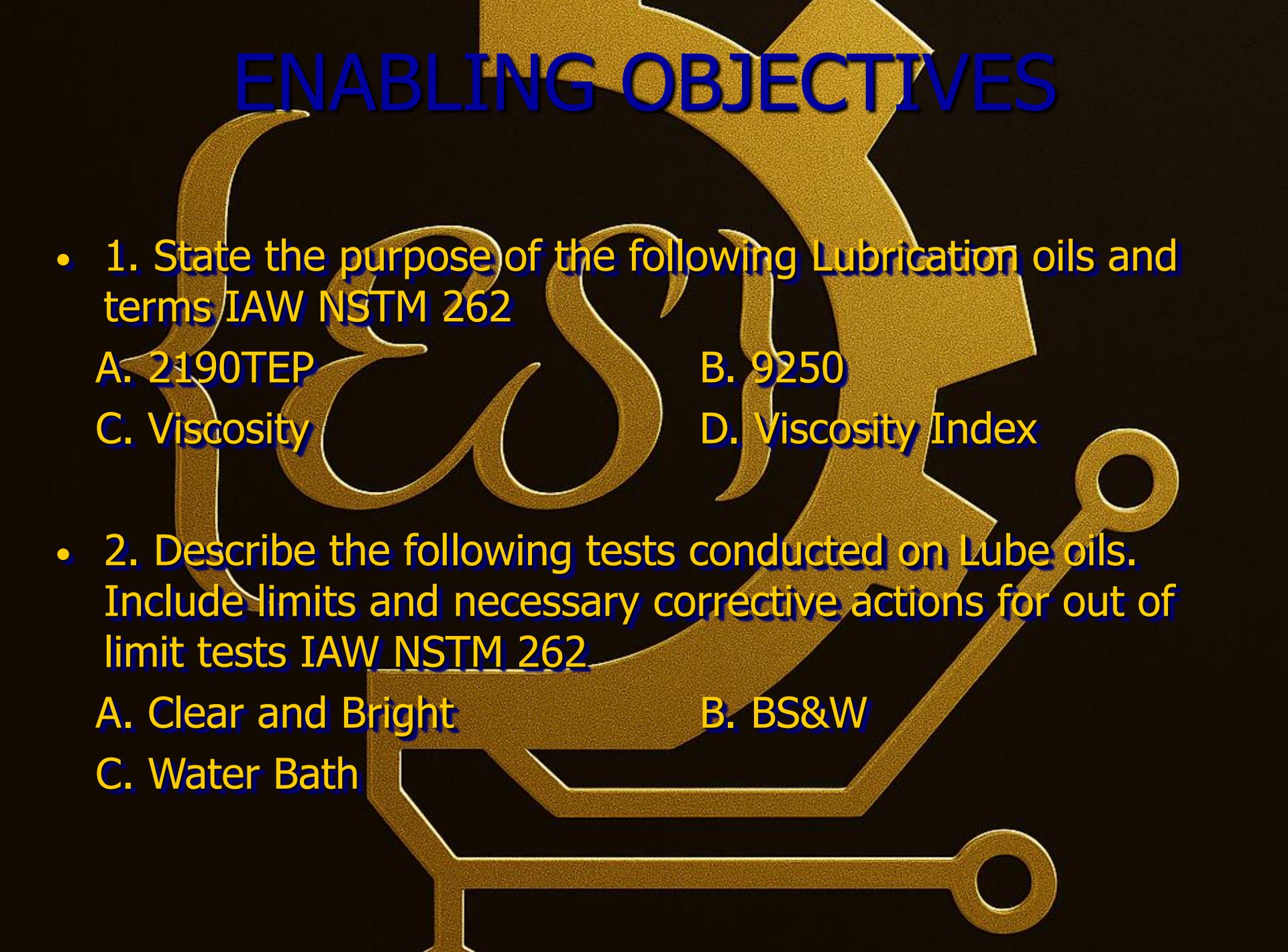


EM300

LUBE OIL AND FUELS

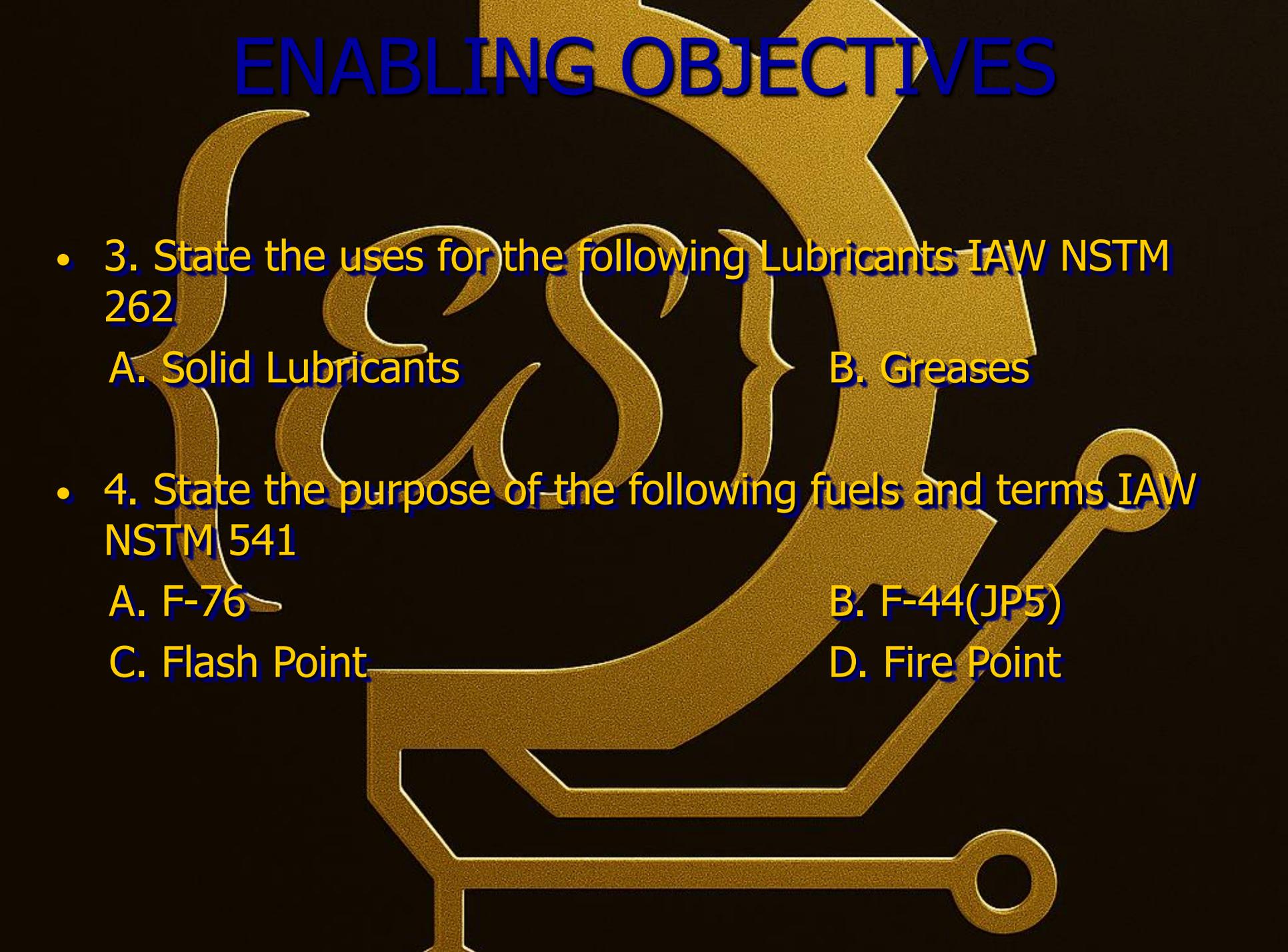


ENABLING OBJECTIVES



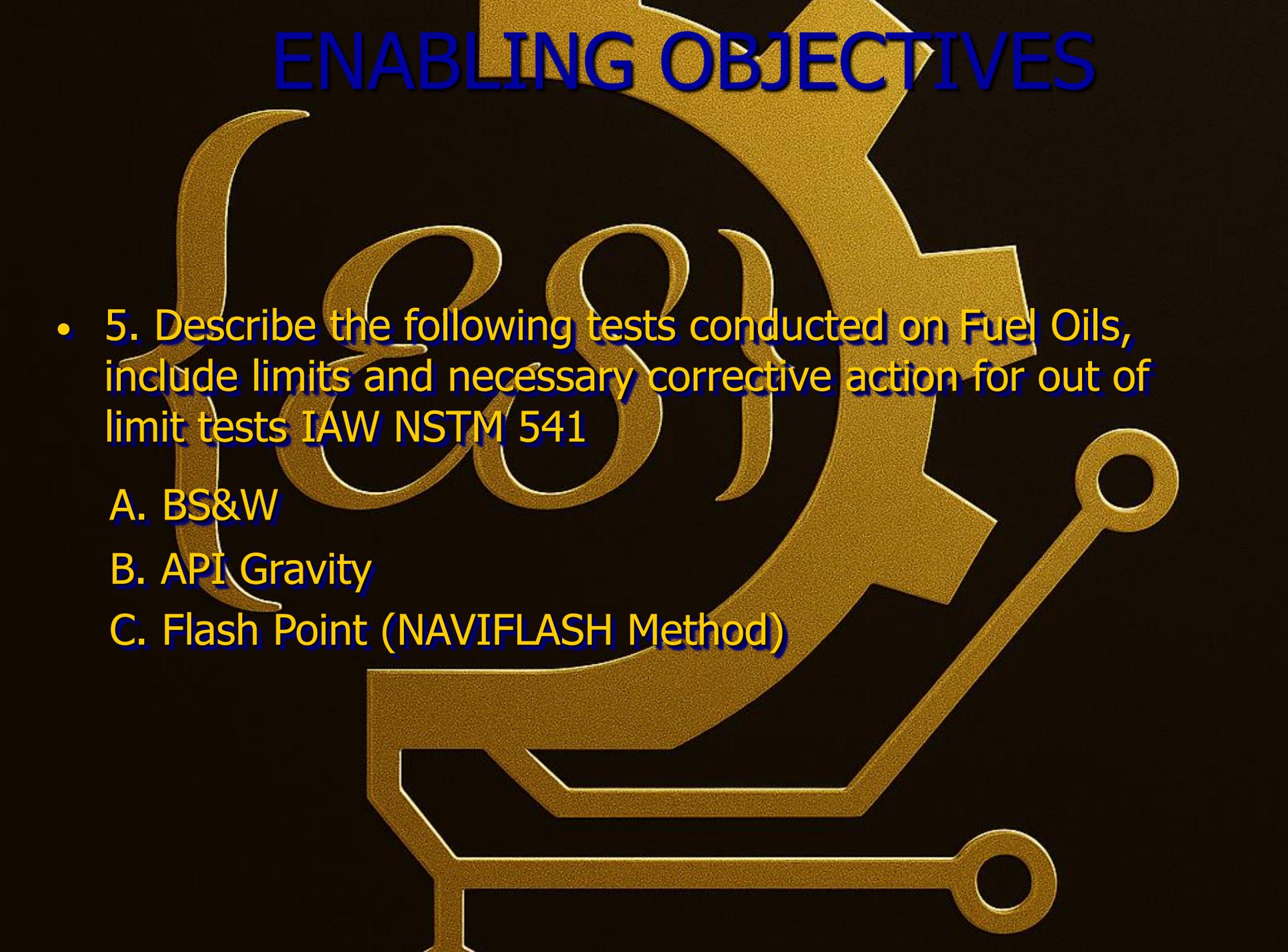
- 1. State the purpose of the following Lubrication oils and terms IAW NSTM 262
 - A. 2190TEP
 - B. 9250
 - C. Viscosity
 - D. Viscosity Index
- 2. Describe the following tests conducted on Lube oils. Include limits and necessary corrective actions for out of limit tests IAW NSTM 262
 - A. Clear and Bright
 - B. BS&W
 - C. Water Bath

ENABLING OBJECTIVES



- 3. State the uses for the following Lubricants IAW NSTM 262
 - A. Solid Lubricants
 - B. Greases
- 4. State the purpose of the following fuels and terms IAW NSTM 541
 - A. F-76
 - B. F-44(JP5)
 - C. Flash Point
 - D. Fire Point

