NTT INDYCAR SERIES
News Conference

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Steve Holman
Dominic Coffey
Andrea Bongiovanni

Press Conference

THE MODERATOR: The Louis Schwitzer award, in its 60th year. It honors and celebrates the engineers behind developing new and innovative concepts annually ahead of the Indianapolis 500.

Here to do the honors, Steve Holman, the chairperson for SAE Indiana chapter.

STEVE HOLMAN: As you said, our 60th annual presentation of the Louis Schwitzer Award. Our new sponsor this year Allison. If you think about it, Allison has about the longest history possible here with James Allison being one of the founders of the Speedway.

At that very first automotive race here when Louis Schwitzer won in 1909, James Allison had to be watching. Pretty amazing those two names are still here as part of the history of the Speedway.

This year the committee has likely the most diverse group ever of potential candidates to interview.

First we talked to Pfc. Briggs. They had a simple but well-engineered update to ensure smooth actuation of the brakes upon pit entrance because sometimes when the drivers would suddenly apply them, they would grab or sometimes they wouldn't grab. Now the drivers don't have to be concerned about that. It's a welcomed update.

Our most interesting interview was with the FOX Sports TV director about new camera views that have been added to the cars by using some very creative ideas in engineering to mount extremely small cameras in rather difficult positions.

An unusual candidate was the removal of the bump and repaving of the turn two. That was a great partnership between the construction engineers and IMS facilities.

Another new design on the car this year is the addition of the rear tire ramp flaps to further reduce the possibility of car lift when traveling backwards after a crash. This is not a new concept, but very comprehensive engineering created a simple but highly effective component.

The winning engineers of the 2026 Louis Schwitzer Award of Dominic Coffey and Andrea Bongiovanni from Dallara for the rear tire ramp flaps.

Dom and Andrea, congratulations. Don, if you'd give us an update on some of the engineering options you looked at, how you did your computational analysis of that, then got the parts into production.

DOMINIC COFFEY: I want to say thank you to everybody on the Louis Schwitzer board here and the sponsor for letting us be a part of this project and award.

We also have Andrea Bongiovanni via Zoom I think here from Italy. Thanks, Andrea for calling in.

The project we worked on originated in the last couple years. As Steve said, we worked on several different projects to try to keep the car from becoming unstable in 135 or 180 degree spin conditions.

Dallara is always pursuing trying to increase that safety and try to increase the stability of the car when it gets to those spin conditions.

We went through several different design iterations before we got to the final product. These design iterations included having similar flaps on the inside of the trailing edge of the diffuser. So currently the car has a pair of flaps on the topside of the diffuser. We were looking at several different options for putting diffuser flaps on the inside. We went through that, did detailed designs on that, did not believe that was going to be a consistent or reliable method of achieving the goal.

With that we moved on to what we call the tire ramp flap, which we actually have a pair here. They sit on the top, on the very trailing edge, of the tire ramps, just ahead of the rear wheels. These are designed so that in 135 and 180

degree spin conditions, these flaps will deploy, reducing the lifting force on the body of the car, looking to mitigate the possibility of a car becoming airborne in these spin conditions.

STEVE HOLMAN: Can you give us any numbers in speed or pounds of the effect of this?

DOMINIC COFFEY: When we are doing aerodynamic studies like this where the car has spun around, we look at what we call the V critical speed, the critical speed at which the car would lift up.

The inclusion of these flaps has increased the V critical by 30 miles an hour in the 180 degree condition, and I believe by 17 miles an hour in the 135 degree condition.

We looked at several ride heights as well because when the car is in a crash, it's very possible that the front axle of the car can drop to the ground, so the front right height will go to zero as well this. Has increased that V critical speed as well.

STEVE HOLMAN: Dave, any questions?

THE MODERATOR: We have Andrea on Zoom as well. Maybe just chime in on maybe the process, winning this award, what it means.

ANDREA BONGIOVANNI: Hello. As Dom has said, I'm honored to receive the award.

Referring to the process, we started exploiting the different areas of the car in order to analyze which are the part of the car that works in completely different ways with respect to the design condition.

Concentrating on 130 and 180 degrees, we start analyzing which are the elements that provide more stabilizing contribution from the aerodynamic perspective.

Besides observing several options, we found the element on the tire ramp flap, that the tire ramp works in a very different way in spin conditions.

With the deployment of this flap we could break this action that's on the upper part of the tire ramp is measuring, as Dominic was saying before, reducing so much the lifting contribution by the top body.

THE MODERATOR: Excellent. Really cool stuff. Steve, four candidates, is that right?

STEVE HOLMAN: Yeah. We could have had five with a little more time and logistics. Worked out better for us. We would have had five good candidates.

I think the key there is that we expected this to be kind of a slow year with the new car coming out in '28. Typically companies and engineering groups don't like to put the resources in something that will only be around for a year or two.

To have them all working this hard and try to improve this car and make it safer is really a credit to all these companies. We were happy to see all that work being done.

THE MODERATOR: I would argue that any year, any of those other candidates might be a winner, right?

STEVE HOLMAN: The sort of backstory for this is in our voting meeting, we had a lot of what we call lively discussion. It was a very close outcome.

You're right, we could have had any number of winners this year.

THE MODERATOR: You mentioned the '28 car. The manufacturers are still working hard here, they're not just relying on the fact there's a new car coming out, a lot of hard work being done for this year, next year?

STEVE HOLMAN: We heard a lot of times in our interviews, We're working on something for '28, but we can't talk about that. There's a lot going on.

THE MODERATOR: Questions.

Q. I have question concerning this device. You said earlier you tried to figure out when the car is trying or want to lift. Is it not different from racetrack to racetrack? Here you have higher speed than on a road course. How you can figure that out? How is the device working on the road course compared to an oval?

DOMINIC COFFEY: That's a great question. So when we were focusing on that V critical, the critical speed at which the car could become airborne, that speed is high enough that it's not of concern on the road courses or the short ovals. The high speeds that you reach even at the longest straights on road courses aren't high enough to cause the car to go airborne in 180 degree condition with that bodywork.

STEVE HOLMAN: The track here as a unique tire ramp that is only used here. These tire ramps, if you hold these up, they have a very slight curvature to them. That's designed specifically for the Indy Speedway tire ramps that

are only used here. This will only be used here at the Indy 500.

Q. But even here with the tire ramp, even the tire ramp has a limit. It's a physic law. When the car goes so fast, I think even the tire ramp must have a limit to save the car from lifts.

DOMINIC COFFEY: Correct. The inclusion of these tire ramps has increased that speed by 30 miles an hour which is well over the top speed of the car that it will ever reach at this track. The critical speed is 30 miles faster.

Q. How many other locations on the car for the Indy configuration were considered for this or was this the obvious spot where this work was going to be done? How many iterations to get the flap the way you wanted it?

DOMINIC COFFEY: What we have here finished in front of us was probably the fifth iteration of it. The other positions considered the bottom side, the intersection of the trailing edge of the underwing. Those options were abandoned either because they did not increase that critical speed or because the installation was not thought to be consistent or robust enough to be really applicable.

Q. I would think maybe it was more effective to install on the car if possible something like an air brake like NASCAR has. Was that an option you looked into?

DOMINIC COFFEY: No, it's not something we really investigated, putting an air brake on the car. Not something we looked into at the moment. I don't think something like this would be retrofitted to act in that manner either. It's only going to deploy under the aero conditions of running backwards.

THE MODERATOR: It's always fascinating how innovation never ends with INDYCAR racing. Congratulations to our friends at Dallara.

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