

**\*\* ON A/C ALL**

TASK 12-32-28-281-812  
Fuel Sampling for Microbiological Contamination

**WARNING:DO NOT GET AIRCRAFT FUEL:**

- IN YOUR MOUTH
- IN YOUR EYES
- ON YOUR SKIN FOR A LONG TIME.

**WARNING:DO NOT GET YOUR CLOTHES SOAKED WITH FUEL.**

AIRCRAFT FUEL IS POISONOUS AND CAN GO THROUGH YOUR SKIN INTO YOUR BODY.

IF YOU ARE CONTAMINATED WASH WITH CLEAN WATER AND IF NECESSARY GET MEDICAL HELP.

**WARNING:MAKE SURE THAT YOU HAVE THE CORRECT FIRE FIGHTING EQUIPMENT AVAILABLE.**

1. Reason for the Job

This procedure lets you do a test of the sample locally or you can send it to a laboratory.

2. Job Set-up Information

A. Fixtures, Tools, Test and Support Equipment

REFERENCE	QTY	DESIGNATION
No specific		clean and sterilized transparent glass container(s)
No specific	1	MICROBMONITOR 2 TEST KIT ECHA MICROBIOLOGY UK (CAGE CODE 0HZY6)
No specific	1	FUELSTAT RESINAE TEST KIT CONIDIA BIOSCIENCE UK (CAGE CODE KE385)

B. Referenced Information

REFERENCE	DESIGNATION
<a href="#">12-32-28-281-801</a>	Operate Water Drain Valves to Drain Accumulated Water from Center, Inner, Outer and Wing Vent Surge Tanks
<a href="#">12-32-28-281-803</a>	Operate Water Drain Valves to Drain Accumulated Water from Trim Tank and Trim Vent Surge Tank
<a href="#">12-32-28-281-807</a>	Operate the Drain Valve of the Fuel/Air Separator to Drain any Accumulated Water
<a href="#">28-00-00-610-801</a>	Fuel Safety Procedures
<a href="#">28-11-00-600-814</a>	BIOBOR Biocidal Shock Treatment - With Fuel Mixed with Biocide

REFERENCE	DESIGNATION
<a href="#">28-11-00-600-815</a>	BIOBOR Biocidal Shock Treatment - When Fuel Mixed with Biocide is not Available (Metered Injection Rig Method)
<a href="#">28-11-00-600-818</a>	KATHON Biocidal Shock Treatment - With Fuel Mixed with Biocide
<a href="#">28-11-00-600-819</a>	KATHON Biocidal Shock Treatment - When Fuel Mixed with Biocide is not Available (Metered Injection Rig Method)
<a href="#">28-11-00-600-822</a>	Removal of The Microbiological Particles
<a href="#">(Ref. Fig. 304/12-32-28-991-008 SHEET 1)</a>	

### 3. Job Set-up

[\(Ref. Fig. 304/TASK 12-32-28-991-008 SHEET 1\)](#)

Subtask 12-32-28-941-063

#### A. Safety Precautions

**WARNING: OBEY THE FUEL SAFETY PROCEDURES. THIS CAN PREVENT INJURY AND DAMAGE.**

(1) Obey the fuel safety procedures [\(Ref. AMM TASK 28-00-00-610-801\)](#).

### 4. Procedure

Subtask 12-32-28-281-061

#### A. Fuel/Microbiological Sampling

NOTE: If moderate or heavy microbiological **contamination** is found in the samples:

- all the fuel tanks may have microbiological **contamination**
- a biocidal shock treatment must be applied to all of the fuel tanks [\(Ref. AMM TASK 28-11-00-600-814\)](#) or [\(Ref. AMM TASK 28-11-00-600-815\)](#) or [\(Ref. AMM TASK 28-11-00-600-818\)](#) or [\(Ref. AMM TASK 28-11-00-600-819\)](#).

(1) Drain a fuel and water sample from each fuel tank [\(Ref. AMM TASK 12-32-28-281-801\)](#) and [\(Ref. AMM TASK 12-32-28-281-803\)](#). You must use a different sample container for each fuel tank.

NOTE: Do not put additives in the samples to show the water contents.

(2) Put the sample(s) into a clean and sterilized transparent glass container(s) with a capacity of 1.0 l (0.2641 USgal) and:

- seal the container(s)
- make sure you can see free water and fuel in the sample(s) (for the MICROBMONITOR2 **kit** or the FUELSTAT RESINAE **kit**).

(3) Identify each sample with a label that shows:

- the aircraft number
- the fuel tank the sample came from
- all additives you know about.

(4) Keep the sealed sample containers in a cool protected area.

**NOTE:**After the **test** samples are collected, microbial **contamination** in the sample could multiply or die. It is recommended that the samples are tested before 6 hours but no later than 24 hours.

**NOTE:**Do not compare results between the microbial detection kits. They use different methods to give results. If you need help, ask the **kit** manufacturer.

Subtask 12-32-28-281-068

B. Fuel/Air Separator

- (1) Drain a fuel sample from the fuel/air separator ([Ref. AMM TASK 12-32-28-281-807](#)).