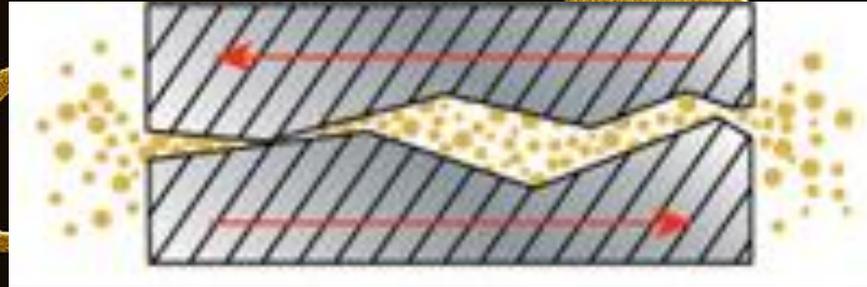
ENABLING OBJECTIVES

The background features a large, golden gear with a complex, stylized font spelling out the word "Tests" in a cursive, calligraphic style. The gear and text are set against a dark, textured background.

- 5. Describe the following tests conducted on Fuel Oils, include limits and necessary corrective action for out of limit tests IAW NSTM 541
 - A. BS&W
 - B. API Gravity
 - C. Flash Point (NAVIFLASH Method)

LUBRICATING OILS

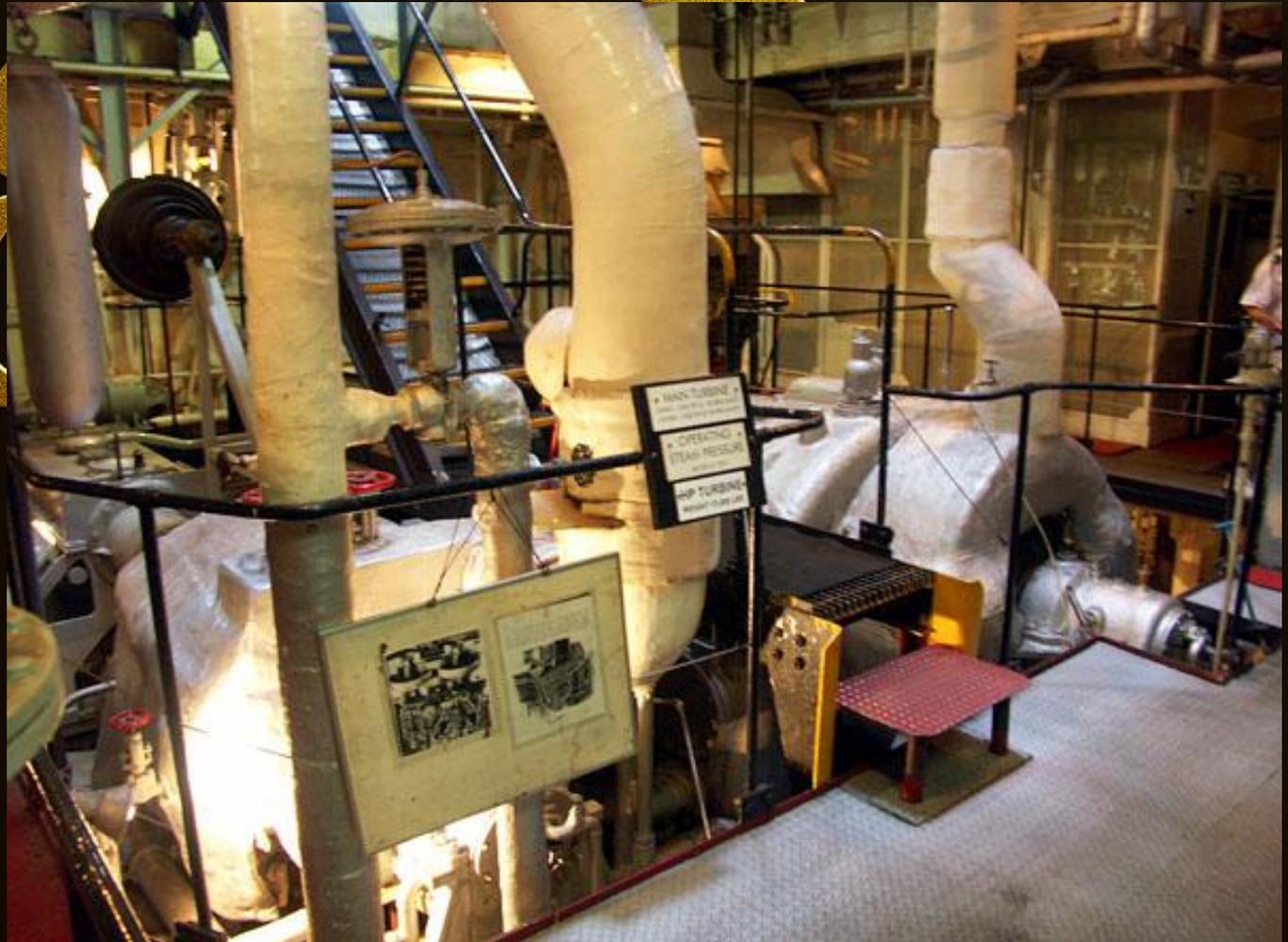
Purpose:



