

## HOW TO USE OUR GASOLINE AND DIESEL HYDROMETERS

### Using a Hydrometer

Ensure your liquid is well-mixed and free of any debris. Place a sample of the liquid to be tested in a test jar and gently lower the hydrometer into the sample allowing it to float freely. If needed, spin the hydrometer until no air bubbles cling to instrument. Once the hydrometer stops moving, take the reading on the hydrometer's scale. Make sure that the hydrometer does not touch the bottom of the test jar.

### Read the Scale

Observe the level at which the hydrometer floats and read the corresponding value on its scale. A higher reading indicates a stronger solution while a lower reading suggests a weaker solution. Take the reading according to the "True Reading" principle as shown in **Figure 1.** below.

### Cleanliness

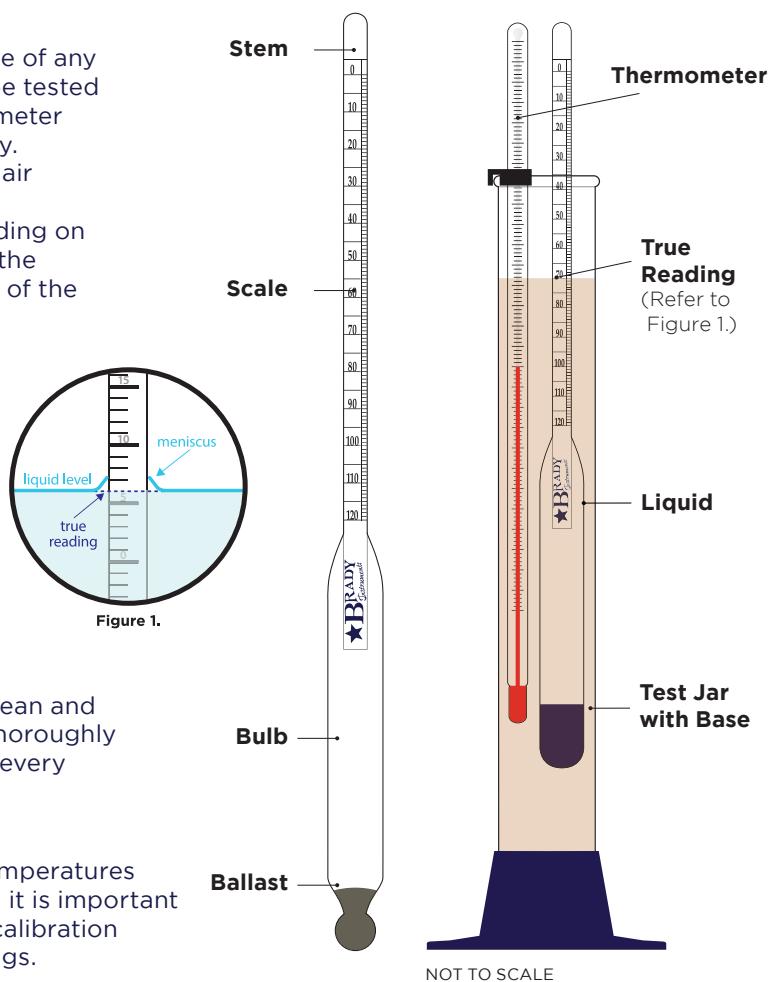
It is important that the hydrometer is clean and free of any dirt and debris. Be sure to thoroughly clean the hydrometer and test jar after every use when testing fuels.

### Temperature

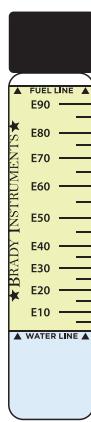
Liquids become less dense at higher temperatures and more dense at lower temperatures, it is important to test your liquid at the hydrometer's calibration temperature to achieve accurate readings.

### Accuracy

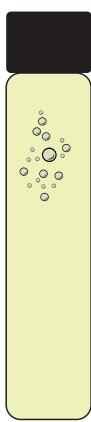
For the most accurate reading, it is best to get the liquid to the hydrometer's designated calibration temperature. If you can acclimate to your liquid to exactly to designated calibration temperature, there is NO NEED to use a correction chart.



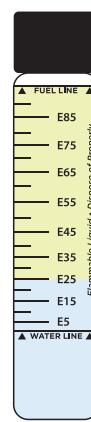
## HOW TO USE OUR ETHANOL TESTER



Fill jar with water to the fill line & add your fuel sample to the neck.



Shake vigorously then let the contents settle.



Observe where the contents have settled to determine % ethanol.

This device will let you know the percentage of ethanol contained in your gasoline. By following the steps above, you will get a reliable indication of the ratio between gasoline and ethanol. Use this method to determine if the fuel is suitable for your application.

**ALWAYS WEAR PROTECTIVE EYE WEAR AND GLOVES**

## **GASOLINE-TEMPERATURE CORRECTION CHART**

3

## Match your readings.

Add or subtract your correction from your original hydrometer reading.

| 1 | Take your original hydrometer reading. | Fuel Temp.* |
|---|--|-------------|
|   | Subtract .009                          | 40°         |
|   | Subtract .005                          | 50°         |
|   | NO CORRECTION NEEDED                   | 60°         |
|   | Add .005                               | 70°         |
|   | Add .009                               | 80°         |
|   | Add .014                               | 90°         |
|   | Add .019                               | 100°        |

| <u>Example:</u> | <u>Original<br/>Reading</u> | <u>Temp<br/>Correction</u> | <u>True Corrected<br/>Reading</u> |
|-----------------|-----------------------------|----------------------------|-----------------------------------|
| .720@80°F       | .720                        | +                          | .009 = .729 Specific Gravity      |

Gasoline Hydrometer Scale for Reference Only

## DIESEL-TEMPERATURE CORRECTION CHART

3

## Match your readings.

Add or subtract your correction from your original hydrometer reading.

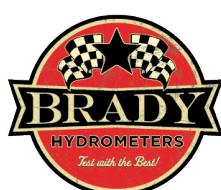
| 1 | Take your original hydrometer reading. | Fuel Temp.* |
|---|--|-------------|
|   | Subtract .008                          | 40°         |
|   | Subtract .004                          | 50°         |
|   | NO CORRECTION NEEDED                   | 60°         |
|   | Add .004                               | 70°         |
|   | Add .008                               | 80°         |
|   | Add .012                               | 90°         |
|   | Add .016                               | 100°        |

| <u>Example:</u>    | <u>Original<br/>Reading</u> | <u>Temp<br/>Correction</u> | <u>True Corrected<br/>Reading</u> |
|--------------------|-----------------------------|----------------------------|-----------------------------------|
| <b>.836 @ 90°F</b> | <b>.836</b>                 | <b>+.012</b>               | <b>= .848</b> Specific Gravity    |

## 2

Diesel Hydrometer Scale for Reference Only

**BRADY** Instruments  
Precision Fuel Hydrometer  
#730-C Specific Gravity @ 60°F.  
Serial Number: 26037



(717) 453-7171 • [www.BradyInstruments.com](http://www.BradyInstruments.com)  
HANDCRAFTED IN THE U.S.A.

\*For the most accurate reading, it is best to get the fuel to the hydrometer's calibration temperature of 60°

If you can acclimate to your liquid to exactly 60°, there is NO NEED to use these charts.

Our instruments are designed to offer the user a general assessment of fuel quality and should not be regarded as scientifically precise.