

NHRA ALTITUDE CORRECTION PROCESS

This altitude correction process applies to all classes with the following exceptions: Top Fuel, Funny Car, Pro Stock, Pro Stock Motorcycle, Top Alcohol Dragster, Top Alcohol Funny Car, Pro Modified, and Competition Eliminator. The following formula is used to convert elapsed times from Sea Level to any given Altitude. The same formula can be reversed to convert from a given Altitude back to Sea Level. You can also use the form found on NHRARacer.com to make this conversion. All factors can be found in the table below.

$$\text{CorrectedET} = \text{ActET} * \text{Factor}$$

$$\text{CorrectedMPH} = \text{ActMPH} * \text{Factor}$$

Where:

CorrectedET = Elapsed Time after conversion
ActET = Elapsed Time of actual run
Factor = Factor at given Altitude

Where:

CorrectedMPH = MPH after conversion
ActMPH = MPH of actual run
Factor = MPH Factor at given Altitude

Division 4		Convert to Sea Level		Convert to Altitude	
City Name	Altitude	ET	MPH	ET	MPH
Roswell, NM	3600	0.9658	1.0326	1.0354	0.9684

Division 5		Convert to Sea Level		Convert to Altitude	
City Name	Altitude	ET	MPH	ET	MPH
Denver, CO	5800	0.9405	1.0563	1.0633	0.9467
Great Bend, KS	1900	0.9853	1.0143	1.0149	0.9859
Julesburg, CO	3500	0.9669	1.0315	1.0342	0.9694
Kearney, NE	2100	0.9830	1.0165	1.0173	0.9838
Pueblo, CO	4900	0.9508	1.0466	1.0517	0.9555
Sturgis, SD	3200	0.9704	1.0283	1.0305	0.9725

Division 6		Convert to Sea Level		Convert to Altitude	
City Name	Altitude	ET	MPH	ET	MPH
Acton, MT	3700	0.9646	1.0337	1.0367	0.9674
Anaconda, MT	5100	0.9485	1.0488	1.0543	0.9535
Boise, ID	2700	0.9761	1.0229	1.0245	0.9776
Lewistown, MT	4100	0.9600	1.0380	1.0416	0.9634
Madras, OR	2200	0.9819	1.0175	1.0185	0.9828
Medicine Hat, AB	2400	0.9796	1.0197	1.0209	0.9807
Edmonton, AB	2300	0.9807	1.0186	1.0197	0.9817
Spokane, WA	2300	0.9807	1.0186	1.0197	0.9817
Prince George, BC	2500	0.9784	1.0208	1.0221	0.9797

Division 7		Convert to Sea Level		Convert to Altitude	
City Name	Altitude	ET	MPH	ET	MPH
Albuquerque, NM	5400	0.9451	1.0520	1.0581	0.9506
Fallon, NV	4000	0.9612	1.0369	1.0404	0.9644
Grand Junction, CO	5000	0.9497	1.0477	1.053	0.9545
Las Vegas, NV	2100	0.9830	1.0165	1.0173	0.9838
Tucson, AZ	3100	0.9715	1.0272	1.0293	0.9735

COMPETITION ELIMINATOR ALTITUDE CORRECTION PROCESS

Due to the diverse nature and range of cars competing within the Competition Eliminator category the following formula is used to convert elapsed times from Sea Level to any given Altitude. The same formula can be reversed to convert from a given Altitude back to Sea Level. You can also use the form found on NHRARacer.com to make this conversion. All factors can be found in the table on the following page.

For Naturally Aspirated Classes:

$$AltET = SLET * Factor + Offset$$

OR

$$SLET = \frac{AltET - Offset}{Factor}$$

Where:

AltET = Elapsed Time at given Altitude

SLET = Elapsed Time at Sea Level

Factor = Factor at given Altitude
Offset = Offset at given Altitude

$$AltMPH = SLMPH * Factor$$

OR

$$SLMPH = \frac{AltMPH}{Factor}$$

Where:

AltMPH = MPH at given Altitude

SLMPH = MPH at Sea Level

Factor = MPH Factor at given Altitude

For Supercharged, Turbocharged, N2O (i.e. ½ Factor) Classes:

$$AltET = SLET * \frac{(Factor - 1)}{2} + 1 + \frac{Offset}{2}$$

OR

$$SLET = \frac{\frac{AltET - \frac{Offset}{2}}{2} + 1}{\frac{(Factor - 1)}{2}}$$

Where:

AltET = Elapsed Time at given Altitude

SLET = Elapsed Time at Sea Level

Factor = Factor at given Altitude
Offset = Offset at given Altitude

$$AltMPH = SLMPH * FactorHalf$$

OR

$$SLMPH = \frac{AltMPH}{FactorHalf}$$

Where:

AltMPH = MPH at given Altitude

SLMPH = MPH at Sea Level

FactorHalf = ½ MPH Factor at given Altitude

CORRECTION FACTORS LISTED BY ALTITUDE

Altitude	Factor	Offset	MPH Factor	½ MPH Factor
1600	1.0228	-0.13	0.989	0.9945
1700	1.0228	-0.12	0.988	0.994
1800	1.0266	-0.14	0.9869	0.9934
1900	1.0266	-0.13	0.9859	0.9929
2000	1.0266	-0.12	0.9848	0.9924
2100	1.0342	-0.17	0.9838	0.9918
2200	1.0342	-0.16	0.9828	0.9913
2300	1.0380	-0.18	0.9817	0.9908
2400	1.0380	-0.17	0.9807	0.9903
2500	1.0380	-0.16	0.9797	0.9897
2600	1.0418	-0.17	0.9786	0.9892
2700	1.0418	-0.16	0.9776	0.9887
2800	1.0456	-0.19	0.9766	0.9881
2900	1.0494	-0.21	0.9755	0.9876
3000	1.0494	-0.20	0.9745	0.9871
3100	1.0494	-0.19	0.9735	0.9866
3200	1.0532	-0.20	0.9725	0.986
3300	1.0532	-0.19	0.9715	0.9855
3400	1.0570	-0.21	0.9704	0.985
3500	1.0570	-0.20	0.9694	0.9845
3600	1.0608	-0.23	0.9684	0.984
3700	1.0646	-0.24	0.9674	0.9834
3800	1.0646	-0.23	0.9664	0.9829
3900	1.0646	-0.22	0.9654	0.9824
4000	1.0684	-0.24	0.9644	0.9819
4100	1.0684	-0.23	0.9634	0.9814
4200	1.0684	-0.22	0.9624	0.9808
4300	1.0760	-0.27	0.9614	0.9803
4400	1.0760	-0.26	0.9604	0.9798
4500	1.0798	-0.28	0.9594	0.9793
4600	1.0798	-0.27	0.9584	0.9788
4700	1.0798	-0.26	0.9574	0.9783
4800	1.0837	-0.28	0.9565	0.9777
4900	1.0837	-0.27	0.9555	0.9772
5000	1.0875	-0.30	0.9545	0.9767
5100	1.0913	-0.31	0.9535	0.9762
5200	1.0913	-0.30	0.9525	0.9757
5300	1.0913	-0.29	0.9516	0.9752
5400	1.0951	-0.31	0.9506	0.9747
5500	1.0951	-0.30	0.9496	0.9742
5600	1.0989	-0.32	0.9486	0.9736
5700	1.0989	-0.31	0.9477	0.9731
5800	1.1027	-0.33	0.9467	0.9726
5900	1.1065	-0.35	0.9457	0.9721
6000	1.1065	-0.34	0.9448	0.9716