1. To form a protective film between adjacent surfaces to reduce wear and dissipate heat at wear surfaces.
2. To protect from corrosion.

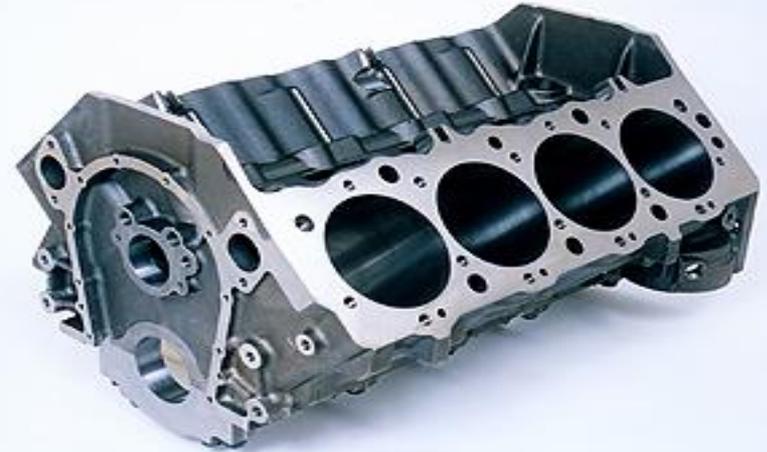
LUBRICATING OILS

2190TEP



LUBRICATING OILS

9250



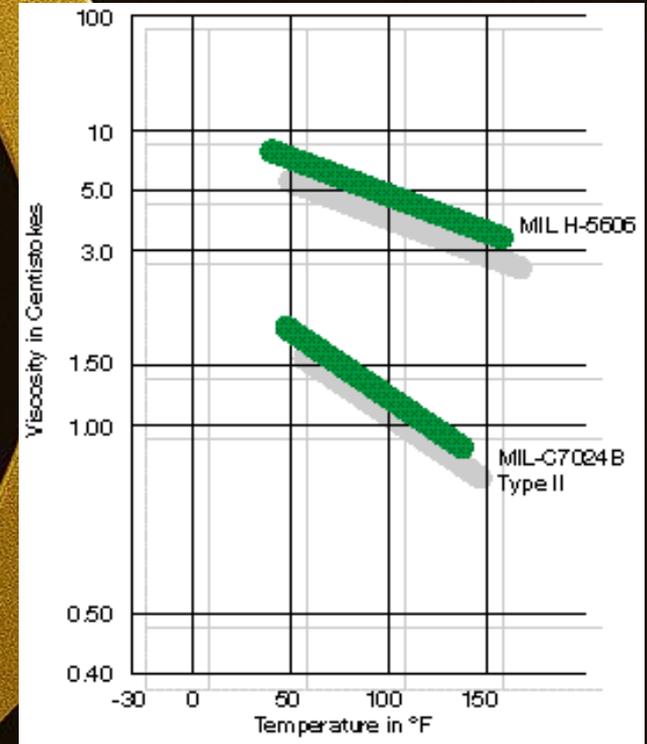
Definitions

VISCOSITY

A fluids resistance to flow

VISCOSITY INDEX

The effect of temperature on a lubricants viscosity is a measurement of its viscosity index



LUBE OIL TESTING

CLEAR and BRIGHT

Clear

Absent of visible matter

Bright

Absent of moisture or other factors that affect the color and clarity of the sample



LUBE OIL TESTING cont.

