

Gearing, Bella, Bonneville 2012

Engine sprocket = 24T - Cutch sprocket = 52T - Ratio engine/clutch (24/52) = 0,4615 or (52/24) = 2,167 - Circumference, rear tyre = 1.98 m
 Rear wheel revolutions pr mile = 813 (1609 m/1.98 m) - Rpm, rear wheel, pr mph = 13.6 (1 mph = 813 revolutions/hour /60 minutes)

Rear wheel sprocket 34T		34T					
Gearbox Sprocket	Ratio	mph pr 1000 rpm*	mph @ 4000 rpm	mph @ 4700 rpm	mph @ 5000 rpm	mph @ 5500 rpm	mph @ 6000 rpm
15T	2,27	14,9	60	70	75	82	90
17T	2,00	17,0	68	80	85	93	102
18T	1,89	18,0	72	84	90	99	108
19T	1,79	19,0	76	89	95	104	114
20T	1,70	20,0	80	94	100	110	120
21T	1,62	20,9	84	98	105	115	126
22T	1,55	21,9	88	103	109	120	131
23T	1,48	22,9	92	108	115	126	138
24T	1,42	23,9	96	112	119	131	143
25T	1,36	25,0	100	117	125	137	150
26T	1,31	25,9	104	122	130	142	155
27T	1,26	26,9	108	127	135	148	162
28T	1,21	28,0	112	132	140	154	168

* Multiply this number by engine rpm/1000 to get speed at other rpm at same ratio

Engine RPM @ speed

Ratio	85 mph	90 mph	95 mph	100 mph	105 mph	110 mph	115 mph
2,27	5686	6021	6355	6689	7024	7358	7693
2,00	5010	5304	5599	5894	6189	6483	6778
1,89	4734	5013	5291	5570	5848	6127	6405
1,79	4484	4747	5011	5275	5539	5802	6066
1,70	4258	4509	4759	5010	5260	5511	5761
1,62	4058	4297	4535	4774	5013	5251	5490
1,55	3883	4111	4339	4568	4796	5024	5253
1,48	3707	3925	4143	4361	4580	4798	5016
1,42	3557	3766	3975	4185	4394	4603	4812
1,36	3407	3607	3807	4008	4208	4409	4609
1,31	3281	3474	3667	3860	4053	4247	4440
1,26	3156	3342	3527	3713	3899	4084	4270
1,21	3031	3209	3387	3566	3744	3922	4101

You can extrapolate for other speeds by taking a rpm figure at a given ratio, divide it by the speed and multiply by the wished-for speed. - Example: ratio 1,28 - 3450 rpm @ 150 Km/h - wish to know rpm at 160 Km/h => $3450/150 \times 160 = 3680$ rpm.

Rear wheel sprocket 35T**35T**

Gearbox Sprocket	Ratio	mph pr 1000 rpm*	mph @ 4000 rpm	mph @ 4700 rpm	mph @ 5000 rpm	mph @ 5500 rpm	mph @ 6000 rpm
15T	2,33	14,6	58	68	73	80	87
17T	2,06	16,5	66	77	82	91	99
18T	1,94	17,5	70	82	87	96	105
19T	1,84	18,4	74	87	92	101	111
20T	1,75	19,4	78	91	97	107	116
21T	1,67	20,3	81	96	102	112	122
22T	1,59	21,3	85	100	107	117	128
23T	1,52	22,3	89	105	112	123	134
24T	1,46	23,2	93	109	116	128	139
25T	1,40	24,2	97	114	121	133	145
26T	1,35	25,1	101	118	126	138	151
27T	1,30	26,1	104	123	131	144	157
28T	1,25	27,1	109	128	136	149	163

* Multiply this number by engine rpm/1000 to get speed at other rpm at same ratio**Engine RPM @ speed**

Ratio	85 mph	90 mph	95 mph	100 mph	105 mph	110 mph	115 mph
2,33	5836	6180	6523	6866	7210	7553	7896
2,06	5160	5464	5767	6071	6374	6678	6981
1,94	4859	5145	5431	5717	6003	6289	6575
1,84	4609	4880	5151	5422	5693	5965	6236
1,75	4384	4641	4899	5157	5415	5673	5931
1,67	4183	4429	4675	4921	5167	5413	5660
1,59	3983	4217	4451	4686	4920	5154	5388
1,52	3807	4031	4255	4479	4703	4927	5151
1,46	3657	3872	4087	4302	4518	4733	4948
1,40	3507	3713	3919	4126	4332	4538	4745
1,35	3382	3580	3779	3978	4177	4376	4575
1,30	3256	3448	3639	3831	4023	4214	4406
1,25	3131	3315	3499	3684	3868	4052	4236

You can extrapolate for other speeds by taking a rpm figure at a given ratio, divide it by the speed and multiply by the wished-forspeed. - Example: ratio 1,28 - 3450 rpm @ 150 Km/h - wish to know rpm at 160 Km/h => $3450/150 \times 160 = 3680$ rpm.

