

**CROSSROADS CHAPTER
HOG
SAFETY MINUTE(s)
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LET'S GO SAILING !!

David Hough, in Proficient Motorcycling, uses the analogy of sailing to describe what is happening when you and your motorcycle encounter wind. David points out that any portion of your bike (or you) that presents a surface to the wind acts like a sail. My interpretation of David's analogy is that Sailboats and Motorcycles have to work with the wind. They have to manage the effect of the wind to allow them to get where they want to go. Here are a few facts and some tips about what it going on and what you can do as you ride when the air is not still. (*Our advantage over sailboats is that we can go when the air is still.*)

The first rule of managing in the wind is to know its direction relative to yours. You can do this by looking at flags on poles near the roadway; the branches and leaves of trees; the direction of blown dust or smoke; the blown direction of tall grasses often near the road; and, of course, you can feel it.

We all know that wind blowing from behind us will increase our speed and, therefore our stopping distance. Wind blowing directly opposite our direction of travel will slow us and reduce our stopping distance slightly. We manage these situations with appropriate awareness and throttle control.

It's the other 358° of possible wind directions that add a complication to riding – crosswinds. For our purpose in this article crosswinds are *any wind that is not moving in the same direction as we are (tailwind, pushing wind) or 180° off our direction (headwind).*

For control, a good rule of thumb is to put pressure on the handgrip toward the oncoming wind. So, if the wind is coming from your right, put pressure on the right grip; from the left, pressure on the left grip.

To judge what you are approaching, look to see what is along side the road that might block the wind. This becomes critical if you are to maintain a straight line as you go. It does not take much to disrupt the wind's path. Barns, houses, lines of pine trees, earthen dikes, walls, etc. – all will disrupt or block the wind. When you enter that area of disruption and you already have compensating pressure on a grip, your bike WILL suddenly move that direction. (*From motorcycle safety training – push right = go right / push left = go left*) And when you leave it, expect to be pushed by the wind once again and to re-establish compensating pressure. You can control this and maintain a straight path only by being aware of what is coming and being prepared to adjust your pressure on the grips quickly.

Beyond that, you can also increase your margin of safety by positioning yourself appropriately in your lane of travel. Ride more toward the center of your portion of the road surface so that you minimize the chance of a sudden disruption (or return) of the wind moving you over the centerline or off the edge of the road's surface before you can make the appropriate adjustment. Group riding leaders, in a really severe crosswind situation with frequent disruptions, may be wise to form the group into a single file so as to allow a complete lane width for each rider without sacrificing following distance.

You also want to remember that in weather conditions that include precipitation you are faced with the added complication of reduced traction. This calls for reduced speed, increased following distance, and, in some cases, the good sense to "sit it out" in a sheltered area.

Another dynamic in "sailing" your bike on the highway is the addition of trucks and buses. These behemoths add another opportunity for you to perfect your sailing ability.

Rolling off the front of a truck or bus is a wave of air that has been pushed aside – much like the wave off the bow of a boat. That wave of air has physical presence and you are going to feel it when you hit it. Be aware, also, that is not the only wave of air coming off that vehicle. Look at the water as you move along in a boat. You will see smaller waves being formed all along the side parallel to the "bow wave" from the front. The same is true for the air around the truck or bus.

Let's talk about two aspects of "truck wind" for a moment. First of all think of the truck as a wind block – like those roadside obstructions we mentioned earlier. If the truck interrupts the flow of wind to you, you have to compensate just as you did for the barn or the pine trees but this wind block is really close to you.

If you are going the same direction as the truck (passing it / wind from your right), it's **REALLY, REALLY CLOSE !** Make sure your lane placement is such that you have enough cushion to handle the time it takes you to adjust your pressure on the grip. Enter its wind shadow as far left in your lane as possible and leave that shadow more to the center of your lane prepared for the impact of its "bow wave" and the wind from your right.

If the truck or bus is approaching you (wind coming from your left) center yourself in your lane as you enter his "wind shadow" preparing for the impact of his bow wave followed by the lack of crosswind. Move left as you leave his shadow to prepare for the return of the crosswind from your left.

Now – let's add another dynamic! While you are next to that truck or bus you may feel that you are being "sucked" into the side of the vehicle. There are several things going on at the same time at this point. We'll talk about the most prominent ones.

Remember the "waves" along side of the boat running parallel to the "bow wave?" Look at how they are shaped. They run along a line that approaches 45° from the truck- like

the bow wave. If I were to draw that line across your bike as you travel parallel to the truck it would probably pass through your right mirror and pierce your left shoulder—that's the direction that wall of air is moving. Got the picture?

As you run into that moving wall of air think about where it hits your bike first. It hits the front wheel and fender first and turns it to the left. Remember, the bike counter-steers. It wants to go to the right – toward the truck!

Then the wave hits the windshield or fairing, first, on the left side. If your fairing or windshield is handlebar mounted (every HD but the Road Glide) the front wheel wants to turn left – the bike goes to the right. Toward the truck!

You are hitting these smaller “waves” one after another. Compensate with pressure on the handgrip away from the truck or bus. And don't ride looking at the side of the truck or bus or its tires. Remember your bike goes where you look. Keep your eyes focused ahead – where you want to go.

The last piece of truck wind to discuss is the turbulence you find behind the truck. All that air that has been pushed aside as that truck or bus goes down the road has to come back to “normal.” That means you will find space behind the truck or bus that is “still air” and some that is turbulent air. The still air is close to the vehicle – you should never be riding there, it's too close. If you do enter it, your bike will speed up as it no longer is “pushing” air. You will find yourself being pulled along – too close to the truck for safe operation. Further back turbulent air is swirling in from both sides. It depends on the conditions but you can expect to find it beginning within 20 ft of the vehicle and extending 5 or 6 car-lengths – diminishing as the distance increases. Be aware as you approach the vehicle from the rear or as the vehicle passes you and re-enters your lane. Again, pressure on the grips is the control mechanism you use as you “feel the push” of the air.

So, there you have it, sailing on your motorcycle. We've not covered all the details nor all the possibilities but, if you absorb this you are on your way to understanding and handling your “craft” in the moving air of Mother Earth.

Now – go practice and have fun.

The Safety Guy - Mike

