### IndyCar Media Conference Friday May 18, 2018

### Steve Holman Tino Belli Andrea Toso

**Press Conference** 

THE MODERATOR: This is an important event here at the Indianapolis Motor Speedway. Steve Holman with us with the Louis Schwitzer Award. Steve, take it away.

STEVE HOLMAN: Thank you. Welcome to the 52nd annual Louis Schwitzer Award presentation. We'd like to thank our long time sponsor Borg-Warner for their continuing generous support, and SAE Indiana Section for providing us with our Selection Committee members, which includes Pat Wildeman, Larry Moore, Steve Widmer, Clay Dunbar, John Norton from Borg-Warner, Steve Driscoll from who got called back to the test cell for some emergency work this morning, Jim Bailey, myself, and our IndyCar sponsor Bill Pappas.

Once again, the engineers involved with the IndyCar Series have provided us with several worthy candidates for the Louis Schwitzer Award. Some examples are last year's winner, PFC Brakes have continued their development and now provide a complete brake system that has earned positive reviews from the drivers for its solid, consistent feel.

An all new electronic system from Cosworth has been developed this year. New steering wheel display is configureable up to 80 different pages. It has much greater speed and capacity for data acquisition and telemetry.

However, our winner this year is the universal aero kit for the 2018 IndyCar. It is so much more than an aero kit involving numerous other upgrades. Let's review some of those other engineering enhancements.

It significantly improves side impact performance by moving the radiators forward and adding a carbon fiber energy absorbing structure in the side pod. It reduces part count complexity and therefore debris when there is a crash, thereby reducing the length of yellow flags and keeps fans more interesting.

It meets or improves previous aerodynamic performance in terms of speed and stability metrics at all the IndyCar venues from street circuits to superspeedways.



It meets the price constraint teams were promised while delivering full compatibility to the existing chassis and power train. By not needing to produce aero kits, costs were also reduced for the engine manufacturers, both current and potential newcomers.

It provides a better driver's car for more passing and fan excitement by controlling the rear turbulent wake and developing less downforce by the upper wings.

Finally, it looks gorgeous. The goal was a car that looked like the IndyCars of the early '80s and '90s that looked fast standing still. We're talk a bit later where all those beautiful curves came from.

For their work on the 2018 aero kit, the winners are engineers from Dallara, Andrea Toso, Antonio Montanari, from IndyCar Tino Belli, and from London product designer Chris Beatty.

Gentlemen, congratulations.

We have today with us Andrea and Tino. Antonio and Chris are still across the pond. I'd like to hand it over to Andrea now for some comments from Dallara.

ANDREA TOSO: Thank you for the award.

You see four people have been awarded, that means a lot. Means that it's been a team effort. Nowadays engineers cannot do anything by themselves. So you see Tino, you see Chris, Dallara all together.

This award is for engineers, provided by engineers, so it's just in the technical environment. How can I say? I see this award as a right example to reward engineers.

I was telling Steve, the engineers are the unsung heroes of our society. They are under a lot of pressure to comply with a lot of requirements, technical, stylish, performance, crash safety and such. Really they are on the front stage like we are today.

At Dallara, I would say that we are part of a community. I say community like a bus. Someone is driving the bus, this is IndyCar. IndyCar is driving the bus. There is an engine in the bus, there is tires, and we provide the structure. We are part of the community. We have been asked by IndyCar to comply with a lot of requirements. Tino and Chris and our people in Italy and our people at Dallara have done a good job.



Again, we usually are not on stage usually. We are engineers, and our role is to provide the platform for these drivers and teams to enjoy, to have fun, to go racing. So this is where we are. Thank you.

STEVE HOLMAN: I just want to say one word about Andrea's contribution. Every year we put a little paragraph on our trophy that describes the winner. A good part of that came right from Andrea's candidate sheet that we ask all our prospective candidates to submit. A lot of the wording and ideas came right from what he wrote us. He has a very good understanding of, as he said, engineers are the unsung heroes, and the things that go on behind the scenes make this IndyCar work very well, all the engineering that goes into it.

Tino.

TINO BELLI: Thank you for being here. Congratulations to Andrea and Chris. I should start really at the very beginning, though. I think we have to thank Jay Frye and Bill Pappas for having the vision and making the vision happen, which is difficult. Financially you have to make things happen.

Secondly, Chris who couldn't make it here today, he sort of sends his apologies. Chris was a big part of this program as well. The aero kit was conceived to look fast as well as be fast. Between Dallara, Andrea, Chris Beatty, we did a lot of backwards and forwards with shapes. A lot of credit has to go to the guys in the Dallara wind tunnel, (indiscernible), Marco, Benedetto. They worked very hard because we were coming up with these shapes which really weren't necessarily optimized. We then had to play with the shapes to make them hit all the performance criteria, which are difficult criteria to hit.

I think we need to give some credit to our teams. We did the sign off testing during the season, which made it very difficult for the teams that actually had to do that testing, they're racing at the same time. Every team that we approached to do anything for us on this project has volunteered and helped in every way. I think that shows the whole team effort.

Honda, Chevy, they had to design the intake system and the electronic system for their engines. We made them put their electronics in a very hot part of the car, which was a big challenge for them as well.

Finally to the guys at the Dallara LLC. They really made it all come together right at the very end. They also took on the challenge with a lot of the electronics on the right-hand side of the car, which is chassis electronics. Very collaborative effort.

