

Solid Subframe Bushings Installation Instructions SPL SSB FRS

Freezing the bushings overnight will help ease installation. Remove subframe and OEM subframe bushings. The OEM subframe bushings can either be pressed out or cut out. The entire OEM bushing must be removed, including the outer metal "shells" (race). When the OEM bushing is completely removed, there should just be one ring of steel left that is part of the subframe itself.

To remove the metal race, carefully make two parallel cuts about a half inch from each other in the race using a body saw being careful not to cut into the subframe. Collapse the race in on itself and knock out the race.

Press in the main bushing from the bottom of the subframe with a shop press. You can use a lubricant like grease or anti seize to minimize binding while pressing in the bushings. Reinstall subframe with the factory retaining plate/washers (pictured) and hardware plus desired shims (see below) and torque the 4 main subframe bolts to 107 ft/lb with a 19mm socket.



Optional: The supplied rubber isolators can be installed between the chassis and the subframe bushing to help dampen some noise.

Shim Installation

To place the subframe at the OEM location (Formula D legal), place two .25" thick shims on top of the subframe in the front. In the rear place one .33" above the subframe.

To "raise" the subframe by .25" in the front and .33" in the rear, place one .25" shim above and one below and place one .33" shim below the rear of the subframe

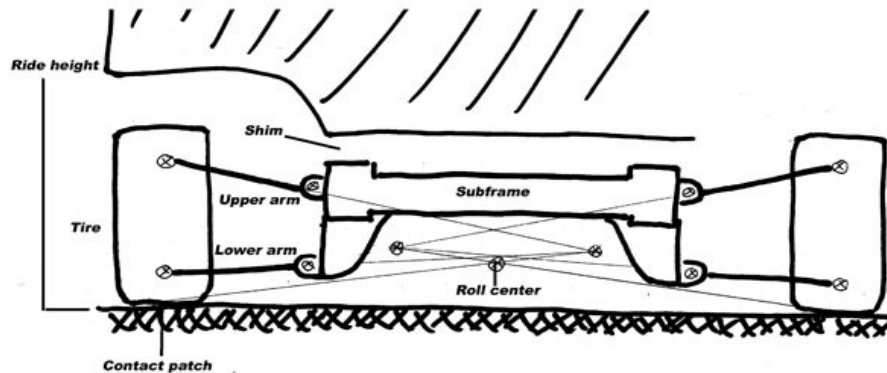
To "raise" the subframe by .5" in the front and .33" in the rear place both .25" shims below the front of the subframe and one .33" below the rear of the subframe.

The following 2 pages explain the effect of raising the subframe on roll center and anti-squat. For a car that is lowered, as a general rule, raising the subframe will improve the roll center but reduce traction. Feel free to experiment with different subframe positions to find the one that best suits your driving style!

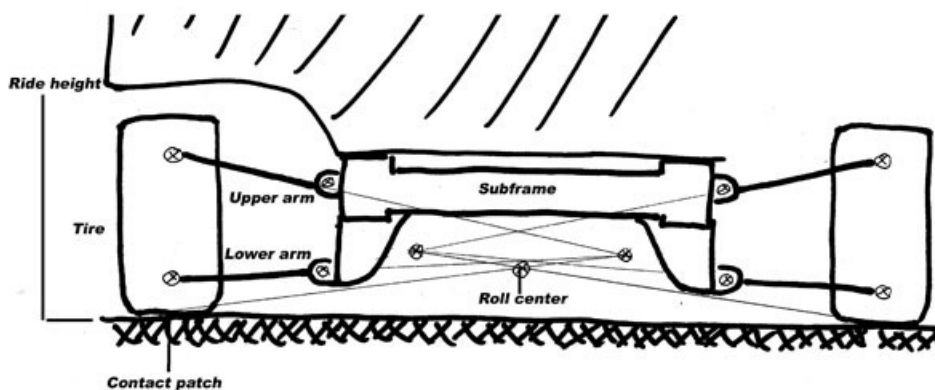
Note: Raising the subframe will alter your rear alignment.

Roll center adjustment and ride height adjustment by raising subframe

The following diagram depicts the subframe at the OEM location, with the stock ride height and roll center. Notice the gap between the subframe and the chassis, where the shims would sit.



The following diagram shows the subframe raised closer towards the chassis (no more gap between subframe and chassis), and the ride height lowered the same amount. The roll center position is un-changed.



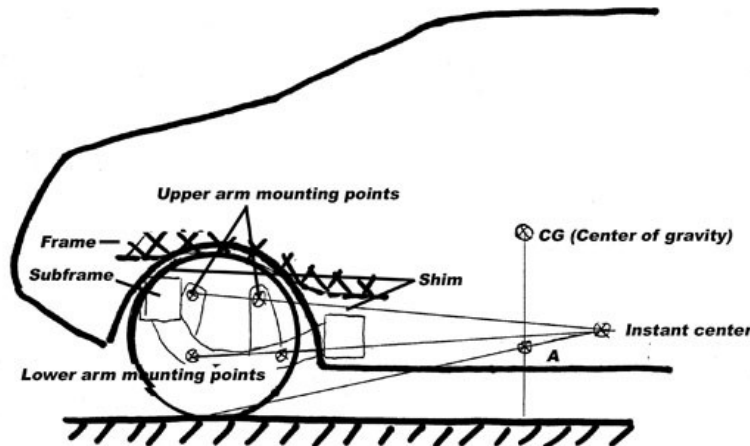
If we are to compare the 2 subframe positions with the car at the same ride height in both cases, raising the subframe will raise the roll center.

Note: Raising the subframe will not significantly change ride height. This is because the ride height is determined by the shock/spring assembly as it sits between the chassis and the knuckle.

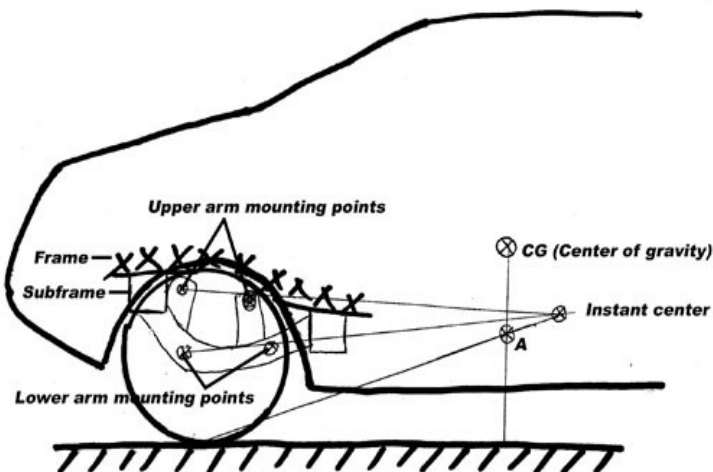
Raising subframe and effect on anti-squat

The ratio between the height from the ground to point "A", and the height from the ground to CG, is the amount of anti-squat. As a general rule, more anti-squat keeps the rear end from squatting under hard acceleration, and reduces traction.

The following diagram depicts the subframe at the OEM location, with the stock ride height and anti-squat. Notice the gap between the subframe and the chassis, where the shims would sit.



The following diagram shows what happens when you raise the subframe closer to the chassis. For this example, we are comparing what happens to the anti-squat when the ride height remains the same. When the subframe is raised, the rear "instant center" is raised as well, that moves point A up and increases anti-squat.



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