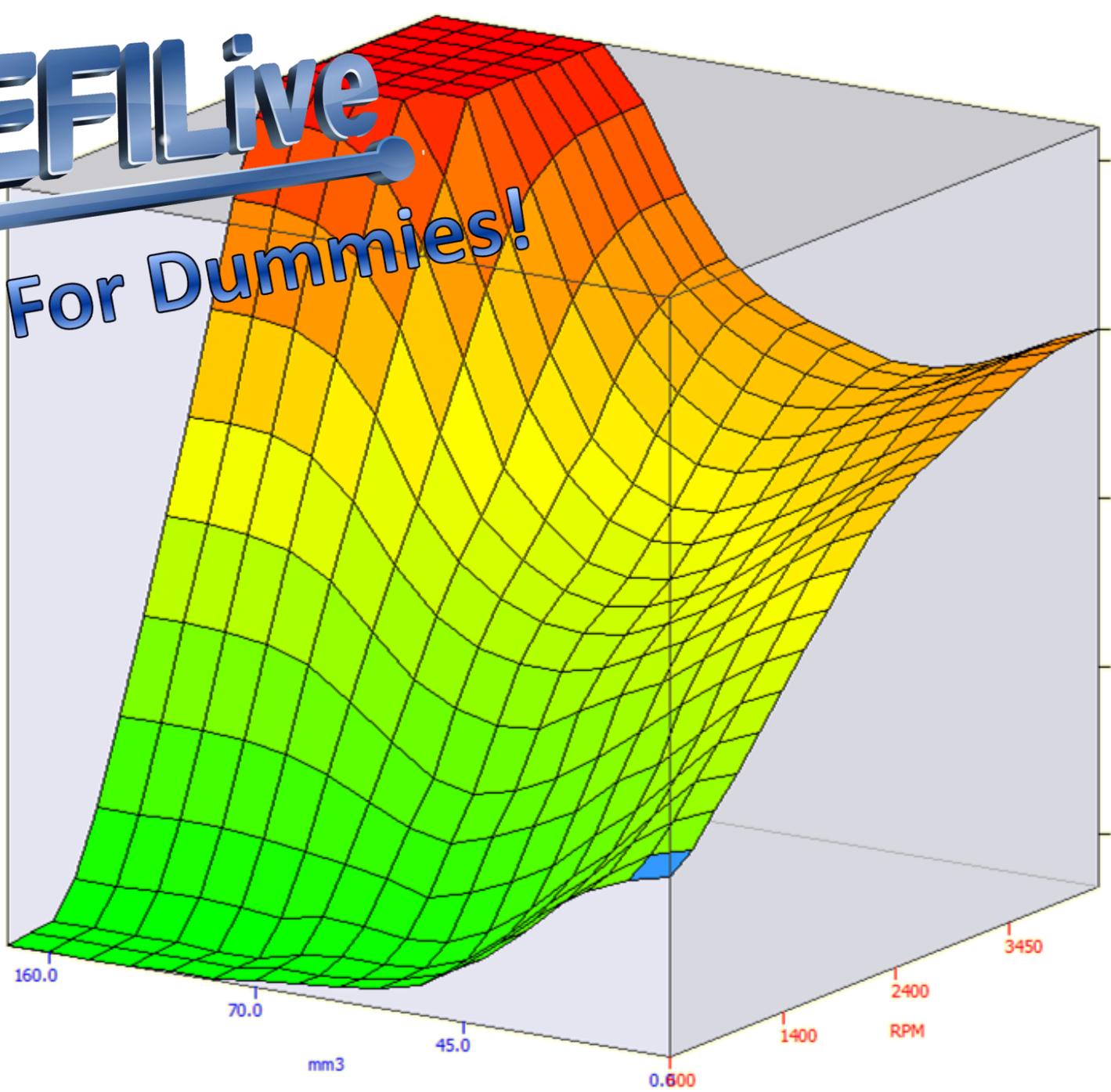
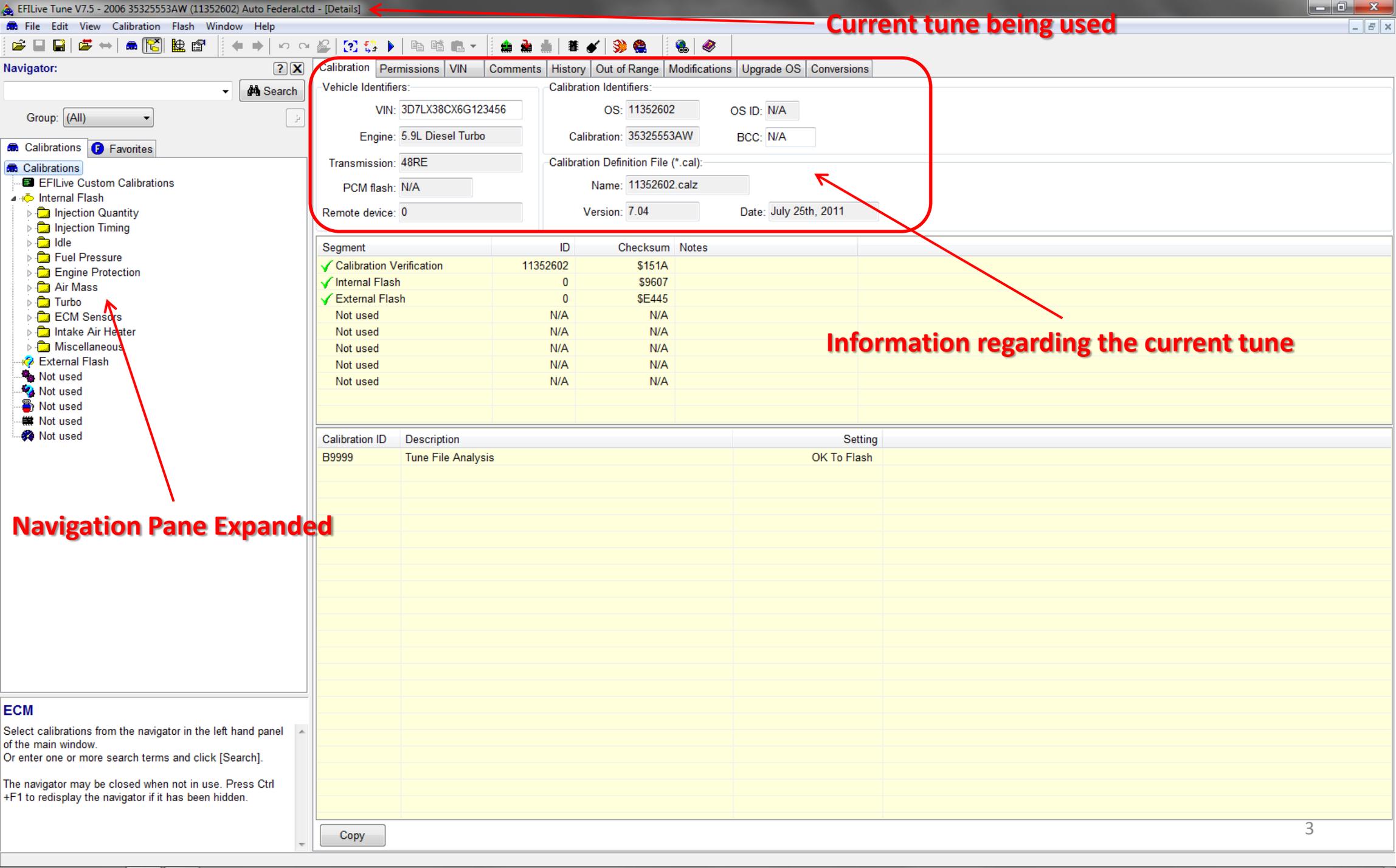


# MEFILive

## For Dummies!







Current tune being used

Information regarding the current tune

Navigation Pane Expanded

Calibration | Permissions | VIN | Comments | History | Out of Range | Modifications | Upgrade OS | Conversions

Vehicle Identifiers:  
VIN: 3D7LX38CX6G123456  
Engine: 5.9L Diesel Turbo  
Transmission: 48RE  
PCM flash: N/A  
Remote device: 0

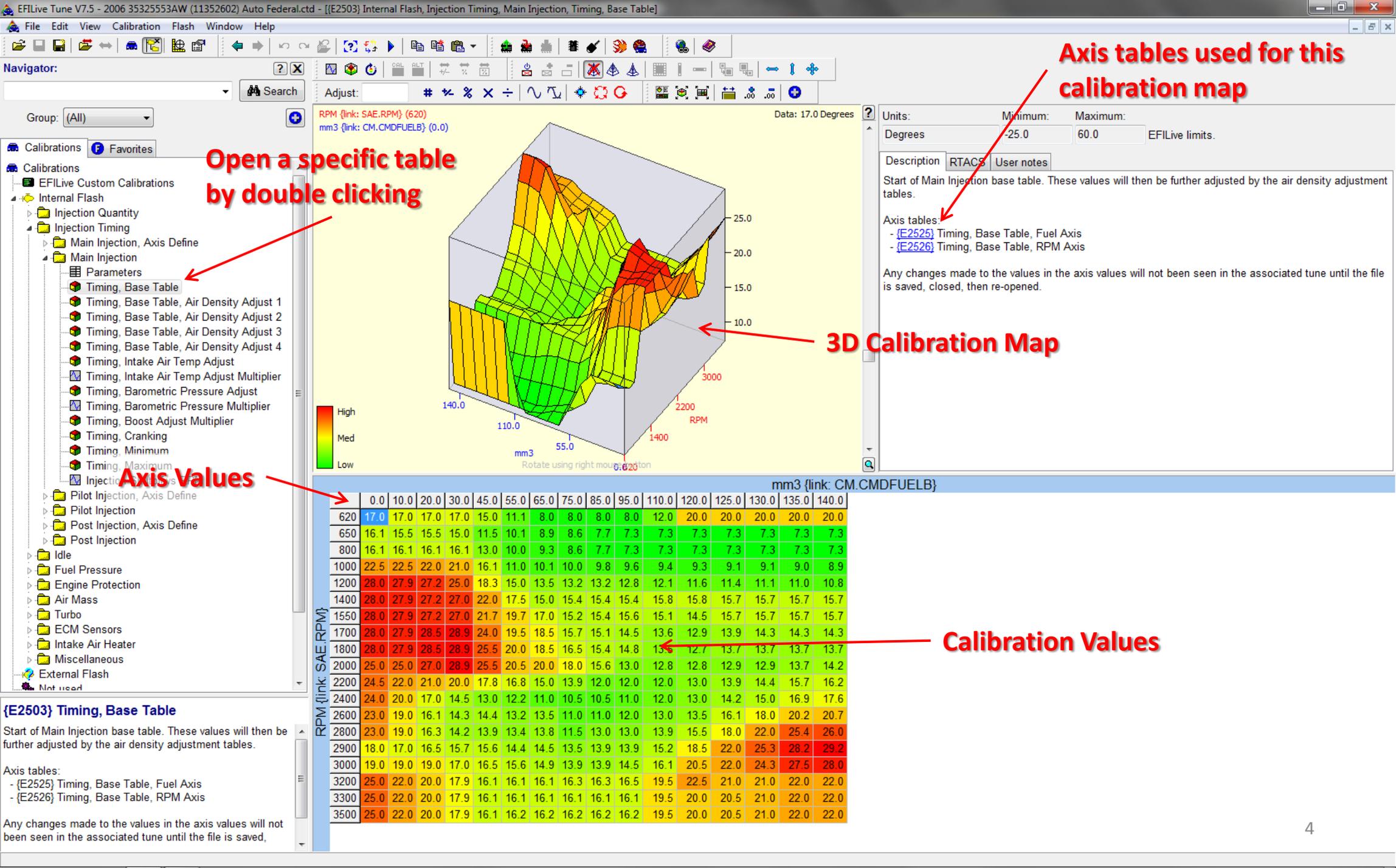
Calibration Identifiers:  
OS: 11352602 OS ID: N/A  
Calibration: 35325553AW BCC: N/A  
Calibration Definition File (\*.cal):  
Name: 11352602.cal  
Version: 7.04 Date: July 25th, 2011

Segment	ID	Checksum	Notes
✓ Calibration Verification	11352602	\$151A	
✓ Internal Flash	0	\$9607	
✓ External Flash	0	\$E445	
Not used	N/A	N/A	
Not used	N/A	N/A	
Not used	N/A	N/A	
Not used	N/A	N/A	
Not used	N/A	N/A	

Calibration ID	Description	Setting
B9999	Tune File Analysis	OK To Flash

Copy

**ECM**  
Select calibrations from the navigator in the left hand panel of the main window.  
Or enter one or more search terms and click [Search].  
The navigator may be closed when not in use. Press Ctrl +F1 to redisplay the navigator if it has been hidden.



Axis tables used for this calibration map

Open a specific table by double clicking

3D Calibration Map

Axis Values

Calibration Values

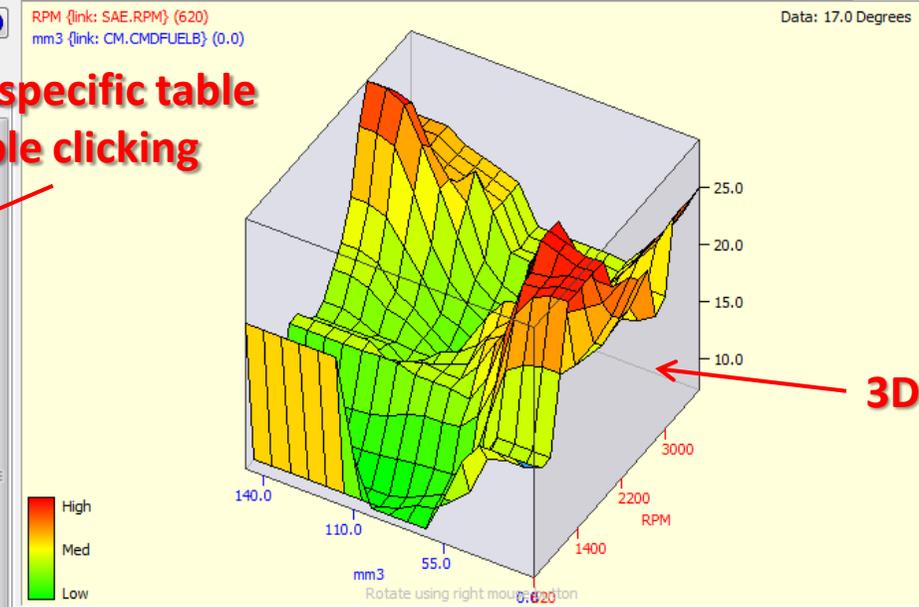
Navigator: Search

Group: (All)

Calibrations Favorites

Calibrations

- EFILive Custom Calibrations
  - Internal Flash
    - Injection Quantity
    - Injection Timing
      - Main Injection, Axis Define
        - Main Injection
          - Parameters
          - Timing, Base Table
          - Timing, Base Table, Air Density Adjust 1
          - Timing, Base Table, Air Density Adjust 2
          - Timing, Base Table, Air Density Adjust 3
          - Timing, Base Table, Air Density Adjust 4
          - Timing, Intake Air Temp Adjust
          - Timing, Intake Air Temp Adjust Multiplier
          - Timing, Barometric Pressure Adjust
          - Timing, Barometric Pressure Multiplier
          - Timing, Boost Adjust Multiplier
          - Timing, Cranking
          - Timing, Minimum
          - Timing, Maximum
          - Injection, Maximum
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define
        - Post Injection
        - Idle
        - Fuel Pressure
        - Engine Protection
        - Air Mass
        - Turbo
        - ECM Sensors
        - Intake Air Heater
        - Miscellaneous
      - External Flash
      - Not used



Units: Minimum: Maximum:  
Degrees -25.0 60.0 EFLive limits.

