Richard Childress Racing Leverages ANSYS to Improve Racecar Speeds

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PITTSBURGH, Feb. 15, 2018 /PRNewswire/ -- Richard Childress Racing (RCR) will improve racing times with ANSYS (NASDAQ: ANSS) through a new, multi-year partnership. RCR will leverage ANSYS Pervasive Engineering Simulation™ software to more accurately predict machine performance and enhance vehicle speed on the race track by enabling a true digital twin of a race car.

image

A fraction of a second on the race track can determine which team takes the trophy, so NASCAR Monster Energy Cup Series teams must constantly improve speeds to stay competitive. A digital twin of the 2018 Chevrolet Camaro ZL1 will arm RCR engineers with a more complete understanding of how the physical racecar will operate under race track circumstances that are nearly impossible to test. Sensors and actuators on the physical car are used to build a digital twin that enables data capture, real-time analytics monitoring and predictive maintenance testing – empowering engineers to optimize vehicle performance before race days.

RCR used ANSYS multiphysics simulation software to develop and enhance the physical 2018 Chevrolet Camaro ZL1, which will debut this season. With ANSYS, RCR reduced drag and optimized structural components of the car and suspension to improve speed. Through the expanded partnership, RCR's engineering and aerodynamics teams will even further advance the car – refining aerodynamics and drastically reducing expensive wind tunnel testing time when compared to traditional testing methods.

"Our competitive advantage is absolutely dependent on our ability to use simulation in all areas of our racing efforts," said Dr. Eric Warren, chief technology officer, RCR. "Our partnership with ANSYS will empower us to implement a true digital twin and set a new benchmark of performance development and efficiency."

"RCR is a true pioneer in innovation on and off the track," said Shane Emswiler, vice president and general manager of mechanical, fluids and electronics, ANSYS. "Building a digital twin will deliver accurate, insightful and reliable results that impact performance every week during race season. Using ANSYS Pervasive Engineering Simulation throughout the entire racecar lifecycle, RCR will race faster, safer and more aerodynamic vehicles."

ANSYS joins RCR's family of more than 40 corporate partners and technical partners, including Dow, Zeiss Industrial Metrology and Microscopy, PTC, Okuma America, Roland DGA and Lucas Oil.

About Richard Childress Racing:

Richard Childress Racing (rcrracing.com) is a renowned, performance-driven racing, marketing and manufacturing organization. Incorporated in 1969, RCR has earned more than 200 victories and 17 championships, including six in the Monster Energy NASCAR Cup Series with the legendary Dale Earnhardt. RCR was the first organization to win championships in the NASCAR Cup Series, NASCAR XFINITY Series and NASCAR Camping World Truck Series. Its 2018 Cup Series lineup includes two-time NASCAR champion and 2017 Coca-Cola 600 winner Austin Dillon (No. 3 Dow/American Ethanol/AAA Chevrolet) along with 2008 Daytona 500 champion and 2013 Brickyard 400 winner Ryan Newman (No. 31 Caterpillar/Grainger/Bass Pro Shops & Cabela's/Liberty National Chevrolet). Its XFINITY Series program includes a multi-driver lineup with the No. 3 Chevrolet including Austin and Ty Dillon, Jeb Burton, Shane Lee and Brendan Gaughan, first-year RCR driver Matt Tifft (No. 2 Nexteer Chevrolet) and second-year XFINITY Series driver Daniel Hemric (No. 21 South Point Hotel & Casino Chevrolet).

About ANSYS, Inc.

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