| INCH-POUND |
MIL-K-23714C
4 September 1989
SUPERSEDING
MIL-K-23714B
October 1975

MILITARY SPECIFICATION

KITS, SAMPLING, FOR AVIATION FUELS, REUSABLE

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers detailed requirements for a reusable fuel sampling kit and a fuel sampling replacement kit.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issue of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

Federal

NN-P-71	Pallets, Material Handling, Wood, Stringer Construction, 2 Way and 4 Way (Partial)
TT-E-490	Enamel, Silicone Alkyd Copolymer, Semigloss, For Exterior and Interior Non-residential use

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Systems Engineering and Standardization Department (Code 53), Naval Air Engineering Center, Lakehurst, NJ 08733-5100, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 8115

Federal (cont'd)

UU-T-81	Tags, Shipping and Stock
PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-621	Boxes, Wood, Nailed and Lock Corner
PPP-B-636	Boxes, Shipping, Fiberboard

Military

MIL-D-6054	Drum, Metal - Shipping and Storage
MIL-P-19834	Plate, Identification, Metal Foil, Adhesive Backed
MIL-P-26514	Polyurethane Foam, Rigid or Flexible, for Packaging

STANDARDS

Federal

FED-STD-101	Test Procedures for Packaging Materials
FED-STD-595	Colors

Military

MIL-STD-129	Marking for Shipment and Storage
MIL-STD-147	Palletized Unit Loads
MS27684	Drums, Metal - Shipping and Storage, 3 to 12 Gallons

(Unless otherwise indicated, copies of the federal and military specifications and standards are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099).

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets, or MS Standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.2 Kits. The kits furnished under this specification shall contain the items listed in Table I (see 6.2).

TABLE I. Kit components.

FUEL SAMPLING KIT	FUEL SAMPLING REPLACEMENT KIT
Four sampling bottles with closures	Four sampling bottles with closures
Cushioning material	Four sampling tags
Container	
Tamperproof seal.	
Four sampling tags	

3.2.1 Components.

3.2.1.1 Sampling bottles. The sampling bottle shall be 32 ± 0.375 ounce capacity, amber colored made of borosilicate or United States Pharmacopoeia (USP) Type III soda-lime glass (see 6.6). The bottle shall be cylindrical with an outer diameter of 3.75 ± 0.125 inches and an overall height of 8.25 ± 0.125 inches. The weight of the bottle shall be 16 ± 0.625 ounces (see Figure 1). The closure shall be made of black molded phenol-formaldehyde and lined with a polyethylene conical liner.

3.2.1.2 Cushioning Material. The cushioning material shall be built up or a molded shape composed of elastic polyether urethane foam conforming to Type I, Class 2, Grade C of MIL-P-26514. The density of the cushioning material shall be 3 ± 0.5 pounds per cubic foot. No filler material shall be included. The built-up cushion half shall be comprised of no more than three pieces cemented together: one section for the main body of the bottle, one section for the neck, and one section a solid cushion pad. The cushioning shall be designed to form a snug fit when placed in the exterior shipping container and loaded with the four sampling bottles (see Figure 1). The cushioning shall consist of two separate parts for easy sampling container accessibility. The cushioning shall provide sampling container immobility and protection from impact and vibration during handling and shipment.

3.2.1.3 Exterior container. The container shall be a metal drum conforming to MIL-D-6054 and MS27684-7 (see Figure 1). The interior and exterior of the container shall be coated with a red semi-gloss enamel conforming to TT-E-490, in lieu of the olive drab specified in MIL-D-6054. The red color shall conform to No. 21136 of FED-STD-595. A primer shall be used under the red enamel.

