

## **CD Contents**

The contents of this CD should help to explain and use some of the math and science involved in vehicle performance. Most, if not all, of the examples are based on the Chevrolet Corvair. If you paid for and registered your name with me, you are entitled to my personal assistance. If you didn't pay for the CD shame on you!

### **1. Reports**

- a. The Science of Vehicle Performance  
A summary of the scientific principles used in determining the performance of a moving vehicle and how these principles are applied. The examples in this report are based on the Chevrolet Corvair.
- b. Vehicle Performance Testing  
An outline of a few simple road tests, and the science behind them, to measure the performance of a vehicle. The test procedures, data collection sheets and data reduction process are included.
- c. Corvair Modifications  
A collection of several modifications to the Corvair and the resulting performance estimates.

### **2. Road Test Data Reduction**

- a. Rolling Friction Test (Low Speed Coast Down Test)  
Excel spreadsheet macro that calculates the coefficient of rolling friction from a low speed coast down test.
- b. Aerodynamic Drag Test (High Speed Coast Down Test)  
Excel spreadsheet macro that calculates the aerodynamic coefficient from a high speed coast down test.
- c. Maximum Throttle Acceleration Test  
Excel spreadsheet macro that calculates the engine horsepower and torque from a maximum throttle acceleration test.

### **3. Analysis Tools**

- a. RPM to MPH converter  
Excel spreadsheet macros that convert between MPH and RPM. A stand-alone program for the Corvair is also included.
- b. Acceleration simulator  
Excel spreadsheet macros that simulate an accelerating vehicle. This program will perform 0-60 MPH, quarter mile or maximum speed runs.
- c. Car Tools Add-In  
Excel add-in that contains macros for vehicle analysis. These macros are documented and demonstrated in the "Car Tools.xls" file.

### **4. Collection of Corvair Data**

Excel spreadsheet that contains performance data on various models of the Chevrolet Corvair.

### **5. 2005 Performance Workshop Presentation on Corvair Aerodynamics**