



ACK Attack

Factory Five Racing's new 818S is a US-designed kit car with genuine Euro appeal. Joe Greeves meets one of FFR's first Stateside customers to see how this Subaru Impreza based roadster stacks up.

Words and pictures: Joe Greeves



Factory Five Racing has become a leader in the kit car field by primarily targeting the American car market, offering kits with big V8s up front that drive the rear wheels. Its new 818 is a distinct shift that's designed for the global marketplace.

Using Solid Works CAD technology, FFR's first 'world car' went from an idea to a prototype in half the usual time. It is available in right-hand or left-hand drive, uses Subaru Impreza WRX components, and features white gelcoat composite body panels that don't need paint. The completed car weighs in at 818kg, hence the name, and the Subaru boxer engine gives it a power-to-weight ratio similar to a Porsche 911 Turbo. Tested on the street, the track, and in the wind tunnel, the lightweight car is a phenomenally quick performer.

FFR estimates it will take 250 man-hours to complete the build. The kit price is just below US\$10,000 (£6000) and the company says the build can be accomplished for less than US\$15,000 (£9000). The internet shows a step-by-step, 34-part tutorial where an 818S is built from start to finish. See <http://tinyurl.com/nnqztcf>

Tom Wallace from Alachua, Florida, Factory Five Racing's 818s is a US-designed kit car with genuine Euro appeal. Joe Greeves meets one of FFR's first sales-side customers, to see how this Subaru Impreza based roadster stacks up. built this 818 and he brings a lot to the table. With a degree in automotive technology and a certified automotive mechanic at BMW, Porsche, and Audi for 14 years, Tom is well-versed in auto mechanics. He also built his own IMSA cars from scratch when he was on the racing circuit back in the '80s and '90s. He changed careers to become an instrument controls electrician, dealing with complex electronics every day and rounding out his store of knowledge.

This combination of skills made it easy for him to begin creating his own cars. He finished a five-year restoration on his Corvette about the time he was ready to retire. His plan was to begin building kit cars for fun and maybe to develop the fun into a business. He had his eye on the Factory Five Racing 818S but it was still on the drawing boards so he decided to build a Factory Five Racing '33 Hot Rod in the meantime. The '33 was finished and sold about the time the 818 came on the market. Tom put his name on the waiting list and began the search for an appropriate donor vehicle.

The 818 uses either a Subaru WRX or Impreza from the years 2002 to 2007 (except STI models). Tom found an '02 WRX on a local car lot and it had a surprise. The dealer could not get the trunk open but Tom bought the car anyway. Before long, the mystery of the trunk was revealed and inside there was a huge crate. In a remarkable stroke of luck, the US\$2800 car had a brand-new WRX long block worth about US\$5000! Tom put the new engine block aside temporarily and began stripping the donor car, rebuilding components as he went along. The 818S uses the WRX engine, transmission, front and rear suspension, steering, and dozens of smaller components.

Tom began the build up of the new engine block using some of the original parts and upgrading it with a larger FP68HTA turbo, Invidia 3-inch blow-off valve, AMR Performance intercooler, Very Cool Parts engine management and wiring harness, DeatschWerks 750cc injectors, GrimmSpeed Boost controller and TGV delete, and custom flow-through 3in exhaust with Tomei stainless steel headers. The car uses sprint car noise reducers rather than a silencer. A plug and play Electromotive TecS engine management system keeps a careful eye on all engine functions.

Tom added his own engine-turned firewall that allowed him to hide wires and

Right: Kirkey seats are a familiar sight in the States. 5-point harnesses keep occupants well located.



plumbing as well as mount some of his electronics like the boost control. He opted to not use the Factory Five fuel tank and had a Boyd 10-gallon aluminum tank built with an Electromotive stealth fuel pump. The redesigned tank allowed three additional inches of legroom inside.

Tom rebuilt the WRX five-speed transmission, adding a Cusco 1.5 limited slip differential. He then transformed the four-wheel drive engine into a two-wheel drive by eliminating the rear driveshaft on the transmission and capping it off with a collar supplied in the kit. The front

driveshafts of the engine now drive the rear wheels.

Tom spent three months stripping donor car and sold what was left on eBay for almost as much as he paid for the original car. That sparkling new engine block was a gift!