Description RTACS User notes

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

Axis tables:  
- (E2525) Timing, Base Table, Fuel Axis  
- (E2526) Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

mm3 (link: CM.CMDFUELB)

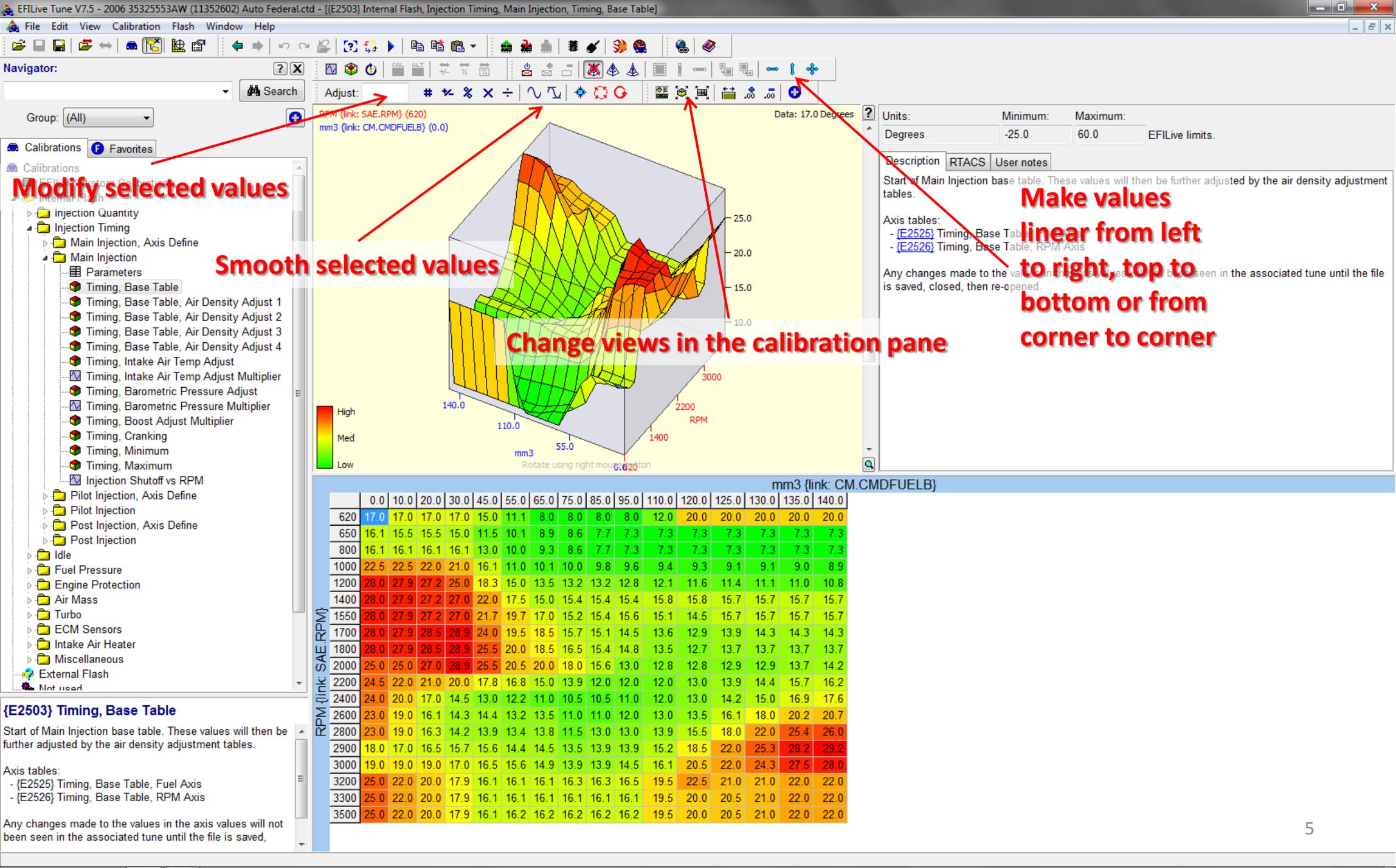
	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
620	17.0	17.0	17.0	17.0	15.0	11.1	8.0	8.0	8.0	8.0	12.0	20.0	20.0	20.0	20.0	20.0
650	16.1	15.5	15.5	15.0	11.5	10.1	8.9	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
800	16.1	16.1	16.1	16.1	13.0	10.0	9.3	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
1000	22.5	22.5	22.0	21.0	16.1	11.0	10.1	10.0	9.8	9.6	9.4	9.3	9.1	9.1	9.0	8.9
1200	28.0	27.9	27.2	25.0	18.3	15.0	13.5	13.2	13.2	12.8	12.1	11.6	11.4	11.1	11.0	10.8
1400	28.0	27.9	27.2	27.0	22.0	17.5	15.0	15.4	15.4	15.4	15.8	15.8	15.7	15.7	15.7	15.7
1550	28.0	27.9	27.2	27.0	21.7	19.7	17.0	15.2	15.4	15.6	15.1	14.5	15.7	15.7	15.7	15.7
1700	28.0	27.9	28.5	28.9	24.0	19.5	18.5	15.7	15.1	14.5	13.6	12.9	13.9	14.3	14.3	14.3
1800	28.0	27.9	28.5	28.9	25.5	20.0	18.5	16.5	15.4	14.8	13.5	12.7	13.7	13.7	13.7	13.7
2000	25.0	25.0	27.0	28.9	25.5	20.5	20.0	18.0	15.6	13.0	12.8	12.8	12.9	12.9	13.7	14.2
2200	24.5	22.0	21.0	20.0	17.8	16.8	15.0	13.9	12.0	12.0	12.0	13.0	13.9	14.4	15.7	16.2
2400	24.0	20.0	17.0	14.5	13.0	12.2	11.0	10.5	10.5	11.0	12.0	13.0	14.2	15.0	16.9	17.6
2600	23.0	19.0	16.1	14.3	14.4	13.2	13.5	11.0	11.0	12.0	13.0	13.5	16.1	18.0	20.2	20.7
2800	23.0	19.0	16.3	14.2	13.9	13.4	13.8	11.5	13.0	13.0	13.9	15.5	18.0	22.0	25.4	26.0
2900	18.0	17.0	16.5	15.7	15.6	14.4	14.5	13.5	13.9	13.9	15.2	18.5	22.0	25.3	28.2	29.2
3000	19.0	19.0	19.0	17.0	16.5	15.6	14.9	13.9	13.9	14.5	16.1	20.5	22.0	24.3	27.5	28.0
3200	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.3	16.3	16.5	19.5	22.5	21.0	21.0	22.0	22.0
3300	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.1	16.1	16.1	19.5	20.0	20.5	21.0	22.0	22.0
3500	25.0	22.0	20.0	17.9	16.1	16.2	16.2	16.2	16.2	16.2	19.5	20.0	20.5	21.0	22.0	22.0

{E2503} Timing, Base Table

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

Axis tables:  
- {E2525} Timing, Base Table, Fuel Axis  
- {E2526} Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved,



**Modify selected values**

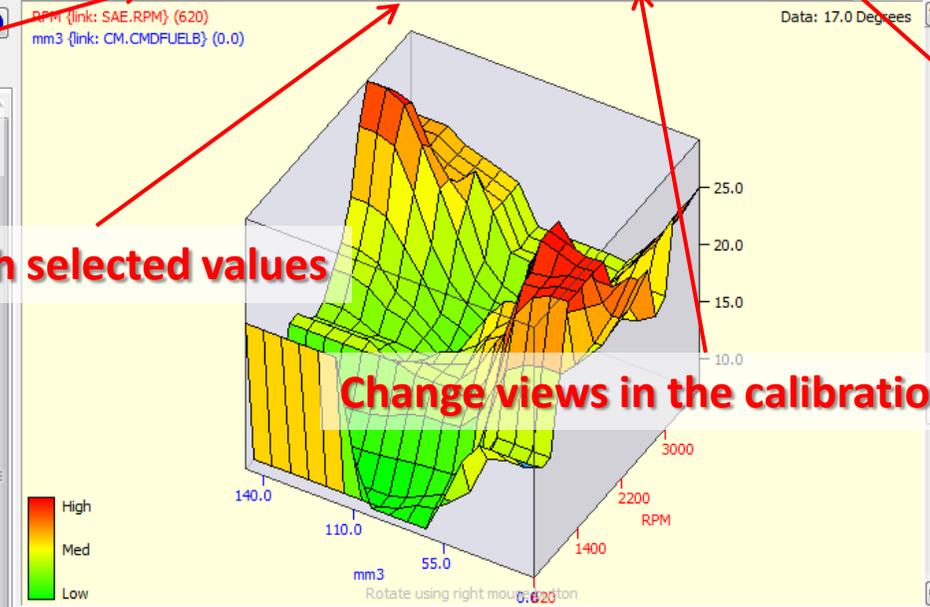
**Smooth selected values**

**Change views in the calibration pane**

**Make values linear from left to right, top to bottom or from corner to corner**

Group: (All)

- Calibrations
- Calibrations
  - Injection Quantity
  - Injection Timing
    - Main Injection, Axis Define
    - Main Injection
      - Parameters
      - Timing, Base Table
      - Timing, Base Table, Air Density Adjust 1
      - Timing, Base Table, Air Density Adjust 2
      - Timing, Base Table, Air Density Adjust 3
      - Timing, Base Table, Air Density Adjust 4
      - Timing, Intake Air Temp Adjust
      - Timing, Intake Air Temp Adjust Multiplier
      - Timing, Barometric Pressure Adjust
      - Timing, Barometric Pressure Multiplier
      - Timing, Boost Adjust Multiplier
      - Timing, Cranking
      - Timing, Minimum
      - Timing, Maximum
    - Injection Shutoff vs RPM
  - Pilot Injection, Axis Define
  - Pilot Injection
  - Post Injection, Axis Define
  - Post Injection
  - Idle
  - Fuel Pressure
  - Engine Protection
  - Air Mass
  - Turbo
  - ECM Sensors
  - Intake Air Heater
  - Miscellaneous
  - External Flash
  - Not used



Units: Degrees Minimum: -25.0 Maximum: 60.0 EFLive limits.

Description RTACS User notes

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

Axis tables:  
- {E2525} Timing, Base Table, Fuel Axis  
- {E2526} Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

**{E2503} Timing, Base Table**

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

- Axis tables:  
- {E2525} Timing, Base Table, Fuel Axis  
- {E2526} Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

	mm3 (link: CM.CMDFUELB)															
	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
620	17.0	17.0	17.0	17.0	15.0	11.1	8.0	8.0	8.0	8.0	12.0	20.0	20.0	20.0	20.0	20.0
650	16.1	15.5	15.5	15.0	11.5	10.1	8.9	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
800	16.1	16.1	16.1	16.1	13.0	10.0	9.3	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
1000	22.5	22.5	22.0	21.0	16.1	11.0	10.1	10.0	9.8	9.6	9.4	9.3	9.1	9.1	9.0	8.9
1200	28.0	27.9	27.2	25.0	18.3	15.0	13.5	13.2	13.2	12.8	12.1	11.6	11.4	11.1	11.0	10.8
1400	28.0	27.9	27.2	27.0	22.0	17.5	15.0	15.4	15.4	15.4	15.8	15.8	15.7	15.7	15.7	15.7
1550	28.0	27.9	27.2	27.0	21.7	19.7	17.0	15.2	15.4	15.6	15.1	14.5	15.7	15.7	15.7	15.7
1700	28.0	27.9	28.5	28.9	24.0	19.5	18.5	15.7	15.1	14.5	13.6	12.9	13.9	14.3	14.3	14.3
1800	28.0	27.9	28.5	28.9	25.5	20.0	18.5	16.5	15.4	14.8	13.5	12.7	13.7	13.7	13.7	13.7
2000	25.0	25.0	27.0	28.9	25.5	20.5	20.0	18.0	15.6	13.0	12.8	12.8	12.9	12.9	13.7	14.2
2200	24.5	22.0	21.0	20.0	17.8	16.8	15.0	13.9	12.0	12.0	12.0	13.0	13.9	14.4	15.7	16.2
2400	24.0	20.0	17.0	14.5	13.0	12.2	11.0	10.5	10.5	11.0	12.0	13.0	14.2	15.0	16.9	17.6
2600	23.0	19.0	16.1	14.3	14.4	13.2	13.5	11.0	11.0	12.0	13.0	13.5	16.1	18.0	20.2	20.7
2800	23.0	19.0	16.3	14.2	13.9	13.4	13.8	11.5	13.0	13.0	13.9	15.5	18.0	22.0	25.4	26.0
2900	18.0	17.0	16.5	15.7	15.6	14.4	14.5	13.5	13.9	13.9	15.2	18.5	22.0	25.3	28.2	29.2
3000	19.0	19.0	19.0	17.0	16.5	15.6	14.9	13.9	13.9	14.5	16.1	20.5	22.0	24.3	27.5	28.0
3200	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.3	16.3	16.5	19.5	22.5	21.0	21.0	22.0	22.0
3300	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.1	16.1	16.1	19.5	20.0	20.5	21.0	22.0	22.0
3500	25.0	22.0	20.0	17.9	16.1	16.2	16.2	16.2	16.2	16.2	19.5	20.0	20.5	21.0	22.0	22.0

File Edit View Calibration Flash Window Help

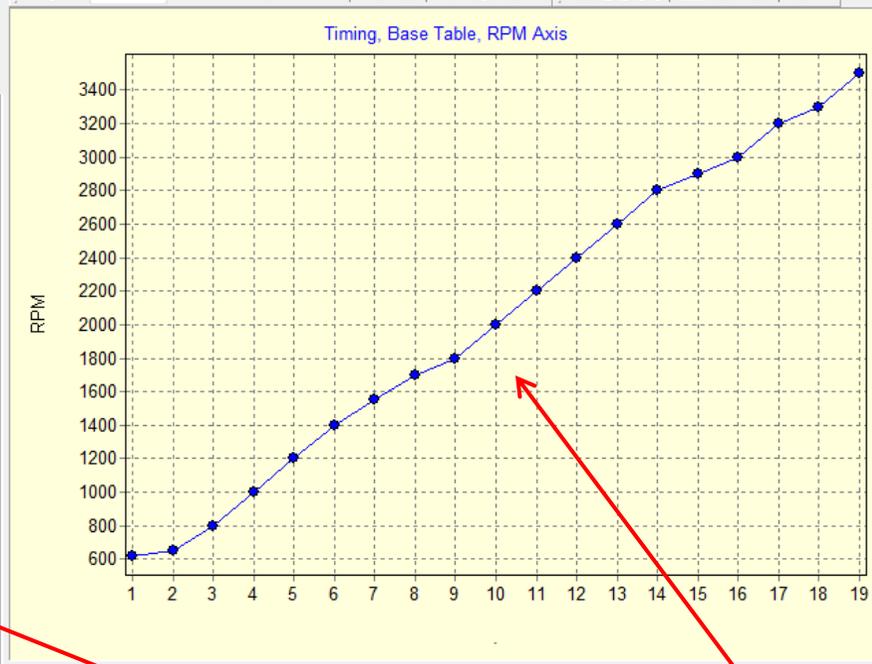
Adjust: # % / X ÷ ~

Navigator:

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
          - Timing, Base Table, Fuel Axis
          - Timing, Base Table, RPM Axis
          - Timing, Base Table 1, Fuel Axis
          - Timing, Base Table 1, RPM Axis
          - Timing, Base Table 2, Fuel Axis
          - Timing, Base Table 2, RPM Axis
          - Timing, Base Table 3, Fuel Axis
          - Timing, Base Table 3, RPM Axis
          - Timing, Base Table 4, Fuel Axis
          - Timing, Base Table 4, RPM Axis
          - Timing, Intake Air Temp Adj, RPM Axis
          - Timing, Intake Air Temp Adj, Fuel Axis
          - Timing, Intake Air Temp Multiplier Axis
          - Timing, Barometric Pressure Adj, RPM Axis
          - Timing, Barometric Pressure Adj, Fuel Axis
          - Timing, Barometric Pressure Adjust Multiplier Axis
          - Timing, Boost Adjust Multiplier, RPM Axis
          - Timing, Boost Adjust Multiplier, Fuel Axis
          - Timing, Cranking, RPM Axis
          - Timing, Cranking, Coolant Temperature Axis
          - Timing, Minimum, RPM Axis
          - Timing, Minimum, Fuel Axis
          - Timing, Maximum, RPM Axis
          - Timing, Maximum, Fuel Axis
          - Injection Shutoff vs RPM, RPM Axis
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define



Units: Minimum: Maximum:

RPM 0 8192 EFILive limits.

