# Front Sway Bar  by Larry Linder

Front and Rear sway bars are a major way of improving the performance of your car on the road. The bar diameters go up in small increments because the stiffness is proportional to radius raised to the 4th power. ( R*R*R*R) of the radius of the bar. A slight increase in diameter results in a large increase in stiffness.

The down side of the larger sway bars is a noticeable harshness on uneven roads.

For the car to handle properly the front and rear bars should be increased in proportion. For example if a 15/16 front bar is used on a small block and a rear bar is added. The car may be so neutral that it can become unstable in severe corners at speed. Good for an experienced racer but bad for the average driver - the car can just slide sideways and never recover until speed is reduced.

Most cars benefit from larger sway bars but like anything it can be more than the car or driver handle when pushed to the limit.

Vehicle dynamics is a very deep subject - there are may books and examples. Chevrolet publishes a brown paper book telling you how to modify your Corvette for racing. The modifications are not reversible once done.

The chart is was prepared for the Judges to make checking originality easier.

## 1963 to 1975 Front Sway bar Size and Bushing partnumbers.

| Bar Diameter | Sway Bar Part Number | Bushing Part Number | Suspension Option | Application |
|---|---|---|---|---|
| 5/8 (0.626) | | | | |
| 11/16 (0.688) | | | | |
| 3/4 (0.750) | 3831971 | 3817573 | STD | 63,64,65,66,67,68,69,70,71,72 exc. HD, SP. Perf. and 427, 454 |
| 13/16 (0.813) | 334930 | 3923674 | STD | 73, 74,75 |
| 7/8 (0.875) | 3871318 | 3871323 | STD | 65 (396) except H. D. Susp. |
| | | 3871823 | STD | 66-67 (437) except H.D Susp. |
| 15/16 (0.938) | 3831972 | 33828826 | RPO F40 | 63-69 w/spec. Perf., Susp. |
| | | RPO F41 | | H. D. Susp. |
| | | 3923674 | | 70-72 w/spec. Perf, Susp. H/Perf. 350 |
| | | 3923674 | | 70-72 (454) |
| | | 3923674 | RPO FE7 | 73, 74 |
| 1 1/8 (1.125) | 351596 | 351597 | RPO FE7 | 75 |

Data Source: Chevrolet Corvette Parts Manual 1953 - 1973

Chevrolet Corvette Chassis Preparation manual 1975