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the Navy,  
and the Air Force  
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**\*Army Regulation 700–132**  
**OPNAVINST 4731.2A**  
**AFI 21–131**

Effective 1 April 2024


Logistics  
**Joint Oil Analysis Program**

By Order of the Secretary of the Army:

RANDY A. GEORGE  
*General, United States Army*  
*Chief of Staff*

R. B. CRITES  
*Deputy Chief of Naval Operations*  
*Integration of Capabilities and Resources*

Official:

  
MARK F. AVERILL  
*Administrative Assistant to the*  
*Secretary of the Army*

Official:

TOM D. MILLER  
*Lieutenant General, USAF*  
*DCS/Logistics, Engineering and Force Protection*

**History.** This publication is a major revision. The portions affected by this major revision are listed in the summary of change.

**Authorities.** The authority for this regulation is the Tri-service Agreement for the Joint Oil Analysis Program (5 January 1976).

**Applicability.** This regulation applies to the Regular Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated. It also applies to the Regular and Reserve Components of the U.S. Navy and the U.S. Air Force. During mobilization, chapters and policies contained in this regulation may be modified by the proponent.

**Proponent and exception authority.** The proponent of this regulation is the Deputy Chief of Staff, G–4. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency, in the grade of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing a justification that includes a full analysis of the expected benefits and must include a formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25–30 for specific requirements.

**Army internal control process.** This regulation contains internal control provisions in accordance with AR 11–2 and identifies key internal controls that must be evaluated (see appendix B).

**Suggested improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) via email to [usarmy.pentagon.hqda-dcs-g-4.mbx.publications@army.mil](mailto:usarmy.pentagon.hqda-dcs-g-4.mbx.publications@army.mil).

**Distribution.** This regulation is available in electronic media only and is intended for the Regular Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve. Also, it is intended for all command levels of the U.S. Air Force and U.S. Navy.

\*This regulation supersedes AR 700–132/OPNAVINST 4731.2A/AFI 21–131, dated 26 March 2014.

# ***SUMMARY of CHANGE***

AR 700–132/OPNAVINST 4731.2A/AFI 21–131  
Joint Oil Analysis Program

This major revision, dated 1 March 2024—

- Adds a provision addressing Joint Oil Analysis Program records management (para 1–5).
- Updates reference (app A).

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## **Chapter 1**

### **Purpose**

#### **1–1. Purpose**

This regulation prescribes policies, responsibilities, and goals for the Joint Oil Analysis Program (JOAP) for the Army, Navy, and Air Force.

#### **1–2. References, forms, and explanation of abbreviations**

See appendix A. The abbreviations, brevity codes, and acronyms (ABCAs) used in this electronic publication are defined when you hover over them. All ABCAs are listed in the ABCA directory located at <https://armypubs.army.mil/>.

#### **1–3. Associated publications**

Procedures associated with this regulation are found in TB 43–0211 and TM 38–301–1.

#### **1–4. Responsibilities**

a. Secretaries of the Army, the Air Force, and the Navy will, in accordance with Tri-service Agreement for the JOAP—

(1) Administer an effective oil analysis program that will accomplish the goals and policies of this regulation.

(2) Issue supplemental guidance to implement Service participation in JOAP and promote maximum participation and cooperation.

(3) Designate an oil analysis program management office to execute the oil analysis program and participate in the JOAP.

(4) Ensure that all appropriate planning documents (for example, strategic plans, budgets, facilities, manpower, and maintenance) include JOAP requirements.

(5) Coordinate oil analysis research, development, test, and evaluation projects and studies among the Services to avoid duplicate efforts with regard to the improvement, enhancement, augmentation, or replacement of existing analytical testing techniques and ensure inter-Service agreement on JOAP study objectives and methodologies.

(6) Ensure oil analysis laboratories provide oil analysis support to the other Services within its capabilities according to this regulation and the JOAP Manual, Volume I (NAVAIR 17–15–50.1/TM 38–301–1/T.O. 33–1–37–1/CGTO 33–1–37–1).

