

## SECRET WEAPONS: ELECTRIC TIRE WARMERS



Why waste a lap bringing the tires up to temperature when you can have science do the work for you in the pits? Tire warmers have long been the standard in top tiers of competition, and Chicken Hawk Racing has products for a surprising range of applications.

At a Porsche Club track day a year ago, we noticed a fancy GT3RS perched on jacks while wearing electric tire warmers. Seriously? Did someone think we were at the Track Day National Championships or something? Sure, it was a little chilly out—say 45 degrees—but a single warmup lap should have done the trick, right?

A short while later, though, we watched a Z06 Corvette spin out into the grass when exiting the pits. Then we got the point: Cold tires can be dangerous. Just think, how many times have you seen a professional racer lose it on the out lap?

During our One Lap of America debut, we experienced this problem firsthand. Morning sessions in early May can be quite cool, and the time trial format—one warmup lap, three timed circuits, and then a quick cooldown—leaves little time for tire warming, especially on a light car like our Honda. Several times we almost crashed on the out lap, once going completely agricultural.

Furthermore, our car carries 65 percent of its weight on the nose, which means the front tires heat up much quicker than the rears. Our Hankook R-S3 rubber is killer when warmed up, but needs some heat before it can deliver any real grip.

Due to all these factors, the warmup lap actually worsens performance. The front tires gain grip quickly, but the rears never get any. With no grip in the rear, there is no friction to create heat to create more grip. Catch-22.

The only way to break out of the vicious cycle is to artificially add heat to the rear tires—or dumb down the suspension setup, making the car slower. We don't like slow.

#### Warming on the Road

Electric tire warmers are standard equipment in motorcycle road racing, and many riders have begun using them for track days. When you don't have a roll cage to protect you, safety is key. The consistent performance delivered by preheated tires makes all the difference.

For a variety of reasons, though, active tire warming has been outlawed in most four-wheeled road racing, with Formula 1 being the notable exception. Certainly there is the logistical nightmare of having generators running in grid. There's also a cost argument, though savvy teams are using warmers already for non-race test session consistency.

This practice seems to be limited by political hang-ups more than anything. One Lap of America has no such rules.

After we had our aforementioned PCA track day epiphany, we decided to “bring the heat” to our outings. Electric tire warmers would be our secret weapon, allowing us to be aggressive right from the start. Plus, we'd only need two units—one for each rear tire—since the fronts could come up to temp on their own.

Before hitting the track, we'd simply have to raise the rear of the car with a small aluminum floor jack. Remember, every tool used on One Lap has to travel in the car from track to track.

One question remained, though: Where would the power come from? Not all tracks have electrical outlets, so we'd need to bring our own. Again, Honda power came to the rescue. We procured a small, lightly used EU1000 genset from Craigslist. It would provide just enough juice to run two warmers.

#### Bringing the Heat

We did our research and found out that the big name for tire warmers is Chicken Hawk Racing. In fact, they are pretty much the only player besides some inexpensive, overseas products of dubious quality.

Founded in 1992 for the sole purpose of servicing the motorsports industry with this product, Chicken Hawk continues to expand and refine its line by working with top professional race teams and tire manufacturers. Together, they have determined optimal heating rates and temperatures for both preheating and standby time in the paddock. Their technology and expertise is so good that they have now formed a subsidiary to service industrial clients in non-motorsports applications.

A call to company founder David Podolsky, a multi-time national champion motorcycle road racer, enlightened us even further. Not only will the blankets warm the tires for immediate use, but continued “simmering” during off-track time in the paddock will reap even more benefits.

First, the tires experience only a single heat cycle during each track day—not the usual four or five. Additionally, tire wear is reduced, as “cold-cutting” and graining of aggressively driven cold tires become things of the past. And finally, you can set tire pressure once, when the tires are warm, and never have to guess at how the pressure will rise during a session.

So, do tire warmers work? Heck yeah.

They totally eliminated the problems we had experienced. In fact, the only issue we had on our One Lap journey was at Daytona, where there was an unexpected and lengthy delay on grid which allowed our preheated rear tires to cool off. Usually they would stay hot for a good 20 minutes in the open air, but the delay ended up being twice that. Result: We spun out on the out lap in Turn 6, coming quite close to the tire wall.

Our Chicken Hawk warmers are now a key ingredient of our track day program. Even on cool mornings in the fall and winter, our car is one of the first to hit the track and gets up to speed immediately. As with our American Express card, we don't leave home without them.

And when we get lazy and don't use them, Mr. Oversteer typically pays a visit to teach us a lesson. We've even tried to quantify the value through our typical scientific test regime, but the difference is so clear—spin or don't spin—that it becomes dangerous to flirt with the edge of disaster in that way.

The Chicken Hawk sports car tire warmers start at \$1550 for a set of four, and they come in a dizzying range of sizes. Whether you're a track day enthusiast or a professional racer, consistently warm tires can help you land consistently fast times.

#### source

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