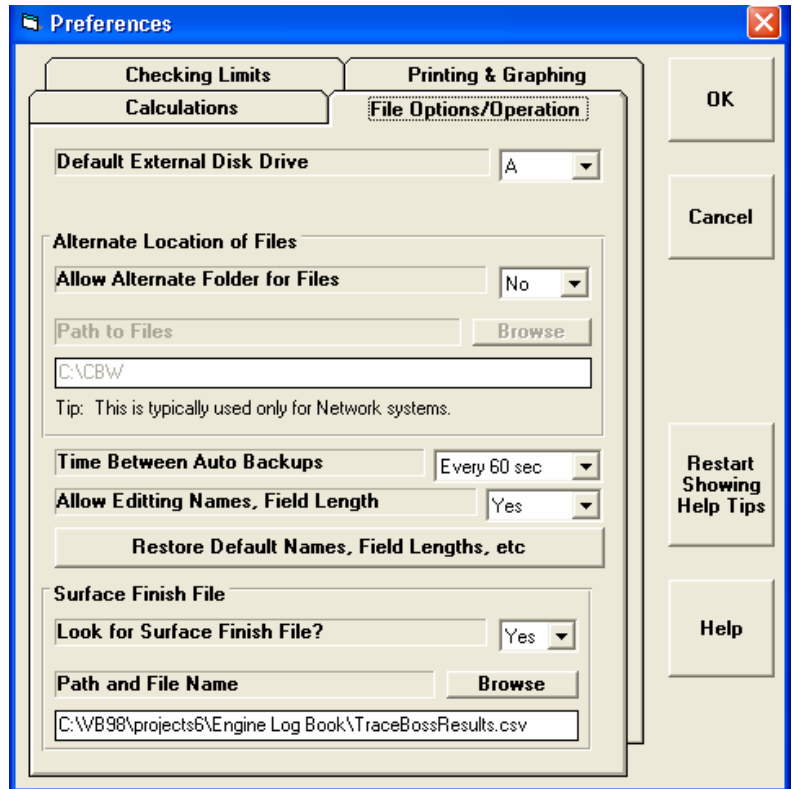


Engine Log Book Pro v1.1 C Updates

The version 1.1 C has added several new features, which include:

- Automatically read in a Surface Finish file.
- Let you specify an alternate location for storing files and easily switch back and forth between the default or alternate location.
- Manage up to 8 different picture files for most all screens.
- Lets you pick a new Cylinder Numbering pattern for Ford Power Stroke diesels.
- Piston-to-Valve Clearance report (with new Preference to use Piston Fly Cut depth in the calculation)
- You can adjust the program's estimated cam lift profile by entering a measured "lift at TDC" to improve Piston-to-Valve Clearance accuracy.
- Valve Spring Report
- Allow multiple inputs for doing the Valve Spring Report (Valve to Deck Clearance, Spring Installed Height, Coil Bind)

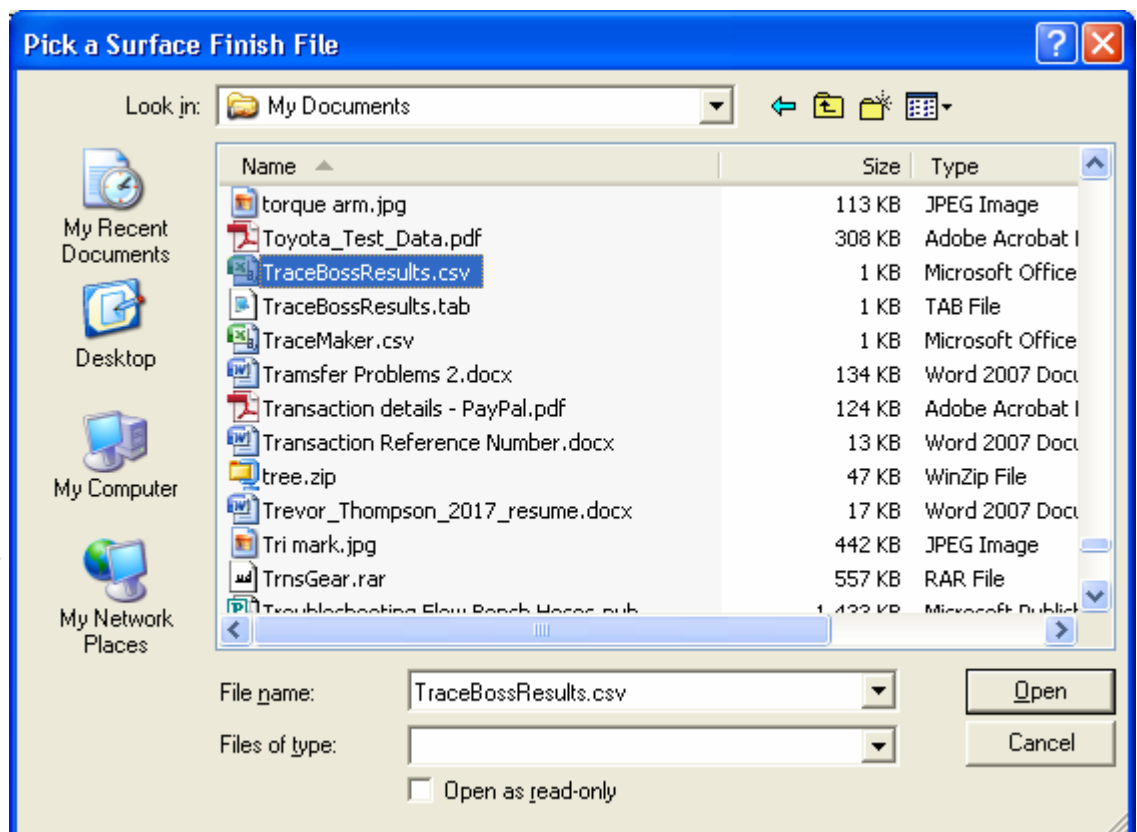


Read Surface Finish File

Trace Boss is a surface finish data logging software for measuring surface finish via several different surface finish sensors. Set this to Yes and there are new options in the screen for measuring surface finish at various positions in individual cylinder bores.

To read a Trace Boss Surface Finish file, you must first turn on this feature in Preferences, under the "File Options/Operation" tab. Then related options become enabled.

Click the Browse button and browse your computer for the file that Trace Boss will produce. It typically has a name like TraceBossResults.csv or TraceBossResults.tab. Many times this will be in computer's My Documents folder, but you can have Trace Boss store it most anywhere you want. The Log Book can read either a .csv or .tab file.



If you browse to the correct file, the "Path and File Name" field will be loaded with the complete path (letter drive and folders) and file name of the Trace Boss file.

Now you are prepared to read a Trace Boss surface finish file automatically.

Now you can click on "Surface Finish" in the "Machined Block/Short Block" screen and request to enter "Multiple Inputs" for the Surface Finish screen to open.

Once you've had Trace Boss save a file of readings, you can click the "Start Reading Data File" button and it will read and enter the readings. The readings will be read into which set of 5 fields has the blinking cursor. Typically the cursor is in the first set of 5 in the 3:00 position on the right, and that is where they will be stored. The cursor will automatically jump to the next set of 5 fields, typically the 6:00 position

Once the first set is recorded with the "Start Reading Data File" button, the program starts to watch the Trace Boss file. If it sees that it has been updated, it will automatically read the new results and store it in the next set of 5 fields. This can be a great time saver.

