Instructions for Logging Using the Vag-Com

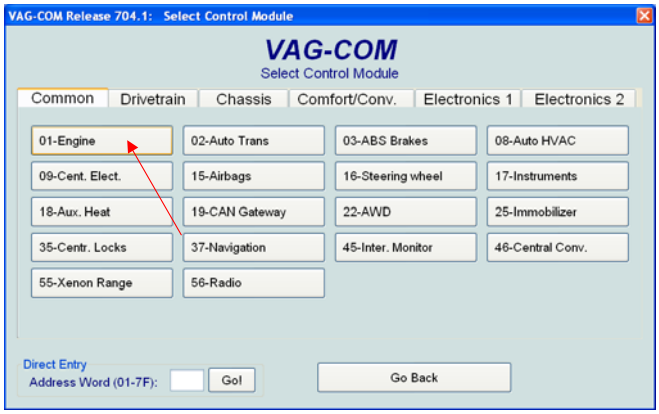
Note: Vag-com logging should be done by someone who is trained, competent, and qualified to do so. This only to be used as a guideline. This also assumes that you have the Vag-com cable installed and working on your computer.

See Appendix A for common measuring blocks
See Appendix B for help making Excel charts
See Appendix C for the 2.0T label file

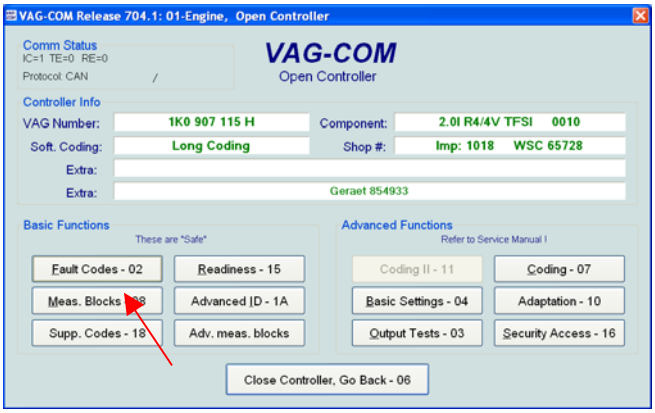
General:

-**Safety is extremely important – only do logs when it's safe to do so.**
-Make sure to follow all applicable laws.
-Most logs should be done in a third gear Wide-Open Throttle (WOT) from 2000-6500 rpm. If this cannot be achieved, then a second gear WOT can be done.
-For the cars equipped with automatics if you have problems with the kick down, then you can press and hold either the up shift paddle (if equipped) or the push and hold the shifter upwards when in Tiptronic mode. So, to do a third gear pull, press and hold the up shift when you are in second gear, which would drop you into third gear.
-Make a note of what the ambient temperature is.
-Whenever you log, make sure to log RPMs, if needed.
-Certain modules such as the LCT module would conflict with the Vag-com and should be turned off before using the Vag-com.

1. Turn the key of the car to the "ON" position.
2. Open the Vag-com application.
3. Click on the "**Select**" button as shown in the diagram shown to the left below.
4. Click on the "**Engine**" button as shown in the diagram shown to the right below.

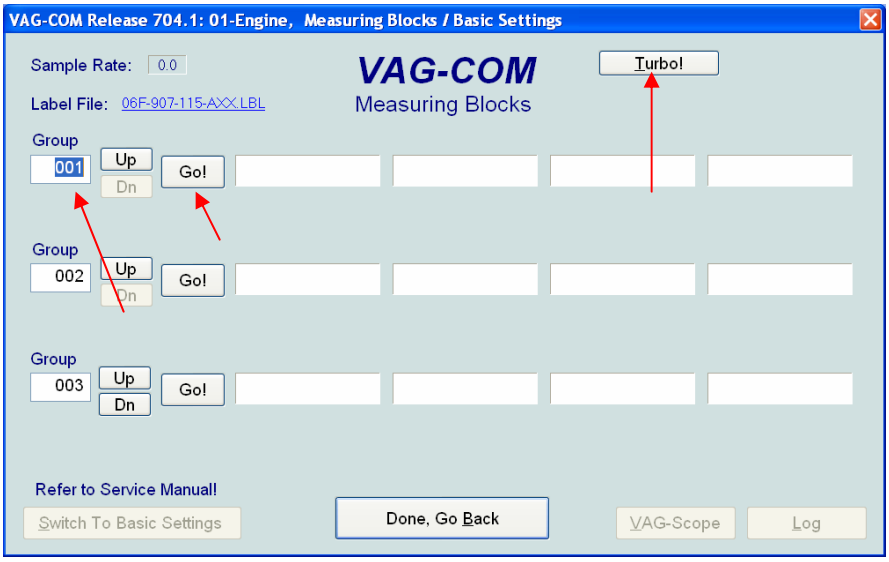


5. Click on the "**Meas. Blocks – 06**" as shown below.

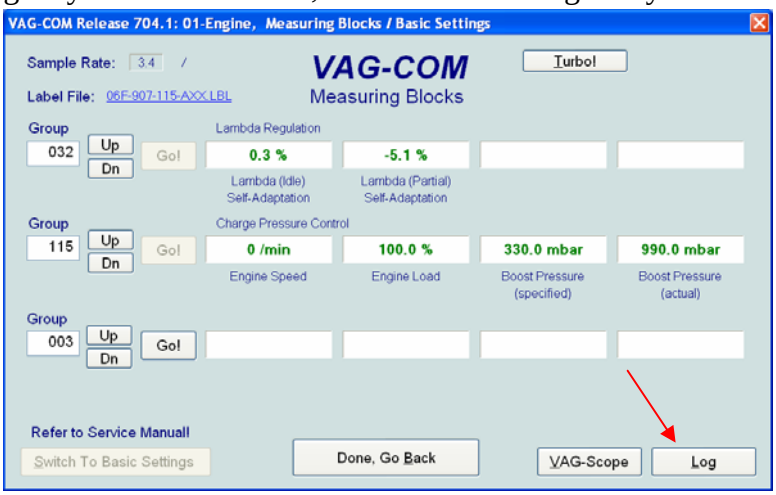


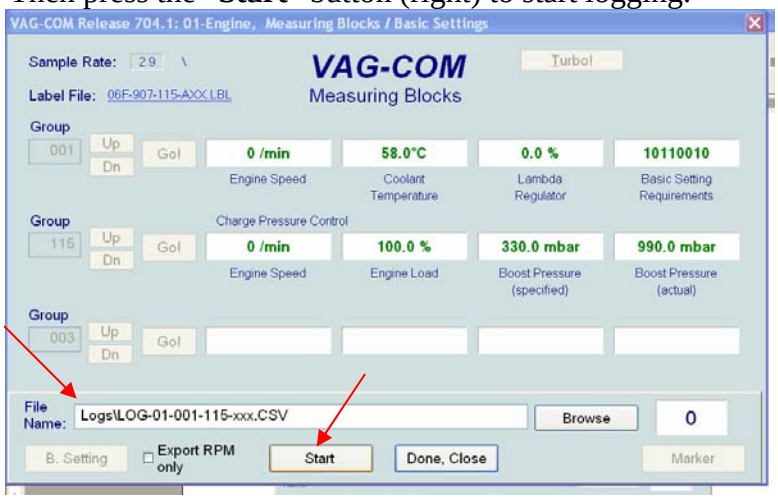
6. A screen like the one below should come up. You can select what blocks you want to measure and then hit the "**GO**" button. You can log up to 3 measuring blocks at once.

Tip: You can use the "Turbo**" button to increase the sample rate. Also logging less measuring blocks will result in a higher sample rate. **



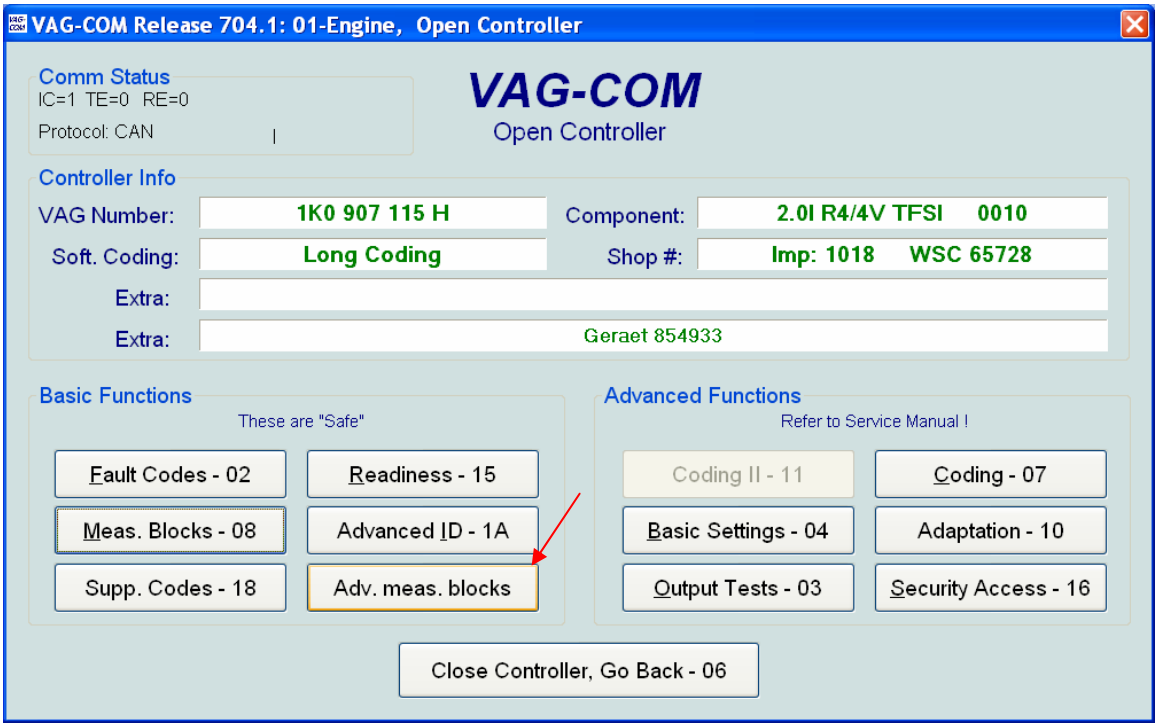
7. Hit the "**Log**" button to start logging as shown (left). You will see a prompt for the file name (right). Vag-com will give you a default name, which can be changed if you'd like. Then press the "**Start**" button (right) to start logging.



