

Appendix 5: New Features in Version 3.4 B

Here is a brief listing of some of the features new in Version 3.4 B:

- Program has several new Example vehicle files, including an all electric Tesla, most with picture files. Fig A12.
- Program now allows for 4 more trans ratios so you can specify up to 10 speed transmissions, either manual or automatic in Transmission Specs. Fig A13.
- You can now specify an automatic torque converter to lock up at some particular gear ratio. At that gear ratio and all higher gears, the converter is assumed to remain locked. Fig A13.
- Program now also has 4 more gear shift RPMs in Driving Specs screen. Fig A14
- Added a setting for number of gears in the transmission, and program now hides gear ratios not needed. This makes it more clear how the program is using transmission gears. Prior to v3.4B, the program just looked for a blank or zero input for a ratio to know that gear was not being used. Fig A13
- Now, if the program finds that converter is too loose for a combination User Selected shift RPMs and the particular power curve, the program now switches to Computer Picked Shift RPMs so the calculations can continue.
- The program now has greatly enhanced graphing options, similar to our larger programs. You can overlay more runs, zoom in, specify grid layout, have more printout and labeling options, and much more. Figs A15 through A27.
- Now when you delete a file, it now goes to the Recycle Bin so you can 'recover it later if you need to. Fig A29 and Fig A30.
- The program now has an "Advanced" button for saving or opening data files or external drives or other folders on your computer. Fig A28
- The program now better checks for some values for producing errors and fixes the problems so the calculations can continue, without producing error messages.
- Program now has a "Compress Picture File" as a File option for pictures, which explains how to compress picture files with 3rd party program.
- Program now better handles direct drive transmission and 1 gear transmissions.
- You can now retrieve files from History Log.
- Program now better deals with external drives for saving and opening files, and no longer calls them "Floppy Disks".
- Program now saves more of the graph settings for printing and comments.

