PRI 2006: Latest News

Engine Analyzer Pro v3.5 Update is scheduled to be released in January 2007. Major enhancements include:

- More accurate exhaust tuning simulation.
- Features to automatically email graphs, files and reports.
- Valve "Clash" simulation to see if valves are likely to hit each other for Hemi and 4 Valve engines.
- Greatly expanded Chain Calculations, to do dozens up to thousands of runs automatically.
- New cam "ramp rating" input, to more closely match your exact cam profile.
- New turbocharger inputs, backup and restore options, new calculation menus, and many other new features.

This update is free to anyone who purchased the EA Pro since July 2006, $60 for owners of EA Pro v3.3.

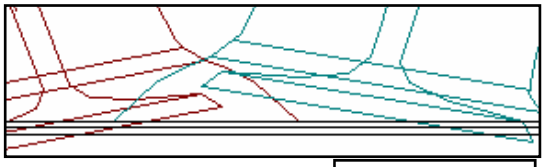

Fig 1 EA Pro Valve "Clash"

Automatic Spring Tester will be debuted at the PRI trade show. The Automatic Spring Tester produces outstanding repeatability, and is ***very easy on your arm***. It can test springs 4" tall or taller, and up to 1800 lbs (with 150 psi shop air pressure). Fig 2.

Fig 2 Automatic Valve Spring Tester

Blowby Sensor will also be debuted at the PRI trade show. This truly affordable blowby sensor will let you monitor engine ring sealing during your dyno runs. It has large inlets and outlets to provide for very low restriction. Fig 3.

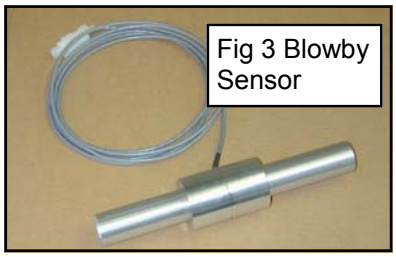

Fig 3 Blowby Sensor

Circle Track Log Book was released back in March, 2006. Fig 4. This program lets circle track racers organize all those notes you take and would like to ***actually use*** to tune your car's setup. We tried to include a spot for everything we thought racers needed. But even if we missed something, you can customize this program for ***everything you need***. It will link to our Circle Track Analyzer v3.5 to save and analyze calculated setup details like Roll Center, Roll Couple, Camber Gain, etc. It also has a powerful Tire Temp Analysis to make good use of tire temp data.

