

HOT TUNER

\$65K  
STOCK  
STi

106 HD

WORDS SHAUN CLEARY PICTURES TONY RABBITTE

# TUNING A WRX STi

CAN YOU RID SUBARU'S NEW WRX STi OF ITS UNDERSTEER AND TORQUE ISSUES? MRT AND WHITELINE HAVE A CRACK



## DO I WORK THE ENGINE...

One of the complaints levelled at the WRX STi has been its lack of bottom-end and mid-range grunt. You're wasting your time if the 2.5-litre turbo engine is spinning at less than 3000rpm, but above those revs, power builds steadily until about 6500rpm. Gear selection is critical, because you need powerful drive from the rear-biased AWD system to make up for the frustrating turn-in and mid-corner understeer.

On a cold and slippery winter morning, our standard STi lapped Wakefield Park just over a second slower than its BFYB time last month

### WAKEFIELD LAP TIME

STANDARD WRX STi 1:11.3sec



## ...OR FIX THE HANDLING?

Our main gripe with the WRX STi is its submissive understeer out on the racetrack – the very place it should assert some head-kicking authority. Slow-in and fast-out has always been the quick way to drive an STi, but the new car is plain frustrating. It just can't carry as much speed into the apex. If it wasn't for the STi's intelligent viscous diff setup, the new car would be in the brown stuff out on the racetrack.

## SUSPENSION

**\$3K HANDLING MODS**

108

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### ANTI-LIFT/CASTER KIT

⌘ \$150.00 RRP WHITELINE  
More caster and revised anti-lift geometry makes the car more responsive in the front-end, affording better turn-in

### SUPPORT BRACING

⌘ \$565.00 RRP WHITELINE  
Increases torsional rigidity and offers extra support to areas that might be weakened by the strengthened sway bars

### HEAVY-DUTY SWAY BARS

⌘ \$575.00 RRP WHITELINE  
Beefier sway bars assist body control and significantly reduce understeer. The car takes on a more neutral handling balance

### LOWERED SPORT SPRINGS

⌘ \$360.00 RRP WHITELINE  
'Control' suspension tune lowers ride height, but the roll centre kit restores roll centre height to reduce understeer

### COMPLETE WHITELINE KIT

⌘ \$2890.00 RRP WHITELINE  
Includes full fitment and a 12-month, 20,000km road use warranty. For yours, call Redranger on (02) 4340 9535



## SUSPENSION UPGRADE

### FINALLY, ABOLITION OF TURN-IN UNDERSTEER

It's funny how some sensible suspension work can transform a submissive, frustrating track car into an involving, responsive drive. It's even funnier that Subaru couldn't do it themselves.

From the very first corner after pitlane's exit at Wakefield Park, the Whiteline STi surprised me. Initially, it was because I nearly drove it clean across the grass on the inside of the first apex I arrived at. But after some familiarisation, it surprised me again that it could deliver such a rewarding driving experience from a standard car that offers no hint as to what the chassis is really capable of.

It's understandable that Subaru should offer a car that appeals to a broad driving population, but we were under the impression that was why the standard WRX existed. Obviously not, after its disappointing BFYB appearance, but that still

doesn't explain why the STi is so tame.

The Whiteline car is the exact opposite, hunting down each apex with fervour. It carried another 4km/h at the apex of high-speed Turns Five and Seven than the standard STi, and managed the same at the tighter Turns Six and Eight. All up, it's a much more capable track tool than the standard STi.

The Whiteline car is keenly adjustable into the mid-corner, but because it lacks the power of the MRT car, it doesn't quite offer the same level of corner-exit satisfaction. Less power equals less drive to the rear wheels when the diff sorts things out.

But for \$3K, you can't go wrong with Whiteline's suspension tune. It doesn't cost much more than a premium set of rubber and in comparison, offers a much more rewarding driving experience.



Revised suspension geometry delivered a completely different driving experience. Stevie Wonder could tell the difference between the Whiteline car's tenacious turn-in and the standard STi. A big hike in most corner apex speeds was the result, as was a full second over a lap.

## CONCLUSION

In short, a WRX STi with both sets of mods would be a bloody quick car. The combination of MRT's beefy bottom-end and mid-range performance gains with the sharper handling of the Whiteline suspension pack would potentially make it over two seconds quicker around Wakefield Park. And for a comparatively minor \$8K spend, that's not a bad return.



### WAKEFIELD LAP TIMES

STANDARD STI	1:11.3sec
MRT POWER UPGRADE	1:10.2sec
WHITELINE UPGRADE	1:10.3sec



## ENGINE

**\$5K  
ENGINE  
MODS**



# PERFORMANCE UPGRADE

MORE POWER AND A FATTER, FITTER TORQUE CURVE

I was a bit hesitant about the MRT STi before I drove it. More herbs is always a good thing, especially when you're talking an additional 35kW and a 24-percent increase in torque. But my only reservation was about what an STi, already plagued by turn-in and mid-corner understeer, might do when it arrived at Wakefield Park's Turn Two five keys faster.

