Hewitt

AVIATION FUELING PRODUCTS

Aviation Fueling Hose Sporadic and Occasional Use Recommended Practice*

This Recommended Practice applies to situations where aviation hoses have already been installed but are not in daily use and the fuel has been allowed to remain static in the fueling hose at higher ambient temperatures (generally above 75° F).

Jet fuel color may vary from colorless to a straw color. 100LL Avgas contains a blue dye. Observation of fuel color that is not typical should be investigated further. Operating experience has documented cases of discoloration of aviation fuel held in the fueling hose for several days in a high ambient temperature environment.

The intention of this Recommended Practice is to promote general awareness of the potential observation of this fuel condition and recommended actions if detected.

If the above described conditions are present, aviation fuel should be inspected prior to dispensing to aircraft.

Perform a White Bucket Test (using a properly bonded bucket) to detect the presence of discolored or contaminated fuel. Record the results per standard rating criteria.

If discolored or contaminated fuel is detected, the approximate volume within the fueling hose should be removed from service. Approximate line fill for 50' lengths of various diameter hoses are found in the chart below.

After draining the hose, it should be refilled and rechecked before performing fueling operations. If the condition continues additional flushing may be required.

Hoses with single point nozzles in fixed or mobile fueling systems that are set up for recirculation should follow EI 1540 recommendations for new hose commissioning and be flushed with 500 gallons of fuel.

Single-Point Recirculation Valve

*This Recommended Practice is not intended for new hose installations.

Truck mounted disposal/holding tank

Main tank ports on top of vehicle

Fueling systems with overwing fueling hoses/nozzles may not be set up for fuel recirculation and flushing with 500 gallons may be impractical. Flushing can be accomplished by either putting the fuel into a disposal or holding tank which may be mounted on the truck or by rerouting through the portals on top of the truck's main tank **(taking appropriate fire safety precautions)**. Consider flushing small bore hoses with a minimum of 10 times the hose fill volume. Once completed, recheck the fuel before beginning fueling operations.

Because of the diversity of operating conditions, each location should develop their own specific procedures to detect and remove fuel from the supply system that exhibits unusual appearance characteristics related to the conditions described in the Recommended Practice*.

Checking Fuel Quality

Fuel quality can be checked quickly and effectively by using a white porcelain or properly grounded plastic bucket and a glass jar. Clean the bucket and jar, open the delivery hose and take a 1- to 2-gallon sample into the bucket.

Look for the following:

- Free water suspended in the fuel or at the bottom of the container
- Particles in the fuel
- Unusual odor **(Use personal safety precautions when checking)**
- Fuel color that is not typically observed
- Wispy white film or foam that does not break up and disappear quickly

Pour some of the fuel into the glass jar and look for haze.

A white film or "soap suds" on the surface can indicate surfactant contamination. Unusual odor may indicate a product mix or the presence of microbial growth. A change in any of these conditions is cause for further investigation. Check with the fuel supplier for guidance.

New Fueling Hose Commissioning Flushing Recommendations (EI 1540): Before using a new fueling hose, soak and flush it with fuel to remove any contaminants. Fill the hose with the fuel to be used and let it soak for at least 8 hours at a minimum temperature of 59° F. Drain the hose and check the fuel for solid matter and discoloration. If contamination or discoloration is observed, fill the hose with fuel and repeat the soak period. Check the fuel and repeat the soak-and-flush procedure until no particulate is present and there is no color change. Circulate 500 gallons of fuel through the hose and pressure-test it to the maximum working pressure before placing it in service. Check the nozzle strainer, and clean as necessary, prior to dispensing fuel.

Gallons in a 50ft Hose Assembly

HOSE ID	LENGTH IN FEET	TOTAL CUBIC INCHES	TOTAL GALLONS
0.75	50	265.11	1.15
1	50	471.30	2.04
1.25	50	736.41	3.19
1.5	50	1060.43	4.59
2	50	1885.20	8.16
2.5	50	2945.63	12.75

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