# HUILA

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# Competition Tire Air Pressure

***Editor's Note:***

The following is a "Guide To High Performance Handling" presented by The Tire Rack, and submitted to Huila by club member, Lee Guertler.

**Competition Tire Air Pressure**

When racing on D.O.T. tires, air pressure is a major consideration in tuning the handling of your car, especially in cases where suspension adjustments are limited. The chart below shows some of the changes you can make to change the balance of the car. Please note that the air pressure changes are different on the BFG Comp T/A R1 than most other tires due to the asymmetrical sidewall construction.

To get even wear when using D.O.T. tires you must be very careful not to use too low of a tire pressure. Both the BFG Comp T/A R1 and the Hoosier Radials can wear unevenly if under-inflated. The start point for the R1 should be close to the factory recommended pressures for your car, typically in the high 20's to mid 30's in PSI. The Hoosier Radial seems to work best at much higher pressures, such as the mid 30's to as high as 50 PSI. If under-inflated the R1's tend to wear near the first groove in from the outer shoulder, which has been termed the "Evil Groove O'doom". On the Hoosier's, under-inflation will cause a thin ring of wear at the very edge of the tread. If properly inflated, these problems can be avoided. Probably the biggest adjustment you can make to improve tire wear is the driver. Avoid sliding the tires, locking up the wheels under braking, and drive as smooth as possible.

**Tire Pressures In The Rain**

For Both Autocross and road racing, increase tire pressures 6-10 PSI from where you would normally run in dry conditions. Increasing the tire pressure rounds the profile of the tire by decreasing the deflection of the tire. This results in a smaller contact patch. It also helps keep the grooves in the tread open so that they can channel the water out from under the tire.

| ADJUSTMENTS | DECREASE UNDERSTEER | DECREASE OVERSTEER |
|---|---|---|
| Front tire press. Except BFG | Higher | Lower |
| Rear tire press. Except BFG | Lower | Higher |
| | | |
| Front tire press. BFG only | Lower | Higher |
| Rear tire press. BFG only | Higher | Lower |
| | | |
| Front tire size | Larger | Smaller |
| Rear tire size | Smaller | Larger |
| Front camber | More negative | More positive |
| Rear camber | More positive | More negative |
| Front toe | Toe-out | Toe-in |
| Rear toe | Toe-in | Toe-out |
| Front caster | More positive | More negative |
| Front springs | Soften | Stiffen |
| Rear springs | Stiffen | Soften |
| Front sway-bar | Soften | Stiffen |
| Rear sway-bar | Stiffen | Soften |
| Weight dist. | More rearward | More forward |