

Wheel Compatibility

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Looking for bigger/wide/lighter wheels for your Saab? Not a problem - you just need to know a few things to get you going.

Wheel selection involves a number of critical dimensions - it's not just a matter of finding the right bolt pattern. You must be sure that the wheel offset and hub dimensions are correct as well. Let's discuss each, first:

-Bolt Pattern

"Bolt Pattern" describes the diameter of the circle formed by the lug bolts. Earlier Saabs all use a 4-bolt hub, so the bolt pattern can effectively be measured by finding the distance between the center of two opposite lugs. Easier, of course, is to use the information here:

Two different bolt patterns were used on 99, 900, and 9000 models. All 99s and 900s up through and including MY1987 used a 4x114.3 bolt pattern. All 9000s and those 900s made between 1988 and 1993 used a 4x108 bolt pattern. Neither of these patterns is especially unique:

Honda Accords & Preludes from 1992 to 1996, Mazda RX-7 (SE only) from 1984 to 1988, Mitsubishi 4-bolt from 1983-, Nissan 4-bolt from 198?- all used the earlier 4x114.3 pattern.

Ford Mustangs from '79 to '83, Ford Thunderbirds and Mercury Cougars from 1980 to 1988, Ford Escort ZX2, Ford Focus, Mercury Cougars from '99-02, and Volvo 850 4-bolt all use the later 4x108 pattern.

-Offset

Offset describes the distance between the centerline of the wheel's width and the back of the wheel's mounting surface, where it contacts the hub. A positive offset means the mounting surface is closer to the outside of the wheel, and a negative offset means the mounting surface is closer to the inside of the wheel. Zero offset results when the mounting surface of the hub is directly parallel to the wheel's centerline. Historically speaking, rear-wheel-drive cars use negative offset, and front-wheel-drive cars use positive offset. Very few remotely modern cars have zero offset wheels. These days, however, with multi-link and MacPherson Strut-based suspensions, most cars tend to to positive offset wheels, even if they're rear-wheel-drive. All Saabs use positive offset wheels. Remember: the larger the value of the positive offset, the further inboard the wheel will reach.

On a Saab, wheel offset is exceptionally important since the wheel wells are not very deep. You must be careful when fitting wider wheels that the tires do not scrub the inside of the fenders or the shock towers; this can be quite a task! Generally speaking, the wider the wheel gets the smaller the positive offset should be. For example, stock 15-spoke (15" x 5.5") alloys fitted to earlier 900s will have an offset of +40mm, whereas Saab Super Aero (16" x 6.5") alloys fitted to 9000 Aeras have an offset of +27mm. In the middle, asymmetric 3-spoke (15" x 6") alloys have an offset of +35mm. This provides us with an anecdotal but certainly useful formula - for every .5" that the wheel increases, the offset must decrease by about 5mm. This will be influenced by a particular wheel's design, but is a good place to start. As a note, Saabs generally cannot accept anything wider than a 7" wheel as there simply is not adequate clearance between the fender and the shock tower. Additionally, +22mm is about the smallest positive offset a Saab will handle with a guarantee of rubbing the fenders, and +40mm is the greatest without rubbing the shock towers on a 6" wide wheel. Lowered cars will have an increased chance of rubbing one side or the other, and maximum wheel widths and offsets must be adjusted accordingly.

Whatever you do, please remember this is a general rule, and you should test-fit any given wheel & tire combination to be sure there isn't any interference.

-Hub Diameter

The other thing you'll need to keep in mind is that the hub diameter. If the hub on the wheel you want is too small, you can have a machine shop bore out the wheel slightly to the correct dimension. If the hub is too large, your best bet is to contact a local wheel shop or the manufacturer of the wheel itself - either may be able to provide you with an adapter ring to snug the wheel up to the hub. Without this adapter, the only thing centering the wheel will be the lug bolts and you may end up with vibration as the wheel shifts around the hub. All Saabs have a 65.1mm hub bore. This is fairly large, but conveniently many Hondas use a 64.1mm hub bore. A 1mm difference is hardly tangible, and with the beveled edges of the Saab hub, squeezing on a slightly smaller hub may not be a problem.

Note: If you choose to mount a wheel whose hub is too large, it's critical that all lug nuts/bolts are torqued to specification before lowering the car to the ground. If you fail to observe this, the wheel will not be properly centered and there is an increased risk (if not a guarantee) of vibration.