

**BY ORDER OF THE COMMANDER
MOUNTAIN HOME AFB (ACC)**

**MOUNTAIN HOME AIR FORCE BASE
INSTRUCTION**



21-167

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Incorporating Change 1,
13 SEPTEMBER 2017

Maintenance

**AVIONICS LINE REPLACEABLE UNIT
(LRU) BAD ACTOR, COULD NOT
DUPLICATE (CND), AND
REPEAT/RECUR PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This publication establishes procedures for Air Force Policy Directive 21-1, Managing Aerospace Equipment Maintenance; and establishes procedures for the 366th Fighter Wing (366 FW) Bad Actor, CND, and Repeat/Recur Program. This instruction pertains to, but is not limited to maintenance actions within the 366th Maintenance Group (366 MXG), the 366th Aircraft Maintenance Squadron (366 AMXS), and the 366th Component Maintenance Squadron (366 CMS). It implements guidelines contained in Air Force Instruction (AFI) 21-101, Aerospace Equipment Maintenance Management, and Combat Air Force (CAF) Supplement; and Technical Order (TO) TO 00-35D-54-WA-1, USAF Deficiency Reporting, Investigating, and Resolution. It is applicable to avionics maintenance personnel under the direction of 366 MXG/CC. Ensure all records created (e.g., DD Form 1574, AFTO Form 350, CND Report, etc.) as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, Management of Records. Contact supporting records managers as required. Refer recommended changes and questions regarding this publication to the office of primary responsibility (OPR) using AF Form 847, Recommendation for Change of Publication, route AF Forms 847 through the base publications and forms manager.

SUMMARY OF CHANGES

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This interim change revises MOUNTAINHOMEAFBI21-167 by (1) removing LRU repair action, (2) changing squadron production supervisor to squadron maintenance supervision, (3) removing squadron production supervision (Mustang-2) will inform maintenance supervision, (4) removing (second time in repair cycle), (5) removing (Mustang-2), (6) removing Mustang-2 will inform maintenance supervision, (7) changing 15 hours to 30 hours, (8) changing 30 calendar days to 120 calendar days.

1. General. The primary objective of the bad actor program is to identify and remove from service avionics LRUs that repeatedly fail on the aircraft but cannot be reliably duplicated or repaired during intermediate level maintenance. Return these units to depot for further testing to identify deficient technical data, operational flight programs, or built-in-tests, poor quality design, manufacturing defects, inadequate training, or software test voids in the field. The objectives of CND, Repeat/Recur Program is to ensure a thorough review occurs on all LRUs which CND during bench check, or are identified as in-shop repeat/recurs during historical research. While specific procedures for CND, and repeat/recur LRUs may differ in individual sections, all sections will exercise proper supervisory review of maintenance actions to ensure only quality products are returned to Aircraft Maintenance Units (AMU) or supply.

2. Responsibilities:

- 2.1. Ensure bad actor LRUs are identified and returned to depot with a Deficiency Report (DR).
- 2.2. Ensure bad actor LRUs have detailed documentation on fault indications, test steps failure results, and past failure data.
- 2.3. Ensure authorized personnel review LRU histories and maintenance actions for all CNDs.
- 2.4. Ensure LRUs are identified as repeat/recur through LRU historical checks.

3. Procedures:

- 3.1. Closely scrutinize LRUs delivered from AMU for accurate description on the Air Force Technical Order (AFTO) Form 350, Repairable Item Processing Tag. If failure data is inadequate, contact the squadron production supervisor or AMU technician for clarification.
- 3.2. Avionics flight technicians will maintain close coordination with AMU avionics specialists to collect additional failure data such as repeated cannibalizations, multiple failures on different aircraft, and other problems.
- 3.3. Sections performing 3-level maintenance will do a thorough review of LRU history before maintenance to determine if LRU meets repeat/recur criteria. Sections performing 2-level maintenance may wait until completion of maintenance to review LRU history as testing failure will dictate return to depot.
- 3.4. For first time CND the following procedures apply. Upon completion of testing, a qualified technician will inspect the LRU, sign two Department of Defense (DD) Forms 1574, Serviceable Tag – Materiel, and return unit to service. Submit LRU and paperwork to

work center production supervisor for history review. Use Global Eye/RAMPOD database or equivalent to annotate "FIRST TIME CND". In an effort to provide immediate feedback to AMU supervision electronically route CND report IAW Attachment 2, Sample CND Report, as an e-mail attachment to squadron maintenance supervision and applicable AMU supervision.

3.5. For first time repeat/recur the following procedures apply. Conduct standard LRU testing. If testing results in a BCS without a repair action taken (CND), open the LRU, inspect for internal chassis damage, foreign objects/debris and all components resealed. Repeat standard testing. If the unit tests without error or fault, notify work center supervisor for history review, annotate Global Eye/RAMPOD database "FIRST REPEAT/RECUR," and electronically route CND worksheet IAW Attachment 2 as an e-mail attachment to Squadron Production Supervision and applicable AMU supervision.

3.6. For second repeat/recur failure (third time in repair cycle) the following procedures apply. Conduct standard LRU testing. If testing results in a BCS with no repair action taken (CND), take the suspect LRU to AMU for aircraft ground/BIT checks. If not possible, enter the LRU into the Bad Actor Program. Return LRUs to depot with a DR. Brief the avionics flight chief, maintenance supervision, and AMU maintenance supervision on LRU history for each bad actor returned to depot.