(7) Designate an office of primary responsibility and provide a primary and an alternate member to the JOAP executive committee.

(8) Determine the applicability of oil analysis techniques and related evaluation criteria for its equipment and lubricant products. Evaluation criteria are composed of some or all of the following: wear-metal limits, wear-metal trends, decision tables, physical test limits, component part composition, component diagrams, and specific comments related to the particular component from which an oil sample is taken.

(9) Provide for inter-Service participation in contracts to procure and support JOAP equipment.

(10) Provide equipment, supplies, and training for instructors at the Defense JOAP Training Course (J3AZP2A752 003) for Service-specific testing.

(11) Distribute the JOAP Manual.

b. JOAP-certified laboratory operators will—

(1) Provide non-reimbursable routine support to all Department of Defense and Coast Guard transient customers and permanent customers in the laboratories' assigned areas of responsibility. JOAP coordinating group members may authorize customers to use its Service's laboratory if the additional workload does not interfere with the existing workload.

(2) Provide inter-Service support only when they are JOAP-certified. Only qualified operators and evaluators will perform inter-Service work. Service program managers will establish their own policies for using non-JOAP-certified laboratories. A non-JOAP laboratory cannot be JOAP-certified through the JOAP certification program. Use of non-JOAP laboratories will be at the discretion of the individual Service's program managers. Certification refers to the process to approve laboratory instruments for JOAP use.

Instruments will meet or exceed minimum performance criteria established by the JOAP correlation program manager.

(3) Ensure that laboratory response time meets the operational requirements of customer service. If the laboratory response time or total turnaround time fails to routinely meet inter-Service customer service operational requirements, the JOAP coordinating group must review and resolve the issue as established by the JOAP executive committee in the JOAP Manual. Response time refers to the elapsed work hours from the time that an analysis request is received in the oil analysis laboratory and required processing is completed. Total turnaround time refers to the interval encompassing the period from the time the sample is taken until an answer (maintenance recommendation and request for resample) is received by the customer.

(4) Ensure that aeronautical samples have precedence over all other routine samples.

(5) Ensure that a maintenance recommendation resulting from an oil analysis finding is communicated to the customer and entered into the appropriate enterprise reporting database. For samples with normal results, return of the processed Department of Defense (DD) Form 2026 (Oil Analysis Request) will serve as notification of completion of sample analysis. For samples with abnormal results, the laboratory manager will advise the owning unit of the laboratory recommendation either in person, by telephone, or by electronic mail within 24 hours of sample receipt for aeronautical samples and within 72 hours of sample receipt for non-aeronautical samples, weekends and holidays excluded per the JOAP Manual.

### **1-5. Records management (recordkeeping) requirements**

The records management requirements for all record numbers, associated forms, and reports required by this regulation are addressed in the Record Retention Schedule—Army (RRS—A). Detailed information for all related record numbers, forms, and reports are located in Army Records Information Management System (ARIMS)/RRS—A at <https://www.arims.army.mil>. If any record numbers, forms, and reports are not current, addressed, and/or published correctly in ARIMS/RRS—A, see DA Pam 25-403 for guidance.

### **1-6. Joint Oil Analysis Program organization**

a. The JOAP ensures timely and accurate oil support and other fluid-wetted component analysis support to Army, Navy, and Air Force customers through the strategic location of all oil analysis laboratories and through the standardization of procedures, data elements, analytical instrumentation, and diagnostic techniques. The JOAP uses oil analysis as a maintenance diagnostic tool to—

(1) Determine the internal condition of aeronautical and nonaeronautical engines, transmissions, and gearboxes, and their oil-wetted components through the analysis of used lubricating oils, hydraulics, grease, and fluids. Its goal is flight safety, enhanced equipment readiness, reduced maintenance costs, and extended component life.

(2) Determine the suitability of lubricants and fluids for continued use, resulting in savings and early detection of harmful conditions that, if uncorrected, could promote premature component failure.

b. The JOAP is comprised of the JOAP offices of primary responsibility, JOAP executive committee, and the JOAP coordinating group.

c. Chiefs of JOAP offices of primary responsibility will—

(1) Be responsible for the Services' oil analysis policy, strategic planning, and participation in the JOAP.