Figure A12 New Vehicle Files

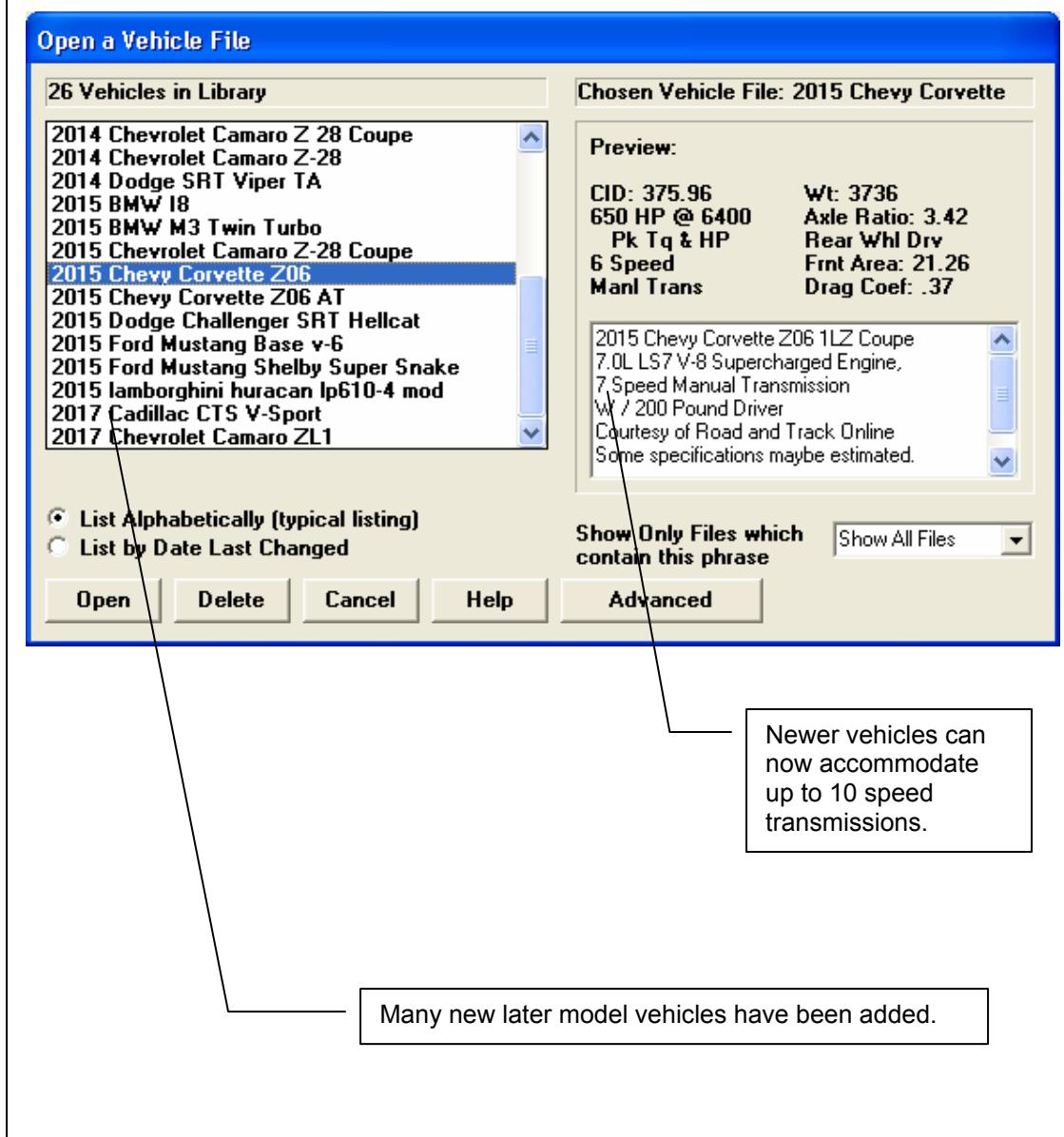


Figure A13 New Transmission Specs

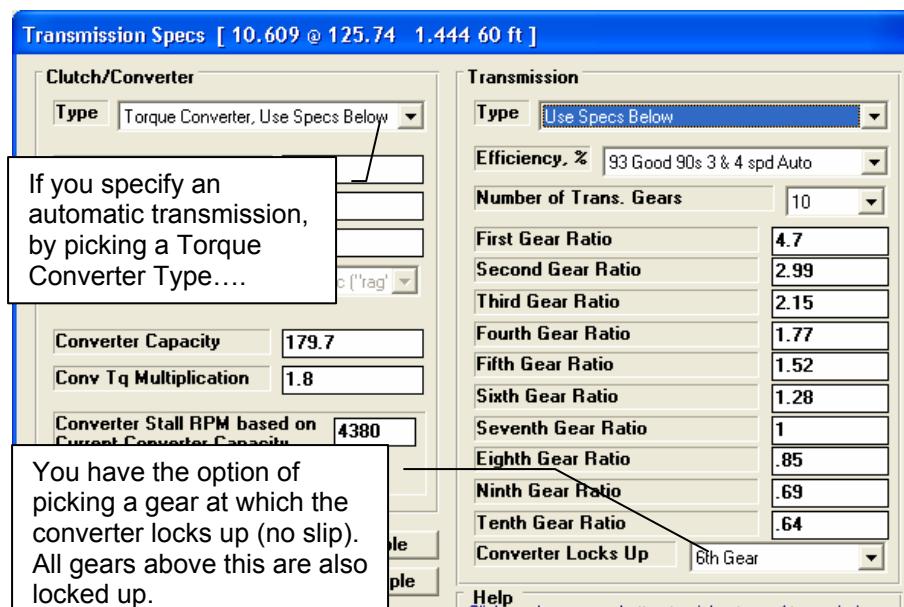
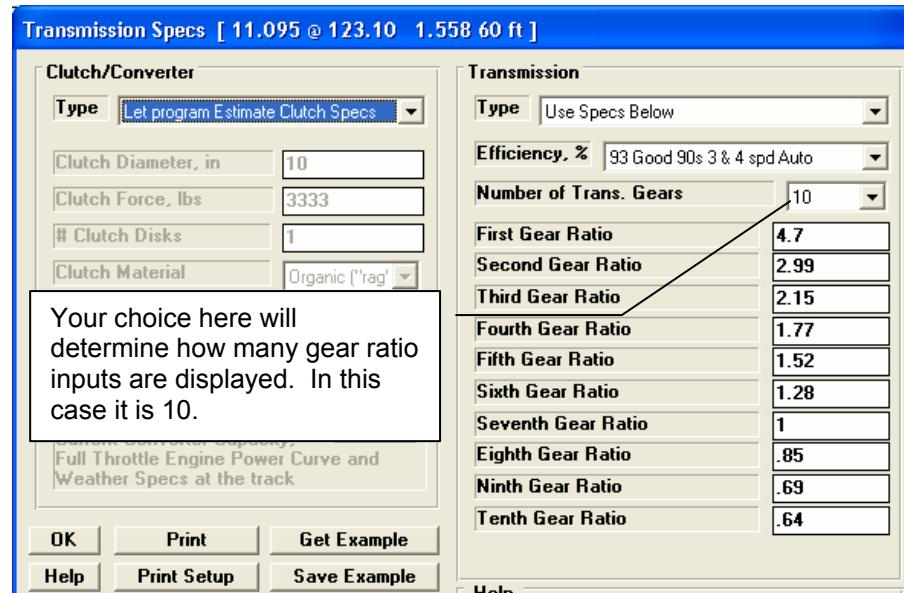
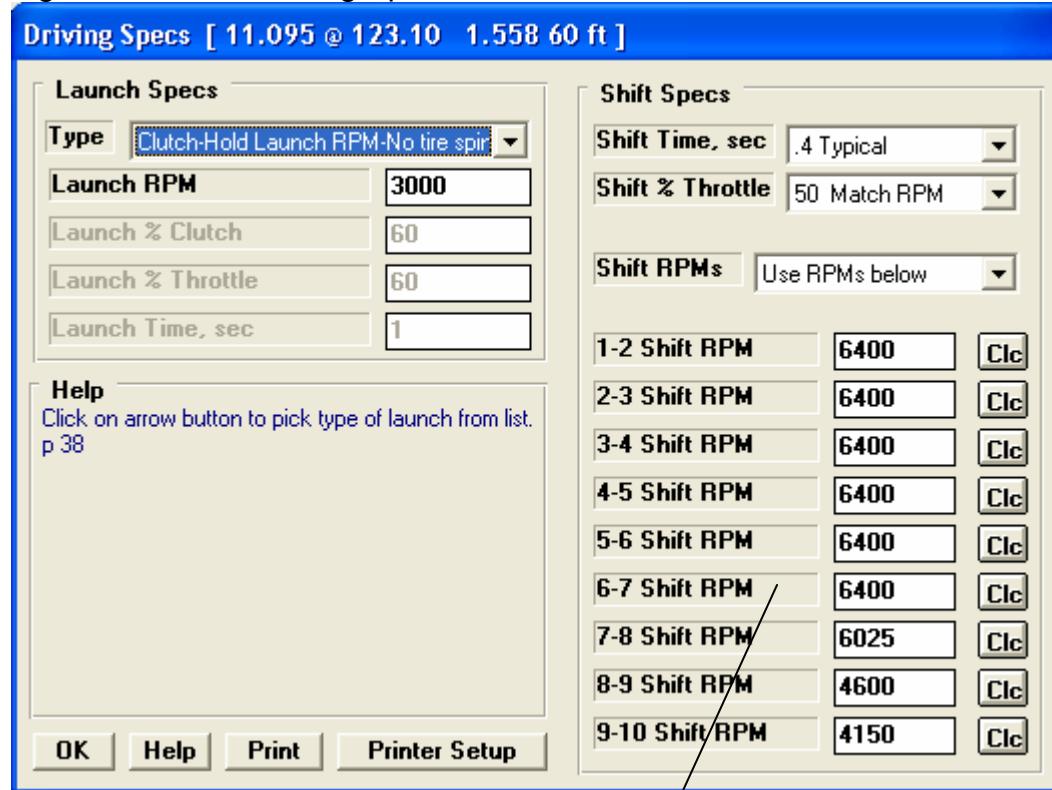


