

# 2010 SEMA Show: Yaris GT-S Club Racer

November 01, 2010

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The Toyota Yaris is well-known as a value-driven sub-compact car with proven reliability and excellent fuel efficiency. It has also proven in past SEMA shows to be very versatile when it comes to customization. The little sub-compact returns to the 2010 SEMA Show, this time proving it can also be converted into a very capable race car.

To make the Yaris racecar a reality Toyota Motor Sales, U.S.A., Inc. asked *SportsCar* magazine to convert a 2006 Yaris five-door liftback. The Yaris selected for the project was a veteran of the 2007 SEMA Show, formerly known as the Yaris Club project. Toyota renamed the car the GT-S Club Racer as an homage to the popular GT-S grade Celica's of the 1980's and 90's. *SportsCar* magazine accepted the challenge and began remaking the Yaris into a Sports Car Club of America (SCCA) sanctioned racecar.

*SportsCar* magazine began the project by shedding nearly 400 pounds off the vehicle's curb weight by removing several creature comforts like the air conditioning and audio system to tip the scale at less than the 1,900 pound class minimum.

The exterior of the Yaris GT-S Club Racer features a Molly Designs inspired graphics that pays homage to Dan Gurney's All American Racers-built IMSA GTP Toyota Eagle Racers of the 1990's. Additional exterior features include a Seibon carbon fiber hood and hatchback, AeroCatch hood pins, Racing Lifestyle fender flares, I/O Port Racing Supplies tow hooks, and Lexan side and rear windows. The Yaris rides on three-piece JRW330 13 x 7 Jongbloed Racing wheels wrapped with Goodyear Eagle Sports Car Special 20.0 x 9.5-13 racing slicks.

Underneath the hood is a Toyota 1.5-liter four-cylinder engine with VVT-i. *SportsCar* magazine made several modifications to increase the horsepower from the stock 106 to 145 @ 7252 RPM. Modifications included several bolt-on performance parts including a K&N air intake, a DC Sports header, and Rebello Racing Engines camshafts and cylinder head work to name a few. A Mishimoto radiator and Coast Fabrication Ultra Lightweight racing muffler were also added. The engine is mated to a SPEC aluminum flywheel and three-puck clutch, a Kaaz limited slip differential and a 4.312 final drive gear set swapped in from a Scion xB.

To help slow the car Carbotech XP-8 brake pads and Goodridge stainless steel brake lines were added.

Modifications on the inside included an AiM Sports MXL race data acquisition dash system paired with an AEM Performance Electronics EMS Series 2 ECU, for complete control of the engine and data accumulation. Safety was addressed with a Sparco Evo 2 FIA race seat and race pedals while Autopower supplied a Pro-Cam six-point harness and window net. Additional safety features include an NRG Innovations steering wheel with a quick release hub, a Braille No-Weight battery, Longacre kill switch and mirrors, and an Emergency Suppressions Systems fire system.

Once completed, it was time to race. The Yaris GT-S Club Racer won its very first race, topping the competition at Willow Springs Raceway in Southern California. Driven by *SportsCar* magazine associate editor Jason Isley, the little racecar went on to win the Southern Pacific H Production Division Championship. Capturing its division qualified the Yaris for the 47th SCCA National Championship Runoffs at the historic Road America circuit in Elkhart Lake, Wisconsin where it competed in late September. At the championships, it qualified 13th and finished a very respectable 8th out of a field of 26. Competing against older classics, it was the newest car in the field by 19 years!

After the SEMA Show, Toyota and Sony Computer Entertainment America LLC, will host the producers of Gran Turismo® 5 at a race track where they will compare their "virtual" racing skills versus their "actual" racing skills by driving the GT-S Club Racer in a time trial format.

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## Yaris GT-S Club Racer Features

### Exterior:

Molly Designs inspired graphics  
Seibon carbon fiber hood and hatchback  
AeroCatch hood pins  
Racing Lifestyle fender flares  
I/O Port Racing Supplies tow hooks  
Lexan side and rear windows

### Tires/Wheels:

Goodyear Eagle Sports Car Special 20.0×9.5-13 Racing Slick  
Jongbloed Racing Wheels three-piece JRW330 13×7

### Interior:

AiM Sports MXL race data acquisition dash system  
Sparco Evo 2 FIA race seat  
Sparco race pedals  
NRG Innovations steering wheel with quick release hub  
Autopower Pro-Cam 6-point harness  
Autopower window net  
Braille No-Weight battery  
Longacre kill switch  
Longacre mirrors  
Emergency Suppression Systems fire system

### Suspension:

AST Suspension – USA custom 5100 series dampers  
Eibach ERS springs 550lbs front/650lbs rear  
Whiteline adjustable rear swaybar

### Brakes:

Carbotech XP-8 pads  
Goodridge stainless steel brake lines

### Engine:

Toyota 1NZ-FE 1.5 liter with VVT-i [145hp@7252rpm](#)  
Rebello Racing Engines camshafts and cylinder head work  
AEM Electronics EMS Series 2  
AEM Electronics UEGO wideband O2  
MP Tuning custom harness  
Church Automotive Testing tune  
Okada Projects USA Plasma Direct Coils  
K&N Air Intake  
DC Sports header  
Coast Fabrication Ultra Lightweight Racing Muffler  
Mishimoto radiator  
Pure Power 10W-20 racing oil  
Pure Power Lifetime Oil Filter

**Drivetrain:**

SPEC aluminum flywheel and three-puck clutch  
Kaaz limited slip differential  
Scion xB final drive swap (4.312)

**Participating Suppliers:**

AiM Sports: [aimsports.com](http://aimsports.com)  
AEM Electronics: [aemelectronics.com](http://aemelectronics.com)  
AST Suspension – USA: [ast-usa.com](http://ast-usa.com)  
Autopower: [autopowerindustries.com](http://autopowerindustries.com)  
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Braille Battery: [braillebattery.com](http://braillebattery.com)  
Church Automotive Testing: (310) 518-4966  
Coast Fabrication: [coastfab.com](http://coastfab.com)  
Eibach: [eibach.com](http://eibach.com)  
Emergency Suppression Systems: [essfire.com](http://essfire.com)  
Fast Lane Racing School: [raceschool.com](http://raceschool.com)  
Garage Graffix: [garagegraffix.com](http://garagegraffix.com)  
Goodyear: [racegoodyear.com](http://racegoodyear.com)  
Hiro's Auto Repair: [hiros-auto.com](http://hiros-auto.com)  
I/O Port Racing Supplies: [ioportracing.com](http://ioportracing.com)  
Jongbloed Racing Wheels: [jongbloedracing.com](http://jongbloedracing.com)  
Kaaz: [kaazusa.com](http://kaazusa.com)  
K&N: [knfilters.com](http://knfilters.com)  
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Mishimoto: [mishimoto.com](http://mishimoto.com)  
MP Tuning: [mptuning.net](http://mptuning.net)  
NRG Inovations: [getnrg.com](http://getnrg.com)  
Okada Projects USA: [okadaprojects.com](http://okadaprojects.com)  
Pure Power: [gopurepower.com](http://gopurepower.com)  
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Toyota Racing Development: [trdusa.com](http://trdusa.com)  
Whiteline: [whiteline.com.au](http://whiteline.com.au)