BS & W

(Bottom Sediment & Water)

For samples that fail the Clear and Bright test must conduct a BS & W test



LUBE OIL TESTING

Water Bath



When an oil sample is not at operating temperature (120 + or - 5 degrees F), it must be placed in a warm water bath prior to doing a clear and bright test.

Lubricating Oils

Solid Lubricants-

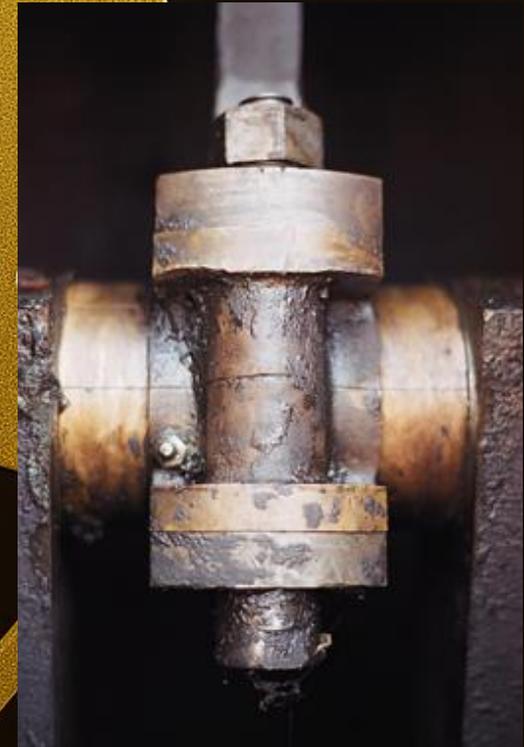
Used where unusual temperature and environmental conditions preclude the use of conventional fluid lubricants.



LUBRICATING OILS

Greases-

Used in situations where sufficient lube oil cannot be effectively maintained on machinery surfaces.



FUELS

F-76 (DFM)

