



## Rex on Speed

The new-age WRX might be larger and heavier than its predecessor, but it can still be made to handle. And, of course, the EJ20 turbo motor can tolerate pretty well all of those previous model bolt-ons...

*Words by Michael Knowling, Pix by Julian Edgar*

"It's overweight, but it's got a better chassis and is much more refined than the previous model." That's the word on the MY01 Subaru WRX from one of Australia's leading suspension specialists, Jim Grief of Whiteline.



When the MY01 WRX was first released, the general feeling amongst enthusiasts was to hold off buying the new model and keep their mitts on the lighter MY94-00 series. However, Jim saw that the new model would inevitably take off - as it is starting to just now - and he ordered himself a brand-spankers Rexie for RD purposes. This was in March 2001. The first thing that Jim liked about the new model was its wider front track (which aids turn-in) and higher rear roll centre (which makes the rear-end feel more lively). The extra kilograms didn't help matters though...



And what's that fancy brake disc visible in the front suspension photo? Well, Whiteline have designed their own curved-groove disc (manufactured by DBA) and are in the midst of testing their effectiveness. Improved out-gassing, less likelihood of surface contamination and left-to-right interchangeability are amongst their plusses. Also, with a painted heat dot on the discs, the Whiteline guys are able to make a more informed pad compound selection.

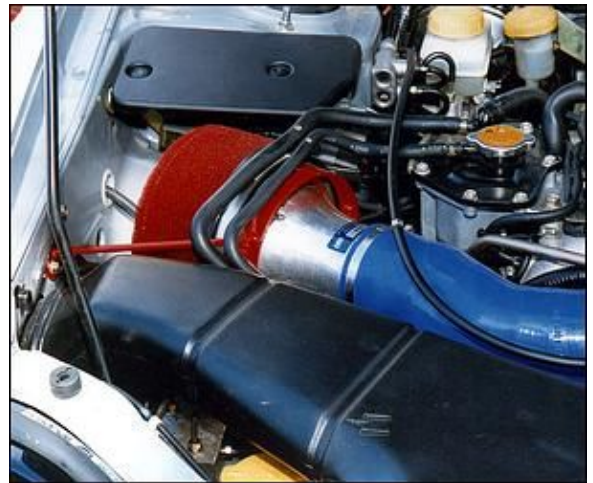
Experimentation kicked off with Project REX II by comparing the standard suspension against a simple set of lowered springs. With track times revealing a consistent half-second improvement, the guys knew there was something to be made with ride height. The standard (as new) shockers performed all right with the lowered springs on the track, but when subjected to the rigors of public roads, they didn't make a good pairing. Jim and his team then set about developing a complimentary coil-over spring/damper combo. Working in consultation with Drummond Motorsport, Whiteline now offers these Premium 40mm diameter adjustable platform struts, which are filled with modified adjustable Koni dampers. Spring rates are progressive, with the fronts being around 25 percent stiffer and rears being around 40 percent stiffer than the standard springs (when at the same ride height).



While the prototype struts were being built, Whiteline's Handling Pack was being developed and tested on the MY01. The Handling Pack sees a 22mm adjustable swaybar at both ends (with optional heavy-duty links and mounts at the rear), plus a front anti-lift castor kit and rear camber adjustment kit. However, you'll find the optional extra heavy-duty 24mm blade adjustable front and rear swaybars are permanent residents on the Whiteline vehicle. Rear suspension rigidity is also further improved with the fitment of an optional upper strut brace, rear sub-frame mount kit, and diff support kit. At the front-end, an optional steering rack mount kit improves steering response.



When we arrived to photograph and drive the car, the 'bars had been set to their intermediate stiffness, the adjustable shocks were about mid way through their 30-point adjustment and the ride height was set 50mm lower than stock. Despite these struts allowing 20mm more bump travel than the OE parts, Jim says a 30-40mm lowering is a more practical setting for road use.