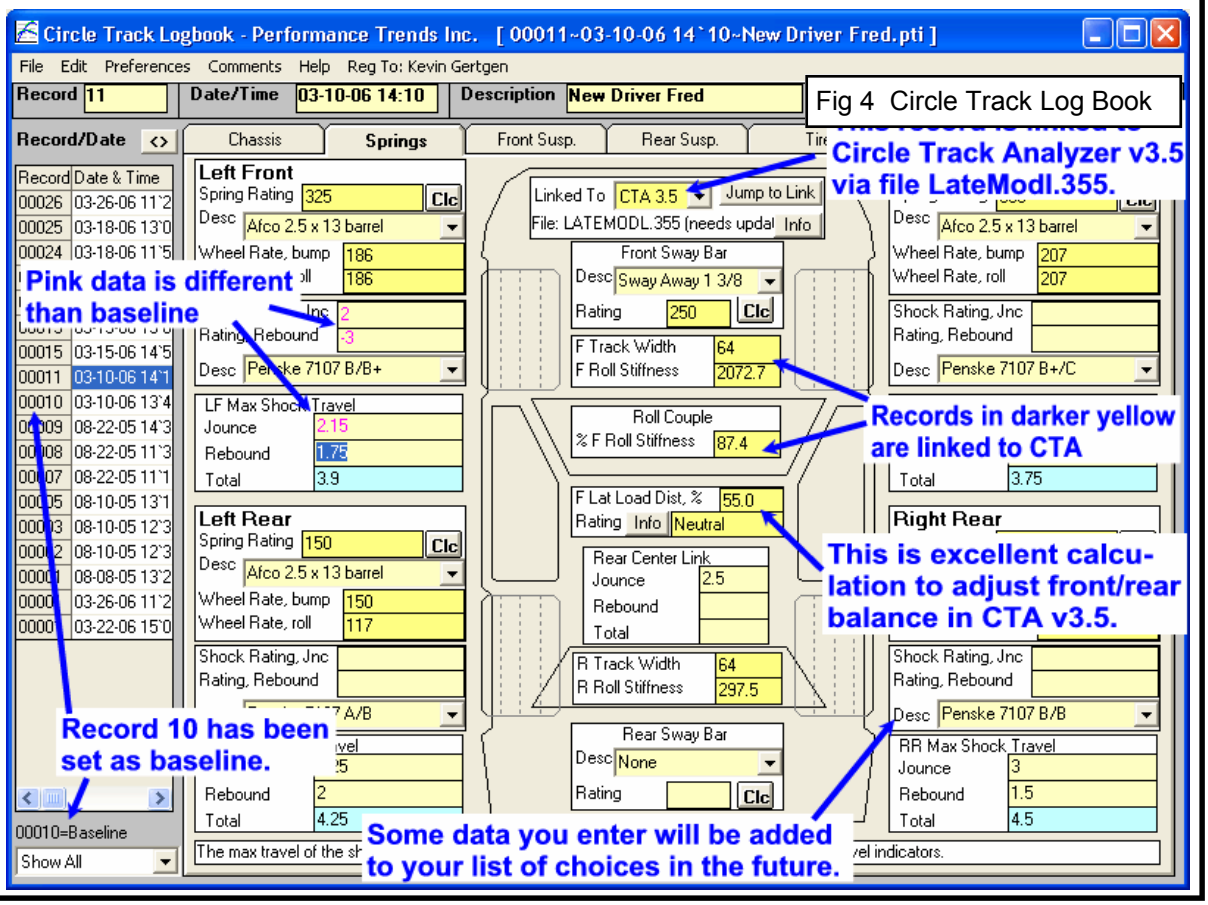

Fig 4 Circle Track Log Book

Port Flow Analyzer v3.5 update is coming in 2007 with several new enhancements like done in EA Pro v3.5. Also, it will support an automatic valve opener. Fig 5. If your bench has a motor controller, you can just start the test

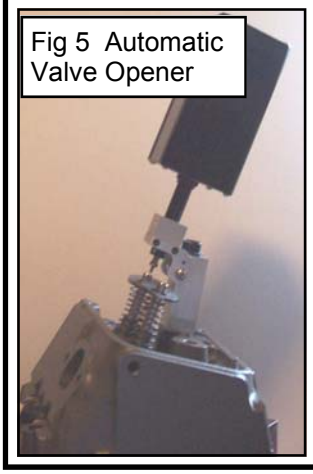

Fig 5 Automatic Valve Opener

and come back when all the lifts have been flowed. Other enhancements include a New Test Wizard for easier testing for beginners, and larger, sizable display screen of readings from FlowCom ™ or our Black Box II.

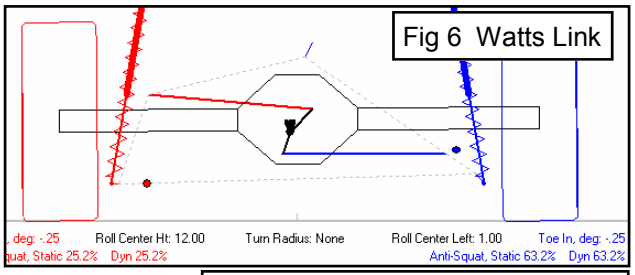

Fig 6 Watts Link

Suspension Analyzer v2.0 was released back in June 2006. It has several new features, including:

- Metric inputs, and automatic conversions between English and Metric units.
- Front Lateral Load Distribution (FLLD%) is now calculated and can be optimized. FLLD% has a strong influence on vehicle "balance", or the amount of oversteer and understeer.
- Several new Optimize features have been added, including the ability to "optimize" FLLD%.
- New Suspension Options like Watts Link instead of a Panhard Bar, and Solid Axle with Leaf Springs. Figs 6 and 7.
- Other new spring options like Torsion Bars, Rocker Arm Springs (coil overs mounted inside of the A arm pivots), and coil overs which can be mounted to the upper A arms.
- New Animate features to read more types of Data Logger files, like data from Pi, Motec and AIM.

