

1 Cost and Manufacturing Event FSPT 2024

The following is with relation to the Cost and Manufacturing Event as located in the FSG Rules Book under Section S 2.2.5. The Real Case mentioned below has to be presented via a ten minutes presentation during your time slot at the Cost and Manufacturing Event.

1.1 Real Case Topic (CV only)

Racing cars with electric and combustion engines, and more recently with hybrid drives, take part in Formula Student. In order to offer the combustion teams a "green future" and to give established e- teams a new challenge, there will also be hydrogen-powered vehicles in the future. These will be fuel cell vehicles with a buffer battery on board that feeds the electric drive, but also vehicles with combustion engines that run on hydrogen instead of RON 98 or E85.

In Formula Student Combustion the 4-cylinder 599cc Yamaha YZF-R6 engine is often used. Please outline the steps that need to be taken to convert this standard motorcycle engine to run on hydrogen. We ask you to show the manufacturing process and cost calculation for the a 4-cylinder 599cc Yamaha YZF-R6 engine running on hydrogen.

1.2 Important points:

- Provide transparency in the creation of your presentation.
- The judges want to see how you arrived at the results and which source you used.
- Focus on the production phase (from the raw materials to the finished product).
- Present your results to the judges and be sure to take a systematic and realistic approach to your solution.

1.3 Real case presentation requirements:

- Max. 10 min in length.
- 5 min questions to your presentation after that from the Judges.
- One A4 page handout for the Judges (print and as PDF).

We look forward to your presentation!