To all members of the press

Saturday,21 May 2022

SUPER FORMULA NEXT50
3rd Carbon Neutral Development Test

Japan Race Promotion, Inc. (JRP) held the 3rd Carbon Neutral Development Test of the season on May 18 & 19 ahead of Super Formula Rd. 4 at Autopolis.

＜Photo of test cars "The Red Tiger" and "The White Tiger"

As previously announced on March 5, 2022, as part of the SUPER FORMULA NEXT50 project, JRP will use circuits that Super Formula races are held on for "Mobility & Entertainment Technical Developmental Testing." The following 3 areas are what was tested at Autopolis:

1. For realization of carbon neutrality: material-based test, tire test, fuel test
2. Aero dynamic improvement test so drivers can achieve optimum potential
3. Machine development for entertainment enhancement

Behind the wheel for development testing were Hiroaki Ishiura and Koudai Tsukakoshi. Both provided feedback on the testing, while working alongside SF NEXT50 technical advisor Youji Nagai, HRC (Honda Racing), TOYOTA GAZOO Racing, and Yokohama Rubber during 4 sessions over 2 days for a total of 8 hours.

Testing was blessed with two days of great weather conditions. The course at Autopolis is quite different than that of Rd. 1 of development testing at Fuji Speedway, and Rd. 2 at Suzuka.

Autopolis is located high atop mountains at an altitude of 800 meters above sea level, with most of the first part of the course running downhill, followed conversely with the second half being mostly uphill, with both high and low g-force corners along the way. Results from the first two rounds were put to the test to see what new could be learned during this round of testing.

During this round, engine testing with carbon neutral fuel, as well as new types of tire construction and compounds were tested. In addition, bio-composite materials made of flax and other natural materials manufactured by the company Bcomp, were used in body-based heat, water, strength testing. The set-ups for both cars were calculated based on results from the 2 previous development tests to closely monitor downforce needed in overtaking and on-track battles.
JRP, through its SF NEXT50 project, shares the data from its core-theme of carbon neutral development testing with its partners for the realization of carbon neutrality in commercial vehicles and the like. JRP will continue development testing at each event throughout the season.

Comment from Development Driver Hiroaki Ishiura

“The grip from the tarmac at Autopolis is very high, so it is a high tire deg course. I had a lot of rubber pick-up because of the tire wear, which was something I hadn’t experienced in Super Formula to-date. Just with a change in tire compound that happened, so I think they were probably able to gather a lot of useful data. Testing at a circuit so different than the others like here at Autopolis holds a lot of importance in my mind. Tires were the main item on the list, so I didn’t work on anything new, but I think we were able to get plenty of testing done. It’s getting close to time to for a new machine, and there are a lot of issues and concerns to be worked out with the Bcomp cowl, which will probably be addressed going forward. Because we’re actually able to test it, we’ve been able to hold discussions. In terms of carbon neutral fuel, we’ve been discussing how to use it, I think what we’re achieving here in Super Formula will add to the knowledge for it to be used in other racing categories around the globe. This is honestly very cutting-edge development testing that we’re doing.”

Comment from Development Driver Koudai Tsukakoshi

“Our tests were held this time at Autopolis, which is one of the most unique circuits Super Formula races at. Tires were the main box that we checked off this time. We used tire specs that proved good during the Fuji Speedway and Suzuka tests. I think we were able to move

one step forward.　The grip at Autopolis was somewhere in between what we saw at Fuji and Suzuka.　The tire specs were designed for high downforce circuits, but because of the altitude, that cuts back on downforce, and the corners are mid-range.　After a long run, we found that the pick-up and heat of the tires was different than what we had encountered elsewhere. Being able to understand that was certainly a plus, because it was something we didn't see at Fuji or Suzuka.　We also found some new issues that need to be worked out, which I'm sure will be properly analyzed.　As far as fuel is concerned, it didn't feel like we were running anything different than usual.　Even here in the high altitude at Autopolis.　While we were doing the overtaking menu, I didn't feel the loss of downforce when running behind the other car in high-downforce conditions nearly as much as I did at Suzuka.　But after cutting down on the downforce, when I got behind the other car, I found the downforce differential to be less than what I had experienced at other circuits."

Comment from Technical Advisor Youji Nagai

"In regard to scheduling, it is almost time to work on the car technical regulations for next season.　We wanted to take a look at the results from the tests here at Autopolis then decide on what direction to go.　After testing different angle settings on the rear ring, we learned that the cars can get close to one another even with a bit lower down force.　With that knowledge in hand, we're able to just about decide on the concept we want to go with.　We used different casings and compounds in the tires at both Fuji Speedway and Suzuka, but put them all together for the testing here.　Even though we're leaving with a couple more things that need to be worked out because this is a high deg circuit, I think we're close to what we want in regard to tires, too.　We used carbon neutral fuel in the in the overtake system (OTS) during testing here.　As this is a high-altitude circuit, the turbo load is normally higher than at other circuits.　We'll need to take a look at the data for that.　Rocks seemed to have played quite a bit of havoc on the bio-composite cowl.　Racing cars have a coat of sealant on-top of the paint job.　We aren't using sealant on the test cowl at this point, but it looks like we're missing the degree of hardness we have with carbon.　Being able to walk away with that knowledge is a good thing.　Overall, we had a good couple of days of testing.　This reinforced that testing at all the courses really makes sense."