



Mack Trucks, Inc.
Greensboro, NC USA

Service Bulletin Trucks

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Date	Group	No.	Release	Page
5.2014	230	10	02	1(4)

Diesel Fuel Hydrometer, Instructions All Models

Diesel Fuel Hydrometer, Instructions

The diesel fuel hydrometer is used for troubleshooting engine performance problems and measuring diesel fuel quality. The hydrometer measurements are given as an American Petroleum Institute (API) gravity reading when testing diesel fuel composition and combustion characteristics.

Note: Information is subject to change without notice.

Illustrations are used for reference only, and can differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

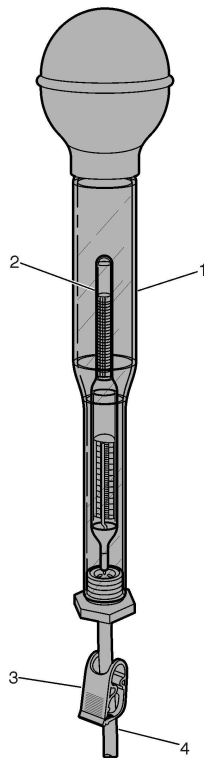
2309-06-03-01 Diesel Fuel Hydrometer, Instructions

You must read and understand the precautions and guidelines in Service Information, Function Group 20, "Engine Safety Practices" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.



WARNING

Individuals performing API gravity test must wear proper protective equipment (PPE) before drawing a sample of diesel fuel. Safety glasses must be worn to prevent eye contamination in case of a splash. Gloves must be worn to prevent contamination through skin contact. If contact is made, immediately flush eyes and/or skin with water and seek medical attention.

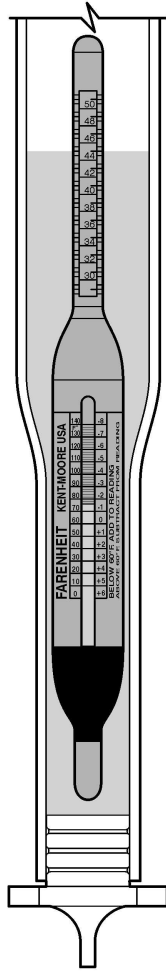


1

Assemble diesel fuel hydrometer, part number J38641-B.

W2059421

- 1 Glass Tube
- 2 Bulb
- 3 Tube Clamp
- 4 Siphon Tube

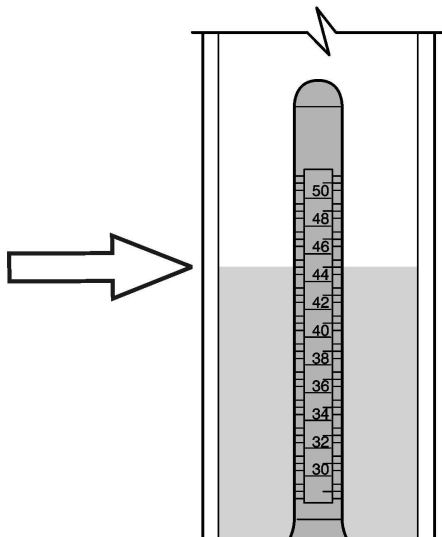


2
Draw sufficient fuel into the hydrometer to completely float the bulb inside the glass tube.

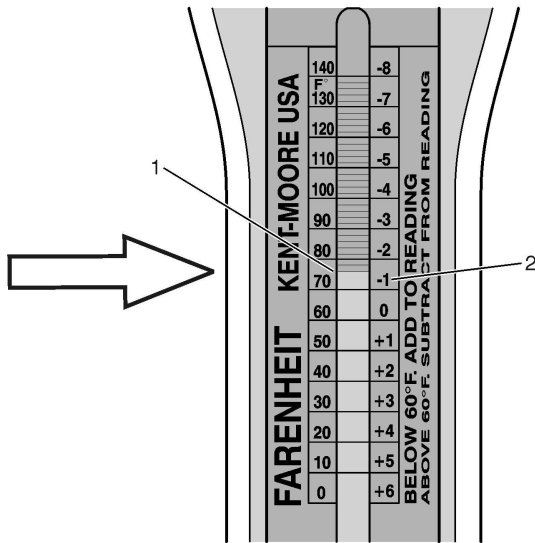
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3
Close the siphon tube using tube clamp.

4
Take an API gravity reading from the top scale indicated by the fuel line on the floating bulb. Example shows an API gravity reading of 45.



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W2059424

- 1 Temperature Reading
- 2 Variable Reading

EXAMPLE	
API Gravity Reading	45
Subtract Bottom Temperature/Variable Scale Reading From API Gravity Reading	-1
Corrected API Gravity Reading	44

W2059425

5
Take a reading from the bottom temperature scale indicated by the mercury level on the floating bulb. Temperature is measured in Fahrenheit and used to determine the variable reading shown on the right side of the temperature scale.

Note: The variable reading shown on the right of the temperature scale is displayed in whole numbers and is subtracted or added to the API gravity reading to determine corrected API gravity.

6
Add or subtract the variable reading (based on temperature) to the API gravity measurement. The result is the corrected API gravity for diesel fuel.

7
See the table below for MACK recommended API gravity ranges for Type 1–D and Type 2–D heavy vehicle diesel fuel.

API Gravity Range for Heavy Vehicle Diesel Fuel	
Diesel Fuel Type	API Gravity range
TYPE 1–D	38 — 44
TYPE 2–D	32 — 38