Subtask 12-32-28-281-062

C. Sample **Test** - MICROBMONITOR2 **Test Kit** Procedure

- (1) Do one of the steps that follow:
  - (a) Use the MICROBMONITOR 2 **TEST KIT** ECHA MICROBIOLOGY UK (CAGE CODE 0HZY6) (and the manufacturers instructions) to do a **test** on the WATER and FUEL samples, or
  - (b) Send the WATER and FUEL samples to an approved laboratory.
- (2) Do a check of the results:

**NOTE:**If you do only one **test**, it can give an incorrect indication of the condition of the fuel tanks. If a **test** shows **contamination**, (moderate or heavy) do a second **test** before you remove the aircraft from service.

(a) Negligible **contamination**

- 1 The **contamination** is negligible if:
  - the WATER sample contents has 1000 CFU (Colony Forming Units) or less
  - the FUEL sample contents has 4000 CFU or less.
- 2 Continue to monitor the fuel tanks at the scheduled inspection interval.  
This procedure is now complete.

(b) Moderate **contamination**

- 1 The **contamination** is moderate if:
  - the WATER sample contents has between 1000 and 10000 CFU
  - the FUEL sample contents has between 4000 and 20000 CFU.
- 2 Use the same method and do the sample **test** again in not more than 10 days after the first **test**.
- 3 If the **contamination** has not changed from moderate:
  - do the BIOBOR or KATHON biocidal shock treatment (moderate **contamination** procedure) to all of the fuel tanks, ([Ref. AMM TASK 28-11-00-600-814](#))or ([Ref. AMM TASK 28-11-00-600-815](#))or ([Ref. AMM TASK 28-11-00-600-818](#))or ([Ref. AMM TASK 28-11-00-600-819](#)).

(c) Heavy **contamination**

- 1 The **contamination** is heavy if:
  - the WATER sample contents is more than 10000 CFU

-the FUEL sample contents is more than 20000 CFU.

- 2 Use the same method and do the sample **test** again in not more than 10 days after the first **test**.
- 3 If the **contamination** has not changed from heavy:  
-do the BIOBOR or KATHON biocidal shock treatment (heavy **contamination** procedure) to all of the fuel tanks  
([Ref. AMM TASK 28-11-00-600-814](#)) or ([Ref. AMM TASK 28-11-00-600-815](#)) or ([Ref. AMM TASK 28-11-00-600-818](#)) or ([Ref. AMM TASK 28-11-00-600-819](#)).

NOTE:When you do the heavy **contamination** procedure, you will need to enter all the fuel tanks to remove the **contamination**

([Ref. AMM TASK 28-11-00-600-822](#)).

The MICROBMONITOR2 **Test Kit** Procedure is now complete go to para. 5.(Close-up).

Subtask 12-32-28-281-064

D. Sample **Test** - FUELSTAT RESINAE **Test Kit** Procedure

NOTE:The FUELSTAT RESINAE **test kit** shows the most frequent type of **contamination** you can find in fuel tanks (Hormoconis Resinae).

Other types of **contamination** will not be shown.

(1) Do one of the steps that follow:

- (a) Use the FUELSTAT RESINAE **TEST KIT** CONIDIA BIOSCIENCE UK (CAGE CODE KE385) (and the manufacturers instructions) to do a **test** on the WATER and FUEL samples, or
- (b) Send the WATER and FUEL samples to an approved laboratory.

(2) Do a check of the results:

NOTE:If you do only one **test**, it can give an incorrect indication of the condition of the fuel tanks. If a **test** shows **contamination**, (moderate or heavy) do a second **test** before you remove the aircraft from service.

(a) Negligible **contamination**

- 1 The **contamination** is negligible if the indication lines (on the **test kit**) show a negative result.
- 2 Continue to monitor the fuel tanks at the scheduled inspection interval.  
This procedure is now complete.

(b) Moderate **contamination**

- 1 The **contamination** is moderate if the indication lines (on the **test kit**) show a low positive result.  
Use the same method and do the sample **test** again in not more than 10 days after the first **test**.
- 2 If the **contamination** has not changed from moderate:  
-do the BIOBOR or KATHON biocidal shock treatment (moderate **contamination** procedure) to all of the fuel tanks,  
([Ref. AMM TASK 28-11-00-600-814](#)) or ([Ref. AMM TASK 28-11-00-600-815](#)) or ([Ref. AMM TASK 28-11-00-600-818](#)) or

[\(Ref. AMM TASK 28-11-00-600-819\)](#).

(c) Heavy **contamination**

- 1 The **contamination** is heavy if the indication lines (on the **test kit**) show a high positive result.
- 2 Use the same method and do the sample **test** again in not more than 10 days after the first **test**.

If the **contamination** has not changed from heavy:

-do a BIOBOR or KATHON biocidal shock treatment (heavy **contamination** procedure) to all of the fuel tanks

[\(Ref. AMM TASK 28-11-00-600-814\)](#) or [\(Ref. AMM TASK 28-11-00-600-815\)](#) or [\(Ref. AMM TASK 28-11-00-600-818\)](#) or [\(Ref. AMM TASK 28-11-00-600-819\)](#).

5. Close-up