

# laminar

LAMINAR LIP NOW FITTED AND TESTED IN AUSTRALIA.



Crikey this is an excellent product.

The Yamaha FJR 1300A 2006 model is an excellent sports tourer. Excellent power, ABS anti-skid braking, shaft drive, outstanding handling and tour ability all wrapped into the one package. However, it has one significant drawback, the bloody turbulence created by the adjustable screen. And I am not alone in complaining about it. How can they design such a beautiful work of art and technology and leave the most important thing out. It might just be that we Australians are taller in the body and therefore destroying the dynamics of the screen. Must be something in the diet? The Kangaroo or Crocodile possibly?



I love this bike, but in standard guise it had unbearable wind turbulence and noise for the rider (pilot) at normal road speeds of say 60mph (100kph) to 70mph (120kph) and I desperately needed to do something about the screen. It was as if my head was placed inside a paint mixer or a mix master. After spending many hours attempting to find out the cause of the turbulence and noise, I fortunately discovered the Laminar Lip. The boys from Laminar Lip (Igor and Leo) advised me as follows; "The LIP works where other shields/shield extensions/deflectors don't because it is an inverse air foil. Air that travels between the shield and the LIP will want to follow the LIP in a Bernoulli effect (<http://scienceworld.wolfram.com/physics/BernoullisLaw.html>), the same principle that keeps an airplane aloft except in this case, the wing would be upside-down. As the air exits the LIP/Shield channel, it is moving upward and faster than oncoming air, which smooths out the air for you. Now, most people seem to think that adding a LIP will duck you from the air completely, and this is not necessarily the case, the main function of the LIP is to smooth air out, which it does quite admirably. However, a second function of the LIP is to raise the air, usually about 6-8 inches higher from where you sit. This may or may not be enough to duck you from the wind, but if not, at least the air that you do get will be nice and smooth. The feeling of having your head in a paint shaker at 60+ MPH goes away and it will feel as if you're riding at about 35MPH".

So I purchased the Laminar Lip from the Australian Distributor, Australian Motorcycle Components. Excellent service and the item shipped direct to my door. The Australian agent is a good one. Excellent in fact.

I fitted the Laminar Lip overnight. It was very easy to fit. Once in position, it has a remarkable strength about it. The 3M securing buttons are placed in such a way that once secured it gains strength and rigidity from the Mother screen to which it is attached. It is a rather tidy bit of kit. I rode it in traffic to work in the morning and at city speeds there was noticeably less turbulence around the body and head area. After attending to my work in the morning, I took it for a spin at highway speeds. I have now taken the Laminar Lip for a test ride at highway speeds between

100kph (60 mph) to 140kph (80mph). What an interesting thing. Quite interesting how it works! Yes, you can see physics at work. Previous to owning the Laminar Lip, whether at city speeds or at highway speeds there was a wind roar in my ears like a jet taking off. Actually, the roar at highway speeds was unbearable except for minutes at a time. Previous to owning the Laminar Lip, whether at city speeds or at highway speeds there was turbulence behind the screen that was as you say, like having your head in a paint shaker. Previous to owning the Laminar Lip, to ride anywhere at highway speeds I had to use my Alpine Ear Plugs. Those Alpine Ear Plugs would reduce the sound to something that was acceptable and so that I would not suffer permanent ear damage. Actually the noise without ear plugs was so bad you would get a headache and also it took away the enjoyment of the riding experience. Previous to owning the Laminar Lip, to ride anywhere at highway speeds, I fitted to my Shoei ZR1000 helmet, a device that I imported from Wales in Great Britain. That device was called a Windjammer II from Proline in Cardiff, Wales. It helped to reduce the wind turbulence under the helmet and reduce the noise slightly and the whistling mostly, however, as good as it was, I still needed the Alpine Ear Plugs. Now that I have fitted the Laminar Lip, I do not need the Windjammer II, and I do not need the ear plugs. I am absolutely pleased with my Laminar Lip for my new Yamaha FJR1300A 2006 model.

I took the bike fitted with Laminar Lip to Australia Zoo on the weekend to pay my last respects to our late Steve Irwin the Croc Hunter. At touring and highway speeds and at those speeds where they send you to gaol (jail) and throw away the key, there is virtually no turbulence or wind noise. It does as it is intended, smooths out the air so that the ride becomes most enjoyable.

Just wonder why they do not install a Laminar Lip on bikes as standard ?

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## **Post Script. A little food for thought:**

**Bernoulli's Principle** states that as the speed of a moving fluid increases, the pressure within the fluid decreases. The fluid can be either a liquid or a gas. For Bernoulli's Principle to apply, the fluid is assumed to have these qualities:

- fluid flows smoothly
- fluid flows without any swirls (which are called "eddies")
- fluid flows everywhere through the pipe (which means there is no "flow separation")
- fluid has the same density everywhere (it is "incompressible" like water)

As a fluid passes through a pipe that narrows or widens, the velocity and pressure of the fluid vary. As the pipe narrows, the fluid flows more quickly. Surprisingly, Bernoulli's Principle tells us that as the fluid flows more quickly through the narrow sections, the pressure actually decreases rather than increases!