Rear wheel sprocket **36T**

36T

Gearbox Sprocket	Ratio	mph pr 1000 rpm*	mph @ 4000 rpm	mph @ 4700 rpm	mph @ 5000 rpm	mph @ 5500 rpm	mph @ 6000 rpm
15T	2,40	14,1	57	66	71	78	85
17T	2,12	16,0	64	75	80	88	96
18T	2,00	17,0	68	80	85	93	102
19T	1,89	18,0	72	84	90	99	108
20T	1,80	18,9	75	89	94	104	113
21T	1,71	19,8	79	93	99	109	119
22T	1,64	20,7	83	97	103	114	124
23T	1,57	21,6	86	102	108	119	130
24T	1,50	22,6	90	106	113	124	136
25T	1,44	23,6	94	111	118	130	141
26T	1,38	24,6	98	116	123	135	148
27T	1,33	25,5	102	120	128	140	153
28T	1,29	26,3	105	124	132	145	158

* Multiply this number by engine rpm/1000 to get speed at other rpm at same ratio

Engine RPM @ speed

Ratio	85 mph	90 mph	95 mph	100 mph	105 mph	110 mph	115 mph
2,40	6012	6365	6719	7073	7426	7780	8133
2,12	5310	5623	5935	6247	6560	6872	7185
2,00	5010	5304	5599	5894	6189	6483	6778
1,89	4734	5013	5291	5570	5848	6127	6405
1,80	4509	4774	5039	5304	5570	5835	6100
1,71	4283	4535	4787	5039	5291	5543	5795
1,64	4108	4350	4591	4833	5075	5316	5558
1,57	3933	4164	4395	4627	4858	5089	5321
1,50	3757	3978	4199	4420	4641	4862	5083
1,44	3607	3819	4031	4244	4456	4668	4880
1,38	3457	3660	3863	4067	4270	4473	4677
1,33	3331	3527	3723	3919	4115	4311	4507
1,29	3231	3421	3611	3802	3992	4182	4372

You can extrapolate for other speeds by taking a rpm figure at a given ratio, divide it by the speed and multiply by the wished-for

speed. - Example: ratio 1,28 - 3450 rpm @ 150 Km/h - wish to know rpm at 160 Km/h => $3450/150 \times 160 = 3680$ rpm.

Rear wheel sprocket **39T**

39T

Gearbox Sprocket	Ratio	mph pr 1000 rpm*	mph @ 4000 rpm	mph @ 4700 rpm	mph @ 5000 rpm	mph @ 5500 rpm	mph @ 6000 rpm
15T	2,60	13,1	52	61	65	72	78
17T	2,29	14,8	59	70	74	82	89
18T	2,17	15,6	63	73	78	86	94
19T	2,05	16,6	66	78	83	91	99
20T	1,95	17,4	70	82	87	96	104
21T	1,86	18,2	73	86	91	100	109
22T	1,77	19,2	77	90	96	105	115
23T	1,70	20,0	80	94	100	110	120
24T	1,63	20,8	83	98	104	115	125
25T	1,56	21,8	87	102	109	120	131
26T	1,50	22,6	90	106	113	124	136
27T	1,44	23,6	94	111	118	130	141
28T	1,39	24,4	98	115	122	134	146

* Multiply this number by engine rpm/1000 to get speed at other rpm at same ratio

Engine RPM @ speed

Ratio	85 mph	90 mph	95 mph	100 mph	105 mph	110 mph	115 mph
2,60	6513	6896	7279	7662	8045	8428	8811
2,29	5736	6074	6411	6748	7086	7423	7761
2,17	5436	5755	6075	6395	6715	7034	7354
2,05	5135	5437	5739	6041	6343	6645	6947
1,95	4885	5172	5459	5746	6034	6321	6608
1,86	4659	4933	5207	5481	5755	6029	6303
1,77	4434	4694	4955	5216	5477	5738	5998
1,70	4258	4509	4759	5010	5260	5511	5761
1,63	4083	4323	4563	4803	5044	5284	5524
1,56	3908	4137	4367	4597	4827	5057	5287
1,50	3757	3978	4199	4420	4641	4862	5083
1,44	3607	3819	4031	4244	4456	4668	4880
1,39	3482	3687	3891	4096	4301	4506	4711

You can extrapolate for other speeds by taking a rpm figure at a given ratio, divide it by the speed and multiply by the wished-for

speed. - Example: ratio 1,28 - 3450 rpm @ 150 Km/h - wish to know rpm at 160 Km/h => $3450/150 \times 160 = 3680$ rpm.

