



GENERAL SUPPORT CENTER-EUROPE



MANNHEIM LABORATORY CENTER

AOAP & MATERIAL TESTING LABS EXTERNAL SOP

SEPTEMBER 2003

THE BEST SUPPORTING THE BEST!



THIS PAGE INTENTIONALLY LEFT BLANK

(Backside of Cover Page)

MLC EXTERNAL STANDING OPERATING PROCEDURES - CUSTOMER ASSISTANCE

ARMY OIL ANALYSIS PROGRAM (AOAP) AND MATERIAL TESTING SERVICES

1. **PURPOSE:** To provide guidance and instructions on proper procedures when utilizing the Army Oil Analysis and Material Testing services.
2. **APPLICABILITY:** This Standing Operating Procedure (SOP) applies to all units, maintenance activities, agencies, and organizations supported by the USAREUR Army Oil Analysis and Material Testing Laboratories.
3. **REFERENCES:**
 - (a) TB 43-0106, Army Oil Analysis Program Aeronautical Equipment.
 - (b) DA PAM 738-751, Functional Users Manual for the Army Maintenance System - Aviation (TAMMS-A).
 - (c) http://weblog.army.mil/aoap/aoap_air_a.htm
On-line Aeronautical Equipment Requiring Enrollment in AOAP Table
 - (d) DA PAM 738-750, Functional Users Manual for The Army Maintenance Management System (TAMMS).
 - (e) AR 750-1, Army Materiel Maintenance & Retail Maintenance Operations
 - (f) TB 43-0211, AOAP Guide for Leaders and Users.
 - (g) USAREUR Supplement 1 to AR 750-1, Army Maintenance Policy and Retail Maintenance Operations.
 - (h) http://weblog.logsa.army.mil/aoap/aoap_combat_.htm
On-line Non-Aeronautical Equipment Requiring Enrollment in AOAP (Tables 4-1 thru 4-7)
 - (i) AR 700-139, Army Warranty Program.

NOTE: Current DA Pam, TB, AR, and Supplements have been used in compiling this SOP.

4. **DATA ERRORS AND OMISSIONS:** Attempts have been made by the MLC management staff to thoroughly proof-read this SOP, with the hopes of providing our supported customers with the finest, most accurate guidance possible. However, should you detect any data omissions or errors in this publication, we welcome your inputs and ask that you make us aware of these shortcomings.

Mannheim Laboratory Center is a certified ISO 9001:2000 chemical analysis laboratory service provider. We have a very active quality management review program established in which we seek continual process improvement in our operations. Should you wish to alert us to a possible omission or error in this publication, please help us by putting your comments to writing and bring it to the attention of any of our Mannheim Laboratory Center staff for immediate review and analysis. Our goal is to establish this SOP as a living document, providing the Warfighter with timely updates and corrections, as deemed required. "The Best Serving The Best!"

MANNHEIM LABORATORY CENTER

STANDING OPERATING PROCEDURES - CUSTOMER ASSISTANCE

TABLE OF CONTENTS

CHAPTER I	GENERAL INFORMATION	PARA	PAGE
	* Operating Hours	1-1	1-2
	* AOAP Training	1-2	2
	* Applicable Online Web Resources	1-3	2
CHAPTER II	AERONAUTICAL EQUIPMENT: AOAP INSTRUCTIONS & PROCEDURES		
	* Publications on Aeronautical Guidelines	2-1	3
	* Special Instructions on Sampling Technique	2-2	3
	* Special Instructions on Aeronautical Component Data	2-3	3 - 4
CHAPTER III	NON-AERONAUTICAL (GROUND) EQUIPMENT: AOAP INSTRUCTIONS & PROCEDURES		
	* What To Sample	3-1	5
	* When To Sample	3-2	5 - 7
	* How To Sample / Sampling Supplies / Sampling Methods (Valve & Pump Methods)	3-3	7 - 8
	* Preparing The Sample For The Laboratory (DD Form 2026 / ULLS Generated DA Form 5991-E)	3-4	8 - 10
	* Laboratory Recommendations (Resample/Oil Change)	3-5	10 - 11
	* Maintenance Recommendations / Feedback Forms (DA Form 3254-R and DA Form 2407)	3-6	11 - 13
	* Repeat Sample Analysis Recommendation Notices	3-7	13
	* Instructions For Updating/Editing/Transferring Component Data	3-8	14 - 16
	* PCS & TDY Status	3-9	16
	* Maintenance Status	3-10	16 - 17
	* Samples Submitted with Insufficient Data or Insufficient Amounts of Oil	3-11	17 - 18
	* Component Enrollment	3-12	18
	* AOAP Official Monthly Reports / Printouts	3-13	18 - 20
	* AOAP Responsibilities	3-14	20 - 22
	* USAREUR AOAP Monitor Training / Certification	3-15	22 - 23
CHAPTER IV	MATERIAL TESTING LABORATORY: ANALYSIS INSTRUCTIONS & PROCEDURES		
	* Services Available	4-1	24
	* Types of Testing/Analysis Conducted	4-2	24 - 25
	* Specific Instructions (Preparing Test Samples and the DD Form 1222)	4-3	25

TABLE OF CONTENTS - CONTINUED

FIGURE	LIST OF FIGURES/EXAMPLES	PAGE
	** Lists/Figures/Tables Cover Page	26
2-1.	** Example: Manual DD Form 2026 (Oil Analysis Request For Aeronautical Equipment)	27
3-1.	** AOAP Sampling Supplies	28
3-2.	** Sampling By The Valve Method (Ground)	29
3-3. – 3-3.a.	** Sampling By The Pump Method (Ground)	30 - 31
3-4.	** Example: Manual DD Form 2026 (Oil Analysis Request for Non-Aeronautical / Ground Equipment)	32
3-5.	** Example: ULLS Generated DA Form 5991-E (Oil Analysis Request for Non-Aeronautical Equipment)	33
3-6.	** Example Memorandum: AOAP Monitor Appointment Order	34
3-7.	** Example Memorandum: Unit Deployment w/o Equipment	35
3-8.	** Example Memorandum: Unit Deployment with Equipment	36
3-9.	** Example Memorandum: Equipment Turn-in	37
3-10.	** Maintenance Status Request – Documentation Samples	38
3-11.	** ULLS Generated DA Form 5990-E (Work Order)	39
3-12.	** ULLS Generated DA Form 5988-E (Maint & Insp Worksheet)	40
3-13.	** Example: DA Form 3254-R (Oil Analysis Recommendation & Feedback)	41
3-14.	** DA Form 3254-R – Feedback Close-out Documentation Samples	42
3-15.	** AOAP Pressure-Sensitive Labels	43
3-16.	** Example: Components Enrolled In Oil Analysis Report (CER)	44
3-17.	** Example: Resample & Type Recommendation Report (RTR)	45
3-18.	** Example: Laboratory Workload Summary (WS)	46
3-19.	** Example: DD Form 1556-1 For AOAP Monitor Training	47
3-20.	** Example Memorandum: Request For AOAP Delinquency Award	48
3-21.	** Map: AOAP Support Area, Germany	49
3-22.	** Map: AOAP Support Area, USAREUR	50
4-1.	** Example: DD Form 1222 (Request for Material Testing Support)	51

	LIST OF TABLES	PAGES
Table 1.	** Component And End Item Serial Number Structure Table	52 - 62

CHAPTER I GENERAL INFORMATION

1-1 OPERATING HOURS OF MANNHEIM LABORATORY CENTER

OFFICE OF DIRECTOR

Mon - Fri	0730-1600
Director	Tel DSN: 382-5288
Management Assistant	Tel DSN: 382-5288
AOAP Management Spec.	Tel DSN: 382-4353/4355
MLC IT Specialist	Tel DSN: 382-4352
Fax DSN	382-4302
Tel/Fax COM	0621-779-XXXX
Location	Coleman Barracks Bldg #50

MANNHEIM AOAP LABORATORY

Mon - Fri	0730-1600
Lunch	1200-1230
Holidays	Lab Closed American Holidays Lab Closed German Holidays/Admin Open
Lab Chief	Tel DSN: 382-5246/4383
Fax DSN	382-4302
Tel/Fax COM	0621-779-XXXX
Location	Coleman Barracks Bldg #50

After Duty Hours Emergency Samples: (Aircraft Only)
Contact IC Office, Bldg #63 at the Main Gate entrance
to Coleman Bks or Flight Dispatch Office, Bldg #20.

Mailing Address	Mannheim Laboratory Center ATTN: AERSC-MLC CMR 418 APO AE 09058-9702
-----------------	---

BAMBERG AOAP LABORATORY

Mon - Fri	0730 - 1600
Lunch	1200 - 1230
Holidays	Lab Closed American Holidays Lab Closed German Holidays/Admin Open
AOAP Management Spec.	Tel DSN: 469-8496 / 8427
Lab Chief	Tel DSN: 469-8427 / 8424
Fax DSN	469-8497
Tel / Fax COM	0951-300-XXXX
Location	Warner Barracks Bldg # 7487

Mailing Address Mannheim Laboratory Center, Bamberg Activity
ATTN: AERSC-MLC-BA
Unit 27535
APO AE 09139-7535

MATERIAL TESTING LABORATORY, MANNHEIM

Mon - Fri 0730-1600
Lunch 1200-1230
Holidays Closed American Holidays
Closed German Holidays
Lab Chief Tel DSN: 382-4115/5221
Fax DSN 382-4302
Tel / Fax COM 0621-779-XXXX
Location Coleman Barracks Bldg #52

1-2. USAREUR AOAP MONITOR TRAINING/CERTIFICATION PROGRAM

Mannheim AOAP Training TEL DSN: 382-5288/4254
FAX DSN: 382-4302
COMMERCIAL: 0621-779-XXXX
Bamberg AOAP Training TEL DSN: 469-8496 / 8427
FAX DSN: 469-8497
COMMERCIAL: 0951-300-XXXX

1-3. APPLICABLE ONLINE WEB RESOURCES

Mannheim Laboratory Center Homepage:
<http://www.21tsc.army.mil/Gsce/mlc/default.htm>

Dept of The Army - AOAP Program Manager Office Homepage:
<http://weblog.logsa.army.mil/aoap/openpg.htm>

General Support Center – Europe Homepage:
<http://www.21tsc.army.mil/gsce/>

21ST Theater Support Command Homepage:
<http://www.21tsc.army.mil>

CHAPTER II AOAP INSTRUCTIONS/PROCEDURES FOR AERONAUTICAL EQUIPMENT

2-1. PUBLICATIONS ON AERONAUTICAL GUIDELINES

Aeronautical components enrolled in the AOAP are listed in TB 43-0106 or log on to the following website: http://weblog.logsa.army.mil/aoap/aoap_air_a.htm
Aviation units must follow the policies and procedures outlined in TB 43-0106, DA Pam 738-751, and AR 750-1.

2-2. SPECIAL INSTRUCTIONS ON SAMPLING TECHNIQUES (Ref. TB 43-0106)

a. Aeronautical Drain Method Sampling Procedure - Oil samples may easily be contaminated with water or sludge if approximately 1 pint of oil is not drained prior to taking a sample when using the drain method. Aviation units must exercise proper procedures while taking a sample to avoid any contamination to the oil.

b. Aeronautical Tube Method Sampling Procedure - The use of plastic flexible tubing for aeronautical sampling is preferred. The tube is inserted in the filler neck or the dipstick tube. Insert tubing in oil reservoir. Be careful not to let the tube touch the bottom of the reservoir. Allow the tube to fill with oil (do not use mouth suction), place a finger over the top of the tube and withdraw it from the reservoir. The tube will be partially filled with oil. Insert the tube into the sample bottle. Release the oil by removing your finger from the top of the tube. Repeat the action until the bottle is filled. Then write the aircraft end item/ component serial number on the label of the oil sample bottle. DD Form 2026/DA Form 5991-E must be completed, wrapped around the bottle, secured with a rubber band and both together must then be forwarded to the laboratory.

c. When using the tube method, do not allow the tube to touch the sides or bottom of the oil tank when taking a sample through the filler neck; sludge which enters the tubing causes erroneous laboratory findings (which may result in the aircraft being grounded or resample requested). Oil samples should always be taken approximately the same depth in the reservoir each time.

2-3. SPECIAL INSTRUCTIONS ON AERONAUTICAL COMPONENT DATA

a. Aviation units must ensure that aircraft component serial numbers correspond with the correct end item at all times to avoid data errors on DD Form 2026/DA Form 5991-E and the AOAP computer database. It should be noted that if a component serial number does not correspond to the correct end item and the laboratory analysis indicates abnormal results, the lab may not be able to identify which aircraft should actually be grounded. This is very dangerous and could lead to aircraft accidents.

b. Aviation units must always include hours since overhaul and hours since oil change on the DD Form 2026/DA Form 5991-E. This information is crucial to laboratory evaluation criteria.

c. Aviation units must inform the AOAP laboratory on the DD Form 2026/DA Form 5991-E in the remarks block why a sample is submitted as "SPECIAL" when not requested by the lab (i.e., chip lights, overspeed, overtorque, filter button, sudden stoppage, metal on filter, aircraft mishap, unusual noises, etc.). This information determines if additional analysis is needed, which is essential for the accurate evaluation of the sample and to provide the correct recommendation for the component in question.

d. Aviation units should, upon detection of metals on chip detector or abnormal metals found on oil filter, submit the metal/filter to the AOAP laboratory along with oil sample ASAP. The debris submitted is an extremely important factor in determining specific additional analysis.

e. Aviation Monthly Report: Aviation units will only receive the Components Enrolled Report and Resample and Type Recommendation Report. Component History Printouts are available upon request.

CHAPTER III **AOAP INSTRUCTIONS & PROCEDURES FOR *NON-AERONAUTICAL* EQUIPMENT**

3-1. WHAT TO SAMPLE

Equipment/components mandated for AOAP enrollment are listed in DA Pam 738-750 and on the LOGSA website http://weblog.logsa.army.mil/aoap/aoap_combat_a.htm

This webpage is for combat equipment. Other equipment classes can be accessed by following the links at the bottom of the combat webpage.

3-2 WHEN TO SAMPLE (DA PAM 738-750)

a. Routine samples are to be submitted at prescribed intervals as established in DA Pam 738-750, chapter 4 or as indicated on the LOGSA website http://weblog.logsa.army.mil/aoap/aoap_combat_a.htm

Samples should be taken as near the prescribed interval as possible. Sampling at the prescribed time is not always possible. In such instances a 10 percent variance before or after the scheduled date, hours, or miles for sampling is permissible.

b. Special samples are those samples other than routinely scheduled. Special samples should be submitted to the laboratory under the following circumstances:

(1) At the request of the laboratory.

(2) Immediately before transfer among commands or overseas deployment of equipment. These special samples will be processed by the losing AOAP laboratory prior to equipment transfers or deployment.

(3) After maintenance, overhaul, or replacement of a component.

(4) After indication of a problem, i.e., overheating, excessive oil loss, or loss of pressure.

(5) After indication of contamination, i.e., cloudy, sludge, water, excessively dirty, visible metal particles, etc.

NOTE: Special samples should be clearly marked "SPECIAL" and banded with red tape or marked in some other conspicuous manner so that the laboratory may easily identify them.

The DD Form 2026/DA Form 5991-E that accompanies the samples to the laboratory should be marked "SPECIAL" in the "Remarks" block and its borders should be outlined in red.

c. Equipment that is "NMC" does not require sampling until repairs are completed. When a vehicle is in storage, no sampling is required until the vehicle is scheduled for operational use.

d. Units should sample maintenance float equipment at 25 hours of operation or quarterly, whichever occurs first.

e. When a vehicle is used for developmental purposes, used as a training aid or static display, authorization to discontinue sampling or to sample at longer intervals may be granted by the applicable major command. When the equipment returns to normal operation, sampling intervals established in DA Pam 738-750) will once again apply.

f. When a unit is deployed and AOAP is not readily available, the unit maintenance

officer may authorize an oil and filter change when oil contamination is evident. On these occasions, a sample of the contaminated oil will be forward to the supporting AOAP laboratory as soon as possible with appropriate comments included in the "Remarks" block of the DD Form 2026/DA Form 5991-E (Oil Analysis Request).

(1) During the transition to war, AOAP support will be provided by fixed labs, mobile, and/or portable systems, as they are available.

(2) During wartime, AOAP service will be provided as far forward as possible using the most responsive system available. AOAP service will also be event oriented, occurring during unit stand-downs, reconstitutions, and the conduct of DS/GS levels of maintenance.

g. For equipment which has been targeted for turn-in or labeled excess and **is not in operational use** while awaiting disposition instructions, the following procedures apply:

(1) A memorandum signed by the Commander is required by the laboratory, which identifies all affected equipment/unit(s). For large density, it is recommended that units use the laboratory **Components Enrolled Report** to identify the end items & components that are affected. **When this report is used, the memorandum from the Commander must be attached**, otherwise the laboratory will not execute the action. Turn-ins of small quantities of end items may be listed on the memorandum. In this case the equipment must be identified by **end item model, end item serial number, component model and component serial number**.

(2) After the laboratory has been notified, routine sampling requirements may be discontinued as long as **equipment is not in operational use**. However, laboratory recommendations from the last sample analysis (if results were 'ABNORMAL') must be complied with.

(3) The laboratory will place the equipment in STORAGE status in the AOAP database until disposition instructions are received. Equipment will not be identified as delinquent on the AOAP monthly printout while awaiting disposition instructions. When equipment is dropped from unit's property book, unit must notify the supporting lab to delete the equipment from the AOAP monthly printout.

h. Anytime a unit relocates, either permanently or thru deployment, the following is required:

(1) The unit must notify the servicing laboratory by memorandum from the Commander 90 days prior to departure date or ASAP identifying all equipment, the unit(s) involved, and the new location. Advance notice is required in order to provide the servicing laboratory sufficient time for processing of records.

(2) All equipment scheduled to relocate or deploy must be sampled prior to relocation. Laboratory recommendations other than "NORMAL" must be complied with prior to placement of the equipment on TDY/PCS status.

(3) Upon completion of sample analysis and the determination of "NORMAL" results, equipment records will be finalized in the AOAP database. The last sample result must be maintained as part of the equipment's permanent record.

(4) The losing laboratory will forward the units equipment records to the gaining laboratory.

- i. Unit deploys without equipment (equipment in admin storage):

(1) Unit must notify the supporting laboratory by memorandum from the Commander, as early as possible of the upcoming deployment date, and the unit equipment affected. Laboratory recommendations from the last sample result (result other than "NORMAL") must be complied with prior to placing the equipment in admin STORAGE status. The last sample result must be maintained as part of the equipment's record. **The home station laboratory will place the equipment in STORAGE status during the deployment.**

3-3. HOW TO SAMPLE/SAMPLING SUPPLIES/SAMPLING METHODS (DA PAM 738-750)

a. IAW DA Pam 738-750 units will maintain an adequate level of sampling supplies. If your equipment has a sampling valve, the oil-sampling pump or tubing is not needed.

b. Oil samples should be submitted to the AOAP laboratory as soon as they are pulled whenever possible.

c. Samples taken from a cold component normally do not give a true representative sample of the oil in the system. The laboratory prefers that all samples be taken at normal operating temperature; however, units may take a sample without warming the component to operating temperature if the equipment has been operated within the last 30 days. If the equipment has not been operated within the last 30 days, it must be brought up to operating temperature before sampling. This applies to both routine and special samples. When the laboratory requests that a component be operated before sampling, this request must be complied with.