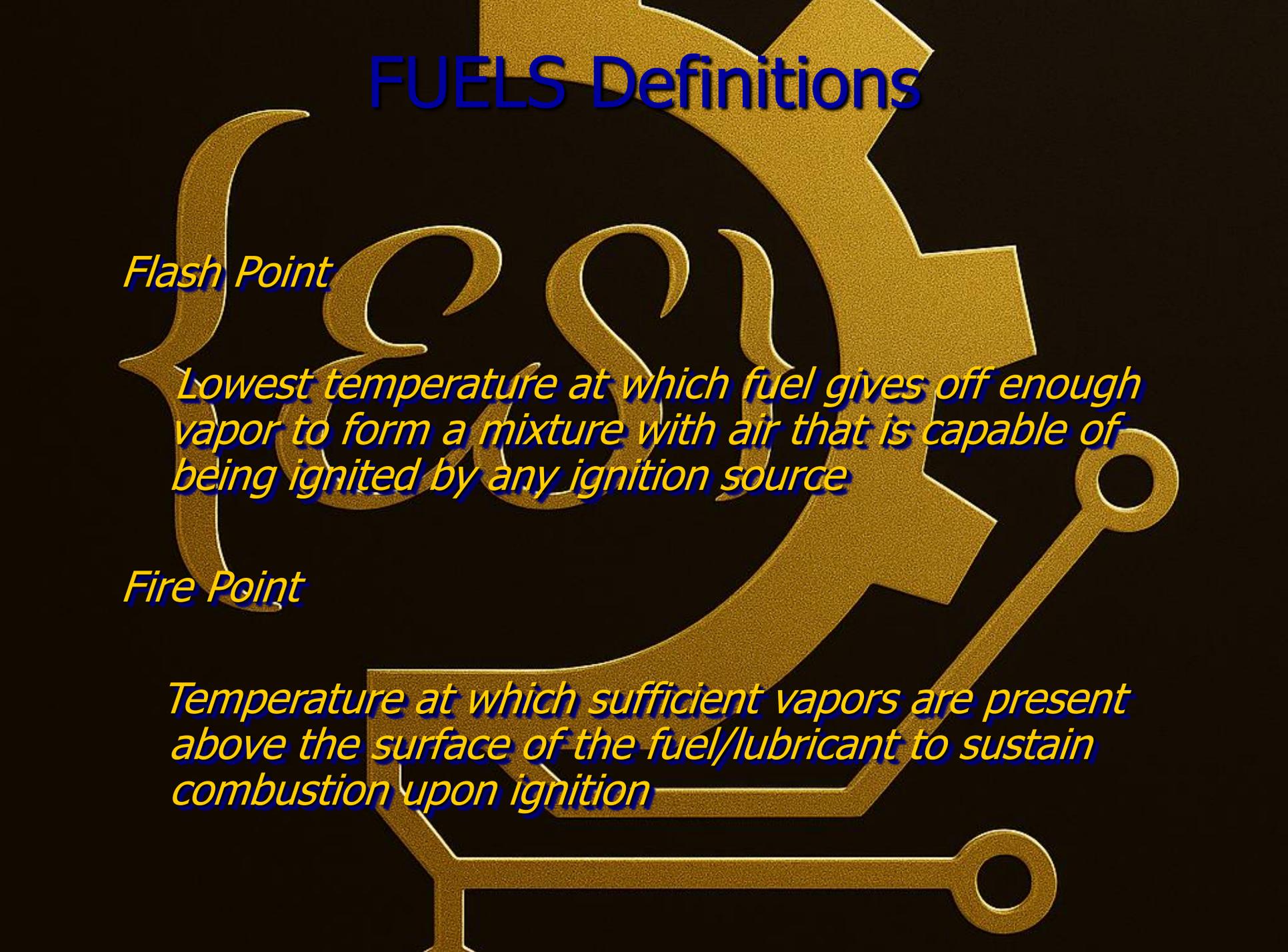


FUELS

F-44 (JP5)



FUELS Definitions



Flash Point

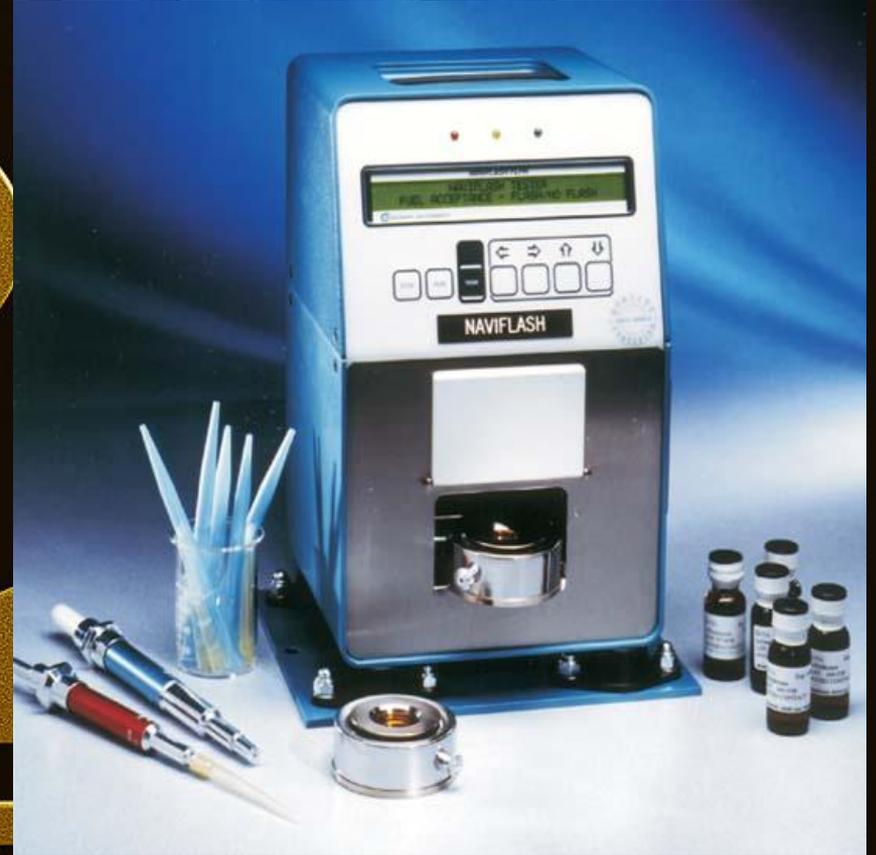
Lowest temperature at which fuel gives off enough vapor to form a mixture with air that is capable of being ignited by any ignition source

