

WHEEL FITMENT GUIDE

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1. How do I use this guide?

If you have time, read the whole thing. It contains a lot of useful information that will help you choose wheels and tires that fit the S2000 properly. If you don't have time, skip down to the 'What fits' section, and follow these instructions:

1.1 If you know what size tires you want to use (This is the best way to start):

- 1) Scroll down to the 'What fits?' section, and find the tire width you want to use
- 2) Look at the offset listed for that size' it's the minimum for that width of tire
- 3) Take note of the wheel widths' if you go wider, the wheels might stick out (Jeep!)

1.2 If you have found a wheel you just love, and want to know if it fits:

- 1) Scroll down to the 'What fits?' section and find the rows that have your wheel width- (there may be more than one row)
- 2) Pick a tire width you want to use
- 3) Find the offset that goes with that tire width
- 4) Make sure the wheel you want to buy has at least that offset (higher is almost always OK, lower is not.)

2. What is this offset business?

The offset is the distance from the wheel centerline (midway between the front and back of the wheel) to the mounting face of the wheel that contacts the hub of the vehicle. **The S2000 requires high positive offsets.** A positive offsets indicates that the mounting surface of the wheel is closer to the front of the wheel than the back. This offset is expressed in millimeters, and is seen as numbers such as "+40" or "et40."

Since the offset is measured from the wheel centerline, and not the outside edge, the required wheel offset depends on the width of the wheel and tire.

3. What causes rubbing?

Rubbing is when the tire contacts some part of the car when the suspension is compressed from a bump or when the car is cornering. Usually it is the outermost tread of the tire that contacts the fender. If the offset is too high, then the tire may rub on the chassis or suspension components. **Here's the important thing: Since the offset is measured from the center of the wheel, the location of the tire tread (the part that can rub) does NOT depend on the width of the wheel, only the OFFSET of the wheel.** What does this mean? It means that you can have two wheels, one 7 inches wide, and one 8 inches wide, and if the offset of the two wheels is the same, the tire will be in the same place relative to the fenders. The tire's side wall makes up the difference between the 7" and 8" wheel. But the tread will be in the same place.

4. What fits?

Many people have tried many different wheels and tires on the S2000. Along the way, a lot of people have had problems with rubbing. Some had a little rubbing, and some had none. With all of this experimentation, a few things were figured out. **The information below is not the drop dead final word of what will and will not fit.** Certain things can be done to make something fit that otherwise wouldn't, such as

increasing negative camber, running narrow tires, and rolling fenders, but that adds a lot of variability to this equation and thus is difficult to predict. We'll assume the owner has had a proper alignment, uses tires recommended for the chosen wheel width, and hasn't modified their fenders.

Based on successes and failures from many S2000 owners, we can use an offset calculator to figure out what other offsets and tires will work. **These are minimum recommended offsets. You can use a higher offset if you want, and you will get additional fender clearance.**

For the front:

Offsets lower than +43 are not recommended on the front because a very narrow tire would need to be used to avoid rubbing.

+43 to +47 offset: 6.5" - 7.5" wide wheel

+48 to +52 offset: 7.0" - 8.0" wide wheel

+53 to +57 offset: 7.0" - 8.0" wide wheel

+58 to +62 offset: 7.5" - 8.5" wide wheel

+63 or higher offset: 7.5" - 8.5" wide wheel

For the rear:

Offsets below 40 are not recommended for the rear because a tire narrower than the stock tire would need to be used to avoid rubbing.

+40 to +44 offset: 7.5" - 8.5" wide wheel

+45 to +49 offset: 7.5" - 9.0" wide wheel

+50 to +54 offset: 8.0" - 9.5" wide wheel

+55 to +59 offset: 8.5" - 9.5" wide wheel

+60 to +64 offset: 9.0" - 10.0" wide wheel

+65 or higher offset: 9.0" - 10.0" wide wheel

Note: Verify wheel width by checking the tire manufacturer's specifications . These are guidelines that should work for most wheel and tire combinations.

The offsets above will all set the outside edge of the tire to the same place relative to the outer fender, rounding to the nearest millimeter.

Of course, the wheel width must be chosen to fit the tire you plan to use. You can't stuff a 275 on a 7" wide wheel, and you wouldn't want to use a 9" wide wheel with a 205 tire. Read the specs on the tires you want to use, and figure out what wheel width you should use.

4.1 OEM Fitments

For reference, the OEM MY00-03 (AP1) wheel sizes and offsets are as follows:

Front:

16" x 6.5", +55 offset, 205 tire

Rear:

16" x 7.5", +65 offset, 225 tire

and the OEM MY04+ (AP2) wheels are as follows:

Front:

17" x 7.0", +55 offset, 215 tire

Rear:

17" x 8.5", +65 offset, 245 tire (255 on the S2000 CR)

5. What is stagger and why do I need it?

If you look at the OEM wheel sizes above, you'll see that the OEM wheels have 1" of stagger for the AP1 and 1.5" of stagger for the AP2. That means the rear wheels are 1" wider than the fronts for the AP1, and 1.5" wider for the AP2. This is done in conjunction with the use of a wider tire, with a wider tread width in the rear. (See the stickies at the top of the Wheel and Tire Forum page for more info on proper tire tread widths.)

When choosing aftermarket wheels, wheels should be chosen that have stagger, like the OEM wheels. This allows you to use a wider tire on the rear, which is essential to proper handling and safety of the S2000. It is possible to run the same width wheels front and rear, and stagger only the tire sizes in a similar way to OEM tire sizes. However, this is not an ideal solution, because you may end up attempting to mount a tire on a wheel that's outside it's recommended width range. For instance, the popular 17x7" or 17x7.5" wheels that are so common. You could run the OEM AP2 tire sizes on these wheels, however the rear tire will be pinched on the rear wheel, because the OEM wheel is 8.5" wide. When pinching a wide tire on a narrow wheel, the intended performance and tread life of that tire may not be met.

So, when choosing aftermarket wheels, consider the tire sizes that will fit on them by looking at the specs of the tire you want to use (see the rim width specs), and try to maintain the stagger of wheel widths that the OEM sizes have. If anything, err on the side of a wider wheel and tire for the rear as this is the safer solution.

On a final note, here are a couple of links Xviper pointed out that are very helpful.

<http://www.tirerack.com/wheels/tech/...jsp?techid=101>

<http://www.yokohamatire.com/utcustom.asp>

Cheers.