



HOW TO GET THE MOST FROM YOUR R-COMPOUND TIRES

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YOU WILL LEARN



- Proper fitment
- Optimizing tire pressures
- Heat cycling
- Slip angle & G-load
- Driving in the sweet spot
- Proper use of a tire pyrometer
- The value of R-compound tires

PROPER FITMENT

Tire dimension data

<https://trackdaytire.com/product/hoosier-sports-car-dot-radial-r7-tires/>

HOOSIER SPORTS CAR D.O.T. - RADIAL A7 & R7											
Item Number	Tire Size	Load/Speed Rating	Tread Width	Approx. Dia	Circ	Recom. Rim Width	Measured Rim Width*	Section Width	A7 AutoCross	R7	Road Race
46302	P185/60ZR13	90W	7.0"	21.8"	68.4"	5.6-5"	6.0"	7.0"	X	X	
46304	P205/60ZR13	86W	8.0"	22.8"	71.7"	5.5-7.5"	6.0"	8.8"		X	
46309	P225/45ZR13	77W	8.5"	20.6"	64.8"	7-8.5"	7.0"	9.4"	X	X	
46312	P225/50ZR13	88W	8.0"	22.8"	71.7"	5.5-7.5"	6.0"	8.8"		X	
46322	P255/40ZR13	82W	9.5"	20.6"	64.9"	8.5-10"	9.0"	10.8"	X		
46406	P205/55ZR14	85W	8.0"	22.8"	71.8"	5.5-7.5"	7.0"	9.0"		X	
46416	P225/50ZR14	88W	8.7"	22.8"	71.8"	6-8"	7.0"	9.3"	X	X	
46502	P205/50ZR15	84W	8.0"	22.8"	71.8"	5.5-7.5"	6.5"	8.5"	X	X	
46511	P225/45ZR15	81W	8.6"	22.8"	71.8"	7-8.5"	7.5"	9.3"	X	X	
46516	P225/50ZR15	90W	8.8"	23.8"	74.8"	8-9.5"	7.0"	9.7"		X	
46522	P245/40ZR15	83W	9.4"	22.8"	71.7"	8-9.5"	8.5"	10.1"	X	X	
46526	P245/50ZR15	95W	9.4"	24.4"	76.2"	7-8.5"	7.5"	10.3"		X	

PROPER FITMENT

Tire size optimization with larger contact patch

HOOSIER SPORTS CAR D.O.T. - RADIAL A7 & R7										
Item Number	Tire Size	Load/Speed Rating	Tread Width	Approx. Dia	Circ	Recom. Rim Width	Measured Rim Width*	Section Width	A7 AutoCross	R7 Road Race
46826	P245/40ZR18	88W	9.0"	25.4"	79.8"	8-9.5"	9.0"	10.3"	X	X
46836	P275/35ZR18	87W	10.3"	25.5"	80.2"	9-11"	9.5"	10.7"	X	X
46843	P295/30ZR18	88W	10.6"	25.3"	79.5"	9.5-11"	10.0"	11.6"	X	X
46935	P295/30ZR19	89W	10.4"	26.1"	82.1"	10-12"	10.0"	11.5"		X

Plus One / Minus One Rim Diameter:

- Sidewall height -- grip vs. response trade off
- Use data to confirm contact patch changes very little
- Rule of thumb for ABS cars keep overall circumference within 3% front to rear

Rim Width Recommendation:

- Rim width is optimum at plus/minus $\frac{1}{2}$ inch of tread width

Alignment Recommendation:

- Front - Three degrees negative camber (-3)
- Rear – Two degrees negative camber (-2) – Independent Suspension

TIRE PRESSURE

Optimum tire pressure , differs by driver, car, track, & weather - results vary

- Create your process – PSI measurement and documentation is key
- “General rule of thumb” of PSI for track use optimized vehicles ranging from **3000 to 4000 lbs.** HOT target psi = One (1) psi per @100 lbs. of total vehicle weight with fuel, driver, passengers
- “General rule of thumb” of PSI for track use optimized vehicles **under 3000 lbs.** as follows per Hoosier Tire Tips:

Roadrace/Track Applications

VEHICLE SIZE	RECOMMENDED HOT PRESSURE	COLD PRESSURE
1800-2200 LBS.	32-34+	26-28
2200-2600 LBS.	34-36+	26-28
2600-3000 LBS.	36-40+	26-30
OVER 3000 LBS.	40-42+	30-34

Please contact a Hoosier Tire representative for cold pressure settings for vehicles over 3000 LBS.