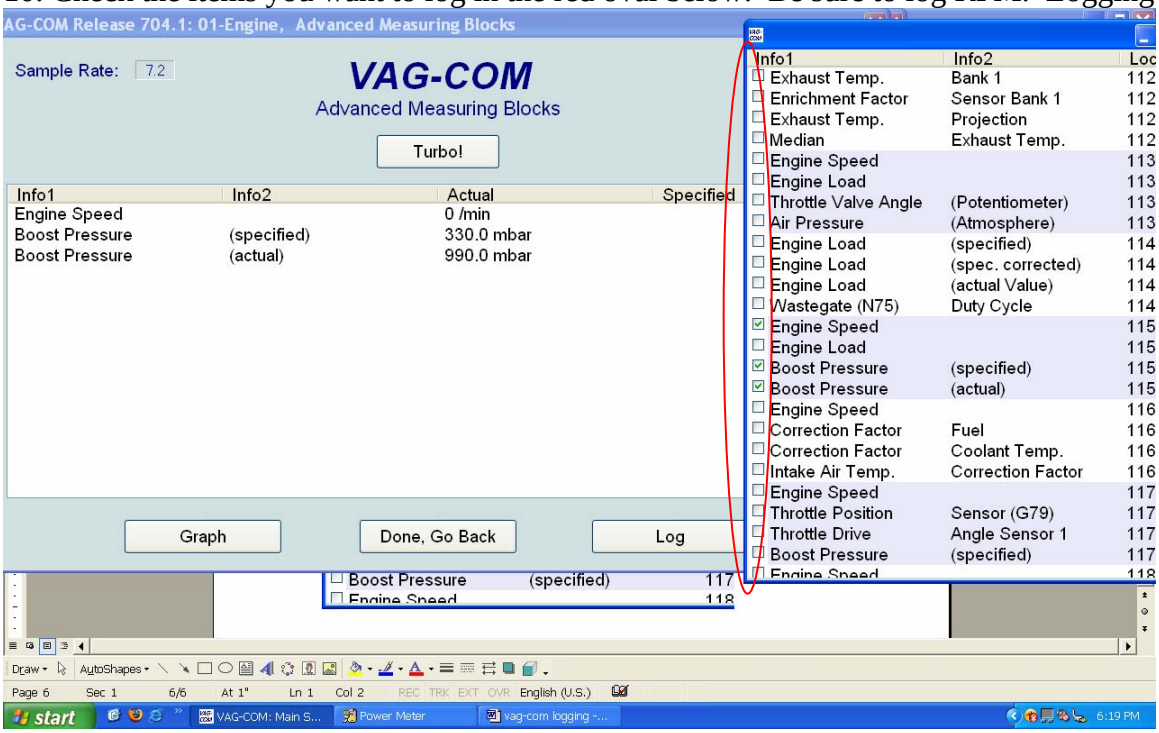


8. You can use the "**Marker**" button to mark when you start a run, or what type of run it is (i.e. for a 3rd gear pull, you can press the marker button three times. Once you are finished logging, press the "**Stop**" button. Once you are finished logging, press the "**Done, Close**" button.

9. Instead of using the Measuring blocks, you can also use the Advanced measuring blocks which allows you to pick and choose each component you want to log. Select the "**Adv. Meas. Blocks**" button.



10. Check the items you want to log in the red oval below. Be sure to log RPM. Logging is similar as Steps 7 & 8 above.



Appendix A – Common Items to Log

You can look at the label file for your car. This will tell you what can be logged. This is the label file for the 2.0T FSI engine:

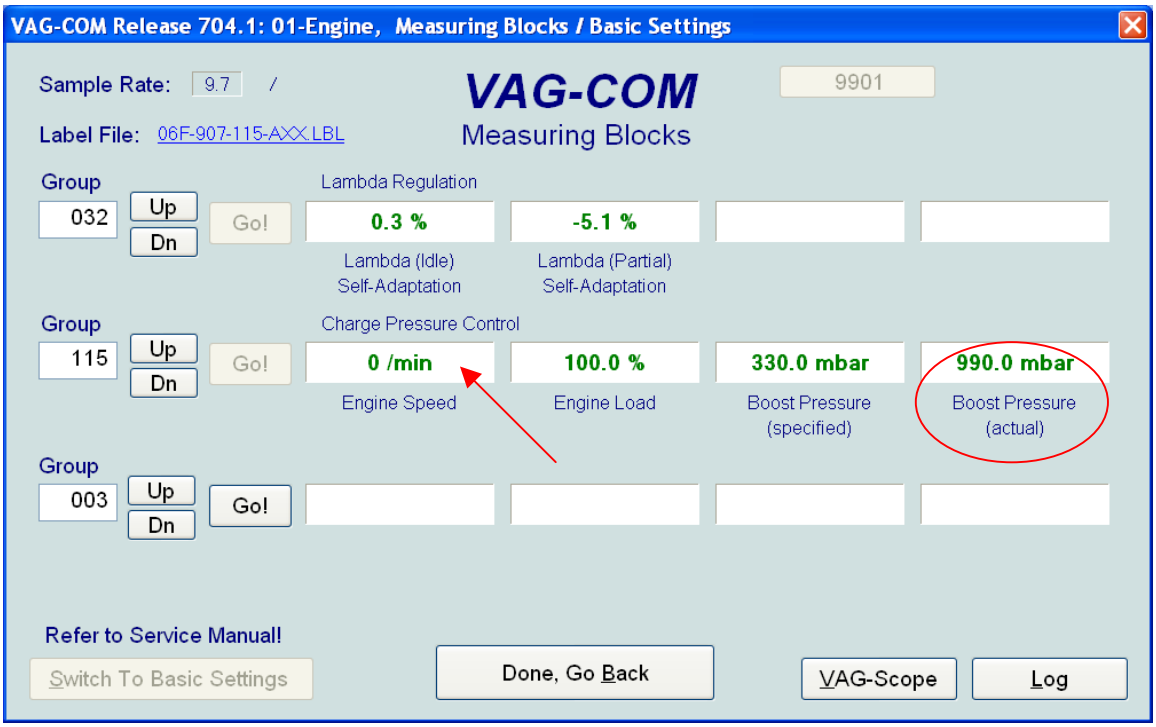
http://www.ross-tech.com/vag-com/download/label-files/06F-907-115-AXX.lbl (Also in Appendix C)

Generally speaking, to diagnose a problem, I'd start with logging the following Measuring Blocks (MB):
-MB 003,020,115
-MB 002,106,118
You can substitute other MB's as you see fit.

Common logged items are as follows:
**Note that some items might not be applicable to your car. Please refer to the label file. **

Please note that some readings are shown in more than one Measuring Block (MB)

Boost Pressure: MB 115
-For boost, you should note the actual pressure with the engine off. This would be the atmospheric pressure (shown circled in red below). As a check, the engine speed arrowed in red below should read "0". If you are near sea level, then you can use 1000mbar as an approximate atmospheric pressure.
-Boost Pressure (actual) is the pressure actually seen by the MAP sensor. You should never see a value below atmospheric pressure since the MAP sensor is located upstream of the throttle body on the 2.0T engine.
-Boost Pressure (specified) is what the engine requests and you will see vacuum pressure for specified boost.
-Sometimes, it is useful to log both values.
-Once you get the boost data in PSI, simply use the following equation to calculate boost
(logged boost – atmospheric pressure) * .0145



Fuel Rail Pressure: MB 106
This is the pressure that the fuel is being injected into the combustion chamber. You could run into issues if it gets much below 100 bar.

Air/Fuel Ratio: MB 031
The 2.0T has a wideband o2 sensor which reads in lambda. Only the front o2 sensor is pertinent in tuning, the rear is for emissions purposes only. Multiply the lambda value by 14.7 to get the Air/Fuel Ratio.

Timing: MB 011
-Displays the timing angle.

Timing pull: MB 020
-Displays timing pull. This affects Timing (MB 011) above. It is important to note that a lot of timing pull does not necessarily mean there is a problem.

Mass Air Flow: MB 002
-This is the amount of air that's coming into the engine. Please note that changing the cross-sectional area of the MAF housing at the MAF sensor will affect the MAF reading. It is not recommended to change the cross-sectional area unless you have programming to compensate for it.

Intake Air Temperature (IAT): MB 118
-Self explanatory. It is a good idea to log before and after an aftermarket FMIC install.

Torque: MB 120
-The torque calculated is a theoretical value. You can calculate HP using this torque value and RPM value.
-You can use the dyno spreadsheet here:
http://www.ross-tech.net/vag-com/examples/Block_120_Tutorial.xls
-Some people have reported that the torque value is not accurate for chipped cars, so be careful if you do decide to use this tool.

Fuel Trims: MB 032
-These values can be checked with the engine off.
-Generally speaking, you'd want to be within ±10% if you're stock. If you're modded, then the mods might have some affect on the fuel trims. If your fuel trims are way out of whack then you might get a DTC and/or a CEL.
-You can read more about fuel trims here:
http://wiki.ross-tech.com/index.php/Fuel_Trim_Info

Exhaust Gas Temperature (EGT): MB 112
-This tells you the temperature at the front o2 sensor as well as projected EGT.

Coolant temperature: MB 004
-This tells you the actual coolant temperature. This could be slightly different then the pseudo coolant temperature gauge on the dash as the gauge on the dash has a huge dead zone where it will read 190°F.

Voltage Supply: MB 004
-Self explanatory.

Vehicle speed: MB 005
-Tells you the actual vehicle speed. The speed displayed on the speedometer may be off.