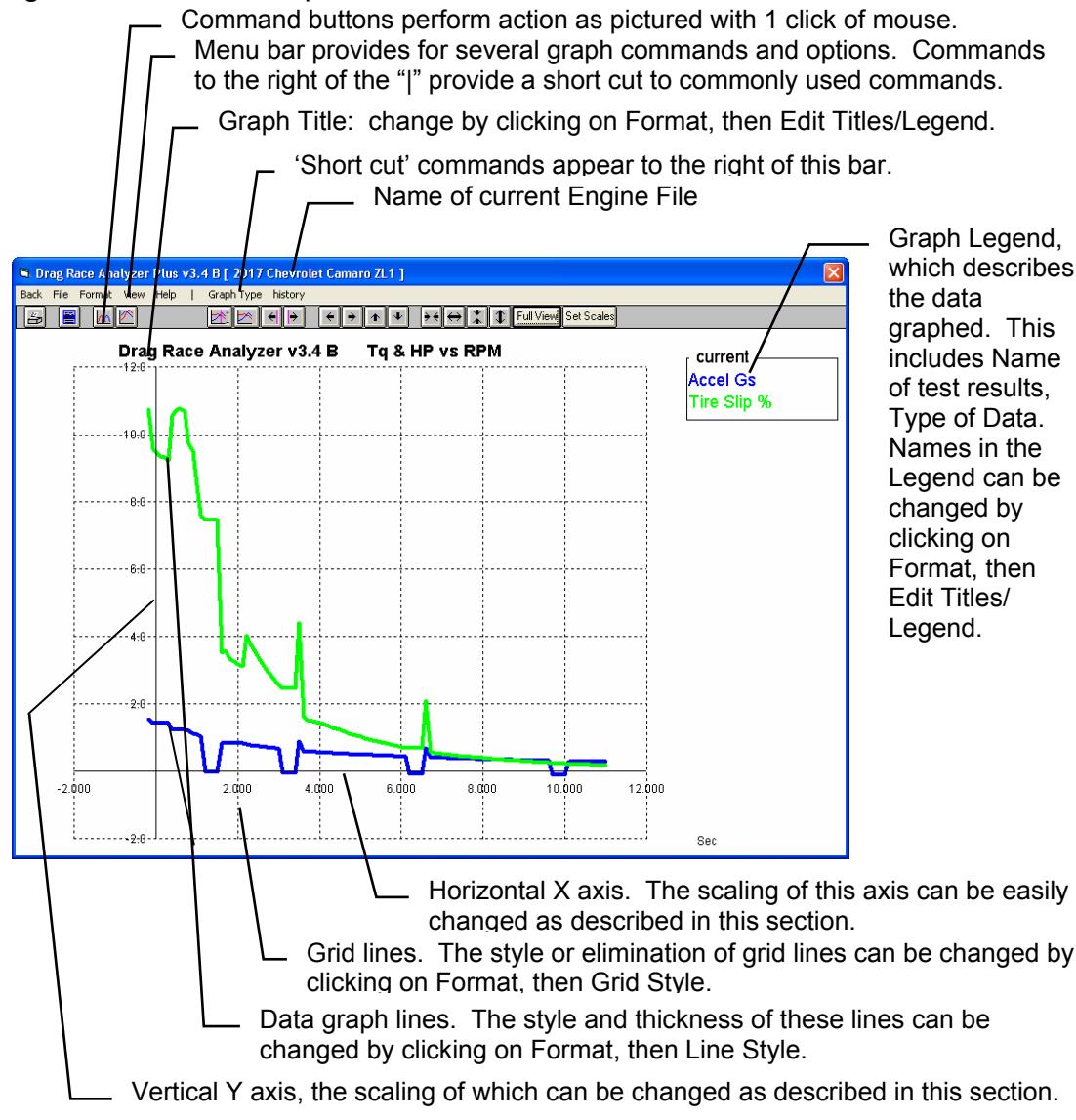
Figure A14 New Driving Specs



Because there are now up to 10 transmission ratios, there are now Shift RPMs available for all 10 gears.

Graphs are obtained by clicking on the Graph button or the Graph name in the menu bar at the top of the tabular results screen shown in Figure 3.2, Chapter 3. Figure A15 below shows a typical graph and descriptions of some of the basic graph screen items.

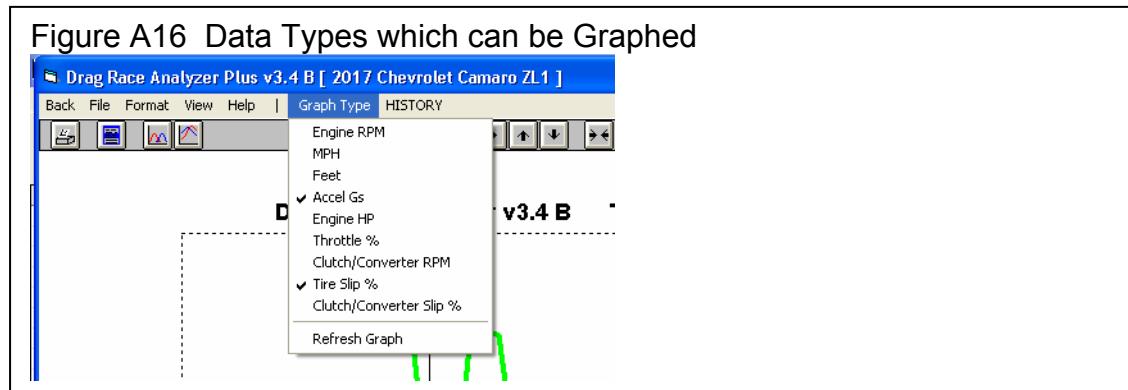
Figure A15 Basic Graph Screen Items



There are several types of data which can be graphed, including:

- Engine RPM
- MPH, vehicle speed in miles per hour.
- Clutch or torque converter RPM.
- Feet is the distance down the track.
- Accel Gs is acceleration rate in Gs.
- Engine HP is the amount of HP being delivered to the clutch converter. This is affected by Driving Specs, engine RPM, weather conditions, and the shape of the power curve.
- Throttle, % is the amount the throttle is opened, where 100% mean wide open throttle or full power. Throttle is affected by Driving Specs and can be limited to prevent tire spin.
- Clutch or Converter RPM is the input to the transmission.
- Tire Slip, % is the amount the tires are slipping. Even though tires have not broken loose, they can still be slipping up to 10-15%.
- Clutch or Converter Slip, % is the difference between Clutch or Torque Converter RPM and Engine RPM, expressed as a percent. If the clutch or converter are locked, this will be 0%.

Figure A16 Data Types which can be Graphed

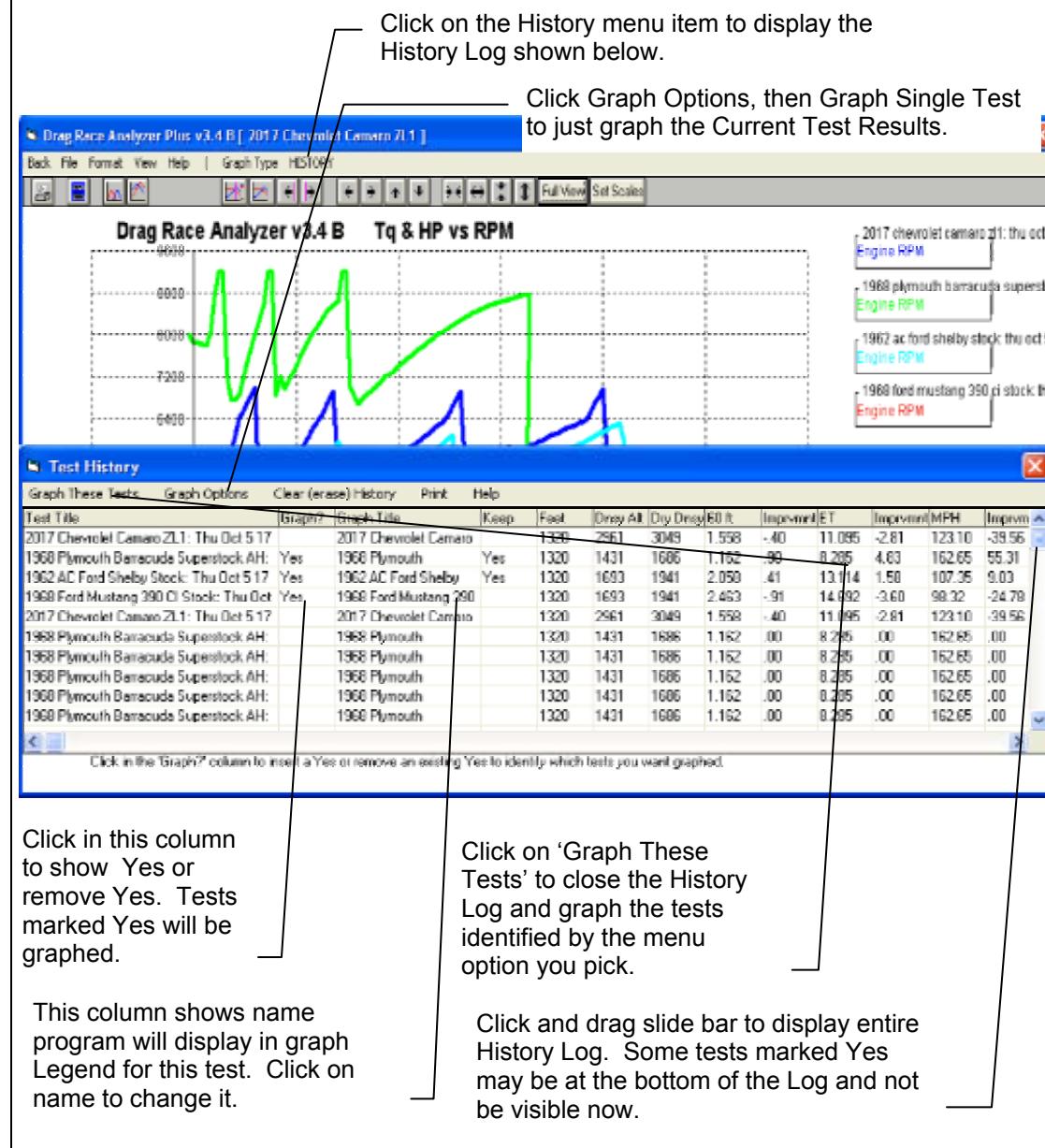


There are basically 2 types of graphs you can produce:

- ***Current test results.*** These are the test results for the data displayed in the Test Results screen, for the current Vehicle specs and conditions, the last run you made.
- ***Test results from the History Log.*** The History Log is a list of 25 tests, some of which you have specified you want saved long term, some of which are simply the last tests you have run.