+Higher pressures will improve the performance capability but will require a more sensitive feel to take advantage of the increase.

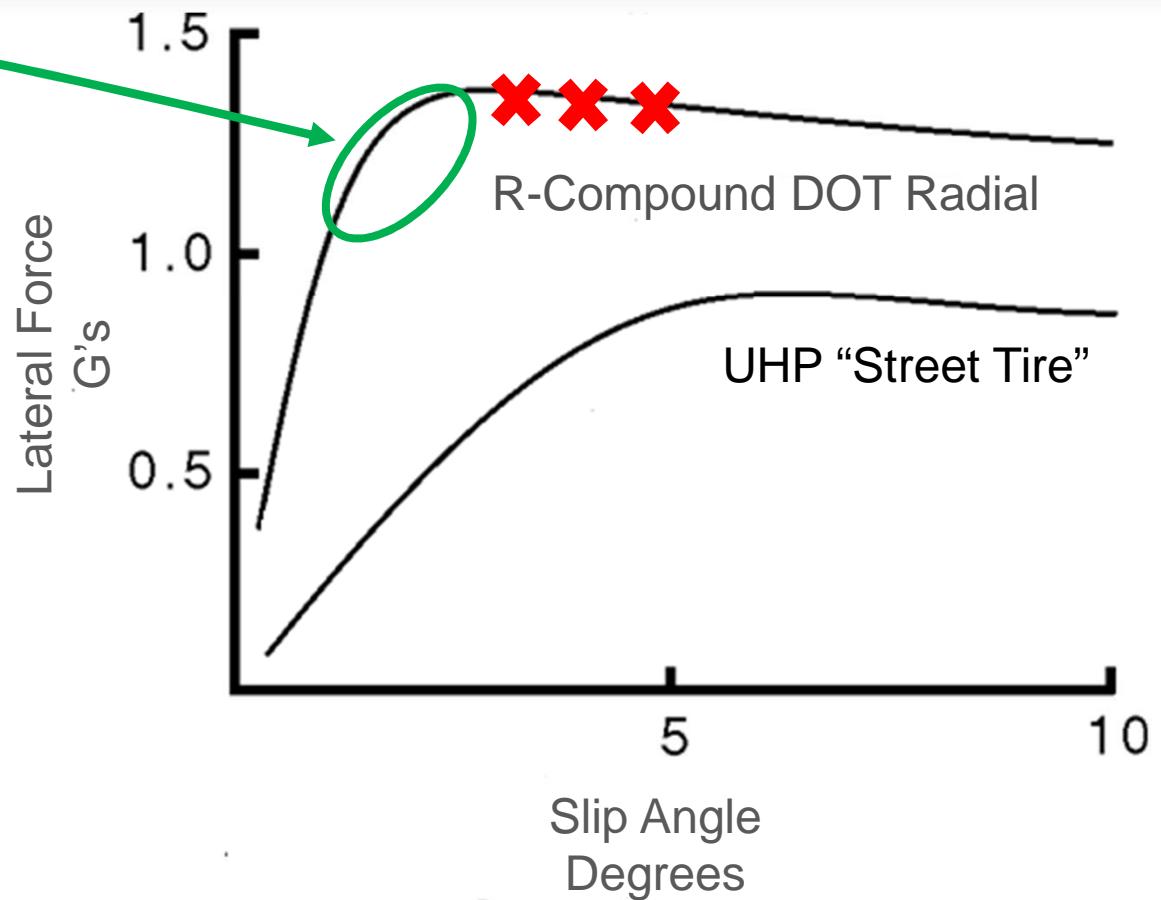
- Road course including oval track (i.e. Daytona) + 10% cold PSI and less camber
- Email questions to sales@trackdaytire.com

