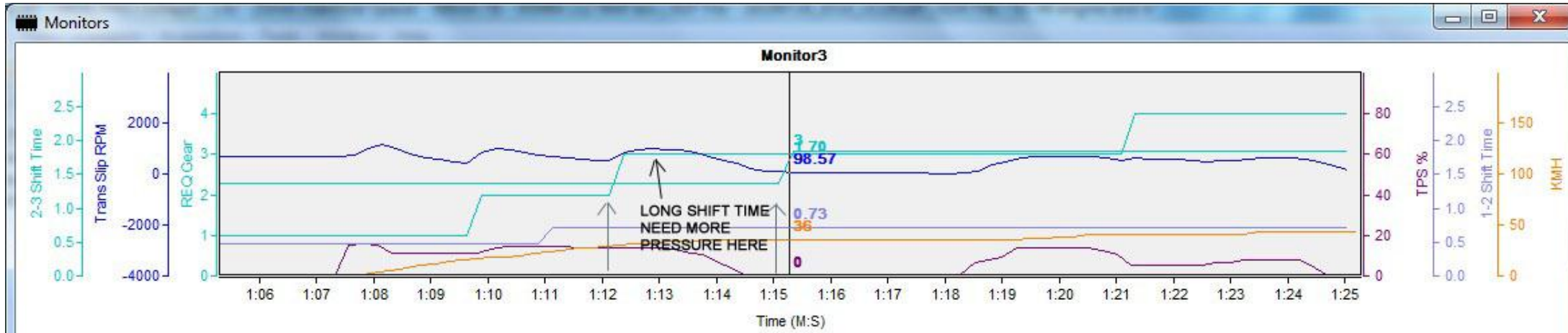


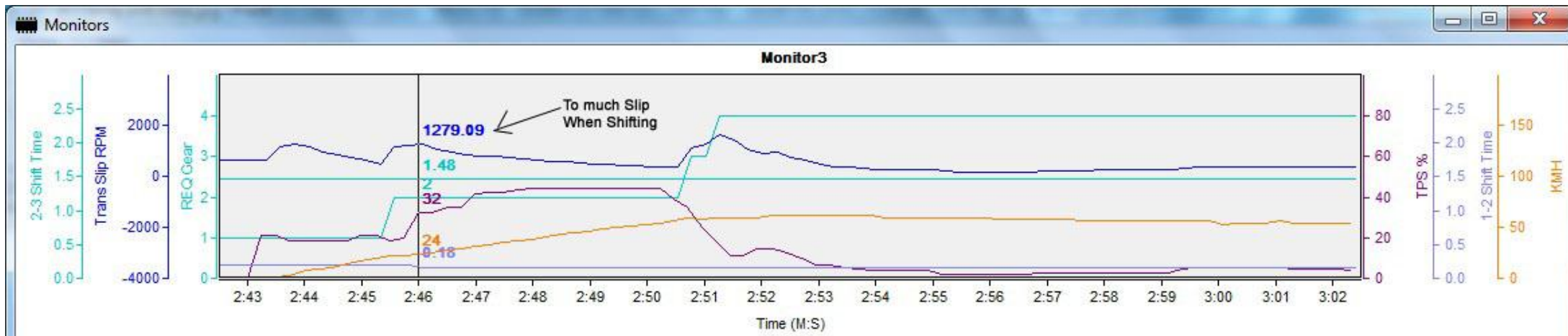
Automatic Force Motor Tuning Tips

VS V6 N/A Used for EG

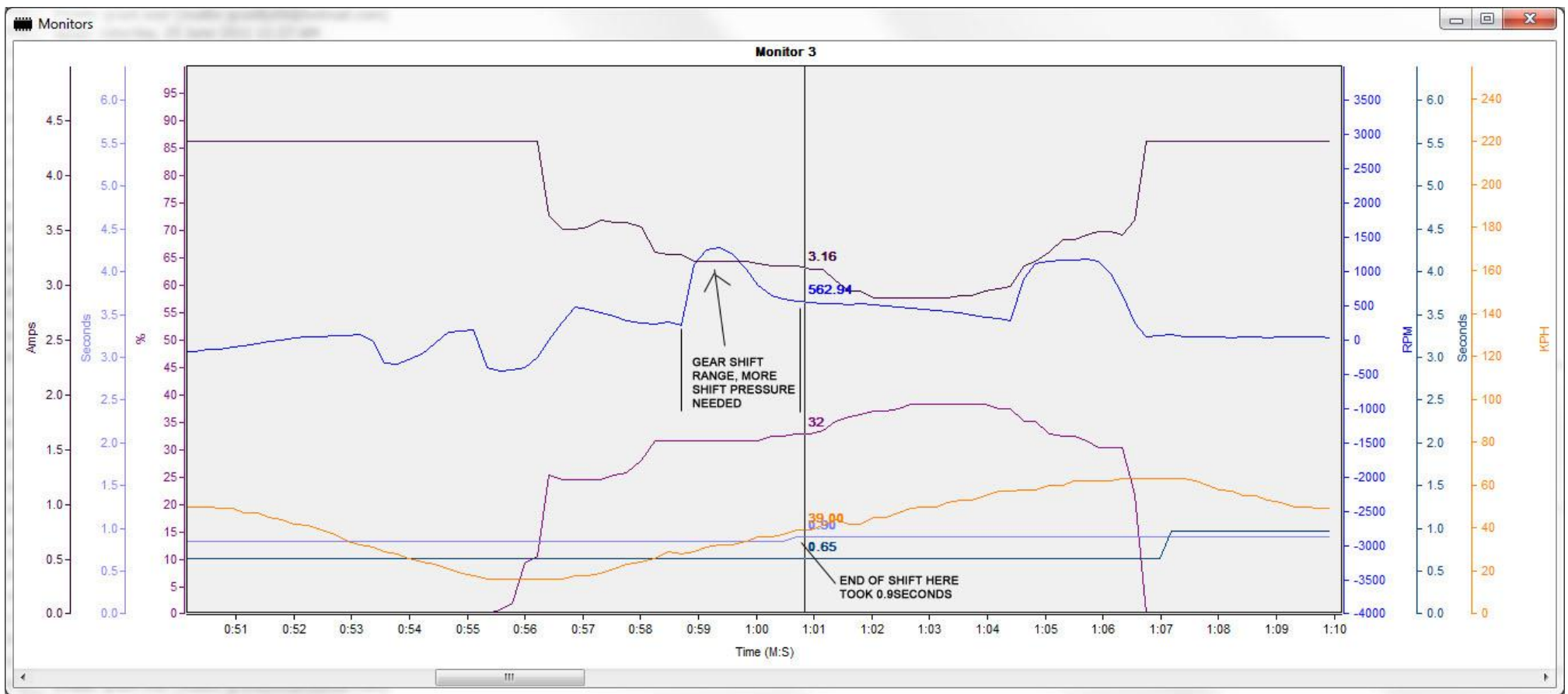
New Transmissions run at ruffly 400rpm slip while not TCC Locked. TCC Lock should produce no Slip.
Shift Times (Aim for 0.4 – 0.5seconds, or down to 0.3 Seconds with shiftkit, any faster and get potential overlap)



1.70 Second Shift Time



Classic Stock Force Motor Tables, Slip for Smooth Shifting



Needs more Shift Pressure Added, Stock Added Shift Pressure is Normally 3psi

Typical Scalars to Add Extra Pressure while Shifting

| Force Motor - Pressure ... | Force Motor - Pressure ... | Force Motor - Pressure ... |
|--|--|--|
| Force Motor - Pressure Added for 1-2 Upshift | Force Motor - Pressure Added for 2-3 Upshift | Force Motor - Pressure Added for 3-4 Upshift |
| <input type="text" value="3.00"/> PSI | <input type="text" value="3.00"/> PSI | <input type="text" value="3.00"/> PSI |
| No Compare Bin | No Compare Bin | No Compare Bin |
| <input type="text" value="None"/> Copy Save Cancel | <input type="text" value="None"/> Copy Save Cancel | <input type="text" value="None"/> Copy Save Cancel |