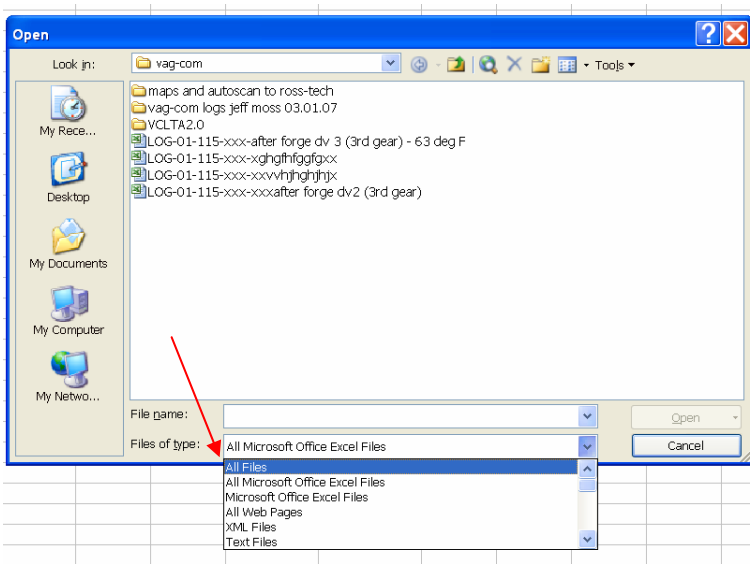
Misfire counter: MB 015 & 016
-This could be useful if you suspect that you have misfires.

Wastegate (N75) Duty Cycle: MB 118

Oil temperature: MB 134

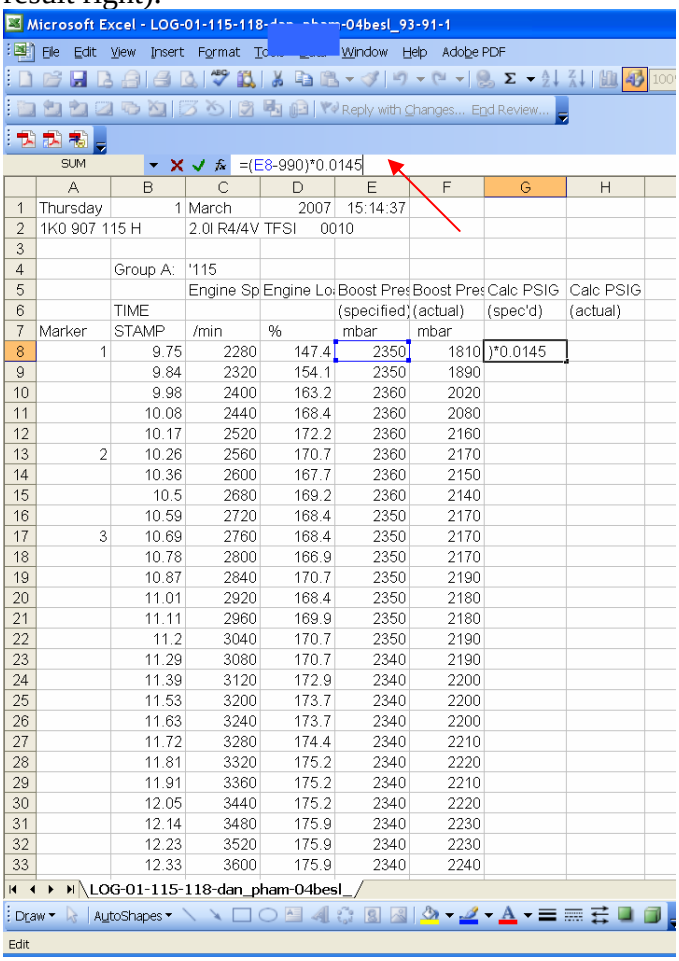
Appendix B: Making Graphs Using Excel

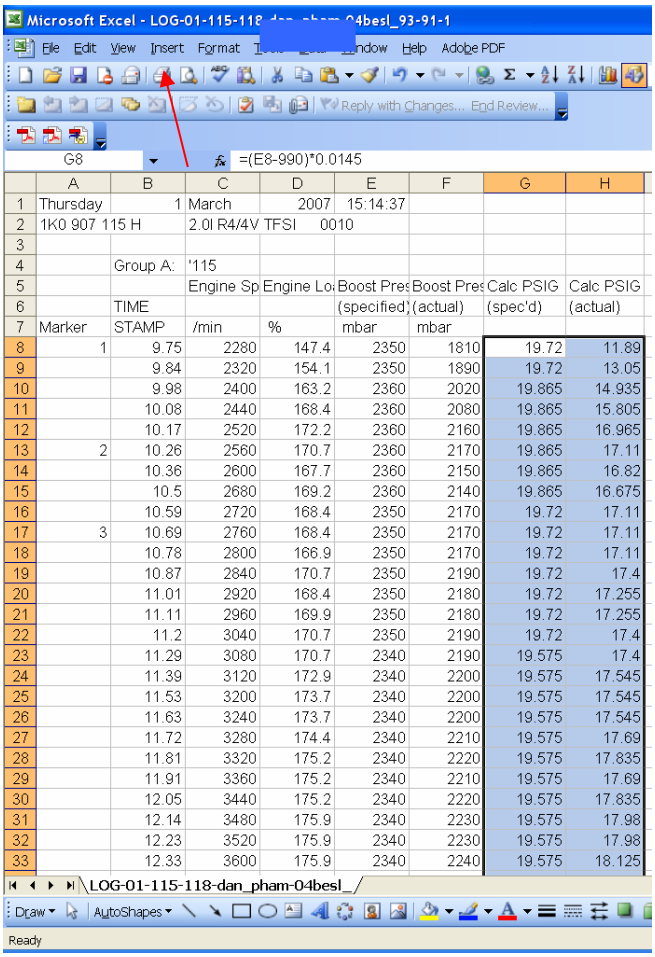
1. Using Windows Explorer, find and open the log file(s) that you created using the Vag-com. They are .CSV Files. If you open them using Excel, then go to the "**File**" menu and select "**Open**". Then you may have to go to the "**Files of type**" and select "**All Files**".



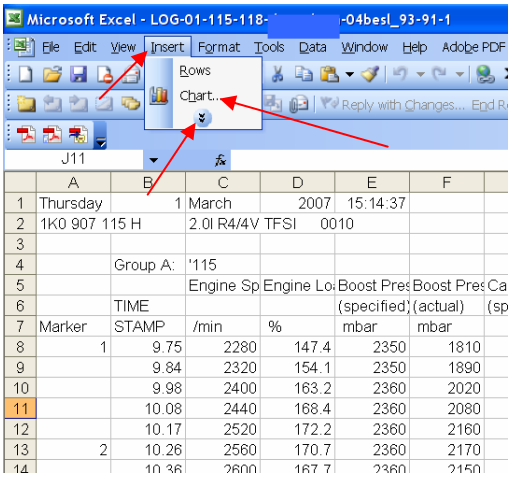
2. Once you open the file, I'd suggest that you resave it as an .XLS file right away.

3. I have deleted the non-related data points to make it easier to see what you're doing. I am using Boost as an example, but doing other MB's should be similar and easier. I added two columns to calculate the spec'd and actual boost in gauge pressure in PSI. Note that the 990 is the atmospheric pressure as measured earlier. The equation use is: [**(logged boost – atmospheric pressure) * .0145]** as discussed above (see left). Apply the same formula for both spec'd and actual (see result right).

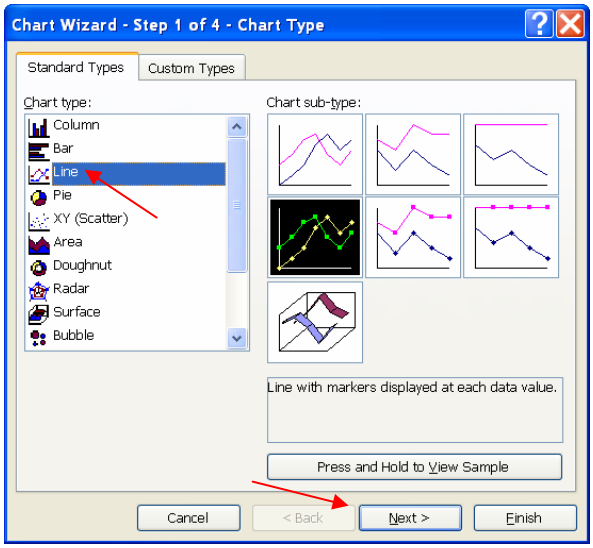




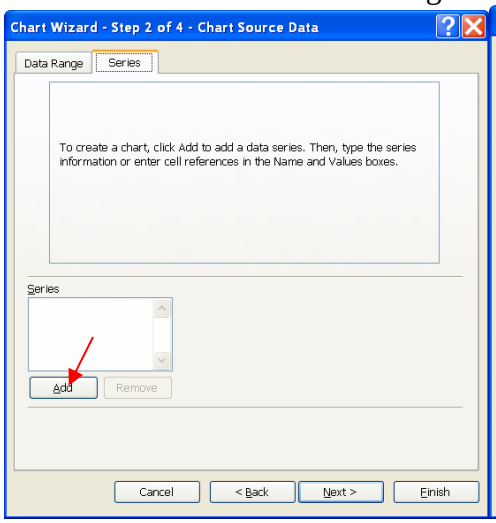
4. Hit the "**Insert**" toolbar, and choose "**Chart**". Note, you may have to hit the two down arrows if you don't see the Chart option. The chart wizard (right) should pop up. Under "**Chart type**" select "**Line**", then hit "**Next**" (see right)

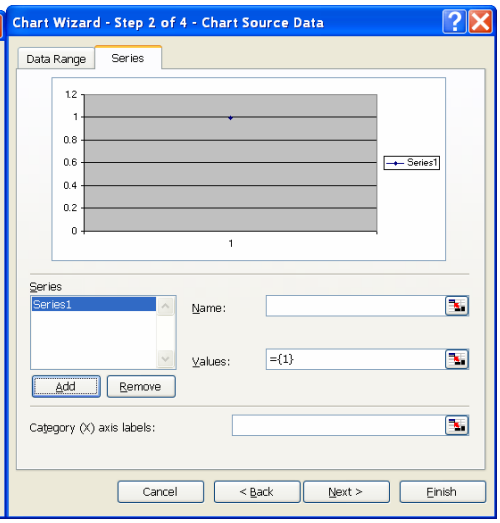


	A	B	C	D	E	F
1	Thursday	1	March	2007	15:14:37	
2	1K0 907 115 H		2.0l R4/4V TFSI	0010		
3						
4		Group A:	'115			
5			Engine Sp	Engine Lo	Boost Pres	Boost Pres
6		TIME			(specified)	(actual)
7	Marker	STAMP	/min	%	mbar	mbar
8	1	9.75	2280	147.4	2350	1810
9		9.84	2320	154.1	2350	1890
10		9.98	2400	163.2	2360	2020
11		10.08	2440	168.4	2360	2080
12		10.17	2520	172.2	2360	2160
13	2	10.26	2560	170.7	2360	2170
14		10.36	2600	167.7	2360	2150