So I played things safe and braked a couple of metres earlier the first time out. It proved a successful move, as the old slow-in, fast-out adage worked well. But what I wasn't counting on was the benefit the extra torque would have on cornering.

The ECU upgrade delivers a much more sensitive throttle pedal in the revised Sport Sharp mode. And picking it up earlier in the corner only exaggerates the rear-steer effect the STi's diff demonstrates in standard trim. As a consequence, you're carrying a few more km/h as you plough past the ideal line to the apex before the diff sends drive to the rear and fires you out to a tighter corner exit.

Once you're onto a straight, you immediately notice the extra power. The engine surges hard from about 3000rpm, but the biggest difference is how hard it keeps hauling through the mid-range. The standard STi only peaks over 370Nm for about 500rpm, from 2800-3300rpm, but the MRT car delivers over 440Nm from 3100rpm all the way through to 5400rpm. That's a massive increase and the end result is quantified by an additional 7km/h at the end of the main straight.

But that's only half the story. The brakes already had a couple of hard track days up their sleeve and weren't at their best. That meant I had to brake around three metres earlier than I should have.

It also means that the MRT's laptime of 1:10.2 could have potentially been another tenth or two faster over the course of an entire lap.

But the best bit about the MRT was the gruff boxer exhaust note it barked on-throttle. Then again, isn't that what Subaru's halo performance car should sound like anyway?

More power and torque from the ECU and exhaust upgrade meant that the MRT car made better use of the STi's rear-drive diff bias. The MRT car was also significantly quicker in a straight line as a result of the extra shove.

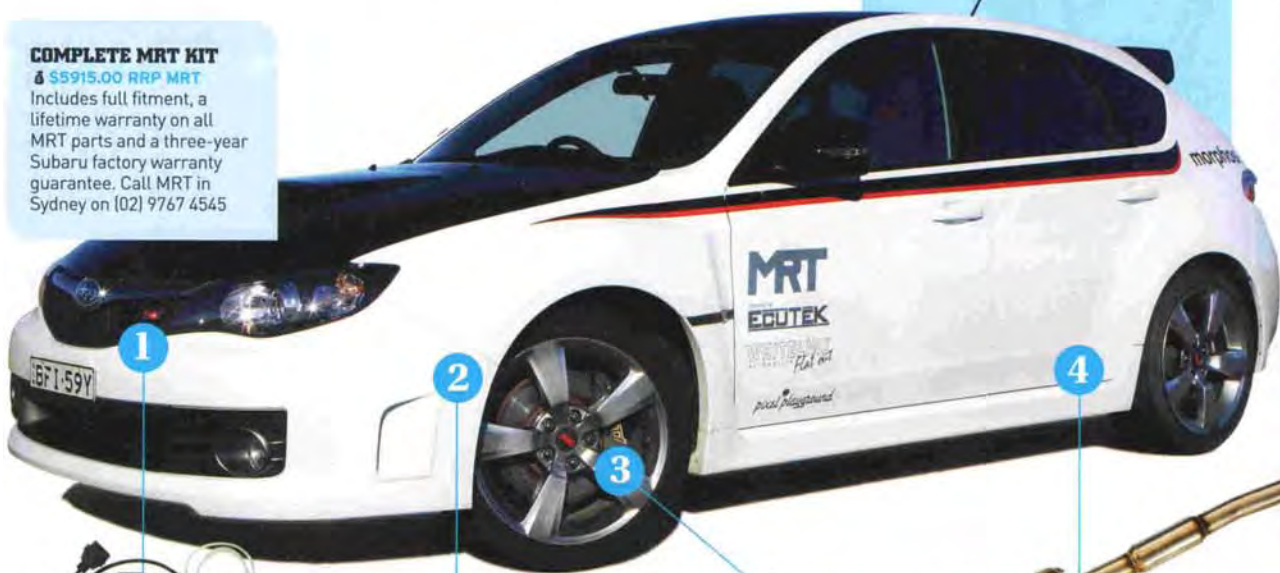
POWER	
STANDARD	221kW
MRT UPGRADE	256kW

WAKEFIELD LAP TIMES	
STANDARD	1:11.3sec
MRT UPGRADE	1:10.2sec



### COMPLETE MRT KIT

⊕ \$5915.00 RRP MRT  
Includes full fitment, a lifetime warranty on all MRT parts and a three-year Subaru factory warranty guarantee. Call MRT in Sydney on (02) 9767 4545



#### ECUTEK UPGRADE

⊕ \$1995.00 RRP MRT  
98RON Ecutek tune allows a proper high- and low-power mode via SI-Drive, rather than just changing the power curve



#### 3" DUMP PIPE

⊕ \$800.00 RRP MRT  
This is the last piece of the exhaust puzzle to ensure maximum benefits are gained from the Ecutek upgrade



#### SPORTS BRAKE KIT

⊕ \$965.00 RRP MRT  
High-temp pads front and rear offer more progressive pedal feel, while being kinder on the rotor. Includes AP Racing fluid



#### 3" CAT-BACK EXHAUST

⊕ \$1795.00 RRP MRT  
A full stainless steel exhaust, with a high-flow catalytic converter and a flexible joint in the centre pipe to reduce NVH