NOTE: Although the above procedure authorizes taking cold samples, all samples taken on gas turbine engines must be taken at normal operating temperature. When the temperature is very low, one may not be able to take a cold sample readily; therefore equipment may need to be operated to warm the oil enough to extract the sample easily. Equipment coming out of storage must always be brought up to operating temperature prior to sampling.

d. Samples taken from an oil reservoir immediately after addition of new oil will not be representative, and will not become representative until complete mixing of the old oil and new oil has taken place. Unit should operate the equipment until normal operating temperature has been obtained.

NOTE: The Unit Equipment Oil Sampler should ensure that all safety precautions are observed when taking a sample to protect from injury and to avoid environmental hazards.

e. Sampling - (valve method) to take a sample using the valve method, simply open the valve and flush a small amount (approx. 1/2 pint or 3 oz) of oil from the line to clear the valve. **Fill the sample bottle to approximately 1/2-inch from the top** (do not overfill the sample bottle), then close the valve. Fill in your equipment bumper number, component type, i.e., engine, transmission or hydraulic, and component serial number on the sample bottle label to avoid a mix-up between samples.

f. Sampling- (pump method) to take a sample through the oil filler neck or through the dipstick tube. Units should follow the procedure listed below:

- (1) Determine how far the tubing has to be inserted into the reservoir by using the dipstick as a gauge. Cut tubing approximately 10 inches longer than the dipstick.
- (2) Attach tubing to the sampling pump by inserting tubing through "T" handle opening. Tubing should extend 1/4 inch below pump head threads, then tighten "T" handle.
- (3) Attach bottle to sampling pump.
- (4) Carefully insert tubing into reservoir. Do not allow tubing to touch the bottle or sides of the reservoir, since any sludge entering the tubing will contaminate the sample.
- (5) Hold sample pump horizontally and pump until oil starts entering the bottle. Fill the bottle to approximately 1/2 inch from top (do not overfill the sample bottle). Depress vacuum relief valve (on top of the pump) to stop flow of oil.
- (6) Remove bottle from pump, replace and tighten bottle cap.
- (7) Withdraw tubing from reservoir, loosen "T" handle, and remove tubing from pump. Discard tubing and replace reservoir covering.
- (8) Fill in your equipment bumper number, component type and component serial number on sample bottle to avoid mix-up between samples.

3-4. PREPARING THE SAMPLE FOR THE LABORATORY (DD FORM 2026/ULLS DA FORM 5991-E, OIL ANALYSIS REQUEST)

a. A DD Form 2026/DA Form 5991-E must accompany all oil samples to the laboratory. The following instructions explain the information required on the DD Form 2026/DA Form 5991-E. **Samples submitted without this form will not be processed; samples submitted with incomplete Oil Analysis Request forms will not be processed.**

- (1) To Oil Analysis Lab: Enter name of your supporting laboratory.
- (2) From Major Command, Operating Activity: Include your Major Command (3rd ID, 1st AD, 21st TAACOM, SETAF, etc.), full unit designation and address, UIC, and telephone number.
- (3) Equipment Model/APL: Enter nomenclature and model number of component, (example: Engine AVDS 1790-2A or XMSN CD 850-6A or HYD System).
- (4) Equipment Serial No: This block shall contain the serial number of the engine or the component being sampled.
- (5) End Item Model/Hull No.: [\(WHAT IS IT, BY NAME?\)](#) i.e., M4K, M923.
- (6) End Item Serial No./EIC: Enter the end item serial number (the number of the vehicle or equipment, not the NSN).
- (7) Date Sample Taken: (Self-explanatory).
- (8) Local Time Sample Taken: LEAVE BLANK.

(9) Hours/Miles Since Overhaul: The AOAP software now accepts either miles, kilometers or hours since the last overhaul or new component installation. In this block, please enter the proper measurement type (miles/km/hours) and the proper numerical data.

(10) Hours/Miles Since Last Oil Change: The AOAP software now accepts either miles, kilometers or hours since the last oil change. In this block, please enter the proper measurement type (miles/km/hours) and the proper numerical data.

(11) Reason For Sample: (Is it Routine, Lab Request, Special, or Other?) If it is "Other," state reason in remarks block, i.e., initial sample, excessive smoke, loss of engine power.

(12) Oil Added Since Last Sample: Identify in pints, quarts, or gallons.

(13) Action Taken, Discrepant Item, How Malfunctioned, How Found: Leave Blank

(14) How Taken: (Drain or Tube).

(15) Sample Temperature: (Hot or Cold)

(16) Type Oil: (15W40, etc.).

(17) Remarks Block: When using the manual DD Form 2026, the AOAP monitor or Motor Sergeant should be the POC listed in the remarks block. Record any special symptoms that might indicate a problem or any special maintenance that has been performed, and ensure that total **end item usage is recorded in this block, to include current meter reading plus usage from replaced meters**. End item usage may be reported in miles, hours, or kilometers, but must be consistent. **For each component that is sampled, whether a manual Oil Analysis Request is used or the ULLS 5991-E, end item usage must be recorded on the Oil Analysis Request when submitted to the laboratory. If usage is not submitted to the laboratory on the Oil Analysis Request, it will be reflected on the monthly printout (Components Enrolled Report) as "UNK," and the end item and/or component will be identified as having no usage reported.**

b. Units operating under ULLS will use automated forms in place of manual forms prescribed in this SOP. Units should always submit the most legible copy of the ULLS 5991-E Oil Analysis Request to the laboratory. When copies are not legible, laboratory personnel often encounter difficulties reading data, which is vital to laboratory analysis, evaluation and the accuracy of the monthly reports. To avoid delays in sample processing and discrepancies to the monthly reports, please submit clear and legible and accurate data on ULLS 5991/ DD 2026 forms.

c. The unit AOAP Monitor is responsible for ensuring that all data is accurate and complete for each end item/component enrolled in the AOAP. Failure to update the ULLS database will result in sample confusion, processing delays, and monthly report errors.

d. When samples are to be mailed, and the number is four or less, use the padded shipping sack. Ensure the sample bottles have correct data filled in to include component and end item serial number. Insert the sample(s) into individual plastic zip-lock bags and seal. Then, wrap the completed Oil Analysis Request around the outside of the plastic zip-lock bag, securing it with a rubber band only. Send it first class mail to your supporting laboratory. Commercial express parcel delivery (such as UPS, FEDEX or DHL) may also be used to ship samples to the laboratory. Do not use bulk mail or parcel post.

When the number of samples to be mailed/expressed is five or more, use the 12-compartment sample boxes that the empty bottles came in. Place the bottles into the box. **Place the Oil**

Analysis Requests together in a separate plastic bag, then lay this bag on top of the bottles. Seal each box. Apply the appropriate address labels to the top of the box. If you are sending via APO, attach a US Customs Form. Forward all samples to the laboratory using the most expeditious mode available.

e. Do not ship or forward loose oil sample bottles in large cardboard containers or group Oil Analysis Requests in one large stack inside the container. Use the twelve bottle container boxes and place inside the large container. Place the Oil Analysis Request inside the plastic “zip-lock” bag; place the bag containing Oil Analysis Request(s) within the box that has the corresponding bottles.

f. When delivering the samples directly to the laboratory by courier, fold the completed Oil Analysis Request in half and then again (both times horizontally), wrap it around the sample bottle, and secure it with a rubber band. Do this so the unit name is visible when completed. Please do not use tape, paperclips, string or other means to attach the Oil Analysis Request to the bottle. Use rubber band only.

3-5. LABORATORY RECOMMENDATIONS (RESAMPLE/OIL CHANGES)

a. The laboratory will date stamp the DD Form 2026/DA Form 5991-E when received. Regardless if the analysis results show “NORMAL” or “ABNORMAL”, the dated DD Form 2026/DA Form 5991-E will be returned to the unit within five days after it has been processed thru local distribution channels. The laboratory dated DD Form 2026/ DA Form 5991-E confirms the equipment was sampled and should be placed behind the DD Form 314 and retained until the next sample is submitted and another laboratory dated DD Form 2026/DA Form 5991-E is returned to the unit. Only the most recent DD Form 2026/DA Form 5991-E should be retained with the DD Form 314.

b. Customer units may be issued a component resample request from the laboratory due to several reasons.

(1) In most instances, lab personnel are attempting to verify and confirm a particular finding. Since a serious fault may exist, additional evaluation/ analysis is required. Units must respond to the request ASAP. If the unit cannot respond within 5 working days, the maintenance officer or his designated representative must notify the laboratory chief to determine the possibility of sustaining more damage if the equipment remains in service.

(2) Another frequent reason the lab issues a component resample request is because an oil sample was submitted as coming from one component, but actually the testing and analysis results may not conform to the expected lubricate and component footprint as identified on the component sample request paperwork. The lab then notifies the unit the sample came from the wrong “type/source.” In these instances, we recommend unit maintenance personnel be diligent in ensuring the next sample is correctly drawn/taken from the proper component and end item indicated on the Oil Analysis Request form.

c. Oil will not be changed unless recommended by the laboratory. When recommended, both oil and filter(s) will be changed. The AOAP is a condition-monitoring program, which is designed to reduce resource usage by conserving petroleum products through the On-Condition-Oil-Change (OCOC) policy. The OCOC policy does not change or modify procedures and guidance for new equipment under manufacturer’s warranty or seasonal oil change requirements noted in current TMs or LOs.

(1) For new equipment under manufacturer’s warranty, hard-time oil service intervals must be followed. However, if the AOAP laboratory recommends an oil change, the

recommendation will be followed. The unit must also change oil at the appropriate hard-time interval to keep the warranty valid. After the warranty period expires, OCOC procedures will apply.

(2) If the laboratory recommends that a warranty component have maintenance performed, the AOAP monitor should contact the supporting Warranty Control Office and provide details of the laboratory recommendation relative to the item under warranty.

(3) The AOAP does not override or supercede TM or LO specifically directed filter-only changes. As with any maintenance accomplished on the oil-wetted systems, the unit shall provide the AOAP lab a special oil sample after completion of all filter-only changes. Sample will be taken after the affected component/system has been brought to full operating temperatures and normal operational conditions.

3-6. MAINTENANCE RECOMMENDATIONS/FEEDBACK FORMS **(DA Form 3254-R AND DA Form 2407)**

a. DA Form 3254-R will be used only when a maintenance action is recommended and not to request a component resample or recommend oil changes. Maintenance recommendations will be annotated on the DA Form 3254-R when sample analysis indicates a serious problem. Lab will notify the unit immediately via telephonic message. This will be followed up with a written message format, currently an email to the unit maintenance POC. Finally, the DA Form 3254-R and processed ULLS 5991 will be mailed to the customer via APO.

b. Upon receipt of a DA Form 3254-R issued by the AOAP laboratory, the unit commander will place the equipment in a NMC status until the maintenance action is completed.

c. If the laboratory recommends removing the equipment from service (which means, do not operate) due to a potentially serious fault, the unit maintenance officer will immediately remove the item in question from service. It will not be returned to service until repairs are completed or technical inspection by the maintenance officer/support maintenance personnel verify that continued use will not cause further wear and damage. All determinations to remove a component from the end item are made by maintenance personnel, not by laboratory personnel. AOAP pressure-sensitive labels should be attached to the component upon determination that removal of the component from the end item is necessary. If maintenance personnel do not have AOAP labels, contact the supporting lab and request the labels.

(1) In the case of an emergency requiring use of the equipment before repairs are completed, a certification of the necessity to use the item, and a statement as to what actions have been taken to prevent further damage, must be annotated in Block 14 of DA Form 3254-R. The statement must be verified by signature of the unit commander or his designated representative.

(2) Corrective action for all recommended maintenance must be accomplished ASAP. If all repairs cannot be completed within 10 working days, the unit will request the end item/components be placed in "MAINTENANCE" status in the AOAP database to avoid delinquent samples on the official reports.

(3) A request for equipment to be placed in "MAINTENANCE" status due to maintenance related reasons does not require the signature of the commander. However, a DA Form 2407/ DA Form 5990-E must be submitted to the laboratory. The easiest way to

accomplish this is to submit an Oil Analysis Request for each component belonging to the end item, attached to the DA Form 2407/5990-E. In the "Remarks" block of the Oil Analysis

Request(s), inform the laboratory to place the equipment in “MAINTENANCE” status. Please ensure that each end item/ component serial numbers are annotated on the Oil Analysis Request(s). The lab will not place the equipment in “MAINTENANCE” status if the request is not accompanied by DA Form 2407/DA Form 5990-E. After repairs are completed, follow the sampling instructions that were recommended on the DA Form 3254-R by the laboratory.

d. The correct procedures for maintenance feedback from each level of maintenance are outlined in the following paragraphs: (Reference TB 43-0211, AOAP Guide for Leaders and Users). For each DA 3254-R issued, the lab will prepare and provide to the unit 3 copies of the DA Form 3254-R and 4 AOAP labels. Actions required are as follows:

(1) **Organizational Level (Maintenance Feedback)**

a. **If personnel at the using unit have performed the laboratory recommended inspection or repair action:** they will complete the lower portion of DA Form 3254-R copy marked “Unit Level.” Block 14 of this DA Form 3254-R will be used to explain any diagnostics performed, discrepancies found, and actions taken to return the component to a serviceable condition. Unit personnel are requested to provide feedback to the lab regarding the accuracy of the laboratory recommendation made when issuing the DA Form 3254-R. Also, unit personnel will provide the laboratory documentation reflecting labor man-hours and repair parts, with total costs expended at the unit level. The unit maintenance supervisor must print and sign name in the appropriate block of the DA 3254-R. Supervisor will return this information to the laboratory within five working days after the maintenance is completed. Forward unused AOAP labels back to the laboratory, discard the other two copies of DA Form 3254-R.

b. **If the required maintenance is above the organizational level:** be sure to annotate all actions taken by the using unit in Block 14 on the “Unit COPY” of the DA Form 3254-R. The unit Maintenance Supervisor will print name and sign this copy, returning it to the AOAP lab along with the DA Form 2407/5990-E showing component was evacuated to higher-level maintenance for support. Forward the other **two copies of the DA Form 3254-R** (marked DS and GS) and the AOAP labels along with the equipment to DS. If the component is placed in a container, two AOAP labels are affixed to opposite sides of the component so they are readily noticed. The other two AOAP labels will be affixed to opposite sides of the container exterior.

(2) **DS Level (Maintenance Feedback)**

a. **When equipment is received at DS level, it should be accompanied with two copies of the DA Form 3254-R, a DA Form 2407, and AOAP labels.** If repairs are made at DS level, the DS maintenance supervisor is responsible for annotating Block 14 of DA Form 3254-R with the discrepancies found, and repairs that were made; cost of labor and the repair parts used. This information should be annotated on SAMS-1 Work Order Detail. Forward the “DS MAINTENANCE COPY” of the DA Form 3254-R, DA Form 2407/5990-E, and the completed SAMS-1 to the laboratory within five days after maintenance is completed. The DS Maintenance Supervisor must sign all paperwork. Finally, AOAP laboratory requests DS maintenance personnel provide written feedback regarding the validity of the specific maintenance inspection and repair recommendation issued from the laboratory. This feedback from the DS units will allow the AOAP fine-tune our maintenance recommendations.

b. **If repairs cannot totally be made at the DS level, the “DS Maintenance Copy” of the DA Form 3254-R** will be annotated in Block 14, stating that the equipment has been evacuated to GS maintenance. DS will also annotate all discrepancies found and repairs

and return to the lab. DS Maintenance Supervisor will provide the lab with a copy of the DA Form 2407 / ULLS 5990 showing the equipment was evacuated to GS. All AOAP labels will be attached to the component /shipping container, if component has been removed. **DA Form 2407/5990-E and the “GS Maintenance Copy” of the DA Form 3254-R** must accompany the component to GS maintenance.

(3) **GS Level (Maintenance Feedback)**

GS responsibilities are to assure that Direct Support has properly prepared DA Form 3254-R and DA Form 2407/5990-E and forwarded them with the equipment/component. When repair actions have been completed at GS level, annotate Block 14 of the DA Form 3254-R explaining any diagnostics performed, discrepancies found, and actions taken to restore the component to a serviceable condition. Attach a copy of the DA Form 2407/5990-E to the DA 3254-R, ensure that all forms are signed by the GS maintenance officer, and forward to the laboratory within five days after maintenance is completed.

NOTE: EACH LEVEL OF MAINTENANCE IS RESPONSIBLE FOR SUBMITTING FEEDBACK TO THE LAB WHEN A DA FORM 3254-R IS ISSUED.

3-7. SAMPLE ANALYSIS REPEAT RECOMMENDATION NOTICES

In instances when the laboratory analyzes a sample and issues an abnormal sample recommendation to the unit, for which the unit then does not comply with that specific recommendation, if the original problem is still present, the lab will issue a “second notice” to the unit. The new lab recommendation will state, “comply with previous lab recommendation.” Please note the following examples of repeat notice situations.

a. If the lab recommends that an engine be inspected/repaired due to fuel contamination and the unit only changes the oil and submits a resample, then most likely that resample will still be fuel contaminated. (In this case the lab would have issued a DA 3254-R maintenance recommendation). The fuel problem still exists. This will result in a 2nd Notice.

b. Quite frequently we see these situations: lab will recommend a component oil and filter(s) be changed. Some units do not take this specific action, instead they may only resample the component; or perhaps only change the oil- but not the oil and filters; or perhaps only change the filter- but not the oil and filter; or the unit simply takes no action at all- but simply provide another sample some months later; or perhaps the unit does change the oil and filters- but from the wrong component on the end item. Other examples include changing oil and filters, but failing bring the component to operating temperatures prior to the “drain” phase or failing to allow the sump to drain completely. All these actions affect the quality of sample.

c. If there are extenuating circumstances that prohibit you from complying with laboratory recommendations, the AOAP lab should be notified.

d. After a component receives a 2nd Notice, a memorandum will be forwarded to the unit commander requesting assistance to resolve the discrepancy. This memorandum will be elevated up the chain of command until recommendations have been complied with. The objectives of the AOAP are to maintain equipment readiness by early detection of conditions that cause equipment failure; reduce maintenance/repair cost by removing equipment from service prior to catastrophic component failure and excessive component wear. Noncompliance with laboratory recommendations conflicts with Army Oil Analysis Program objectives.

3-8. INSTRUCTIONS FOR UPDATING/EDITING/TRANSFERRING COMPONENT DATA

Each authorized and serviced customer unit will have a database account established within the servicing laboratories Oil Analysis Standard Inter-Service System (OASIS) mini-computer network. The OASIS database is the Army database program used to manage your units AOAP. Every customers AOAP account is distinct since we utilize the customers specific Unit Identification Code (UIC) to manage all equipment placements within the OASIS database. In a larger sense, you own your particular OASIS account...and the supporting AOAP lab is held responsible to maintain your account for you at the laboratory. No changes should happen to your account without a specific written request from the owning customer unit. For each data change or correction required, the USAREUR AOAP has an established two-step process in place to effect those changes. We'll briefly explain it now, with detailed follow-up later in this section. First of all, each correction or update must be made to the ULLS box. Then, once the proper information is posted to ULLS, the AOAP Monitor will print out, verify and sign the ULLS-5991E (Oil Analysis Request). This is the source document for changes to the OASIS. The AOAP Monitor then provides this to the lab for update in the OASIS. Unit level monitors are responsible to ensure all data change information is clearly stated and highlighted in the remarks block of the ULLS 5991 before presenting this to the lab for OASIS update. Once the data is updated at the lab, this particular ULLS 5991 form is filed in the unit hard file at the supporting laboratory. In this way, there should always be an audit trail available to validate each data change and all information on the component enrollment reports.

a. Below, we provide detailed instruction and bullets to assist you in managing the AOAP data changes and corrections to your OASIS account:

(1) The method used in the USAREUR AOAP to change unit report data in the OASIS is the ULLS-5991E or DD Form 2026 (Oil Analysis Request). Requests for data corrections must be initiated and signed by the AOAP monitor in order for the lab to make data corrections and changes to the unit AOAP OASIS database.

