

Arrow McLaren and Greene Tweed Co-Engineer Lightweight Anti-Roll Bar Lever to Advance INDYCAR Performance

Redesigned thermoplastic composite component supports the pursuit of marginal gains through advanced material innovation.

LANSDALE, PA, UNITED STATES, July 23, 2026 /EINPresswire.com/ -- [Greene Tweed](#), a global leader in high-performance materials, and [Arrow McLaren](#) have co-engineered a lightweight anti-roll bar lever for the team's NTT INDYCAR SERIES race cars using Greene Tweed's [Xycomp® DLF™](#) thermoplastic composite. The redesigned component reduces weight by 64 grams per car, while meeting the strength and reliability demands of elite open-wheel racing.

The anti-roll bar lever is a critical suspension component that helps control chassis roll and maintain consistent handling balance during high-speed cornering. In INDYCAR competitions, where cars regularly exceed 220 mph and performance gains are measured in fractions of a second, even small reductions in weight and refinements in mechanical balance can contribute to more consistent handling, tire management, and stability.

Working closely with Arrow McLaren's engineering team, Greene Tweed evaluated the component's performance requirements, geometry, manufacturing approach, and material demands before transitioning the design from 7075 aluminum billet to Xycomp® DLF™. The high-



ARB part



ARB-case-study-thumb

performance thermoplastic composite material offers a high strength-to-weight profile and is engineered to replace complex metallic components for aerospace and defense, industrial, and other demanding applications.

"Projects with Arrow McLaren are the perfect proving ground for Xycomp® DLF™. In this case, moving from a well-understood aluminum billet to a thermoplastic composite for a complex-shaped suspension component that must endure the extreme stresses of IndyCar racing required deep collaboration and trust," said Sebastien Kohler, Senior Scientist, Greene Tweed. "Leveraging the properties of our DLF composite allowed us to reduce weight while validating a new design and manufacturing methodology for one of the most demanding racing environments."

The Xycomp® DLF™ anti-roll bar levers were first introduced on Nolan Siegel's No. 6 car at Barber Motorsports Park and have since been implemented across all Arrow McLaren cars. Beyond the material change itself, the project also reduced internal development workload for Arrow McLaren's engineering and production groups, underscoring the value of Greene Tweed's technical support throughout the redesign and manufacturing processes.

"Greene Tweed exceeded every expectation. Their expertise in materials, manufacturing processes, and the performance requirements we face made the development and production of this component remarkably seamless," added Kory Drake, Design Engineer, Arrow McLaren. Their team demonstrated a deep technical understanding and a collaborative approach throughout the project, resulting in a true engineering partnership. We value this relationship greatly and look forward to working together for many years to come."

Visit Arrow McLaren's latest case study to learn how the combination of Arrow McLaren's race engineering insight with Greene Tweed's thermoplastic composite expertise delivered a lighter component designed for reliability and performance on the racecourse:

<https://www.mclaren.com/racing/indycar/2026/engineering-the-margins-of-victory/>

About Greene Tweed

Greene Tweed is a leading global manufacturer of high-performance thermoplastics, composites, seals, and engineered components that outperform and outlast in the world's harshest environments. For 160 years, we have served clients in semiconductor, oil and gas, aerospace, defense, chemical and pharmaceutical processing, and other industries where failure is not an option. Greene Tweed products are sold and distributed worldwide. For additional information, call +1.215.256.9521, or visit our website at www.gtweed.com.

Sofia Doss

Greene Tweed

sdoss@gtweed.com

This press release can be viewed online at: <https://www.einpresswire.com/article/928817375>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2026 Newsmatics Inc. All Right Reserved.