Rhino Duo-Chek Engine Coolant and Battery Test Refractometers quickly and accurately determine freeze protection and percent concentration of engine coolants and battery charge level

Introducing the Rhino-rugged water resistant, dustproof, and shock resistant hand-held refractometer

- Improved optics – easy to read
- Automatic Temperature Compensated – accurate measurements at any temperature
- No batteries required – reliable any time
- Black polycarbonate housing – durable and built to last
- Water resistant and dustproof – sealed internal optics cannot be contaminated
- Shock resistant – drop tested from 3 feet
- Six measurement scales included – versatile all-in-one tool
- Meets ASTM standards – highest confidence in the measurement is guaranteed
- Affordable – real value for any budget

The Rhino Duo-Chek Engine Coolant and Battery Test Refractometer offers an accurate, fast and easy-to-use method for testing engine coolant freeze point, glycol concentration, and battery charge condition. Automatic temperature compensation provides immediate, accurate direct readings of ethylene glycol, environmentally-safe propylene glycol, and battery electrolyte with only a few drops of sample.

One Rhino Duo-Chek can measure:

- Freeze Point of Ethylene Glycol coolant
- % Concentration of Ethylene Glycol coolant
- Freeze Point of Propylene Glycol coolant
- % Concentration of Propylene Glycol coolant
- Battery Electrolyte specific gravity
- Battery Electrolyte charge level

Rhino Engine Coolant & Battery Testers

Model	DC 70	DC 60
Catalog No.	137584L0	137564L0
Specific Gravity Scale Division	1.100-1.400 0.01	1.100-1.400 0.01
Antifreeze Protection Ethylene Glycol Propylene Glycol Scale Division	 +32° to -60°F +32° to -60°F 5°F	 0° to -48°C 0° to -48°C 3°C
Coolant Concentration Scale Ethylene Glycol Propylene Glycol	 0-70% 0-63%	 0-70% 0-61%
Refractive Index Range	1.3330-1.4048	1.3330-1.4048
Calibration Liquid	Distilled Water	Distilled Water
[1]Accuracy	±1.0°F	±0.55°C
Application	Check engine coolant and battery condition	

[1] By following ASTM D3321-94 (2002)

For more information, contact Reichert Analytical Instruments.

Reichert Analytical Instruments

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The Rhino Duo-Chek Engine Coolant and Battery Test Refractometer is accurate. It stands out in the crowd.

All coolant testers are not created equal. Sure, you have a choice: you can choose not to test, you can choose chemical strips, you can choose a variety of different hydrometers, or you can choose a competitive brand of refractometer. But consider the facts and actual test results first:

Why test engine coolant?

Everyone knows that the proper concentration of engine coolant will keep the engine block from freezing and cracking in the winter months. On the other hand, the engine coolant will keep the engine from boiling over in the summer months. But did you also know that:

Under Concentration of coolant/anti-freeze will cause:

liner or water pump impeller cavitation
general corrosion
deposits on heat transfer surfaces
plugging of the system with corrosion products

Over Concentration of coolant/anti-freeze will cause:

water pump seal seepage
solder bloom or solder corrosion
hose and gasket seepage
plugging of system with precipitates or gelled additives
slush formation and resultant overheating

Engine coolant as a chemical is formulated to work at it's maximum effectiveness only if the correct concentration is maintained. Serious engine and component damage will result if the coolant is not tested for proper concentration.

Is there an Official Test Method or Standard for testing engine coolant?

Yes, ASTM D3321-94 (2002) – "Standard Test Method for Use of the Refractometer for Field Test Determination of the Freezing Point of Aqueous Engine Coolants" This test method calls for accurate measurements not to vary more than 1 deg F (0.5 deg C). The Rhino Duo-Chek meets this standard and satisfies all requirements within.

Which coolant tester can you trust?

A few years back, we commissioned an outside survey of mechanics. One of the questions asked of them was … "In choosing an engine coolant tester, how accurate must it be?" Of those surveyed, the great majority of the service providers answered that the testers should be ±5 degrees F.

We later conducted an actual test of cars using 3 different types of hydrometers and the Duo-Chek refractometer. Hydrometers were found to be inaccurate by as much as 23 degrees F! Our Duo-Chek refractometer was off by only 1 degree F.

	Hydrometer disc type	needle type	floating ball type	Rhino Duo-Chek
Car # 1	-25 deg F	-34 deg F	-25 deg F	-43 deg F
Actual Freeze point -43 deg F	(error 18 deg)	(error 9 deg)	(error 18 deg)	(no error)
Car # 2	-25 deg F	-34 deg F	-40 deg F	-49 deg F
Actual Freeze point -48 deg F	(error 23 deg)	(error 14 deg)	(error 8 deg)	(error 1 deg)

Knowing the facts, would you choose anything other than the Rhino Duo-Chek?

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