Description RTACS User notes

Defines the axis breakpoints used by tables:

- {E2503} Timing, Base Table

Timing, Base Table, RPM Axis (RPM)

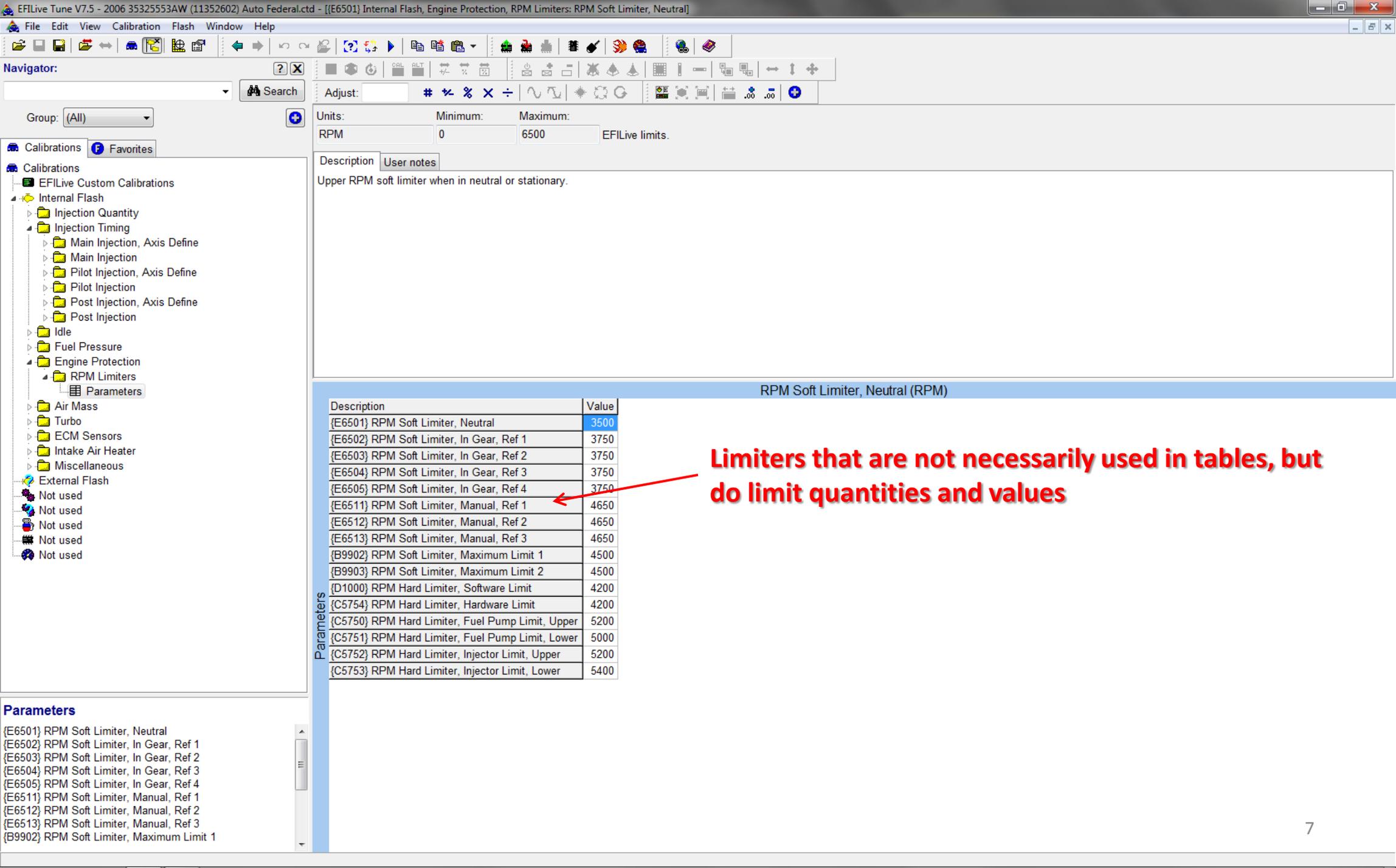
	Value
1	620
2	650
3	800
4	1000
5	1200
6	1400
7	1550
8	1700
9	1800
10	2000
11	2200
12	2400
13	2600
14	2800
15	2900
16	3000
17	3200
18	3300
19	3500

**These are the axis values that effect your maps**

{E2526} Timing, Base Table, RPM Axis

Defines the axis breakpoints used by tables:

- {E2503} Timing, Base Table



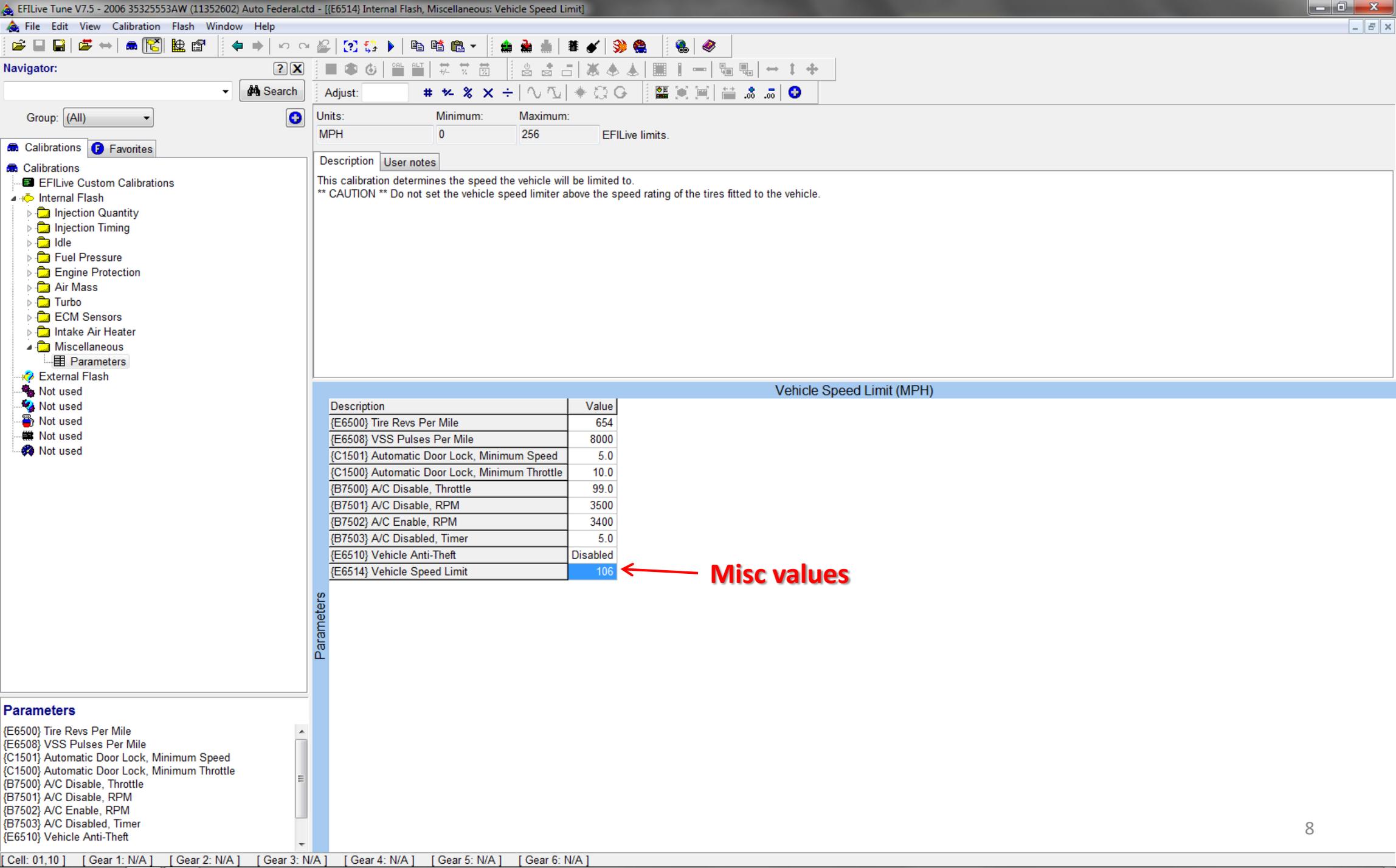
Parameters

### RPM Soft Limiter, Neutral (RPM)

Description	Value
{E6501} RPM Soft Limiter, Neutral	3500
{E6502} RPM Soft Limiter, In Gear, Ref 1	3750
{E6503} RPM Soft Limiter, In Gear, Ref 2	3750
{E6504} RPM Soft Limiter, In Gear, Ref 3	3750
{E6505} RPM Soft Limiter, In Gear, Ref 4	3750
{E6511} RPM Soft Limiter, Manual, Ref 1	4650
{E6512} RPM Soft Limiter, Manual, Ref 2	4650
{E6513} RPM Soft Limiter, Manual, Ref 3	4650
{B9902} RPM Soft Limiter, Maximum Limit 1	4500
{B9903} RPM Soft Limiter, Maximum Limit 2	4500
{D1000} RPM Hard Limiter, Software Limit	4200
{C5754} RPM Hard Limiter, Hardware Limit	4200
{C5750} RPM Hard Limiter, Fuel Pump Limit, Upper	5200
{C5751} RPM Hard Limiter, Fuel Pump Limit, Lower	5000
{C5752} RPM Hard Limiter, Injector Limit, Upper	5200
{C5753} RPM Hard Limiter, Injector Limit, Lower	5400

**Limiters that are not necessarily used in tables, but do limit quantities and values**

- {E6501} RPM Soft Limiter, Neutral
- {E6502} RPM Soft Limiter, In Gear, Ref 1
- {E6503} RPM Soft Limiter, In Gear, Ref 2
- {E6504} RPM Soft Limiter, In Gear, Ref 3
- {E6505} RPM Soft Limiter, In Gear, Ref 4
- {E6511} RPM Soft Limiter, Manual, Ref 1
- {E6512} RPM Soft Limiter, Manual, Ref 2
- {E6513} RPM Soft Limiter, Manual, Ref 3
- {B9902} RPM Soft Limiter, Maximum Limit 1



File Edit View Calibration Flash Window Help

Adjust: # % X ÷

Units: Minimum: Maximum: MPH 0 256 EFILive limits.

Description User notes

This calibration determines the speed the vehicle will be limited to.  
 \*\* CAUTION \*\* Do not set the vehicle speed limiter above the speed rating of the tires fitted to the vehicle.

Navigator:

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
      - Idle
      - Fuel Pressure
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
        - Parameters
    - External Flash
      - Not used
      - Not used
      - Not used
      - Not used
      - Not used

Adjust: # % X ÷

Units: Minimum: Maximum: MPH 0 256 EFILive limits.

Description User notes

This calibration determines the speed the vehicle will be limited to.  
 \*\* CAUTION \*\* Do not set the vehicle speed limiter above the speed rating of the tires fitted to the vehicle.

Parameters

Vehicle Speed Limit (MPH)

Description	Value
{E6500} Tire Revs Per Mile	654
{E6508} VSS Pulses Per Mile	8000
{C1501} Automatic Door Lock, Minimum Speed	5.0
{C1500} Automatic Door Lock, Minimum Throttle	10.0
{B7500} A/C Disable, Throttle	99.0
{B7501} A/C Disable, RPM	3500
{B7502} A/C Enable, RPM	3400
{B7503} A/C Disabled, Timer	5.0
{E6510} Vehicle Anti-Theft	Disabled
{E6514} Vehicle Speed Limit	106

← Misc values

Parameters

- {E6500} Tire Revs Per Mile
- {E6508} VSS Pulses Per Mile
- {C1501} Automatic Door Lock, Minimum Speed
- {C1500} Automatic Door Lock, Minimum Throttle
- {B7500} A/C Disable, Throttle
- {B7501} A/C Disable, RPM
- {B7502} A/C Enable, RPM
- {B7503} A/C Disabled, Timer
- {E6510} Vehicle Anti-Theft

EFILive Tune V7.5 - 2006 3532553AW (11352602) Auto Federal.ctd - [[E0262] Internal Flash, Injection Timing, Pilot Injection, Timing, Base Table]

File Edit View Calibration Flash Window Help

Navigator: Search Adjust: # % / X ÷

Group: (All)

Calibrations Favorites

Calibrations

- EFILive Custom Calibrations
- Internal Flash
  - Injection Quantity
  - Injection Timing
    - Main Injection, Axis Define
    - Main Injection
    - Pilot Injection, Axis Define
    - Pilot Injection
      - Timing, Base Table
      - Timing, Base Table, Air Density Adjust 1
      - Timing, Base Table, Air Density Adjust 2
      - Timing, Base Table, Air Density Adjust 3
      - Timing, Base Table, Air Density Adjust 4
      - Timing, Cranking
    - Post Injection, Axis Define
    - Post Injection
  - Idle
  - Fuel Pressure
  - Engine Protection
  - Air Mass
  - Turbo
  - ECM Sensors
  - Intake Air Heater
  - Miscellaneous
- External Flash
  - Not used
  - Not used
  - Not used
  - Not used
  - Not used

Units: Degrees Minimum: -25.0 Maximum: 60.0 EFILive limits.