Rear wheel sprocket 42T

42T

Gearbox Sprocket	Ratio	mph pr 1000 rpm*	mph @ 4000 rpm	mph @ 4700 rpm	mph @ 5000 rpm	mph @ 5500 rpm	mph @ 6000 rpm
15T	2,80	12,1	48	57	61	67	73
17T	2,47	13,7	55	65	69	76	82
18T	2,33	14,6	58	68	73	80	87
19T	2,21	15,4	61	72	77	84	92
20T	2,10	16,2	65	76	81	89	97
21T	2,00	17,0	68	80	85	93	102
22T	1,91	17,8	71	84	89	98	107
23T	1,83	18,5	74	87	93	102	111
24T	1,75	19,4	78	91	97	107	116
25T	1,68	20,2	81	95	101	111	121
26T	1,62	20,9	84	98	105	115	126
27T	1,56	21,8	87	102	109	120	131
28T	1,50	22,6	90	106	113	124	136

* Multiply this number by engine rpm/1000 to get speed at other rpm at same ratio

Engine RPM @ speed

Ratio	85 mph	90 mph	95 mph	100 mph	105 mph	110 mph	115 mph
2,80	7014	7426	7839	8251	8664	9076	9489
2,47	6187	6551	6915	7279	7643	8007	8371
2,33	5836	6180	6523	6866	7210	7553	7896
2,21	5536	5861	6187	6513	6838	7164	7490
2,10	5260	5570	5879	6189	6498	6807	7117
2,00	5010	5304	5599	5894	6189	6483	6778
1,91	4784	5066	5347	5629	5910	6191	6473
1,83	4584	4854	5123	5393	5662	5932	6202
1,75	4384	4641	4899	5157	5415	5673	5931
1,68	4208	4456	4703	4951	5198	5446	5693
1,62	4058	4297	4535	4774	5013	5251	5490
1,56	3908	4137	4367	4597	4827	5057	5287
1,50	3757	3978	4199	4420	4641	4862	5083

You can extrapolate for other speeds by taking a rpm figure at a given ratio, divide it by the speed and multiply by the wished-for

speed. - Example: ratio 1,28 - 3450 rpm @ 150 Km/h - wish to know rpm at 160 Km/h => $3450/150 \times 160 = 3680$ rpm.

MPH @ 4700 rpm with these sprocket combinations:

	34T	35T	36T	39T	42T
15T	70	68	66	61	57
17T	80	77	75	70	65
18T	84	82	80	73	68
19T	89	87	84	78	72
20T	94	91	89	82	76
21T	98	96	93	86	80
22T	103	100	97	90	84
23T	108	105	102	94	87
24T	112	109	106	98	91
25T	117	114	111	102	95
26T	122	118	116	106	98
27T	127	123	120	111	102
28T	132	128	124	115	106

MPH steps with these sprocket combinations (use this to determine whether to change front or rear sprocket next)

Sprockets (F/R)	mph @ 4700	Step (mph)
19/42	72	-
20/42	76	4
19/39	78	2
21/42	80	2
20/39	82	2
19/39 + 22/42	84	2
21/39	86	2
19/35 + 23/42	87	1
19/34 + 20/36	89	2
22/39	90	1
20/35 + 25/42	91	1
21/36	93	2
20/34 + 23/39	94	1
25/42	95	1
21/35	96	1
22/36	97	1
21/34 + 24/39 + 26/42	98	1
22/35	100	2
23/36 + 25/39 + 27/41	102	2

Sprockets (F/R)	mph @ 4700	Step (mph)
22/34	103	1
23/35	105	2
24/36 + 26/39 + 28/41	106	1
23/34	108	2
24/35	109	1
25/36 + 27/39	111	2
24/34	112	1
25/35	114	2
28/39	115	1
26/36	116	1
25/34	117	1
26/35	118	1
27/36	120	2
26/34	122	2
27/35	123	1
28/36	124	1
27/34	127	3
28/35	128	1
28/34	132	4