(2) Memorandums and printouts **will not** be accepted to execute data corrections.

(3) Verbal or telephonic requests for data corrections **will not** be executed by the lab.

(4) Data changes/corrections information will **not be** submitted on the same form along with any required oil sample. If data corrections and oil samples are both required to be turned in at the same time, suggest data changes/updates be submitted separately from the oil sample, each on their own ULLS-5991E / DD Form 2026.

(5) Customer instructions must be clear and legibly stated on the Oil Analysis Request form in the Remarks block. Use a yellow or green highlighter to mark the instructions. This will make the request more apparent to lab personnel. All corrections, changes, and deletions that are relevant to data errors must be authorized by signature of the AOAP monitor before the lab will initiate the changes.

(6) Data corrections must be submitted to the AOAP laboratory before the 25th day of each month in order to ensure laboratory personnel can complete the updates prior to creating the following months official reports.

- (1) Incorrect end item and/or component model numbers enrolled.
- (2) Incorrect end item and/or component serial numbers enrolled.
- (3) Duplicate component enrollment for the same end item. (e.g. 2 engines)
- (4) Incorrect or no end item usage reported.
- (5) Incorrect admin/bumper numbers.

c. All the items listed in 3-8.B., (above) can be corrected simply by using the Oil Analysis Request form.

(1) All changes will be made in the ULLS database prior to being submitted to the AOAP laboratory.

(2) After changes have been made to the ULLS database, the correct information should appear in the data fields of the DA Form 5991-E. The incorrect information should be annotated in the "Remarks" block, along with instructions requesting the laboratory to delete the incorrect information. The lab will assume that all other information elsewhere on the form is correct. Samples are not required when making data corrections.

d. If an end item has had a component change, the unit must inform the lab to delete the **old component serial number** to avoid a delinquency. **First**, the unit should **enroll the new component** by submitting a sample to the lab accompanied with an Oil Analysis Request containing the correct information for the new component. Using a separate ULLS 5991, **in the "Remarks" block, annotate the old component serial number and instruct the lab to delete it.**

e. When equipment has been transferred to another unit and it is known where it was transferred to, please forward this information to the AOAP lab. This will allow the laboratory to transfer the equipment's history rather than deleting it.

f. The lab will not delete a component that requires (DA Form 3254-R) feedback; a properly completed DA Form 3254-R and any other required documentation and feedback must be provided before the component can be deleted from the printout.

g. Deletion of an entire company or battalion from the AOAP database requires a written and signed memorandum **signed by the Commander, XO, or a Warrant Officer** in the unit's chain of command. All end items/components and unit(s) affected must be identified. Each memorandum will include the specific Unit Identification Code (UIC) affected. The laboratory requests knowledge of where the equipment will be future maintained and located if known. The request should be addressed to the supporting laboratory (ATTN: AOAP Lab, Mannheim or AOAP Lab, Bamberg). Verbal requests for any deletions will NOT be executed.

h. Permanent Relocation/Temporary Deployment – Any time a unit relocates, either permanently or through deployment, the following procedures are necessary:

(1) The unit must notify the servicing laboratory concerning transfer/deployment schedules at least 30 days in advance of departure. Advance notice is required in order to provide the laboratory sufficient time for processing of pre-departure AOAP samples and to prepare records for transfer to the new supporting laboratory.

(2) The losing laboratory will forward equipment AOAP records directly to the gaining laboratory, unless directed otherwise.

i. Transient Equipment Records - Transient units are responsible for obtaining complete oil analysis records for their equipment from the losing laboratory and for delivery of the records to the gaining laboratory at the new operating site. If sufficient time is not available to comply with these procedures before departure, the losing laboratory will mail all required oil analysis records to the gaining laboratory.

3-9. PCS or TDY STATUS

a. PCS and TDY statuses are codes used by the AOAP lab and will appear on the monthly **Components Enrolled in Oil Analysis Report** after the lab has been notified that the unit is deploying. **All requests (memorandums) for equipment to be placed on TDY or PCS status must be signed by the Commander (see Para 3-9b below).**

b. Unit will attach the **Components Enrolled In Oil Analysis Report (CER)** to the memorandum requesting PCS or TDY status. Equipment to be placed on PCS/TDY status will be highlighted. If the unit will fax the CER to the lab, the unit must instead make a visible pen marking or asterisks to the right side of the component serial number instead of highlighting the component. Highlighter markings often times don't transmit when faxed to the lab.

c. When equipment is participating in field exercises (i.e., Grafenwoehr / Hohenfels): this does not constitute the need for TDY status. Routine sampling intervals still apply. Units will continue with routine and special sampling when on exercise. AOAP Monitors must pre-plan for this operational requirement.

3-10. MAINTENANCE STATUS

a. The AOAP allows units to place equipment in a special "MAINTENANCE" status when extenuating maintenance circumstances prevent the unit from drawing/taking a required oil sample. This action will temporarily defer the need to take the required oil sample, suspending the immediate need to submit the oil sample and allowing the unit to avoid a "delinquent" component status for any item placed in "MAINTENANCE."

b. If unit is unable to sample equipment due to maintenance related reasons, i.e., equipment in 3rd Shop, repair condition such that a proper fluid sample is not feasible, sample is equipment being painted, awaiting parts that prohibit the component from being sampled, etc., the AOAP lab should be contacted using the following procedures:

c. Required Unit Actions and Supporting Documentation to Place Equipment in Maintenance Status. **Verbal requests will NOT be accepted.** Unit will submit to the AOAP laboratory, one copy of ULLS 5990-E and/or ULLS 5988-E (or equivalent manual forms) indicating/ highlighting the reason the AOAP sample cannot be taken, along with one copy of the ULLS-5991 (Oil Analysis Request) form for **each component** belonging to the end item (all components belonging to the end item should be placed in "MAINTENANCE" status to avoid printout delinquencies). In the "Remarks" block of the Oil Analysis Request form, the unit AOAP Monitor must instruct the lab to place the equipment in "MAINTENANCE" status and then sign the request form.

When "Maintenance Status" is requested due to an associated maintenance related

reason (NMC-Maintenance), then requests will be submitted with a DA Form 2407/5990-E (Maintenance Work Order Request). Likewise, when a unit requests "Maintenance Status" due to a specific supply/parts problem, then the DA Form 2404/5988-E (Equipment Maintenance & Inspection Worksheet) will be provided to the lab. Only use this support documentation (2404/5988) if the equipment is awaiting a part (at the organizational level) that prohibits a sample from being taken.

d. To bring a component out of "MAINTENANCE STATUS," the unit simply submits a special oil sample and annotates the remarks block to read "Remove From Maint Status". If the unit performed any repairs or maintenance affecting the component, these should also be included in the remarks block of the Oil Analysis Request form.

3-11. SAMPLES SUBMITTED WITH INSUFFICIENT OIL OR INSUFFICIENT/DUPLICATE DATA

a. Samples submitted with insufficient oil or insufficient data such as, missing or obvious incorrect component serial numbers on the Oil Analysis Request form, **will not be processed**. Samples submitted with illegible Oil Analysis Request forms due to oil spillage during transit will not be processed.

Insufficient oil or insufficient data will result in delinquencies on the printout. Your equipment was sampled, but your serial number did not match the previously submitted serial number. The DD Form 2026/ULLS 5991-E Oil Analysis Request form will be returned to the unit stating the reason why the sample was not processed and the corrective action unit personnel should take. Personnel should follow the corrective action immediately to avoid printout problems. Table 1 contains component and end item serial number structures for reference.

b. If duplicate serial numbers are received (equipment claimed by another unit), the sample will be processed and the DD Form 2026/ULLS 5991-E will be returned to the unit asking the unit to verify ownership of the equipment. Verification should be done immediately.

c. Components with duplicate administrative numbers assigned in the AOAP database (bumper numbers within the unit) must be verified by the unit, if the laboratory requests verification.

d. It is the responsibility of the unit AOAP Monitor to ensure that the Oil Analysis Request form is accurate and complete. Repeated incorrect data problems may require visual inspection of the component/end item serial numbers, bumper numbers, etc

e. **End Item Usage Reporting:** When an ENG, XMSN, or HYD sample is submitted to the lab, the odometer reading of the end item must be recorded on each Oil Analysis Request. End item usage must be reported as miles, hours, or kilometers. If the end item does not have an odometer, record the hour-meter reading. If the increment of usage is not identified on the Oil Analysis Request, it will not be entered into the AOAP database. Failure to submit usage is reflected on the monthly Components Enrolled in Oil Analysis Report as a blank figure in the end-item usage column, meaning no end item usage was reported with

the last sample received at the lab. The report also provides a roll-up at the end of the report which shows total components and a percentage of components not reporting end item usage.

(1) When the end item has both an odometer and hour-meter, only record the odometer reading.

(2) Ensure total equipment usage is shown, i.e., the current meter reading plus usage from replaced meter(s). DD Form 314 (“Remarks” block) will indicate if the equipment had a meter replaced and the usage of the old meter.

(3) If the component is not installed in an end item, enter “uninstalled” on the Oil Analysis Request form. Usage reporting is NOT REQUIRED for end items not having an odometer or hour-meter.

3-12. COMPONENT ENROLLMENT

a. End items required to participate in the AOAP are listed in DA Pam 738-750 and the LOGSA website: http://weblog.logsa.army.mil/aoap/aoap_combat_.htm Each ground equipment category (i.e. Combat; Tactical; Construction; MHE; Support Equip-Generators) has its own specific equipment AOAP enrollment table on the website. Currently, the most up to date source for components requiring enrollment into the AOAP is the USAMC/LOGSA AOAP Program Director’s Homepage/Website (link above). This is the preferred technical reference source and should be used instead of the equipment listings published in Update 14, DA Pam 738-750. Some end items have multiple components requiring AOAP, i.e., an M984 has three components (ENG, XMSN, and HYD System), all of which must be enrolled and sampled.

b. Units should check their Components Enrolled In Oil Analysis Report monthly to ensure that all end items/components owned by their unit requiring AOAP are sampled IAW prescribed regulations and/or directives. Units should compare this listing to the AOAP enrollment requirements and a copy of the current unit property book listing.

c. Enrollment takes place by submitting to the lab a special sample from the component and the corresponding correctly annotated ULLS –5991. Ensure the “remarks block” states “initial enrollment”.

3-13. AOAP OFFICIAL MONTHLY REPORTS / PRINTOUTS

The AOAP official monthly reports / printouts are generated by the 5th normal duty day of each month and are expedited to supported units via APO, email or lab-pickup by unit personnel.

When email is the distribution method, laboratory personnel will convert all reports to an email capable file and provide an electronic copy of each of the reports listed in paragraph 3-13.a. (below), to the unit AOAP POC’s, as unit maintenance leadership requests and provides email addresses to the supporting laboratory. Email allows for a timely distribution of the official reports. As such, unit personnel receive the email reports much quicker than hardcopy. When email is the method of distribution, there will be no routine printed copy of reports distributed.

When hard copy is the method of official reports distribution, the Mannheim Laboratory Centers to will disseminate monthly printouts for non-aeronautical (ground) equipment units as follows to various command levels:

- a.** Division Levels will receive upon request:
 - (1) Copy of Components Enrolled Report
 - (1) Copy of Resample & Type Recommendation Report
 - (1) Copy of Laboratory Workload Summary Report

- b. Brigade Levels will receive upon request:
 - (1) Copy of Components Enrolled Report
 - (1) Copy of Resample & Type Recommendation Report
 - (1) Copy of Laboratory Workload Summary Report
- c. Battalion or Regiment Levels will receive:
 - (2) Copy of Components Enrolled Report
 - (2) Copy of Resample & Type Recommendation Report
- d. Unit Levels will receive:
 - (2) Copies of Components Enrolled Report
 - (2) Copies of Resample & Type Recommendation Report

e. The above dissemination will be provided only as indicated above. There are no mid-month reports generated by the laboratory. An additional copy of the official reports may be obtained in emergency cases only. Requests for additional copies of the monthly reports will be determined on a case-by-case basis, and will typically be emailed, when requested. Additional copies may be obtained when units deploy or relocate.

f. Some levels of command share official mailing address such as, a Battalion and Unit. Levels of command that receive official monthly reports for dissemination to subordinate elements are responsible for ensuring that subordinate elements receive the reports in a timely manner. The AOAP laboratory will not provide additional reports due to late dissemination within the unit chain of command.

- g. Information contained in the distributed official monthly reports:

(1) **Components Enrolled in Oil Analysis Report (CER):** is sorted by UIC and item serial number. It lists each end item and component enrolled, the date the last sample was taken, the last sample number assigned, the date next sample is due, end item & component usage, routine sample delinquencies, admin number assigned and a brief laboratory recommendation for the last sample analyzed for each enrolled component. This report is the most important communication link between the unit and the lab. This report is available by UIC or in some cases by a larger grouping of units, for example some battalions and brigades.

(2) **Resample and Type Recommendation Report (RTR):** is sorted by UIC and item serial number, when it is produced. The purpose of this report is to provide the supported customers with a snapshot of only those enrolled end items / components that have an outstanding abnormal sample analysis result and lab recommendation. This report will only be produced and distributed as a monthly official report, if the specific unit (by UIC) has any outstanding abnormal sample results for enrolled equipment. If, on the date the report was printed, there are outstanding abnormal sample results, then the report can be produced. If all components are "normal," then no report will produce.

This report lists each component, by end item and component serial number having an abnormal sample, along with a brief lab recommendation. The same data fields are present as were noted for the CER (above). The report also provides a simple sum total of outstanding abnormal components; a unit roll-up of the total number resample recommendations received during the reporting period; a roll-up of total resample recommendation actions not complied with during prior reporting periods, with a breakout covering several calendar periods. This report is available by UIC and in some cases by a larger grouping of units, for example some battalions or brigades.

(3) **Laboratory Workload Summary Report** is typically provided to Command Monitors, although some battalion and unit monitors will receive it if their monthly report distribution is by email. This report summarizes total end items enrolled, total components enrolled, percentage of end items having no usage data submitted, percentage delinquent, previous recommendations requiring feedback, total samples received, number of routine samples received, number of resample requests, special samples, total number of samples that were normal, total number of resample requested by the lab, total number of oil changes recommended by the lab, and the total number of maintenance actions recommended by the lab in UIC sequence for all units in brigade or equivalent commands. As with the previous reports, capability exists to produce this report by UIC and by some larger grouping or sort methods, such as battalion or brigade, depending on the unit needs.

h. Other Non-Standard OASIS Reports. The OASIS database system contains the capacity to produce a few other non-standard reports for our customers, on an as needed basis. If you would like to discuss this topic further, please contact your supporting AOAP Management Specialist.

3-14. AOAP RESPONSIBILITIES

a. Commanders. It is essential that Commanders at all levels ensure that implementation and procedures of AOAP are followed IAW AR 750-1, Para. 4-36; DA Form 738-750, chap. 4; TB 43-0211, USAREUR Supplement 1 to AR 750-1; MLC External SOP, and other applicable publications/memorandums.

(1) All units and levels of command must have a primary and alternate AOAP monitor who is adequately trained by the supporting laboratory. AOAP MONITOR DUTY APPOINTMENTS must be in writing and signed by the Commander. A copy of the duty appointment must be forwarded to the supporting AOAP laboratory to be maintained in the unit's record. Only AOAP monitors appointed by the Commander in writing will be allowed to transact AOAP business for their respective unit. Unit personnel who serve as an ALTERNATE monitor must also be appointed in writing with signature of the Commander; a copy should be furnished to the supporting laboratory. Recommend a copy of these Appointment Orders also be furnished/provided to the next higher command-level AOAP Monitor.

(2) Upon receipt of a DA Form 3254-R (Oil Analysis Recommendation and Feedback) issued by the AOAP laboratory, the unit Commander will place the equipment in a NOT MISSION CAPABLE STATUS until the maintenance action is completed.

(3) **Actions that require signature of the Commander, XO, or Warrant Officer:** (Please refer to paragraphs 3-2 through 3-9 of this SOP for details on each action):

a. Deletion of single/multiple enrolled end items from the unit AOAP OASIS database account. This could include equipment transferred out to another unit (UIC), equipment disposed of through Army supply channels or DRMO; or transfer to a Theater Fleet Refurbishment Program (TFRP).

b. Deletion of an entire company/battalion from the AOAP OASIS database.

b. Notification memorandum for permanent relocation or temporary deployment.

c. Equipment targeted for turn-in or labeled excess; or equipment otherwise no longer accounted for on unit property book.

d. Placement of equipment on TDY (see Para 3-12h & i), PCS, or STORAGE (see Para 3-2g, page 5) status.

e. DD Form 1556, Request, Authorization, Agreement, Certification of Training and Reimbursement, to enroll in the AOAP Monitor training course (Block 34).

b. Command Monitors, i.e., Division, Brigade, and Battalion-Level AOAP Monitors, should establish an adequate program to ensure that all participating units are well informed of the total program requirements IAW DA and USAREUR policies for the Army Oil Analysis Program. Command monitors are the central POC for all actions relevant to subordinate units within their command. It is essential that command monitors be knowledgeable of unit level AOAP in general and the policies/procedures outlined in this SOP, to include the following:

(1) Division/Brigade/Battalion monitors (and their assistants) will forward a copy of AOAP appointment(s) indicating their full name, rank, complete mailing address, and military/ commercial telephone number to the supporting AOAP laboratory and subordinate units.

(2) Command monitors (and assistants) must be trained/certified by the supporting AOAP laboratory. Command monitors must take the lead in establishing a basic training package for unit personnel thru coordination with subordinate AOAP monitors and/or MLC.

(3) Review the monthly AOAP Laboratory Workload Summary Report and initiate corrective action when the report reflects a problem in subordinate units.

(4) If the command monitor has requested that the monthly Components Enrolled In Oil Analysis Report or the Resample & Type Recommendation Report (the unit's copy) be forwarded for dissemination to subordinate units, it is essential that the report be forwarded to the units ASAP. Failure to forward the unit's copy to the unit in a timely manner will result in unnecessary AOAP problems such as, repeat notices, data errors, and delinquent samples. This also applies when recommendations from the lab are phoned or faxed to the command level.

c. Unit Monitors should establish a unit level AOAP program that monitors all phases of training, performance, and follow thru of the AOAP, to include:

(1) Provide the AOAP Command Monitor and the AOAP lab with a copy of their appointment as AOAP monitor indicating their name and the alternate monitor's name, rank, organization/complete mailing address, and military/commercial telephone number. AOAP Monitor duty appointment orders will be prepared and formatted per the example provided in this SOP (see figure 3-6) and must be signed by the Commander.

(2) Unit monitors must be trained/certified by the supporting laboratory. Training should take place NLT 90 days after the Commander has officially appointed personnel as AOAP Monitor.

(3) Ensure a sufficient supply of Oil Analysis Request forms and sampling supplies are on hand at all times.

