

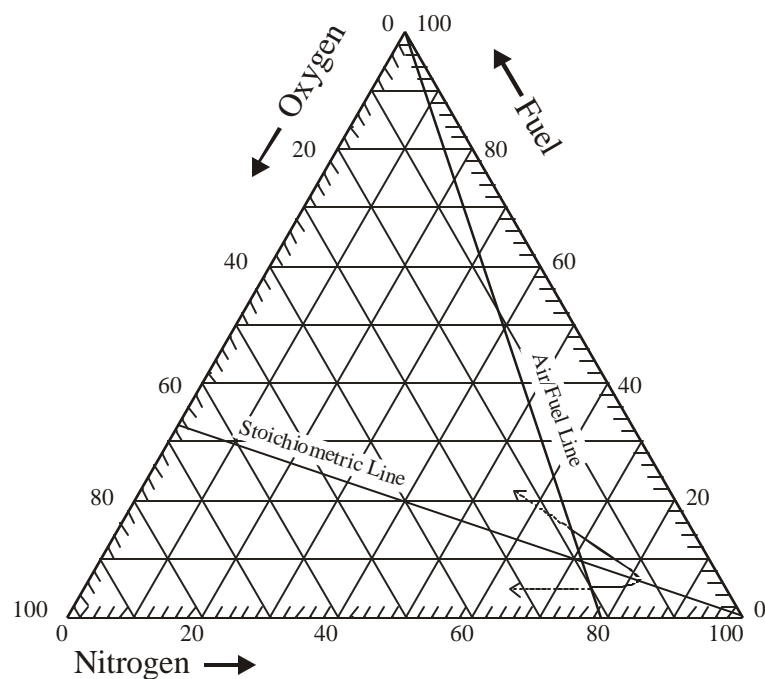
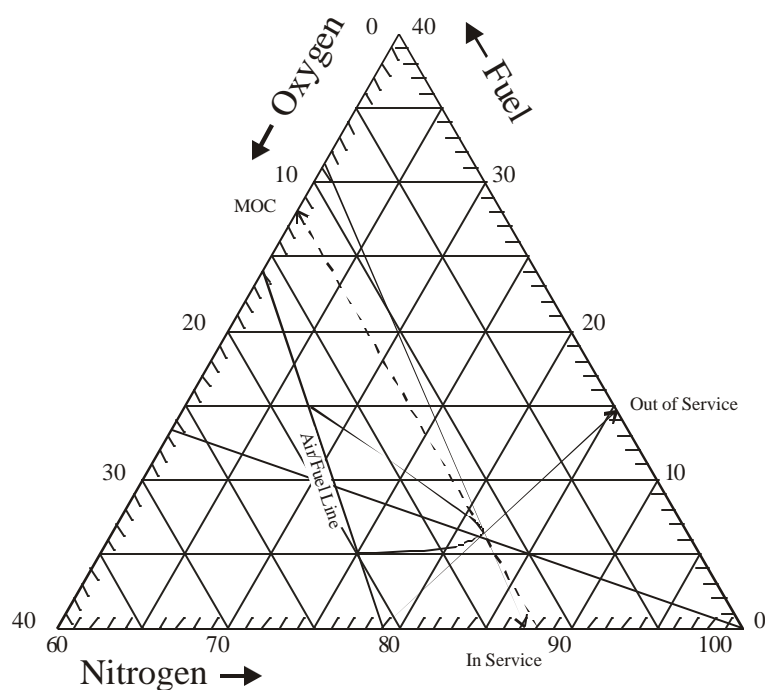
Methane



25°C and Atmospheric Pressure



Triangular Plot Data From Reference 2



Molecular weight:	16.04
Boiling point: ¹	-161.45°C
LFL: ²	5%
UFL: ²	15%
MOC:	12% O ₂
Flash point: ³	-222.56°C

Vapor Pressure Equation: ⁴	$\ln P = A - \frac{B}{T(K) + C}$
	P (mmHg)
	93 to 120K
	A = 15.2243
	B = 897.84
	C = -7.16

Concentration of vapor in air at 1 atm.: **%

From Figure:

In service Concentrations:	87% N ₂ 13% O ₂
Out of service Concentrations:	14.5% Fuel 85.5% N ₂

¹Lide, D. R., Editor in chief, *Handbook of Chemistry and Physics*, 71st ed., CRC Press, Inc., Boston, 1991

²Zabetakis, M. G., *Flammability Characteristics of Combustible Gases and Vapors*, U.S. Dept. of the Interior, Bureau of Mines, No. 627, 1965

³Stephenson, R. M., *Flash Points of Organic and Organometallic Compounds*, Elsevier Science Publishing Co., Inc., New York, 1987

⁴Reid, R. C., Prausnitz, J. M., and Sherwood, T. R., *The Properties of Gases and Liquids*, 3rd ed., McGraw Hill, New York, 1977