3.7. If a LRU is ground checked on an aircraft and a faulty component is isolated as the cause of the repeat/recur failure, return the component to depot with a DR. The LRU will continue to be monitored as a repeat/recur until no longer applicable.

4. Prescribed and Adopted Forms:

4.1. Prescribed Forms:

4.1.1. None

4.2. Adopted Forms:

4.2.1. AF Form 847, Recommendation for Change of Publication

4.2.2. AFTO Form 350, Repairable Item Processing Tag

4.2.3. DD Form 1574, Serviceable Tag – Materiel

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Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 21-1, Managing Aerospace Equipment Maintenance, 25 February 2003

AFI 21-101, Aircraft & Equipment Maintenance Management, 26 July 2010, and CAF Sup, 11 July 2012

AFMAN 33-363, Management of Records, 1 March 2008

TO 00-35D-54-WA-1, USAF Deficiency Reporting, Investigating, and Resolution, 1 November 2011

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFTO—Air Force Technical Order

AMU—Aircraft Maintenance Unit

AMXS—Aircraft Maintenance Squadron (366 AMXS)

BCS—Bench Check Serviceable

CAF—Combat Air Force

CC—Commander

CMS—Component Maintenance Squadron (366 CMS)

CND—Could Not Duplicate

DD—Department of Defense

DR—Deficiency Report

IAW—In Accordance With

ETI—Elapsed Time Indicators

LRU—Line Replaceable Units

MXG—Maintenance Group (366 MXG)

MXMV—Avionics Flight (366 CMS/MXMV)

TO—Technical Order

SRU—Shop Replaceable Unit Definitions

Terms

Could Not Duplicate (CND)—is defined as a reported failure that cannot be duplicated during standard in-shop testing procedures.

A "Recur"—in the backshop is defined as an identical or similar LRU failure occurring within 30 hours of operation for items with an Elapsed Time Indicator (ETI) or within 120 calendar days for items without an ETI. A "Bad Actor" in the backshop is defined as a second time repeat/recur failure— third time in shop under previously identified criteria. If testing results in a Bench Check Serviceable (BCS) with no repair action taken, the unit should be entered into the Bad Actor Program.

A "Repeat" in the backshop—is defined as an identical or similar LRU failure that occurs within 5 hours of operation for items with elapsed time indicators (ETI) or within 10 calendar days for items without ETI.

A "Recur" in the backshop—is defined as an identical or similar LRU failure occurring within 15 hours of operation for items with an ETI or within 30 calendar days for items without an ETI. A "Bad Actor" in the backshop is defined as a second time repeat/recur failure – third time in shop under previously identified criteria. If testing results in a Bench Check Serviceable (BCS) with no repair action taken, the unit should be entered into the Bad Actor Program.

A LRU—can also be considered a bad actor if it has a combination of CND and repair actions in a 6-month period but continues to exhibit aircraft failures. Note: While these criteria attempt to be comprehensive, the discretion of the reviewer should be used to ensure a suspected LRU meets the intent of these criteria. If AMU and backshop technicians concur, LRUs may be returned to depot as bad actors before above criteria are met. All bad actor LRUs will have DRs submitted.

Attachment 2

SAMPLE CND REPORT

Table A2.1. SAMPLE CND REPORT

CND REPORT							
366 CMS AVIONICS FLIGHT							
COMPLETED BY BACKSHOP				Date (yyyymmdd)			Time :
Technician	Grade	Phone 828-2400	Squadron 366 CMS	Section MXMVV	AMU	MDS F-15E	Tail No.
Nomenclature			NSN	Serial No	JCN/WCE	WUC	
MICAP: Yes	Impounded Aircraft: No		If Yes, Reason for Impound				
AFTO 350 Discrepancy:							
IMDS Discrepancy:							
AFTO 350 Tag Number:				Supply Document No.:			
Action Taken by Backshop							
Pre Insp <input type="checkbox"/>	Bench Checked All Tests <input type="checkbox"/>	Cleaned <input type="checkbox"/>	Painted <input type="checkbox"/>	7-Level Insp <input type="checkbox"/>	Manhours Used		
Remarks:							
1st Time CND <input type="checkbox"/>	2nd Time CND <input type="checkbox"/>	3rd CND Repeat/Recur <input type="checkbox"/>	PQDR Exhibit <input type="checkbox"/>	NRTS <input type="checkbox"/>			
History of LRU Before Current Fail							
Date of Last Fail (yyyymmdd):		ETI of Last Fail:		Current ETI:	Delta Hours:		
Remarks:							
AMU Specialist/Technician Notified				Date Notified (yyyymmdd)		Time Notified	
366 CMS Supervision Notified				Date Notified (yyyymmdd)		Time Notified	
Remarks (Routing Comments):							
Instructions for Technician: Email completed form to Shift Production Supervisor							
Instructions for Production Supervisor: Quality REVIEW and EDIT all data and save a copy on the shared drive (retain for 90 days). Email to 366 CMS Supervision (Mustang 2), Flight OIC/Chief/Superintendents, and Shop Chief/Superintendent.							
Instruction 366 CMS Supervisor: Please contact & email this form to the respective AMU MO/Maint. Supervision concerning this CND.							

366 CMS/MXMV CND Form IAW MHAFBI 21-167, 29 October 2014