Description RTACS User notes

Start of Pilot Injection base table. These values will then be further adjusted by the air density adjustment tables.  
The timing degrees for the Pilot pulse are from the start of the Main injection pulse, not TDC.

Axis tables:

- [E0260] Timing, Base Table, RPM Axis
- [E0261] Timing, Base Table, Fuel Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

RPM {link: SAE.RPM} (1200,2400)  
mm3 {link: CM.CMDFUELB} (65.0,140.0)

Data: 13.9 Degrees

High  
Med  
Low

Rotate using mouse button

mm3 {link: CM.CMDFUELB}

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
620	13.0	13.0	13.0	13.9	13.9	14.5	15.0	18.0	19.1	20.3	21.8	23.0	23.4	24.0	24.5	25.1
650	13.0	13.0	13.0	10.0	11.0	14.5	15.0	18.0	19.1	20.3	21.8	23.0	23.4	24.0	24.5	25.1
800	13.0	13.0	13.0	10.0	10.0	13.9	13.9	18.0	20.2	20.6	21.2	21.6	21.7	21.9	22.1	22.3
1000	10.0	10.0	10.0	10.0	10.0	13.9	13.9	18.0	21.0	21.0	20.3	19.7	19.5	19.2	18.9	18.6
1200	9.5	9.5	9.5	10.0	11.0	13.0	13.9	18.0	21.0	21.0	21.0	28.0	28.0	34.0	34.0	34.0
1400	9.5	9.5	10.0	10.9	11.6	14.5	17.0	22.0	22.0	22.0	22.0	32.0	46.1	46.1	46.1	46.1
1550	9.5	9.5	9.5	10.0	12.0	18.0	23.0	26.0	26.0	26.0	30.0	47.2	46.1	46.1	46.1	46.1
1700	9.5	9.5	10.0	10.7	16.1	24.0	28.0	35.0	38.0	40.0	45.0	48.9	47.3	47.3	47.3	47.3
1800	9.5	9.5	10.0	11.0	20.0	28.0	35.0	41.3	43.0	46.4	48.2	48.8	48.0	48.0	48.0	48.0
2000	10.0	11.5	13.5	13.5	23.0	28.9	39.0	45.0	47.0	47.7	51.0	53.2	54.3	55.3	56.4	57.4
2200	10.0	13.5	17.0	18.0	26.0	38.0	43.9	54.0	54.5	54.5	55.0	52.6	52.4	52.6	52.9	53.1
2400	10.0	12.5	13.0	15.0	26.0	37.0	47.0	54.5	54.5	54.5	55.0	52.1	52.3	52.5	52.0	52.3
2600	10.0	12.5	13.0	15.0	22.0	35.5	43.9	54.5	54.5	54.5	55.0	53.3	54.0	53.8	54.1	54.8
2800	10.0	11.0	12.0	16.1	22.0	36.0	43.0	53.0	54.5	54.5	55.0	53.0	52.7	51.4	50.5	50.3
2900	10.0	12.0	12.0	17.0	20.0	30.0	41.0	45.5	52.0	52.0	53.6	51.4	50.5	50.5	50.0	49.3
3000	10.0	11.0	12.0	13.0	13.9	23.0	36.0	43.9	49.0	49.0	49.6	49.6	50.0	50.0	52.0	52.0
3200	10.0	11.0	12.0	13.0	13.9	17.0	24.0	33.0	40.0	40.0	33.6	34.2	36.2	36.7	39.7	42.7
3300	10.0	11.0	12.0	13.0	13.9	17.1	23.0	32.0	40.0	35.5	33.5	33.0	32.5	32.0	33.5	35.0
3500	10.0	11.0	12.0	13.0	13.9	15.0	22.0	31.1	40.0	35.5	33.5	33.0	32.5	32.0	33.5	35.0

RPM {link: SAE.RPM}

Start of Pilot Injection base table. These values will then be further adjusted by the air density adjustment tables.  
The timing degrees for the Pilot pulse are from the start of the Main injection pulse, not TDC.

Axis tables:

- [E0260] Timing, Base Table, RPM Axis
- [E0261] Timing, Base Table, Fuel Axis

**Smoothing maps and values**  
**-Select values to be smoothed**  
**-Right-click smoothing function**

{E0262} Timing, Base Table

EFILive Tune V7.5 - 2006 3532553AW (11352602) Auto Federal.ctd - [[E0262] Internal Flash, Injection Timing, Pilot Injection, Timing, Base Table - modified]

File Edit View Calibration Flash Window Help

Navigator: Search Adjust: # % / \* / + ~ [Icons]

Group: (All) [Icons]

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
          - Timing, Base Table
          - Timing, Base Table, Air Density Adjust 1
          - Timing, Base Table, Air Density Adjust 2
          - Timing, Base Table, Air Density Adjust 3
          - Timing, Base Table, Air Density Adjust 4
          - Timing, Cranking
        - Post Injection, Axis Define
        - Post Injection
      - Idle
      - Fuel Pressure
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used
      - Not used
      - Not used

RPM {link: SAE.RPM} (2800)  
mm3 {link: CM.CMDFUELB} (45.0) Data: 22.0 Degrees

High  
Med  
Low

Rotate using mouse button

Units: Degrees Minimum: -25.0 Maximum: 60.0 EFLive limits.

Description RTACS User notes

Start of Pilot Injection base table. These values will then be further adjusted by the air density adjustment tables.  
The timing degrees for the Pilot pulse are from the start of the Main injection pulse, not TDC.

Axis tables:  
- {E0260} Timing, Base Table, RPM Axis  
- {E0261} Timing, Base Table, Fuel Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

mm3 {link: CM.CMDFUELB}

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
620	13.0	13.0	13.0	13.9	13.9	14.5	15.0	18.0	19.1	20.3	21.8	23.0	23.4	24.0	24.5	25.1
650	13.0	13.0	13.0	10.0	11.0	14.5	15.0	18.0	19.1	20.3	21.8	23.0	23.4	24.0	24.5	25.1
800	13.0	13.0	13.0	10.0	10.0	13.9	13.9	18.0	20.2	20.6	21.2	21.6	21.7	21.9	22.1	22.3
1000	10.0	10.0	10.0	10.0	10.0	13.9	13.9	18.0	21.0	20.3	19.7	19.5	19.2	18.9	18.6	
1200	9.5	9.5	9.5	10.0	11.0	13.0	16.4	19.1	21.2	22.6	24.1	26.5	28.7	30.3	30.8	30.8
1400	9.5	9.5	10.0	10.9	11.6	14.5	18.8	21.8	23.9	25.9	29.0	33.1	37.0	39.0	39.7	39.9
1550	9.5	9.5	9.5	10.0	12.0	18.0	23.0	26.4	29.0	31.5	35.1	39.6	42.7	44.3	44.8	44.9
1700	9.5	9.5	10.0	10.7	16.1	24.0	28.1	32.2	35.4	38.2	41.5	44.5	46.5	47.3	47.6	47.7
1800	9.5	9.5	10.0	11.0	20.0	28.0	33.1	38.0	41.5	44.2	46.5	48.2	49.3	49.8	50.0	50.2
2000	10.0	11.5	13.5	13.5	23.0	28.9	37.9	43.0	46.5	48.6	50.0	50.9	51.4	51.8	52.1	52.3
2200	10.0	13.5	17.0	18.0	26.0	38.0	41.5	47.0	50.2	51.7	52.3	52.5	52.6	52.8	53.1	53.3
2400	10.0	12.5	13.0	15.0	26.0	37.0	44.1	49.6	52.8	53.6	53.6	53.4	53.2	53.3	53.5	53.7
2600	10.0	12.5	13.0	15.0	22.0	35.5	43.9	54.5	54.5	54.5	55.0	53.3	54.0	53.8	54.1	54.8
2800	10.0	11.0	12.0	16.1	22.0	36.0	43.0	53.0	54.5	54.5	55.0	53.0	52.7	51.4	50.5	50.3
2900	10.0	12.0	12.0	17.0	20.0	30.0	41.0	45.5	52.0	52.0	53.6	51.4	50.5	50.5	50.0	49.3
3000	10.0	11.0	12.0	13.0	13.9	23.0	36.0	43.9	49.0	49.0	49.6	49.6	50.0	50.0	52.0	52.0
3200	10.0	11.0	12.0	13.0	13.9	17.0	24.0	33.0	40.0	40.0	33.6	34.2	36.2	36.7	39.7	42.7
3300	10.0	11.0	12.0	13.0	13.9	17.0	23.0	32.0	40.0	35.5	33.5	33.0	32.5	32.0	33.5	35.0
3500	10.0	11.0	12.0	13.0	13.9	15.0	22.0	31.1	40.0	35.5	33.5	33.0	32.5	32.0	33.5	35.0

RPM {link: SAE.RPM}

Axis tables:  
- {E0260} Timing, Base Table, RPM Axis  
- {E0261} Timing, Base Table, Fuel Axis

**Selected values will be smoothed and will be reflected on both the 3D map and the values table**

10

File Edit View Calibration Flash Window Help

Adjust: # % / X ÷ ~ [Icons] [Icons]

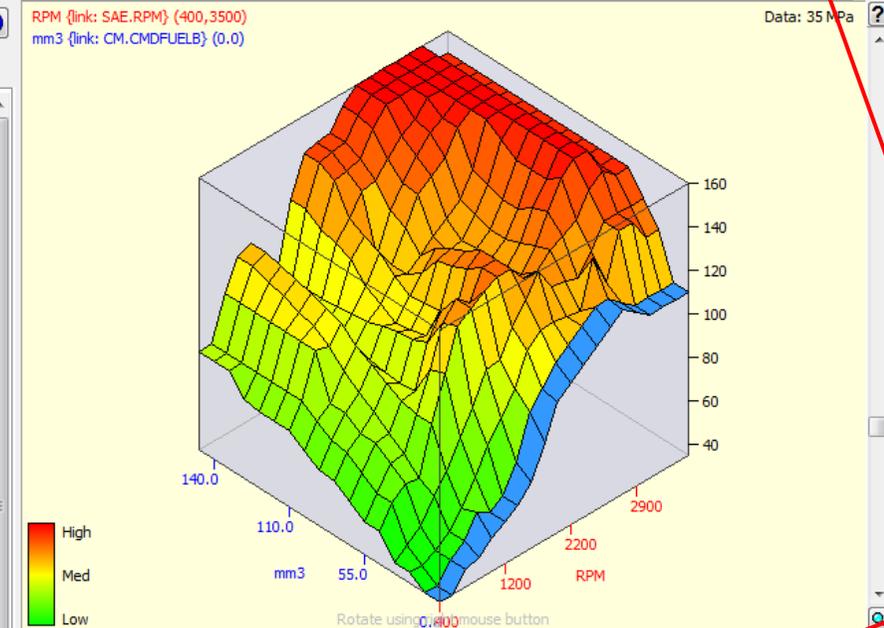
Units: Minimum: Maximum: MPa 0 250 EFiLive limits.

Navigator: Search

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define
        - Post Injection
      - Idle
      - Fuel Pressure
        - Parameters
        - Axis Define
          - Fuel Pressure, Base Table
          - Fuel Pressure, Air Density Adjust 1
          - Fuel Pressure, Air Density Adjust 2
          - Fuel Pressure, Air Density Adjust 3
          - Fuel Pressure, Air Density Adjust 4
          - Fuel Pressure Reg, Base Duty Cycle
          - Fuel Pressure Reg, Max Duty Cycle
          - Fuel Pressure Reg, Current Conversion
      - P.I.D Control
      - Diagnostics
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used



Description **RTACS** User notes

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - (D0753) Fuel Pressure Base Table, RPM Axis  
 - (D0754) Fuel Pressure Base Table, Fuel Axis

**Using linear functions to equalize effects from L to R, T to B or corner to corner**

**-Select values to be modified**

**-Right-click desired linear function**

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	130.0	135.0	140.0
400	35	35	40	40	50	50	55	60	61	65	70	70	71	80	80
600	35	35	40	45	60	60	65	70	71	75	80	80	80	80	80
650	43	43	43	50	65	70	75	75	80	80	100	100	100	100	100
800	45	48	48	60	64	71	76	81	86	91	98	103	105	108	110
1000	50	58	55	68	85	85	87	91	95	99	105	108	110	112	114
1200	54	54	66	80	105	102	88	87	88	89	91	92	93	93	94
1400	58	58	77	90	123	120	107	104	103	101	99	98	97	96	95
1600	65	70	86	104	128	128	118	102	100	99	103	107	115	118	125
1800	80	90	96	105	132	122	112	110	109	108	113	119	122	126	143
2000	95	97	110	116	135	135	130	127	125	115	110	110	110	135	144
2200	100	105	116	125	136	135	135	130	127	122	115	123	127	136	145
2400	105	110	116	135	127	120	120	120	115	118	120	135	136	143	154
2600	110	115	115	124	127	121	120	120	119	125	140	145	150	160	160
2700	115	120	114	123	133	131	128	125	128	130	145	145	152	154	160
2800	120	120	135	121	136	143	140	135	135	138	140	155	155	160	160
2900	115	115	120	130	140	155	150	150	155	160	160	160	160	160	160
3000	110	110	140	140	150	160	160	160	160	160	160	160	160	160	160
3200	110	110	140	140	155	160	160	160	160	160	160	160	160	160	160
3500	110	110	130	140	150	150	150	150	150	150	150	150	150	150	150

RPM (link: SAE.RPM)

**{D0782} Fuel Pressure, Base Table**

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - (D0753) Fuel Pressure Base Table, RPM Axis  
 - (D0754) Fuel Pressure Base Table, Fuel Axis



File Edit View Calibration Flash Window Help

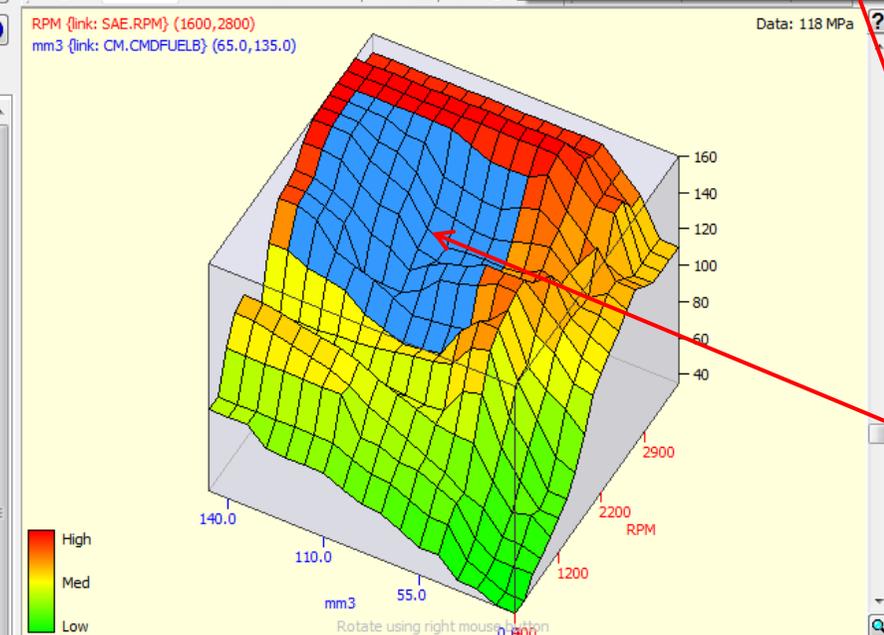
Adjust: # % / \* / Use linear blending between edited and non edited cells (Ctrl+L)