(2) Oversee inter-Service policy coordination and management.

(3) Establish an inter-Service memorandum of agreement (MOA) that specifies the JOAP tasks that the Services elect to perform in a collaborative effort. This MOA will assign programmatic and financial responsibilities for each task to a specific Service for execution.

d. The JOAP executive committee will—

(1) Rotate the committee chair among the Services (Army, Navy, and Air Force) every 2 years.

(2) Provide headquarters-level review on all inter-Service matters requiring resolution.

(3) Review the JOAP tri-Service MOA and joint policy within 30 days of receipt of recommendations for changes from the JOAP coordinating group and then take action, as appropriate.

(4) Ensure all appropriate planning documents (budgets, facilities, manpower, and maintenance) include requirements for the collaborative JOAP tasks.

(5) Review Service recommendations and determine what new technologies and equipment will be implemented as the standard for the JOAP community.

(6) Resolve disagreements among the Services on JOAP-related matters.

- (7) Elevate issues to the chiefs of JOAP offices of primary responsibility, as required.
  - (8) Charter working groups for special tasks or surveys, as required.
  - (9) Coordinate establishing JOAP laboratories to avoid duplication.
  - (10) Ensure data compatibility among the Services.
  - (11) Establish a minimum frequency to transfer inter-Service data to ensure timely availability to end users.
- e. The JOAP coordinating group, which is comprised of Oil Analysis Program Managers from each Service, will—
- (1) Meet semiannually or more frequently, if required, to ensure overall progress is consistent with the JOAP Manual.
  - (2) Coordinate Service oil analysis efforts and requirements.
  - (3) Elevate disagreements to the JOAP executive committee, if necessary.
  - (4) Consolidate tri-Service requirements for JOAP-related analytical instruments.
  - (5) Review and recommend changes to the JOAP tri-Service MOA and joint policy to the JOAP executive committee annually, each February.
  - (6) Exchange ideas on technological advancements. This includes, but is not limited to—
    - (a) Developing, publishing, maintaining, and distributing documents, such as oil analysis test reports, equipment evaluation reports, program directories, and newsletters.
    - (b) Conducting and participating in meetings and symposiums and coordinating with other agencies, civilian companies, universities, and other countries to exchange technological innovations and to report on emerging technologies.

## **Chapter 2**

### **Joint Oil Analysis Program Goals and Objectives**

#### **2–1. Joint Oil Analysis Program goals**

The JOAP was instituted to—

- a. Maximize inter-Service use of oil analysis by consolidating laboratories; coordinating support; and standardizing instrumentation, analytical techniques, data, and forms (that is, Department of the Army (DA) Form 5991–E (Oil Analysis Request (EGA)), DD Form 2026, DA Form 2408–20 (Oil Analysis Log), and DA Form 3254–R (Oil Analysis Recommendation and Feedback (LRA)), and customer laboratory procedures).
- b. Enhance cohesion, reduce cost, and combine missions, where feasible.
- c. Provide non-reimbursable routine support to all Department of Defense and Coast Guard transient customers and permanent customers in each JOAP-certified laboratory's assigned area of responsibility.

#### **2–2. Joint Oil Analysis Program objectives**

The JOAP was instituted to—

- a. Improve the operational readiness and economy of military equipment through the use of oil analysis, a condition-monitoring concept that relies on the detection and measurement of wear-metals and the determination of a lubricant's physical properties.
- b. Collect and analyze oil analysis trend data to increase the effectiveness of oil analysis techniques in the diagnosis of potential equipment failures.
- c. Provide wear-metal and lubricant physical property data to the various weapon systems managers and others, as required.
- d. Test, evaluate, and promote new and emerging techniques, existing technologies, and equipment for oil analysis.
- e. Ensure all Army, Navy, and Air Force oil analysis plans and operations are integrated to provide standardized laboratory techniques, procedures, data, calibration standards, analytical instruments, and inter-Service oil analysis support to all military departments, where practicable.

