

## Choose The Gear Ratio That Is Best For Your Vehicle

When selecting a Gear Ratio, you should consider the following:

1. Tire Size
2. Transmission Ratio
3. Final Gear Ratio
4. Engine RPM at Cruise Speed

The following formula has been developed to calculate the optimum final Gear Ratio to suit your application.

$$\frac{\text{M.P.H. X Gear Ratio}}{\text{Tire Diameter}} \times 336 = \text{RPM}$$

The chart shown below shows **RPM** calculations at **55 MPH** for various combinations of final **Gear Ratio** and **Tire Diameter**. **Gear Calculator** is available on RICHMOND website [www.richmondgear.com](http://www.richmondgear.com)

Gear Ratio	Tire Diameter																
	24	25	26	27	28	29	30	31	32	33	34	35	36	38	40	42	44
2.56	1972	1892	1820	1752	1690	1631	1577	1526	1478	1434	1391	1352	1314	1245	1183	1126	1075
2.73	2102	2018	1940	1869	1802	1740	1682	1627	1577	1529	1484	1441	1401	1328	1261	1201	1147
2.94	2264	2173	2090	2012	1942	1874	1811	1753	1698	1646	1599	1552	1509	1429	1358	1294	1235
3.08	2372	2277	2189	2108	2033	1963	1897	1836	1779	1725	1674	1626	1581	1498	1423	1355	1294
3.21	2472	2373	2282	2197	2119	2046	1977	1914	1854	1798	1745	1695	1648	1561	1483	1412	1348
3.31	2549	2447	2353	2266	2185	2110	2039	1973	1912	1854	1799	1748	1699	1610	1529	1456	1390
3.42	2633	2528	2430	2341	2257	2179	2107	2039	1975	1915	1859	1806	1756	1663	1580	1505	1436
3.54	2726	2617	2516	2423	2336	2256	2181	2110	2044	1982	1924	1869	1817	1722	1635	1558	1487
3.73	2872	2757	2651	2553	2462	2377	2298	2224	2154	2089	2027	1969	1915	1814	1723	1641	1567
3.90	3003	2883	2772	2669	2574	2485	2402	2325	2252	2184	2120	2059	2002	1897	1802	1716	1638
4.10	3157	3031	2914	2806	2706	2613	2526	2444	2368	2296	2228	2165	2105	1994	1894	1804	1722
4.27	3288	3156	3035	2923	2818	2721	2630	2545	2466	2391	2321	2255	2192	2077	1973	1879	1793
4.56	3511	3371	3291	3121	3010	2906	2809	2718	2633	2554	2478	2408	2341	2218	2107	2006	1915
4.88	3758	3607	3469	3340	3221	3110	3006	2909	2818	2733	2652	2577	2505	2373	2255	2147	2050
5.29	4073	3910	3760	3621	3491	3371	3259	3154	3055	2962	2875	2793	2716	2573	2444	2328	2222
5.38	4143	3977	3824	3682	3551	3428	3314	3207	3107	3013	2924	2841	2762	2616	2486	2367	2260
5.71	4397	4221	4058	3908	3769	3639	3517	3404	3298	3198	3104	3015	2931	2777	2638	2512	2398
6.17	4751	4561	4385	4223	4072	3932	3801	3678	3563	3455	3354	3258	3167	3001	2851	2715	2591
7.17	5521	5300	5096	4907	4732	4569	4417	4274	4141	4015	3897	3786	3681	3487	3313	3155	3011

## How To Choose The Gear Ratio Based on Speed

When selecting a Gear Ratio, you need the following information:

1. Tire Size (diameter)
2. Final Transmission Ratio
3. Engine RPM at Cruise Speed

Formula to calculate Gear Ratio based on speed

$$\frac{\text{RPM X Tire Diameter}}{\text{MPH X 336}} = \text{Ratio}$$

Example: If you want to **Cruise** at 60 MPH at 2000 RPM and your **Tire Diameter** is 30", the **Gear Ratio** you need is a **3.00**

$$\frac{2000 \text{ RPM X } 30'' \text{ Tire Dia.}}{60 \text{ MPH X } 336} = 3.00$$

