

Tannas Noack S2™

Volatility Test

ASTM D5800, Procedure D

Principle

Evaporation Loss / Volatility: The evaporation loss/volatility of engine oils is of particular importance to the automotive industry as it closely relates to oil consumption in an engine and can lead to a change in the properties of the engine lubricant.

A measured quantity of sample is placed in an evaporation crucible and heated to 250°C for 1-hour while a constant flow of air, controlled at 20 mm H₂O vacuum, is drawn over its surface to remove the resultant vapors. The loss in mass of the oil is determined by weighing before and after the test and calculating the percent loss.

History

The original Noack volatility test was introduced to the industry in the 1930's for determining the evaporation loss of lubricating oils. Now known as Procedure A, it operates with a toxic mixture of compounds known as Wood's Metal for sample heating.

Innovation

In the mid-1990's, Mr. Selby, and his colleagues at the *Savant Group*, eliminated the need for Wood's Metal by devising a noble-metal heater approach. This innovative development was completed in 1997 and Tannas began marketing the first non-Wood's Metal Noack tester. Novel advancements and updates to the original Selby-Noack® led to the new Tannas Noack S2™ Volatility Test.

Features

- Calibration to lab environment using interchangeable Orifice Caps – 'tunable' to the atmospheric conditions of each lab.
- Only Noack System to collect volatile products for further analysis of phosphorus, sulfur, and other elemental oil vapors.
- Used for *Phosphorus Emission Index (PEI)* and *Sulfur Emission Index (SEI)* related to phosphorus and sulfur emissions from the combustion chamber.
- Advanced Automated Software Option.

New Design

- Design enhancements for improved test precision and ease-of-use for high sample workloads and robust day-to-day operation.
- Incorporates metal Reaction Vessel and Quick Connect Fittings for test efficiency and easy cleaning.
- Compact, all-in-one design with small footprint.
- New touchscreen controller with a user-friendly interface.



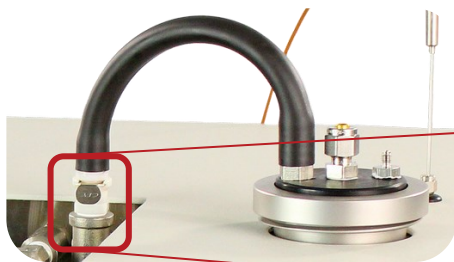
ASTM D5800D

Required for :

- ILSAC GF-3 to GF-5 & dexos™ Engine Oil Specifications.
- API 'SL', 'SM', 'SN' categories for modern engine oils.
- Scheduled for acceptance in CEC L-040 in May 2018.

Special Features

- Sized Orifice Tubes easily calibrate and "tune" instrument to lab environment.
- True operation at 250°C Temperature Setting.
- Redesigned for improved precision and rapid turn-around between tests.
- Collection of volatile products during Noack test for further analysis.



Quick Connect Fitting (left): Connections snap together easily for rapid and stable test setup.



TANNAS CO.
4800 James Savage Rd.
Midland, MI 48642 USA



TannasKing.com



tannas@savantgroup.com



+1 989 496 2309



+1 989 496 3438

Instrument & Parts

Noack S2 Volatility Test:

480000: 110 VAC, 50/60 Hz Power

480500: 220 VAC, 50/60 Hz Power

ASTM D5800, Procedure D:

480118: Reaction Vessel – TNS2

480127: Reaction Vessel Lid Assembly – TNS2

480132: Outlet Tube Assembly – TNS2

480130: Inclined Manometer Assembly

480140: Quick Connect Fitting 1/4 NPT/Coupling

480141: Quick Connect Fitting 1/4 Barb/Coupling

480139: Quick Connect O-ring

480133: Coalescing Filter Housing Assembly

450110: Coalescing Filter Element

450135: O-ring - Coalescing Filter

460029: Vacuum Tubing - Tygon 1/4" ID

450138: Pump Filter Element

450136: O-Ring - Pump Filter

480026: Stirrer Bar

550031: Gripper Gloves

040045: VarClean[®] Cleaner

040034: SNH-200 Reference Oil

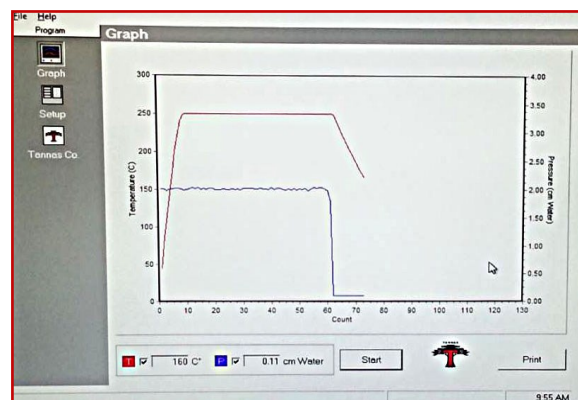
040032: SNC-150 Reference Oil

040048: SNA-130 Reference Oil

Automated Software

The Tannas Noack S2[™] Software Package provides real-time display of test temperature and vacuum control during the 1-hour test and temperature based automatic shutdown after test. It allows convenient entry of sample information and offers test result reporting at end-of-test.

The data analysis downloads to a .csv file for easy transfer into LIMS or conversion to an Excel spreadsheet.

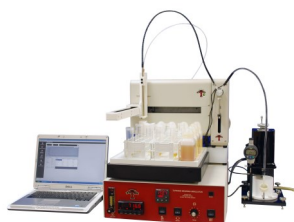


Additional TANNAS CO. Precision Laboratory Instruments



Tannas Foam Air Bath (TFAB[™])

- ASTM D892, D6082, IP146
- Non-liquid bath
- 24°C to 150°C range



Tapered Bearing Simulator (TBS[™]) Viscometer

- ASTM D4683, D6616, CEC L-36-A90, IP370
- High-Temperature, High-Shear (HTHS) Viscosity



Quantum[®] Oxidation Tester

- ASTM D2272, D2112, D4742, D942, IP229
- RPVOT, TFOOT, Grease Oxidation
- Non-liquid 'dry cylinder' sample heating



TANNAS CO.
4800 James Savage Rd.
Midland, MI 48642 USA



TannasKing.com
tannas@savantgroup.com

© 2018 Tannas Co. | TNS2 - 06 | Printed in USA



+1 989 496 2309



+1 989 496 3438