The program will accurately read in the results with either "Order of Labels" option you select, or if the file is .tab or .csv.

The screenshot shows the 'Surface Finish' window of the 'Build Log Book Pro' software. The window is divided into several sections:

- Surface Finish Comments:** Includes a dropdown for 'Order of Labels' (set to 'Rpk, Rk, Rvk, RA, Rz') and three text boxes for 'Comment 1', 'Comment 2', and 'Comment 3'.
- Notes:** A text area explaining that the screen is for entering surface finish readings and that the 'Order of Labels' dropdown is used to select the data format.
- Buttons:** 'Keep Readings', 'Help', 'Cancel', 'Print', 'Make Report', 'Make Graph', 'Make Graph with Numbers', 'Erase Inputs', 'Start Reading Data File', and 'Stop Reading Data File'.
- Data Entry Grid:** A grid for entering surface finish data for cylinders 1 through 8. The grid is organized into two columns of five fields each. The first column is labeled 'Front of Engine' and the second column is labeled 'Rear of Engine'. The fields are: Rpk, Rk, Rvk, RA, and Rz. The 'Rz' field in the second column contains the value 4.031.

Callouts provide additional instructions:

- A callout points to the 'Surface Finish' button in the main window, stating: "Click here, then select Multiple Readings to open the Surface Finish screen."
- A callout points to the 'Order of Labels' dropdown, stating: "Typically this is the first set of fields for saving the results."
- A callout points to the 'Start Reading Data File' button, stating: "Click here to start recording from data file."

Here's screens from TraceBoss for setting up writing results to a file.

Click on Settings first.

Click on Results Output second.

Browse to the file and location you want third. Then choose either Comma or Tab Delimited, then click OK. The Log Book can read either format.

SPC Configuration

Output Settings

File: C:\Users\mcmal\Desktop\TraceBossResults.csv

Comma Delimited Tab Delimited

OK Cancel

TraceBoss - Simulated Measuring Instrument

Surface Texture Data

23/01/2023 15:21:26

SETTINGS RESULTS HELP INFO

TraceBoss Settings

Measurement

Gauge: Simulated test

Sampling Lengths (N): 10

User Length (in): 0.30

Geometry & Filtering

Level the data:

Filter Type: Robust

Cutoff (in): 0.030

Material Ratio

MEASURE

Click here to write a results file.

TraceBoss - Simulated Measuring Instrument

Surface Texture Data

Simulated Measuring Instrument Data

23/01/2023 15:25:53

TS company name here!

NEW PRINT SAVE OPEN SCALING SETTINGS RESULTS HELP INFO

Roughness Profile

Material Ratio

Reference Geometry: Line

Filtering: Spline 0.0001 - Robust 0.030 in

Ra	9.848 μin	Rk	22.822 μin	Rpq	8.132 μin
RzDIN	148.001 μin	Rpk	6.650 μin	Rvq	47.938 μin
Rpm	23.673 μin	Rvk	35.619 μin	Rmq	87.218 %
Rmr	92.886 %	Rmr1	7.438 %		
(Rmr0: 5.0 %, Depth: 39 μin)		Rmr2	82.669 %		
Wt	17.240 μin	Rvo	3.087 μin		

Simulated Measuring Instrument

Tracing Length: 0.300 in

Ready.

MEASURE

Alternate Location for Storing Files

Some users want to store their engine files on a central location so several users can access them. This is typically on a network. One way to do this is to install the Engine Log Book on this central computer and they you access the program from various other computers on the network.

Another method is to have the Log Book installed on several computer and have the files stored in this central location, or "Alternate Location". If this is what you want to do, you first have to turn on this feature in Preferences.

You have 3 options:

- No
- Yes
- Pick

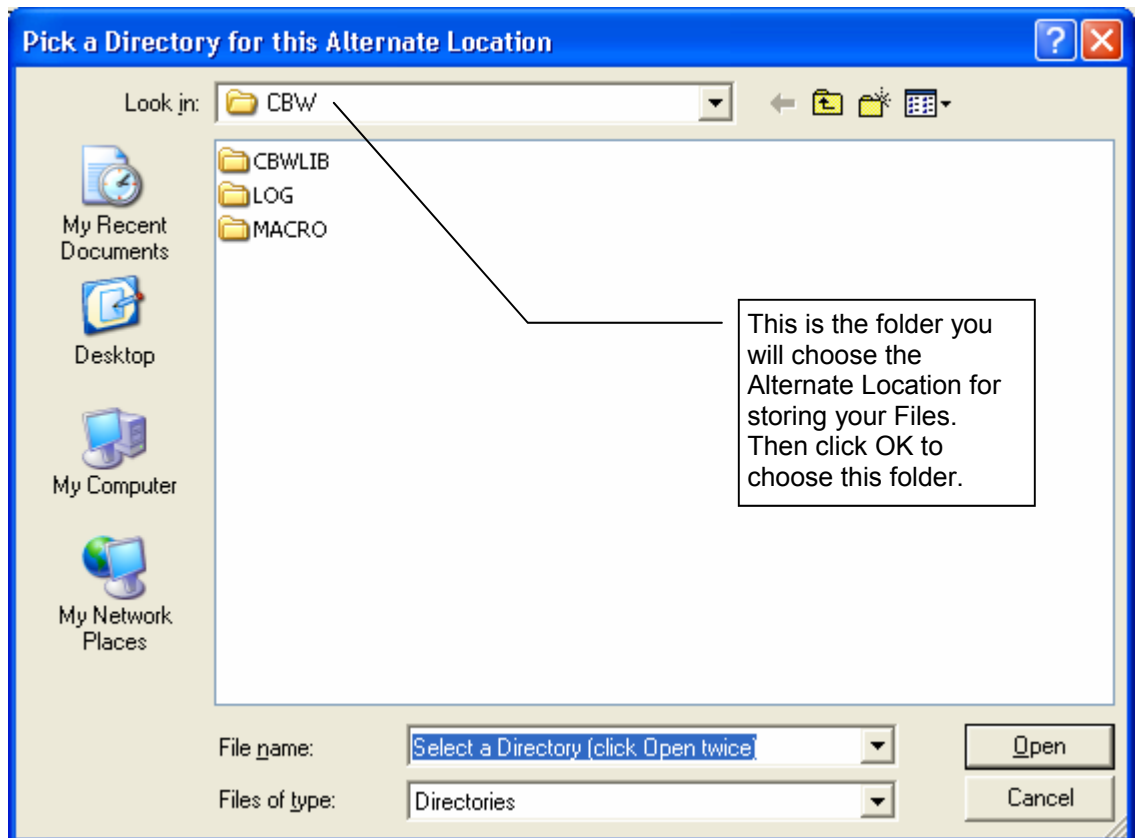
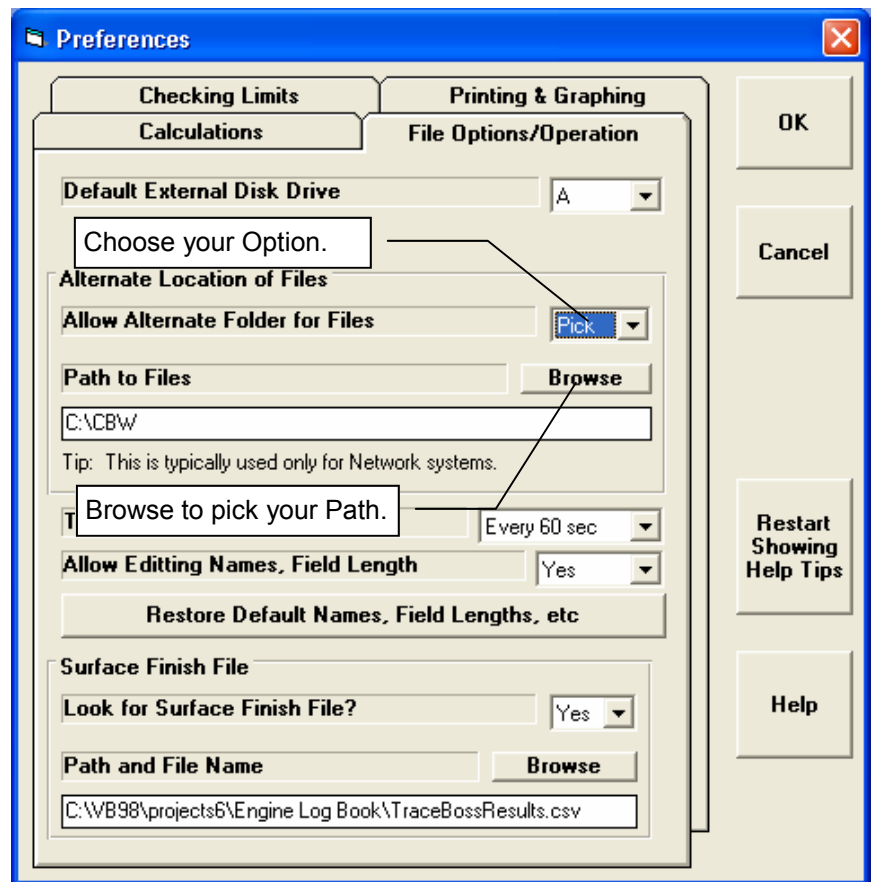
No means files are stored in the default location, the Engine Files folder in the Log Book program's folder.