(4) Ensure equipment users and maintenance personnel are instructed on the: proper techniques of drawing samples from the specific enrolled and proper equipment components; and properly trained in locating data plates that list relevant equipment serial numbers that are AOAP required.

(5) Ensure that the Oil Analysis Request form contains accurate and complete data.

(6) Ensure that routine and special sampling requirements are accomplished as prescribed by the applicable AOAP publication or instructions received from the laboratory.

(7) If the ULLS is used, ensure that the database is kept current and updated when changes occur.

(8) Ensure timely submission of samples to the laboratory using the most expeditious delivery mode available. First class mail, courier, and commercial express parcel delivery is to be used to meet response times. Use of bulk parcel post or similar lower rated service is prohibited. Regulation does not allow unit monitors to wait to assemble large sample batches to be assembled before delivery to supporting AOAP lab.

(9) Ensure the Commander is kept fully informed on the status of equipment maintenance, maintenance management, and readiness of equipment as reflected by Oil Analysis Laboratory Reports.

(10) Ensure the laboratory is kept up to date on any changes in the density of equipment and/or serial number changes of components, which are enrolled in the AOAP.

(11) Ensure that all AOAP required equipment/components belonging to the unit are enrolled in the AOAP.

(12) Ensure that all laboratory recommendations are complied with by unit maintenance personnel, and proper feedback is documented on the applicable forms and submitted to the laboratory from both the unit/support maintenance personnel as outlined in this SOP/IAW with applicable TBs and publications.

(13) Licensed Equipment Operators - Ensure each operator is given an AOAP training course of approximately two hours duration. Completion of the training should be annotated in Section III of the individual's DA Form 348. Training should be accomplished by knowledgeable personnel, i.e., Unit AOAP Monitors, MAIT personnel, or the supporting laboratory.

(14) Ensure that up-to-date AOAP guidance and publications are on hand for quick reference.

3-15 USAREUR AOAP Monitor Training/Certification

a. Personnel designated as AOAP Monitors must be trained/certified by the supporting laboratory (Mannheim Laboratory Center). Prior training received from other than the Mannheim Laboratory Centers is not valid in USAREUR. This includes training received during deployments to the Balkans. Unit personnel should contact the supporting laboratory for class schedules and requirements. (Please see chapter 1, General Information, of this SOP for the appropriate telephone numbers).

b. Training location Mannheim: (MLC), Coleman Barracks Bldg #50, Mannheim Germany.

c. Training location Bamberg: (MLC), Warner Barracks, Bldg #7487, Bamberg Germany.

d. Courses available:

- (1) AOAP Monitor certification/training for Battalion & Unit Level Monitors.
2 days (16 hrs) 0800-1600 hrs
- (2). AOAP Monitor certification/training for Division/Brigade Level Monitors.
4 hrs 0800-1200
- (3) Aeronautical Equipment AOAP Monitor certification/training (only).
4 hrs 0800-1200 hrs

e. Materials required for training:

(1) All unit personnel who have been appointed AOAP Monitor (Primary or Alternate) by the Commander must bring a properly formatted and completed copy of their appointment orders to the training class.

(2) DD Form 1556-1 (front page only) (Request, Authorization, Agreement, Certification of Training and Reimbursement) signed by the Commander, XO, or Warrant Officer in BLOCK #34 of the DD Form 1556.

f. Billeting is the student's responsibility. There is no billeting on Coleman Barracks. Students attending the course at the Bamberg AOAP laboratory, please contact the Warner Bks Guest House to make personal billeting arrangements, at DSN 469-7000.

g. Beginning FY02, USAREUR AOAP Monitor Certification is valid for 3 years.

h. On-site AOAP training is available upon written request from the Commander. On-site AOAP training will not be provided for less than 10 people. Contact your supporting laboratory for coordination.

4-1. Services Available:

The Material Testing Laboratory of MLC works under the direction of USAREUR Suppl. 1 to AR 750-1 and AE Reg 710-2. The laboratory offers the following services:

- a. Cyclic testing of Government supplies (shelf life item surveillance and testing).
- b. Procurement acceptance testing (pre-purchase and control testing, surveillance of contractor performance etc.).
- c. Quality control of industrial operations.
- d. Testing and analysis of POL products (also in connection with equipment failure or for suspected contamination).
- e. Analysis for and identification of contaminants in soil, water etc.
- f. Consultant support in all areas of material analysis, testing and use.

4-2. Type of Materials Tested

The Material Testing Laboratory of MLC tests and analyzes all kinds of material used by the Army with the exception of medical items and food. Examples of material tested are given in the list below:

- a. Coating products like paint, varnish, lacquer, enamel, Chemical Agent Resistant Coating, primers, dent fillers, etc.
- b. Chemical products like solvents, thinners, degreasing agents, insect repellants, organic and inorganic chemicals, penetrants, battery acids, antifreeze, coolants and heat transfer media, etc.
- c. Preservation products like preservative compounds, corrosion preventive compounds, barrier material, etc
- d. Adhesives and related material like epoxy adhesives, acrylic adhesives, paper adhesives, paper and plastic tapes, sealing material, rubber cement, etc.
- e. Cleaning products like soap, windshield cleaners, fingerprint remover, cleaning compounds, etc.
- f. POL products like lubricating oil, hydraulic fluid, brake fluid, fuel, grease, transformer oils, etc
- g. Other items like metals, paper products, rubber products, wood and wood products, etc.
- h. The laboratory also performs analyses for environmental contamination of soil, water, wood, etc.

Note: If you do not find the material you would like to have tested in the listing above, please give us a call (Tel DSN: 382-4115/5221, COMM: 0621-779-xxxx) and we will find a way to support you.

4-3. Material Testing Sample Submission Instructions & Procedures:

Samples will be accepted for testing from USAREUR procurement, quality assurance and engineering agencies and/or commanders or their designees of USAREUR units and agencies. Laboratory services are free of charge to these authorized customers. All other customers please contact the laboratory prior to submitting samples for guidance. Samples of shelf life items for shelf life extension testing may be submitted to the laboratory if the samples represent material in stock valued at \$100 or more.

Samples should be sent to:

Director, Mannheim Laboratory Center
ATTN: Material Testing Branch
CMR 418
APO AE 09058-9702

If possible, please send your samples to the laboratory together with a properly filled DD Form 1222. If you do not have access to this form, please state on a sheet of paper your analysis request, together with your address and a POC at your unit and we shall cut the form here at the laboratory.

Analysis of samples that have not been properly collected, prepared, preserved, or transported wastes Government resources and laboratory time. The laboratory will offer advice and assistance on sample preparation, packaging, and delivery. Whenever possible send samples in their original container to the laboratory. If this is not possible, please contact the laboratory for further information on how to submit these samples.



FIGURES/EXAMPLES



MANUAL OIL ANALYSIS REQUEST (AERONAUTICAL)

OIL ANALYSIS REQUEST			KEYPUNCH CODE
TO	OIL ANALYSIS LAB Mannheim APO AE 09028		1-3
R O M	MAJOR COMMAND	3RD COSCOM	4
	OPERATING ACTIVITY (Include ZIP Code/APO) DODAAD	B Co 8/158th Avn Regt 09165	5-10
	EQUIPMENT MODEL/APL	Engine	11-14
	EQUIPMENT SER. NO.	LE18896R	15-20
	END ITEM MODEL/HULL NO.	UH-1H	
	END ITEM SER. NO./EIC	7221622	
	DATE SAMPLE TAKEN (Day, Mo., Yr)	24 Mar '96	21-24
	HOURS/MILES SINCE OVERHAUL	212	25-28
	HOURS/MILES SINCE OIL CHANGE	78	30-33
	REASON FOR SAMPLE LAB	<input type="checkbox"/> ROUTINE <input type="checkbox"/> REQUEST <input type="checkbox"/> TEST <input checked="" type="checkbox"/> OTHER (Specify)	34
	OIL ADDED SINCE LAST SAMPLE (Pts., Qts., Galts)	13 qts.	35-38
	ACTION TAKEN		
	DISCREPANT ITEM		
	HOW MALFUNCTIONED		
	HOW FOUND	<input type="checkbox"/> LAB REQUEST <input type="checkbox"/> AIR OR GROUND CREW	
	HOW TAKEN	<input type="checkbox"/> DRAIN <input type="checkbox"/> TUBE	37-38
	SAMPLE TEMPERATURE	<input type="checkbox"/> HOT <input type="checkbox"/> COLD	
	TYPE OIL	23699	
	REMARKS	CHIP LIGHT POC & Telephone number 3690.5 Hrs.	
	FOR LAB USE ONLY		
	SAMPLE RESPONSE TIME		39-40
	FE 41-43	AG 44-46	AL 47-49
	CR 50-52	CU 53-55	MG 56-58
	NI 59-61		
	PB 62-64	SI 65-67	SN 68-70
	TI 71-73	MO 74-76	
	LAB RECOMMENDATION		
	77-78		
	SAMPLE NO.	SIGNATURE	FILE MAINT
			79
			DATA SEQ
			80

DD FORM 2026 NOV 77 2026 PREVIOUS EDITION WILL BE USED

**Figure 2-1. DD Form 2026
(Manual Aeronautical Oil Analysis Request)**

Supplies

To ensure compliance with AOAP requirements, keep an adequate stock of sampling supplies on hand. This chart gives basic information about supplies needed to sample aeronautical and nonaeronautical equipment. If your equipment has a sampling valve, you do not need the oil-sampling pump or tubing. (It is Recommended a 90-day supply of expendables be stocked.)

Non-Aero NSN	Item	Aero NSN
8125-01-082-9697 (NOTE 1)	 Sampling Bottle 	8125-00-933-4414
4930-01-119-4030	Pump, Oil Sampling	N/A
N/A	3/8-in Plastic Tubes 15-in long 30-in long 	4710-00-933-4415 4710-01-087-1629
4720-00-964-1433	 Nonmetallic tubing 1/4 in outside diameter	N/A
8105-00-290-0340	Shipping Sack 	8105-00-290-0340
8105-00-837-7754	 Plastic Bag	8105-00-837-7754 8105-00-837-7753
8125-01-193-3440	Mailer Kit (NOTE 2)	N/A
NOTES: (1) The three ounce nonaeronautical plastic sampling bottle will be used for submitting grease samples. (2) The mailer kit, NSN 8125-01-193-3440, is leakproof and contains 24 nonaeronautical sampling bottles, plastic shipping sacks, and mailing cartons. It is used when shipping samples through the U.S. Postal Service.		

NOTE:
 REFER TO TB 43-0211 TO LOCATE REPAIR / SPARE PARTS FOR THE AOAP SAMPLING PUMP, TO INCLUDE ALL THE DIFFERENT NSNs FOR THE O-RINGS.

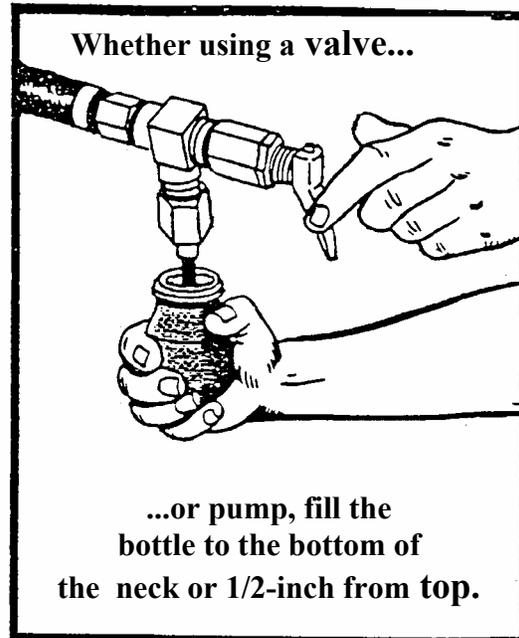
Figure 3-1. AOAP Sampling Supplies.

Taking a Non-Aeronautical Oil Sample

Valve Method:

To make sampling easier, sampling valves are installed on many items of non-aeronautical equipment according to instructions in the now obsolete publication: TM 9-2300-422-23&P.

To take a sample with a valve, you may need to start the engine to pressurize the system. The lab recommends you allow the system to come to operating temperature. Once the oil starts to flow, flush a small amount (approx. 1/2 pint or 8 oz / 250 ml.) of oil from the line to clear out contamination. Then fill the sample bottle from the valve.



Fill the sample bottle to a point approximately one-half inch (1 1/2 cm) from the top of the bottle. An east rule of thumb is to fill to a point where the bottleneck just starts to round off.

Secure the cap snugly, but not over-tight. Clean off any spills and mark the plastic bottle with the component identification information, making sure to include the component serial number.

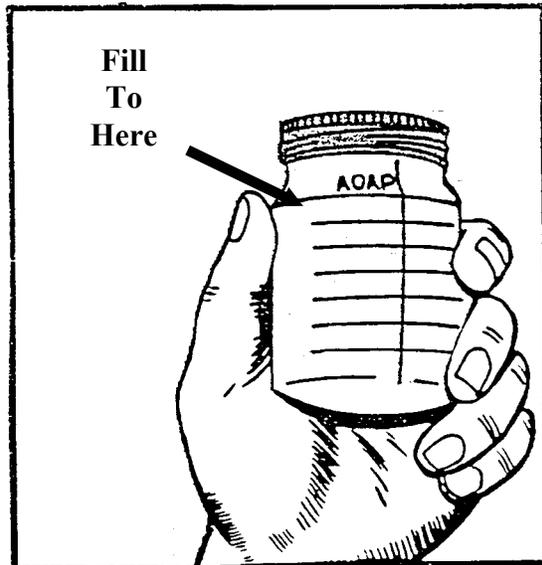
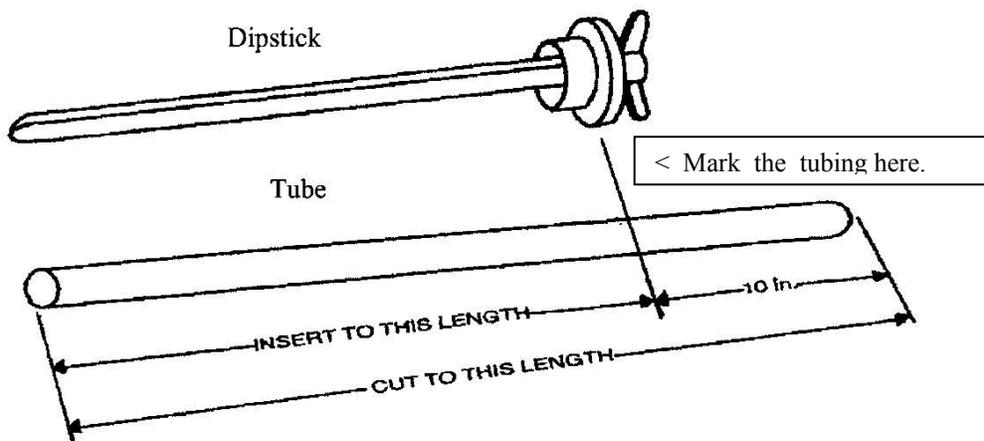


Figure 3-2. Sampling Using The Valve Method

Pump Method:

Sampling from equipment that has no sampling valve takes more time. First measure the dipstick length and mark the tubing at the same length as the dipstick is inserted into the dipstick. Mark the tubing with this length for future use. Now, cut the tubing at some point beyond this mark, but a minimum of 10 inches longer than the dipstick mark.



Loosen the T-handle on the pump. Insert the plastic tubing about 1/2 inch into the bottle. Tighten the T-handle just enough to grip the tubing firmly. Remove the filler cap or dipstick from the oil reservoir. Insert the tubing into the reservoir to the point you marked on the tubing. **This mark should prevent you from letting the tubing touch bottom.** If the tube touches the bottom, sludge will be picked up, and the laboratory will request another sample.

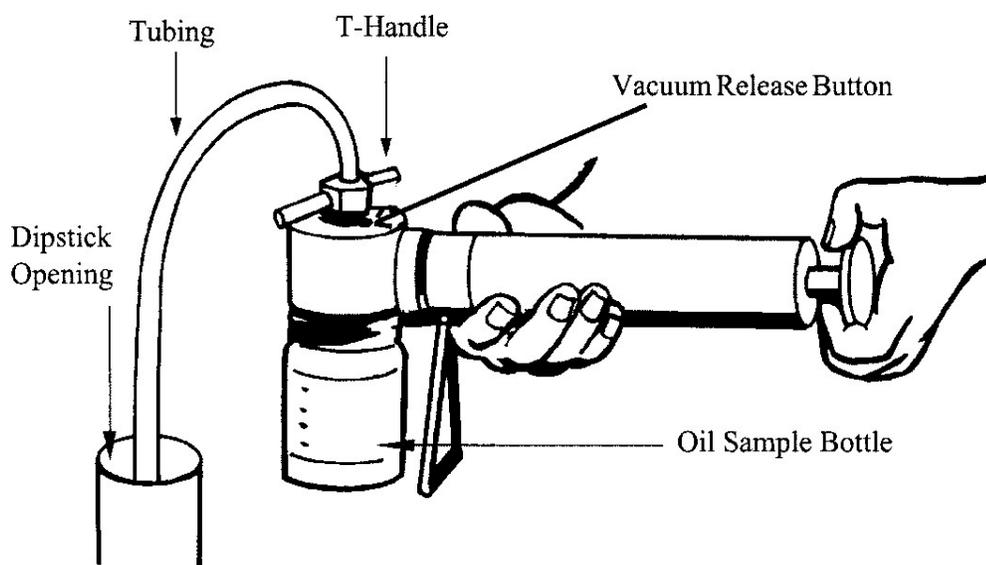


Figure 3-3. Sampling Using The Pump Method

Pull the pump handle out slowly. Oil should flow into the sample bottle.

Fill the sample bottle to the bottom of the neck or about 1/2 inch from the top of the bottle. Push the vacuum release button when you have enough oil. Do not let oil get into the pump. If oil does get into the pump, clean it thoroughly.

Remove the tubing from the dipstick opening. Unscrew the sample bottle and replace the bottle cap. Use a clean rag or tissue to wipe off any oil on the tip of the tube. Then pull the tube out of the pump head. Discard the tubing.

Whether you take your sample by valve or pump, enter end item and component serial numbers on the sample bottle and make sure information on DD Form 2026/ULLS 5991-E are correct and complete. Then get the sample; along with the DD Form 2026/ULLS 5991-E, to the AOAP Monitor or ULLS clerk for processing, whichever one is designated in your unit. This Warfighter will see that it is sent to your AOAP laboratory by the fastest means available.