STOCK Force Motor Table Trans Slip History Log

History Tables

History Table

Trans Slip

View

Running Average

Clear

☐ Graph

Trans Slip - TPS vs VSS vs Transmission Slip

| | 0 | 6.150 | 12.500 | 18.750 | 25 | 31.150 | 37.500 | 43.750 | 50 | 56.150 | 62.500 | 68.750 | 75 | 81.150 | 87.500 | 93.750 | 100 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|---------|---------|----------|--------|--------|-----|
| 0 | 847.401 | 1305.635 | 777.792 | 1066.938 | 764.625 | | | | | | | | | | | | |
| 6 | 429.498 | 955.938 | 1007.750 | 1162.594 | 1090.333 | 785.750 | | | | | | | | | | | |
| 13 | -61.190 | 362.325 | 666.078 | 655.917 | | 971.500 | | | | | | | | | | | |
| 19 | -104.192 | 563.750 | 747.722 | 850.661 | | 722 | 1343.625 | | | | 627.500 | | | | | | |
| 26 | 108.537 | 442.750 | 713.487 | 877.522 | 887.150 | 865.479 | 878.625 | 934 | | | | | 532.375 | | | | |
| 32 | -5.781 | | 728.625 | 782.125 | 738.486 | 818.200 | 770.328 | 807.500 | | 907 | | | 391.813 | | | | |
| 39 | 58.073 | 512.271 | 691.216 | 957.938 | 919 | 676.938 | 704.156 | 510.833 | | 752.625 | | 348.875 | | | | | |
| 45 | 103.651 | 494.660 | 730.107 | 842.375 | 839.021 | 801.333 | 887.625 | 581.675 | | 1006.250 | 303.125 | | | | | | |
| 51 | 100.905 | 384.566 | 774.767 | 852.272 | 903.328 | 896.479 | 1141.750 | 891.732 | | | | | | | | | |
| 58 | 69.681 | 346.360 | 913.711 | 923.338 | 1181.563 | | 695.333 | 411.313 | | 1010 | 421.625 | | | | | | |
| 64 | -9.631 | 254.397 | 625.683 | 771.429 | 872.750 | 906.625 | 930.125 | 678.125 | | 494.250 | 360.167 | | | | | | |
| 71 | -67.121 | 288.089 | 507.575 | | | | | 1477.250 | 661.125 | 533.482 | | 345.875 | | -101.792 | | | |
| 77 | -24.566 | 21.772 | 200 | | | | | 825.292 | 534.750 | 569.650 | | 321.625 | 307.458 | | | | |
| 84 | -118.522 | 49.771 | 126.896 | 348.038 | 14.639 | 1202.042 | 487.458 | 483.313 | 1425.125 | | | 278.250 | 284.938 | | | | |
| 90 | -38.826 | 101.475 | 492.500 | 404.500 | 686.438 | 1132.583 | 658.417 | 873.344 | | | | | | | | | |
| 97 | | | | | | | | | | | | | | | | | |
| 103 | | | | | | | | | | | | | | | | | |

History Tables

Monitors

History Tables Monitors

TUNED Force Motor Table Trans Slip History Log

(Aim for 400slip rpm in Non TCC Locked Areas, Depending on Trans Condition this target may not be achievable, this is the tune achieved on a 270,000 km 4L60E)

History Tables

History Table

Trans Slip

View

Running Average

Clear

☐ Graph

Trans Slip - TPS vs VSS vs Transmission Slip

| | 0 | 6.150 | 12.500 | 18.750 | 25 | 31.150 | 37.500 | 43.750 | 50 | 56.150 | 62.500 | 68.750 | 75 | 81.150 | 87.500 | 93.750 | 100 |
|-----|----------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|--------|----|--------|--------|--------|-----|
| 0 | 990.215 | 878.106 | 990.234 | | | | | | | | | | | | | | |
| 6 | 479.575 | 639.685 | 711.984 | 972.409 | 881.958 | 1094 | | | | | | | | | | | |
| 13 | -28.264 | 248.680 | 368.982 | 593.944 | 872.500 | 737.125 | 1025.563 | | | | | | | | | | |
| 19 | -168.023 | 451.286 | 496.435 | 434.158 | | 634.458 | 769.375 | | | | | | | | | | |
| 26 | 184.680 | 406.160 | 552.719 | 775.180 | 761.188 | 793.111 | 481.188 | | | | | | | | | | |
| 32 | 115.007 | 432 | 583.150 | 570.218 | 681.010 | 673.750 | 767.646 | 877.929 | 842.125 | | | | | | | | |
| 39 | -19.875 | 242.675 | 417.979 | 665.561 | 685.206 | 604.578 | 630.021 | 730.333 | 746.042 | | | | | | | | |
| 45 | 84.856 | 315.665 | 542.913 | 617.486 | 710.021 | 589.739 | 526.500 | 671.250 | 612.625 | | | | | | | | |
| 51 | 85.374 | 331.346 | 517.214 | 699.072 | 735.344 | 759.375 | 876.125 | 485.203 | 461.200 | 470.688 | | | | | | | |
| 58 | 49.978 | 292.458 | 483.657 | 648.927 | 806.606 | 856.758 | 484.958 | 386.931 | 424.125 | | 442.300 | | | | | | |
| 64 | 16.728 | 310.151 | 461.920 | 605.209 | 712.767 | 804.254 | 1217.875 | 349.333 | 371.167 | | 385.719 | | | | | | |
| 71 | 12.599 | 191.383 | 345.290 | | 708.620 | 774.029 | | 1248.750 | 505.393 | | | | | | | | |
| 77 | -1.973 | 74.637 | 68.808 | 443.065 | 592.632 | 713.819 | 468.625 | 543 | 699.479 | | | | | | | | |
| 84 | -70.494 | -1.901 | 2.382 | 206.137 | 491.703 | 712.569 | 666.018 | | | | | | | | | | |
| 90 | -52.989 | -3.637 | 0.899 | 6.931 | 41.083 | 585.813 | 641.100 | | | | | | | | | | |
| 97 | -10.536 | -4.652 | -4.415 | -4.215 | -3.445 | | | | | | | | | | | | |
| 103 | | -4.365 | -4.756 | -4.605 | -4.182 | | | | | | | | | | | | |