Yes means files are stored in the Alternate location that is stored in the "Path to Files" field.

Pick means you can easily switch back and forth between the Default and Alternate location.

If you click the Browse button, you can browse to most any location including network locations. Note only folders are displayed, that you can only pick a folder and not a file.

When the "Look In" field at the top has the correct folder, click the Open button.



If you choose the Pick option, the bottom of the Open screen has the options of Use Alternate Location, or Use Default Location. Click on the Check Box or either label to switch between the 2 locations

Open an Engine File

63 Engines in Library

1/25/2023	0001	0001~34421~Ind Bore Calcs 4 pos 4 cyl.ebl
1/8/2023	0001	0001~34421~Individual Bore Calcs 4 pos.ebl
1/1/2023	dddd	dddd~safds~skladfjdlk.ebl
1/1/2023	33345	33345~31166~ggggertgen.ebl
11/25/2022	3565	3565~14572~Log Book Pro Example x.ebl
6/13/2022	27184	27184~B-00206~Martin.ebl
6/13/2022	27184	27184~B-00206~Martin v8.ebl
6/13/2022	27184	27184~B-00206~Martin v10.ebl
7/1/2021	3565-b	3565-b~14572~Log Book Pro Example.ebl
6/10/2021	3565	3565~14572~Log Book Pro Example.ebl
5/24/2021	3565-d	3565-d~14572~Example w Bore Thickness.ebl
5/24/2021	3565	3565~14572~Example w Bore Thickness.ebl
5/22/2021	3564-old	3564-old~14572~Example w Bore Thickness.ebl
5/21/2021	3565-c	3565-c~14572~Example w Bore Thickness.ebl
5/20/2021	3565-b	3565-b~14572~Example w Bore Thickness.ebl
5/19/2021	3565-a	3565-a~14572~Example w Bore Thickness.ebl
5/18/2021	3564	3564~14572~Example w Bore Thickness.ebl
5/2/2021	98765	98765~34421~junk.ebl
4/11/2021	98765	98765~34421~surface fin.ebl
2/24/2021	0001	0001~34421~v1.1B Feb 23.ebl

Chosen File: 3565-c~14572~Example w

Preview: Includes build up to: Complete Short Block

Num Cyl: 8
Bore: 3.9999
Stroke: 3.75
CID: 377.
Rod Len: 6

Cust: Example w Bore Thickness
Sales #: 3565-c
Eng #: 14572

Sales Comment: Wheeler BB Chevy 468
 Eng. Part #: EP 444

Show Only These Builds: All Builds

Show Only Files which contain this phrase: Show All Files

List Alphabetically
 List Chronologically (most recently saved first)

List By...
 Order Number Engine Serial Number

Use Alternate File Location: C:\CBW
 Use Default File Location: C:\WB98\projects6\

Click the Check Box to choose or "un-choose" the Alternate Location or the Default location. You can also click the option names.

Open an Engine File

4 Engines in Library

1/7/2023	33341	33341~yyy34~Gertgen.ebl
1/7/2023	12444	12444~yyy33~gert.ebl
1/7/2023	0001	0001~34421a~Individual Bore Calcs 4 pos.ebl
12/31/2022	3565	3565~14572~Log Book Pro Example x.ebl

Chosen File: 0001~34421a~Individual Bore

Preview: Includes build up to: Complete Short Block

Num Cyl: 8
Bore: 3.9998
Stroke: 3.75
CID: 377.
Rod Len: 6.

Cust: Individual Bore Calcs 4 pos
Sales #: 0001
Eng #: 34421a

Sales Comment: some pics
 Eng. Part #: gm334

Show Only These Builds: All Builds

Show Only Files which contain this phrase: Show All Files

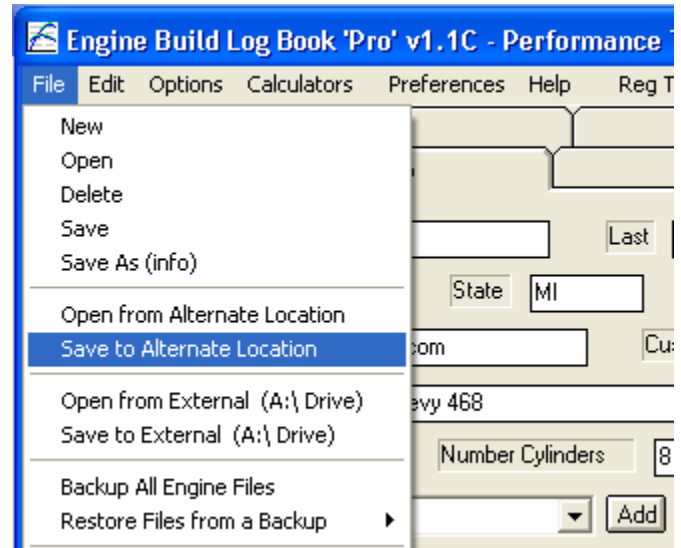
List Alphabetically
 List Chronologically (most recently saved first)