Thank you.

ANDREA TOSO: Usually engineers talk about

technical stuff, nuts and bolts, turbos. But engineers are not robots. The personal relationship is fundamental. The human factor is fundamental. I like to thank Tino and everybody because of the great personal relationship. Without that, you can be the brightest engineer in the world, but you get nowhere.

I've been knowing Tino and Steve for many, many years. Again, without that, you could be the brightest and cleverest engineer, but you're going nowhere. So let's not forget that engineers are human people, right?

STEVE HOLMAN: Questions.

# Q. Andrea, how radical of a difference did your original concept look compared to what the final product is in this car?

ANDREA TOSO: The original concept didn't come from us. I think it came from the fans. They had a really clear say. They knew what they want. So the style aspect, the legacy of the past, was a starting point.

At the first it looked impossible, really impossible. Little by little we digested and we made it. At the start we made some proposals, and in retrospective, our proposals were awful, I mean, wrong. Thanks to IndyCar, it's been a joint effort to go together the right direction.

#### Q. As far as the package that's used here, has there been any characteristics of the car that have surprised you one way or another?

ANDREA TOSO: It's a bit too early to say, because just three practice sessions. Of course, there's been an open test weeks ago. So far so good. Performance I think is better than we expected given the conditions. I hope you agree, Tino. I would say it's even better than we thought. I'm positive.

Q. Andrea, you said earlier the proposals you made in the first place were awful. With all the experience for many years of Dallara in racecar manufacturing, did your company start with a totally white sheet of paper or you had some ideas already in mind aero kit would look like?

ANDREA TOSO: I've been around IndyCar for more than 20 years, but I'm not American, so I have to be humble. IndyCar has been around for more than a hundred years. Again, with a humble attitude is better that we listen than come up and say, Okay, let's do that way. Again, thanks to Tino and Jay Frye and Bill and Chris Beatty, these people, and the teams and the drivers.

Is better to listen. God gave us two ears and one mouth, right?

Q. Tino, I think you were involved also in the design of the Indy Lights car?
TINO BELLI: No, I wasn't.



#### Q. Andrea, you were involved.

ANDREA TOSO: Yes, I've been part. Most of the credit goes to Antonio.

Q. Drivers that have moved from that car to this complimented how close it is. Is that something you looked at when you designed the new car? ANDREA TOSO: Remember, the platform of the current IndyCar dates back to 2012. I mean, main features and suspension and system. Indy Lights came later. So in the structure of the current IndyCar is not the consequence of Indy Lights. I would say no. Honestly, no.

Q. 2022, 2023, there will be a new IndyCar. How far down the road are you already thinking of the conception of what the new IndyCar will look like? TINO BELLI: Bill and I have had a lot of talks of how we see the design of the cars going in the future. But really they're nothing more than just backwards and forwards. We talked with Jay a little bit about it. In general we really wanted to get through this month first. It's a very different car to what we've had since 2012. It was very important for us to concentrate on getting through this month. I think after this race is through, we might start to think a little bit more about the next generation.

ANDREA TOSO: I agree with Tino. Let's live in the present, go through this. Is the first race with this new package. Of course, the structure is fundamentally the same. But we recommend to Steve the other day. It's like wife, okay? You change clothing, you change everything, and the wife looks great, new, fresh, it's fun. But inside the character is the same, okay? But let's get used and then it's time to look for a new clothing, whatever, a new wife also. That is politically incorrect, but...

## Q. This universal aero kit has to work everywhere. Is there any from your perspective weak points where it could be a problem?

TINO BELLI: So far for IndyCar we monitor the fan forums, we manage all the statistics we can get. So far this season everything has been positive. We felt we were much better at St. Pete, we were better at Long Beach. We made a significant improvement at Phoenix, although we registered that the fans did not necessarily -- some of the fans did not feel the same way. We will work very hard at those configurations where we are a little bit weaker. Some of the teams around here, they're getting used to saying it's quite a different car, has a very different center the gravity. They have to get used to tune their suspension, every part of the car, to get more than the others.

After every race we assess it, and going forward we will try to make any changes that will help where we think we're weak.

STEVE HOLMAN: It kind of relates to some of the

questions we were getting from the group here regarding the look of the car and the image of the car. I really want to make sure you understand that that was a really strong effort in this redesign the guys from IndyCar. Bill Pappas and Jay Frye were absolutely adamant, whatever it took, a little extra money, time, work, this car was going to look good. It was almost like a rebranding effort. There's a lot of open-wheel cars out there with all the aero bits on them, they're ungainly. That is what IndyCar was trying to avoid. They wanted a beautiful car. That's where this wife comment keeps coming in. I'll talk more about that at our Saturday night banquet. There was a lot of beauty put into this car by the guys from IndyCar. They put that at the top of the list. They deserve a lot of accolades for getting that done.

ANDREA TOSO: We make a lot of cars, GP2, GP3, F-3, single seater. Just think, this IndyCar is the only one with no air box. Even Formula 1, all kinds of cars. It's nice, sleek, clean, simple. It looks fast. It's the only one left that is that shape. It sets aside from the rest of the world. It has its own identity. That means it looks great. I like it.

THE MODERATOR: After that description of the car, I think I need a break. Thank you very much and congratulations.