The History Log is explained in some detail in Section 3.5 starting on page 105. This section will explain how to graph test results for tests in the History Log.

Figure A17 History Log for Graphing



Other Graphing Features

The graph screen has several features, including:

- Printing
- Cursor to pinpoint the value of a particular point on the graph
- Changing titles and legend names
- Changing the scales
- Miscellaneous Format Options to change the appearance of the graph.

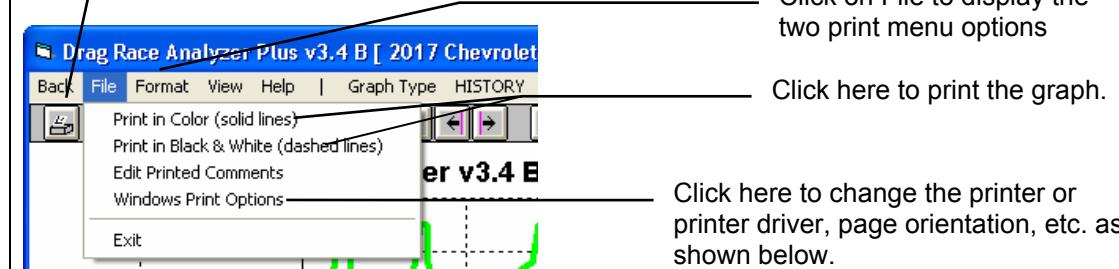
These are discussed in this next section.

Printing

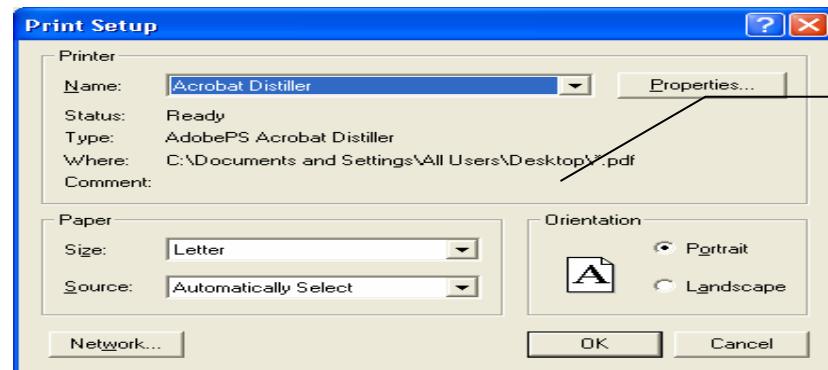
Figure A18 shows the options for printing graphs and how to access these options. It also shows the screen for changing the Windows Printer Setup.

Figure A18 Printing Graphs

Clicking on the Printer button is the same as clicking on File and then Print.



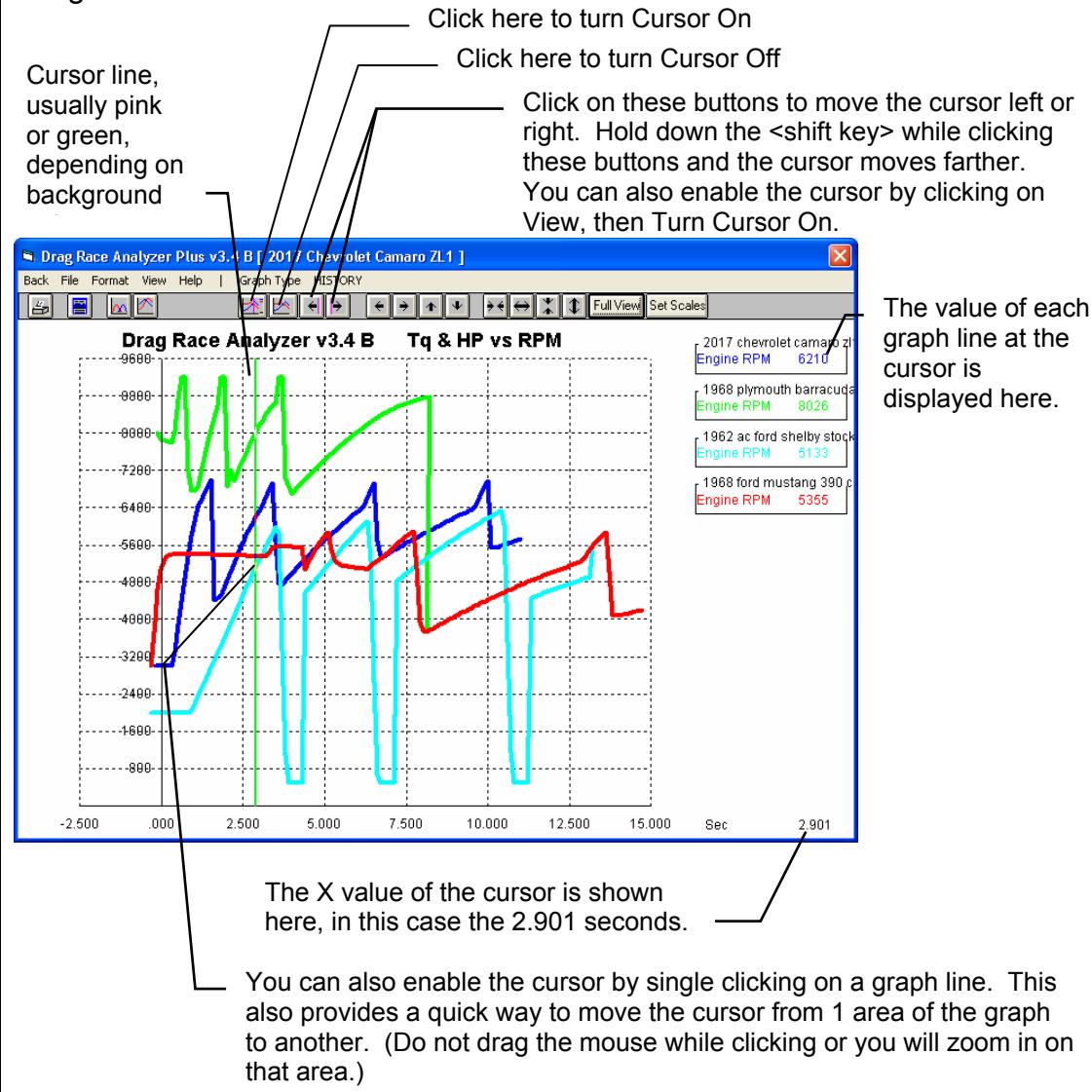
Windows standard
Printer Setup menu



Cursor

The cursor feature is very useful for determining or comparing the value of the graph lines at various places. See Figure A19 for explaining the use of the cursor.

