



**Bell Performance, Inc.** tel 407-831-5021  
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## **Bell Performance Mix-I-Go and Dee-Zol Additives and Horsepower**

**Benefit:** In addition to improved mileage, lowered emissions and improved lubrication of pre-combustion surfaces (including fuel pumps and injectors), both products improve available power for the vehicle operator.

**Mechanism:** Both products contain a combustion improver/modifier which change the way fuel is combusted within the combustion chamber after injection. The combustion modifier minimizes pre-oxidation combustion reactions, resulting in a more even burn of the fuel in the combustion chamber. This results in more power for the piston through the entire power stroke.

### **Mix-I-Go Testing Protocols:**

Controlled tests were conducted to demonstrate the product's effects on power in a gasoline engine.

#### **Test #1:** Townsville College of Technical and Further Education

Background Parameters: Additive was tested in a HQ Holden engine with sufficient mileage to represent normal wear and combustion chamber deposits. Cylinder head was removed and combustion chamber deposits measured to a depth of 1.35-1.45mm with even distribution. Cylinder head was reinstalled and engine oil/filter replaced. Engine was run through a full test cycle without additive. A double dosage of Mix-I-Go was added and engine was run for 8 hours to clean engine. Fuel system was then changed over to a new system with single dose of additive in place, and identical set of dynamometer tests were run.

#### **Results of Test #1**

Horsepower at 3000rpm increased from 67 to 73.

Break Mean Effective Pressure (pressure developed in cylinders) – increased from 94.5psi to 96.4 despite lowering of compression pressure due to removal of deposits.

Thermal Efficiency increased by 13%; the ratio of the power available in fuel to the power the engine delivers at the crankshaft as work.

#### **Test #2:** University of Nevada-Reno, Agricultural and Industrial Mechanics Division

Background Parameters: 371 Detroit diesel engine, properly tuned to manufacturer's specs. It was recorded the number of minutes required to consume a gallon of gas, then converted to gallons per hour. Untreated diesel was used to establish a baseline.

Baseline Data (Phase I and II): 90HP, 1050 RPM, 2.75 GPH

#### **Results of Test #2**

Phase III (4 oz to 10 gallons treat rate): 92HP, 1050 RPM, 2.55 GPH

Phase IV (11 hours of operation): 93HP, 1050 RPM, 2.45 GPH

Phase V (treat rate changed to 2 oz to 10 gallons, following the initial breakin period): Baseline data of 90HP, 1050 RPM, 2.75 GPH. Four hours later treatment, fuel consumption dropped to 2.35 GPH while horsepower had increased to 94 HP.



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Phase VI: Operation of engine with additive removed. Energy dropped almost immediately; HP dropped from 94 to 92 within an hour. Within 3 hours, all readings had returned to baseline levels.

### **Dee-Zol Testing Protocols:**

Controlled testing was conducted to demonstrate the product's effects on power in a diesel engine.

**Test #1:** Townsville College of Technical and Further Education (TAFE)

Background Parameters: General Motors 3 cylinder 2 stroke engine, BP distillate fuel w/ 52 cetane, metered electronically. Engine set to factory specifications and brought to operating temperature. Test was carried out at 1800rpm, max. torque rating at 1400rpm.

Cleaning Phase: Engine run for 5 hours at 1500rpm using fuel treated double at 80ml to 25L.

Testing Phase: Single dose of DeeZol added to fresh distillate, run at 1800rpm and 1400rpm, instrument readings read again.

### **Results of Test #1**

Horsepower increased from 64.14kW (85.98 bhp) to 70.27 kW (94.19 bhp), 9.5% increase. At maximum torque, brake horsepower increased from 70.49 to 74.48 bhp (5.5% increase).

### **Conclusion:**

Dee-Zol increased horsepower in diesel engines between 5-5 – 9.5%.

Mix-I-Go increased horsepower in gasoline engines by almost 9% while simultaneously increasing Brake Mean Effective Pressure and Thermal Efficiency.

These results lead one to believe that both products increase horsepower available to the vehicle operator.

Bell Performance  
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