

**BY ORDER OF THE CHIEF,  
NATIONAL GUARD BUREAU**

**AIR NATIONAL GUARD POLICY  
DIRECTIVE 90-2135**

**14 MAY 2003**

**Command Policy**



**COMPLIANCE AND STANDARDIZATION  
REQUIREMENT LIST (C&SRL) OIL ANALYSIS  
PROGRAM (OAP)**

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This directory implements Air Force Policy Directive (AFPD) 90-2, *The Inspection System*, and is applicable to all Air National Guard (ANG) flying units. Compliance with this directory and its parent instruction Air National Guard Instruction (ANGI) 21-101, *Maintenance Management of Aircraft*, is mandatory. Units will supplement this publication with items developed from appropriate technical data, Air Force Occupational Safety and Health (AFOSH) Standards (STD), local operating instructions (OI), etc., to assess internal compliance. Higher Headquarters/Inspector General (HHQ/IG) may use this directory in whole or in part during evaluations and exercises.

**SUMMARY OF REVISIONS**

**This document is substantially revised and must be completely reviewed.**

**1.** The items listed do not constitute the order or limit the scope of the inspection/assessment. As a minimum, units will use this directory in conjunction with the annual unit self-inspection. The objective is to identify deficiencies that preclude attainment of required capabilities.

**Table 1. Oil Analysis Program**

| ITEM NO. | ITEM AND REFERENCES<br>(All references are to ANGI 21-101 unless otherwise indicated)   | YES | NO | N/A |
|----------|---|-----|----|-----|
| 1.       | OIL ANALYSIS  |     |    |     |
| 1.1.     | Does Maintenance Supervision ensure that the Oil Analysis Program (OAP) is monitored and administered according to ANGI 21-105, <i>Corrosion Control, Nondestructive Inspection, and Oil Analysis Programs?</i> (2.5.6.)  |     |    |     |
| 1.2.     | Does the Non-destructive Inspection (NDI) Section provide the capability for the oil analysis program (OAP)? (4.10.6.)  |     |    |     |
| 1.3.     | If required, does the propulsion element supervisor act as the primary OAP Manager and ensure all OAP responsibilities are performed IAW AFI 21-124? (4.13.3.1.1.)  |     |    |     |
| 1.4.     | Has the OAP Manager established procedures to monitor OAP trends and takes required actions? (4.13.3.1.2.)  |     |    |     |
| 1.5.     | Does the OAP Manager ensure personnel are trained to identify and respond to wear metal limits for assigned and maintained engines, and are trained to perform sampling procedures (TO 33-1-37-2, <i>Joint Oil Analysis Program Laboratory Manual, Volume II?</i> (4.13.3.1.3.) |     |    |     |
| 1.6.     | Does the OAP Manager ensure oil samples taken at the test cell are promptly delivered to the OAP laboratory? (4.13.3.1.4.)  |     |    |     |
| 1.7.     | Does the OAP Manager act as a central point-of-contact for all abnormal OAP laboratory results? (4.13.3.1.5.)   |     |    |     |
| 1.8.     | Does the OAP Manager forward information to the OAP laboratory concerning actions taken as a result of OAP recommendations? (4.13.3.1.6.)   |     |    |     |
| 1.9.     | Are Joint Oil Analysis Program (JOAP) procedures included on the QA Routine Inspection List (RIL)? (10.9.1.3.8.16.)   |     |    |     |
| 2.       | Scanning Electron Microscope/Energy Dispersive X-Ray (SEM/EDX) Magnetic Chip Detector Analysis Program (MCDP).  |     |    |     |
| 2.1.     | Are the Propulsion (primary) and NonDestructive Inspection (alternate) Supervisors the point of contacts for SEM/EDX related matters? (18.34.1.1.)  |     |    |     |
| 2.2.     | If recurring chip detector analysis service is required, has your organization identified by letter primary and alternate MCDP monitors for their unit? (18.34.1.2.)  |     |    |     |
| 2.3.     | Do all newly assigned MCDP monitors attend a briefing by the Propulsion Shop, which covers the duties and responsibilities of all MCDP monitors? (18.34.1.3.)   |     |    |     |

| ITEM NO. | ITEM AND REFERENCES<br><i>(All references are to ANGI 21-101 unless otherwise indicated)</i>  | YES | NO | N/A |
|----------|---|-----|----|-----|
| 2.4.     | Do all MCDP monitors or their representatives submit Magnetic Chip Detectors (MCD) for debris analysis for their aircraft and assigned engines as per applicable technical order? (18.34.1.4.1.)  |     |    |     |
| 2.5.     | Do all MCDP monitors or their representatives ensure MCD debris analysis is forwarded with the following information: squadron, rank/name, aircraft serial number, engine serial number, total engine hours, date/time, visual chips, reason for analysis request and sortie number? (18.34.1.4.2.) |     |    |     |
| 2.6.     | Does the Propulsion Shop ensure MCD analyses that indicate significant levels of M50 or other critical materials are immediately reported to the MOC? (18.34.2.1.)  |     |    |     |
| 2.6.1.   | Does the Propulsion Shop immediately notify test cell personnel of analysis results for engines in test cell? (18.34.2.2.)  |     |    |     |
| 2.6.2.   | Does the Propulsion Shop notify the MOC during periods of SEM/EDX downtime? (18.34.2.3.)  |     |    |     |
| 2.7.     | Does the Aircraft Maintenance Squadrons (AMXS) exercise responsibility for monitoring the MCDP on the flight line? (18.34.3.1.)   |     |    |     |
| 2.7.1.   | Does the AMXS ensure visual inspection of the MCD is performed IAW applicable technical orders? (18.34.3.2.)  |     |    |     |
| 2.7.2.   | Does the AMXS ensure MCDs are submitted for analysis within 75 minutes after engine shutdown? (18.34.3.3.)  |     |    |     |
| 2.7.3.   | Does the AMXS ensure current SEM/EDX status code is maintained for each aircraft serial number to indicate aircraft status relative to MCD analysis results? (18.34.3.4.)   |     |    |     |
| 2.7.4.   | Does the AMXS coordinate with MOC to recall aircraft determined to be flying with unacceptable levels of debris? (18.34.3.5.)   |     |    |     |
| 2.8.     | Does the MOC serve as primary communication link for transfer of SEM/EDX information between the Propulsion Shop and its customers? (18.34.4.1.)  |     |    |     |
| 2.8.1.   | Does the MOC ensure current SEM/EDX status code is maintained for each aircraft serial number to indicate aircraft status relative to MCD analysis results? (18.34.4.2.)  |     |    |     |
| 2.8.2.   | Does the MOC immediately notify the owning AMXS/Flying Squadron (transient aircraft) when MCD analysis indicates unacceptable levels of debris so they can coordinate recall of affected aircraft? (18.34.4.3.)   |     |    |     |
| 2.9.     | Is NDI notified prior to deployments to determine if MCDP support will be available at the deployed location? (18.34.5.1.)  |     |    |     |

| <b>ITEM NO.</b> | <b>ITEM AND REFERENCES</b><br><i>(All references are to ANGI 21-101 unless otherwise indicated)</i>   | <b>YES</b> | <b>NO</b> | <b>N/A</b> |
|-----------------|---|------------|-----------|------------|
| 2.10.           | If it is determined that MCDP is not available while aircraft are cross country/deployed, are visual MCD inspections performed IAW applicable engine directives? (18.34.5.2.) |            |           |            |

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