

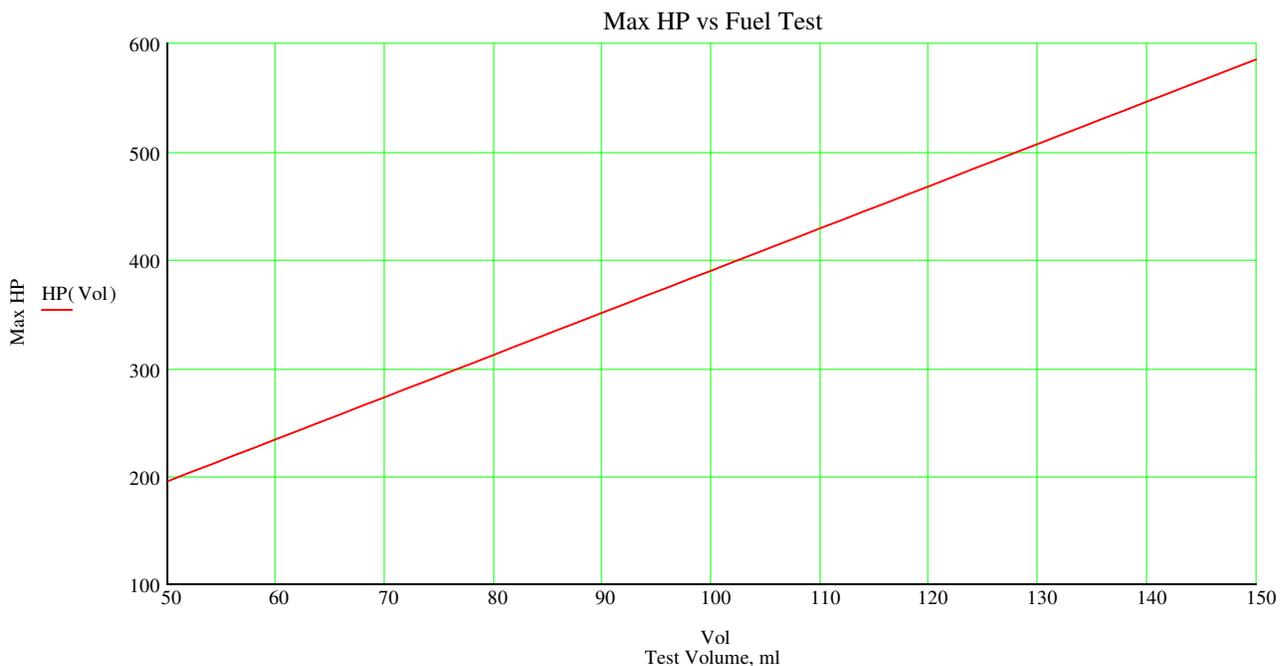
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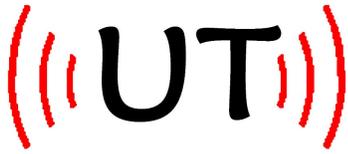
CIS Flow Test Data

The following equations and graph can be used to correlate a 15-second flow test to the maximum power that the fuel system is capable of supporting. This correlation is valid for the maximum delivery of the fuel system only, NOT the engine as a whole. The flow test quantity is given for ml and lb. To run the flow test place the injectors into a graduated cylinder or pre-weighed container. Run the fuel pump for exactly 15 seconds while holding the air metering plate against the stop in the maximum flow position. NOTE: For turbocharged applications the system pressure should be reduced by an amount equal to the boost pressure. If the system pressure is changed for this test don't forget to change it back when the test is done.

- | | |
|------------------------|---|
| Fuel density := 737.22 | Density of gasoline, kg/cu-m |
| ml := 10 ⁻⁶ | Conversion of ml to cu-m |
| lb := 2.204622 | Conversion of kg to lb |
| BSFC := 0.6 | Fuel conversion to power for slightly rich engine, lb/hp-hr |
| Cyls := 6 | Number of cylinders |
| hr := 4·60 | Conversion of 15 sec test time to 1 hr |
| Vol := 50,52.. 150 | Graph the range of 50ml to 150ml for 15 sec test |

$$\text{HP}(\text{Vol}) := \frac{\text{Vol} \cdot \text{ml} \cdot \text{Fuel density} \cdot \text{lb} \cdot \text{Cyls} \cdot \text{hr}}{\text{BSFC}}$$





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The following graph is the same function except the flow test is scaled in oz. This unit was chosen to allow the use of an inexpensive consumer grade digital scale (i.e. Target Stores Catalog # 10636462) to be used in lieu of a graduated cylinder.

$$\text{oz} := \frac{1}{16} \quad \text{Conversion of oz to lb}$$

Weight := 1.3, 1.35.. 3.9 Graph the range of 1.3 to 3.9oz for 15 sec test

$$\text{HP}(\text{Weight}) := \frac{\text{Weight} \cdot \text{oz} \cdot \text{Cyls} \cdot \text{hr}}{\text{BSFC}}$$