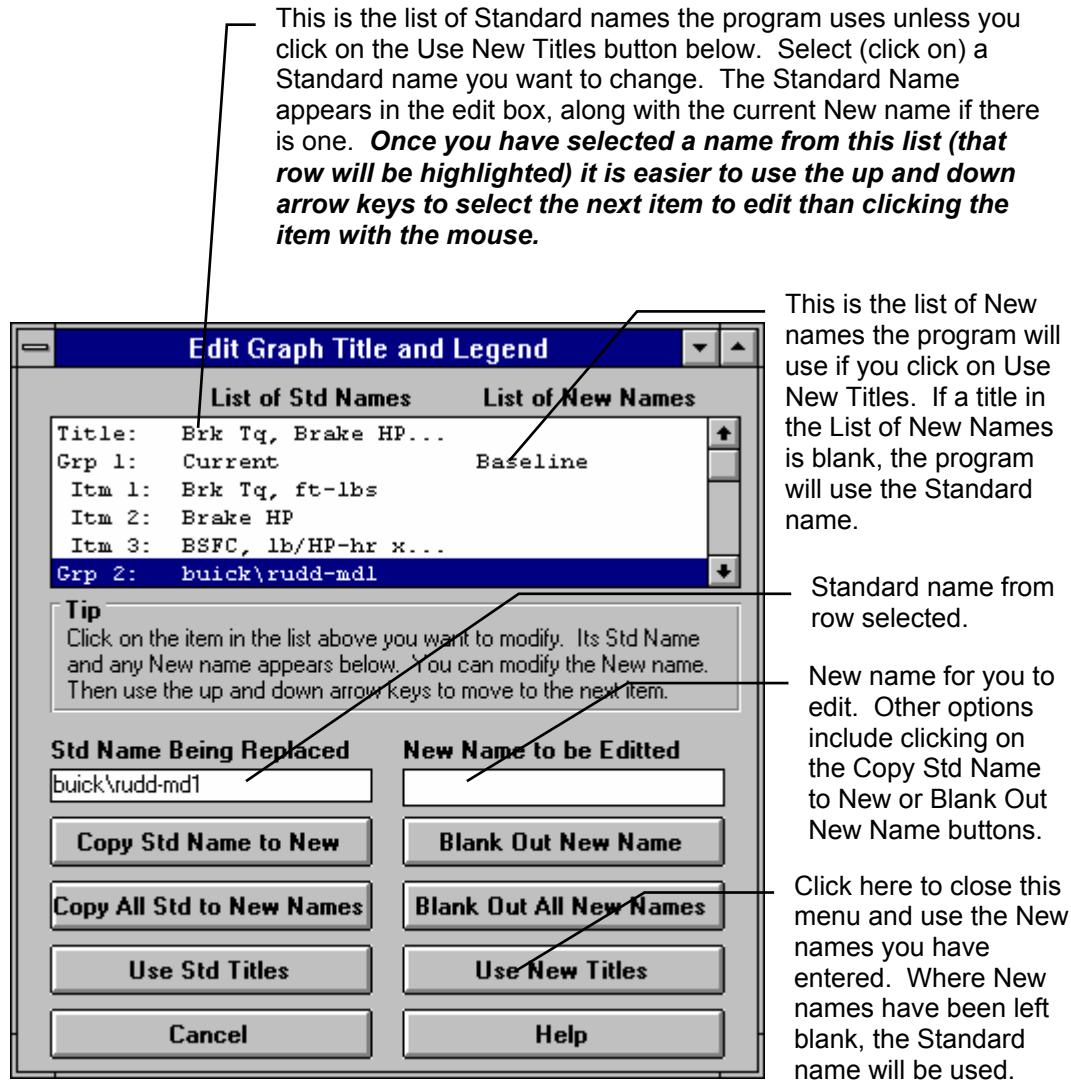
Figure A19 Cursor Features and Commands



Changing titles and legend names

Many times you may want to customize a graph by printing labels of your choice. Click on Format and then Edit Titles/Legend to bring up the menu shown in Figure A20 which will allow you to do this.

Figure A20 Menu to Edit Title and Legend



Changing the scales

Many times you may want to change the scale of the X or Y axis. This may be to show an area in more detail or to match the scales of a previous graph. The Drag Racing Analyzer has several ways to change the scales as shown in Figures A21 and A22.

Figure A21 Changing Scales for the X or Y Axis

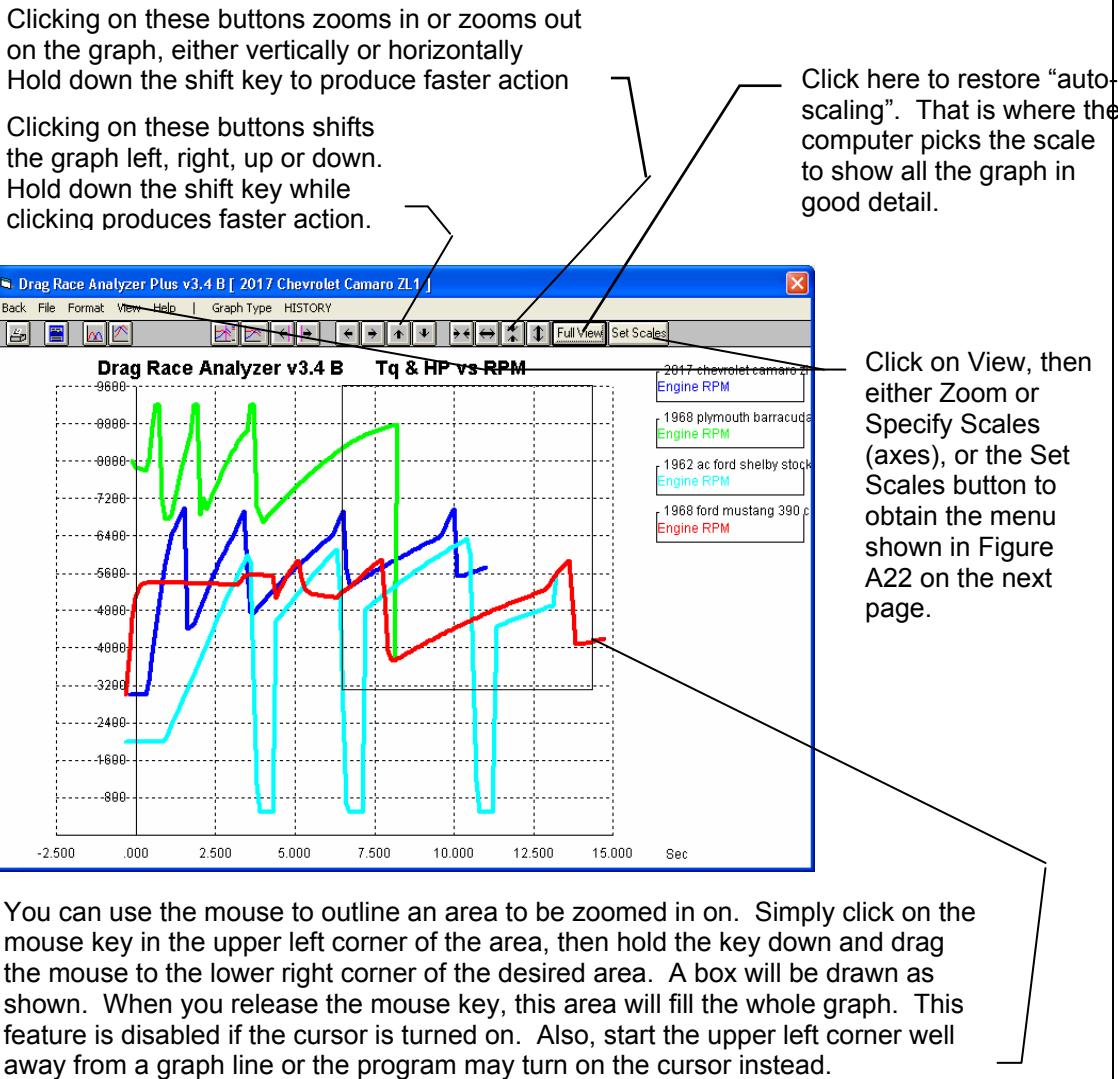
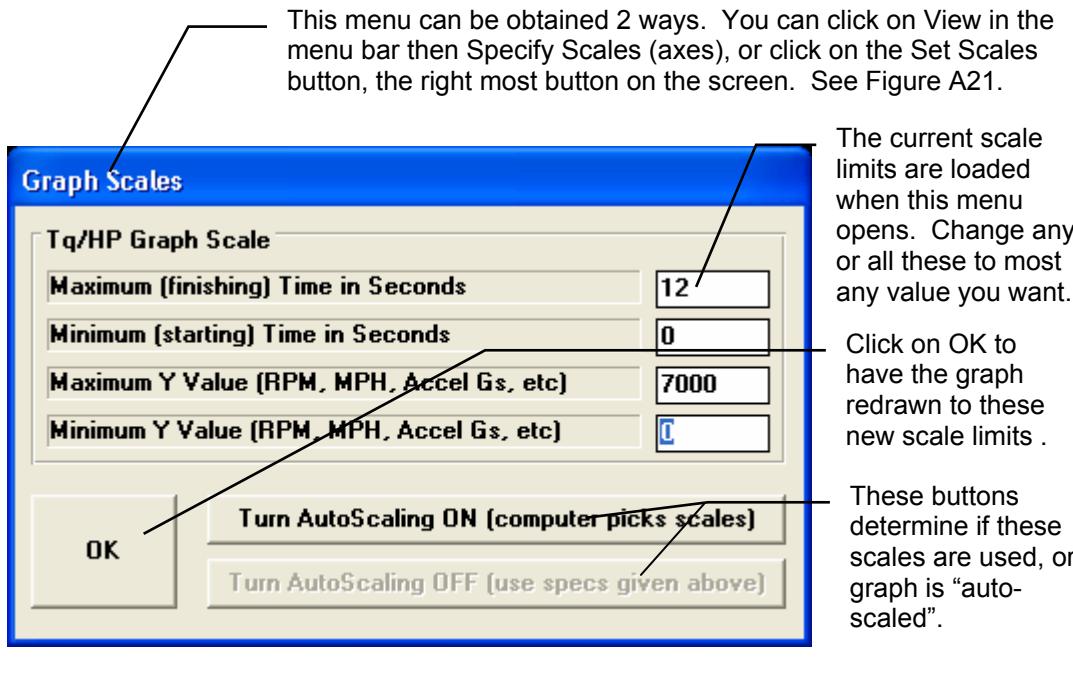