Navigator: Search

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define
        - Post Injection
      - Idle
      - Fuel Pressure
        - Parameters
        - Axis Define
        - Fuel Pressure, Base Table
        - Fuel Pressure, Air Density Adjust 1
        - Fuel Pressure, Air Density Adjust 2
        - Fuel Pressure, Air Density Adjust 3
        - Fuel Pressure, Air Density Adjust 4
        - Fuel Pressure Reg, Base Duty Cycle
        - Fuel Pressure Reg, Max Duty Cycle
        - Fuel Pressure Reg, Current Conversion
      - P.I.D Control
      - Diagnostics
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used



**Using the linear function to modify a group of cells. Used when a particular section has undesired high or low spots .**

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
400	35	35	40	40	50	50	55	60	61	65	70	70	70	71	80	80
600	35	35	40	45	60	60	65	70	71	75	80	80	80	80	80	80
650	43	43	43	50	65	70	75	75	80	80	100	100	100	100	100	100
800	45	48	48	60	64	71	76	81	86	91	98	103	105	108	110	113
1000	50	58	55	68	85	85	87	91	95	99	105	108	110	112	114	116
1200	54	54	66	80	105	102	88	87	88	89	91	92	93	93	94	94
1400	58	58	77	90	123	120	107	104	103	101	99	98	97	96	96	95
1600	65	70	86	104	128	128	118	102	100	99	103	107	115	118	120	125
1800	80	90	96	105	132	122	112	110	109	108	113	119	122	126	139	143
2000	95	97	110	116	135	135	130	127	125	115	110	110	110	135	140	144
2200	100	105	116	125	136	135	135	130	127	122	115	123	127	136	142	145
2400	105	110	116	135	127	120	120	120	115	118	120	135	136	143	152	154
2600	110	115	115	124	127	121	120	120	119	125	140	145	150	160	160	160
2700	115	120	114	123	133	131	128	125	125	128	130	145	152	154	160	160
2800	120	120	135	121	136	143	140	135	135	138	140	155	155	160	160	160
2900	115	115	120	130	140	155	150	150	150	155	160	160	160	160	160	160
3000	110	110	140	140	150	160	160	160	160	160	160	160	160	160	160	160
3200	110	110	140	140	155	160	160	160	160	160	160	160	160	160	160	160
3500	110	110	130	140	150	150	150	150	150	150	150	150	150	150	150	150

**{D0782} Fuel Pressure, Base Table**

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
- {D0753} Fuel Pressure Base Table, RPM Axis  
- {D0754} Fuel Pressure Base Table, Fuel Axis

File Edit View Calibration Flash Window Help

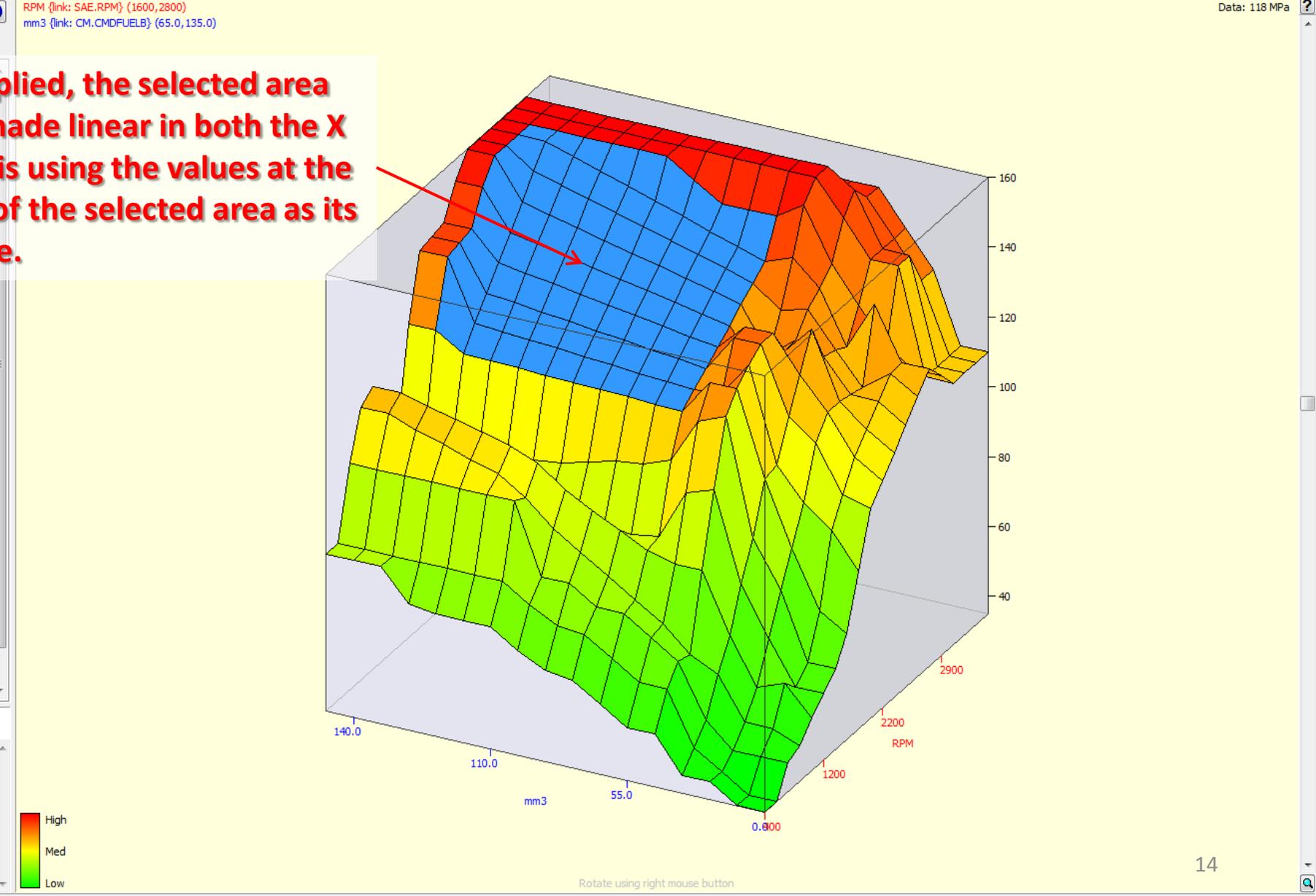
Navigator: Search Adjust: # % % X ÷ ~ [Icons]

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define
        - Post Injection
      - Idle
      - Fuel Pressure
        - Parameters
        - Axis Define
          - Fuel Pressure, Base Table
          - Fuel Pressure, Air Density Adjust 1
          - Fuel Pressure, Air Density Adjust 2
          - Fuel Pressure, Air Density Adjust 3
          - Fuel Pressure, Air Density Adjust 4
          - Fuel Pressure Reg, Base Duty Cycle
          - Fuel Pressure Reg, Max Duty Cycle
          - Fuel Pressure Reg, Current Conversion
        - P.I.D Control
        - Diagnostics
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used

**Once applied, the selected area will be made linear in both the X and Y axis using the values at the corners of the selected area as its reference.**



**{D0782} Fuel Pressure, Base Table**

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

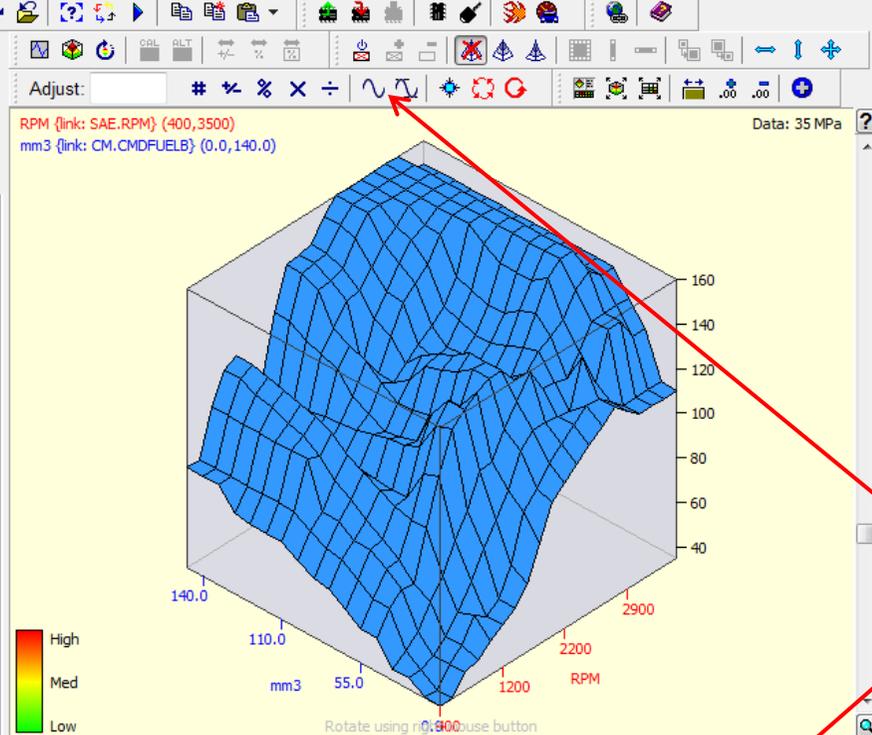
Axis tables:  
 - {D0753} Fuel Pressure Base Table, RPM Axis  
 - {D0754} Fuel Pressure Base Table, Fuel Axis

**Navigator:**

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define
        - Post Injection
      - Idle
      - Fuel Pressure
        - Parameters
        - Axis Define
          - Fuel Pressure, Base Table
          - Fuel Pressure, Air Density Adjust 1
          - Fuel Pressure, Air Density Adjust 2
          - Fuel Pressure, Air Density Adjust 3
          - Fuel Pressure, Air Density Adjust 4
          - Fuel Pressure Reg, Base Duty Cycle
          - Fuel Pressure Reg, Max Duty Cycle
          - Fuel Pressure Reg, Current Conversion
      - P.I.D Control
      - Diagnostics
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used



Units: Minimum: Maximum:  
MPa 0 250 EFILive limits.

Description RTACS User notes

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
- {D0753} Fuel Pressure Base Table, RPM Axis  
- {D0754} Fuel Pressure Base Table, Fuel Axis

**Smoothing an entire table**  
**-Select all values in the table**  
**-Use the smoothing function until you've achieved your desired goal**

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
400	35	35	40	40	50	50	55	60	61	65	70	70	70	71	80	80
600	35	35	40	45	60	60	65	70	71	75	80	80	80	80	80	80
650	43	43	43	50	65	70	75	75	80	80	100	100	100	100	100	100
800	45	48	48	60	64	71	76	81	86	91	98	103	105	108	110	113
1000	50	58	55	68	85	85	87	91	95	99	105	108	110	112	114	116
1200	54	54	66	80	105	102	88	87	88	89	91	92	93	93	94	94
1400	58	58	77	90	123	120	107	104	103	101	99	98	97	96	96	95
1600	65	70	86	104	128	128	118	102	100	99	103	107	115	118	120	125
1800	80	90	96	105	132	122	112	110	109	108	113	119	122	126	139	143
2000	95	97	110	116	135	135	130	127	125	115	110	110	110	135	140	144
2200	100	105	116	125	135	135	130	127	122	115	123	127	127	136	142	145
2400	105	110	116	135	127	120	120	120	115	118	120	135	136	143	152	154
2600	110	115	115	124	127	121	120	120	119	125	140	145	150	150	160	160
2700	115	120	114	123	133	131	128	125	125	128	130	145	152	154	160	160
2800	120	120	135	121	136	143	140	135	135	138	140	155	155	160	160	160
2900	115	115	120	130	140	155	150	150	155	155	160	160	160	160	160	160
3000	110	110	140	140	150	160	160	160	160	160	160	160	160	160	160	160
3200	110	110	140	140	155	160	160	160	160	160	160	160	160	160	160	160
3500	110	110	130	140	150	150	150	150	150	150	150	150	150	150	150	150

RPM (link: SAE.RPM)

**{D0782} Fuel Pressure, Base Table**

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - {D0753} Fuel Pressure Base Table, RPM Axis  
 - {D0754} Fuel Pressure Base Table, Fuel Axis

File Edit View Calibration Flash Window Help

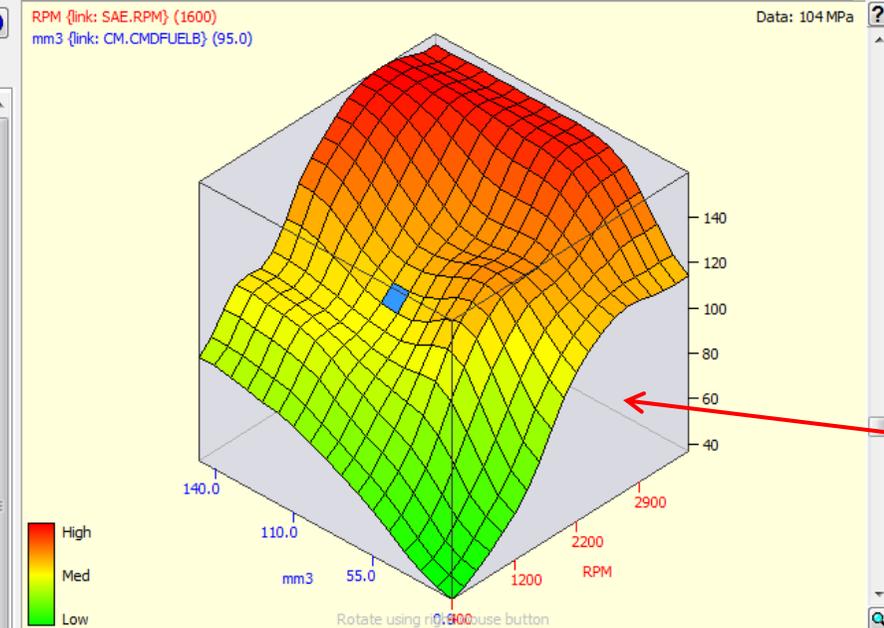
Adjust: # % / X ÷ ~ [Icons] .00 .00

Navigator: Search

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
        - Main Injection, Axis Define
        - Main Injection
        - Pilot Injection, Axis Define
        - Pilot Injection
        - Post Injection, Axis Define
        - Post Injection
      - Idle
      - Fuel Pressure
        - Parameters
        - Axis Define
        - Fuel Pressure, Base Table
        - Fuel Pressure, Air Density Adjust 1
        - Fuel Pressure, Air Density Adjust 2
        - Fuel Pressure, Air Density Adjust 3
        - Fuel Pressure, Air Density Adjust 4
        - Fuel Pressure Reg, Base Duty Cycle
        - Fuel Pressure Reg, Max Duty Cycle
        - Fuel Pressure Reg, Current Conversion
      - P.I.D Control
      - Diagnostics
    - Engine Protection
    - Air Mass
    - Turbo
    - ECM Sensors
    - Intake Air Heater
    - Miscellaneous
  - External Flash
    - Not used
    - Not used
    - Not used



Units: Minimum: Maximum: MPa 0 250 EFiLive limits.