## **Appendix A**

### **References**

#### **Section I**

##### **Required Publications**

**NAVAIR 17-15-50.1/TM 38-301-1/T.O. 33-1-37-1/CGTO 33-1-37-1**  
Joint Oil Analysis Program Manual, Volume I (Cited in para 1-4a(6).)

#### **Section II**

##### **Prescribed Forms**

This section contains no entries.

## **Appendix B**

### **Internal Control Evaluations**

#### **Section I**

##### **Joint Oil Analysis Program (Army, Navy, and Air Force)**

###### **B-1. Function**

The function covered by this evaluation is the JOAP.

###### **B-2. Purpose**

The purpose of this evaluation is to assist Army, Navy, and Air Force senior leaders in evaluating key internal controls. It is not intended to cover all controls.

###### **B-3. Instructions**

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, and simulation). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that this evaluation has been conducted must be accomplished on DA Form 11-2 (Internal Control Evaluation Certification).

###### **B-4. Test questions**

- a. Have JOAP personnel at the appropriate levels been assigned and properly trained?
- b. Are JOAP personnel executing JOAP for those items listed in governing directives and policies?
- c. Are units sending maintenance feedback to laboratories?
- d. Are supported units properly responding to laboratory recommendations?

###### **B-5. Supersession**

This evaluation replaces the evaluation previously published in AR 700-132, dated 26 March 2014.

###### **B-6. Comments**

Help make this a better tool for evaluating internal controls. Submit comments to the Deputy Chief of Staff, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

#### **Section II**

##### **Joint Oil Analysis Program (Organization)**

###### **B-7. Function**

The function covered by this evaluation is the JOAP.

###### **B-8. Purpose**

The purpose of this evaluation is to assist the JOAP organization in evaluating key internal controls. It is not intended to cover all controls.

###### **B-9. Instructions**

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, and simulation). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that this evaluation has been conducted must be accomplished on DA Form 11-2.

###### **B-10. Test questions**

- a. Is required laboratory equipment being programmed, funded, and procured?
- b. Are JOAP laboratory operations adequately funded?
- c. Are laboratory instruments and personnel properly certified?



- d.* Are weapon systems and sampling intervals evaluated at least annually and is regulatory guidance revised accordingly?
- e.* Is the JOAP equipment component list being reviewed and approved annually?
- f.* Are MOAs, instructions, and policies being updated to reflect approved changes?

**B-11. Supersession**

This evaluation replaces the evaluation previously published in AR 700-132, dated 26 March 2014.

**B-12. Comments**

Help make this a better tool for evaluating internal controls. Submit comments to the Deputy Chief of Staff, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

## **Glossary of Terms**

### **Customer**

Any agency, organization, or activity authorized by the Service program manager to submit samples to and receive oil analysis services from JOAP laboratories.

### **Inter-Service customer**

A customer receiving oil analysis support from another Service's laboratory.

### **Joint Oil Analysis Program certification program**

A program managed by the Service's oil analysis program management office to ensure that oil analysis laboratories have the capability to perform oil analysis services.

### **Joint Oil Analysis Program correlation program**

A program in which all JOAP-certified laboratories receive and analyze correlation samples (a sample of oil, synthetic or mineral, used to monitor instrument capability to produce desired results) to confirm that all spectrometers produce results continually to meet inter-Service and intra-Service analysis requirements.

### **Joint Oil Analysis Program offices of primary responsibility**

The Army, Navy, and Air Force lead agents responsible for inter-Service policy coordination, problem resolution, and management control over their respective Service's oil analysis programs.

### **Joint Oil Analysis Program-certified laboratory**

An Army, Navy, or Air Force oil analysis laboratory operating according to JOAP regulations.

### **Non-Joint Oil Analysis Program laboratory**

A laboratory that is not part of the Services' oil analysis program that may participate in some portions of the JOAP.

**UNCLASSIFIED**

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