Figure A22 Menu to Specify Graph Axes Scales



Format Options

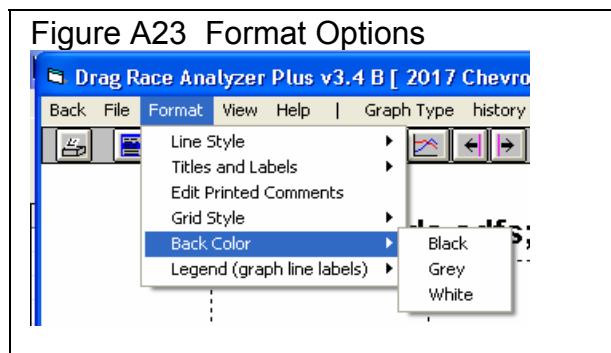
Click on the Format menu item to be presented with several options which will be briefly discussed here.

Line Style

Click on Line Style to change the thickness of the graph lines.

Titles and Labels

Click on Titles and Labels to bring up option screen shown in Figure A18. See choices shown in Figure A22.



Edit Printed Comments

Click on Edit Printed Comments for the screen shown in Figure A23. These settings only affect printouts.

Grid Style

Click on Grid Style to change or omit the drawing of grid lines on the graph.

Back Color

Click on Back Color to change the background color of the graph from white, black or gray. Different Back Colors can make certain line colors stand out better, so experiment with your particular computer display and Line Style (thickness).

