

Smoking in the Cold

In cold weather, condensation in the M157's fog oil tank can freeze and block the fog oil pump strainers. That stops smoking cold. But there are ways to smoke cold problems.

When it's below freezing, have your fuel supply folks add kerosene or diesel fuel to the fog oil to form a mixture that flows easier. The table below shows the right mix of fog oil and fuel.

Operating Temperature	Percentage of Fog Oil to Diesel/Kerosene
Above 32°F	100/0
32° to -10°F	75/25
-11° to -25°F	60/40
-26° to -40°F	50/50

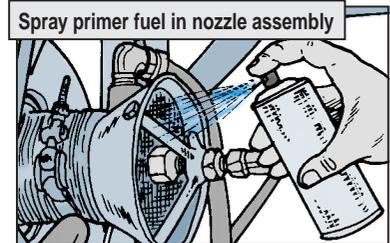
The fuel folks also need to add 16 ounces of DGME icing inhibitor, NSN 6850-01-377-5075, to every 40 gallons of fog oil.

For the engines, use Type 2 automotive combat gasoline (MOGAS), NSN 9130-00-240-8201, in below-freezing weather, **or** mix 16 ounces of isopropyl alcohol, NSN 6810-00-286-5435, to each 5 gallons of untreated gasoline. Keep all fuel tanks as full as possible to prevent condensation.

If you don't have Type 2 gas, use engine primer fuel, NSN 6850-00-823-7861, to start the M157 in cold weather.

Spray the primer into the nozzle assembly for 2 to 3 seconds and step away (primer fuel is very flammable). Have a buddy immediately push the

ENGINE switch to START. Don't hold it in START longer than 15 seconds or you'll lose too much air pressure to start. Do this procedure up to three times more. If the M157 still won't start, tell your repairman.



For the M157A2, smoking in the cold is a little different. You mix fog oil just like you did for the M157, and add 16 ounces of isopropyl alcohol to each 5 gallons of untreated gasoline or 2 ounces of icing inhibitor to each 5 gallons of other untreated fuel. Then use

these preheat cycles according to the fuel you're using:

Fuel	Preheat Cycle
MOGAS	0
JP-1	1
JP-4	1
JP-5 turbine	3
JP-8 turbine	4
Diesel fuel-arctic	4
DF-1 diesel	4

After setting the PREHEAT, hold the FUEL switch in START until the FUEL indicator comes on. Release the FUEL switch and let it flip to RUN.

After the AIR indicator lights and the PREHEAT indicator goes off, hold the ENGINE switch in START for 1 to 2 seconds and then release it. Wait 3 seconds.

Hold the ENGINE switch in START until the ENGINE indicator lights and the SMOKE TEMP indicator reaches the green band. Release the ENGINE switch and let it flip to RUN.

Wait until the engine temperature reaches 800°F. Hold the FOG OIL switch in START until the FOG OIL indicator lights, then let the switch flip to RUN. You're ready to smoke.

For more information, see Pages 2-29 through 2-34 in TM 3-1040-283-10.