The FFR 818 kit arrived complete powdercoated tubular steel, spaceframe chassis, composite body panels, and interior panels, along with suspension, fuel, and cooling system components and more including comprehensive instructions. Tom says they were easy to follow and

Below: Probably the most developed dash we've seen on a USA kit car. VCP gear shift mechanism looks trick.



Built This... Tom Wallace

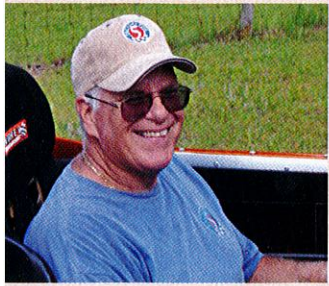
Occupation: Retired car mechanic and electronics

Previous car: VW Beetle

Job to do on your car: Work's done.

Previous win car: Factory Five GTM

Best car you've experienced: I drove an IMSA
Honda RX-7 in the Daytona 24 Hours

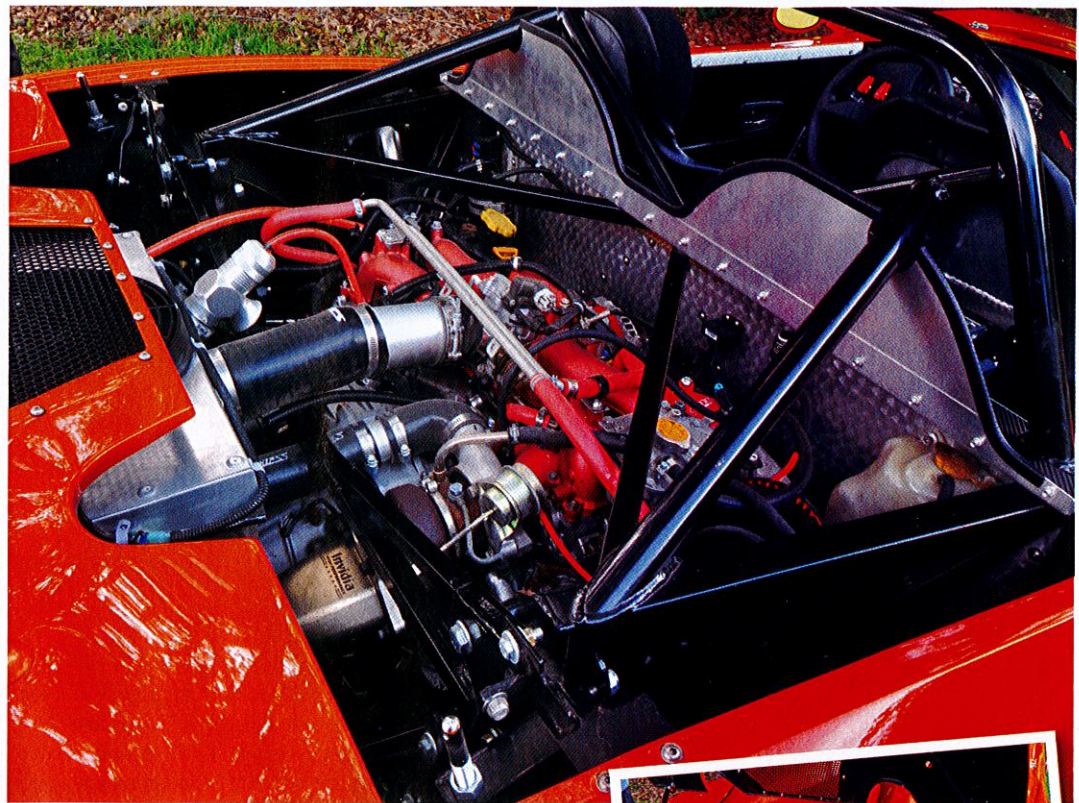


the Factory Five forum as an
se help. Tom benefitted from the
of other builders and posted many
his own.

ore long, he had the 818 in what he
o-kart' mode. With no body panels
e, he fired up the engine and drove
around the neighbourhood, happy
that everything worked perfectly
othing loose or leaking. The
ss body panels were installed next
the cut lines carefully fitted. Tom
ere was not much work involved in
the panels to fit properly.

le you can leave the body in white,
d an entirely different approach in
Huegenics in Trenton, Florida, has
l several of his cars in the past and
ght the car to the shop and
mbled it for owner Chris Dobbs.

le it was being prepped and
l, Tom trailered the chassis down to
Pressley of Very Cool Parts in
rise, Alabama. Wayne is an expert
818 and offers custom-made parts
vices to get yours up and running.