Description RTACS User notes

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - {D0753} Fuel Pressure Base Table, RPM Axis  
 - {D0754} Fuel Pressure Base Table, Fuel Axis

**Smoothing an entire table  
 - This is the same map after using the smoothing function 5 times**

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
400	37	38	42	46	52	57	61	64	68	71	75	77	78	80	81	82
600	39	40	44	49	55	61	65	69	73	77	80	83	85	86	87	88
650	43	44	48	54	61	67	72	75	79	84	89	92	94	95	96	97
800	48	50	54	61	69	75	79	82	86	90	95	98	100	102	103	104
1000	52	56	62	71	80	85	87	88	91	94	97	100	102	104	105	105
1200	58	62	70	82	92	96	96	95	96	98	100	101	103	104	104	104
1400	64	69	79	92	104	107	105	102	100	100	101	102	104	106	107	108
1600	73	79	89	102	112	116	113	108	105	104	105	108	111	114	117	119
1800	84	89	98	110	119	122	119	115	112	110	111	113	118	123	128	131
2000	94	99	107	116	123	126	124	121	118	116	116	118	123	130	136	140
2200	102	106	113	121	126	127	126	124	121	120	120	124	130	136	142	145
2400	108	111	117	123	126	126	125	124	122	122	125	130	136	143	148	151
2600	112	115	119	124	127	127	126	125	124	126	130	137	143	149	153	155
2700	116	118	121	126	129	131	131	130	130	132	137	143	149	153	157	158
2800	117	120	124	129	134	138	139	138	139	141	145	150	154	157	159	159
2900	117	120	126	133	140	145	147	148	148	150	153	155	157	158	159	160
3000	115	120	128	137	145	151	153	154	154	155	156	157	158	158	159	159
3200	114	120	129	139	147	152	155	155	156	156	156	156	157	157	157	157
3500	114	119	129	139	147	152	154	154	154	154	155	155	155	155	155	155

RPM (link: SAE.RPM)

**{D0782} Fuel Pressure, Base Table**

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - {D0753} Fuel Pressure Base Table, RPM Axis  
 - {D0754} Fuel Pressure Base Table, Fuel Axis



EFILive Tune V7.5 - 2006 3532553AW (11352602) Auto Federal.ctd - [D0782] Internal Flash, Fuel Pressure, Fuel Pressure, Base Table - modified

File Edit View Calibration Flash Window Help

Adjust: 20 # % % X ÷ ~ [Icons]

Units: Minimum: Maximum: MPa 0 250 EFiLive limits.

Description RTACS User notes

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - (D0753) Fuel Pressure Base Table, RPM Axis  
 - (D0754) Fuel Pressure Base Table, Fuel Axis

**Modifying the values in a group of cells -As you can see, this took the values in the cells and added 20% to each value.**

High Med Low

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
400	35	35	40	40	50	50	55	60	61	65	70	70	70	71	80	80
600	35	35	40	45	60	60	65	70	71	75	80	80	80	80	80	80
650	43	43	52	60	78	84	90	90	96	96	120	100	100	100	100	100
800	45	48	58	72	77	85	91	97	103	109	118	103	105	108	110	113
1000	50	58	66	82	102	102	104	109	114	119	126	108	110	112	114	116
1200	54	54	79	96	126	123	106	104	106	107	109	92	93	93	94	94
1400	58	58	92	108	148	144	128	125	124	121	119	98	97	96	96	95
1600	65	70	103	125	154	154	142	122	120	119	124	107	115	118	120	125
1800	80	90	115	126	158	146	134	132	131	130	136	119	122	126	139	143
2000	95	97	132	139	162	162	156	152	150	138	132	110	110	135	140	144
2200	100	105	116	125	136	135	135	130	127	122	115	123	127	136	142	145
2400	105	110	116	135	127	120	120	120	115	118	120	135	136	143	152	154
2600	110	115	115	124	127	121	120	120	120	119	125	140	145	150	160	160
2700	115	120	114	123	133	131	128	125	125	128	130	145	152	154	160	160
2800	120	120	135	121	136	143	140	135	135	138	140	155	155	160	160	160
2900	115	115	120	130	140	155	150	150	150	155	160	160	160	160	160	160
3000	110	110	140	140	150	160	160	160	160	160	160	160	160	160	160	160
3200	110	110	140	140	155	160	160	160	160	160	160	160	160	160	160	160
3500	110	110	130	140	150	150	150	150	150	150	150	150	150	150	150	150

RPM (link: SAE.RPM) (650,2000)

mm3 (link: CM.CMDFUELB) (20.0, 110.0)

Data: 52 MPa

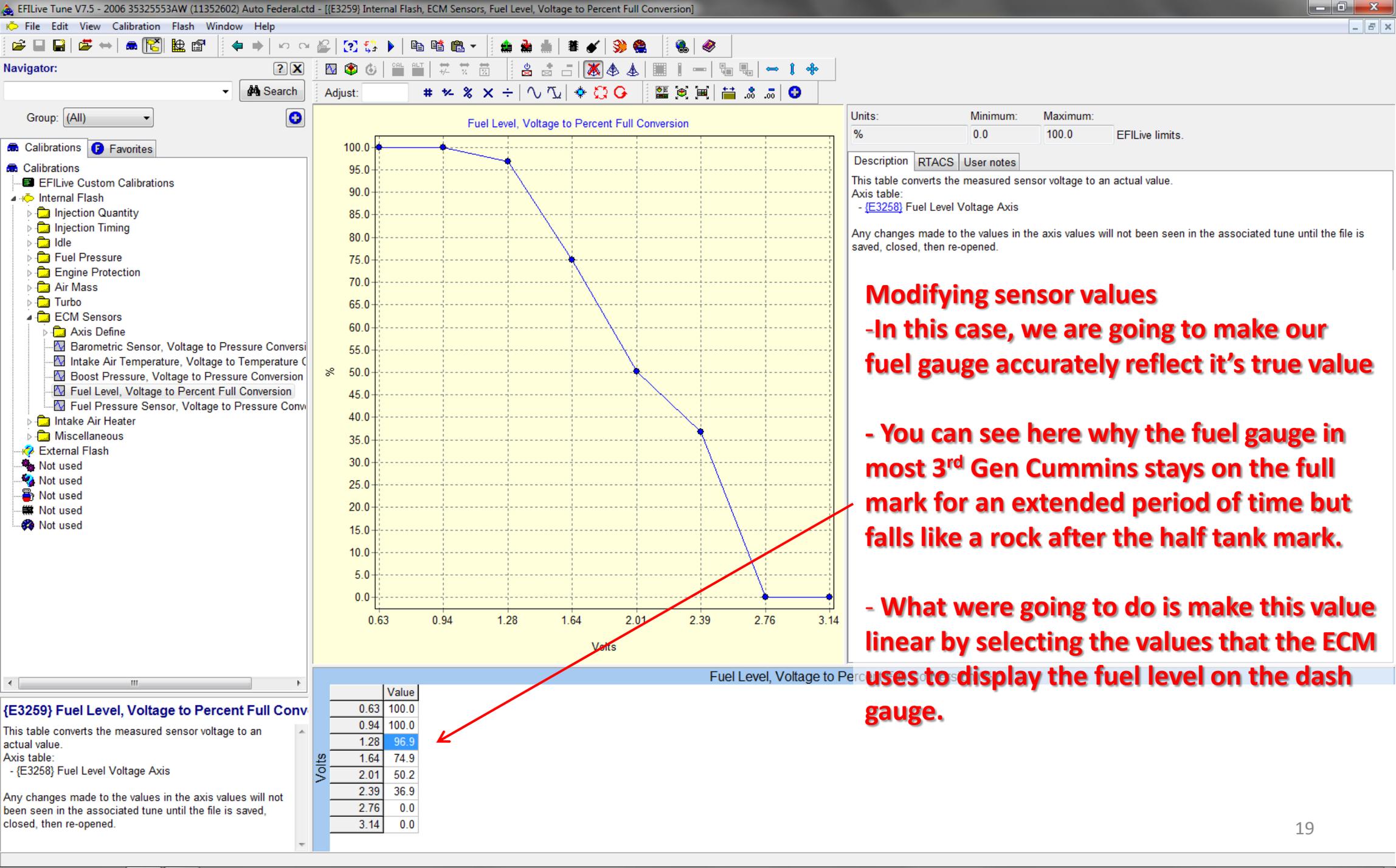
Rotating using right mouse button

External Flash  
 Not used  
 Not used  
 Not used

**{D0782} Fuel Pressure, Base Table**

This table defines the base commanded fuel pressures which will then be further adjusted by the air density adjustment tables.

Axis tables:  
 - (D0753) Fuel Pressure Base Table, RPM Axis  
 - (D0754) Fuel Pressure Base Table, Fuel Axis



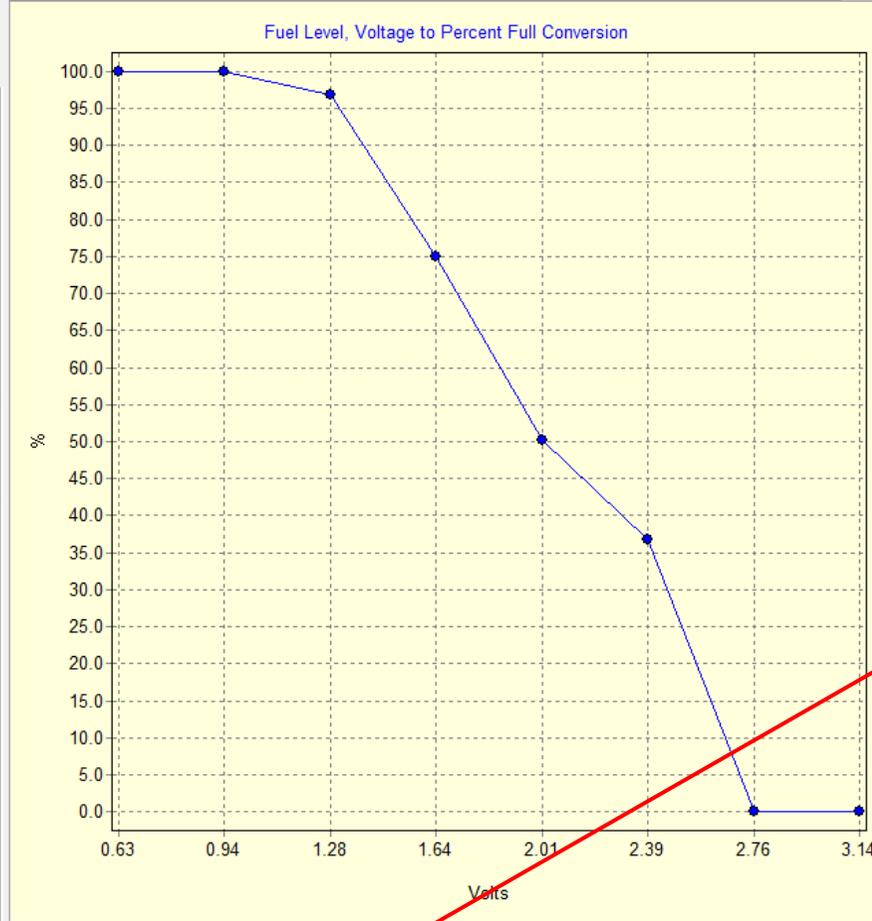
File Edit View Calibration Flash Window Help

Navigator: Search

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
      - Idle
      - Fuel Pressure
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
        - Axis Define
        - Barometric Sensor, Voltage to Pressure Conversion
        - Intake Air Temperature, Voltage to Temperature Conversion
        - Boost Pressure, Voltage to Pressure Conversion
        - Fuel Level, Voltage to Percent Full Conversion
        - Fuel Pressure Sensor, Voltage to Pressure Conversion
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used
      - Not used
      - Not used



Units: Minimum: Maximum: EFILive limits.

% 0.0 100.0

Description RTACS User notes

This table converts the measured sensor voltage to an actual value.

Axis table:

- [(E3258) Fuel Level Voltage Axis]

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

**Modifying sensor values**

- In this case, we are going to make our fuel gauge accurately reflect it's true value
- You can see here why the fuel gauge in most 3<sup>rd</sup> Gen Cummins stays on the full mark for an extended period of time but falls like a rock after the half tank mark.
- What were going to do is make this value linear by selecting the values that the ECM uses to display the fuel level on the dash gauge.

{E3259} Fuel Level, Voltage to Percent Full Conv

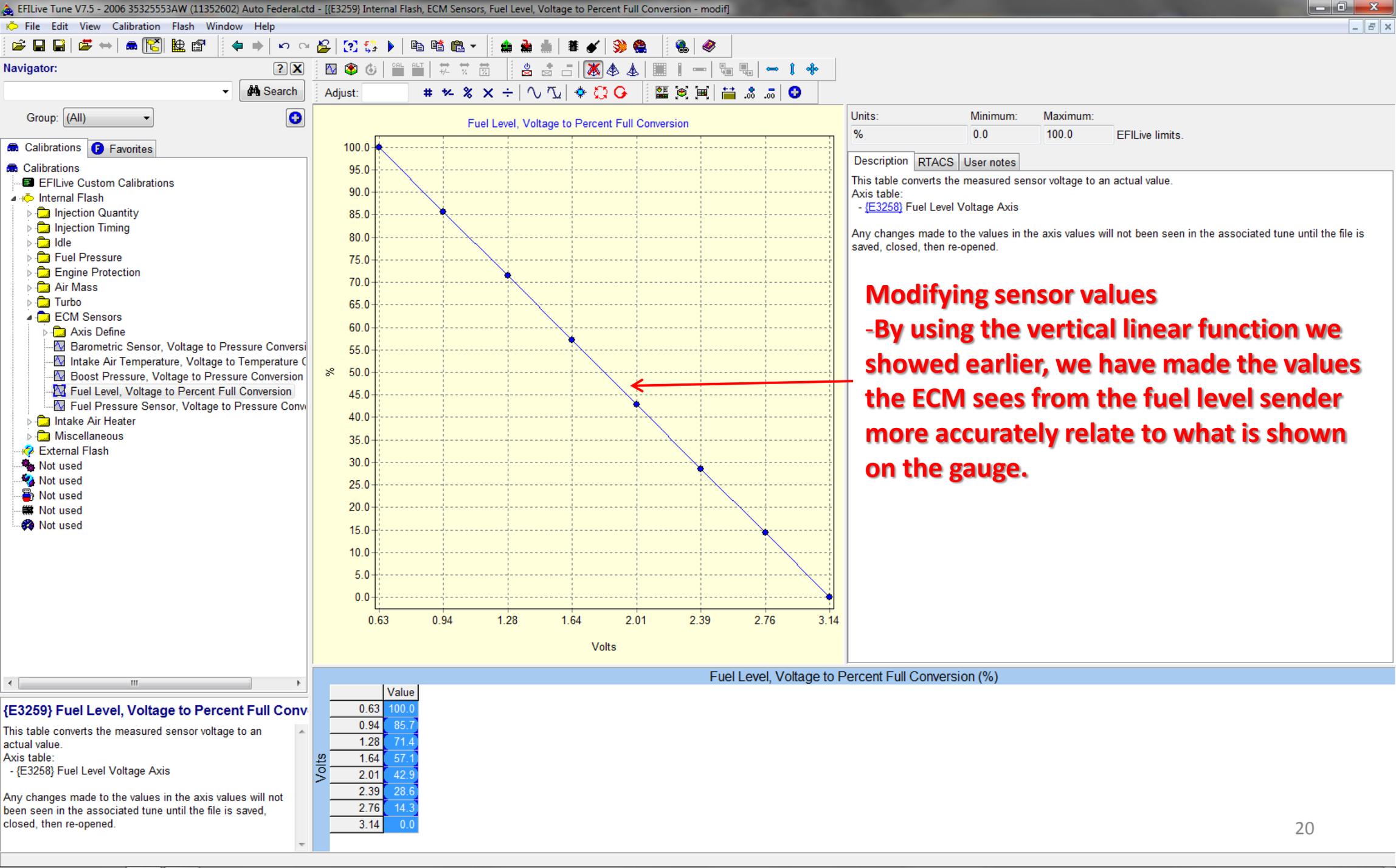
This table converts the measured sensor voltage to an actual value.

