NTT INDYCAR SERIES
News Conference

Friday, May 17, 2024

Steve Holman
Andrew McDougall
Andrew Heard

Press Conference

THE MODERATOR: One of the many traditions here at Indianapolis Motor Speedway is the annual Louis Schwitzer Award, now in its 58th year, which is incredible to think about. It is presented by the Indiana Section of the Society of Automotive Engineers International, which honors and celebrates the engineers behind developing new and innovative concepts annually to the Indy 500.

Here to do the honors once again Steve Holman, the Louis Schwitzer Award committee chairperson for SAE, Indiana chapter.

Good morning, Steve.

STEVE HOLMAN: Thank you, Dave. Thanks for hosting our 58th annual presentation of the Louis Schwitzer Award, presented by SAE, Indiana Section.

We are pleased to announce our new sponsors, Valvoline and Cummins. These two companies have a history of innovation and technical excellence in their perspective fields and currently are celebrating their 30th anniversary of corporate partnership. We're looking forward to a similar long relationship with them.

Thanks go out to Roger and Bonnie at Valvoline and John Mills and John Woods at Cummins.

The Louis Schwitzer Award committee had numerous developments to interview this year, many driven by the desire to reduce weight and create some real estate for the upcoming hybrid system.

We investigated updates to the brakes, aeroscreen, rear wing and supports, attenuator, uprights, oil, race control and the transmission.

The XTRAC transmission has been the sole provider to INDYCAR since the year 2000. During that time since 2000, there's been several iterations. Previous to this year, it was the electrically controlled and pneumatically actuated.

By going to an all-electric system, several pneumatic components are eliminated: compressor valve block, piston, lines and replaced by this (showing device). This may look rather simple and innocuous, but inside it contains a very ingenious design, or in proper British, clever bits, to get the new electric motor to drive the shift actuator with the proper speed, torque, ratio, and reliability.

We'll get into some of those details a little bit more later.

One of the parameters for the Schwitzer Award is the courage and conviction to explore new ideas. This new ESA, electric shift actuator, is truly new and unique in the world. For his invention, engineering and persistence over several years, we award the 2024 Louis Schwitzer Award to Andrew McDougall.

ANDREW McDOUGALL: Thank you very much. I'm deeply honored to receive this award today for the electric shift actuator. While I may have initiated a lot of development on this, so many talented individuals I'm proud to work alongside.

Others who have helped me massively are Jeff Chumley, Jerry (indiscernible) and Rose Panikulam.

I think you've already described a lot of about XTRAC. I'd like to thank the committee again for considering my application. Both very appreciated and motivating for the future.

I think you've covered a lot of things I sort of wrote down (smiling).

STEVE HOLMAN: Tell us a little bit more about some of the parameters. I mentioned the speeds are faster. Electrical usage lower.

ANDREW McDOUGALL: A lot of the challenges we had to face to getting an all-electric system on the car is it's not just a case of putting electric motor on and off you go, the electrical demands of that sort of thing can be particularly

high.

We looked for ways of increasing efficiency throughout the system to mean that all-electric systems could achieve the speeds that we need. Also being all electric there's a lot less dead time at the beginning and the end, that allows you to condense the whole shift cycle.

STEVE HOLMAN: Can you talk anything about what's inside this. That's the secret part, but...

ANDREW McDOUGALL: I mean, essentially there's a lot of fairly established, good engineering ideas that go together to make a very ingenious mechanism, I'd like to think, that allows it to do the shift and control the shift very accurately and achieve the speeds we need.

It's that that has really allowed an electric motor to drive the shift system efficiently, without putting too much electrical demand on the car, things like that.

ANDREW HEARD: This is Andrew Heard, vice president of XTRAC.

Andy and I have worked together at XTRAC for over 20 years now. Like I say, he's both a fantastic engineer and what a modest one as well.

Yeah, without getting into some very, very clever engineering inside that unit, which is basically just another one in a line of great inventions that Andy has created whilst he's been with XTRAC, as he suggested supported by engineers from the wider British-based business with an office here, Andy is based here in the office in Indiana. Undoubtedly we get a lot of support from the larger engineering team in the UK.

Again, it's a fantastic invention that if we could share the details, you'd all agree. Certainly not his first and hopefully won't be the last.

Congratulations, Andy, from everyone at XTRAC.

THE MODERATOR: Steve, as the hybrid unit has developed, I'm sure you had a long list of ideas for this award this year.

STEVE HOLMAN: Yeah, absolutely, that's right. As I mentioned, brakes, aeroscreen, hybrid units going to bring more speed and weight into a corner. There was some work done on the brakes, really good work, both to get a little more capacity shall we say, and the big things is heat rejection.

The aeroscreen took quite a bit of weight. The upper frame is titanium, a lot of weight was taken out of that. That should help some performance both on the road tracks and here at the Speedway.

Might be some higher speeds (smiling).

If anybody has any questions, we can describe how this works a little bit better afterwards. Truly clever. Thank you for that, Andrew.

THE MODERATOR: A much-anticipated award each and every year. Congratulations, Andrew, and friends at XTRAC as well.

FastScripts by ASAP Sports