BY ORDER OF THE COMMANDER
388 FIGHTER WING

AIR COMBAT COMMAND INSTRUCTION
21-152

388 FIGHTER WING
Supplement

12 AUGUST 2009

Maintenance

ENGINE TRENDING AND DIAGNOTIC (ET&D) PROGRAM

ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-Publishing website at **www.e-publishing.af.mil**

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 388 MOS/MXOOE

Certified by: 388 MXG/CC (Col. Roger L. Rostvold)
Pages: 4

ACCI 21-152, 20 April 2000, Certified Current 05 May 2008, is supplemented as follows:

This supplement establishes local policies and procedures to be followed by all applicable units that interface with Comprehensive Engine Trending and Diagnostics System (CETADS) and Intelligent Trending and Diagnostic System (ITADS). Refer recommended changes and questions about this publication to the 388 Maintenance Operations Squadron/Engine Management Branch (MOS/MXOOE) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-af61a/afrims/afrims/**.

4.2. **(Added)**When CETADS indicates evidence of engine deterioration and/or causes diagnostic troubleshooting, the Aircraft Maintenance Unit (AMU) Engine Trending & Diagnostic monitor will notify the production supervisor and the wing project NCO. The engine will be assigned to the "WATCH" status. The AMU monitor will initiate maintenance actions on the engine and ensure timely feedback to the wing project NCO on significant maintenance actions.

4.2.1. **(Added)**Significant maintenance actions include, but are not limited to, engine instrumentation calibration/repair, engine inspections, fault analysis troubleshooting, and

removal and replacement of components. After troubleshooting procedures are accomplished on a particular engine, the AMU ET&D monitor will coordinate with the wing project NCO on corrective actions and will document engine maintenance actions in Core Automated Maintenance System (CAMS).

8.1.1. **(Added)**The wing ET&D project NCO is the contact for all ET&D matters. The wing project NCO will act as the wing monitor and will trend, plot and analyze daily the data supplied by the AMU monitors. In addition, the wing project NCO will be in contact with performance engineers on matters concerning ET&D, and will coordinate with performance engineers on all actions not covered in technical orders.

8.6.Coordinate with propulsion flight chief, Component Maintenance Squadron (CMS) maintenance supervision, depot engineers and if needed, General Electric (GE) contractors on matters that would drive engine removal or make aircraft unavailable because of a trend that shows adverse deterioration and/or causes for diagnostic troubleshooting.

8.11.Monitor all "WATCH" status engines and ensure all corrective actions meet prescribed technical order requirements. Engines on "WATCH" status should go TDY or off station only if they can be down loaded and processed in CETADS after each flight (no cross-country hops). This restriction may be waived by OG/CC, MXG/CC or deputies.

8.12.1. **(Added)**Be the primary contact with software engineers to report all program deficiencies and software configuration for CETADS and ITADS.

8.16. **(Added)**Host computer and wing project NCO computer will be the backup to the AMU's CETADS computer.

9.1.1. **(Added)**Aircraft Maintenance Units: Each unit will provide the wing project NCO with the names of personnel who are assigned as the primary and alternate ET&D monitors or points of contact. The monitors should not be rotated unless absolutely necessary. Rotating monitors greatly hampers the reliability and management of the respective system, thus degrading the program.

9.2.1. **(Added)**The ET&D monitor will have a Ground Station Unit (GSU) computer supplied by the wing project NCO. This computer will be sub-located in the AMU in a central location accessible at all times by flight-line technicians. It must have access to the base LAN.

9.3.1. **(Added)**All engine databases will be updated daily to reflect current status of engines assigned.

9.3.2. **(Added)**All sorties during any given day will be downloaded and processed into CETADS no later than 2400 hours daily or 2 hours after the last sortie landing. Engines on "WATCH" status will be downloaded after each flight and processed to analyze for the reason the engine is on "WATCH" status before next sortie. When possible, aircraft with engines on "WATCH" status should be scheduled for flight lead positions in order to prevent part-throttle take-offs. Part-throttle take-offs do not generate valid performance trend data.

9.3.3. **(Added)**AMU will send a qualified individual with a mobile GSU computer on each deployment to process, trend and transfer data either to the host system via modem (if available) daily or send the XXXXXXXX.COP file via e-mail daily to the project NCO and Engine Management Element (EME) . Each AMU should procure and maintain a portable CETADS

GSU (laptop) for use on deployments. This laptop will be dedicated to CETADS and must be accessible without delay.

9.3.4. **(Added)**Aircraft deploying to an overseas area should have established trend data. Spare engines sent to the deployed location that do not have trend data established will be put on "WATCH" status until a minimum of five flights is obtained and a good trend history established.

9.5.1. **(Added)**The ET&D monitor or a qualified technician will analyze available engine fault data to identify and recommend maintenance actions. The ET&D monitor and flight-line technicians are strongly encouraged to use Air Force Engineering Technical Service (AFETS), GE representatives, and the project NCO to accurately diagnose and troubleshoot engine faults.

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Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFMAN 33-363, *Management of Records*

Abbreviations and Acronyms

CETADS—Comprehensive Engine Trending and Diagnostics System

ET&DP—ENGINE TRENDING AND DIAGNOTIC PROGRAM

MOS/MXOOE—Maintenance Operations Squadron/Engine Management Branch

RDS—Records Disposition Schedule

TOC—Table of Contents

ITADS—Intelligent Trending and Diagnostic System

AMU—Aircraft Maintenance Unit

GE—General Electric

CAMS—Core Automated Maintenance System

CMS—Component Maintenance Squadron

GSU—Ground Station Unit

AFETS—Air Force Engineering Technical Service

EME—Engine Management Element