HEAT CYCLING

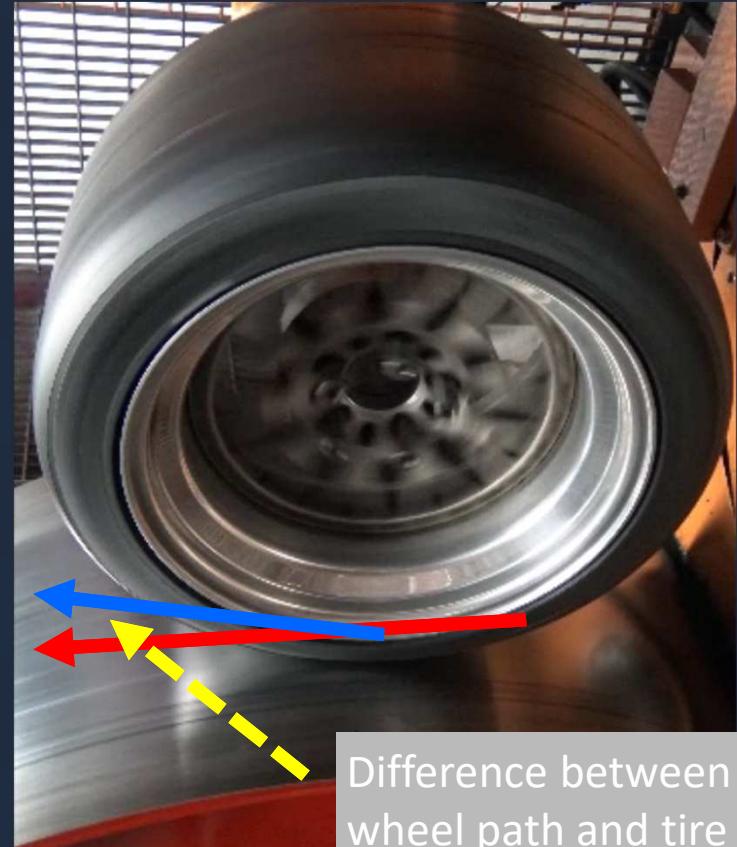
- Most effective
 - On the car
 - On the track
 - With load
 - Rest for 24+ hours
- Break them in and “get off of them” – no more than 15 minutes
- Storage
 - Inside a black plastic bag
 - Away from electric motors / welders & compressors
 - Max shelf life 3 years
 - Limited effectiveness for cycled tires over a winter break

THE “SWEET SPOT”

Driving in the **Sweet Spot** is the key to maximum tire grip and longevity



Steering Angle – Lateral Deflection

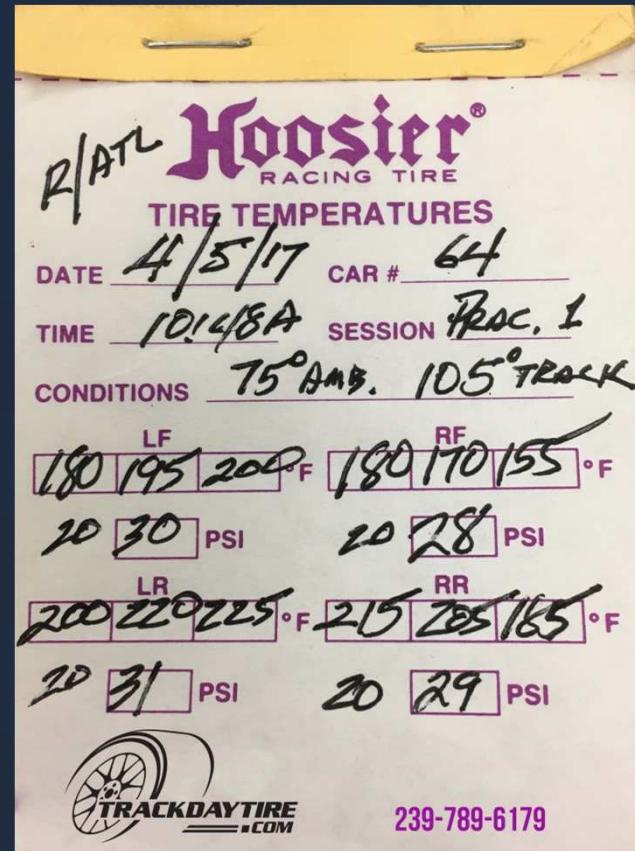


Difference between
wheel path and tire
path is Slip Angle

<https://www.youtube.com/channel/UC-nZlgNbwsX9Rtygl1xJXMQ>

PYROMETER USE

- Temps across the tire
- Use tread indicators as reference
- Probe Pyrometer is best
- 180F to 200F pit lane temps
- Repeat process & document



ARE YOU READY FOR R-COMPOUNDS?

1. Does your driver skill set allow you the ability to control the car/tire in the “sweet spot” of max grip and low slip angle?
2. Do you find yourself unable to slow down enough to go faster --- essentially still over drive the tires?
3. Do you drive solo i.e. as a mature intermediate, advanced, driver or an instructor?
4. If you have more confidence will your on track driving performance improve?

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Qualifications

- Member of MSR "Instructors Wanted" email list

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