History Tables

Monitors

Some of the higher speed or Higher TPS areas may not be able to be tuned as 90psi max pressure has already been Met. There will then need to be hardware replaced (Clutches etc) or modifications done (Shiftkits, servos etc) to increase apply pressure.

Stock Force Motor Table for Reference

Normal Mode - Force Motor Pressure (PSI) V's TPS & KPH

Function: Offset (+/-) Value: -1 Execute

Edit linked Y-Axis table

| | 0 | 6% | 31% | 37½ | 43¾ | 50 | 56% | 62½ | 68¾ | 75 | 81% | 87½ | 93¾ | 100 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 15.00 | 10.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 13 | 25.00 | 15.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 19 | 30.00 | 20.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 26 | 40.00 | 30.00 | 22.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 32 | 50.00 | 40.00 | 30.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| 39 | 70.00 | 60.00 | 50.00 | 43.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 |
| 45 | 80.00 | 70.00 | 60.00 | 52.00 | 45.00 | 45.00 | 45.00 | 45.00 | 45.00 | 45.00 | 45.00 | 45.00 | 45.00 | 45.00 |
| 51 | 90.00 | 80.00 | 70.00 | 63.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 |
| 58 | 90.00 | 90.00 | 80.00 | 73.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 |
| 64 | 90.00 | 90.00 | 90.00 | 85.00 | 80.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 71 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| 77 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| 84 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 |
| 90 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 86.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 |
| 97 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| 103 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |

Sel Count: 1, Min: 0.000, Max: 0.000, Avg: 0.000

Tweaked Force Motor Table

Normal Mode - Force Motor Pressure (PSI) V's TPS & KPH

Function: Offset (+/-) Value: -1 Execute

| | 0 | 6% | 12% | 18% | 25 | 31% | 37% | 43% | 50 | 56% | 62% | 68% | 75 | 81% | 87% | 93% | 100 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 25.00 | 15.00 | 10.00 | 8.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| 13 | 35.00 | 25.00 | 15.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| 19 | 46.00 | 40.00 | 38.00 | 35.00 | 32.00 | 30.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 |
| 26 | 66.00 | 55.00 | 55.00 | 55.00 | 50.00 | 42.00 | 40.00 | 38.00 | 38.00 | 38.00 | 38.00 | 38.00 | 38.00 | 38.00 | 38.00 | 38.00 | 38.00 |
| 32 | 76.00 | 65.00 | 65.00 | 65.00 | 60.00 | 51.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 |
| 39 | 90.00 | 80.00 | 75.00 | 75.00 | 75.00 | 64.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 |
| 45 | 90.00 | 90.00 | 85.00 | 85.00 | 85.00 | 69.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 |
| 51 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 85.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 | 76.00 |
| 58 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 86.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 | 81.00 |
| 64 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 | 87.00 |
| 71 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| 77 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| 84 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| 90 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| 97 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| 103 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |

Sel Count: 1, Min: 0.000, Max: 0.000, Avg: 0.000

When tuning the Force Motor Table you want to try and keep it smooth, if there is some parts that need attention and only at certain conditions like only in 3rd gear it maybe better altering another table like below.

Typical Table to Add Extra Running Pressure Per Gear Vs TPS

2-3-4 Pressure Offset (PSI)...