List By...
 Order Number Engine Serial Number Customer

Use Alternate File Location: C:\CBW
 Use Default File Location: C:\WB98\projects6\Engine Log Book\Engine Files

When checked, you are choosing the Alternate Location

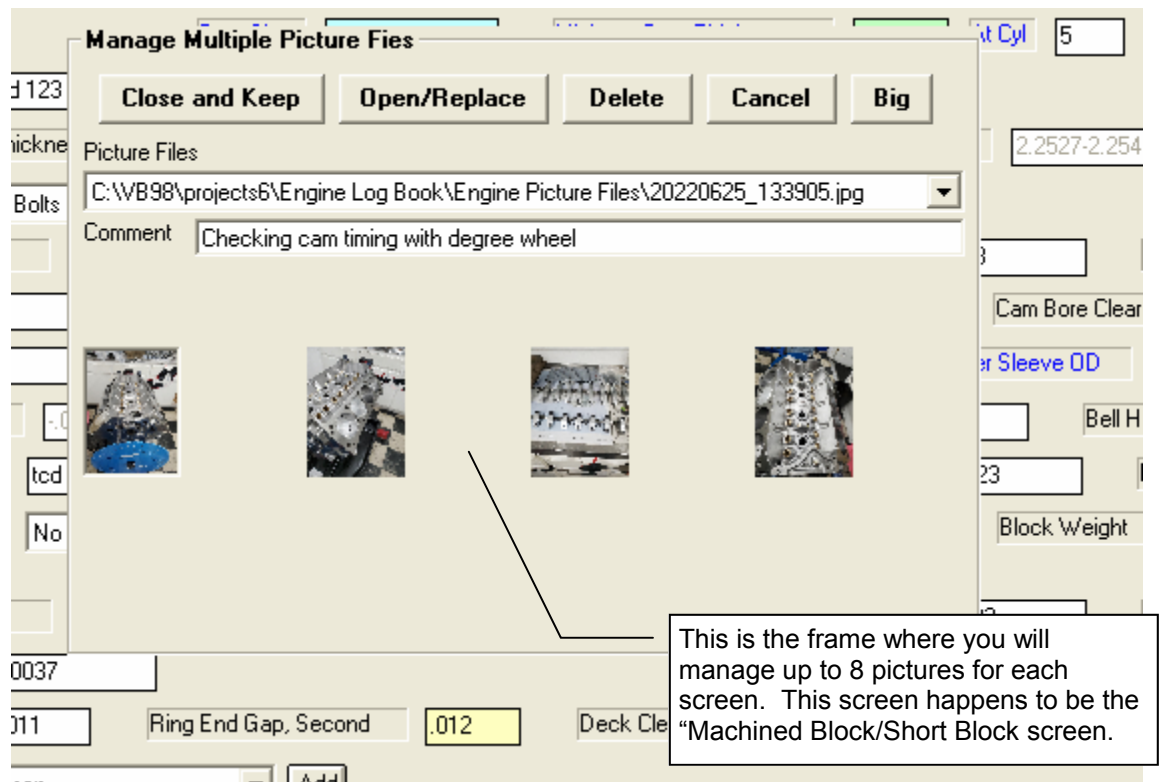
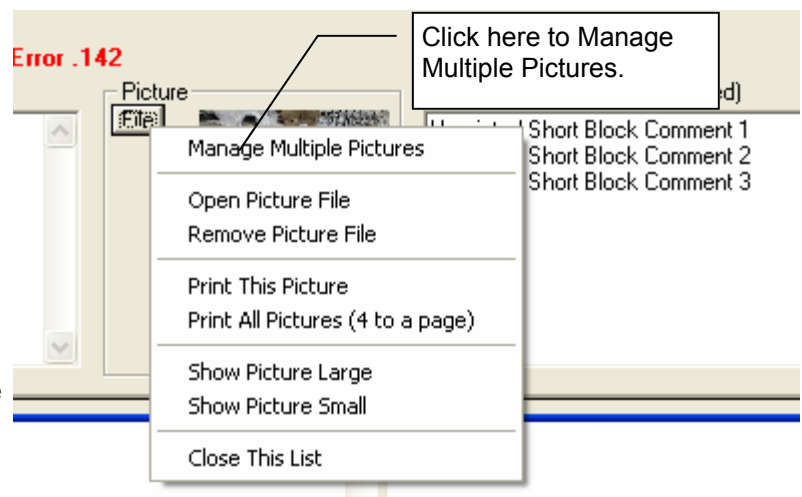
If you have chosen the “Pick” option, then if you choose to save a file, you can click on File, then Save to Alternate Location.



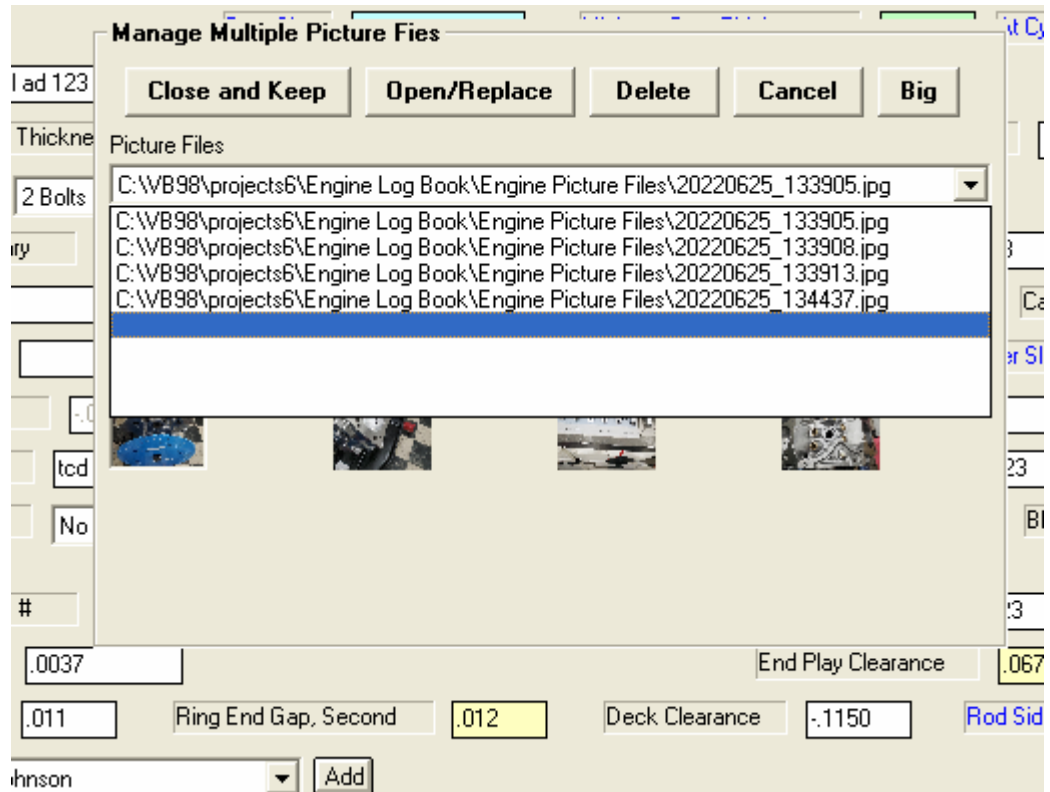
Manage Multiple Picture Files

The Picture “File” button at the bottom of all screens now have a couple of “Multiple” picture options for Managing them and Printing them.