Tom's car was tuned on the dyno to ensure
that everything was working properly.
Since the transmission works best with
horsepower numbers below 300, they
actually detuned the motor slightly to
ensure it could handle the new power,
ending up with 250 rear-wheel horsepower
and 240lb ft torque, produced at a
conservative 14lb of boost. The finished
car weighs slightly more than the
published specs because of the extras
involved, registering 934kg, but Tom
doesn't plan on a name change!

The final step was paint and
upholstery. One look will tell you that
this paint job could cost more than the
car! After the 818 was blocked smooth,
the car was left white with the exception
of the air exhausts on the bonnet and the
humps in the rear, which were painted
black for a subtle difference. Dobbs

Above: Main
engine cover can
be completely
removed for
improved access.

Right: Rear access
panel only reveals
the exhaust and
other components.
There's no storage in here.



sprayed the car with gold metal flake,
followed up with PPG Orange Glow,
added more flake, then wrapped it up
with several coats of clear. The 18in by
8.5in MB Boost wheels were also painted
to match. Tyres are Kumho 215x35 R18s
in the front and 225x40 R18s in the rear.
The spoiler on the back was a \$20 salvage
yard item from a Hyundai Tiburon,
complete with a third brake light. It was a
perfect fit and was painted to match.

Tom and his wife Marsha did the
upholstery, modifying a few things from
the FFR package. The original WRX
instruments were positioned directly in
front of the driver while a trio of vertically
mounted STRI Motorsports gauges
monitor boost pressure, oil pressure and
voltage. The K-Tuned billet shifter from
Very Cool Parts is a work of art and Tom
says it was way too pretty to cover with a
boot. The Sparco steering wheel and Lokar
handbrake provide a satisfying hands-on
feel while the Kirkey racing seats and RCI
5-point harnesses keep driver and
passenger comfortable and safe. Custom
door cards and carbonfibre accents add a
distinctive touch and there is even a Dual
stereo head unit with a pair of speakers.
Most of the time however, Tom is happiest
listening to the soundtrack from the

Left: 818S is a dramatic
looking machine.

turbo-charged motor.

Now that it's complete, Tom says the build itself was a little easier than the '33, but what's it like now that it's complete? The 818's light weight and considerable horsepower give it the retina-flattening launch of an artillery round! Hit the gas, pop the clutch, and your head is pinned

Right: Soft-top looks the part but is currently fiddly to locate.

Bottom: An American kit with real potential to succeed in Europe? Could be.

Tom Wallace's Factory Five 818S

Specification

Engine: 2-litre Subaru Impreza WRX engine, 250bhp.

Gearbox: Standard Subaru 5-speed.

Suspension: 2002 WRX front and rear suspension components with Koni dampers, Factory Five front upper control arms, rear lower control arms.

Brakes: 2002 WRX fitted with drilled and slotted discs.

Wheels & Tyres: Kumho ECSTA 215x35 R18 up front and 225x40 R18 in the rear.

Interior: Kirkey aluminum racing seats, RCI racing harnesses, K-Tuned billet shifter, Lokar emergency brake handle, STRI instruments, Dual stereo head unit with twin speakers, black carpeting and carbon fibre accents.

Exterior: Body panels and aero package from FFR, custom Orange Glow paint by Huegenics in Trenton, Florida, Hyundai Tiberon rear spoiler, soft top.

Contacts

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W: www.huegenics.com

Parts/prep: Very Cool Parts, Enterprise, Alabama **T:** 00 1 760 403 6266.

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Factory Five forum 2: www.ffcars.com/forums



back against the seat as it reaches a 7000rpm redline. Slam the shifter into the next gear and the process is repeated. Zero to 60mph comes up in the sub four second range. The blinding acceleration and Velcro-like traction of the 818 makes every minute spent during Tom's 15-month build process worth the wait.

The car has lots of pros and maybe just one con. The pros are it is a beautiful car, handles marvelously, is comparatively low priced, and is unbelievably fast. The con is

it lacks any kind of storage space and that includes room to store the soft top. While Florida is known as the Sunshine State, when the sunshine turns liquid, you better be under a bridge with a cell phone and a willing partner.

What's next on Tom's schedule? He is already making plans to build a Factory Five Daytona Coupé and is coming ever closer to transforming his car building hobby into a wonderful retirement occupation. **CKC**

