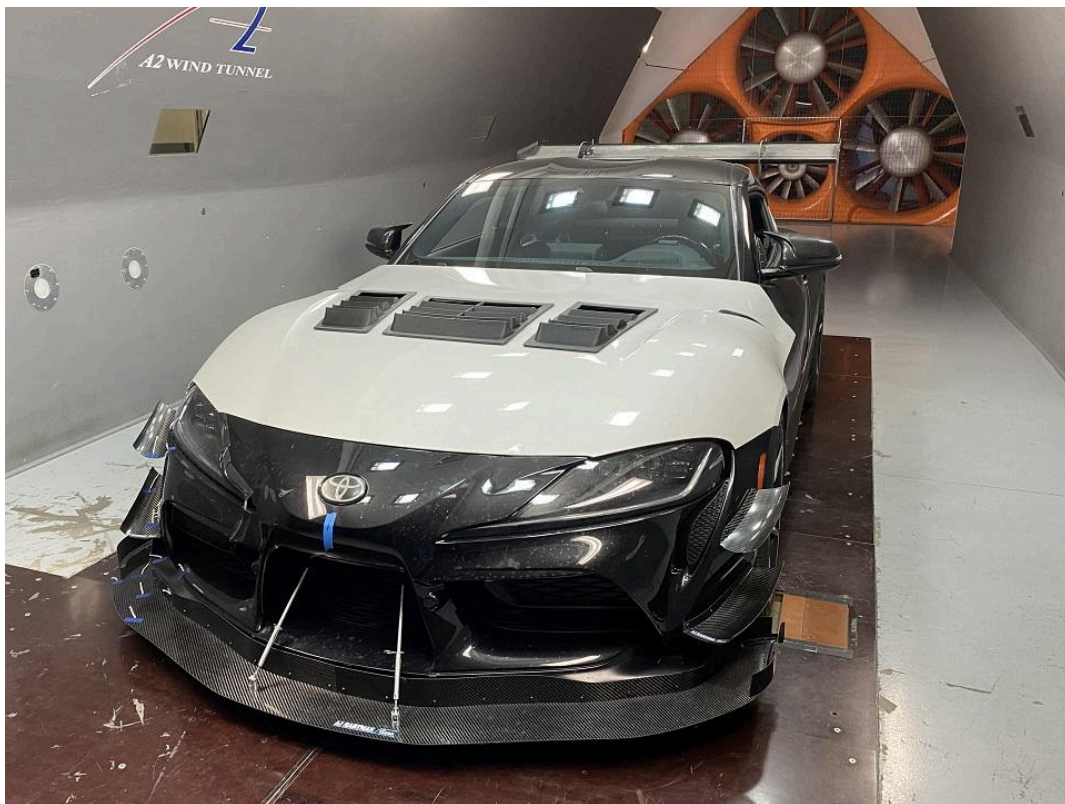


# */// Race Louvers*

Professional R&D - Wind Tunnel Tested - Track Proven

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Supra MK5 Wind Tunnel Data

Welcome to Race Louvers. Here we tested our newest CF Extreme louvers as well as our RS Street, RT Track and RX Extreme louvers along with several other style vents commonly found on the market.

Our test went as expected. Since Louver design and physical size dictate functionality all of the single center kits were the same 16x14" size for a good apples to apples comparison. Generally speaking there is an incremental increase in functionality from our least aggressive kit to our most aggressive. One point of interest is we came to the tunnel with 3 different iterations of our CF louvers. As you can see in the data our least aggressive CF worked the best, it provided the best cooling and downforce at the least amount of drag. Our two more aggressive CF louvers actually had no increase in cooling but a fair increase in drag showing that testing is important.

A word on efficiency. Most are familiar with lift to drag ratio, L/D is a measure of efficiency. Take a wing for example, they create downforce (neg lift) at the cost of some drag. A hood extractor is a bit different in that they have two gains, they create both cooling and downforce at the cost of some drag. So a good efficient aero setup usually involves a splitter, hood and fender extractors and a properly sized rear wing for aero balance.

Test car prep level:

- Toyota Supra Mk5 with the AJ Hartman Aero package, wing, splitter, tunnels, canards.