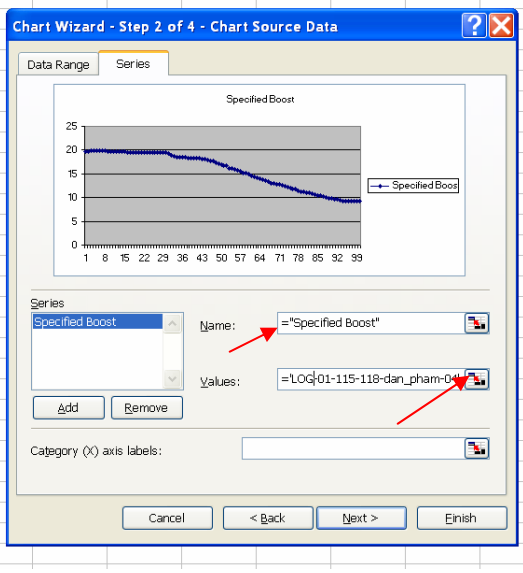
5. The screen (left) should pop up. Choose the "**Series**" tab, and you should see something like the screen in the middle. Hit the "**Add**" button (middle screen). The screen should look like the right screen.



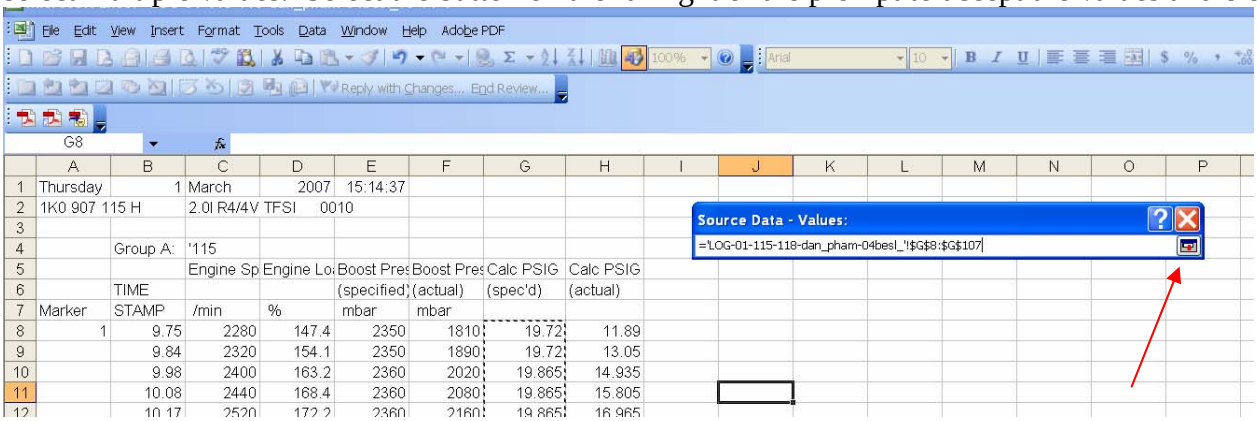


6. In the "**Name**" box label it as "**Specified Boost**". Then click on the box to the far right of the "**Values**" box and select the specified boost values.

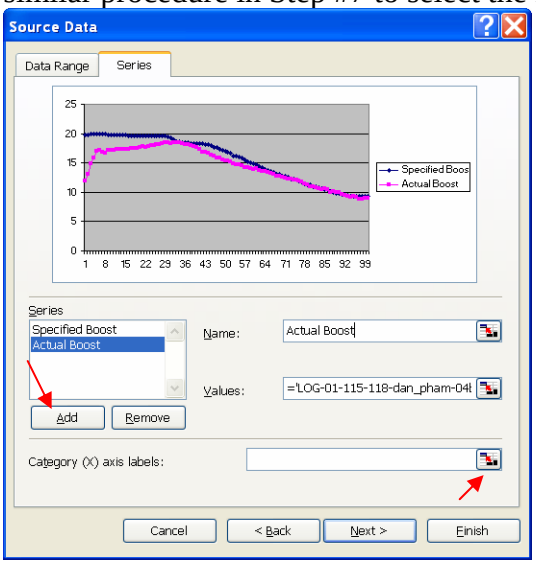
	A	B	C	D	E	F	G	H
4		Group A:	'115					
5			Engine Sp	Engine Lo	Boost Pres	Boost Pres	Calc PSIG	Calc PSIG
6		TIME			(specified)	(actual)	(spec'd)	(actual)
7	Marker	STAMP	/min	%	mbar	mbar		
8	1	9.75	2280	147.4	2350	1810	19.72	11.89
9		9.84	2320	154.1	2350	1890	19.72	13.05
10		9.98	2400	163.2	2360	2020	19.865	14.935
11		10.08	2440	168.4	2360	2080	19.865	15.805
12		10.17	2520	172.2	2360	2160	19.865	16.965
13	2	10.26	2560	170.7	2360	2170	19.865	17.11
14		10.36	2600	167.7	2360	2150	19.865	16.82
15		10.5	2680	169.2	2360	2140	19.865	16.675
16		10.59	2720	168.4	2350	2170	19.72	17.11
17	3	10.69	2760	168.4	2350	2170	19.72	17.11
18		10.78	2800	166.9	2350	2170	19.72	17.11
19		10.87	2840	170.7	2350	2190	19.72	17.4
20		11.01	2920	168.4	2350	2180	19.72	17.255
21		11.11	2960	169.9	2350	2180	19.72	17.255
22		11.2	3040	170.7	2350	2190	19.72	17.4
23		11.29	3080	170.7	2340	2190	19.575	17.4
24		11.39	3120	172.9	2340	2200	19.575	17.545
25		11.53	3200	173.7	2340	2200	19.575	17.545
26		11.63	3240	173.7	2340	2200	19.575	17.545
27		11.72	3280	174.4	2340	2210	19.575	17.69
28		11.81	3320	175.2	2340	2220	19.575	17.835
29		11.91	3360	175.2	2340	2210	19.575	17.69
30		12.05	3440	175.2	2340	2220	19.575	17.835
31		12.14	3480	175.9	2340	2230	19.575	17.98



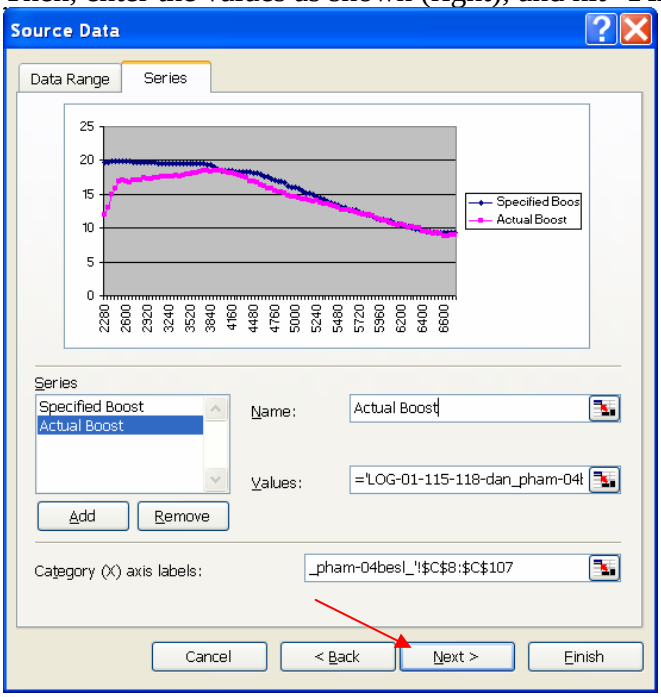
7. The "**Source Data – Values**" prompt will come up. Select the values you want to use. Hold down the shift key to select multiple values. Select the button on the far right of the prompt to accept the values and close the prompt.

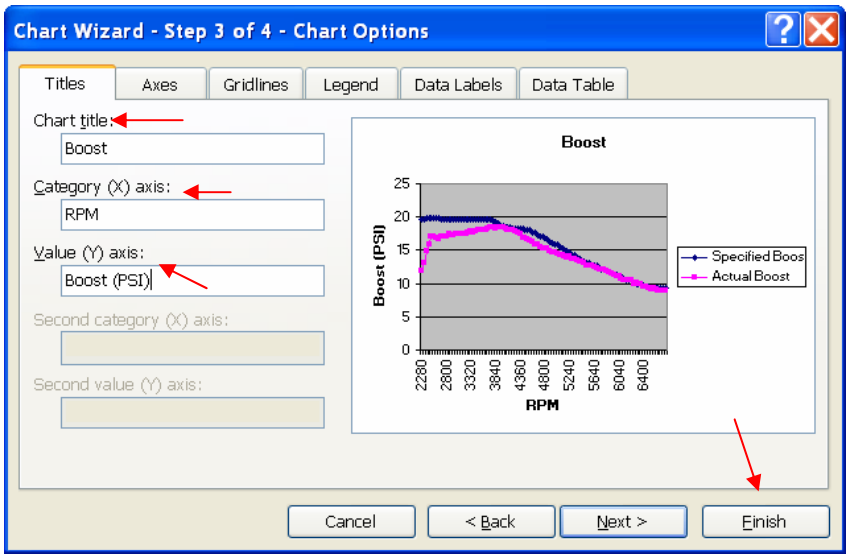


8. Click the "**Add**" button to add another series. Do Steps # 7 & 8 for the actual boost. The screen should now look like the one below. Then click on the box to the far right of the "**Category (X) axis labels**:" as shown below. Follow the similar procedure in Step #7 to select the RPM values.