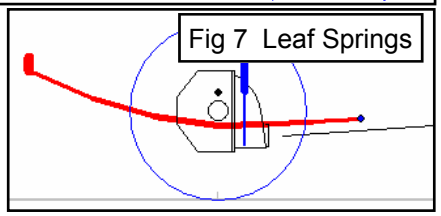
Fig 7 Leaf Springs

The update cost is $55 if you own the Full Vehicle version, $40 for the Basic version.

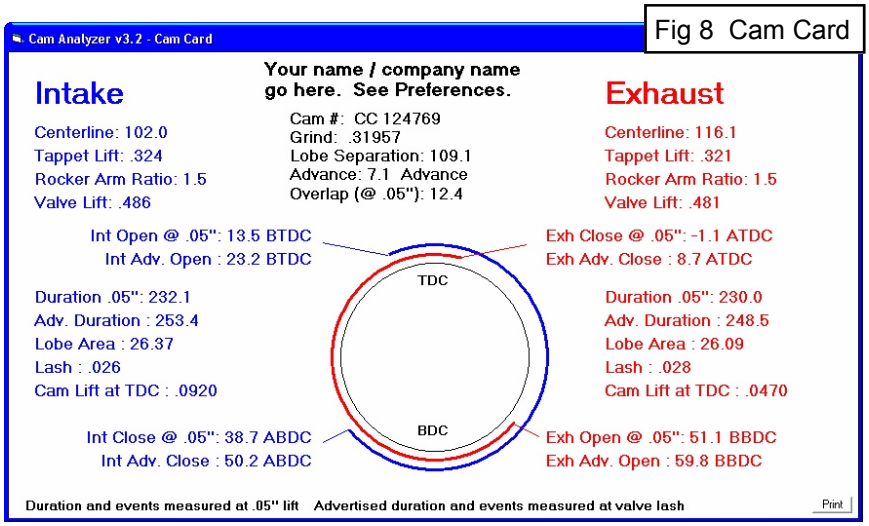

Fig 8 Cam Card

Cam Analyzer Updates have been released as users have requested features in the Cam Test Stand and software. We've got 2 new accessories, the universal .750" roller lifter and our Magnetic Locator, which keeps the cam located laterally on the stand. See Figs 9 and 10. Other enhancements in the ***Plus version*** of the software include:

- The Virtual Follower feature has been released. This lets you measure a cam with the linear encoder directly on the cam lobe, and then simulate what that lobe would do with different types of followers or OHC valve trains. See Figs 11 and 12.
- Printing a Cam Card. Fig 8.
- New graph feature "Graph Analyze - Find Difference Between Lobes " will automatically adjust 2 lobes for the best alignment, and then find the maximum difference between these 2 lobes. This is an excellent way to see how 2 lobes are similar, or one lobe has worn, or if a lobe falls within some specified range.
- Calculations like Cam Lobe Runout and a Minimum Required Flat Tappet Diameter have been added.
- Features to measure cams and timing in the engine.
- New feature coming: Measure dowel pin timing so program will predict actual timing in the engine.

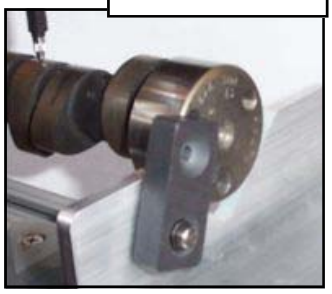
Fig 9 Magnetic Locator for Cam


Fig 10 Universal Roller


Fig 11 Using Actual Follower

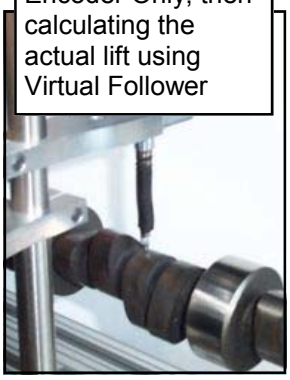
Fig 12 Using Encoder Only, then calculating the actual lift using Virtual Follower

Engine Log Book Updates have been released. These include:

- Metric inputs, and the ability to convert back and forth between Metric and English units.
- Linking to Compression Ratio Calculator.
- Added a 1 keystroke back up and restore command of all files.

Dyno Load Control is being developed. We have one chassis dyno working well, but it will take more development before we can release a finalized version. Watch our email newsletters for our