

Administrative Changes to OC-ALCI 21-501, *Identification of Metal Used in Manufacture Processes*

OPR: 76 MXSS/MXDTAA

Certified by: “76 MXSG/DD (Mr. David Goss)” is hereby changed to “76 MXSG/DD (Bruno Morf)”.

References throughout to “AFI 21-101_AFMCSUP1,” are hereby changed to “AFSCMANI21-102_OC-ALCSUP”.

13 January 2017

**BY ORDER OF THE COMMANDER
OKLAHOMA CITY AIR LOGISTICS
COMPLEX**

**OKLAHOMA CITY AIR LOGISTICS
COMPLEX INSTRUCTION 21-501**

2 OCTOBER 2014



Maintenance

**IDENTIFICATION OF METAL USED IN
MANUFACTURE PROCESSES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Certified by: 76 MXSG/DD
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This instruction implements and extends the guidance of AFI 21-101_AFMCSUP1, *Aircraft and Equipment Maintenance Management*, procedures governing identification of metal material responsibilities within the Oklahoma City Air Logistics Complex (OC-ALC). This Oklahoma City Air Logistics Complex (OC-ALC) instruction establishes procedures and responsibilities for submission of metals used in manufacturing processes to the 76th Maintenance Support Squadron, Analytical Chemistry Section (76 MXSS/MXDtaa) for chemical analysis. This instruction applies to the 76th Aircraft Maintenance Group (76 AMXG), the 76th Propulsion Maintenance Group (76 PMXG), the 76th Commodities Maintenance Group (76 CMXG), and 76 MXSS/MXDtaa. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed IAW the Air Force Record Disposition Schedule (RDS) located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm> or as required by Title V operating permit. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional's chain of command.

SUMMARY OF CHANGES

This instruction has been updated to reflect administrative changes of 76 MXW to OC-ALC nomenclatures. This publication should be read in its entirety.

1. Scope. This instruction covers definitions, references, and responsibilities for metals for Federal Supply Class (FSC) 9500, 4700 and 3439 used in the manufacturing processes.

2. Definitions.

2.1. Identification Marking Methods: One of three methods permitted by technical order (TO) 42D-1-3, *Method of Identifying Steel, Aluminum, and Copper Alloys in Air Force Stock*, for the identification of metal stock material. These methods in order of preference are:

2.1.1. Stencil Marking.

2.1.2. Color Code Marking.

2.1.3. Metal Die Code Stamping.

2.2. Stencil Marking: Permanent marking using a sheet, of plastic or cardboard, in which the alloy identification has been cut so that ink or paint applied to the sheet will reproduce the identification on the metal surface. TO 42D-1-3 states that this is the preferred method of applying a marking.

2.3. Color Code Marking: Marking in which a series of color bands represent numbers and letters to denote material composition, temper, physical, and/or surface condition.

2.4. Metal Die Code Stamping: A set of engraved metal pieces used for impressing numbers and letters denoting the composition, temper, and specification onto the metal item. TO 42D-1-3 states that this method shall only be used where facilities are not available or size will not permit the application of one of the other methods.

2.5. Permanent Marking: Physical item marking such that it shall not rub off or be otherwise effaced by contact incident to normal handling, exposure to the elements, shipment, and storage.

3. Responsibilities:

3.1. Production Maintenance Groups (76 AMXG/76 PMXG/76 CMXG) shall:

3.1.1. Assure shop service center (SSC)/weapon system support center (WSSC) personnel check all metal stock material upon receipt from supplier for proper identification markings. Properly identified packages where individual items were not marked by the manufacturer will be marked by SSC/WSSC personnel at the time of receipt.

3.1.2. Assure production personnel do not accept metal stock material from SSC/WSSC that does not bear positive identification. Inspect identification markings on bench stock prior to use. Metal stock material in excess of manufacture requirements will be identified and marked according to TO 42D-1-3 by production personnel and then returned to the SSC/WSSC. If material cannot be specifically identified as to composition, temper, and specification, a sample will be routed to 76 MXSS/MXD TAA for analysis and identification before the material is issued, used, or stored in the SSC/WSSC.