Figure A24 Titles and Labels

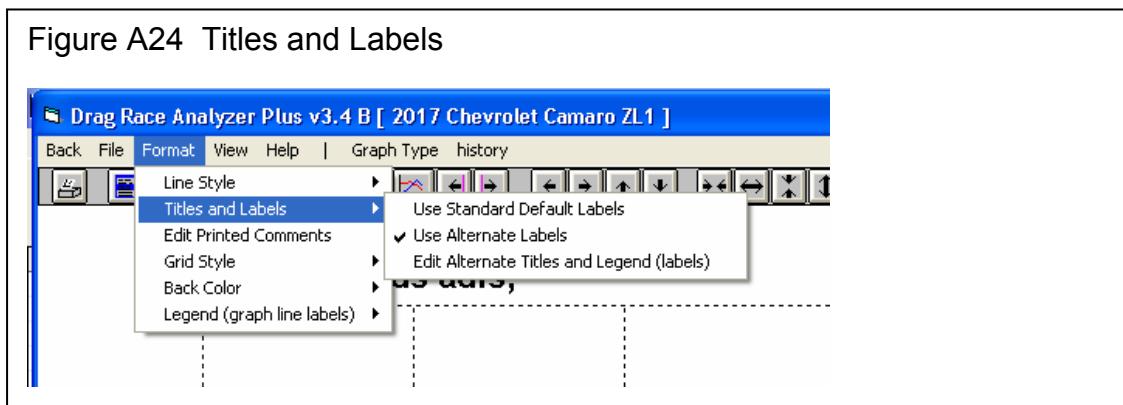


Figure A25 Edit Printed Comments

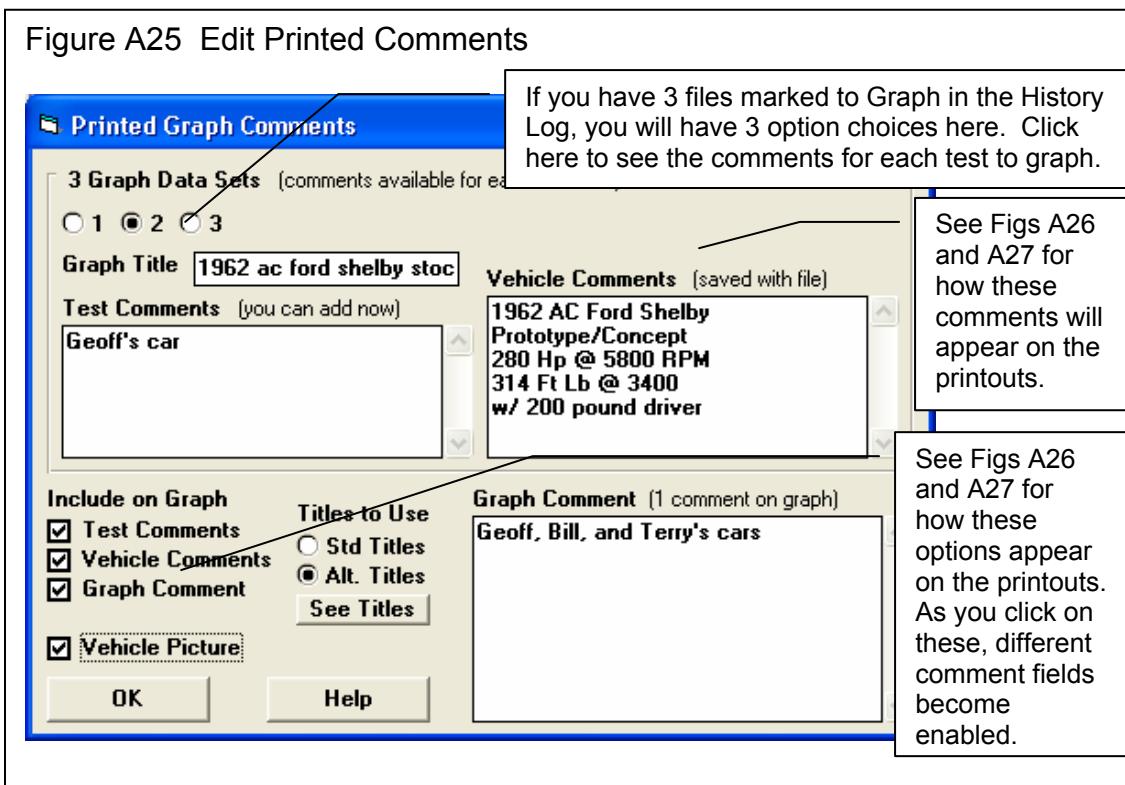


Figure A26 Graph Printout with Printing Options

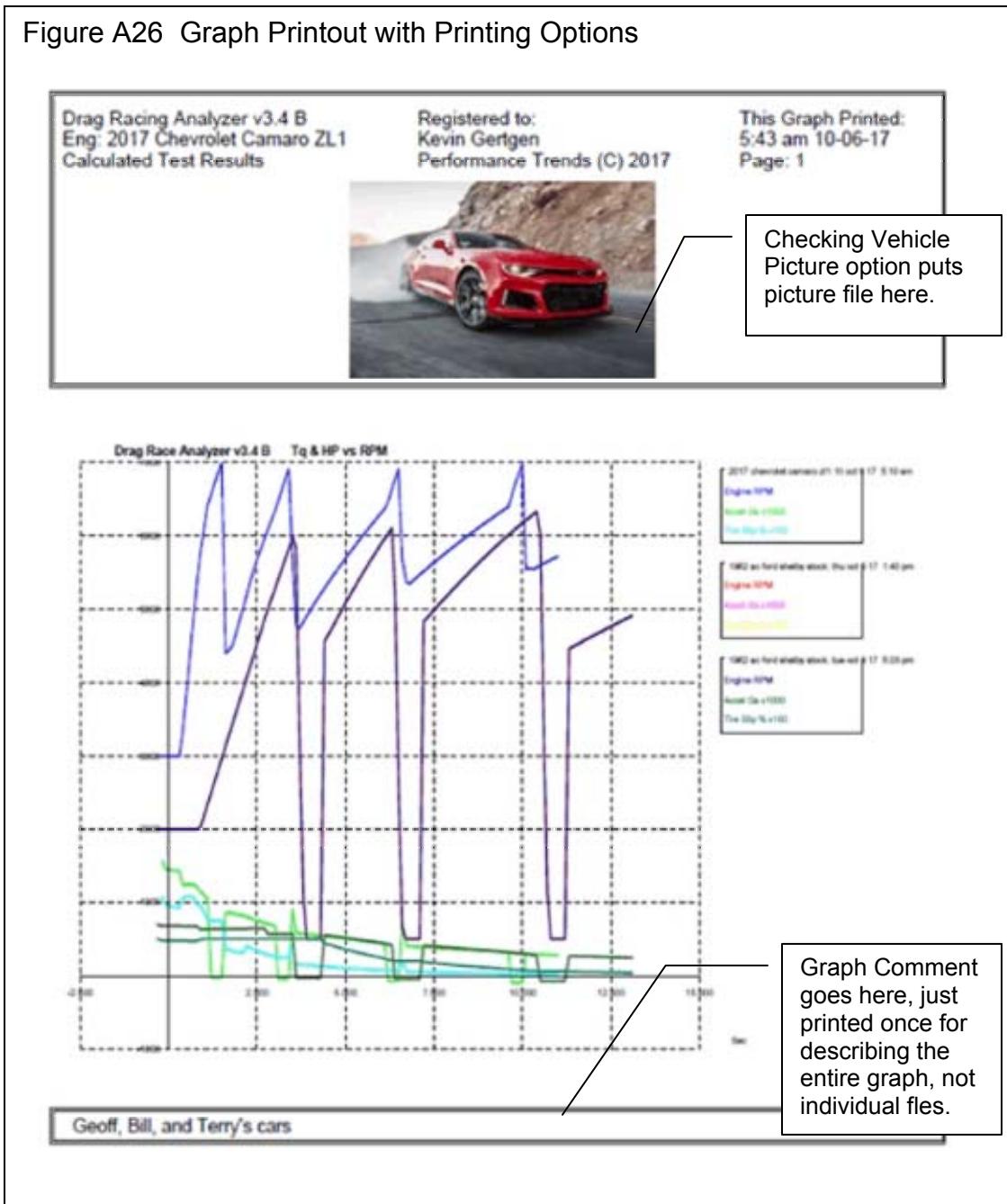


Figure A27 Graph Printout with Printing Options, cont

<p>Test Comment. These are entered in screen of Fig A25 and can be anything you want.</p> <p>Test File Name, with run time and date.</p>		
Drag Racing Analyzer v3.4 B Eng: 2017 Chevrolet Camaro ZL1 Calculated Test Results	Registered to: Kevin Gertgen Performance Trends (C) 2017	This Graph Printed: 8:51 am 10-06-17 Page: 2
Test and Engine Comments for: 2017 Chevrolet Camaro ZL1: Fri Oct 6 17 5:10 am Terry's car		
2017 Chevrolet Camaro ZL1 Supercharged and intercooled pushrod 16-valve V-8, aluminum block and heads, direct fuel injection. 376 cu in, 6162 cc, 650 hp @ 6400 rpm, 650 lb-ft @ 3600 rpm Some specifications maybe estimated. Car & Driver track sheet 12/16/16 1/4 Mile 11.5 sec. @ 125 Mph		
Test and Engine Comments for: 1962 AC Ford Shelby Stock: Thu Oct 5 17 1:40 pm Geoff's car		
1962 AC Ford Shelby Prototype/Concept 260 Hp @ 5800 RPM	314 Ft Lb @ 3400 w/ 200 pound driver	
Test and Engine Comments for: 1962 AC Ford Shelby Stock: Tue Oct 3 17 5:03 pm Bill's car		
1962 AC Ford Shelby Prototype/Concept 260 Hp @ 5800 RPM	314 Ft Lb @ 3400 w/ 200 pound driver	

File Comments for the 2nd test marked Yes to Graph in the History Log.

Test File Name and Test Comment for 2nd test marked Yes to Graph in the History Log.

File Comments, which are the comments you enter on the main screen, and are saved with each vehicle file.