Hood vents tested:

- stock hood no vents (baseline)
- mesh / open hole
- stamped louvers
- waterfall vent
- common recessed louvers
- Race Louver RS Street
- Race Louvers RT Track
- Race Louvers RX Extreme
- Race Louvers CF Extreme (CF V1)
- Race Louvers CF V2
- Race Louvers CF V3
- Race Louvers CF Extreme center and side hood kits

Test procedure:

- Simply swap out hood vents with no other changes for back to back testing

Conclusions:

- Our RS, RT, RX and CF kits are progressively better than one another.
- Our new CF Extreme louvers are our best functioning kit yet.
- You get what you pay for, no generic 'improves cooling' sales pitch, just real research and development, real testing, real data and comparable data so you know you're getting the best.

Video: <https://youtu.be/FMIJqdwynCQ>

**Wind Tunnel Radiator Differential Pressure Percent Increase (Cooling Air Flow Increase)**

Supra Mk5. Single 16x14" Center Vent Comparison. OE Grill Opening.

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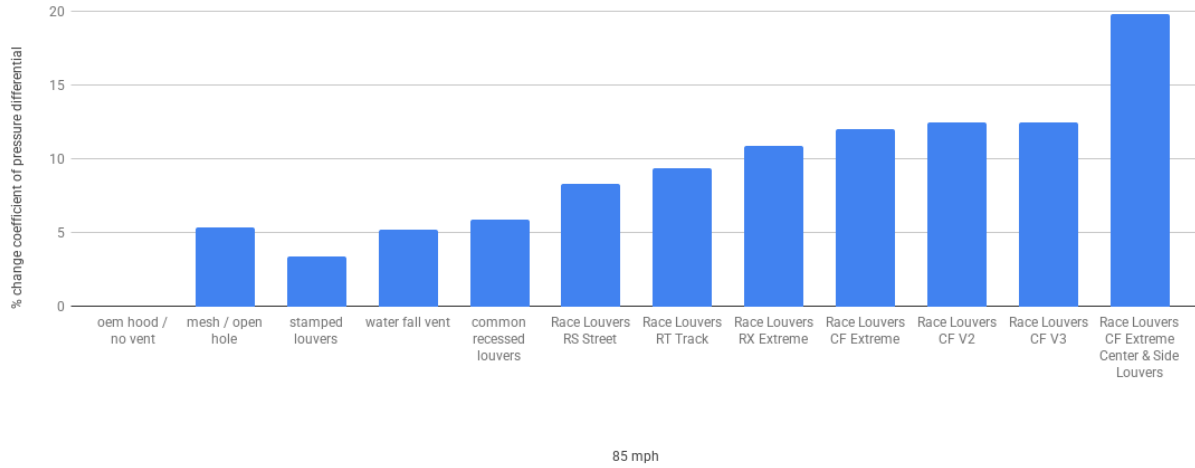


Figure 1 - Cooling

**Wind Tunnel Front Downforce**

Supra Mk5. Single 16x14" Center Vent Comparison. OE Grill Opening

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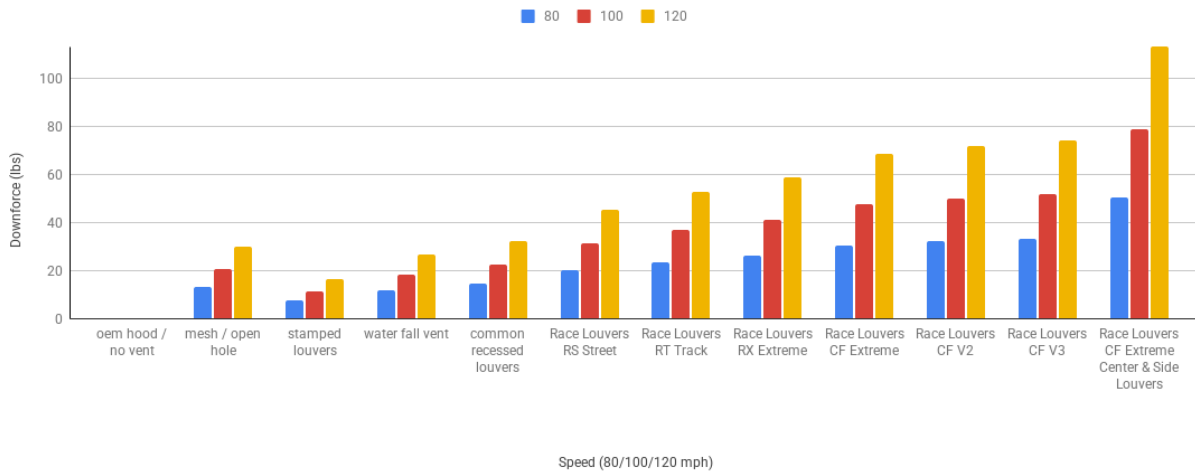