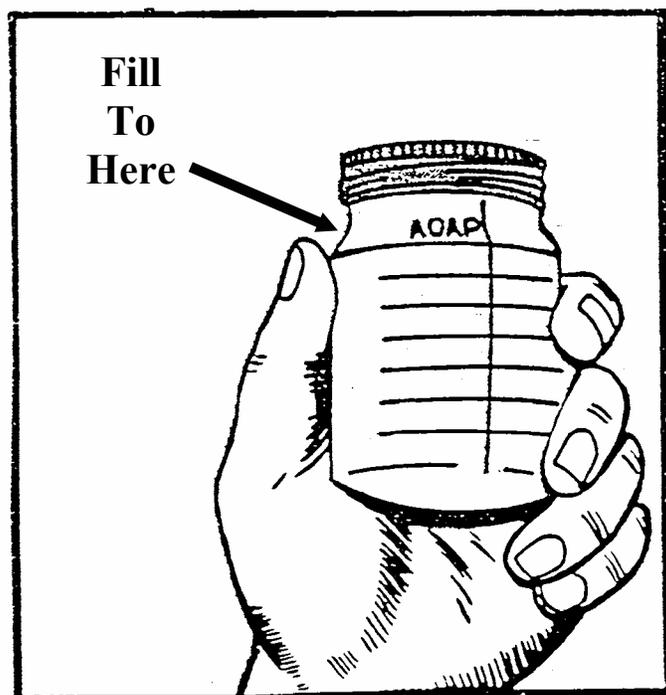


Figure 3-3a. Sampling Using The Pump Method - Continued

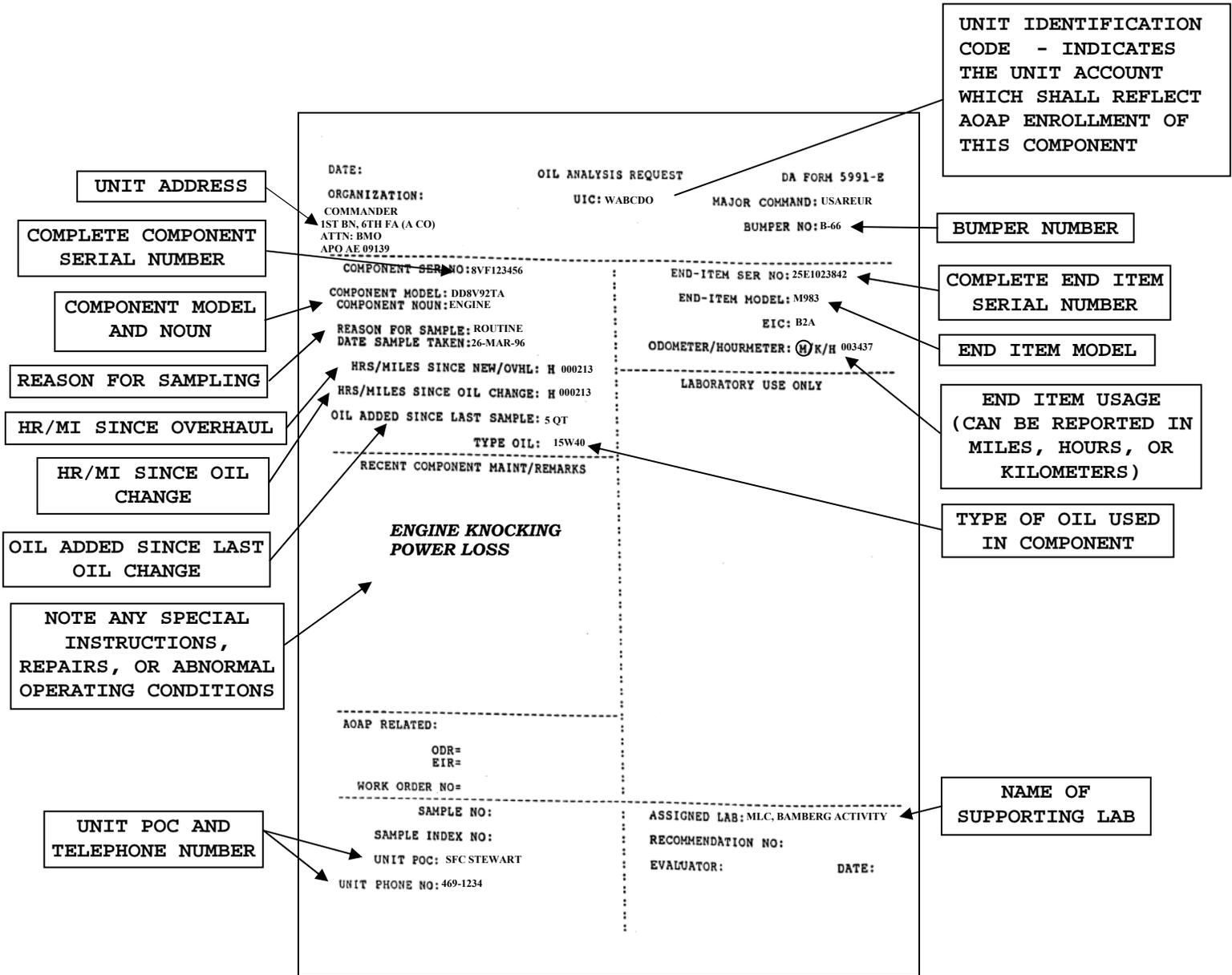
MANUAL OIL ANALYSIS REQUEST (NON-AERONAUTICAL)

OIL ANALYSIS REQUEST			KEYPUNCH CODE
TO	OIL ANALYSIS LAB Mannheim APO AE 09028-3		8-3
FROM	MAJOR COMMAND SARUER / 3RD COSCOM		
	OPERATING ACTIVITY (Include ZIP Code/APO) DODAAD B Co 8/158th Avn Regt 09165		5-10
	EQUIPMENT MODEL/APL Engine DD8V92TA		11-14
	EQUIPMENT SER. NO. 8VF123456		15-20
	END ITEM MODEL/MULL NO. M978		
	END ITEM SER. NO./EIC 20E102236		
	DATE SAMPLE TAKEN (Day, Mo., Yr) 24 Mar 96	LOCAL TIME SAMPLE TAKEN	21-28
	HOURS/MILES SINCE OVERHAUL 212		29-30
	HOURS/MILES SINCE OIL CHANGE 78		30-33
	REASON FOR SAMPLE <input type="checkbox"/> ROUTINE <input type="checkbox"/> REQUEST <input type="checkbox"/> TEST CELL <input checked="" type="checkbox"/> OTHER (Specify)		34
	OIL ADDED SINCE LAST SAMPLE (Pts, Qts, Gall) 13 qts.		35-38
	ACTION TAKEN		
	DISCREPANT ITEM		
	HOW MALFUNCTIONED		
	HOW FOUND <input type="checkbox"/> LAB REQUEST <input type="checkbox"/> AIR OR GROUND CREW		
	HOW TAKEN <input type="checkbox"/> DRAIN <input type="checkbox"/> TUBE	SAMPLE TEMPERATURE <input type="checkbox"/> HOT <input type="checkbox"/> COLD	TYPE OIL 15W40
	REMARKS LOSS OF POWER POC & Telephone number 10,514 Miles		37-38
	FOR LAB USE ONLY		
	SAMPLE RESPONSE TIME		39-40
	FE 41-43	AG 44-46	AL 47-49
	CR 50-52	CU 53-55	MG 56-58
	NI 59-61	PB 62-64	SI 65-67
	SN 68-70	TI 71-73	MO 74-76
	LAB RECOMMENDATION		77-78
	SAMPLE NO.	SIGNATURE	FILE MAINT 79
			DATA SEQ 80

FORM DD 1 NOV 77 2026 PREVIOUS EDITION WILL BE USED

**Figure 3-4. DD Form 2026
(Manual Oil Analysis Request, Ground Equipment)**

ULLS GENERATED OIL ANALYSIS REQUEST (NON-AERONAUTICAL)



**Figure 3-5. ULLS 5991-E
(Oil Analysis Request, Ground Equipment)**

DEPARTMENT OF THE ARMY
HEADQUARTERS, 1ST BATTALION (PATRIOT), 8TH AIR DEFENSE ARTILLERY
UNIT 00091
APO AE 09999

AVCRS-GR-HQ

15 AUGUST 03

MEMORANDUM FOR AOAP Lab Chief, Mannheim or Bamberg

SUBJECT: AOAP Monitor Additional Duty Appointment

1. Effective 15 AUG 031, WO1 Mel Gibson is appointed as Battalion Primary AOAP Monitor for 1st Battalion, 8th Air Defense Artillery.
2. AUTHORITY: AR 750-1
3. PURPOSE: To perform duties as required by applicable regulations.
4. PERIOD: Until officially relieved.
5. SPECIAL INSTRUCTIONS: N/A
6. To contact AOAP monitor: DSN Tel: 385-1010, DSN Fax 385-1927; email address: mel.gibson@cmtymail.100asg.army.mil.

TOM A HANKS
LTC, AD
Commanding

DISTRIBUTION:
1- Soldier Concerned
2- File

***Figure 3-6. Example Memorandum
(AOAP Monitor Additional Duty Appointment Orders)***

DEPARTMENT OF THE ARMY
HEADQUARTERS, 1ST BATTALION (PATRIOT), 8TH AIR DEFENSE ARTILLERY
UNIT 00091
APO AE 09999

AACR-GG-HQ

30 JUL 03

MEMORANDUM FOR AOAP Lab Chief, Bamberg or Mannheim

SUBJECT: **Unit Deployment** (without equipment)

1. Effective 20 SEP 03, 1/8 ADA Battalion will deploy to Macedonia. Equipment will remain in garrison at the motorpool in non-operational use. No PMCS or maintenance will be performed during the unit deployment period. Please place unit equipment in **STORAGE** status within the AOAP OASIS database, as noted on the attached highlighted AOAP Components Enrolled In Oil Analysis Reports.

2. The following UICs will deploy without equipment:

UIC: **WD4XT0 (HHB 1/8 ADA)** **WD4XA0 (A Co, 1/8 ADA)**
 WD4XB0 (B Co, 1/8 ADA) **WD4XC0 (C Co, 1/8 ADA)**

3. POC this action is CW3 Gene Hackman, AOAP monitor, DSN 424-7800.

JENNIFER A. LOPEZ
LTC, FA
Commanding

Example Memo: Unit Deployment (without equipment)
For large density, it is required that a current copy the AOAP printout with highlighted equipment be attached to the above memorandum, & forwarded to the lab.

Figure 3-7. Example Memo: Unit Deployment (without equipment)

**DEPARTMENT OF THE ARMY
HEADQUARTERS 82ND ENGINEER BATTALION
UNIT 00091
APO AE 09999**

ARAA-ENG-HQ

04 AUG 03

MEMORANDUM FOR AOAP Lab Chief, Bamberg or Mannheim

SUBJECT: **Unit Deployment (with equipment)**

1. Effective 05 SEP 03, Alpha Company, 82nd Engr Battalion will deploy to Bosnia with equipment. Request the equipment identified on the attached AOAP Components Enrolled in Oil Analysis printout be placed in PCS status during this deployment.
2. UIC: **WANEE0 (A Co. 82nd Engr Bn)**
3. POC is SFC Jodie Foster, AOAP monitor, DSN 444-0001.

ANTHONY S. HOPKINS
LTC, EN
Commanding

Example Memo: Unit Deployment (with equipment)

For large density, it is required that a copy the AOAP printout with highlighted equipment be attached to the above memorandum, & forwarded to the lab.

Figure 3-8. Example Memo: Unit Deployment (with equipment)

DEPARTMENT OF THE ARMY
HEADQUARTERS, 621ST MSB
UNIT 00091
APO AE 09999

ARRC-MSB-HQ

12 Jul 03

MEMORANDUM FOR AOAP Lab Chief, Mannheim or Bamberg

SUBJECT: **Equipment Turn-in**

1. The following equipment has been turned-in, and is no longer on unit property book. The equipment was transferred to the Theater Fleet Refurbishment Program (TFRP), at Maintenance Activity Kaiserslautern (MAK), Kaiserslautern, Germany.
2. Please deleted equipment from UIC: WWWHTO/HQ 621st MSB in the AOAP database.
3. Equipment:

<u>BUMPER #</u>	<u>END ITEM SER. #</u>	<u>COMP MODEL</u>	<u>END-ITEM MODEL</u>	<u>COMP SERIAL #</u>
A-16	054689	ENGINE	M35A3	5RM12345
B-70	29F1026789	ENGINE	M977	8VF123456
B-70	29F1026789	TRANS.	M977	2510165897
C-66	27E1026657	ENGINE	M984	8VF105245
C-66	27E1026657	TRANS	M984	25100676516
C-66	27E1026657	HYD	M984	27E1026657

4. POC is SFC Gene Hackman, AOAP Monitor, DSN 445-3600.

Billy Martin
MAJ, OD
XO

EXAMPLE MEMO: Equipment Turn-in:
For large densities, it is required that the AOAP printouts for each unit be highlighted and attached to the above memorandum.

**Figure 3-9. Example Memo:
Equipment Turn-In ~ Equipment No Longer On Unit Property Book**

PAPERWORK REQUIRED BY THE LAB TO PLACE EQUIPMENT IN MAINTENANCE STATUS

ULLS OR MANUAL GENERATED OIL ANALYSIS REQUEST FORM (ULLS 5991-E OR DD 2026)

**NOTE: IT IS RECOMMENDED THAT ALL
COMPONENTS BELONGING TO THE END
ITEM BE PLACED IN MAINTENANCE.**

ULLS OR MANUAL GENERATED MAINTENANCE REQUEST FORM (ULLS 5990-E OR 2407)

DATE: 20030722 OIL ANALYSIS REQUEST DA FORM 5991-E

ORGANIZATION: UIC: WJCU70 MAJOR COMMAND: 7TH ATC
 COMMANDER BUMPER NO: HQ133
 HHC 1-4 INF BN
 UNIT 20211
 APO AE 09173

COMPONENT SER NO: 2510103395 END-ITEM SER NO: 2401028702
 COMPONENT MODEL: DDA-H740D END-ITEM MODEL: M978
 COMPONENT NOUN: TRANSMISSION EIC: B2H
 REASON FOR SAMPLE: ROUTINE ODOMETER/HOURMETER: M 008664
 DATE SAMPLE TAKEN: 20030722

HRS/MILES SINCE NEW/OVHL: H 002200
 HRS/MILES SINCE OIL CHANGE: H 002200
 OIL ADDED SINCE LAST SAMPLE: 000

TYPE OIL: 15W40
 RECENT COMPONENT MAINT/REMARKS

**PLEASE PLACE IN
MAINT STATUS.
EQUIPMENT IN DS
FOR REPAIRS.
5990/5988
ATTACHED**

AOAP RELATED:
 ODR=
 EIR=
 WORKORDER NO=

SAMPLE NO: ASSIGNED LAB: USAREUR AOAP LAB
 SAMPLE INDEX NO: 4987 RECOMMENDATION NO:
 UNIT POC: SPC STARKS EVALUATOR: DATE:
 UNIT PHONE NO: (000)466-2179

DATE: 27-OCT-92 MAINTENANCE REQUEST DA FORM 5990-E

UTIL CODE: 0 UIC: WH99B0 B CO 703 INF BN PHONE: (803)212-3131
 SUP WON: SUP UIC: WH99BA B CO 703 MAINT BN PHONE: 331-2820
 SHOP SEC:

EQUIPMENT DATA
 TYPE MNT REQ: 1 ID: A NSN: 2320005798985 MODEL: MB84
 NOUN: TK CGO 1.25T SER NUM: W24BE752114595 QTY: 00001
 ORG WON: H99801200015 PRIORITY: 12 FAILURE DETECTED: D
 MI/KM: M 038375 HOURS: 000000 ROUNDS:
 IN WARRANTY: N LEVEL OF WORK: F ADMIN NUM: B8
 MALFUNCTION/REMARKS: TRANSMISSION FAILURE
 PD AUTHENTICATING SIGNATURE: _____

SIGNATURE DATA
 SUBMITTED BY: _____ ORD DATE: _____ MIL TIME: _____
 ACCEPTED BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____

ACTION DATA
 WORK STARTED BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____
 INSPECTED BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____
 PICKED UP BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____

COMPLETION DATA
 QTY RPR: _____ QTY CONDEMNED: _____ NRTS: _____
 EVAC WON: _____ EVAC UNIT NAME: _____

**THE CORRECT PAPERWORK REQUIRED BY YOUR AOAP LAB TO PLACE
COMPONENTS IN MAINTENANCE STATUS IN THE AOAP OASIS DATABASE**

**Figure 3-10. Required Documentation to Place Components
in Maintenance Status Within the AOAP OASIS Database.**

DATE: 27-OCT-92

MAINTENANCE REQUEST

DA FORM 5990-E

----- CUSTOMER DATA -----

UIC: WH99B0
UTIL CODE: 0

B CO 703 INF BN

PHONE: (883)212-3131

----- ACTIVITY DATA -----

SUP WON:
SUP UIC: WH99BA

B CO 703 MAINT BN

PHONE: 331-2820
SHOP SEC:

----- EQUIPMENT DATA -----

TYPE MNT REQ: 1 ID: A NSN: 2320005798985 MODEL: M894
NOUN: TK CGO 1.25T SER NUM: W248E7S2114595 QTY: 00001
ORG WON: H99B01200015 PRIORITY: 12 FAILURE DETECTED: D
MI/KM: M 038375 HOURS: 000000 ROUNDS:
IN WARRANTY: N LEVEL OF WORK: F ADMIN NUM: 88

MALFUNCTION/REMARKS: TRANSMISSION FAILURE

PO AUTHENTICATING SIGNATURE: _____

----- SIGNATURE DATA -----

SUBMITTED BY: _____ ORD DATE: _____ MIL TIME: _____
ACCEPTED BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____

----- ACTION DATA -----

WORK STARTED BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____
INSPECTED BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____
PICKED UP BY: _____ STATUS: _____ ORD DATE: _____ MIL TIME: _____

----- COMPLETION DATA -----

QTY RPR: _____ QTY CONDEMNED: _____ NRTS: _____
EVAC WON: _____ EVAC UNIT NAME: _____

**Figure 3-11. ULLS 5990-E
(Maintenance Request)**

OIL ANALYSIS RECOMMENDATION AND FEEDBACK For use of this form, see DA PAM 738-750. The proponent agency is AMC.		REQUIREMENT CONTROL SYMBOL CSGLD-1818
1. TO: FIELD (Include ZIP Code and Telephone Number) CDR 55 PERS SERV BATT ATTN: MAINT OFFICER ATTN: AEUPE-PSB-H-PAC CMR 470 APO, AE 09165 US ARMY EUROPE	3. LAB RECOMMENDATION NUMBER A7S2451571001	4. END ITEM MODEL M4K
	5. END ITEM SERIAL NUMBER 9150142	6. COMPONENT TYPE CASE-207D -ENG
	7. COMPONENT SERIAL NUMBER 4323380	8. COMPONENT TIME (Hours/Miles) 0 Hours Reported
2. FROM: LABORATORY (Include ZIP Code) MANNHEIM LABORATORY CENTER UNIT 29702, BOX 301 ATTN: AERSC-MLC APO, AE 09028 Comm: 49-621-779-5246 FAX: 382-4302 DSN: 382-5208/5131 email: ismail.alsaadi@hq.21tsc.army.mil	9. RECOMMENDATION AND REASON FOR ACTION <u>TEST FAILED</u> Physical <u>LAB FINDINGS</u> Fuel VISC/70	TEC CODE BUMP NO SAMPLE NO DJVA P-25 03393 Do Not Operate Do not Chg Oil or Filt Until Corrected. Inspect/Repair: Fuel System When Corrected, Chg Oil & Filt, Resamp After 1 Hr Op. Contact Support For Assistance (IF NECESSARY)
10. SIGNATURE AND TITLE OF INITIATOR SCH	11. DATE (Day/Month/Year) 27 January 2000	12. NOTE FOR ARMY AVIATION ONLY Send copy of this form to: Commander, Corpus Christi Army Depot ATTN: AMSAM-MMC-VS-ECP, (STOP 55) 308 Crecy Street Corpus Christi, TX 78419-5260
14. FEEDBACK (Maintenance Performed/Action Taken) [] Repaired Air Induction System. Parts Repaired/Replaced: _____ [] Repaired Brake/Steering System. Adjustments Made: _____ [] Repaired Fuel System. Parts Repaired/Replaced: _____ [] Repaired Cooling System. Parts Repaired/Replaced: _____ [] Changed Oil. Serviced/Replaced Oil Filter(s). Submitted [] Teardown Performed. 2407 Attached. Major Findings/Comments: _____ Evacuated To []Ds, []Gs, []Depot. Job Order# _____ New Component Serial Number: _____ Remarks:		13. QDR NUMBER
15. FROM: FIELD DEPOT MAINTENANCE PERSONNEL [] ORG [] DS / [] GS Signature And Title Of Maint Supervisor/Monitor	16. DATE (Day/Month/Year)	17. TO LABORATORY UNIT 29702, BOX 301 ATTN: AERSC-MLC APO, AE 09028