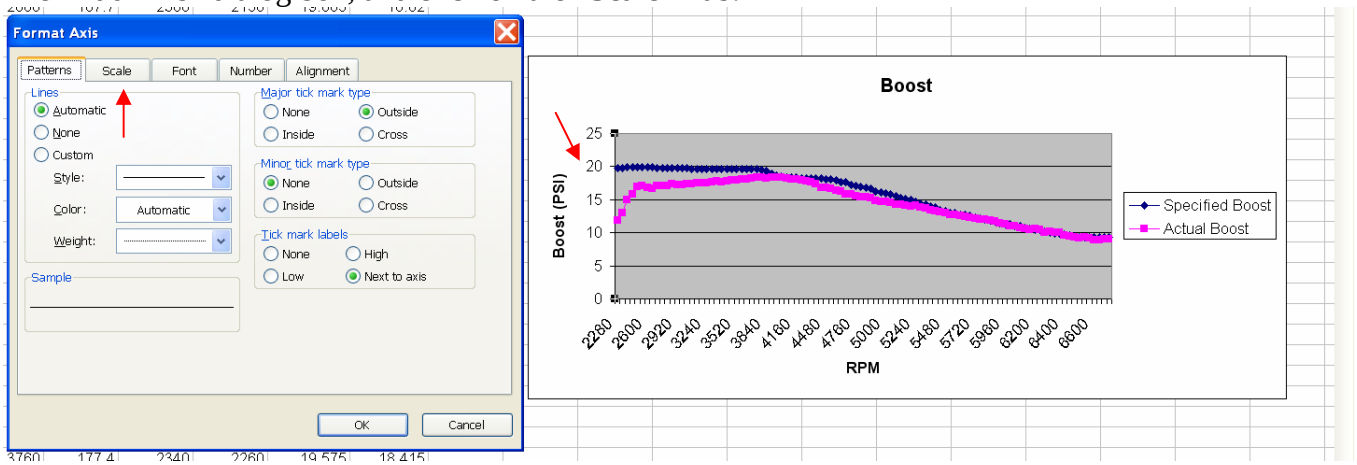


9. The graph should now resemble a boost graph (left). Click on the "**Next**" button. The screen to the right shows up. Then, enter the values as shown (right), and hit "**Finish**"

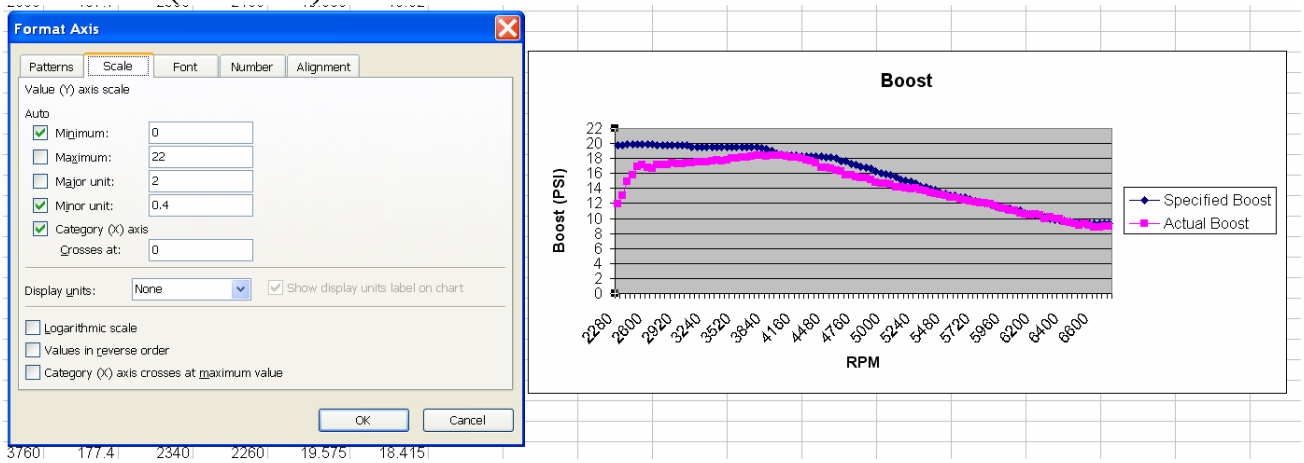




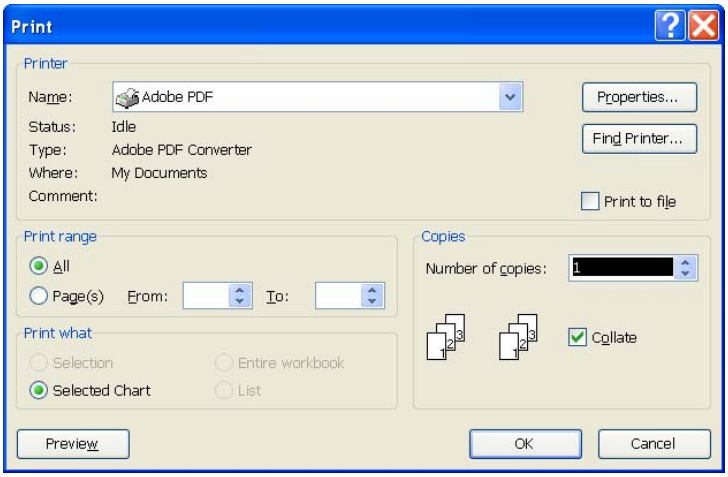
10. The graph is now complete. If you wish, you may change the scaling. Click on any of the boost values to open the "**Format Axis**" dialog box, and click on the "**Scale**" Tab.



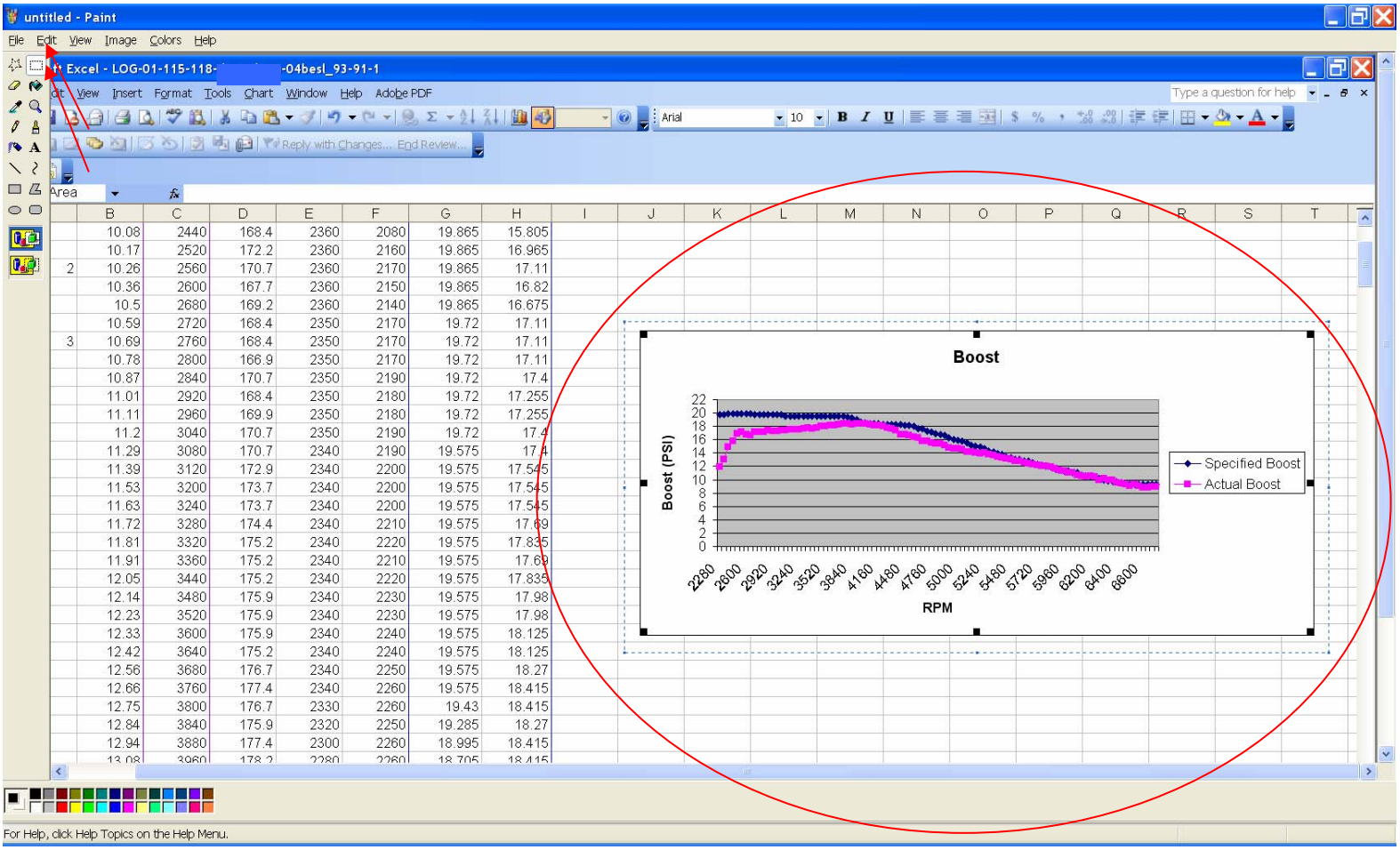
11. Change the scaling to whatever you see fit. You can also change the scaling of the RPMs by clicking on any of the RPM values (not shown).



12a. If you have the full version of Adobe Acrobat, then you can use it to print the chart to PDF. Just select the graph and hit the Print button. I find that this is gives the best image. You can crop part of the image if you wish. Once you are satisfied, then in Acrobat, go to File>Save As, and save as a .JPG file (not shown).

