



AMZ News

FORMULA STUDENT NETHERLANDS



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eiger at the brake test
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The First Day

Ten months have passed since the current AMZ team met for the first time. Since then, countless hours have been invested into construction, discussions, assembling and testing to present *eiger* in its current form. Finally, in the past week, the time has come: *eiger* had to face its competition for the first time at Formula Student Netherlands. The journey to the TT Circuit in Assen started on Sunday with a total of seven cars. Following the arrival, the team set up the box in the paddock as well as the team tent on the camping ground. Shortly after, the participating teams gathered at the welcome ceremony to officially launch Formula Student Netherlands 2018.

On the opening day of the event, scrutineering was first up on the agenda. In order to prove the car's regula-

tory compliance, *eiger* had to undergo an electric as well as a mechanical inspection, the latter one being completed on Tuesday. Meanwhile, during the Engineering Design event, the team had the chance to explain to a select group of judges why *eiger* is such an outstanding engineering feat, which hardly presented any difficulties. Finally, the financial understanding of building such a car was assessed during the Cost and Manufacturing event.

Statics & Skidpad

On the second day at FSN, scrutineering was set to be concluded: following the mechanical inspection, the drivers had to demonstrate how to egress the car in just under five seconds. Tension was rising as *eiger* approached the tilt table where it had to prove that it would not roll over while tilted at an

angle of 60 degrees. Shortly after, rain and brake tests were successfully completed meaning that the car was now officially cleared for the dynamic disciplines. At the same time, in the Business Plan Presentation, our business team pitched their start up idea to the judges, playing the role of potential investors, in order to receive the necessary funding. Later in the evening, things started to get serious: in wetpad, *eiger* was ready to challenge the competitors for the first time, a task the car passed with flying colors: on watered ground, *eiger* was the quickest to complete the two 15 meters wide circles.



eiger during endurance
©AMZ, Frank Schaufelberger

Acceleration & Autocross

Backed by this first taste of success, the third day at TT Circuit was kicked off with the acceleration event: the car setting the fastest time over 75 meters wins. A first run was completed although *eiger* could not resort to its full power. In the box, the car was then tuned to further improve the performance: the camber of the wheel was optimized for driving straight and the rear wing was adjusted to a drag reducing position. However, in the remaining runs, problems with the motor controllers arised. Nevertheless, a solid second position in acceleration revealed the true potential of *eiger*.

eiger was then pushed back to the box in a hurry to prepare the car for the autocross event taking place in the afternoon. Here, two drivers get to drive two rounds each in order to complete a circuit of about one kilometer in length in the fastest possible time. In the beginning, our first driver was able to showcase his reflexes and excellent

control of the car, however, handling of the car got worse in his second lap due to a leaking spring damper element. Although worth watching from outside, this did not contribute to a faster lap time. Also with the second driver at the wheel, *eiger* appeared to run into trouble. In corner three, the car unexpectedly slowed down and eventually shut down due to a loose sensor on the accelerator pedal. In the end, the result was a satisfying fourth position.

Endurance

The issue which occurred during autocross was fixed on the following day. It was the final day of FSN which meant that it was time to get ready for endurance, the ultimate discipline of a Formula Student event. A circuit of 22 kilometers in total has to be completed as fast as possible, whereby efficient driving will also be rewarded. As the endurance makes up 40 percent of the points, total concentration dominated the box. *eiger* was again thoroughly checked and the accumulator charged

to full capacity. Furthermore, the power and torque were reduced to ensure the car's reliability.

Overall Win

Thanks to those precautions and a good preparation, the race turned out very satisfactory. Both our drivers were able to drive constant and fast lap times, meaning that *eiger* finished endurance on top. Unfortunately, a time penalty of 30 seconds for a drivers change that took to long was added to the final time. However, a second place in endurance combined with a convincing display in the remaining dynamic and static disciplines were enough to secure overall victory, even if the suspense was palpable until the end: Elbflorace, the team from TU Dresden, delivered an exciting fight for the first place. Ultimately, only 18 points separated both teams with AMZ finishing at the top with 953 points. At this point, we want to congratulate Dresden and University Racing Eindhoven for 2nd and 3rd place, respectively.

Next Stop Austria

Right now, further tests are planned to repeat this success during Formula Student Austria, starting from July 30th. If you want to follow the action live from the Red Bull Ring, make sure to follow us on Twitter and Facebook.

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