DA FORM TEST 3254-R

**Figure 3-13. DA Form 3254-R (Issued by the AOAP Lab)
Oil Analysis Recommendation and Feedback**

MAINTENANCE RECOMMENDATION (3254-R) FOLLOW UP PAPERWORK REQUIRED BY THE LABORATORY AFTER COMPLETION OF MAINTENANCE

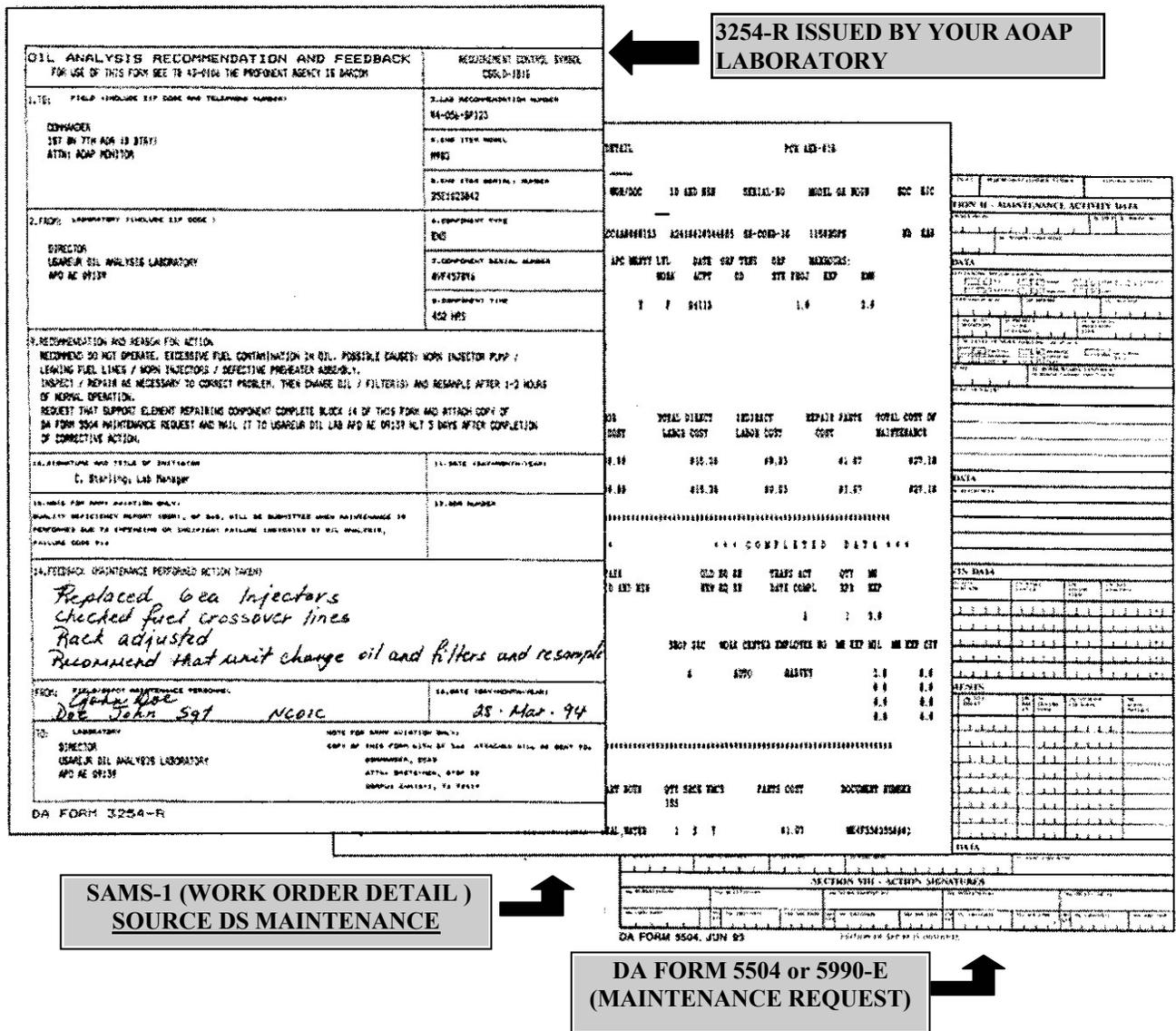


Figure 3-14. DA Form 3254-R with Unit Feedback Report, Sams-1 Work Order Detail and the DA 5990-E Maintenance Request Attached

AOAP PRESSURE SENSITIVE LABELS

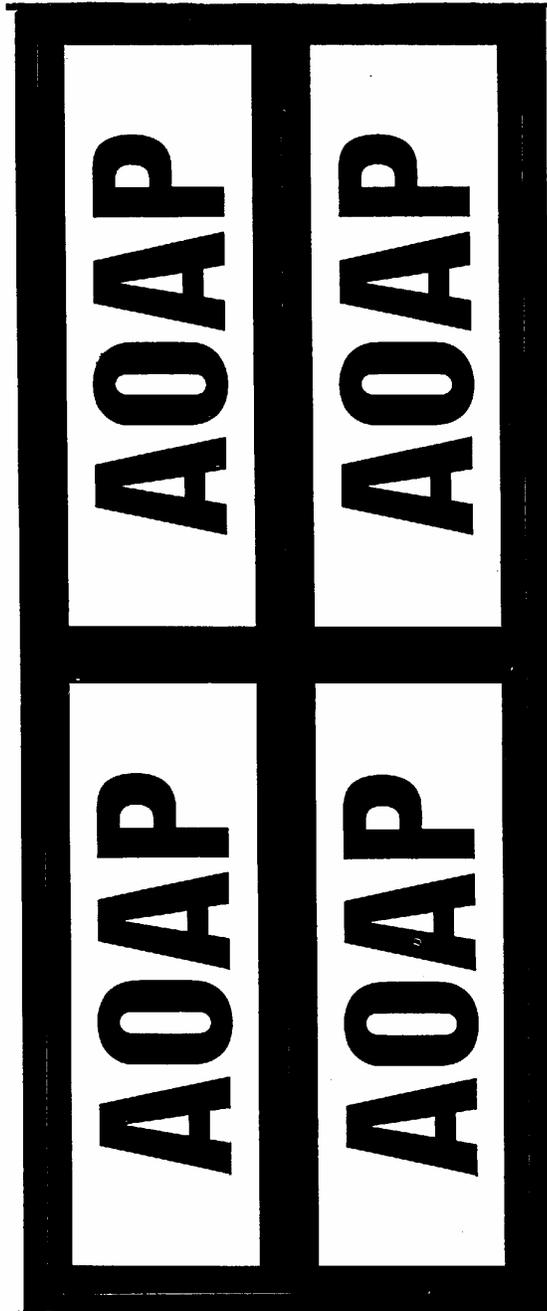


Figure 3-15. Sample of AOAP Component Labels Issued by the AOAP Lab Along with Each “DA Form 3254-R”

**Non-Aeronautical
Components Enrolled in Oil Analysis Report**

For MANNHEIM LABORATORY CENTER
Report Date: 18 Aug 2003

Report Period Ending
31 Jul 2003

Sort Code: 102

UIC: WCAY99

Unit Name: 123 MAINT.CO.

Address: UNIT: 45632

BAMBERG,APO, AE 09139

Bump #	End-Item Mod	End Item S/N	E/I Meter Reading	Component Mod	Component S/N	Since Overl	Since Oil Chg	Sample No	Date Sampled	Next Due	Days Dig	Recommendations
B-1	M998	055343	27425M	6.2 L DIESEL	NG3DSME1	2742H	2742H	0655A	06 Feb 2003	05 Aug 2003	0	Normal
D-1	M998	055768	24280M	THM-3L80	NG3ATBT1	2508H	2508H	02003	30 Jul 2002	30 Jul 2003	Due	Normal
HH311	M978	2XG1026288	31160M	DD8V92TA	8VF146778	890H	886H	1515A	14 Nov 2002	13 May 2003	0	Normal
E-162	M1A1	5A076U	999999N	AGT-1500	LE90472	999999H	99999H	03675	22 Apr 2002	21 Jun 2002	0	Normal
SCOOP1	MW24C	9157533	539H	HYD SYS	9157533	999999H	100H	0406A	27 Oct 2001	27 Oct 2002	277	Normal
A-4	M923	C52302669	105M	MT654	2420024767	105H	105H	SP191	18 Jul 2003	17 Jul 2004	0	Abnormal Findings Check Type Oil and Source Resample ASAP!
H-801	M923	C52303153	M	NHC-250	11146574	57866M	57866M	03486	22 Jul 2003	18 Jan 2004	0	Abnormal Findings Do Not Change Oil Resample ASAP!
B-23	M113A3	MSJ12415MU	2674M	DD6V53T	6D242205	30M	30M	00S87	07 Aug 2003	06 Oct 2003	0	Contamination Confirmed Fuel Dilution Do Not Operate! Inspect and Repair Fuel System Do Not Change Oil or Filter until Prob Corrected Resample after 1 hours of operation

Total Components Enrolled =	8	Total Recommendations With No Feedback =	1
Total End Items Enrolled =	8	Total Components Delinquent =	1
Total End Items With No Usage Reported =	2	Percentage End Items With No Usage Reported =	25%

Figure 3-16. Sample Copy of an AOAP Lab OASIS Database "Components Enrolled In Oil Analysis Report" (CER)

**Non-Aeronautical
Resample and Type Recommendation Report
MANNHEIM LABORATORY CENTER**

Report Date: 18 Aug 2003

Sort Code: 102
 UIC: WCAY99
 Unit Name: 123 MAINT.CO.
 Address: UNIT: 45632
 BAMBERG,APO, AE 09139

Bump #	End-Item Mod	End Item S/N	Component Mod	Component S/N	Date Sample	Date Proc	Sample #	Recommendations
A-4	M923	C52302669	MT654	2420024767	18 Jul 2003	22 Jul 2003	SP191	Abnormal Findings Check Type Oil and Source Resample ASAP!
H-801	M923	C52303153	NHC-250	11146574	22 Jul 2003	30 Jul 2003	03486	Abnormal Findings Do Not Change Oil Resample ASAP!
B-23	M113A3	MSJ12415MU	DD6V53T	6D242205	07 Aug 2003	13 Aug 2003	00587	Contamination Confirmed Fuel Dilution Do Not Operate! Inspect and Repair Fuel System Do Not Change Oil or Filter until Prob Corrected Resample after 1 hours of operation

Total Resample Recs from 01/07/2003 to 31/07/2003 = 2
 Total Resamples Not Complied With From Prior Reporting Periods= 0
 Total Resamples Not Complied With = 3

Total number of days for resamples not complied with:

10 days or less	11-20 days	21-30 days	31-40 days	41-50 days	51-60 days	over 60 days
1	1	1	0	0	0	0

Figure 3-17. Sample Copy of the AOAP Lab OASIS Database "Resample & Type Recommendation Report" (RTR)

Non-Aeronautical
LABORATORY WORKLOAD SUMMARY
 MANNHEIM LABORATORY CENTER
 01 Jul 2003 - 31 Jul 2003
 FOR SAMPLES RECEIVED

Sortcode	Uic	UNIT SUMMARY			TYPE SAMPLE			LAB RECOMMENDATION						
		End Items	Usage	Components	Delinquency	Feedbacks	Total Samples*	Routine	Reg.	Other	Normal	Resample	Oil	Inspect
512	WJHBAA	9	100.00%	20	0.00%	0	4	4	0	0	3	1	0	0
	4TH CAV, "E" TRP	9	100.00%	20	0.00%	0	4	4	0	0	3	1	0	0
Totals for UIC's Selected for Sort Code		9	100.00%	20	0.00%	0	4	4	0	0	3	1	0	0
Totals for all records		9	100.00%	20	0.00%	0	4	4	0	0	3	1	0	0

* Differences may occur between totals and sample categories due to combinations of recommendations

Figure 3-18. Sample Copy of an AOAP Laboratory OASIS Database "Laboratory Workload Summary Report" (WS)

REQUEST, AUTHORIZATION, AGREEMENT, CERTIFICATION OF TRAINING AND REIMBURSEMENT (Abbreviated)									
A. Agency code and subelement, and submitting office number (XX-XX-XXXX) AETV-BHR-PA			B. Standard document number (Org identifier/ FY, Doc./ type code/ Serial number)			C. Request Status or Process Code (X one)		D. Amendment No.	
						<input checked="" type="checkbox"/> (1) Initial		<input type="checkbox"/> (2) Resubmission	
						<input type="checkbox"/> (3) Correction		<input type="checkbox"/> (4) Cancellation	
Section A - TRAINEE / APPLICANT INFORMATION									
1. Name (Last, First, Middle Initial) MITCHELL, BYRON F.			2. 1st 5 letters of last name MITCH		3. Social Security Number 123-45-6789		4. Ed. level		5. Continuous Federal Svc a. Years b. Months
6. Home Address (Street, City, State and ZIP Code) (optional)			7. Phone Numbers (Include area code) a. Home b. Office		8. Position Title TRACK MECHANIC				
11. Organization Name B BTRY, 3/27 FA			(1) Commercial (2) Autovon 485-7558		9. Position Level (X one) a. Executive b. Manager		10. Pay Plan / Series / Grade / Step (Rank/ MOS/AFSC/ or Navy Designator) SSG/63D		
12. Organization Mailing Address (Include ZIP) UNIT 98765 OR CMR 987 APO AE 09034			13. Organization UIC WAXTOA		14. Type of Appointment		15. No. prior non-government training days		
			16. Are you handicapped or disabled? (X one) Yes No		d. Non-Supervisory		e. Other (Specify)		
Section B - TRAINING COURSE DATA									
17. Course Title BATTALION AND UNIT LEVEL AOAP CERTIFICATION TRAINING									
18. Training Objectives (Benefits to be derived by the Government) TO LEARN THE DUTIES AND RESPONSIBILITIES OF USAREUR AOAP MONITORS, IAW ESTABLISHED POLICIES AND PROCEDURES TRAINING CONDUCTED IAW AR 750-1 AND USAREUR SUPPLEMENT I TO AR 750-1					19. Recommended Training Source, School or Facility a. Name MANNHEIM LABORATORY CENTER b. Mailing address (Include ZIP) ATTN: AERSC-MLC-BA UNIT 27535 APO AE 09139 (aka: Bamberg Oil Analysis Lab)				
20. Course Codes					c. Location of training site (if other than 19b) WARNER BKS, BLDG 7487, BAMBERG, GE				
a. Purpose		f. Security Clearance		k. Training Program		21. Course hours (4 digits)		22. Course Identifiers	
b. Type		g. Allocation Status		l. Reason for Selection		a. Duty 16		a. SAID	
c. Source		h. Priority		23. Training Period (YYMMDD)		b. Non-duty 0		b. Catalog / Course	
d. Special Interest		i. Training Level		a. Start 011126		c. TOTAL 16		c. Offering / TLN	
e. Training Vendor		j. Method of Training		b. Complete 011127					
Section C - COST INFORMATION (Costs incurred and billed are not to exceed amount in item 30.)									
24. If training does not involve expenditure of funds other than salary, pay or compensation, skip the remainder of questions in Section C and X this box <input checked="" type="checkbox"/>									
25. Direct Costs			26. Indirect Costs (For information only)			27. Accounting Classification			
a. Tuition cost		b. Books, material, other		c. Total direct costs 0.00		a. Travel cost		b. Per diem/other costs	
d. Funding source		31. Job Order No.		28. Labor Costs		29. Signature of Fiscal Officer (Follow local procedure)		30. Total of Direct & Indirect Costs 0.00	
Section D - APPROVAL / CONCURRENCE / CERTIFICATION									
32. Supervisor: I certify training is job related and nominee meets prerequisites. (If not, attach waiver.)									
a. Typed Name (Last, First, Middle Initial) HUTCHINSON, EDWIN P., SFC			b. Phone number (Include area code) 485-3587			33. Training Officer: I certify this training meets regulatory requirements.			
c. Signature & Title MOTOR SGT/MOTOR TECH/BMO			d. Date 20NOV01			a. Typed Name (Last, First, Middle Initial) WHITE, CHARLES E., SSG			b. Phone number (Include area code) 485-5322
34. Authorizing Official			35. Course Acceptance (To be completed by school official)			c. Signature & Title TRAINING NCO/S-4			d. Date 19NOV01
a. Action (X one) <input checked="" type="checkbox"/> (1) Approved <input type="checkbox"/> (2) Disapproved			b. Typed Name (Last, First, Middle Initial) PETRELL, MICHAEL P., CPT			a. Accepted			c. School Official Signature
c. Phone number (Include area code) 485-5886			d. Signature & Title COMMANDER, B BTRY 3/27 FA			b. Not Accepted			d. Date
e. Date 21NOV01			36. Course Completion (To be completed by school official)			a. If course was not completed, X this box, leave this section blank, and return this form with an explanation memo. <input type="checkbox"/>			b. Actual Completion Date (YYMMDD)
37. Billing Instructions (Identify discount terms. Furnish original invoice and 3 copies to: % days.)			d. Signature & Title			c. Grade			e. Date
			38. Certifying Government Official			a. I certify that this account is correct and proper for payment in the amount of: \$			
			b. Signature			c. Date Signed			
			d. DSSN Number			e. Check Number			f. Voucher Number

TRAINING FACILITY: Invoice should be sent to office indicated in item 37. Please refer to standard document number given in item B at top of page to assure prompt payment.

DD Form 1556-1, MAR 87 (EG)

DoD exception to SF 182 approved by GSA / IRMS 11-86.

**Figure 3-19. DD Form 1556-1
Training/ Authorization/Certification Form
(Note: Example of Completed Form ~ Lab Requires Only First Page)**

DEPARTMENT OF THE ARMY
51ST MAINTENANCE BATTALION
UNIT 29922
APO AE 09086

AERAS-U-L-MT

02 OCT 02

MEMORANDUM FOR Mannheim Laboratory Center, (Bamberg or Mannheim)

SUBJECT: Request for Verification of USAREUR ODCSLOG Army Oil Analysis Program (AOAP) Delinquency Goal Achievement Award

1. In accordance with USAREUR Supplement 1 to AR 750-1, App T, para T.4.e, request the following units AOAP delinquency rate be verified for the period from 01 Oct 00 through 30 Sep 01 (12 months).