The screen for Managing Multiple Pictures is shown below. Click on the dropdown for “Picture Files” and you have 8 options. Choose one of the 8, then you can click the Open/Replace button and browse to the picture file. Or click the Delete button to delete that particular picture file. For each file you can enter a comment to describe the particular picture.

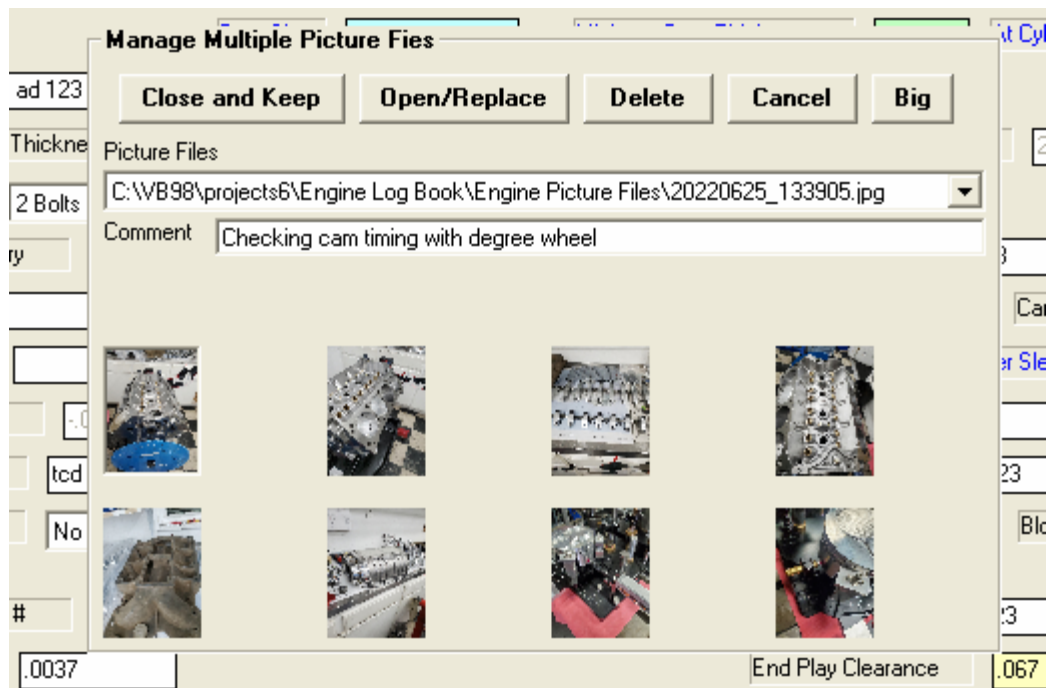


Here it shows picking the 5th picture file location from the dropdown.



Here it shows where 8 pictures have been picked.

NOTE: The pictures chosen are not part of the engine file, which could make files incredibly huge. The program only stores the file name and path. Therefore if you send a file to another user, the picture files will not go with the file unless you send them separately and they are stored to the same location on the other user's computer as on your computer.



Here are some options for printing pictures. The "First Picture" is the first picture of the 8, and is the picture shown in the frame at the bottom of each screen.

The screenshot displays the 'Engine Build Log Book 'Pro' v1.1C' software interface. The title bar shows the file name: '3565-c~14572~Example w Bore Thickness.ebl'. The menu bar includes 'File', 'Edit', 'Options', 'Calculators', 'Preferences', 'Help', and 'Reg To: Kevin GG'. The 'File' menu is open, showing options like 'New', 'Open', 'Delete', 'Save', 'Save As (info)', 'Open from Alternate Location', 'Save to Alternate Location', 'Open from External (A:\ Drive)', 'Save to External (A:\ Drive)', 'Backup All Engine Files', 'Restore Files from a Backup', 'Printing', 'Unlock Program', 'Exit', and 'Close this List'. The 'Printing' sub-menu is expanded, showing options: 'Print Engine Build Log Report', 'Print Engine Build Log Report and Multiple Inputs', 'Print Screen As Is', 'Print Blank Worksheet', 'Printing Pictures', 'Windows Printer Setup', and 'More Print Options'. The 'Printing Pictures' sub-menu is further expanded, showing options: 'Print First Picture of Current Screen', 'Print All First Pictures (4 to a page)', 'Print Multiple Pictures for Current Screen (4 to a page)', and 'Print Multiple Pictures for All Screens (4 to a page)'. The main window is divided into sections: 'Complete Engine', 'Rotating Assembly', and 'Machined Block/Short Block'. The 'Rotating Assembly' section contains fields for 'Bore Size' (3.9999-4.0012), 'Minimum Bore Thickness' (.1), 'Deck Height' (9.12), 'Main Bore Size' (2.44), 'Primary Fastner #' (main bolt 123), 'Freeze Plug #' (fp 123), 'Head Dowel #' (hd 123), 'Rear Main Seal Adapter #' (rmsa 123), 'Rear Main Seal #' (rms 123), 'Main Brg Clearance' (.0037), 'Ring End Gap, Top' (.011), 'Ring End Gap, Second' (.012), and 'Technician' (bruce johnson). The 'Machined Block/Short Block' section contains fields for 'Main Bearing ID' (2.2527-2.2547), 'Cam Bearing', 'Cam Bore Clearance' (.00), 'Lifter Sleeve OD' (1.0000-1.00), 'Bell Housing Dowel', 'End Play Clearance' (.067), 'Piston-Bore Cle', and 'Rod Side Clearance' (.02). At the bottom, there is a 'Comments' section with a text area containing 'Completely Fictitious Engine Specs', 'Short Block Comment 1', 'Short Block Comment 2', and 'Short Block Comment 3'. To the right of the comments is a 'Picture File' section with a thumbnail image of a piston and a text area for 'In House' Comments (not printed) containing 'Unprinted Short Block Comment 1', 'Unprinted Short Block Comment 2', and 'Unprinted Short Block Comment 3'. A red text warning is visible above the comments: '(click for info) Int Open Spring Ht Error .133, Exh Open Spring Ht Error .142'.