Although the car has not long been in this world, Jim has had time to develop his WRX's suspension set-up **and** send it off to the MRT workshop of Brett Middleton for some considerable mechanical and body enhancements. Long-time experienced in WRX mods, MRT installed a Group A Ram Pod air filter (with the factory cold air scoop feeding air to the filter area), a silicone induction hose kit and a full 3-inch stainless exhaust system. This uses a turbine/wastegate splitter, a double layer flex joint, high-flow cat, centre resonator and rear muffler. A neat MRT Performance nameplate is welded onto the 4-inch tip.

While these mods are so far relatively run-of-the-mill, the next level of performance called for a larger capacity turbocharger - an IHI VF24 roller bearing unit hung off a modified exhaust manifold. Brett of MRT tells us the VF24 is a relatively small member of the VF-family, but it's very well suited to everyday driving. Add to this a plug-in Link programmable computer - mapped at MRT - and we'd estimate that this 16 psi boosted EJ pumps out around 40 percent more power than stock. It's more than enough to shift the Rex's 1390kg pork in a real hurry (when on boost, anyway!).



Before a big dose of boost was injected to wake the engine up, an MRT replacement top-mount bar-and-plate air-to-air intercooler (and associated water spray) was slipped in before the throttle. Bolted to the engine side end-tank is a GFB (Go Fast Bits) atmospherically venting blow-off valve.



Of course, there's no point in having a promo/RDvehicle that slides through traffic unnoticed. High impact stickers are splashed on every panel and a wild bunch of body add-ons ensure that's not likely to happen...



MRT have installed their 22B replica rear wing, STi replica bonnet scoop, clear indicators and a wicked front-end light set-up. The genuine Prodrive tri-lights take away the 'googlie' look of the standard headlights, and STi replica mesh fog light covers make the ideal complimentary touch. In case you're interested, MRT retails these items for AUS\$1620 and AUS\$199 (plus GST) respectively. Rims and tyres are standard Subaru issue - as Jim says, these make it easier to set up the handling. "It minimises the variables of having a really sticky set of rubber."

So here's one Rex that looks good, when goes hard on boost, and can also attack flowing corners with ease.

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## So what is Whiteline's REX-II like on the road?

Whiteline must be congratulated for achieving a very taut - but not hard - ride. With the adjustable dampers about half way through their adjustment, the Rex never crash-bangs or causes discomfort. It's a very 'liveable'.

The handling side of things largely depends on swaybar, damper and ride height adjustments.

However - with the swaybars in their medium stiffness positions, middle-of-the-road adjustment on the shocks and the car sitting 50mm lower than standard - we punted the car around some corners and roundabouts. It turned in quite crisply, held a cornering line very well and - in most conditions - was able to get its power down without hassle. The only area where the car let us down was in tight, hard power-on situations, where the car would plough understeer. Note that this is not a fault with the suspension, it's simply the downfall of Subaru's basic viscous centre coupling brand of four-wheel drive.

After hearing our comments on the power understeer, Jim stuck the car up on the hoist and made some fine adjustments. The 3-position rear swaybar was changed from its medium stiffness to maximum stiffness and an extra 5-points of adjustment were dialled up in the rear shocks (which still had more adjustment left). The job took about 5 minutes.



Back on the road we could feel that the adjustments had made a difference; turn-in was further improved and the rear-end became more taily with a mid-corner lift-off. The power-understeer, however, remained - there's no way around this without going for a more intelligent centre diff.

So - given that the power-understeer is caused by the driveline configuration rather than the suspension - we'd give the Whiteline suspension extremely high marks. It can be set up to suit specific driving styles and offers minimal trade-off in ride quality.

And what does the suspension cost?

Well, given you receive (take a deep breath!) 40mm Premium struts, 24mm adjustable 'bars, heavy-duty rear swaybar links and mounts, rear camber kit, rear upper alloy strut brace, front of rear diff support lock kit, rear sub-frame lock kit, heavy-duty steering rack mount kit and front castor kit, the AUS\$4669 retail price (plus fitting) isn't too shabby.