#### MILITARY SPECIFICATION

## FILTER AND DISPOSABLE ELEMENT, FLUID PRESSURE HYDRAULIC, 3 MICRON ABSOLUTE

This amendment forms a part of Military Specification MIL-F-81836(AS) dated 18 February 1972, and is approved for use by the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

#### PAGE 2

Paragraph 2.1 Military Specifications: Delete "MIL-E-5272 Environmental Testing, Aeronautical and Associated Equipment, General Specification for".

#### PAGE 3

Paragraph 2.1 STANDARDS, <u>Military</u>: Add "MIL-STD-810 Environmental Test Methods".

Add "MIL-STD-1523 Age Controls Of Age-Sensitive Elastomeric Materials"

Line 8: Delete "ANA 438 Age Controls of Age Sensitive Elastomeric Items".

Lines 9 and 10: Delete "AND 10064 Fitting, Installation of Flared Tube, Straight Threaded Connectors".

#### PAGE 4

Paragraph 2.1 STANDARDS, <u>Military</u>: Add "MS21344 Fittings, Installation of Flared Tube, Straight Threaded Connectors, Design Standard for".

Paragraph 2.2 Other Publications, lines 10 and 11: Delete and substitute "(Applications for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Dr., Warrendale, PA 15096)."

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Paragraph 3.4.2.1, line 1: Insert title "Filter element repair procedures".

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#### PAGE 6

Paragraph 3.4.3.1, line 1: Insert title "Metal types".

Paragraph 3.4.5 Age controls, line 2: Delete "ANA Bulletin NO. 438" and substitute "MIL-STD-1523".

#### PAGE 7

Paragraph 3.5.1, line 1: Insert title "Construction".

Paragraph 3.5.2, line 1: Insert title "Filter types".

Paragraph 3.5.3, line 1: Insert title "Filter Design".

Paragraph 3.5.4, line 1: Insert title "Filter assembly strength".

Paragraph 3.5.4 <u>Filter assembly strength</u>, line 5: Delete "AND 10064" and substitute "MS 21344".

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Paragraph 3.5.15.3 <u>Gauge indicator</u>, lines 10 and 11: Delete the eighth sentence and substitute "The gauge shall be indicated in red at all differntial pressures above 105 psid."

Paragraph 3.6.1, line 1: Insert title "Filter assembly performance".

Paragraph 3.6.2 <u>Bubble point</u>, line 1: Delete the first sentence and substitute "The supplier shall determine the initial bubble point occurring in the filter elements. That pressure shall be correlated against the size of the maximum particle passing through the filter element. This method shall be thoroughly defined and both the bubble point value and the maximum particle size shall be submitted to the procuring activity for approval."

#### PAGE 14

Paragraph 4.3.6 <u>Test dust, source of supply</u>, lines 3 and 4: Gelete the address and substitute "Naval Air Development Center (NADC), Aeronautical Materials Dept., Code 6061, Warminster, PA 18974-5000."

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Paragraph 4.4.1.1.1, line 1: Insert title "Types of samples".

Paragraph 4.4.1.1.2, line 1: Insert title "Assembly of specimens".

Paragraph 4.4.1.1.3, line 1: Insert title "Clearance of moving parts".

Paragraph 4.4.1.2.1, line 1: Insert title "Test samples".

Paragraph 4.4.1.2.2, line 1: Insert title "Repair of filter elements".

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Paragraph 4.5.2 <u>Sampling test</u>: Delete the first sentence and substitute "Sampling of filter assemblies and elements shall be in accordance with MIL-STD-105, using special inspection level S-1, with no rejects allowed.

Paragraph 4.5.2.1 <u>Cleanliness</u>: Delete and substitute "4.5.2.1 <u>Cleanliness</u> — To assure that the filter elements and housing are being cleaned properly, and to assure that the parts are not contaminated during packaging, sample filter elements or assemblies shall be unpacked and tested for cleanliness as specified in paragraphs 4.5.2.1.1 and 4.5.2.1.2. The filter elements shall be installed in a precleaned housing. The migration analysis test shall be conducted in accordance with paragraph 4.6.2.9.2. The requirements of paragraph 4.6.2.9.2 shall be met except that the weight of the contaminant collected shall not exceed 5 milligrams."

Add the following paragraph "4.5.2.1.1 <u>Vibration</u> - The filter assembly, filled with the test fluid, shall be vibrated for 15 minutes at a frequency of  $120 \pm 10$ cps and a double amplitude of 0.014 inch, in a direction parallel to the bowl of assembly."

Add the following paragraph "4.5.2.1.2 <u>Degree of cleanliness</u> - The filter assembly shall be transferred to a stand and flushed with 2,000 milliliters of prefiltered hydraulic test fluid at rated flow (while the effluent is collected). The contaminant level of the effluent sample shall be determined in accordance with ARP 785. The contaminant value obtained shall not exceed 5 milligrams maximum."

Paragraph 4.6.1.4.5 <u>Salt spray test</u>, lines 2 and 3: Delete "paragraph 4.6.1, Procedure I, of MIL-E-5272.", and substitute "MIL-STD-810."

Paragraph 4.6.1.4.6 <u>Sand and dust</u>, lines 2 and 3: Delete "paragraph 4.11.1, Procedure I of MIL-E-5272.", and substitute "MIL-STD-810."

Paragraph 4.6.1.4.7 Fungus, line 2: Delete "MIL-E-5272, Procedure I, paragraph 4.8.1.", and substitute "MIL-STD-810".

Paragraph 4.6.1.7.1, line 1: Insert title "Test report".

Preparing activity
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