RELATIVE HUMIDITY FOR RON & MON CFR ENGINE UNITS

Temperature VS Barometric Pressure Calculation Table

Temp	Vg		Pressure H in inches of Hg																			
°C	al/g		28.5	28.6	28.7	28.8	28.9	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	30.0	30.1	30.2	30.3	30.4	30.5
0.0	206,278	I/Va, g/al	0.001232	0.001236	0.001240	0.001245	0.001249	0.001253	0.001258	0.001262	0.001266	0.001270	0.001275	0.001279	0.001283	0.001288	0.001292	0.001296	0.001301	0.001305	0.001309	0.001314	0.001318
		RH, min	0.9044	0.9076	0.9108	0.9139	0.9171	0.9203	0.9235	0.9266	0.9298	0.9330	0.9361	0.9393	0.9425	0.9457	0.9488	0.9520	0.9552	0.9584	0.9615	0.9647	0.9679
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0	192,577	I/Va, g/al	0.001227	0.001231	0.001236	0.001240	0.001244	0.001249	0.001253	0.001257	0.001262	0.001266	0.001270	0.001274	0.001279	0.001283	0.001287	0.001292	0.001296	0.001300	0.001305	0.001309	0.001313
		RH, min	0.8413	0.8442	0.8472	0.8501	0.8531	0.8560	0.8590	0.8619	0.8649	0.8678	0.8708	0.8737	0.8767	0.8796	0.8826	0.8855	0.8885	0.8914	0.8944	0.8973	0.9003
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2.0	179,889	I/Va, g/al	0.001223	0.001227	0.001231	0.001235	0.001240	0.001244	0.001248	0.001253	0.001257	0.001261	0.001266	0.001270	0.001274	0.001278	0.001283	0.001287	0.001291	0.001296	0.001300	0.001304	0.001308
		RH, min	0.7830	0.7857	0.7885	0.7912	0.7940	0.7967	0.7994	0.8022	0.8049	0.8077	0.8104	0.8132	0.8159	0.8187	0.8214	0.8242	0.8269	0.8297	0.8324	0.8352	0.8379
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
3.0	168,132	I/Va, g/al	0.001218	0.001222	0.001227	0.001231	0.001235	0.001240	0.001244	0.001248	0.001252	0.001257	0.001261	0.001265	0.001269	0.001274	0.001278	0.001282	0.001287	0.001291	0.001295	0.001299	0.001304
		RH, min	0.7291	0.7317	0.7343	0.7368	0.7394	0.7419	0.7445	0.7470	0.7496	0.7522	0.7547	0.7573	0.7598	0.7624	0.7650	0.7675	0.7701	0.7726	0.7752	0.7777	0.7803
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4.0	157,232	I/Va, g/al	0.001214	0.001218	0.001222	0.001227	0.001231	0.001235	0.001239	0.001244	0.001248	0.001252	0.001256	0.001261	0.001265	0.001269	0.001273	0.001278	0.001282	0.001286	0.001290	0.001295	0.001299
		RH, min	0.6794	0.6818	0.6842	0.6866	0.6889	0.6913	0.6937	0.6961	0.6985	0.7009	0.7032	0.7056	0.7080	0.7104	0.7128	0.7152	0.7175	0.7199	0.7223	0.7247	0.7271
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
5.0	147,120	I/Va, g/al	0.001209	0.001214	0.001218	0.001222	0.001226	0.001231	0.001235	0.001239	0.001243	0.001248	0.001252	0.001256	0.001260	0.001265	0.001269	0.001273	0.001277	0.001282	0.001286	0.001290	0.001294
		RH, min	0.6334	0.6356	0.6379	0.6401	0.6423	0.6445	0.6467	0.6490	0.6512	0.6534	0.6556	0.6579	0.6601	0.6623	0.6645	0.6668	0.6690	0.6712	0.6734	0.6756	0.6779
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.0	137,734	I/Va, g/al	0.001205	0.001209	0.001214	0.001218	0.001222	0.001226	0.001230	0.001235	0.001239	0.001243	0.001247	0.001252	0.001256	0.001260	0.001264	0.001268	0.001273	0.001277	0.001281	0.001285	0.001290
		RH, min	0.5909	0.5929	0.5950	0.5971	0.5992	0.6012	0.6033	0.6054	0.6075	0.6095	0.6116	0.6137	0.6158	0.6178	0.6199	0.6220	0.6240	0.6261	0.6282	0.6303	0.6323
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
7.0	129,017	I/Va, g/al	0.001201	0.001205	0.001209	0.001213	0.001218	0.001222	0.001226	0.001230	0.001234	0.001239	0.001243	0.001247	0.001251	0.001256	0.001260	0.001264	0.001268	0.001272	0.001277	0.001281	0.001285
		RH, min	0.5515	0.5534	0.5554	0.5573	0.5592	0.5612	0.5631	0.5650	0.5670	0.5689	0.5708	0.5728	0.5747	0.5767	0.5786	0.5805	0.5825	0.5844	0.5863	0.5883	0.5902
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
8.0	120,917	I/Va, g/al	0.001196	0.001201	0.001205	0.001209	0.001213	0.001217	0.001222	0.001226	0.001230	0.001234	0.001238	0.001243	0.001247	0.001251	0.001255	0.001259	0.001264	0.001268	0.001272	0.001276	0.001280
		RH, min	0.5150	0.5168	0.5186	0.5205	0.5223	0.5241	0.5259	0.5277	0.5295	0.5313	0.5331	0.5349	0.5367	0.5385	0.5403	0.5421	0.5439	0.5458	0.5476	0.5494	0.5512
		RH, max	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
9.0	113,386	I/Va, g/al	0.001192	0.001196	0.001201	0.001205	0.001209	0.001213	0.001217	0.001221	0.001226	0.001230	0.001234	0.001238	0.001242	0.001247	0.001251	0.001255	0.001259	0.001263	0.001268	0.001272	0.001276
		RH, min	0.4812	0.4829	0.4846	0.4863	0.4880	0.4897	0.4914	0.4931	0.4947	0.4964	0.4981	0.4998	0.5015	0.5032	0.5049	0.5066	0.5083	0.5099	0.5116	0.5133	0.5150
		RH, max	0.9625	0.9659	0.9692	0.9726	0.9760	0.9794	0.9827	0.9861	0.9895	0.9929	0.9962	0.9996	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10.0	106,379	I/Va, g/al	0.001188	0.001192	0.001196	0.001200	0.001205	0.001209	0.001213	0.001217	0.001221	0.001225	0.001230	0.001234	0.001238	0.001242	0.001246	0.001251	0.001255	0.001259	0.001263	0.001267	0.001271
		RH, min	0.4499	0.4515	0.4531	0.4546	0.4562	0.4578	0.4594	0.4610	0.4625	0.4641	0.4657	0.4673	0.4688	0.4704	0.4720	0.4736	0.4752	0.4767	0.4783	0.4799	0.4815
		RH, max	0.8998	0.9030	0.9061	0.9093	0.9124	0.9156	0.9187	0.9219	0.9251	0.9282	0.9314	0.9345	0.9377	0.9408	0.9440	0.9472	0.9503	0.9535	0.9566	0.9598	0.9629

Va = Specific volume of dry air
Vg = Specific volume of satuated vapour
I/Va=Density of dry air. = .00129#H#2.54/((1+0.00367#t)#76)
Where, H = Pressure, in of Hg and T = Temperature in oC
Relative Humidity minimum = 0.00356 Vg/Va

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