Here's a printout for choosing the Option of "Print Multiple Pictures for Current Screen (4 to a page)"

Engine Build Log Book v1.1C Pro Reg To: Kevin GG Printed: 4:00:20 pm 01-30-2023

Machined Block/Short Block for Engine Build File Name: 3565-c~14572-Example w Bore Thickness.ebl

...rojects6\Engine Log Book\Engine Picture Files\20220625_133905.jpg

Checking cam timing with degree wheel



...rojects6\Engine Log Book\Engine Picture Files\20220625_133908.jpg



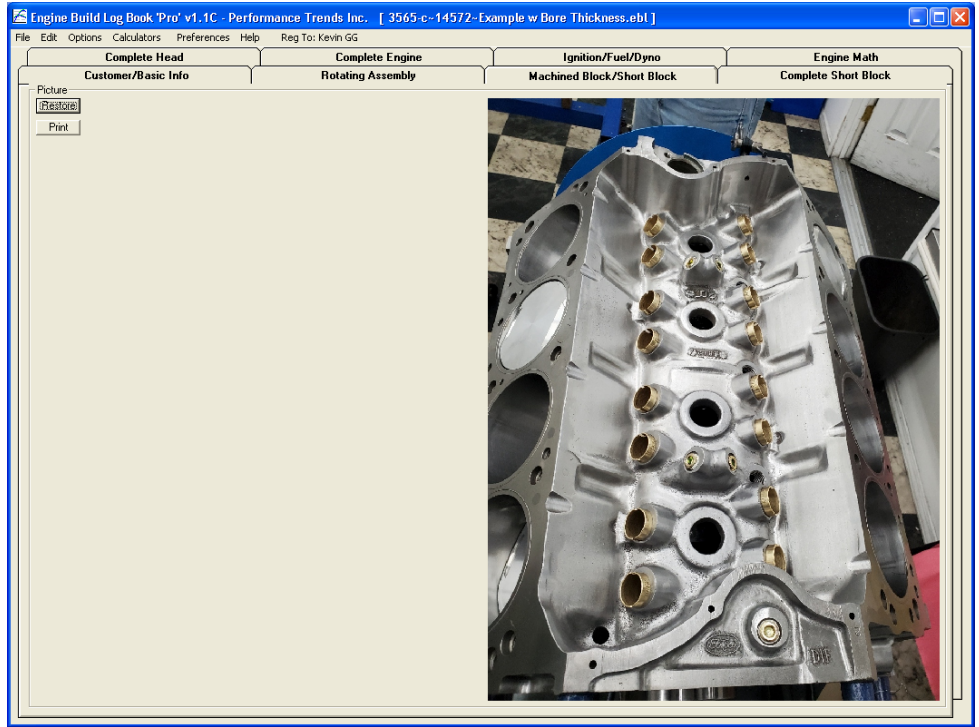
...rojects6\Engine Log Book\Engine Picture Files\20220625_133913.jpg



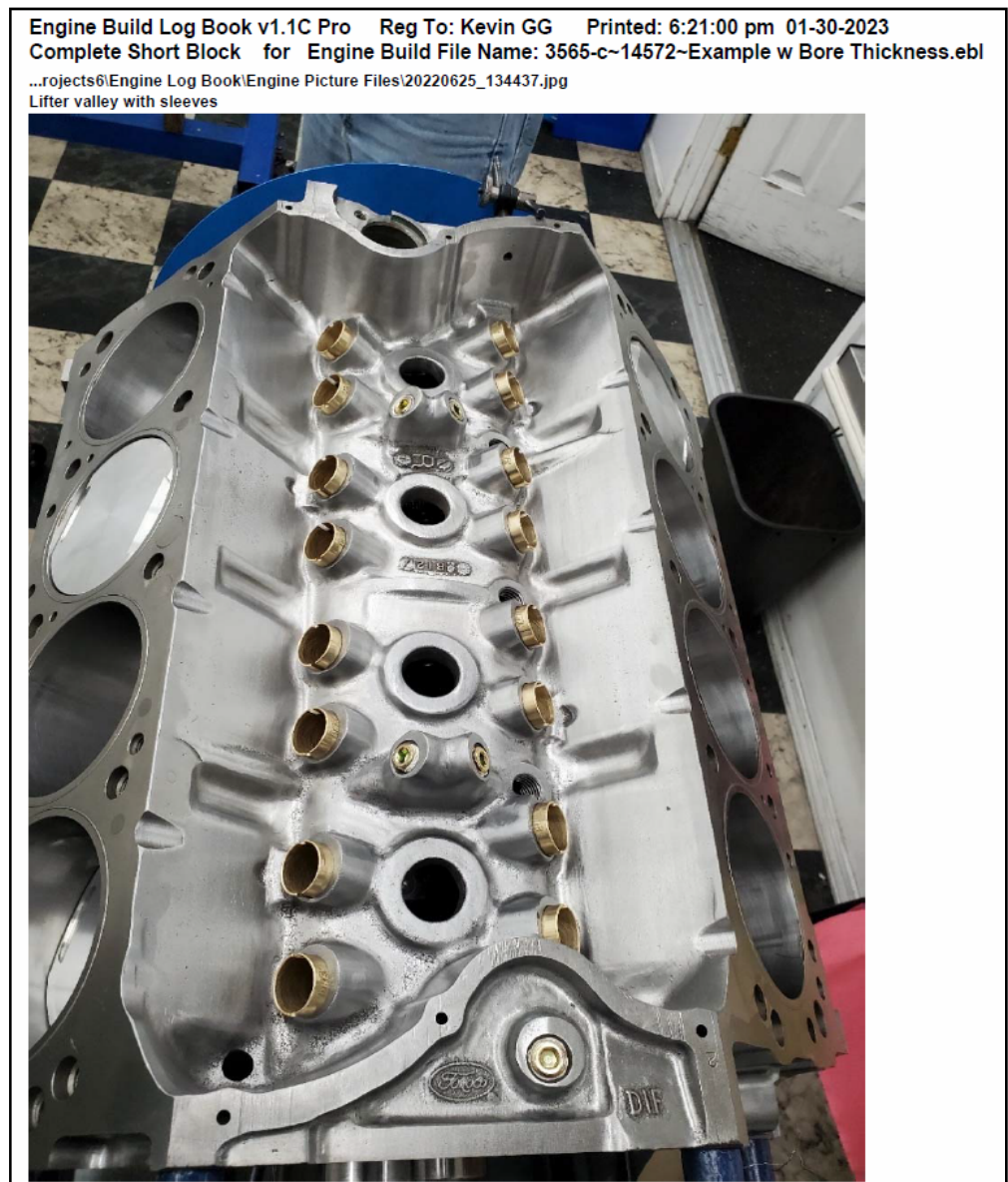
...rojects6\Engine Log Book\Engine Picture Files\20220625_134437.jpg



To the right is the screen if you click the "Big" button, to show the particular file currently selected in the drop down "Big".



To the right is the printout you would get if you click the Print button while you are displaying one of the pictures "Big".



Ford Power Stroke Cylinder Numbering

Engine Build Log Book 'Pro' v1.1C - Performance Trends Inc. [3565-c~14572~Example w Bore Thic

File Edit Options Calculators Preferences Help Reg To: Kevin GG

Complete Head **Complete Engine** **Ignitic**

Customer/Basic Info **Rotating Assembly** **Machined Bl**

Customer Name, First Last Company State Zip Country P

Email Customer Acct Number Sales Order Number

Sales Comment

Engine Size Number Cylinders Layout

- V Pushrod (style B)
- Hor. Opposed Pushrod (style A)
- Hor. Opposed Pushrod (style B)
- V OHC (style A)
- V OHC (style B)
- Hor. Opposed OHC (style A)
- Hor. Opposed OHC (style B)
- Power Stroke V