Figure A28 New Advanced Button For Opening and Saving Files

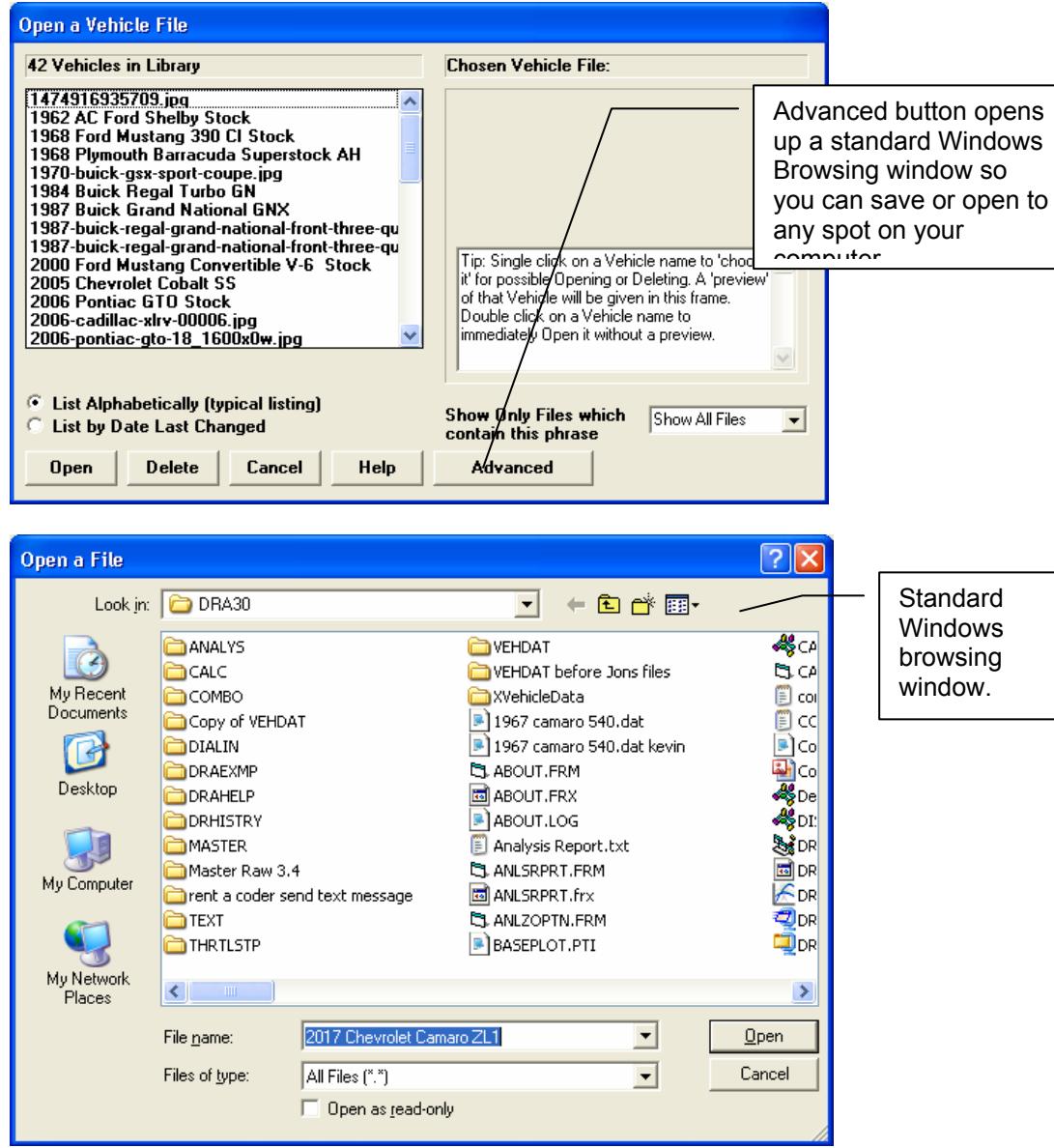


Figure A29 Deleted Files now go to Recycle Bin

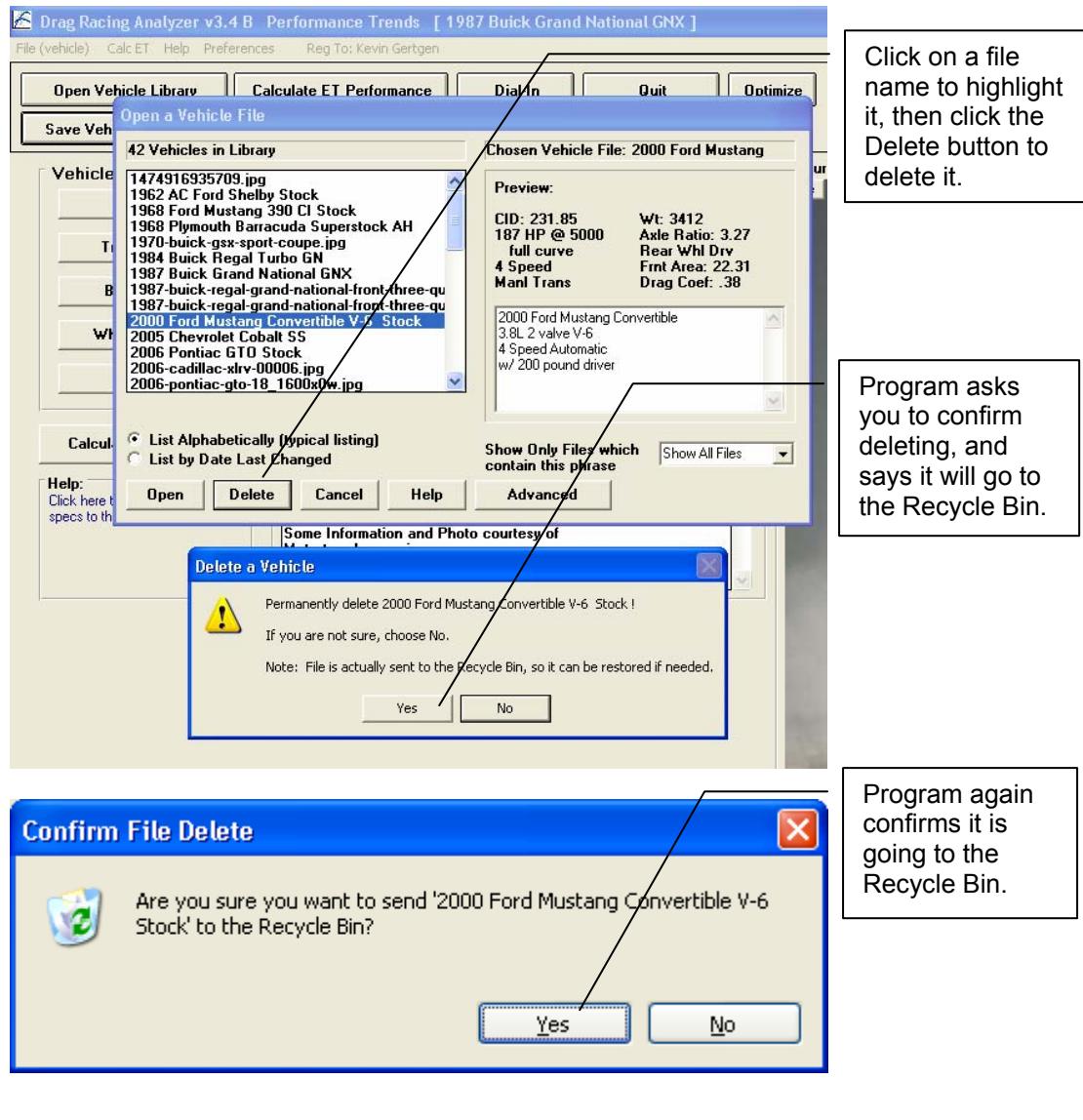


Figure A30 Retrieving Deleted Files from Recycle Bin