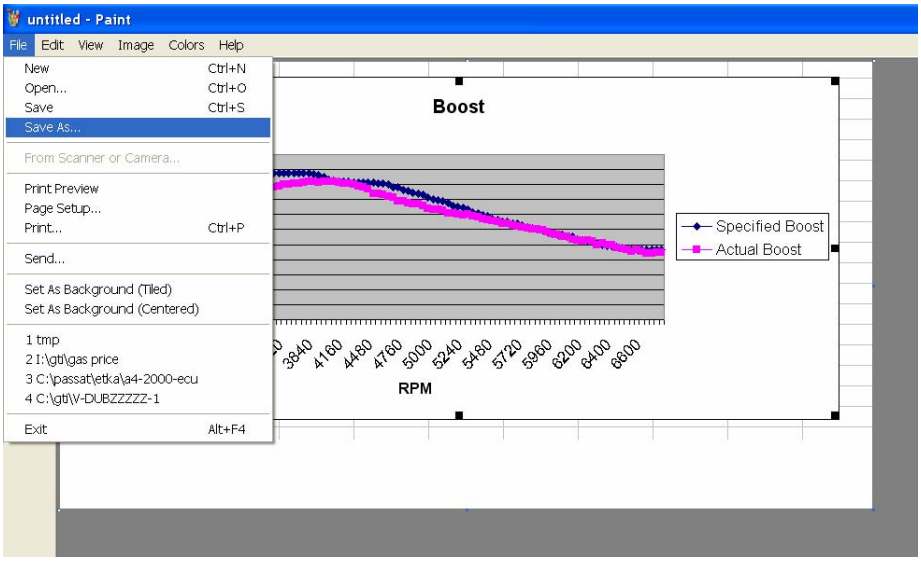


12b1. If you do not have the full version of Acrobat, then make sure the whole graph is on the screen, and hit the "Print Screen" button on your keyboard (not shown). Then open MS Paint, and go to the "**Edit**" menu, and select "**Paste**". Use the select icon (looks like a dashed rectangle), and select the graph as shown below.

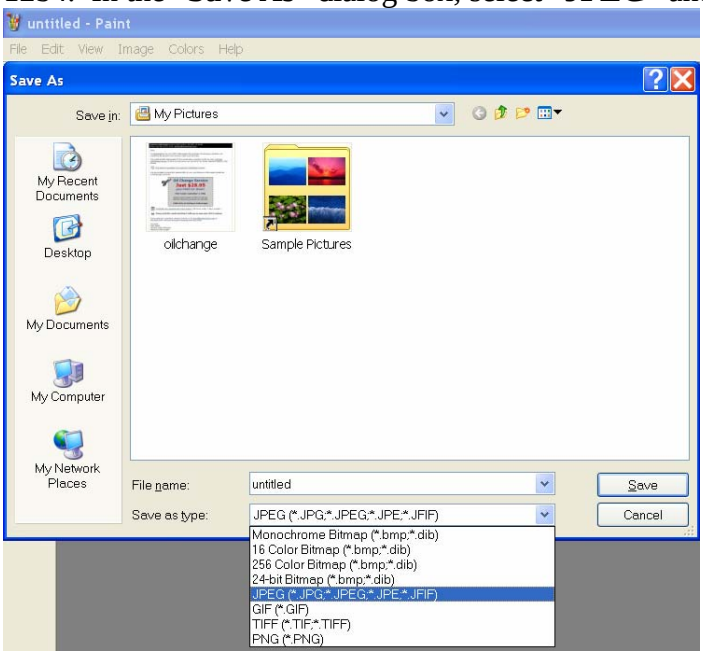


12b2. Go to the "**Edit**" menu and select "**Cut**". Then go to the "**File**" menu and select "**New**". When asked to save changes, select "**No**". Then go to the "**Edit**" menu and select "**Paste**".

12b3. Go to the "**File**" menu again, and select "**Save As**"



12b4. In the "**Save As**" dialog box, select "**JPEG**" and enter a file name and location.



13. Use a photo host such as http://photobucket.com/ to upload the image and use IMG tags to post the image into a thread. For example, say the http://photobucket.com/blah/boost.jpg, the img tags should look like:

[IMG]http://photobucket.com/blah/boost.jpg[/IMG]

Appendix C: 2.0T FSI Label File

```
; VAG-COM Label File
;
; Audi A3 (8P) / Audi A4 (8E) / Audi A6 (4F) / Audi TT (8J)
; Seat Altea/Toledo (5P) / Seat Leon (1P) / Skoda Octavia (1Z)
; VW Eos (1F) / VW Golf/Jetta (1K) / VW Passat (3C) / VW Touran (1T)
;
; Component: Engine (#01) - AXX/BGB/BPJ/BPY/BWA
;
; P/N: ???-9??-115-???
;
; includes measuring blocks and selective output test
;
; This file is part of a redirection package,
; make sure you have all of the following files.
;
; 1K-01.LBL
; 1P-01.LBL
; 1Z-01.LBL
; 3C-01.LBL
; 4F-01.LBL
; 8E-01.LBL
; 8P-01.LBL
; 06F-907-115-AXX.LBL (2.0l TE  @ 200 HP - AXX/BGB/BPJ/BPY/BWA)
;
; created on 17/Apr/2005 by Sebastian Stange (Sebastian@Ross-Tech.com)
;
; last modification: 25/Jul/2006
;
; requires VAG-COM 602.3 or newer
;
;
;------------------------------------------------------
;
; measuring block information
;
;------------------------------------------------------
;
;
001,1,Basic Functions
001,1,Engine Speed
001,2,Coolant,Temperature,Specification: 80...115 °C
001,3,Lambda,Regulator
001,4,Basic Setting,Requirements,see labelfile
; 1xxxxx-x - Coolant temperature below 80 °C
; x1xxxx-x - Engine speed below 2000 RPM
; xx1xxx-x - Throttle valve closed
; xxx1xx-x - Lambda regulation correct
; xxxx1x-x - State of idle
; xxxxx1-x - A/C system compressor deactivated
; xxxxxx-1 - No malfunction detected by Self-Diagnosis
;
002,0,Basic Functions
002,1,Engine Speed
002,2,Engine Load
002,3,Injection,Timing
002,4,Intake Air Mass
;
003,0,Basic Functions
003,1,Engine Speed
003,2,Intake Air Mass
003,3,Throttle Drive,Angle Sensor 1,for EPC (G187) | Display Range: 0...100 %
003,4,Ignition,Timing Angle
```

;
004,1,Engine Speed
004,2,Voltage Supply,,Specification: 12.0...15.0 V
004,3,Coolant,Temperature,Specification: 80...115 °C
004,4,Intake Air,Temperature,Specification: -40.0...+140.0 °C
;
005,0,Basic Functions
005,1,Engine Speed
005,2,Engine Load
005,3,Vehicle Speed,,Specification: 0 km/h
005,4,Load Status,,Display Range: Idle/Partial Throttle/Wide Open Throttle (WOT)/Enrichment/Deceleration
;
006,0,Basic Functions
006,1,Engine Speed
006,2,Engine Load
006,3,Intake Air,Temperature,Specification: -40.0...+140.0 °C
006,4,Heights Correction,Factor
;
007,1,Engine Speed
007,2,Engine Load
007,3,Engine Coolant,Temperature,Specification: -40...+140 °C
007,4,Operating Mode,,See Label File
; x00xxxx? = Homogenous (Lambda = 1)
; x00xxx?x = Homogenous (Lean)
; x00xx?xx = Homogenous/Stratified
; x00x?xxx = Stratified
; x00?xxxx = Stratified (CAT Heating)
; ?00xxxxx = Knock Protection
;
009,1,Engine Oil,Level
009,2,Engine Oil,Warning Barrier
009,3,Fuel Consumption,Signal
009,4,Consumption,Equivalent
;
010,0,Ignition
010,1,Engine Speed
010,2,Engine Load
010,3,Throttle Drive,Angle Sensor 1,for EPC (G187) | Display Range: 0...100 %
010,4,Ignition,Timing Angle
;
011,1,Engine Speed
011,2,Engine Coolant,Temperature
011,3,Intake Air,Temperature,Specification: -40...+140 °C
011,4,Timing Angle,(current Value)
;
014,1,Engine Speed
014,2,Engine Load
014,3,Misfire,Sum Counter
014,4,Misfire,Recognition
;
015,0,Misfire Recognition
015,1,Cylinder 1
015,2,Cylinder 2
015,3,Cylinder 3
015,4,Malfunction,Recognition,Display Range: activated/blocked
;
016,0,Misfire Recognition
016,1,Cylinder 4
016,4,Malfunction,Recognition,Display Range: activated/blocked
;
018,1,Lower,RPM Barrier
018,2,Upper,RPM Barrier
018,3,Lower,Load Barrier
018,4,Upper,Load Barrier
;
020,0,Ignition (Knock Control - Cyl 1 - 4)

020,1,Cylinder 1 Ignition,Angle Delay
020,2,Cylinder 2 Ignition,Angle Delay
020,3,Cylinder 3 Ignition,Angle Delay
020,4,Cylinder 4 Ignition,Angle Delay
;
022,0,Ignition (Knock Control - Cyl 1 && 2)
022,1,Engine Speed
022,2,Engine Load
022,3,Cylinder 1 Ignition,Angle Delay
022,4,Cylinder 2 Ignition,Angle Delay
;
023,0,Ignition (Knock Control - Cyl 3 && 4)
023,1,Engine Speed
023,2,Engine Load
023,3,Cylinder 3 Ignition,Angle Delay
023,4,Cylinder 4 Ignition,Angle Delay
;
028,0,Knock Sensor Test (Short Trip)
028,1,Engine Speed
028,2,Engine Load
028,3,Coolant,Temperature (G69)
028,4,Result,,Specification: Test ON/Test OFF/Sys. OK/Sys. not OK
;
B028,0,Ignition (Knock Sensor Test - Short Trip)
; "Activate" Basic Setting
; Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases to 2200 RPM automatically > Field 4 = Test ON
; Wait until Field 4 shows "Sys. OK"
B028,1,Engine Speed,(G28)
B028,2,Engine Load
B028,3,Coolant,Temperature (G69)
B028,4,Result,,Range: Test ON/Test OFF/Sys. OK/Sys. not OK\nSpecification: Sys. OK
;
030,0,Oxygen Sensor Status
030,1,Bank 1,Sensor 1,Specification: 111
; 1xx - Lambda sensor heating on
; x1x - Lambda sensor ready
; xx1 - Lambda regulation active
030,2,Bank 1,Sensor 2,Specification: 110
; 1xx - Lambda sensor heating on
; x1x - Lambda sensor ready
; xx1 - Lambda regulation active
;
031,0,Lambda Regulation (Constant Operation of Lambda Probes)
031,1,Lambda Sensor,Current Value
031,2,Lambda Sensor,Specified Value
;
032,0,Lambda Regulation
032,1,Lambda (Idle),Self-Adaptation
032,2,Lambda (Partial),Self-Adaptation
;
033,0,Lambda Regulation
033,1,Bank 1,Lambda Control
033,2,Bank 1 Voltage,of Oxygen Sensors
;
034,0,Lambda Regulation (befor Catalyst - Basic Setting: Aging Check)
034,1,Engine Speed
034,2,Catalytic Converter,Temperature
034,3,Period,Duration Sensor
034,4,Result,Lambda Aging,Display Range: Test ON/Test OFF/B1-S1 not OK/B1-S1 OK
;
B034,0,Lambda Control (Aging Check: Bank 1 Sensor 1)
; "Activate" Basic Setting
; Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases automatically > Field 4 = Test ON
; Wait until Field 4 shows "B1-S1 OK"