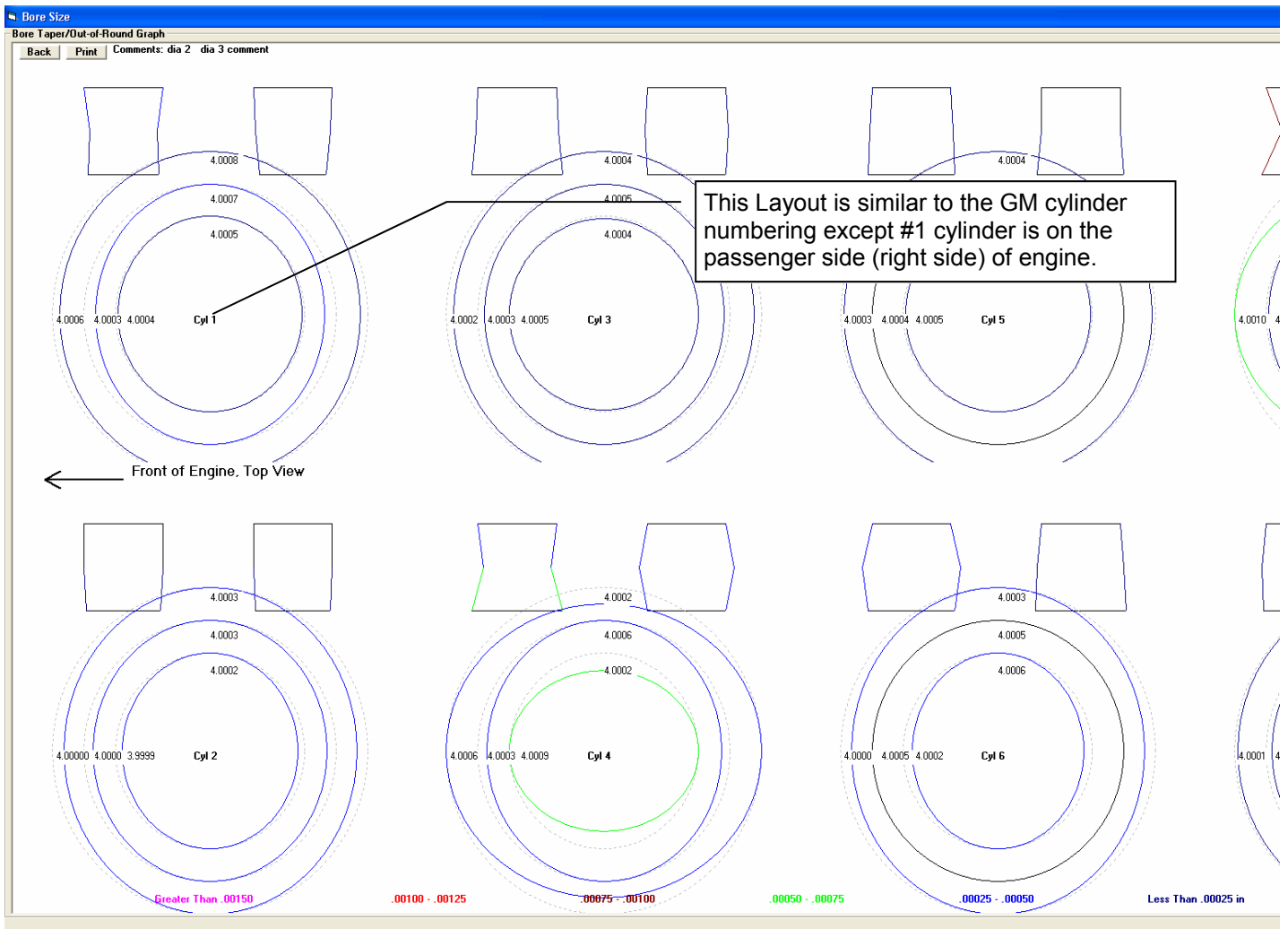
Salesperson Date

Additional Document 1

Additional Document 3

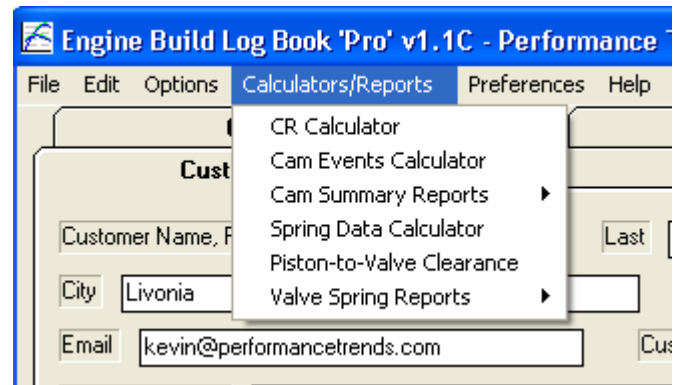
New Ford Power Stroke Layout option.

This Layout is similar to the GM cylinder numbering except #1 cylinder is on the passenger side (right side) of engine.



Piston-To-Valve-Clearance Report

When you are in the Engine Math screen, click on Calculators, then Piston-to-Valve Clearance to produce the report shown below. This reports includes the entries which affect the Estimated Piston-to-Valve Clearance calculations.



```

Cam-Report.txt - Notepad
File Edit Format View Help
----- Kevin GG -----
Name: Jason Carter LS
Company: Bay City Engines
Account Number: ~~~~~
Sales Order Number: 41634
Engine Serial Number: 9L 9019
Date: 11/02/23 Time: 11:20 am

Cam Summary:
Lobe Lift Intake Exhaust
Rocker Ratio .4480 .4210
Lash 1.650 1.550
Gross Valve Lift .004 .006
Net Valve Lift .739 .653
.647

Events Rated At .050''
Duration 268.20 273.50
Centerline 107.0 109.
Open Event 27.1 65.75
Close Event 61.1 27.75
Lobe Separation 108.0
Cam Advance 1.
Overlap 54.85

Other Piston-to-Valve Inputs:
Stroke 3.8000
Rod Length 6
Gasket Thickness .027
Deck Height Clearance .0150
Valve Angle 13.0 13.0
Valve Canted Angle
Valve to Deck Clearance (drop) .022 .083
Estimated Tappet Lift, TDC .1428 .1382
Estimated Valve Lift, TDC .2317 .2082
Estimated Valve Lift at Closest .2848 .2579
Piston Drop from TDC at Closest .0243 .0243
Piston Fly Cut .2950 .2420

Calculated (estimated) Clearances **:
Minimum Piston-to-Valve .106 @ 8 ATDC .140 @ 8 BTDC

** This is the program's estimate of how close the valve will come to the top of the
piston if it has a flat top. If the piston has a dish and/or valve reliefs, this
clearance will likely be more. If the piston has a dome, it could be less. This
estimate is provide mostly so you can see changes in clearances from making changes
in piston, rod, block, head and especially cam, lash and rocker ratio changes.

NOTE: Piston Fly Cut has been included in this calculation, increasing the
clearance compared to a flat top piston. But the software can NOT check to
ensure the Fly Cut is in the correct location for the valve.

Engine Build Log Book Performance Trends Inc (C) 2023
Ln 2, Col 22
  
```

Piston-To-Valve-Clearance Report, cont.

There is a Preference Setting that lets you enter a measured tappet lift at TDC to adjust the cam profile generated by the software. This will improve the accuracy of the Piston-to-Valve Clearance calculations by having the software generate lift profiles which match your cam more exactly.

Choose Yes for this Preference to be able to enter Tappet Lift at TDC. You will lose the inputs of "Cam Bolts #" and "Cam Eccentric #" to be able to do this.

Now you can enter Tappet Lift at TDC for the Intake and Exhaust cam lobes. This will be based on what you measure for these Tappet Lifts.