Axis table:

- [(E3258) Fuel Level Voltage Axis]

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

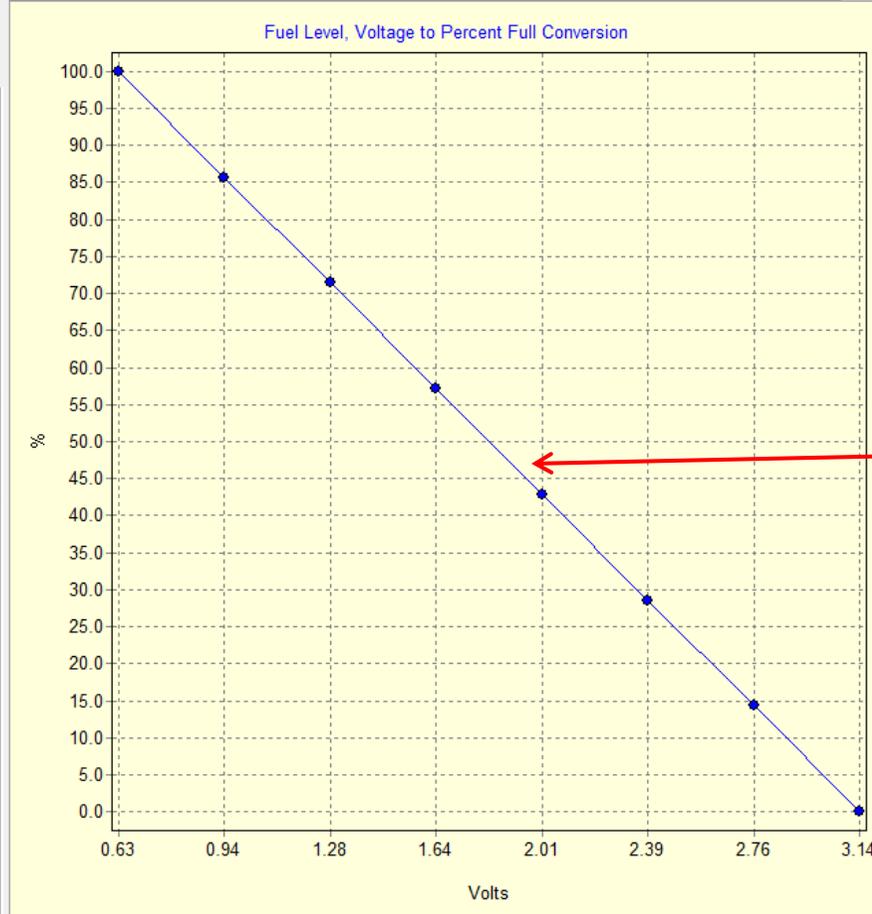
Volts	Value
0.63	100.0
0.94	100.0
1.28	96.9
1.64	74.9
2.01	50.2
2.39	36.9
2.76	0.0
3.14	0.0



Navigator:

Group: (All)

- Calibrations
  - EFILive Custom Calibrations
    - Internal Flash
      - Injection Quantity
      - Injection Timing
      - Idle
      - Fuel Pressure
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
        - Axis Define
        - Barometric Sensor, Voltage to Pressure Conversion
        - Intake Air Temperature, Voltage to Temperature Conversion
        - Boost Pressure, Voltage to Pressure Conversion
        - Fuel Level, Voltage to Percent Full Conversion
        - Fuel Pressure Sensor, Voltage to Pressure Conversion
      - Intake Air Heater
      - Miscellaneous
    - External Flash
      - Not used
      - Not used
      - Not used
      - Not used
      - Not used



Units: % Minimum: 0.0 Maximum: 100.0 EFILive limits.

Description: RTACS User notes

This table converts the measured sensor voltage to an actual value.

Axis table:  
- (E3258) Fuel Level Voltage Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

**Modifying sensor values**  
-By using the vertical linear function we showed earlier, we have made the values the ECM sees from the fuel level sender more accurately relate to what is shown on the gauge.

{E3259} Fuel Level, Voltage to Percent Full Conv

This table converts the measured sensor voltage to an actual value.

Axis table:  
- {E3258} Fuel Level Voltage Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

Fuel Level, Voltage to Percent Full Conversion (%)

Volts	Value
0.63	100.0
0.94	85.7
1.28	71.4
1.64	57.1
2.01	42.9
2.39	28.6
2.76	14.3
3.14	0.0

EFILive Tune V7.5 - 2006 3532553AW (11352602) Auto Federal.ctd - [D0502] Internal Flash, Main Injection, Main Injection Pulse

File Edit View Calibration Flash Window Help

Navigator: Search Adjust: # % / \* X ÷ ~ [Icons]

Group: (All) Calibrations Favorites

Calibrations
 

- EFILive Custom Calibrations
  - Internal Flash
    - Injection Quantity
      - Main Injection, Axis Define
        - Main Injection
          - Pedal Position to Desired Fuel (Normal)
          - Pedal Position to Desired Fuel (Transient)
          - Main Injection Pulse
        - Pilot Injection, Axis Define
          - Pilot Injection
        - Post Injection, Axis Define
          - Post Injection
        - Limiters, Axis Define
          - Limiters
        - Injection Timing
          - Idle
          - Fuel Pressure
          - Engine Protection
          - Air Mass
          - Turbo
          - ECM Sensors
          - Intake Air Heater
          - Miscellaneous
        - External Flash
          - Not used
          - Not used
          - Not used
          - Not used
          - Not used

mm3 {link: CM.CMDFUELB} (12.0,60.0) Data: 712 Microseconds  
MPa {link: CM.FPD} (30.0,70.0)

High  
Med  
Low

Rotate using right mouse button

Units: Minimum: Maximum: EFILive limits.  
Microseconds 0 10000

Description RTACS User notes

This table defines the Main Injection Pulse width (injector opening time). The ECM selects the value from this table based on fuel delivery per stroke (mm3) and Commanded Fuel Pressure (MPa).

Axis tables:  
- [D0500] Main Injection Pulse Fuel Axis  
- [D0501] Main Injection Pulse Fuel Pressure Axis

**Compensating for larger injectors to improve streetability**

**-In this case, were going to reduce the amount of duration to compensate for installing injectors that flow 20% more than stock**

**-What we do is take the data we see in the logs and see what amount of fuel is being commanded and at what pressure.**

**-We select those cells and use the adjust function as described earlier to reduce our duration in the selected range**

	9.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0	70.0	80.0	100.0	110.0	120.0	140.0	160.0	180.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.0	0	590	407	287	259	160	160	160	160	160	160	160	160	160	160	160
2.0	0	784	513	378	333	264	213	200	186	160	160	160	160	160	160	160
5.0	0	1092	732	581	482	373	312	284	263	243	227	226	222	215	213	200
8.0	0	1289	883	704	595	457	383	351	313	289	261	257	248	235	231	218
12.0	0	1496	1050	837	712	560	460	398	369	351	315	301	288	265	258	243
15.0	0	1615	1159	929	790	621	526	455	398	374	348	342	321	290	280	264
20.0	0	1819	1323	1063	911	720	604	539	490	426	381	381	366	345	329	310
25.0	0	2038	1477	1195	1023	817	690	602	544	501	424	415	396	377	364	344
30.0	0	2244	1646	1359	1165	935	775	686	608	552	489	451	432	407	386	364
33.0	0	2385	1766	1481	1284	1037	870	742	657	580	517	486	456	425	399	376
35.0	0	2479	1858	1555	1359	1102	933	817	694	599	534	507	480	437	409	386
38.0	0	2617	1997	1668	1468	1199	1019	887	803	725	566	532	511	461	426	401
40.0	0	2709	2087	1745	1542	1257	1086	946	853	758	593	549	527	489	437	412
41.0	0	2754	2133	1786	1579	1285	1116	978	879	778	649	569	534	502	442	417
44.0	0	2892	2268	1912	1691	1387	1197	1054	947	840	721	666	603	533	469	442
46.0	0	2983	2360	1996	1751	1451	1256	1100	990	900	753	707	670	564	493	464
48.0	0	3074	2451	2077	1825	1513	1314	1159	1047	939	800	741	706	646	527	497
51.0	0	3212	2589	2198	1936	1606	1397	1242	1128	1000	852	803	764	694	615	580
60.0	3000	3623	3000	2568	2262	1885	1651	1471	1344	1218	1054	982	930	836	766	722
80.0	4750	4538	3915	3392	2983	2505	2210	1989	1811	1656	1459	1371	1304	1175	1088	1026
100.0	5500	5453	4830	4216	3705	3125	2768	2508	2290	2103	1840	1740	1654	1508	1396	1316
120.0	6300	6367	5744	5039	4426	3745	3327	3028	2759	2545	2238	2102	2001	1831	1701	1604
140.0	7400	7282	6659	5863	5148	4365	3885	3547	3228	2987	2626	2468	2350	2156	2005	1890

Axis tables:  
- [D0500] Main Injection Pulse Fuel Axis  
- [D0501] Main Injection Pulse Fuel Pressure Axis

{D0502} Main Injection Pulse

This table defines the Main Injection Pulse width (injector opening time). The ECM selects the value from this table based on fuel delivery per stroke (mm3) and Commanded Fuel Pressure (MPa).

EFILive Tune V7.5 - 2006 3532553AW (11352602) Auto Federal.ctd - [D0502] Internal Flash, Main Injection, Main Injection Pulse - modified

File Edit View Calibration Flash Window Help

Navigator: Search Adjust: -20 # % X ÷ ~ [Icons] Data: 570 Microseconds

Group: (All) Calibrations Favorites

Calibrations
 

- EFILive Custom Calibrations
  - Internal Flash
    - Injection Quantity
      - Main Injection, Axis Define
        - Main Injection
          - Pedal Position to Desired Fuel (Normal)
          - Pedal Position to Desired Fuel (Transient)
          - Main Injection Pulse
        - Pilot Injection, Axis Define
          - Pilot Injection
        - Post Injection, Axis Define
          - Post Injection
        - Limiters, Axis Define
          - Limiters
      - Injection Timing
        - Idle
          - Fuel Pressure
            - Engine Protection
            - Air Mass
            - Turbo
            - ECM Sensors
            - Intake Air Heater
            - Miscellaneous
      - External Flash
        - Not used
        - Not used
        - Not used
        - Not used
        - Not used

mm3 {link: CM.CMDFUELB} (12.0,60.0)  
MPa {link: CM.FPD} (30.0,70.0)

High  
Med  
Low

Rotate using right mouse button

Units: Minimum: Maximum: EFILive limits.  
Microseconds 0 10000

Description RTACS User notes

This table defines the Main Injection Pulse width (injector opening time). The ECM selects the value from this table based on fuel delivery per stroke (mm3) and Commanded Fuel Pressure (MPa).

Axis tables:
 

- [D0500] Main Injection Pulse Fuel Axis
- [D0501] Main Injection Pulse Fuel Pressure Axis

**Compensating for larger injectors to improve streetability**

**-What we've done is reduced the total duration period within this specific operating range**

	9.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0	70.0	80.0	100.0	110.0	120.0	140.0	160.0	180.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.0	0	590	407	287	259	160	160	160	160	160	160	160	160	160	160	160
2.0	0	784	513	378	333	264	213	200	186	160	160	160	160	160	160	160
5.0	0	1092	732	581	482	373	312	284	263	243	227	226	222	215	213	200
8.0	0	1289	883	704	595	457	383	351	313	289	261	257	248	235	231	218
12.0	0	1496	1050	837	570	448	368	318	295	351	315	301	288	265	258	243
15.0	0	1615	1159	929	632	497	421	364	318	374	348	342	321	290	280	261
20.0	0	1819	1323	1063	729	576	483	431	392	426	381	381	366	345	329	310
25.0	0	2038	1477	1195	819	654	552	482	435	501	424	415	396	377	364	344
30.0	0	2244	1646	1359	932	748	620	549	486	552	486	457	432	407	386	364
33.0	0	2385	1766	1481	1027	830	696	594	526	580	517	486	456	425	399	376
35.0	0	2479	1858	1555	1087	882	747	654	565	599	534	507	480	437	409	386
38.0	0	2617	1997	1668	1174	959	817	710	643	725	566	532	511	461	426	401
40.0	0	2709	2087	1745	1234	1006	869	757	683	758	593	549	527	489	437	412
41.0	0	2754	2133	1786	1263	1028	893	782	703	778	649	569	534	502	442	417
44.0	0	2892	2268	1912	1353	1110	958	843	758	840	721	666	603	533	469	442
46.0	0	2983	2360	1996	1401	1161	1005	880	792	900	753	707	670	564	493	464
48.0	0	3074	2451	2077	1460	1211	1051	927	838	939	800	741	706	646	527	497
51.0	0	3212	2589	2198	1549	1285	1118	994	902	1000	852	803	764	694	615	580
60.0	3000	3623	3000	2568	1810	1508	1321	1177	1075	1218	1054	982	930	836	766	722
80.0	4750	4538	3915	3392	2983	2505	2210	1989	1811	1656	1459	1371	1304	1175	1088	1026
100.0	5500	5453	4830	4216	3705	3125	2768	2508	2290	2103	1840	1740	1654	1508	1396	1316
120.0	6300	6367	5744	5039	4426	3745	3327	3028	2759	2545	2238	2102	2001	1831	1701	1604
140.0	7400	7282	6659	5863	5148	4365	3885	3547	3228	2987	2626	2468	2350	2156	2005	1890

Axis tables:
 