- a. Unit Name: Headquarters and Headquarters Detachment,
51st Maintenance Battalion
- b. Unit Address: ATTN: AERAS-U-HD
Unit 29922
APO AE 09086
- c. Unit POC/Telephone #: SGT Goodleader, DSN 382-6305
- d. Higher Headquarters: 51st Maintenance Battalion
ATTN: AERAS-U-L
Unit 29922
APO AE 09086

2. POC is the undersigned, DSN 382-6322.

DAVID J. WARBIS
SFC, USA
Battalion Maintenance

***Figure 3-20. Example Memorandum for the
AOAP Delinquency Achievement Award (Request from Unit)***

AOAP AREA OF SUPPORT GERMANY

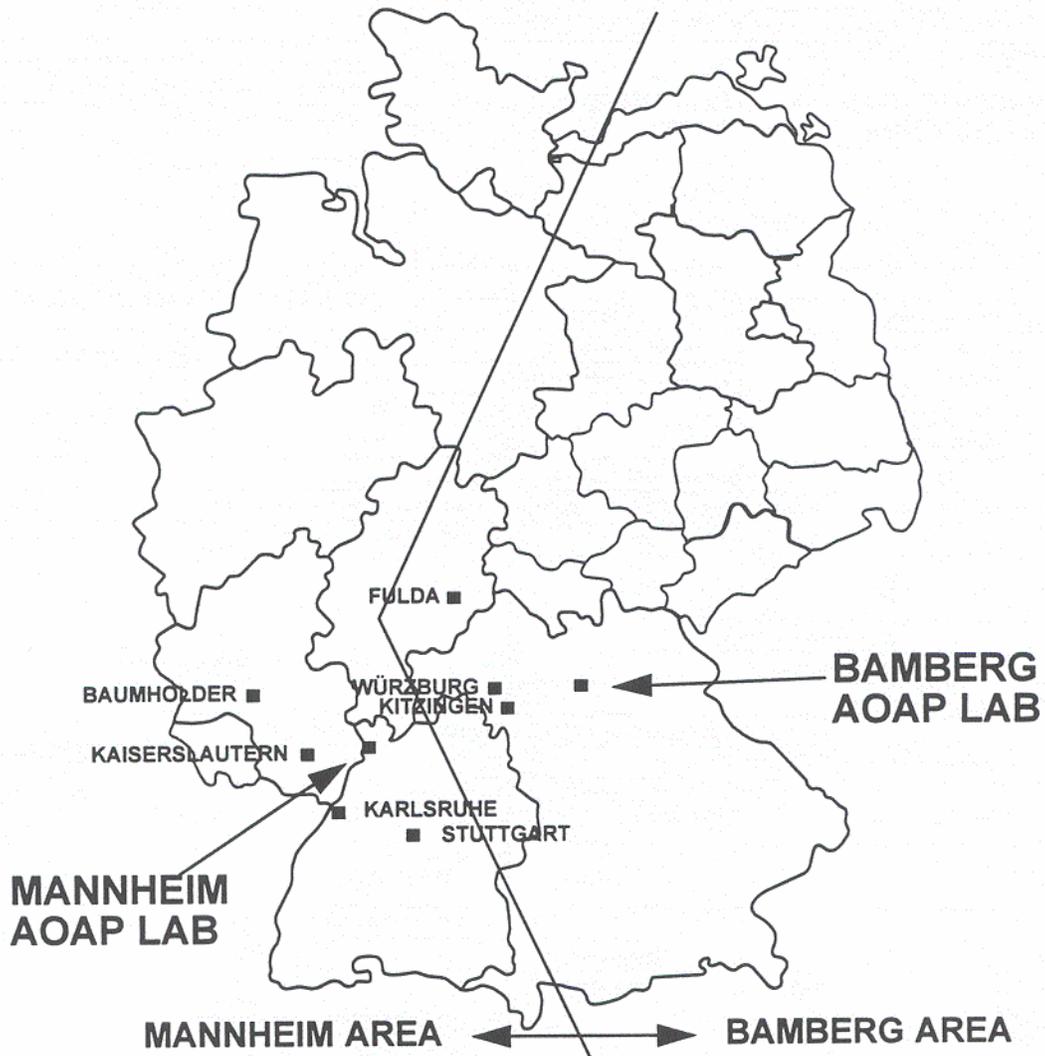


Figure 3-21. AOAP Area of Support, Germany

USAREUR AOAP (AREAS OF SUPPORT)

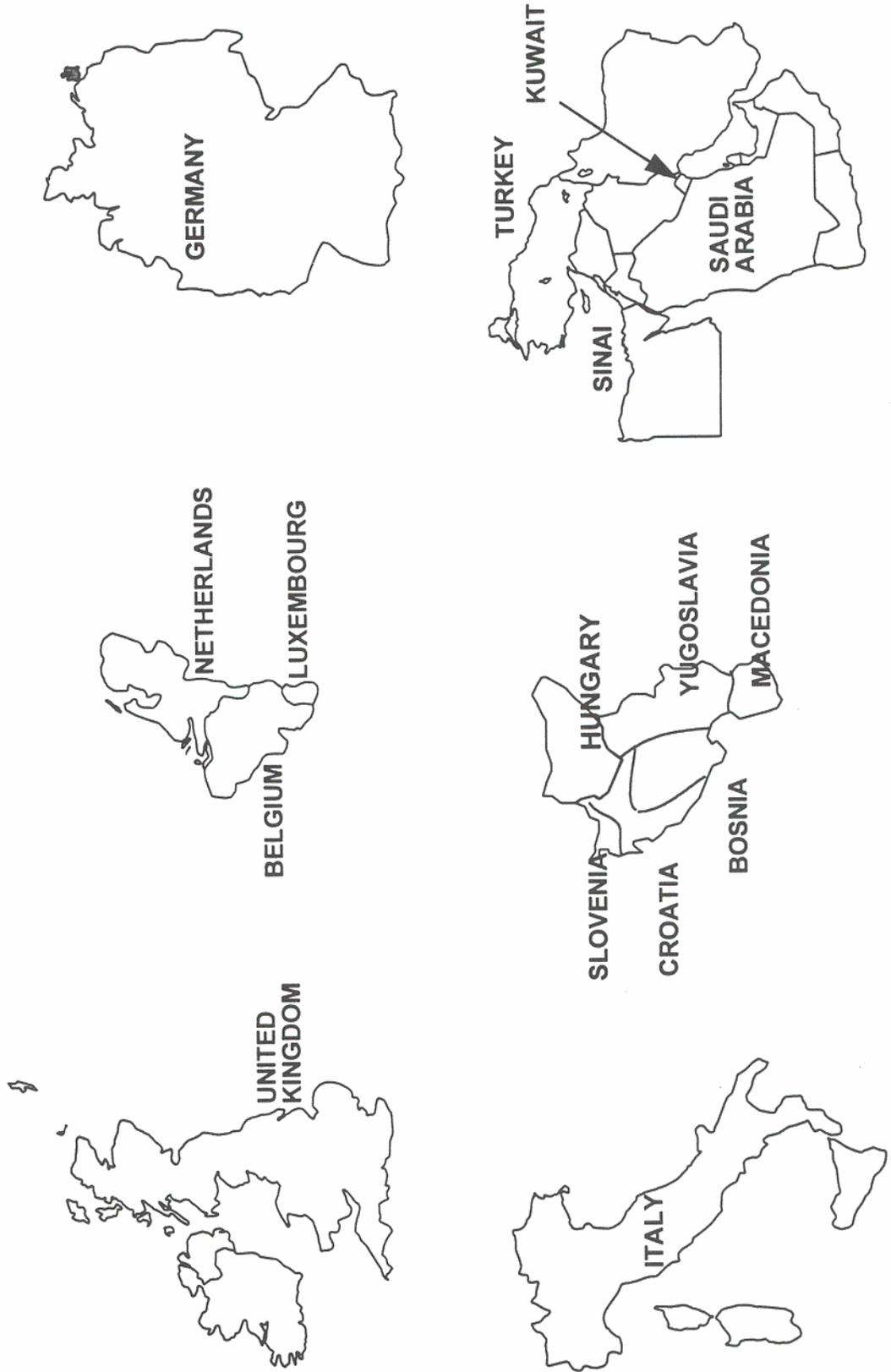


Figure 3-22. USAREUR AOAP Areas of Support

REQUEST FOR AND RESULTS OF TESTS					PAGE NO.	NO. OF PAGES
SECTION A - REQUEST FOR TEST						
1. TO: <i>(Include ZIP Code)</i> Director, Mannheim Laboratory Center ATTN: Material Testing Laboratory CMR 418 APO AE 09058-9702			2. FROM: <i>(Include ZIP Code)</i> YOUR ADDRESS			
3. PRIME CONTRACTOR AND ADDRESS <i>(Include ZIP Code)</i> If applicable CONTRACTOR NUMBER			4. MANUFACTURING PLANT NAME AND ADDRESS <i>(Include ZIP Code)</i> If applicable P.O. NUMBER			
5. END ITEM AND/OR PROJECT 6810-00-584-4070		6. SAMPLE NUMBER 03-001	7. LOT NO. 73B	8. REASON FOR SUBMITTAL serviceability	9. DATE SUBMITTED 18 Sep 03	
10. MATERIAL TO BE TESTED XYLENE	10a. QUANTITY SUBMITTED CN-1	11. QUANTITY REPRESENTED CN-15		12. SPEC. & AMEND AND/OR DRAWING NO. & REV. FOR SAMPLE & DATE TT-X-916		
13. PURCHASED FROM OR SOURCE If applicable		14. SHIPMENT METHOD Truck	15. DATE SAMPLED AND SUBMITTED BY 18 Sep 03, SFC John Doe			
16. REMARKS AND/OR SPECIAL INSTRUCTIONS AND/OR WAIVERS. POC: SFC John Doe Please FAX results to 382-5293 Send originals to address below						
17. SEND REPORT OF TEST TO Your mailing address						
SECTION B - RESULTS OF TEST <i>(Continue on plain white paper if more space is required)</i>						
1. DATE SAMPLE RECEIVED		2. DATE RESULTS REPORTED		3. LAB REPORT NUMBER		
4. TEST PERFORMED	RESULTS OF TEST	SAMPLE RESULT	REQUIREMENTS			
DATE	TYPED NAME AND TITLE OF PERSON CONDUCTING TEST			SIGNATURE		

DD FORM 1222, FEB 62

REPLACES DD FORM 1222, 1 JUL 58, WHICH IS OBSOLETE

USAPPC V1.00

**Figure 3-23. DD Form 1222
Request For and Results of Test (Material Testing Laboratory)**

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
175B	427C772	HYD SYS	427C772
175B	427C772	CLK4000	185372FR
175B	427C726	DD8V71N	8VA440651
2500L	3HD032051	DD6V92	06VF154554
2500L	3HD032051	HT750DRD	2510111751
6000M	6000M0P0576	FUNK-1723	90027290
6000M	6000M1B0754	6BT5.9	44575319
6000M	6000M1E0888	HYD SYS	6000M1E0888
621B	2DB00905	3406	70V20860
621B	2DB00905	7G2780	1LA02920
621B	2DB00915	HYD SYS	2DB00915
AN/MJQ-10A	8323074	D298ERX37	3451924
AN/MJQ-10A	8323069	D298ERX37	3451926
AN/MJQ-10A	T832154	D298ERX37	3436223
AN/MJQ-12	T8429252	AC3500	3D69381
AN/MJQ-12	T8619631	AC3500	3D31997
AN/MJQ-15	T8719786	D198ERX51	3460774
AN/MJQ-15	T8719767	D198ERX51	3461882
AN/MJQ-24	T00117029	A04043B02	4801129
AN/MJQ-24	T00117029	A04043B02	4900203
AN/MJQ-39	RZG15058	ISUZU-C240	767122
AN/MJQ-39	RZG15104	ISUZU-C240	774245
AT422T	220399	13.9LFHR	3931627
AT422T	220399	6BTA5.9	45881515
AT422T	220399	HYD SYS	220399
C350B	B89C3849Y	DD353	38497B
C350B	B89C3849Y	HYD SYS	B89C3849Y
C530A	A91C2516V	393303	9079
C530A	A91C2516V	DD353	3D131302
CAT-130G	7GB01079	HYD SYS	7GB01079
CAT-130G	7GB01762	5R6192	1HC01833
CAT-130G	7GB01099	CAT-3304DIT	07Z13074
CAT-815F	2BS00083	HYD SYS	2BS00083
CAT-815F	2BS00083	CAT-3306B	6NC00940
CAT-815F	2BS00083	1223774	1YY00755
CAT-D7G	3ZD00176	CAT-3306	08Z41126
CAT-D7G	3ZD00176	HYD SYS	3ZD00176
CAT-D7G	3ZD00176	9P5382	2GA05546
CB-534B	4JL00272	CAT-3054	5HK42762
CB-534B	4JL00308	HYD SYS	4JL00308
CS563D	ISZ00227	HYD SYS	ISZ00227
CS563D	1SZ00229	CAT-3116	98Z35714
DV43	62Y00166	HYD SYS	62Y00166
DV43	62Y00166	CAT-5R3855	2MA02372
DV43	62Y00166	CAT-3408	48W15532
F5070	GGB12914	HYD SYS	GGB12914
F5070	GGB12781	NTC-290	10573544
F5070	GGB12914	HT750CRD	13888
FLU419	KM451445	HYD SYS 2	KM451445R
FLU419	KM451445	HYD SYS 1	KM451445F
H100C	31817	HYD SYS	31817

Table 1: Component And End Item Serial Number Structure

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
H100C	37033	P-2004	1573
H100C	31817	P-2004	1427
H100C	37033	HYD SYS	37033
H100C	37033	IHDT817C	8326459
H100C	31817	IHDT817C	20065
JD230LCR	FF0230R60089	HYD SYS	953
JD230LCR	FF0230R60089	JD6068	PE6068H125257
JD230LCR	FF230R600872	HYD SYS	990
JD230LCR	FF230R600872	JD6068	PE6068H125246
K300	9014	HYD SYS	9014
K300	9014	CAT-3208	90N23786
K300	9014	CLK28000	35403T
LRT-110	98343	4B3.9	44240357
LRT-110	98135	17243E	8710003179
LRT-110	98244	HYD SYS	98244
LRT-110	98342	17243E	8810001110
LRT-110	98342	HYD SYS	98342
LRT-110	98342	4B3.9	44240288
LRT-110	98212	17243E	6710002934
LRT-110	98405	17243E	8810000878
LRT-110	98343	HYD SYS	98343
M1	5A061U	HYD SYS	5A061U
M1	5A064U	X1100-3B	10080
M1	5A061U	AGT-1500	LE87230
M1	5A071U	X1100-3B	9995
M1000	1086	HYD SYS	H4R1048971T
M1000	492	HYD SYS	H1R1049026T
M1025	21786	THM-3L80	NG222NT1
M1025	21786	6.2 L DIESEL	NG222NE1
M1025A2	167964	6.5 L DIESEL	NG4PEAE1
M1025A2	167966	6.5 L DIESEL	NG4PECE1
M1026	35204	6.2 L DIESEL	NG2SF7E1
M1026	31630	THM-3L80	NG2T4HT1
M1037	53262	THM-3L80	NG2BDMT1
M1037	103852	6.2 L DIESEL	NG3KAJE1
M1038	63183	THM-3L80	NG3GZAT1
M1038	21078	6.2 L DIESEL	NG275PE1
M1059A3	MSJ11575	DD6V53T	6D0301870
M1059A3	MSJ17656	X200-4	5410006004
M1064A3	GBH082	DD6V53T	06D0302836
M1064A3	GBH082	X200-4	5410006084
M1064A3	RSJ00099	DD6V53T	06D0303594
M1064A3	SJ382	X200-4	5410006057
M1068	PAA02480	TX-100	8T4952
M1068	PAA02480	DD6V53	6D237329
M1068	C1138PAA	DD6V53	6D227128
M1068	C1138PAA	TX-100	82T4354
M1070	H8R1048942	CLT-754	2510182391
M1070	H8R1048942	DD8V92TA	8VF159434
M1070	H2R1048970	CLT-754	2510183179
M1070	H4P1048918	CLT-754	2510182753

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M1070	H2R1049004	HYD SYS	H2R1049004
M1070	H2R1048970	DD8V92TA	8VF159579
M1074	H0N1045445	HYD SYS	H0N1045445
M1074	H5T1061007	CLT-755	2510207467
M1074	H1P1046493	CLT-755	2510171612
M1074	HXP1047688	HYD SYS	HXP1047688
M1074	H9N1046433	DD8V92TA	8VF153668
M1074	H9S1060442	DD8V92TA	8VF166106
M1075	H3P1046883	DD8V92TA	8VF155464
M1075	H3P1046883	CLT-755	2510169633
M1075	H3P1046883	HYD SYS	H3P1046883
M1097	138636	THM-3L80	NG49C4T1
M1097	138651	6.2 L DIESEL	NG49C7E1
M1097A1	162424	THM-3L80	NG4NQMT1
M1097A1	154835	6.2 L DIESEL	NG4FU0E1
M1097A2	179812	6.5 L DIESEL	NG4X3CE1
M1097A2	179527	THM-4L80E	NG4WX0T1
M109A2	23211207	LDS-427-2	4502128
M109A3	23210046	LD-465-1	4501735
M109A3	53210359	LD-465-1	3871952
M109A3	53210089	LDT-465-1D	3991380
M109A6	PAL540	DD8V71T	8VA455650
M109A6	PAL531	HYD SYS	PAL531
M109A6	PAL537	XTG-411-4	15399
M10A	3336022012	IHCS-700	63629
M10A	3336022012	HYD SYS	3336022012
M10A	3336022172	IHCDD-466B	187805
M1113	180470	6.5 L DIESEL	NG4XBKE1
M1113	180470	THM-4L80E	NG4XBKT1
M1114	189214	THM-4L80E	NG4ZUWT1
M1114	189235	6.5 L DIESEL	NG4ZV3E1
M113A2	MSJ13341MAA	DD6V53	6D11618
M113A2	MSJ12741MAA	TX-100-1	8T4340
M113A2	MSJ11321MAA	TX-100-1	1T856
M113A2	MSJ1038MAA	DD6V53	6D225009
M113A3	MSJ17810MU	DD6V53T	6D243474
M113A3	MU300397	X200-4	5410002856
M113A3	MU300901	DD6V53T	6D32342
M113A3	MSJ13277MU	X200-4	5410002584
M113A3	MSJ17810MU	X200-4	5410007709
M1A1	4A017U	AGT-1500	LE93680
M1A1	4A017U	X1100-3B	6927
M1A1	L10260U	X1100-3B	7326
M1A1	4A019U	HYD SYS	4A019U
M1A1	D11014U	AGT-1500	LE92983
M1A1	D11014U	HYD SYS	D11014U
M2A2	2ADR3657R	HMPT-500-3TE	3688
M2A2	2ADR3243R	HMPT-500-3TE	30345
M2A2	2ADR3557R	VTA-903T	37151042
M35A2	12535120	LD-465-1C	3960151
M35A2	32516895	LDT-465-1C	3970395

