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Maintenance

DOD JOINT OIL ANALYSIS PROGRAM (JOAP)

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OPR: 18 MXS/LGMFN (TSgt John E. Collins) Certified by: 18 LG/CC (Col Kenneth R. Emery II)
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This instruction implements AFD 21-1, *Managing Aerospace Equipment Maintenance*. It assigns responsibilities for the DoD JOAP managed by the 18th Wing. It applies to all equipment assigned, attached, or supported by the Nondestructive Inspection (NDI) Laboratory (Lab).

1. References: AFI 21-124, *Air Force Oil Analysis Program*, PACAFI 21-101, *Maintenance Organization and Procedures*, TOs 33-1-37-1/2/3, *Joint Oil Analysis Program Manual*, and 1F-15A-6, *Inspection and Maintenance Requirements for F-15 Aircraft*.

2. Responsibilities:

2.1. JOAP Lab will:

- 2.1.1. Use the Maintenance Operation Center (MOC) and Core Automated Maintenance System (CAMS) screen #174 to maintain a daily JOAP log to track timely receipt of all JOAP samples and confirm expected samples/changes for the day.
- 2.1.2. Review DD Forms 2026, **Oil Analysis Request** for completeness when samples are received. Notify the respective unit through the MOC if there are any documentation errors.
- 2.1.3. Ensure all samples are analyzed and that the results are called into MOC within 60 minutes of receipt. Document the time MOC was notified in the JOAP Log.
- 2.1.4. Notify the MOC of all special or Red Cap oil sample requests. Ensure a log of all special and Red Cap samples is maintained.
- 2.1.5. Notify MOC of all samples not received within 90 minutes of scheduled aircraft landing time.
- 2.1.6. Prepare samples for priority shipment to Osan Air Base, Republic of Korea, whenever oil analysis at Kadena Air Base is not available.

2.1.7. Compile a weekly JOAP report to display the number of samples processed for each unit, overdue samples, DD Form 2026 discrepancies and oil cart samples not received. A copy of this report will be forwarded to each supported unit, 18th Maintenance Squadron (MXS) supervision, and 18th Operations Group (OG) Quality Assurance (QA).

2.1.8. Ensure cross-country paperwork is returned the same day aircraft returns from cross country/deployment. Notify MOC if the analysis record is not received.

2.1.9. Provide JOAP training to all customers and newly appointed JOAP monitors requiring familiarization with the local JOAP procedures.

2.1.10. Compile and forward the quarterly JOAP report to the 18 OG Oil Analysis Program Manager in accordance with PACAFI 21-101.

2.1.11. Ensure aircraft samples turned in during non-duty hours are analyzed and the results reported to MOC within 2 hours at the beginning of next shift. Uninstalled engine sample results will be reported to the test cell.

2.2. Participating units will:

2.2.1. Ensure personnel taking samples have received instructions on oil sampling procedures and ensure training is documented in the individual's training record.

2.2.2. Designate a primary and alternate unit JOAP monitor by letter and forward one copy to the JOAP Lab (18 MXS/LGMFN). Letters will include name, rank, duty phone, and DEROS of appointees and be updated annually or as needed. Unit monitors will be the points of contact for JOAP concerns and responsible for ensuring unit JOAP procedural compliance.

2.2.3. Ensure all JOAP monitors visit the JOAP Lab, within 30 days of being assigned, as part of their indoctrination into the program to learn about the basic workings of JOAP, their responsibilities, and correct procedures.

2.2.4. Ensure Red Cap samples are identified as such and delivered immediately after sampling. A red X will be entered in the AFTO Form 781A, **Maintenance Discrepancy and Work Document** and will not be signed off until analysis results are obtained.

2.2.5. Ensure a properly completed DD Form 2026 accompanies each sample and is reviewed for errors prior to turning in to the JOAP Lab.

2.2.6. Report results of chip detector, filter, screen, and sump inspections to the JOAP Lab when directed, for abnormal engine operation, oil-wetted system maintenance, and engine changes as they occur.

2.2.7. Verify engine code status prior to all engine drain and flush actions with the JOAP Lab.

2.2.8. Deliver oil cart samples to the JOAP Lab on the first duty day of the week NLT 1200 (ensure annotation to oil cart is accomplished). Contaminated carts will be reported back to the unit through the MOC. Oil carts identified as contaminated will be immediately removed from service, drained, and flushed, and a resample submitted to the JOAP Lab for analysis.

2.2.9. Ensure unit's scheduling personnel are aware of aircraft on JOAP surveillance Code "E." The units will not schedule these aircraft for other than local sorties.

2.2.10. Contact the JOAP Lab for oil analysis records at least 2 hours prior to aircraft or spare engines deploying for TDY, going out and back, or transferring to another unit.