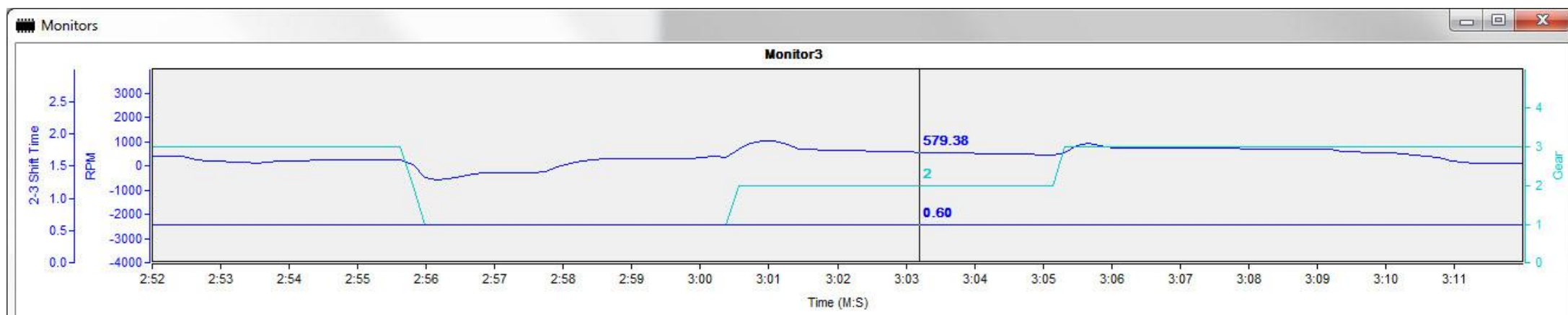
Function: Offset (+/-) Value: 1

2-3-4 Pressure Offset (PSI) V's...

| | 2nd | 3rd | 4th |
|-------|------|-------|-------|
| 0 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 5.00 | 0.00 |
| 12.5 | 0.00 | 8.00 | 0.00 |
| 18.75 | 5.00 | 15.00 | 5.00 |
| 25 | 5.00 | 15.00 | 10.00 |
| 31.25 | 0.00 | 10.00 | 10.00 |
| 37.5 | 0.00 | 0.00 | 10.00 |
| 43.75 | 0.00 | 0.00 | 10.00 |
| 50 | 0.00 | 0.00 | 10.00 |
| 56.25 | 0.00 | 0.00 | 10.00 |
| 62.5 | 0.00 | 0.00 | 10.00 |
| 68.75 | 0.00 | 0.00 | 10.00 |
| 75 | 0.00 | 0.00 | 10.00 |
| 81.25 | 0.00 | 0.00 | 5.00 |
| 87.5 | 0.00 | 0.00 | 5.00 |
| 93.25 | 0.00 | 0.00 | 0.00 |
| 100 | 0.00 | 0.00 | 0.00 |

Sel Co

Tuned Slip Log, a much more acceptable slip rpm and shift time



Pressure Increase Over Stock Force Motor Table Compare Above

Normal Mode - Force Motor Pressure (PSI) V's TPS & KPH

Function: Offset (+/-) Value: -1 Execute

CKUL4113.BIN - Normal Mode - Force Motor Pressure (PSI) V's TPS & KPH

| | 0 | 6% | 12½ | 18¾ | 25 | 31¼ | 37½ | 43¾ | 50 | 56¼ | 62½ | 68¾ | 75 | 81¼ | 87½ | 93¾ | 100 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 10.00 | 5.00 | 5.00 | 3.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 13 | 10.00 | 10.00 | 10.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| 19 | 16.00 | 20.00 | 28.00 | 25.00 | 22.00 | 20.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 |
| 26 | 26.00 | 25.00 | 33.00 | 40.00 | 35.00 | 27.00 | 25.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 |
| 32 | 26.00 | 25.00 | 35.00 | 40.00 | 35.00 | 26.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 |
| 39 | 20.00 | 20.00 | 25.00 | 32.00 | 38.00 | 27.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 |
| 45 | 10.00 | 20.00 | 25.00 | 33.00 | 40.00 | 24.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 |
| 51 | 0.00 | 10.00 | 20.00 | 27.00 | 35.00 | 30.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 | 21.00 |
| 58 | 0.00 | 0.00 | 10.00 | 17.00 | 25.00 | 21.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 | 16.00 |
| 64 | 0.00 | 0.00 | 0.00 | 5.00 | 10.00 | 15.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| 71 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| 84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 103 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Sel Count: 1, Min: 0.000, Max: 0.000, Avg: 0.000

I hope this gives you some Tips in Tuning your own transmission, obviously this tuning needs to be done in both normal and performance modes.