3.2.1.3.1 Nameplates. Nameplates conforming to Type I of MIL-P-19834 shall be attached to the upper portion of the drum, one on the exterior and one on the interior. The nameplates shall be marked as follows:

Sampling Container Fuel Kit
Part No. 80132-P001
NSN 8115-00-719-4111
Cushioning
Part No. 80132-P001-1
NSN 8115-00-719-4825

3.2.1.4 Sampling tag. The sampling tag shall be of white cloth, Size 8, 6.25 inches by 3.125 inches, conforming to Type A, Grade 3 of UU-T-81. Tags shall be strung with not less than 12 inches of polished cotton twine . Tags shall be furnished with the printed markings as shown in Figure 2. Durable black ink shall be used for the markings. Type size shall be as follows:

Aviation test sample	16 point type
Classification, Routine, Special	12 point type
All other markings	10 point type

3.3 Assembled fuel sampling kit. The kit shall be furnished completely assembled and with the drum lid loosely sealed. The closures shall be fitted on the bottles to keep them clean, dry, and ready for use. The tags with the string shall be included with but not attached to the sampling bottles. The four bottles shall be positioned upright with one in each cushioning cavity. The upper cushioning pad shall be secured in place, and the exterior container loosely sealed to the extent necessary to prevent loss.

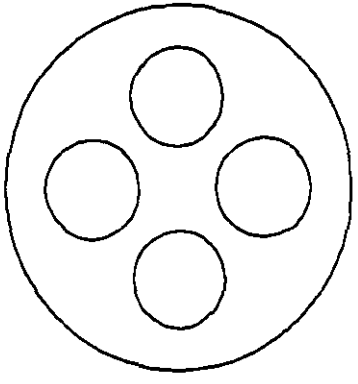
3.3.1 Closure of container. The container shall be sealed by placing the gasket and the lid in position on the container. For the bolt-type lid, effect closure by inserting bolt through lugs on closure rings. Tighten nut and bolt to 6 ± 1 foot pound torque pressure. On the twist lock container, effect closure by inserting locking tool in each of four locks at the top of the container and exerting a twisting motion.

3.3.1.1 Tamperproof seal. A crimped lead seal shall be inserted through the hole in closure bolt, through closure ring lugs or at twist lock to effect a tamperproof seal. The crimped lead seal is not necessary when the container is empty (see 6.2).

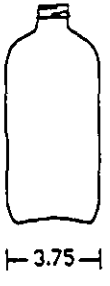
3.4 Assembled fuel sampling replacement kit. The replacement kit shall consist of 4 bottles and 4 tags. The closures shall be fitted on the bottles, and the tags, with strings, shall be included with, but not attached to the sampling bottles.

3.5 Impact resistance. The kits and their cushioned contents shall show no evidence of simulated fuel leakage. The drums shall show no deformation which will affect reclosing and resealing when tested as specified in 4.5.2.

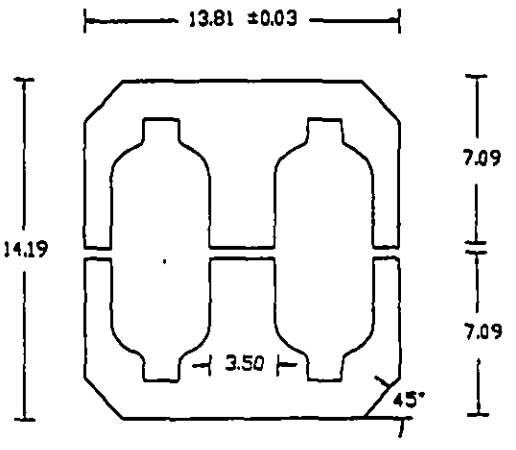
3.6 Workmanship. The kit assembly components shall be free of any defects which may affect durability, strength and serviceability.



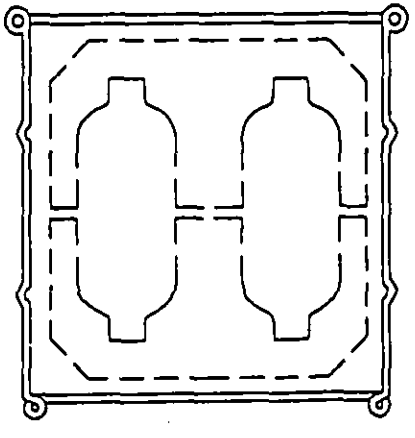
Arrangement of four
sample bottles in kit



Sample bottle
32 ±0.375 ounce capacity



Cushioning, MIL-K-26514
Type 1, Class 2, Grade C



Exterior container
MIL-D-6054, MS27684-7

NOTES:
1. Dimensions are in inches.
2. Tolerances are ±0.125 inches unless otherwise specified.
3. Drawing not to scale.