3.1.3. Submit representative material sample, no less than 1-inch long by 1-inch wide by ¼-inch thick, and send it to the 76 MXSS/MXD TAA for analysis and proper identification. Submit a sample when a non-conformance is suspected; and/or there is a

question as to whether the material meets special criteria as established on the drawing for the item being manufactured; or when the drawing specifically calls for metallurgical/chemical analysis. Planning organizations will include a requirement on Air Force Materiel Command (AFMC) Form 959, *Work Control Document (WCD)*, for sending metal samples for lab testing prior to use in manufacture if the material discrepancy rate or criticality warrants such action.

3.1.4. Complete an AFMC Form 127, *Routed Order*, for each sample submitted. The form shall include the job order number (JON) assigned to the production organization requesting the analysis. Samples from different metal stock pieces submitted at the same time shall be individually bagged with properly completed form in each bag. It is not necessary to submit more than one sample from a single piece of metal stock. Multiple samples in the same bag will be considered to have come from the same metal stock piece and will be treated as one sample analysis request. Requesting organization will deliver samples to 76 MXSS, Lab Support Section (76 MXSS/MXDТАЕ), building 3001, post I-68.

3.1.5. Assure that material cut in such a manner that the identification markings are no longer present on any pieces will immediately replace the missing markings by any one of the three methods specified in TO 42D-1-3.

3.1.6. Tag material with Department of Defense (DD) Form 1575, *Suspended Tag-Material*, when laboratory analysis shows material is misidentified or is unsuitable for intended use. The material will then be returned to supplier for credit or replacement.

3.2. The Analytical Chemistry Section (76 MXSS/MXDТАА) will:

3.2.1. Perform chemical analysis of each sample of metal stock material submitted by a production division to make positive identification.

3.2.2. Prepare a written laboratory report in memorandum format with the proper identification of the metal stock material and notify the customer when report is completed. A completed copy of AFMC Form 127 will be attached. Requesting organization will pick up report and sample from 76 MXSS/MXDТАА, building 3001, post 2I-63. When priority testing is requested, 76 MXSS/MXDТАА will telephone requesting organization when report is ready for pickup. Reports will be mailed using base distribution upon request.

DONALD E. KIRKLAND, Brigadier General, USAF
Commander, Oklahoma City Air Logistics Complex

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

AFI 21-101_AFMCSUP1, *Aircraft and Equipment Maintenance Management*, 26 April 2012

AFI 33-360, *Publications and Forms Management*, 25 September 2013

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

TO 42D-1-3, *Method of Identifying Steel, Aluminum, and Copper Alloys in Air Force Stock*, 16 September 1966

76 MXSGOI 61-200, *Quality Instructions for Chemical Testing Functions*, 4 May 2012

Prescribed Forms

None

Adopted Forms

DD Form 1575, *Suspended Tag-Material*

AF Form 847, *Recommendation for Change of Publication*

AFMC Form 127, *Routed Order*

AFMC Form 959, *Work Control Document (WCD)*

Abbreviations and Acronyms

76 AMXG—76th Aircraft Maintenance Group

76 CMXG—76th Commodities Maintenance Group

76 PMXG—76th Propulsion Maintenance Group

76 MXSG—76th Maintenance Support Group

76 MXSS/MXDTAA—76th Maintenance Support Squadron, Analytical Chemistry Section

76 MXSS/MXDTAE—76th Maintenance Support Squadron, Lab Support Section

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFMCI—Air Force Materiel Command Instruction

AFMCSUP—Air Force Materiel Command Supplement

DD—Department of Defense (when used with forms)

FSC—Federal Supply Class

JON—Job Order Number

OC—ALC —Oklahoma City Air Logistics Complex

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule

SSC—Shop Service Center

TO—Technical Order

WCD—Work Control Document

WSSC—Weapon System Support Center

Terms

Production Maintenance Groups—76 AMXG/76 PMXG/76 CMXG