Fire Point

Temperature at which sufficient vapors are present above the surface of the fuel/lubricant to sustain combustion upon ignition

FUEL TESTING

Flash Point Test (NAVIFLASH)



FUEL TESTING

BS & W

(2) 100 ML SAMPLES



FUEL TESTING

API Gravity Test



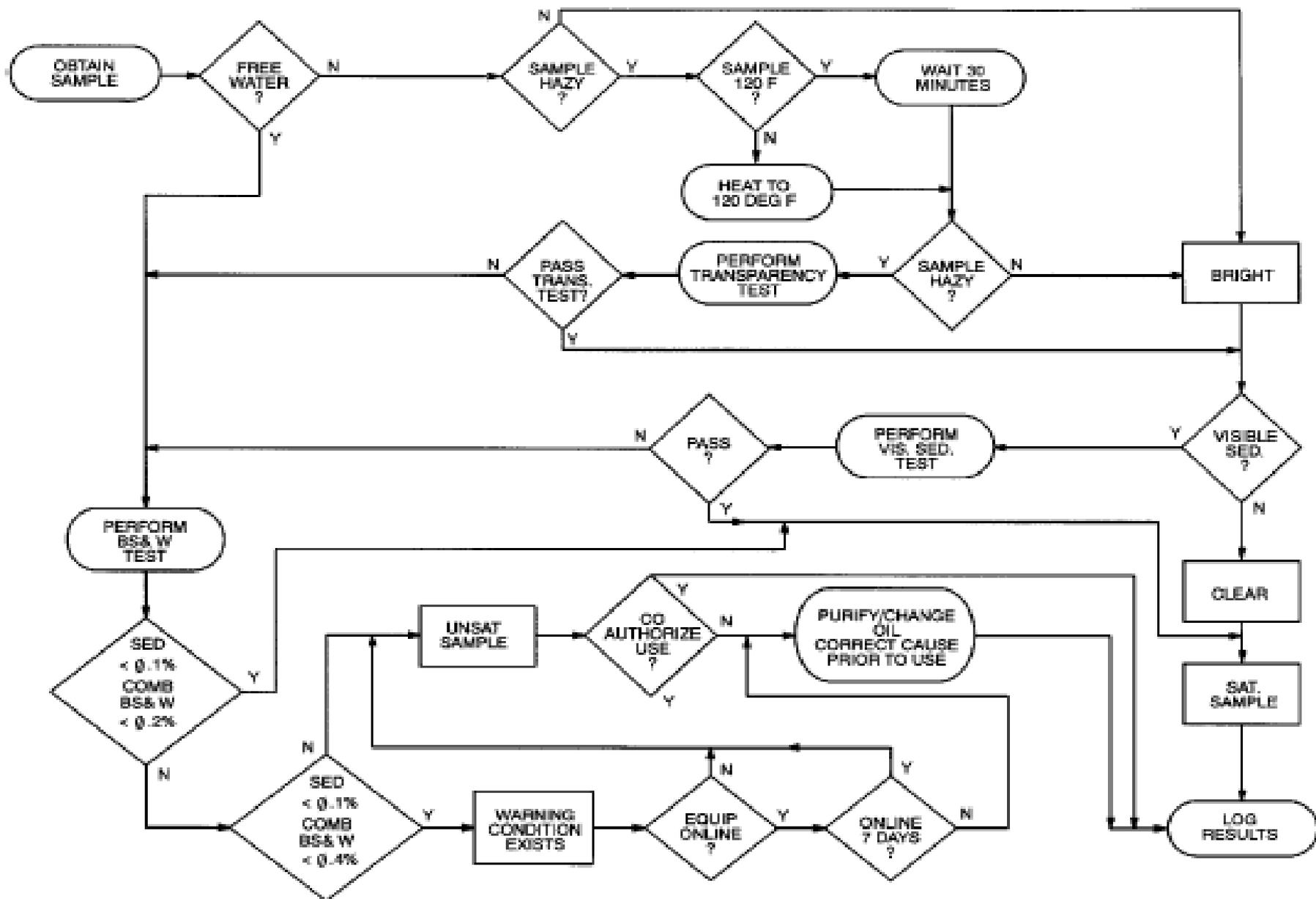


Figure 262-5-2. Flowchart for Systems Without Online Purification Capability