2.2.11. Ensure cross-country oil analysis records are returned into the JOAP Lab the same day the aircraft returns from a deployment. NDI will notify the respective units through MOC of all paperwork not received.

2.2.12. Ensure aircraft that are traveling to bases without certified JOAP capabilities take samples and carry them to the next certified JOAP Lab for expedient analysis.

2.2.13. Ensure JOAP samples are taken after every engine installation run and after required functional check flights.

2.2.14. Sample all aircraft on surveillance immediately after every flight and ensure JOAP results are known prior to the next sortie.

2.2.15. All final test/cell samples will be placed on a Code "F" prior to reissuing to the flight line. This is to ensure engine installation run samples are received and to notify the JOAP Lab of engine changes.

2.3. Operations squadrons will:

2.3.1. Ensure samples are taken daily after the first flight. During surge operations, a minimum of two JOAP samples will be taken. The first sample will be taken after the third flight of the morning goes or when the crew chief performs a thru-flight inspection. Results of the JOAP samples from the morning goes will be known prior to the aircraft's next sortie. The second JOAP sample will be taken after the final flight of the day and before the start of the basic post-flight inspection (BPO).

2.3.2. Ensure the routine sample response time is kept under 2.5 hours. A sample will be taken within 30 minutes following the aircraft landing. Units will deliver the JOAP sample to the JOAP Lab within 1 hour. JOAP Lab personnel will respond with JOAP analysis results to MOC within an hour.

2.3.3. Contact the JOAP Lab by telephone during aircraft 14/30-day records checks to verify engine operating hours, time since oil change, oil serviced since last JOAP sample, and engine serial number.

NOTE: SMO will ensure all aircraft returning from deployments have their records sent to their plans and scheduling section for records check, if the deployment precluded accomplishment.

2.4. The 961st Airborne Air Control Squadron and 82d Reconnaissance Squadron will:

2.4.1. Schedule deployment engine oil samples prior to deployment as required.

2.4.2. Ensure the unit JOAP monitor informs applicable maintenance personnel of each aircraft engine requiring special samples.

2.4.3. Ensure samples taken are delivered to JOAP Lab within 3 hours from time sample taken.

2.5. Transient Alert Flight will:

2.5.1. Ensure transient aircraft requiring oil analysis have samples taken, delivered to the JOAP Lab, and results obtained prior to aircraft departure.

2.5.2. Ensure engine oil analysis records accompanying aircraft are updated by JOAP personnel and returned to the aircraft forms prior to departure.

2.6. MOC will:

- 2.6.1. Notify the JOAP Lab when an aircraft goes cross-country and when it returns to home station. Initiate follow-up action when notified by the lab that analysis records were not received upon aircraft's return.
 - 2.6.2. Notify JOAP Lab personnel of sortie schedule changes as they occur.
 - 2.6.3. Notify applicable FS production superintendent of all JOAP Lab requests for late or missing oil samples and documentation errors.
 - 2.6.4. Maintain a JOAP sample tracking system to reflect current aircraft JOAP status to include aircraft on surveillance and aircraft requiring Red Cap samples.
- 2.7. Propulsion Flight supervision will:
- 2.7.1. Ensure all maintenance actions that affect oil-wetted engine components are provided to the JOAP Lab using remarks section of the DD Form 2026.
 - 2.7.2. Ensure engine JOAP historical records are requested for all components undergoing scheduled maintenance, transferring, or deploying. Records will be picked up prior to component shipment.
 - 2.7.3. Ensure test/cell samples are delivered to the JOAP Lab within 3 hours from the time sample taken. If the JOAP Lab is not manned, contact the maintenance supervisor to notify NDI shift personnel.
- 2.8. Sortie generation flight NCOIC will:
- 2.8.1. Conduct a monthly review of the JOAP centering on timeliness of sample delivered for analysis, accuracy of documentation, and effectiveness of overall JOAP program.
 - 2.8.2. Report all significant findings to their respective SMO.
- 2.9. Units deploying will:
- 2.9.1. Designate the maintenance supervisor as the JOAP monitor, who will be responsible for complying with all aspects of this wing instruction. JOAP monitor will ensure oil analysis records are forwarded to the JOAP Lab supporting the deployment and returned to the 18 MXS JOAP Lab upon return.
 - 2.9.2. Take sufficient oil sampling kits on deployments and expeditiously deliver samples to the nearest JOAP Lab when local certified support is unavailable. The deployment JOAP monitor will keep accurate records of samples taken when no certified JOAP support is available and ensure samples are carried to the first certified JOAP Lab for analysis.

JAMES B. SMITH, Brigadier General, USAF
Commander, 18th Wing