

# Bobby Unser

Highlight Video Transcript



Who'd think of putting ground walnut shells in tires to get a competitive edge in an auto race?

None other than Bobby Unser. And he didn't stop at walnut shells. He experimented with adding ground up car batteries and other materials to tire treads, too—all in search of gaining a traction edge. From his early desire to be "King of the Mountain" at Colorado's Pikes Peak International Hill Climb and throughout his career, Unser's amazing passion to win inspired one innovation after another.

The Wright brothers used a homemade wind tunnel when designing their airplane.

Testing small models helped them get their plane off the ground.

Decades later, investigating the airflow under racing cars, Bobby Unser used an airflow bench – a modified wind tunnel – to help his cars go faster on the ground.

Relentlessly seeking a competitive edge, Unser innovated his way to wins, championships and an almost unmatched legacy.



Top: Wilbur and Orville Wright at their Dayton, Ohio, home, 1910. Bottom: The interior and facade of the Wright Cycle Shop, which was moved from Dayton Ohio, to in 1937

## Bobby Unser, 13-time Winner at Pikes Peak, 3-time Indy Winner, Inventor, Racing Legend

### Ground Effects

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...Well, it's an airflow bench. Through this thing, I can either suck air in through here or out. Like this would be the underwing of a car or the tunnel on a race car, an Indy car. And, and, what we did, like, is just put it right here, and we blow the air instead of sucking it. Blow it out through here, and all these little holes that are in here I take up readings on how much suction.

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This has a bottom to it, a plate which would be the ground, or the racetrack. The air goes in the front of a race car, and this actually sucks down into the ground.

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So if you understand the basics

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Then we make a plastic deal. We mount that on here with a bottom on it. We blow the air through there; we take the readings. We change the design; we change the curve of it. We change different things. Then, when we find one, we take the readings right off of these two instruments there.

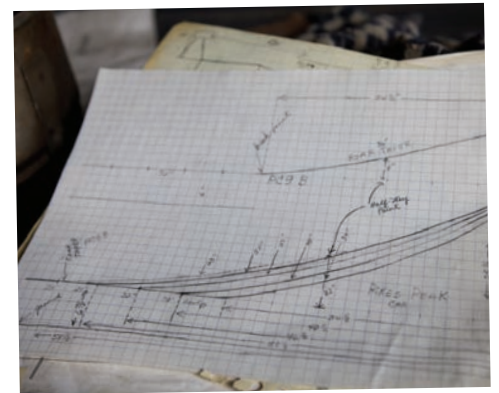
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And so from this thing we can do monumental work...



Bobby Unser

“What really makes people excel over other people, we’re all equal when we’re born so what’s gonna separate us? And it’s only one word...Desire. ”  
— Bobby Unser



A graph showing results from the airflow bench tests.

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## Development Work

... What I discovered, when I was very young, is ... my dad was a fantastic innovator. ... He designed cars and built cars. Like Frank Lloyd Wright used to bring his car all the way from Phoenix up here for my dad to work on. We were just young kids, so we would do a lot of the work ourselves. Well, I took after Daddy that way. When I say I wasn't a race car driver, a real good one, or didn't know it, the truth of the matter is, I was a lot better as the years went on than I realized that I was because I found out that I could make speed happen with race cars with innovations, with development work

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## Walnut Shells

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... In those days, all you had was Firestone. They made a mud and snow tire. . . Number one, we were on the poorer side of life, so we really couldn't afford the new tires very well. And so, my dad made a deal with a guy that made recap tires.

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Well, through doing this, we had a lot of opportunities to try different types of rubber. And we tried crushed batteries ... that worked better, but walnut shells were the answer. And that really worked good. And I was the one that discovered it. Daddy and I did. And we just absolutely set the world on fire. In other words, I could win a whole lot easier.

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... And ultimately, from that – the next year, I made a phone call and got Goodyear Tire and Rubber Company involved.

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Now Goodyear wasn't into racing yet. They were just brand new, innocent company. So, make a long story short, they made the tires, They'd make me selections. They sent me little blocks. Somewhere I still have them, of sample rubber, with different size walnut shells in it. And I picked the ones that looked like the right sizes that I liked. That's still being used today.



A collection of racing tires in Jerry's Garage.



Bobby Unser in the car that won the Pikes Peak International Hill Climb in 1960.

## Conquering Pikes Peak

04:04:25

. . . In my life, the biggest fear that I've always had, since I was really young, is heights). . . And so, Pikes Peak fits this scenario pretty good, because it's not very much up there to have a 500-foot drop-off or a thousand-foot drop-off in places. And so that would scare the heck out of me.

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So, what I did to overcome this is, I would take a passenger car and drive right along the edge. Say, like started maybe 15 miles an hour. I'm talkin' about really getting near the edge of the road. Talkin' about really close. . . Then I would increase the speed to maybe 20 and then 30. And I would do this every year, trying to become immune to the drop-offs. Now, that only cured some of it, because then I trained my eyes to never look down. Always look at the road. Look at the mountain.

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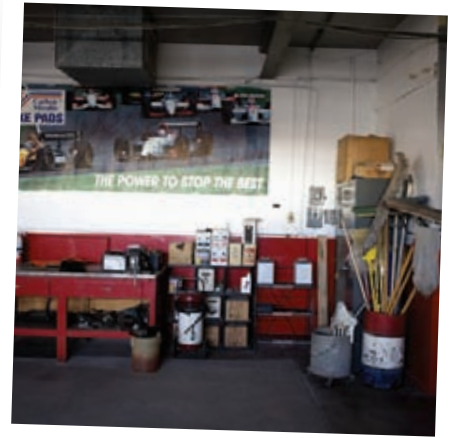
. . . So, every night . . . before I would go to sleep, I would think about Pikes Peak. I would think about how to make my race car better, faster. Little things that I could do.

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And sure enough, sooner or later, it just started working. I'd win Pike's Peak time and time again. To where it was a total of 13 times. And very few people would argue that Bobby Unser wasn't the best ever up there. And that's because I was a fanatic about it.

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What really makes people excel over other people – we're all equal when we're born, so what's gonna separate us? And it's only one word – Desire. The guy that has the most desire will always win, always.



A corner of Jerry's Garage.



Bobby Unser

**Bobby Unser has a lot more to say.  
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