Figure 2 - Front Downforce

**Wind Tunnel Drag**

Supra Mk5. Single 16x14" Center Vent Comparison. OE Grill Opening

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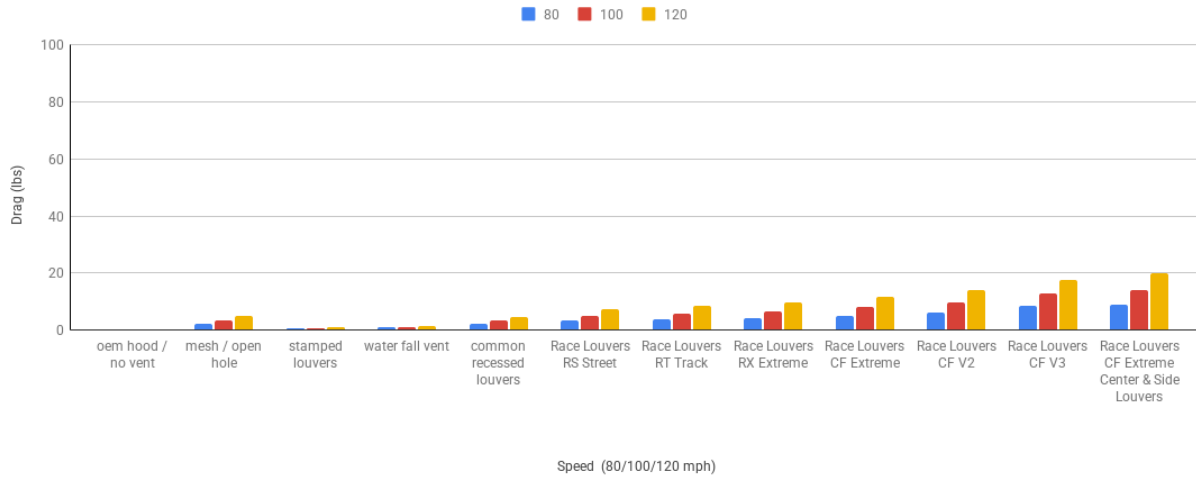
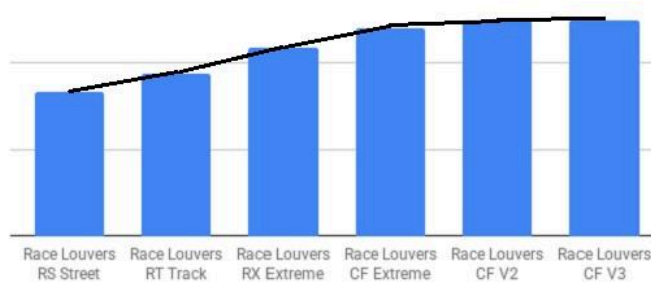
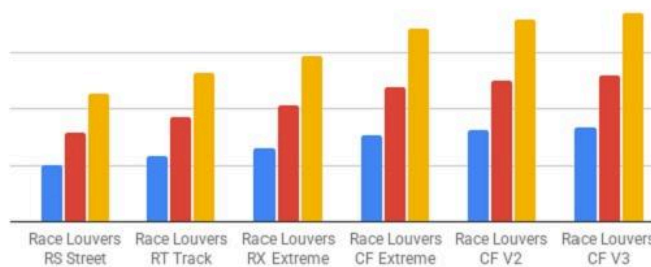


Figure 3 - Drag

**Cooling Airflow**



**Front Downforce**



**Drag**

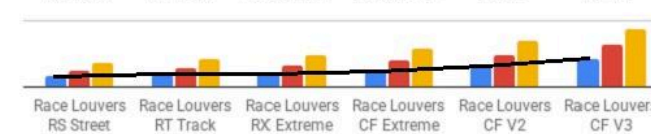


Figure 4

The more aggressive V2 and V3 designs yield no increase in cooling but an increase in drag. Enter our more efficient V1 CF design, our new Race Louvers CF Extreme.



Baseline - No Vents



Mesh / Open Hole



Stamped Louvers



Waterfall Vent



Common Recessed Louvers



Race Louvers RS Street



Race Louvers RT Track



Race Louvers RX Extreme





Race Louvers CF Extreme (CF V1)



CF V2



CF V3



Race Louvers CF Extreme Center & Side Kits