FIGURE 1. Kit assemblies.

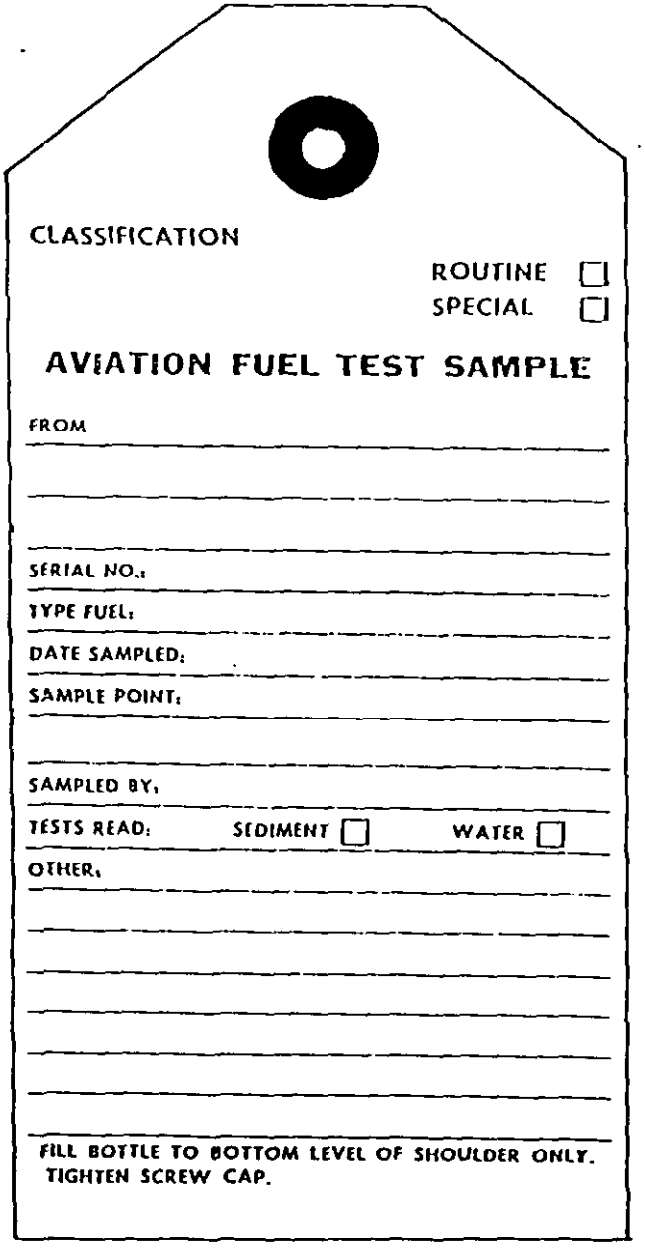


FIGURE 2. Printed sampling tag, UU-T-81, Type A, Grade 3, Size 8.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.3).

b. Quality conformance inspection (see 4.4).

4.3 First article inspection. First article inspection shall include all the examinations and tests of this specification (4.5.1 and 4.5.2) except the inspection of packaging (4.5.3). Unless otherwise specified, no material shall be submitted for acceptance under any contract or order until the first article samples prescribed in 4.3.1 have been subjected to first article inspection and pronounced satisfactory by the procuring activity, or until equivalent certification and data, in accordance with DI-E-2121 (see 6.7), have been approved by the procuring activity (4.3.2). However, approval of the first article samples or equivalent certification and data shall not relieve the supplier of his obligation to meet the quality conformance inspection.