B034,1,Engine Speed,(G28)
B034,2,Catalytic Converter,Bank 1 Temp.
B034,3,Dynamic Factor,Bank 1 Sensor 1
B034,4,Result,Lambda Aging,Range: Test ON/Test OFF/B1-S1 not OK/B1-S1 OK\nSpecification: B1-S1 OK
;
036,1,Bank 1 Sensor 2,Sensor Voltage
036,2,Bank 1 Sensor 2,Result,Specification: Test ON/Test OFF/B1-S2 OK/B1-S2 not OK
;
B036,0,Lambda Control (Sensor Readiness - After Catalyst)
; "Activate" Basic Setting
; Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases automatically > Field 4 = Test ON
; Wait until Field 4 shows "B1-S2 OK"
B036,1,Sensor Voltage,Bank 1 Sensor 2
B036,2,Result,Lambda Availability,Range: Test ON/Test OFF/B1-S2 not OK/B1-S2 OK\nSpecification: B1-S2 OK
;
037,1,Engine Load
037,2,Bank 1 Sensor 2,Voltage
037,3,Bank 1 Oxygen,Sensor Value
037,4,Result,,Specification: Test ON/Test OFF/Sys. OK/Sys. not OK
;
B037,0,Lambda Control (Delta Lambda Bank 1)
; "Activate" Basic Setting
; Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases automatically > Field 4 = Test ON
; Wait until Field 4 shows "B1-S1 OK"
B037,1,Engine Load
B037,2,Sensor Voltage,Bank 1 Sensor 2
B037,3,Delta Lambda,Bank 1 Sensor 2
B037,4,Result,,Range: Test ON/Test OFF/B1-S1 OK/B1-S1 n.OK\nSpecification: B1-S1 OK
;
041,0,Lambda Regulation (Lambda Probe Heating)
041,1,Resistance,Bank 1 Sensor 1
041,2,Heater Condition,,Specification: Htg.bC.ON
041,3,Resistance,Bank 1 Sensor 2
041,4,Heater Condition,,Specification: Htg.aC.ON
;
043,0,Lambda Regulation (befor Catalyst - Basic Setting)
043,1,Engine Speed
043,2,Catalytic Converter,Temperature
043,3,Bank 1 Sensor 2,Voltage
043,4,Result,Lambda Aging,Display Range: Test ON/Test OFF/B1-S2 not OK/B1-S2 OK
;
B043,0,Lambda Control (Aging Check: Bank 1 Sensor 2)
; "Activate" Basic Setting
; Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases automatically > Field 4 = Test ON
; Wait until Field 4 shows "B1-S2 OK"
B043,1,Engine Speed,(G28)
B043,2,Catalytic Converter,Bank 1 Temp.
B043,3,Lambda Voltage,Bank 1 Sensor 2
B043,4,Result,Aging Check,Display Range: Test ON/Test OFF/B1-S2 OK/B1-S2 n.OK\nSpecification: B1-S2 OK
;
046,0,Lambda Regulation (Basic Setting: Conversion Test)
046,1,Engine Speed
046,2,Catalytic Converter,Temperature
046,3,Amplitude,Behavior
046,4,Result Catalytic,Conversion,Pre-Catalytic Converter (Display Range: Test ON/Test OFF/CatConvB1 not OK/CatConvB1 OK)
;
B046,0,Lambda Control (Catalytic Conversion Test Bank 1)
; Short Trips 034/035/036/037/038/043/044 must be OK
; "Activate" Basic Setting
; Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases automatically > Field 4 = Test ON
; Wait until Field 4 shows "CatB1 OK"
B046,1,Engine Speed,(G28)

B046,2,Catalytic Converter,Bank 1 Temp.
B046,3,Catalytic,Conversion Bank 1
B046,4,Result,Cat. Conversion,Range: Test ON/Test OFF/CatB1 OK/CatB1 n.OK\nSpecification: CatB1 OK
;
050,1,Engine Speed
050,2,Engine Speed,(specified)
050,3,Condition,of A/C system,Display Range: A/C-High / A/C-Low
050,4,Operating condition,of A/C Compressor,Display Range: Compr.ON/Compr.OFF
;
051,1,Engine Speed
051,2,Specified,Engine Speed
051,3,Driving mode,,Gear 1...6 (only for automatic)
051,4,Voltage Supply,,Specification: 12.0...15.0 V
;
052,1,Engine Speed
052,2,Engine Speed,(Specified)
052,3,Condition,of A/C system,Display Range: A/C-High / A/C-Low
052,4,Window Heaters
;
053,0,Speed Regulation
053,1,Engine Speed,,Specification: 640...900 RPM
053,2,Engine Speed,(specified),Specification (manual): 670...760 RPM | Specification (automatic): 800...860 RPM
053,3,Voltage Supply,,Specification: 12.0...15.0 V
053,4,Generator Load
;
054,0,Speed Regulation
054,1,Engine Speed
054,2,Load Status,,Display Range: Idle/Partial Throttle/Wide Open Throttle (WOT)/Enrichment/Deceleration
054,3,Sender 2 for,Acc. Pedal Pos.,G79 (Display Range 0...100 %)
054,4,Throttle Drive,Angle Sensor 1,for EPC (G187) | Display Range: 0...100 %
;
055,0,Speed Regulation
055,1,Engine Speed
055,2,Idle Regulator
055,3,Idle Stabilization,Self-Adaptation
055,4,Load Status,,see labelfile
; x0xxx? = A/C Compressor
; x0xx?x = Gear engaged
; x0x?xx = A/C Readiness
; x0?xxx = Rear Window Heater
; ?0xxxx = Front Window Heater
;
056,0,Speed Regulation
056,1,Engine Speed
056,2,Engine Speed,(specified)
056,3,Idle Regulator
056,4,Load Status,,see labelfile
; x0xxx? = A/C Compressor
; x0xx?x = Gear engaged
; x0x?xx = A/C Readiness
; x0?xxx = Rear Window Heater
; ?0xxxx = Front Window Heater
;
057,1,Engine Speed
057,2,Engine Speed,Specified Value
057,3,A/C Compressor
057,4,Duty Cycle,Pressure Sensor,Torque A/C Compressor
;
060,0,Speed Regulation (Basic Setting: Throttle Body Adaptation)
060,1,Throttle Drive,Angle Sensor 1,for EPC (G187) | Specification: 0...100 %
060,2,Throttle Drive,Angle Sensor 2,for EPC (G188) | Specification: 100...0 %
060,3,Self-Adaptation,Steps Counter
060,4,Result,Throttle Valve Adp.,Display Range: ADP runs/ADP OK/ADP ERROR
;
061,1,Engine Speed
061,2,Voltage Supply,,Specification: 12.0...15.0 V

061,3,Activation Throttle,Position Actuator
061,4,Operating,Condition
;
062,1,Throttle Drive,Angle Sensor 1,for EPC (G187)
062,2,Throttle Drive,Angle Sensor 2,for EPC (G188)
062,3,Throttle Position,Sensor (G79)
062,4,Accelerator Pedal,Position Sensor 2,G185
;
063,0,Speed Regulation (Basic Setting: Kick-Down Adaptation)
063,1,Throttle Position,Sensor (G79),Display Range: 0...100 %
063,2,Accelerator Pedal,Position Sensor 2,G185
063,3,Kick-Down,Switch,Display Range: Kick Down
063,4,Kick-Down,Adaptation,Display Range: ADP runs/ADP OK/ADP ERROR
;
064,1,Potentiometer 1,Lower Adaptation
064,2,Potentiometer 2,Lower Adaptation
064,3,Emergency Air Gap,Potentiometer 1
064,4,Emergency Air Gap,Potentiometer 2
;
066,1,Actual,Driving Speed
066,2,Switch Positions
066,3,Specified,Driving Speed,by Cruise Control System (CCS)
066,4,Switch Positions
;
067,2,CCS Switch,Positions
;
068,1,Engine Speed
068,2,Engine Load
068,3,Driving Mode,,only for automatic transmission
068,4,Converter,Clutch Status
;
070,0,Emission Reduction (TEV - Basic Setting)
070,1,Evap. Emissions,Sol. Valve (Open),Specification: 0...100 %
070,2,Oxygen Sensor,Control Deviation
070,3,Evap. Emissions,Sol. Valve (Flow)
070,4,Result,Evap. Emissions,Display Range: Test ON/Test OFF/TEV OK/TEV not OK
;
080,0,Advanced Control Module Identification I
;
081,0,Advanced Control Module Identification II
081,1,Vehicle Ident.,Number (VIN)
;
082,0,Advanced Control Module Identification III
;
083,0,Advanced Control Module Identification IV
083,1,Primary Vehicle,Ident. Number (VIN)
;
086,1,Readiness Bits
086,2,Cycle-Flags
086,3,Cycle-Flags
086,4,Cycle-Flags
;
087,1,Readiness Bits
087,2,System,Malfunction
087,3,System,Malfunction
087,4,System,Malfunction
;
088,1,System Condition
088,2,System Condition
088,3,System Condition
;
089,0,Trip Recorder
089,1,Distance travelled,with MIL active
089,2,Condition,"Tank Empty",Display Range: OK/too low
;
091,1,Engine Speed

