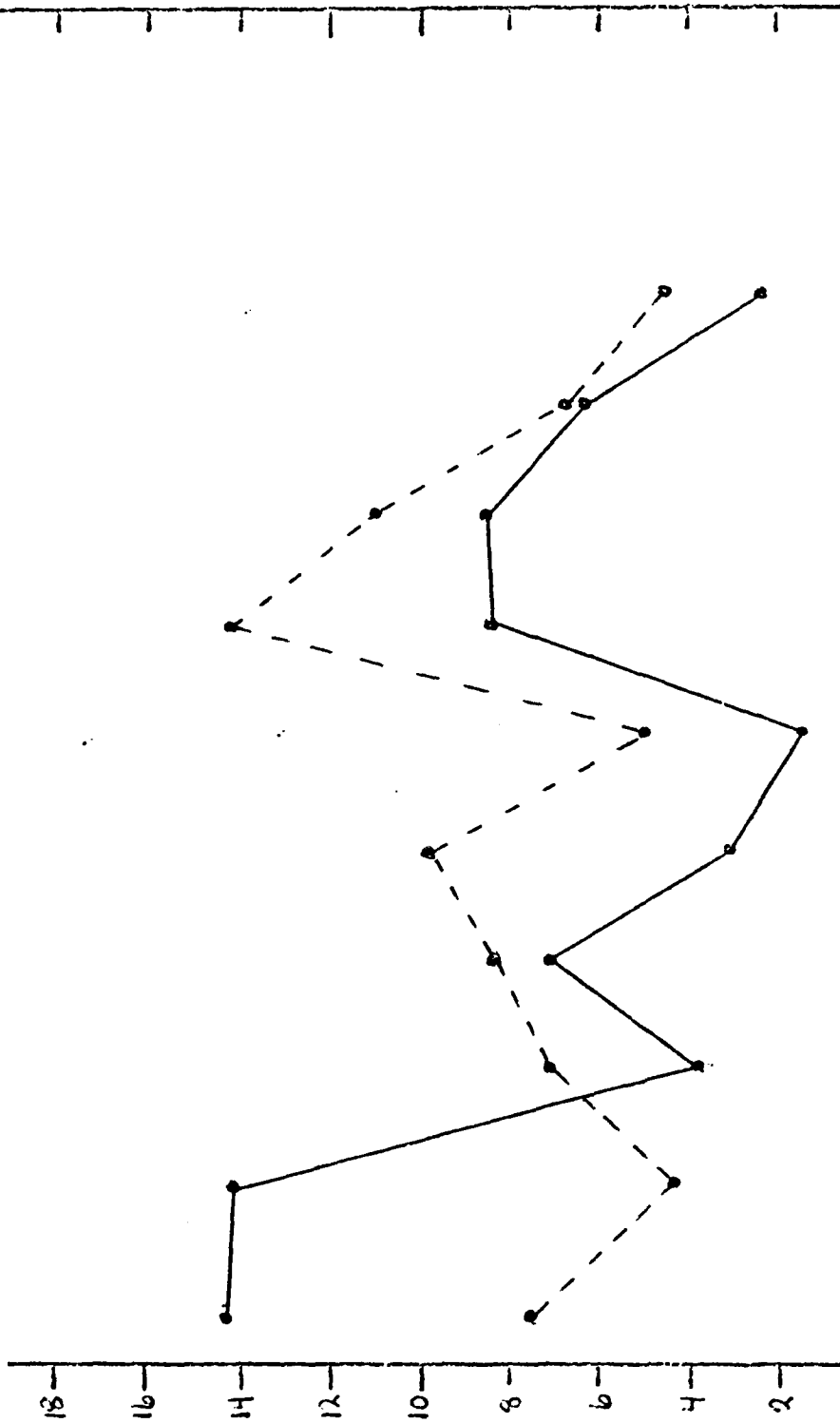
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCM HOURS	843.0	696.6	230.3	395.9	169.4	292.2	637.4	497.4	265.3	116.0		
NMCM RATE ———	14.2	14.1	3.9	7.0	3.0	5.1	14.3	11.1	6.1	2.1		
PMCM HOURS	455.1	200.1	415.3	450.1	562.8	101.4	375.3	378.2	279.6	219.0		
PMCM RATE − − −	7.6	4.1	7.0	7.9	9.9	1.8	8.4	8.5	6.5	4.2		

PERCENTAGE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NMCS HOURS	394.8	304.2	86.2	42.8	266.1	111.6	220.0	2.9	3.7	54.2		
NMCS RATE ——	6.6	6.2	1.4	0.8	4.7	1.9	4.9	0.1	0.1	1.0		
PMCS HOURS	24.8	134.9	227.0	26.2	13.8	36.1	90.3	268.5	21.8	0.0		
PMCS RATE - - -	0.4	2.7	3.8	0.5	0.2	0.6	2.0	6.0	0.5	0.0		

PERCENTAGE

END

FILMED

5-85

DTIC