2010 SEMA Show: Yaris GT-S Club Racer

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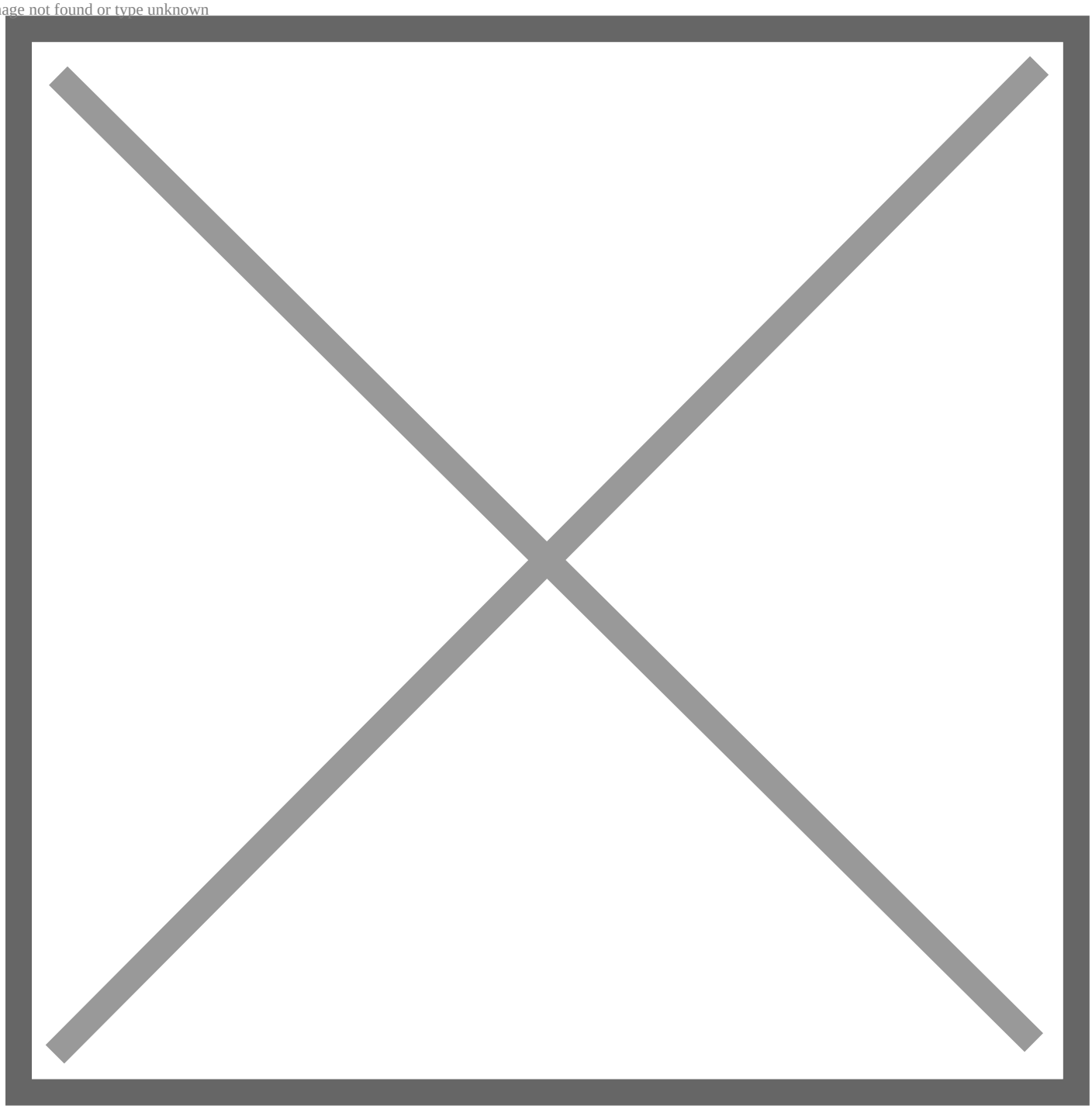

2010 SEMA Show - Toyota Yaris GT-S Club Racer 001

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:
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AEM Electronics: aemelectronics.com
AST Suspension – USA: ast-usa.com
Autopower: autopowerindustries.com
Beta Motorsports: betamotorsports.com
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Sparco: sparcousa.com
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