091,2,Intake Camshaft,Duty Cycle
091,3,Camshaft,Adjustment (spec.)
091,4,Camshaft,Adjustment (act.)
;
093,1,Engine Speed
093,2,Intake Camshaft,Duty Cycle
093,3,Phase Position,Bank 1
;
094,0,Camshaft Adjustment (Basic Setting)
094,1,Bank 1 Camshaft,Adjustment,Specification: CAM-ADJ.ON | Display Range: CAM-ADJ.ON/CAM-ADJ.OFF
094,2,Bank 2 Camshaft,Adjustment,Specification: CAM-ADJ.ON | Display Range: CAM-ADJ.ON/CAM-ADJ.OFF
094,3,Diagnostic,Result,Specification: Syst. OK | Display Range: Test OFF/Test ON/Syst.OK/Syst. nOK
;
099,0,Lambda Control Shut-Off (Basic Setting)
099,1,Engine Speed
099,2,Coolant,Temperature,Specification: 80...115 °C
099,3,Lambda Regulator,(before catalyst)
099,4,Status Lambda,Regulation,Display Range: ON/OFF
;
100,1,Readiness Bits,,see labelfile
; 1xxxxxxx - Exhaust Gas Recirculation (EGR)
; x1xxxxxx - Sensor heater
; xx1xxxxx - Oxygen sensors
; xxx1xxxx - A/C system
; xxxx1xxx - Secondary Air Injection (AIR) system
; xxxxx1xx - Activated charcoal system
; xxxxxx1x - Catalytic converter heater
; xxxxxxx1 - Catalytic converter
100,2,Coolant,Temperature
100,3,Time since,Engine Start
100,4,OBD-Status,,see labelfile
; 1-xxxxxx - MIL warning lamp on
; x-1xxxxx - Complete distance
; x-x1xxxx - At least one malfunction detected
; x-xx--1x - Heating cycle ended
; x-xx--x1 - Heating cycle not possible
;
101,1,Engine Speed
101,2,Engine Load
101,3,Median,injection timing
101,4,Intake Air Mass
;
102,1,Engine Speed
102,2,Coolant,Temperature,Specification: -40...+140 °C
102,3,Intake air,temperature
102,4,Median,injection timing
;
103,1,Current,Fuel Pressure
103,2,Fuel Pressure,Regulator
103,3,Adaptation Value,elect. Fuel Pump
103,4,Demand controlled,Fuel Pump Adapt.
;
104,1,Start Engine,Temperature
104,2,Temperature,Adaptation Factor 1
104,3,Temperature,Adaptation Factor 2
104,4,Temperature,Adaptation Factor 3
;
106,1,Fuel Rail,Pressure
106,2,Electrical,Fuel Pump 1
106,3,Electrical,Fuel Pump 2
;
107,1,Engine Speed
107,2,Lambda Controller,Bank 1 Med. Value
107,4,Result Short Trip
;
110,1,Engine Speed

110,2,Coolant,Temperature,Specification: -40...+140 °C
110,3,Median Injection,Timing
110,4,Throttle Valve Angle,(Potentiometer)
;
111,0,Charge Pressure Control
111,1,RPM Range 1
111,2,RPM Range 2
111,3,RPM Range 3
111,4,RPM Range 4
;
112,1,Exhaust Temp.,Bank 1
112,2,Enrichment Factor,Sensor Bank 1
112,3,Exhaust Temp.,Projection
112,4,Median,Exhaust Temp.
;
113,1,Engine Speed
113,2,Engine Load
113,3,Throttle Valve Angle,(Potentiometer)
113,4,Air Pressure,(Atmosphere)
;
114,0,Charge Pressure Control
114,1,Engine Load,(specified)
114,2,Engine Load,(spec. corrected)
114,3,Engine Load,(actual Value)
114,4,Wastegate (N75),Duty Cycle
;
115,0,Charge Pressure Control
115,1,Engine Speed
115,2,Engine Load
115,3,Boost Pressure,(specified)
115,4,Boost Pressure,(actual)
;
116,1,Engine Speed
116,2,Correction Factor,Fuel
116,3,Correction Factor,Coolant Temp.
116,4,Intake Air Temp.,Correction Factor
;
117,0,Charge Pressure Control
117,1,Engine Speed
117,2,Throttle Position,Sensor (G79),Display Range: 0...100 %
117,3,Throttle Drive,Angle Sensor 1,for EPC (G187) | Display Range: 0...100 %
117,4,Boost Pressure,(specified)
;
118,0,Charge Pressure Control
118,1,Engine Speed
118,2,Intake Air,Temperature
118,3,Wastegate (N75),Duty Cycle
118,4,Boost Pressure,(actual)
;
119,0,Charge Pressure Control
119,1,Engine Speed
119,2,Charge Limit
119,3,Wastegate (N75),Duty Cycle
119,4,Boost Pressure,(actual)
;
120,0,Traction Control (TC/ASR)
120,1,Engine Speed
120,2,Engine Load,(specified)
120,3,Engine Load,(actual)
120,4,Status,,Display Range: TC active/TC n.active
;
122,0,Transmission
122,1,Engine Speed
122,2,Engine Load,(specified)
122,3,Engine Load,(actual)
122,4,Status,,Display Range: Torque red./No tor.red.

;
125,0,CAN-Databus Communication (Powertrain)
125,1,Transmission
125,2,Brake Electronics
125,3,Instrument Cluster
125,4,A/C System
;
126,0,CAN-Databus Communication (Powertrain)
126,2,Steering Angle,Sensor (G85)
126,3,Airbag
126,4,Central,Electronics
;
127,0,CAN-Databus Communication (Powertrain)
127,1,All-Wheel-Drive
127,3,Steering Wheel,Electronics
127,4,Brake Booster
;
128,0,CAN-Databus Communication (Powertrain)
128,1,Electrical,Ignition Key
128,2,NOX-Sensor 1
128,3,NOX-Sensor 2
;
129,0,CAN-Databus Communication (Powertrain)
129,2,Oil Temperature,Sensor
129,3,CAN-Gateway
;
130,0,Mapped Cooling
130,1,Coolant temp.,engine outlet,Specification: 80...115 °C
130,2,Cooland temp.,radiator outlet,Specification: 0...100 °C
130,3,Thermostat,duty cycle,Specification: 0...100 %
130,4,Result,,Display Range: Test ON/Test OFF/Syst. OK/Syst. n.OK
;
131,0,Mapped Cooling
131,1,Coolant temp.,engine outlet,(actual) Specification: 80...115 °C
131,2,Coolant temp.,engine outlet,(specified) Specification: 0...115 °C
131,3,Cooland temp.,radiator outlet,Specification: 0...100 °C
131,4,Thermostat,duty cycle,Specification: 0...100 %
;
132,0,Mapped Cooling
132,1,Coolant,temperature,radiotor outlet
132,2,Temperature,difference,between engine and radiator outlet
132,3,Heater supply,potentiometer,Specification (w/o Climatronic): 0.2...4.8 V | Specification (with Climatronic): 0.2...5.1 V
132,4,Cooling,Status
;
134,1,Oil temperature
134,2,Ambient,temperature
134,3,Intake air,temperature
134,4,Engine output,temperature
;
135,1,Radiator output,temperature
135,2,Duty cycle cooling,fan activation 1
;
136,0,Relay for coolant actuation
136,1,Relay 1,,Specification: ON/OFF
136,2,Relay 2,,Specification: ON/OFF
136,3,Auxiliary water,pump condition
136,4,Fan after-run
;
137,0,A/C Requirements
137,1,AC-Input,,Specification: ON/OFF
137,2,Compressor,Condition,Specification: ON/OFF
137,3,High-Pressure Sw.,or A/C-Pressure
137,4,Fan desire,from A/C-System
;
138,1,Engine Start,Temperature
138,2,Mean Engine,Air Mass

138,3,Median,Vehicle Speed
138,4,Result
;
139,1,Engine Coolant,Temperature Diag.
139,2,Actual Integral,Mass Air Flow
139,3,Specified Integral,Mass Air Flow
139,4,Result
;
140,1,Quantity Valve,closing Angle
140,2,Quantity Valve,opening Angle
140,3,Rail Pressure,(actual)
140,4,Quantity Control,Valve Status
;
141,1,High pressure,system adaptation
141,2,Controller Portion
141,3,Total Compression,Volume
141,4,Rail Pressure,(actual)
;
142,1,Voltage,Upper Stop
142,2,Voltage,Lower Stop
142,3,Adaptation,Status
142,4,Adaptation,Condition
;
143,1,Engine Speed
143,2,Engine Load
143,3,Load shift flap,opening angle
143,4,Operating mode,(GDI)
;
166,1,Lambda
166,2,Sensor Voltage,behind cat. conv.
166,3,Integrated Air Mass
166,4,Result
;
167,1,Oxygen Portion
167,2,Diagnostic,Decelerator Count.
167,3,Const. Oxygen,Sens. Correction,value oxygen sensor
167,4,Result
;
200,0,Readiness Code (Automatic "End of Line" Check)
200,1,Status Counter,,Number of Short Trips that still\nneed to be carried out.
200,2,Status
200,3,Status
200,4,Status
;
B200,0,Readiness Code (Automatic "End of Line" Check)
; "Activate" Basic Setting
; On Request: Firmly press Brake Pedal and Throttle Pedal at once
; Engine Speed increases automatically
; Wait until "Syst. OK" is shown
B200,1,Status Counter,,Number of Short Trips that still\nneed to be carried out.
B200,2,Status
B200,3,Status
B200,4,Status
;
230,0,Fuel Rail Pressure
230,1,Rail Pressure,(specified)
230,2,Rail Pressure,(actual),Specification (Idle): 25.0 bar\nSpecification (Load): max. 110.0 bar
230,3,Rail Pressure,Difference,Specification: ±5.0 bar
;