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M35A2	32524809	LD-465-1	3857439
M35A3	502872	AT1545	3210868642
M35A3	502966	3116ATAAC	5RM02995
M35A3C	503584	CAT-3116	5RM03619
M35A3C	503603	AT1545	3210899881
M36A3	503405	AT1545	3210866253
M3A2	3ADR3311R	HMPT-500-3TE	30022
M3A2	3ADR3318R	VTA-903T	37126645
M3A2	3ADR3311R	VTA-903T	37123013
M3A2	3ADR3324R	HMPT-500-3TE	32514
M48A5AVLB	A2B089	1790-2DA	40107
M48A5AVLB	A2B089	HYD SYS	A2B089
M48A5AVLB	A2B125	CD850-6A	51899
M4K	9144705	HYD SYS	9144705
M4K	9144539	HYD SYS	9144539
M4K	9144539	CLK18340	25357
M4K	9144705	CASE-207D	4314366
M4K	9150114	CASE-207D	4322736
M548A3	C0085	X200-4	5410001666
M548A3	207	DD6V53T	6D241980
M548A3	C0085	DD6V53T	6D240161
M548A3	C0046	X200-4	5410000583
M577A2	PAA01600	DD6V53	6D131399
M577A2	PAA02828	DD6V53	6D239827
M577A2	PAA02829	TX-100-1	87T477
M577A2	PAA01641	TX-100-1	81T1148
M578	BMY1143	XTG-411-2A	4920
M578	BMY816	XTG-411-2A	13869
M578	BMY816	HYD SYS	BMY816
M578	BMY816	DD8V71T	8VA67529
M578	BMY1143	HYD SYS	BMY1143
M60A1AVLB	760014	HYD SYS	760014
M60A1AVLB	800018	HYD SYS	800018
M60A1AVLB	800018	CD850-6A	8350657
M60A1AVLB	690011	1790-2DA	35218
M60A3	1452	1790-2C	54860
M60A3	3384M	CD850-6A	50934
M60A3	996	HYD SYS	996
M813A1	13610713	NHC-250	11232336
M817	C12312383	NHC-250	10296554
M817	C12312259	NHC-250	10292814
M817	C12312257	NHC-250	10292824
M817	C12312271	HYD SYS	C12312271
M820	C35010029	NHC-250	10781712
M820A2	C35510036	NHC-250	748144
M88A1	1547	1790-2DR	38512
M88A1	1737	1790-2DR	50201
M88A1	1737	XT-1410-4	4964
M88A1	1359	HYD SYS	1359
M9	70	13.5HR3610-2	3T3868
M9	256	V903	37151268

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M9	91	HYD SYS	91
M915	T38144510713	CAT-D7155	72S7971
M915	T38144510321	NTC-400	10366098
M915	T38144510117	CAT-D7155	72S07799
M915	T38144510117	NTC-400	10840522
M915A1	6687ES001506	HT754CRD	2510074151
M915A1	668XDS001305	HT754CRD	2510198022
M915A1	6683ES002264	NTC-400	11144559
M915A1	6681ES002263	NTC-400	11747217
M916	T58146610125	HYD SYS	T58146610125
M916	T58146610800	CAT-D7155	72S2537
M916	T58146610653	HYD SYS	T58146610653
M916	T58146610133	NTC-400	10844859
M916A2	81PH66311	HYD SYS	81PH66311
M916A2	81PH66310	DDEC III	06R0615521
M916A2	81PH66310	HT740	2510230780
M917	T58166710110	NTC-400	10794773
M917	T58166710110	CAT-D7155	72S2011
M917	T58166710144	CAT-D7155	72S3472
M917	T58166710144	NTC-400	10845781
M917	T58166710324	HYD SYS	T58166710324
M917A1	PH43111	HT740	2510230754
M917A1	PH43122	HYD SYS	PH43122
M917A1	PH43109	HT740	2510230944
M917A1	PH43115	HT740	2510230828
M917A1	PH43122	DDC III	06R0615172
M917A1	PH43111	DDC III	06R0614792
M917A1	PH43090	DDC III	06R0609568
M917A1	PH43119	HYD SYS	PH43119
M918	T58146810038	NTC-400	10830952
M918	T58146810038	CAT-D7155	72S3085
M918	T58146810005	NTC-400	10832630
M918	T58146810005	CAT-D7155	72S1576
M918	T58146810005	HYD SYS	T58146810005
M919	T58166910133	HYD SYS	T58166910133
M919	T58166910166	CAT-D7155	72S3638
M919	T58166910166	NTC-400	10819467
M920	T58166010822	HYD SYS	T58166010822
M920	T58166010918	NTC-400	10924514
M920	T58166010918	CAT-D7155	72S5099
M923	C52303617	MT654	2420027303
M923	C52303807	MT654	2420154141
M923	C52303122	NHC-250	11224335
M923	C52303038	NHC-250	11167876
M923A1	C52308575	MT654	2420102131
M923A1	C52309030	NHC-250	11664569
M923A1	C52308990	NHC-250	11363101
M923A1	C52309013	MT654	2420103102
M923A2	2300978	6CTA-8.3	44384677
M923A2	2300874	MT654	2420033016
M923A2	2300937	6CTA-8.3	44387574

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M923A2	2300895	MT654	2420122352
M925	C52500714	MT654	2420022120
M925	C52502048	NHC-250	11212011
M925	C52502487	MT654	2420035010
M925	C52502257	HYD SYS	C52502257
M925	C52502043	HYD SYS	C52502043
M925	C52500273	NHC-250	11079824
M925A1	C52502224	MT654	2420034216
M925A1	C52502224	HYD SYS	C52502224
M925A1	C52502769	MT654	2420104265
M925A1	C52502056	NHC-250	11214262
M925A1	C52502769	NHC-250	11336431
M925A2	C52500371	6CTA-8.3	44457883
M925A2	2500298	6CTA-8.3	44451115
M925A2	2500298	MT654	2420126136
M925A2	2500298	HYD SYS	2500298
M925A2	2501578	MT654	2420158598
M927	C52700005	MT654	2420020324
M927	C52700348	MT654	2420037105
M927	C52700053	NHC-250	11100004
M927	C52700004	NHC-250	11094577
M927A2	2003AA022	6CTA-8.3	44378041
M927A2	1003AA008	MT654	2420114594
M927A2	2003AA028	6CTA-8.3	44374996
M927A2	2003AA029	MT654	2420120387
M928	C52800310	MT654	2420021869
M928	C52800440	NHC-250	11254246
M928	C52800309	HYD SYS	C52800309
M928A2	2800110	6CTA-8.3	44490343
M928A2	2800063	HYD SYS	2800063
M928A2	2800110	MT654	2420133421
M928A2	2004AA008	MT654	2420122456
M928A2	2004AA008	HYD SYS	2004AA008
M928A2	2004AA005	6CTA-8.3	44380328
M929	C52900540	NHC-250	11243521
M929	C52900619	HYD SYS	C52900619
M929	C52900749	MT654	2420038443
M929	C52900576	HYD SYS	C52900576
M929A2	1005AB030	HYD SYS	1005AB030
M929A2	1005AA006	HYD SYS	1005AA006
M929A2	1005AB022	HYD SYS	1005AB022
M929A2	1005AB029	MT654	2420118565
M929A2	1005AA006	6CTA-8.3	44330998
M929A2	1005AB025	HYD SYS	1005AB025
M929A2	1005AB030	6CTA-8.3	44339859
M929A2	1005AA006	MT654	2420115154
M931	C53100765	MT654	2420025172
M931	C53100142	MT654	2420155475
M931	C53100213	NHC-250	11096247
M931	C53100216	NHC-250	11219064
M931A1	C53103092	NHC-250	11349806

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M931A1	C53103156	NHC-250	11356179
M931A1	C53103195	MT654	2420107417
M931A1	C53102880	MT654	2420102019
M931A2	3100392	6CTA-8.3	44517494
M931A2	1044AA065	MT654	2420120275
M931A2	1044AA049	6CTA-8.3	44371495
M931A2	3100412	6CTA-8.3	44384664
M931A2	1044AA019	MT654	2420119660
M932	C53200079	HYD SYS	C53200079
M932	C53200143	HYD SYS	C53200143
M932	C53200106	MT654	2420111179
M932	C53200237	NHC-250	11145596
M932	C53200142	NHC-250	11125023
M932	C53200237	MT654	2420026364
M932A1	C53200528	MT654	2420104767
M932A1	C53200532	MT654	2420104662
M932A1	C53200537	HYD SYS	C53200537
M932A1	C53200510	HYD SYS	C53200510
M932A1	C53200476	HYD SYS	C53200476
M932A1	C53200476	NHC-250	11371351
M934	C53400473	MT654	2420029230
M934	C53400397	NHC-250	11151700
M934	C53400489	NHC-250	11173546
M934	C53400481	MT654	2420029287
M934A1	C53400802	MT654	2420102388
M934A1	C53400802	NHC-250	11320708
M934A1	C53400752	NHC-250	11318765
M934A1	C53400752	MT654	242010243
M936	C53600177	MT654	2420140663
M936	C53600177	NHC-250	11337634
M936	C53600177	HYD SYS	C53600177
M936	C53600870	NHC-250	11649960
M936	C53600194	HYD SYS	C53600194
M936	C53600870	MT654	2420113129
M936A1	C53601058	MT654	2420117187
M936A1	C53601058	HYD SYS	C53601058
M936A1	C53600243	NHC-250	11054845
M936A1	C53600157	NHC-250	11209566
M936A1	C53600243	HYD SYS	C53600243
M936A1	C53600243	MT654	2420037734
M936A2	2011AA022	6CTA-8.3	44455494
M936A2	2011AA022	HYD SYS	2011AA022
M936A2	2011AA022	MT654	2420118556
M942	C55200023	NHC-250	11181633
M942	C55200046	MT654	2420029626
M942	42CD003	NHC-250	44626736
M942	C55200013	NHC-250	11170401
M942	42CD005	NHC-250	44630517
M942	C55200078	MT654	2420105759
M944	C54400234	MT654	2420107671
M944	C54400187	NHC-250	11360689

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M944	C54400082	NHC-250	11357799
M944	C54400154	MT654	2420107744
M944	C54400177	MT654	2420107832
M966	26788	6.2 L DIESEL	NG2TQFE1
M966	26711	THM-3L80	NG2TPET1
M966	33102	6.2 L DIESEL	NG2TTDE1
M966	33092	THM-3L80	NG2TT9T1
M977	22F1025344	DD8V92TA	8VF100428
M977	27C1026247	DDA-HT740D	2510092765
M977	21G1028401	HYD SYS	8VF1404015
M977	27C1026247	DD8V92TA	8VF14040151
M977	28F1024862	DDA-HT740D	251003936S
M977	22F1025344	HYD SYS	22F1025344
M978	29F1025423	DDA-HT740D	2510097424
M978	21E1023101	DDA-HT740D	2510080056
M978	28D1021263	DD8V92TA	8VF080226
M978	2XF1024796	HYD SYS	2XF1024796
M981	MSJ12177	DD6V53	6D154003
M981	MSJ12329	TX-100-1	7T4785
M981	MSJ17447	DD6V53	6D241735
M981	MSJ11977	TX-100-1	83T3155
M983	20G1027672	DD8V92TA	8VF106376
M983	29G1027671	DD8V92TA	8VF095833
M983	22G1026765	HYD SYS	22G1026765
M983	25G1027683	HYD SYS	25G1027683
M983	25G1027702	DDA-HT740D	2510009974
M983	24D1021160	DDA-HT740D	2510118199
M984	2XF1025933	DDA-HT740D	2510091543
M984A1	10XS065826	HYD SYS	10XS065826
M984A1	1XXS065719	HYD SYS	1XXS065719
M984A1	1XXS065719	DD8V92TA	8VF178425
M984A1	13XS065738	DD8V92TA	8VF178585
M984A1	13XS065738	DDA-HT740D	2510224663
M984A1	1XXS065719	DDA-HT740D	2510224046
M985	26G1028622	HYD SYS	26G1028622
M985	26G1026711	DDA-HT740D	2510073196
M985	22G1026818	HYD SYS	22G1026818
M985	22G1026818	DDA-HT740D	2510153851
M985	29D1021028	DD8V92TA	8VF144995
M985	26G1028622	DD8V92TA	8VF112761
M985E1	27F1026182	DD8V92TA	8VF106388
M985E1	27F1026182	HYD SYS	27F1026182
M985E1	2XG1026212	HYD SYS	2XG1026212
M985E1	20E1022862	DDA-HT740D	2510073852
M992A2	435	XTG-411-4	4659
M992A2	586	DD8V71TLHR	8VA454890
M992A2	591	HYD SYS	591
M992A2	591	XTG-411-4	14995
M993	4AA00377A	HMPT-500-3E	4761
M993	4AA00301A	HMPT-500-3E	31816
M993	4AA00441A	VTA-903T	37123108

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
M993	4AA00301A	VTA-903T	37111373
M996	44580	THM-3L80	NG2BT2T1
M996	44440	THM-3L80	NG2BRZT1
M996	44333	6.2 L DIESEL	NG2BR3E2
M996	44390	6.2 L DIESEL	NG2BRKE2
M997	62535	THM-3L80	NG3BQPT1
M997	51249	6.2 L DIESEL	NG2AWBE1
M997	51137	6.2 L DIESEL	NG2AV5E1
M997	49095	THM-3L80	NG2A9FT1
M998	58771	6.2 L DIESEL	NG2Z04E1
M998	65516	6.2 L DIESEL	NG3BRBE1
M998	58384	THM-3L80	NG2YRQT1
M998	66015	THM-3L80	NG3BYJT1
M998A1	162602	THM-3L80	NG4LM1T1
M998A1	161773	THM-3L80	NG4LF1T1
M998A1	40288	6.5 L DIESEL	NG2X5VE2
M998A1	161849	6.2 L DIESEL	NG4LGGE1
MEP-004A	KZ00055	D198ERX51	3433623
MEP-004A	KZ02396	D198ERX51	3456432
MEP-005A	RZ52045	D298ERX37	3447484
MEP-005A	RZ51319	D298ERX37	3467472
MEP-006A	FZ02096	AC3500	3D33873
MEP-006A	FZ02043	AC3500	3D33603
MEP-006A	FZ02096	AC3500	3D66218
MEP-007B	FZ1027	CAT-76-4106	49S00872
MEP-007B	T8828837	CAT-76-4106	49S03061
MEP-007B	T8828868	CAT-76-4106	49S03101
MEP-007B	RZ00519	CAT-76-4106	49S00509
MEP-009A	UZ05025	CAT-D343TA	63M23
MEP-113A	KZ06617	D198ERX51	3461068
MEP-114A	BE00034	D298ERX37	3449491
MEP-114A	BE00035	D298ERX37	3447822
MEP-114A	RZ40227	D298ERX37	3445069
MEP-115A	FZ08962	AC3500	3D66444
MEP-115A	FZ08845	AC3500	3D66306
MEP-802A	FZ02426	DN2M-1	4900407
MEP-802A	FZ01965	DN2M-1	4802370
MEP-803A	FZ31152	DN4M	4953123
MEP-803A	FZ30981	DN4M	4903169
MEP-803A	FZ31040	DN4M	4807126
MEP-803A	FZ30874	DN4M	490350210
MEP-804A	FZ58264	C-240PW-28	956459
MEP-804A	FZ58248	C-240PW-28	892105
MEP-804A	FZ58195	C-240PW-28	889103
MEP-806A	RZJ00477	JD6059T	427283
MEP-806A	RZJ00503	JD6059T	428331
MEP-813A	RZC30143	DN4M	4303034
MEP-813A	RZC30284	DN4M	4402330
MEP-813A	RZC30088	DN4M	4301785
MEP-814A	FZ65236	C240PW28	879565
MEP-814A	RZG15051	C240PW28	760721

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
MHE-270	8909680	HYD SYS	8909680
MHE-270	8909661	4B3.9	45067836
MHE-270	8909667	1102T1236210	RBEA366545
MHE-270	8909680	1102T1236210	RBEA375543
MHE-270	8909659	4B3.9	45067352
MW24C	9152686	CASE-504BD	JAA0031313
MW24C	9152741	TT2421-1	5110140848
MW24C	9157433	TT2421-1	5110139315
MW24C	9157433	CASE-504BD	10362506
P250WDMH268	156269	DEUTZ	9050390
P250WDMH268	147086	DEUTZ	7089761
PU405A/M	T8321346	D198ERX51	3465468
PU405A/M	T8001520	D198ERX51	3425126
PU406B/M	T8209896	D298ERX37	3439649
PU406B/M	T8001339	D298ERX37	3467469
PU406B/M	T8230731	D298ERX37	3440049
PU495B/G	T8904433	CAT-76-4106	49S02388
PU495B/G	T9023977	CAT-76-4106	49S03430
PU495B/G	T8903702	CAT-76-4106	49S02450
PU650B/G	T8502141	AC3500	3D67259
PU650B/G	T7900272	AC3500	3D64946
PU650B/G	T82040100	AC3500	3D60108
PU707A/M	FZ07512	AC3500	3D66168
PU707A/M	FZ06418	AC3500	3D66084
PU732M	T8719776	100-1345	3461882A
PU753/M	T00101003	100-1345	J850780129
PU753/M	T00101008	100-1345	K890278748
PU760M	T7913106	D298ERX37	3421258
PU797	T99313193	DN2M	4802466B
PU798	T00133146	DN4M-1	4806322
PU798	T00133144	DN4M-1	4607712
PU798	FZ30265	DN4M-1	4807708
PU799	BZ02264	DN4M-1	43033991
PU799	T0002008	DN4M-1	4303399
PU799	T0002005	DN4M-1	43034411
PU799	T0001802	DN4M-1	4302972
PU800	T99067015	C-240PW-28	859493
PU800	T99067011	C-240PW-28	859390
PU802	T99067028	C-240PW-28	875532
PU802	T98251120	C-240PW-28	878945
PU802	T99067055	C-240PW-28	881043
PU803	T01121024	JD4039T	T04045T839377
PU803	T01159083	JD4039T	T04045T868012
PU803	T01155049	JD4039T	T04045T868130
PU805	T01171080	JD6059T	T06068T879800
PU805	T01003007	JD6059T	T06068T847030
PU805	T01169049	JD6059T	T06068T861666
PU806	T01166040	JD6059T	T06068T861811
PU806	T01002003	JD6059T	T06068T846203
RS28	CM0300092	HYD SYS	CM0300092
RT41AA	67113	126HR183278	2018021

END/ITEM MODEL	END/ITEM SERIAL #	COMPONENT MODEL	COMPONENT SERIAL #
RT41AA	67115	126HR183278	F406006
RT41AA	67115	D3400X289	3457161
RT41AA	67113	D3400X289	3465856
RT41AA	67085	HYD SYS	67085
RT41AA	67115	HYD SYS	67115
RT875CC	70661	HYD SYS	70661
RT875CC	70661	6CTA-8.3	44415016
RT875CC	70661	CLARK-C273.5	TUSA108144
RTFL	6000M1D0842	6BT5.9	44585243
RTFL	6000M1D0842	HYD SYS	600M1D0842
RTFL	6000M1D0842	FUNK-1723	91013520
RTFL	6000M9E0063	HYD SYS	6000M9E0063
SP848	85HX768	HYD SYS	85HX768
SP848	85HX768	DD353	3D0167137
TMS-300-5	41733	HYD SYS	41733
TMS-300-5	41406	HYD SYS	41406
TMS-300-5	41733	DD671	6A0366112
TMS-300-5	41406	DD671	6A361284
TO730HKEG	SM9264	HYD SYS	SM9264
TO730HKEG	SM9264	6BT5.9	44576057
XM93FOX	US00102	HP500 TYPE 6	32215
XM93FOX	US00102	HYD SYS	US00102
XM93FOX	CUS5853	HYD SYS	CUS5853
XM93FOX	CUS5853	HP500 TYPE 6	X059776
XM93FOX	CUS5853	OM402A	X256333
XM93FOX	US00147	HYD SYS	US00147

The tables listed in Figure 3-23 contain examples of AOAP equipment component and end item model numbers and serial number structures. We provide these to our customers only to help our customers in identifying correct numbering structures. By no means is this a complete or total listing.

(THIS PAGE LEFT INTENTIONALLY BLANK)