4.3.1 First article samples. Unless otherwise specified in the contract or purchase order, the sample for first article inspection shall consist of one fuel sampling kit and one fuel sampling replacement kit (see 6.2 and 6.3).

4.3.2 First article waiver. If a contractor has previously furnished the kits in accordance with the requirements of this specification and his product has been found satisfactory, the requirement for a first article sample and its submittal for any susequent contract or order may be waived at the discretion of the procuring activity (see 6.2 and 6.3).

4.4 Quality conformance inspection. Quality conformance inspection shall consist of the examinations listed under 4.5.1 and 4.5.3 and, at the discretion of the contracting officer, of the free fall drop test of 4.5.2 (see 6.4).

4.5 Methods of inspection.

4.5.1 Examination of end item. Noncompliance with any specified requirement or presence of one or more defects shall constitute cause for rejection. The sample unit and unit for determining the lot size for this examination, shall be one fuel kit and one replacement kit.

4.5.1.1 Examination for defects in construction, material, design and workmanship. The fuel sampling kit shall be examined for compliance with the requirements specified in 3.2, 3.3, 3.4, and 3.6 and for defects as listed in table II. The fuel sampling replacement kit shall be examined for compliance with the requirements and for defects applicable to the sampling bottles, closures and tags.

4.5.1.2 Examination for dimensional defects. The fuel sampling kit and replacement kit shall be examined for dimensional defects. Any dimension which does not meet the requirement within the tolerance specified shall be scored as a defect.

4.5.2 Impact resistance test. The fuel sampling kit shall be marked in quarters top and bottom and tested in accordance with FED-STD-101, Method 5007, Free Fall Drop Test; procedure C for cylindrical containers using level A drop height (see 3.5). At the discretion of the contracting officer, these tests shall be repeated on each production lot of kits.

4.5.3 Packaging inspection. The preservation, packing, and marking shall be inspected to verify conformance to the requirements of Section 5. The sample unit and unit for determining lot size for this examination shall be one palletized load.

5. PACKAGING

5.1 Preservation. Fuel sampling kits shall be prepared for shipment completely assembled in accordance with 3.3 and 3.4. The fuel sampling replacement kit shall be immobilized in a class weather resistant PPP-B-636 box. Closure shall be method IV of PPP-B-636.

5.2 Packing. Packing shall be level A, B, or commercial as specified (see 6.2).

5.2.1 Level A. Fuel sampling replacement kits shall be packed in a snug fitting box conforming to PPP-B-601, type overseas or PPP-B-621, style 4. Closure and strapping shall be in accordance with applicable container specification.

5.2.2 Level B. Fuel sampling replacement kits shall be packed in a fiberboard container conforming to PPP-B-636, class weather resistant, style optional. Closure and waterproofing shall be accomplished in accordance with method I of PPP-B-636.

5.2.3 Commercial. Kits shall be packed in a manner that will ensure safe transportation at the lowest rate to the point of delivery.

TABLE II. Examination of End Item

EXAMINE	DEFECTS
Material	Any component or material not as specified
Construction and design	Any component missing or malformed
Sampling bottle	Not cylindrical
	Bottom of bottle does not rest evenly upon flat, smooth level surface
	Seams or edges not smooth
	Presence of blisters over 3/32 inch, stones over 1/32 inch and any cracks, chips; dirt or foreign matter embedded in glass
	Cap does not provide tight fitting closure
Cushioning material	Not uniformly molded or built-up to contain bottles
	Evidence of filler material in composition
	Not clean
Exterior container	Finish not as specified, gaskets missing or damaged, covers do not fit properly, sharp edges and metal splinters, presence of dirt, rust or foreign matter
Sampling tag	Not cloth
	Not strung with polished cotton twine, 12 inches or longer in length
	Printed markings incorrect, illegible, omitted
Assembly	Assembled kits not as specified (see 3.3, 3.3.1, 3.3.1.1 and 3.4)

TABLE II. Examination of End Item (cont'd)

EXAMINE	DEFECTS
Workmanship	Any defect in construction or appearance such as improper chime of drum, bottle closure not uniformly lined

5.3 Marking. The exterior container of the fuel sampling kit shall be marked in accordance with MIL-STD-129 and in 1 inch high letters as follows:

AVIATION FUEL SAMPLES
REUSABLE CONTAINER
DO NOT DESTROY

The fuel sampling replacement kit shall be marked for shipment in accordance with MIL-STD-129. The part number is 80132-P001-4 and the National Stock Number is 9Q-8115-00-717-8572.

