

EMCEE ELECTRONICS INC.

DEF in FSII Test Procedure-patent pending-Feb 2020

Introduction

The aviation industry has recently encountered the problem of **DEF (diesel exhaust fluid)** contamination in **FSII (fuel system icing inhibitor).** Therefore, a need exists to determine if FSII is free of DEF prior to addition of FSII to aviation fuel.

Scope

This test covers the detection of DEF in FSII in a range of 1-100 %.

Procedure

- 1. Using the supplied pipette, dispense approximately 2 mL of FSII sample into the supplied clear vial.
- 2. Empty the contents of the supplied reagent capsule (approximately ½ g) into the vial. **Caution**-it is important that you follow the order of step 1 and 2.
- 3. Place stopper lid on vial.
- 4. Shake vial vigorously for approximately 30 seconds. Contents should have a uniform consistency.
- 5. If an immediate blue color change is observed, this is a positive indicator of DEF contamination in the range of 10-100 %.
- 6. If there is no immediate blue color change, place vial on a level surface and allow to sit for approximately 5 minutes.
- Observe the reagent settling reaction in the vial as follows: Uniform white cloudy- indicative of no DEF contamination. Clear sample on top portion of vial, white settling on bottom or slight blue color changeindicative of DEF contamination in the range of 1-10 %.

Significance and Use

The above procedure provides a rapid, visible test to ascertain significant DEF contamination (1-100%) of FSII. DEF and FSII are both clear and appear similar to water. There is no other known test to determine if they have been mixed.