Piston-To-Valve-Clearance Report, cont.

Here is the report if you enter the Tappet Lifts at TDC, with the changes highlighted. As with anything, if you enter incorrect Lifts at TDC, the Piston to Valve Clearance will be less accurate. Watch the "Percent Adjustment, %" numbers and difference between Estimated and Measured Tappet Lift at TDC. If the software is having to make a large adjustment, double check your Lift at TDC inputs and other inputs that affect the cam profile, like Max Lift, Duration, etc.

Cam-Report.txt - Notepad

File Edit Format View Help

----- Kevin GG -----

Name: Kevin Example w Bore Thickness
 Company: Performance Trends
 Account Number: 32345
 Sales Order Number: 3565
 Engine Serial Number: 14572c
 Date: 29/08/23 Time: 10:42 am

Cam Summary:

	Intake	Exhaust
Lobe Lift	.345	.355
Rocker Ratio	1.73	1.6
Lash	.007-.014	.020
Gross Valve Lift	.597	.568
Net Valve Lift	.590	.548

Events Rated At .050''

	Intake	Exhaust
Duration	240	250
Centerline	106	114.
Open Event	14.	59.
Close Event	46.	11.
Lobe Separation		110
Cam Advance		4.
Overlap		25.

Other Piston-to-Valve Inputs:

Stroke		3.75
Rod Length		6
Gasket Thickness		.033
Deck Height Clearance		-.1150
Valve Angle	20.0	20
Valve Canted Angle	4	6
Valve to Deck Clearance	.125-.140	.441-.448
Estimated Tappet Lift, TDC	.0973	.0777
Measured Tappet Lift, TDC ***	.1030	.0820
Percent Adjustment, % ***	5.9	5.5
Estimated Valve Lift, TDC	.1612	.1044
Estimated Valve Lift at Minimum Clearance to Piston	.2168	.1428
Piston Movement from TDC at Minimum Clearance to Piston	.0239	.0134
Piston Fly Cut	.33	.44

Calculated (estimated) Clearances **:

Minimum Piston-to-Valve .194 @ 8 ATDC .679 @ 6 BTDC

** This is the program's estimate of how close the piston if it has a flat top. If the piston clearance will likely be more. If the piston estimate is provide mostly so you can see change in piston, rod, block, head and especially ca

NOTE: Piston Fly Cut has been included in this calculation, increasing the clearance compared to a flat top piston. But the software can NOT check to ensure the Fly Cut is in the correct location for the valve.

*** The cam's lift profile (and so the Piston-to-Valve Clearance) has been adjusted based on the 'Tappet Lift at TDC' inputs in the Complete Short Block screen, and the 'Estimated Tappet Lift at TDC' numbers based on the standard profile the program generated from your cam inputs. The 'Valve Lift at TDC' numbers are based on this adjusted lift profile.

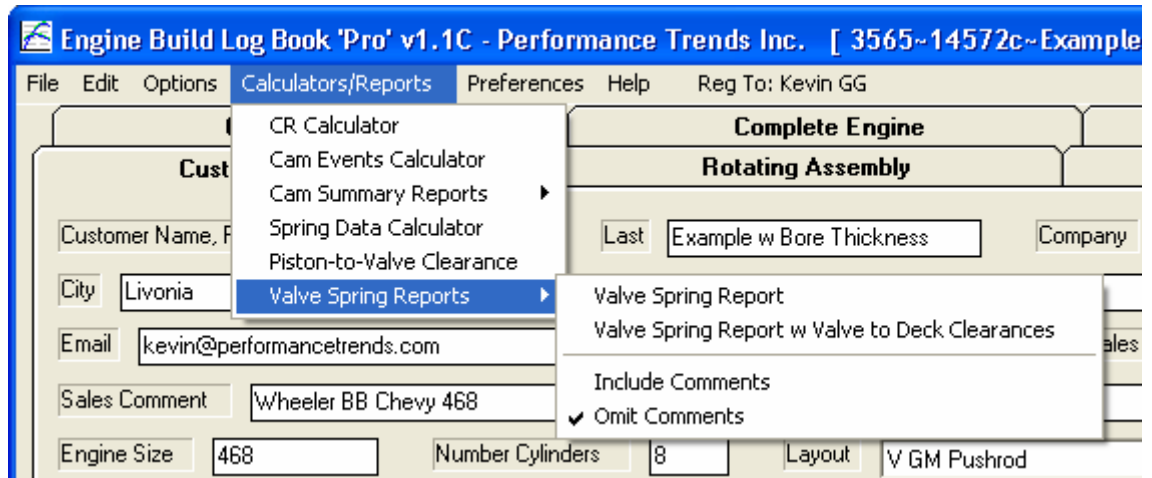
The report shows these lifts here, and the % amount of adjustment the software is making to the cam profile, marked by ***.

More explanation of how these Tappet Lifts at TDC are affecting the Piston-to-Valve clearance calculation, marked by ***.

Ln 4, Col 22

Valve Spring Report

Click on Calculators/ Reports, then Valve Spring Reports for the options shown. A typical report is shown below.. To make this report possible, several inputs shown in this report were modified to allow multiple inputs.



Spring-Report.txt - Notepad

```

----- Kevin GG -----
Name: Kevin Example w Bore Thickness
Company: Performance Trends
Account Number: 32345
Sales Order Number: 3565
Engine Serial Number: 14572c
Date: 29/03/23 Time: 07:22 pm

Valve Spring Summary:

Cylinder          1          2          3          4          5          6          7          8
Int Shim          .000        .000        .015        .000        .000        .015        .000        .000
Int Spring Installed Ht  1.955      1.950      1.950      1.950      1.950      1.950      1.950      1.945
Int Spring Installed Ht * 1.955      1.950      1.935      1.950      1.950      1.935      1.950      1.945
Max Valve Lift **  .577        .577        .577        .577        .577        .577        .577        .577
Int Coil Bind     1.118      1.118      1.118      1.118      1.119      1.118      1.118      1.120
Bind Clearance    .260        .255        .240        .255        .254        .240        .255        .248

Exh Shim          .000        .000        .000        .000        .000        .015        .000        .000
Exh Spring Installed Ht  1.941      1.942      1.943      1.944      1.945      1.946      1.947      1.948
Exh Spring Installed Ht * 1.941      1.942      1.943      1.944      1.945      1.931      1.947      1.948
Max Valve Lift **  .548        .548        .548        .548        .548        .548        .548        .548
Exh Coil Bind     1.201      1.202      1.203      1.204      1.205      1.206      1.207      1.208
Bind Clearance    .192        .192        .192        .192        .192        .177        .192        .192

* Spring Installed Ht with the Shim Thickness subtracted out.

** Int Open Spring Ht Error .148
For the Intake Spring, the Theoretical Max Lift is .345 x 1.730 - .020 = .577
But the Spring Hts show Open Ht = 1.945 - 1.220 = .725

** Exh Open Spring Ht Error .153
For the Exhaust Spring, the Theoretical Max Lift is .355 x 1.600 - .020 = .548
But the Spring Hts show Open Ht = 1.941 - 1.240 = .701

Engine Build Log Book Performance Trends Inc (C) 2023
Ln 1, Col 1
  
```