



NATO

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Chapter 15: Fuels, Oils, Lubricants and Petroleum Handling Equipment

Annex A

Aide Memoire on Fuels in NATO

AVIATION FUELS

NATO CODE

F-18

is an aviation gasoline (low lead) in limited use by certain NATO nations. Also known as AVGAS 100LL.

F-34

is a military kerosene type aviation turbine fuel with Fuel System Icing Inhibitor (FSII) (NOTE 1) used by land based military gas turbine engined aircraft in all NATO countries. (NOTE 2) Also known as JP-8 or AVTUR/FSII.

JET A-1 or AVTUR + Additives (NOTE 3) = JP-8 or AVTUR/FSII.

F-35

is a military kerosene type aviation turbine fuel equivalent to that used by most civil operators of gas turbine engined aircraft. Also known as JET A-1 or AVTUR.

JET A-1 or AVTUR; therefore F-34 = F-35 + Additives.

F-40

is a military wide cut type aviation turbine fuel with FSII used by land based military gas turbine engined aircraft (NOTE 2). Also known as JP-4 or AVTAG/FSII. Within NATO it is an emergency substitute for F-34/F-35.

F-44

is a military high flash point kerosene type aviation turbine fuel with FSII used by ship borne military gas turbine engine aircraft in most NATO countries. Also known as JP-5 or AVCAT/FSII **JET A and JET B** (See NOTES 4 and 5)

NOTES:

1. FSII NATO Code S-1745. Additive to aviation turbine fuels as system icing

inhibitor.

2. Until 1986, F-40 was used by land based gas turbine engined aircraft in all NATO countries except France and the United Kingdom which had converted to F-34 some 15 years earlier. Following a decision by NATO Defence Ministers all nations except Turkey switched from F-40 to F-34. The conversion (known as Stage 1 of the Single Fuel Concept) was completed in 1988. Turkey completed its conversion from F-40 to F-34 in 1996.
3. The term "additives" used in this Aide Memoire can include FSII corrosion inhibitor/lubricity improver additive and static-dissipator additive (SDA).
4. JET A is a civil grade of kerosene type aviation turbine fuel only supplied for operations in the United States. It has a freezing point of -40°C max which differs from JET A-1 (-47°C).
5. JET B is a civil grade of wide cut type aviation turbine fuel which has a different freezing point (-50°C) from F-40 (-58°C) and does not normally contain FSII.
6. For further details about these fuels, see Annex C to STANAG 1135.

GROUND FUELS

GASOLINES

F-46

is a military fuel used in certain armoured and non-armoured vehicle spark ignition engines in NATO Europe areas outside Denmark and the United Kingdom. Also known as gasoline automotive: Military (91 RON) or COMBATGAS. Availability of this fuel is now limited and has been replaced by F-57.

F-57

low leaded gasoline introduced to replace F-46. It is interchangeable with commercial gasoline automotive (98 RON).

F-67

unleaded gasoline automotive interchangeable with commercial gasoline (95 RON).

DIESEL FUELS

F-54

is a military fuel used in compression ignition engines in NATO Europe areas outside Denmark, Greece, Italy, Portugal, Spain and the United Kingdom. Also known as Diesel Fuel: MILITARY or DF-2. It has a Pour Point specification of 18°C maximum.

F-65

low temperature diesel/kerosene fuel blend.

F-75

is a military fuel used in compression ignition engines in Denmark and Greece.

It is normally referred to as FUEL NAVAL DISTILLATE, low pour point. (See Naval fuels).

NOTE: For further details about these fuels, see Annex C to STANAG 1135.

NAVAL FUELS

F-75

is a naval fuel used in compression ignition engines and in naval gas turbines and ships' boilers for steam raising. Also known as FUEL, NAVAL DISTILLATE, low pour point. (See Ground Fuels).

F-76

is the primary naval fuel used as for F-75 above but it may require special handling and storage due to low temperature characteristics. Also known as FUEL, NAVAL DISTILLATE (NOTE 1).

F-77

is a naval residual fuel used for boiler steam raising for certain ships in France, Greece and Turkey. Also known as FUEL, RESIDUAL, light viscosity boiler or 50/50 FFO (NOTE 2).

NOTES:

1. Alternative turbine/diesel engine fuel for use in certain naval helicopters.
2. F-77 may also be used in slow speed diesel engines.
3. F-44 Naval aviation turbine fuels - see Aviation Fuels.
4. For further details about these fuels, see Annex C to STANAG 1135.