5.4 Palletization. Unless otherwise specified, kits shall be palletized in accordance with MIL-STD-147, load Type IV, on pallets conforming to NN-P-71.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The sampling kits covered by this specification are intended to be used for transporting samples of aviation fuel conforming to ASTM D910 or MIL-T-5624 by surface or air. The kit is designed to be durable and reusable except for the bottles and tags. The replacement kit contains replacements for the disposable bottles and tags.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.

b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).

c. Quantity

d.. When first article is required (see 3.1).

e. Whether fuel sampling kit or fuel sampling replacement kit is required (see 3.2).

f. Whether impact resistance test (3.5) is required (see 4.5.2).

g. Whether sealing wire and uncrimped metal seal shall be furnished with drum (see 3.3.1.1).

h. Level of packing (see 5.2).

6.3 First article. When first article inspection is required, the contracting officer should provide specific guidance to offerors whether the item(s) should be a first article sample, a first production item, or a standard production item from the contractor's current inventory and the number of items to be tested as specified in 4.3. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.4 Sampling for quality conformance.

6.4.1 For lot sampling purposes, a lot shall consist of all fuel sampling kits of fuel sampling replacement kits subjected to inspection at one time.

6.4.2 Selection of sample. The selection of a sample for examination or test shall be in accordance with MIL-STD-105. The unit for determining lot size and the sample unit shall be as specified in the applicable examination or test paragraph and the inspection level and acceptance quality level (AQL) shall be as specified in 6.5.

6.5 Inspection levels and acceptable quality levels (AQLs) for examination. In accordance with MIL-STD-105, the inspection levels for the purpose of determining sample size and the acceptable quality levels (AQLs) expressed in defects pe 100 units shall be as follows:

EXAMINATION PARAGRAPH	INSPECTION LEVEL	AQL
4.5.1.1	II	4.0
4.5.1.2	S-3	4.0
4.5.3	S-2	4.0

6.6 Sampling bottles. Bottles manufactured of amber, borosilicate or USP Type III soda-lime glass are required to protect the integrity of the fuel sample. The amber color prevents photochemical reactions and the borosilicate or soda-lime glass resists pH change.

6.7 Consideration of data requirements (See 4.3). The following data requirements should be considered when this specification is applied on a contract. The applicable Data Item Descriptions (DID's) should be reviewed in conjunction with the specific acquisition to ensure that only essential data are requested/provided and that the DID's are tailored to reflect the requirements of the specific acquisition. To ensure correct contractual application of the data requirements, a Contract Data Requirements List (DD Form 1423) must be prepared to obtain the data, except where DOD FAR Supplement 27.475-1 exempts the requirement for a DD Form 1423.

Reference Paragraph	DID Number	DID Title
4.3	DI-E-2121	CERTIFICATE OF COMPLIANCE

The above DID's were those cleared as of the date of this specification. The current issue of DOD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must be researched to ensure that only current, cleared DID's are cited on the DD Form 1423.

6.8 Subject term (key word) listing.

Fuels
Fuel testing
Sampling bottles

6.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:
Army - GL
Navy - AS
Air Force - 69

Review Activity:
Army - SM, AV
Navy - MC
Air Force - 82

Preparing Activity:
Navy - AS
(Project 8115-0500)

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NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-K-23714C	KITS, SAMPLING, FOR AVIATION FUELS, REUSABLE

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ OTHER *(Specify)*:

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)

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