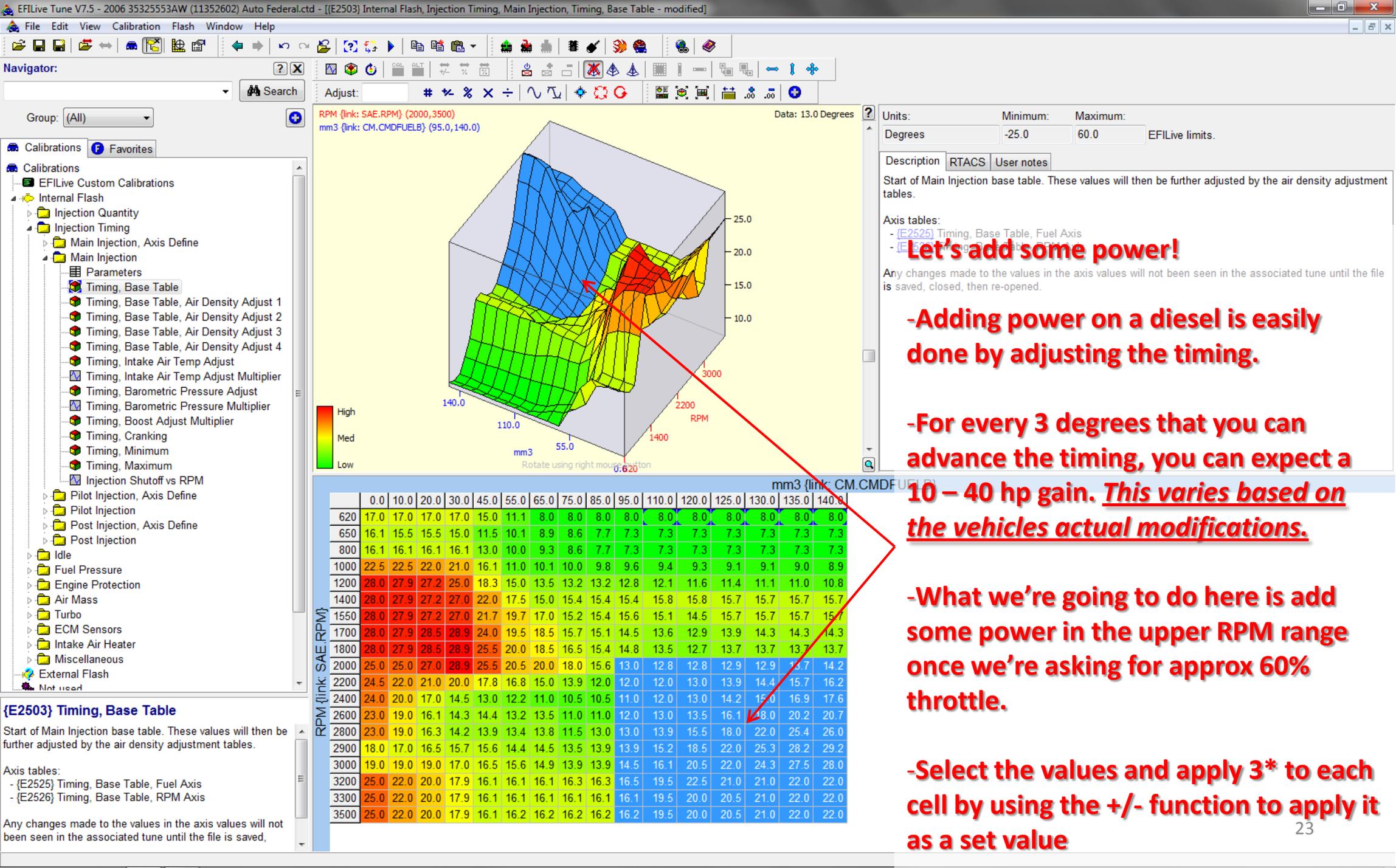
- [D0500] Main Injection Pulse Fuel Axis
- [D0501] Main Injection Pulse Fuel Pressure Axis

**-Continue to make this adjustment until you achieve the desired level of smoke reduction**

**-You can also add duration to simulate installing larger injectors.**

**-Remember! Duration is limited to a specific period of time. Asking for more than you physically have will produce no further gains**

22



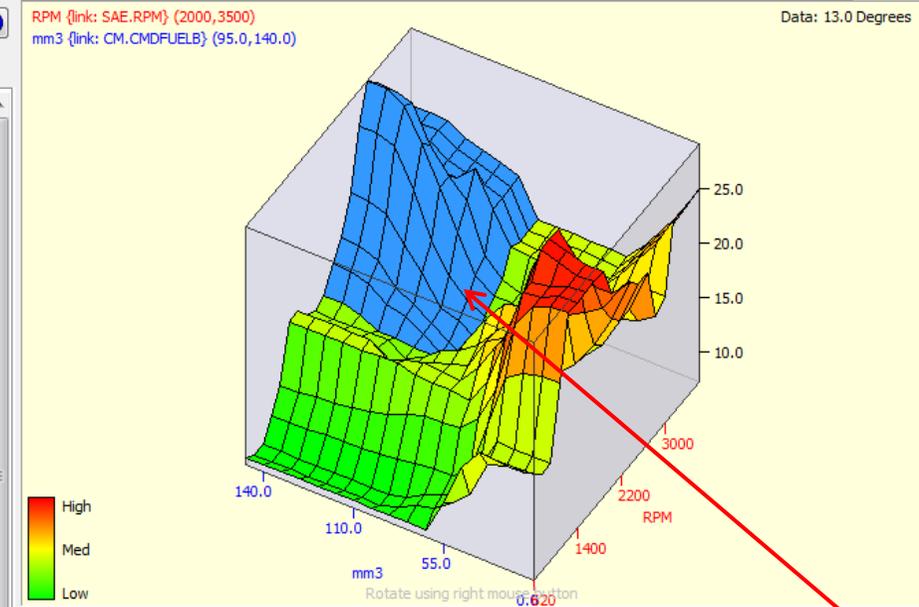
File Edit View Calibration Flash Window Help

Adjust: # % / X ÷ ~

Group: (All)

Calibrations Favorites

- Calibrations
  - EFILive Custom Calibrations
  - Internal Flash
    - Injection Quantity
    - Injection Timing
      - Main Injection, Axis Define
        - Main Injection
          - Parameters
          - Timing, Base Table
          - Timing, Base Table, Air Density Adjust 1
          - Timing, Base Table, Air Density Adjust 2
          - Timing, Base Table, Air Density Adjust 3
          - Timing, Base Table, Air Density Adjust 4
          - Timing, Intake Air Temp Adjust
          - Timing, Intake Air Temp Adjust Multiplier
          - Timing, Barometric Pressure Adjust
          - Timing, Barometric Pressure Multiplier
          - Timing, Boost Adjust Multiplier
          - Timing, Cranking
          - Timing, Minimum
          - Timing, Maximum
        - Injection Shutoff vs RPM
      - Pilot Injection, Axis Define
      - Pilot Injection
      - Post Injection, Axis Define
      - Post Injection
      - Idle
      - Fuel Pressure
      - Engine Protection
      - Air Mass
      - Turbo
      - ECM Sensors
      - Intake Air Heater
      - Miscellaneous
    - External Flash
    - Not used



Units: Minimum: Maximum:  
Degrees -25.0 60.0 EFLive limits.

Description RTACS User notes

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

Axis tables:  
- [E2525] Timing, Base Table, Fuel Axis  
- [E2526] Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
620	17.0	17.0	17.0	17.0	15.0	11.1	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
650	16.1	15.5	15.5	15.0	11.5	10.1	8.9	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
800	16.1	16.1	16.1	16.1	13.0	10.0	9.3	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
1000	22.5	22.5	22.0	21.0	16.1	11.0	10.1	10.0	9.8	9.6	9.4	9.3	9.1	9.1	9.0	8.9
1200	28.0	27.9	27.2	25.0	18.3	15.0	13.5	13.2	12.8	12.1	11.6	11.4	11.1	11.0	10.8	
1400	28.0	27.9	27.2	27.0	22.0	17.5	15.0	15.4	15.4	15.4	15.8	15.8	15.7	15.7	15.7	15.7
1550	28.0	27.9	27.2	27.0	21.7	19.7	17.0	15.2	15.4	15.6	15.1	14.5	15.7	15.7	15.7	15.7
1700	28.0	27.9	28.5	28.9	24.0	19.5	18.5	15.7	15.1	14.5	13.6	12.9	13.9	14.3	14.3	14.3
1800	28.0	27.9	28.5	28.9	25.5	20.0	18.5	16.5	15.4	14.8	13.5	12.7	13.7	13.7	13.7	13.7
2000	25.0	25.0	27.0	28.9	25.5	20.5	20.0	18.0	15.6	13.0	12.8	12.8	12.9	12.9	13.7	14.2
2200	24.5	22.0	21.0	20.0	17.8	16.8	15.0	13.9	12.0	12.0	13.0	13.9	14.4	15.7	16.2	
2400	24.0	20.0	17.0	14.5	13.0	12.2	11.0	10.5	10.5	11.0	12.0	13.0	14.2	15.0	16.9	17.6
2600	23.0	19.0	16.1	14.3	14.4	13.2	13.5	11.0	11.0	12.0	13.0	13.5	16.1	18.0	20.2	20.7
2800	23.0	19.0	16.3	14.2	13.9	13.4	13.8	11.5	13.0	13.0	13.9	15.5	18.0	22.0	25.4	26.0
2900	18.0	17.0	16.5	15.7	15.6	14.4	14.5	13.5	13.9	13.9	15.2	18.5	22.0	25.3	28.2	29.2
3000	19.0	19.0	19.0	17.0	16.5	15.6	14.9	13.9	13.9	14.5	16.1	20.5	22.0	24.3	27.5	28.0
3200	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.3	16.3	16.5	19.5	22.5	21.0	21.0	22.0	22.0
3300	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.1	16.1	16.1	19.5	20.0	20.5	21.0	22.0	22.0
3500	25.0	22.0	20.0	17.9	16.1	16.2	16.2	16.2	16.2	16.2	19.5	20.0	20.5	21.0	22.0	22.0

RPM (link: SAE.RPM)

**Let's add some power!**

**-Adding power on a diesel is easily done by adjusting the timing.**

**-For every 3 degrees that you can advance the timing, you can expect a 10 – 40 hp gain. This varies based on the vehicles actual modifications.**

**-What we're going to do here is add some power in the upper RPM range once we're asking for approx 60% throttle.**

**-Select the values and apply 3\* to each cell by using the +/- function to apply it as a set value**

EFI Live Tune V7.5 - 2006 3532553AW (11352602) Auto Federal.ctd - [[E2503] Internal Flash, Timing, Base Table, Fuel Axis - modified]

File Edit View Calibration Flash Window Help

Adjust: 3

Units: Degrees Minimum: -25.0 Maximum: 60.0 EFLive limits.

Description: RTACS User notes

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

Axis tables:

- [E2525] Timing, Base Table, Fuel Axis
- [E2526] Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved, closed, then re-opened.

**Let's add some power!**

**-What we've done is added 3\* to each cell and the corresponding map.**

**-On an otherwise stock truck, this would add approx 35 PEAK hp in this range. Results WILL vary.**

**-REMEMBER! Timing is THE easiest way to damage the motor too. Too much timing and you try to fire the motor backwards. We HIGHLY recommend you do this tuning on a dyno.**

Calibrations Favorites

EFILive Custom Calibrations

Internal Flash

Injection Quantity

Injection Timing

Main Injection, Axis Define

Main Injection

Parameters

Timing, Base Table

Timing, Base Table, Air Density Adjust 1

Timing, Base Table, Air Density Adjust 2

Timing, Base Table, Air Density Adjust 3

Timing, Base Table, Air Density Adjust 4

Timing, Intake Air Temp Adjust

Timing, Intake Air Temp Adjust Multiplier

Timing, Barometric Pressure Adjust

Timing, Barometric Pressure Multiplier

Timing, Boost Adjust Multiplier

Timing, Cranking

Timing, Minimum

Timing, Maximum

Injection Shutoff vs RPM

Pilot Injection, Axis Define

Pilot Injection

Post Injection, Axis Define

Post Injection

Idle

Fuel Pressure

Engine Protection

Air Mass

Turbo

ECM Sensors

Intake Air Heater

Miscellaneous

External Flash

Not used

{E2503} Timing, Base Table

Start of Main Injection base table. These values will then be further adjusted by the air density adjustment tables.

Axis tables:

- [E2525] Timing, Base Table, Fuel Axis
- [E2526] Timing, Base Table, RPM Axis

Any changes made to the values in the axis values will not be seen in the associated tune until the file is saved,

RPM (link: SAE.RPM) (2000,3500)

mm3 (link: CM.CMDFUELB) (95.0,140.0)

Data: 16.0 Degrees

High

Med

Low

mm3 (link: CM.CMDFUELB)

	0.0	10.0	20.0	30.0	45.0	55.0	65.0	75.0	85.0	95.0	110.0	120.0	125.0	130.0	135.0	140.0
620	17.0	17.0	17.0	17.0	15.0	11.1	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
650	16.1	15.5	15.5	15.0	11.5	10.1	8.9	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
800	16.1	16.1	16.1	16.1	13.0	10.0	9.3	8.6	7.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
1000	22.5	22.5	22.0	21.0	16.1	11.0	10.1	10.0	9.8	9.6	9.4	9.3	9.1	9.1	9.0	8.9
1200	28.0	27.9	27.2	25.0	18.3	15.0	13.5	13.2	13.2	12.8	12.1	11.6	11.4	11.1	11.0	10.8
1400	28.0	27.9	27.2	27.0	22.0	17.5	15.0	15.4	15.4	15.4	15.8	15.8	15.7	15.7	15.7	15.7
1550	28.0	27.9	27.2	27.0	21.7	19.7	17.0	15.2	15.4	15.6	15.1	14.5	15.7	15.7	15.7	15.7
1700	28.0	27.9	28.5	28.9	24.0	19.5	18.5	15.7	15.1	14.5	13.6	12.9	13.9	14.3	14.3	14.3
1800	28.0	27.9	28.5	28.9	25.5	20.0	18.5	16.5	15.4	14.8	13.5	12.7	13.7	13.7	13.7	13.7
2000	25.0	25.0	27.0	28.9	25.5	20.5	20.0	18.0	15.6	16.0	15.8	15.8	15.9	15	16.7	17.2
2200	24.5	22.0	21.0	20.0	17.8	16.8	15.0	13.9	12.0	15.0	15.0	16.0	16.9	17.4	18.7	19.2
2400	24.0	20.0	17.0	14.5	13.0	12.2	11.0	10.5	10.5	14.0	15.0	16.0	17.2	18.0	19.9	20.6
2600	23.0	19.0	16.1	14.3	14.4	13.2	13.5	11.0	11.0	15.0	16.0	16.5	19.1	21.0	23.2	23.7
2800	23.0	19.0	16.3	14.2	13.9	13.4	13.8	11.5	13.0	16.0	16.9	18.5	21.0	25.0	28.4	29.0
2900	18.0	17.0	16.5	15.7	15.6	14.4	14.5	13.5	13.9	16.9	18.2	21.5	25.0	28.3	31.2	32.2
3000	19.0	19.0	19.0	17.0	16.5	15.6	14.9	13.9	13.9	17.5	19.1	23.5	25.0	27.3	30.5	31.0
3200	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.3	16.3	19.5	22.5	25.5	24.0	24.0	25.0	25.0
3300	25.0	22.0	20.0	17.9	16.1	16.1	16.1	16.1	16.1	19.1	22.5	23.0	23.5	24.0	25.0	25.0
3500	25.0	22.0	20.0	17.9	16.1	16.2	16.2	16.2	16.2	19.2	22.5	23.0	23.5	24.0	25.0	25.0

# MEFILive

## For Dummies!

