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APRILIA

TUONO V4 R

TUONO MAY MEAN THUNDER IN ITALIAN, BUT AS THE NEW V4 VERSION PROVES, APRILIA'S NEW NAKED GOES LIKE LIGHTENING



Launch control, anyone?

The Tuono V4 is for the most hardcore enthusiast; a rider who, given the chance, would use a race bike just to go for a coffee." Aprilia's idea of an owner for its new naughty naked sounds suspiciously like its own world champion, the Roman Emperor, popping out to Café Nero. But if you push the Tuono V4 R to its epic true potential, you'll be needing to mainline something a lot stronger than caffeine after a hard ride.

A naked RSV4 with all the electronic trimmings sounds like the perfect recipe for a naked launch. The faired bike has a world championship to its name and is the most focused speed machine to have ever graced a showroom. But to blithely call the new Tuono a naked RSV4 is to both miss the point and ignore the raft of changes Aprilia has made to create the next generation of the proud Tuono name.

The Tuono in v-twin form was the hardcore option in the naked class since its 2002 inception. It had a raw edge, furious intent and developed a devoted following. But with an increasing crowd of power-packed rivals, Aprilia wanted to hit back – with a vengeance.

The competition really heated up with the Ducati Steelfighter and Diavel tussling with the BMW K 1300 R for the increasingly important (well, at least to themselves) accolade of 'most powerful'. But the Tuono trumps them all with the WSB-based motor pumping out a whopping 167bhp. And with the bike blessed with Aprilia's APRC electronics package, the Tuono has the class-leading Ducati Streetfighter S right

in its sights – lesser rivals don't stand a chance.

The marvel that is Aprilia's V4 motor has been tailored to suit its new scene. Its lively character, progressive punch and relentless drive are still evident, but new valve timing, longer intake funnels and a heavier flywheel (to increase inertia) are all employed to reward road riding in a way the RSV4 seldom could. Packed to the rafters with electronics, the APRC system includes traction control, anti-wheelie, launch control and an adaptive quickshifter. Add to this three power modes operated via ride-by-wire and the bike bristles with electronic intent.

You may be surprised to learn that Aprilia designed a new chassis for the Tuono – the news is less surprising if you've had the displeasure of sitting on the race-ready RSV4. Life on the Tuono is easier. The engine sits lower, the swingarm pivot is set further south and the bars and pegs are in far more sympathetic positions. Ancillary wise, there's everything you want to see; decent Sachs suspension, Brembo brakes, a slipper clutch, lighter wheels and a steering damper. This is then all wrapped up in a design that is serviceable rather than sexy. Many naked bikes ironically struggle in the looks department, and the Tuono's design has been set to maximize stability at speed rather than to strut its stuff.

Choosing Valencia for the base of the Tuono's launch was inspired. Not only is this the centrepiece of MotoGP's end of season party, the roads in the hills behind the city are as gnarly as they come. A damp track early



▲▲ A NAKED RSV4 WITH ALL THE ELECTRONIC TRIMMINGS SOUNDS LIKE THE PERFECT RECIPE FOR A NAKED LAUNCH ▲▲



Sneaky factory track settings meant the Tuono V4 R felt sublime on track at Valencia

Even shod with a massive 200-section rear Pirelli Supercorsa SP (it comes on Diablo Rosso Corsas), the Tuono was impressively agile. A side effect of this agility was the bike bucking and weaving between exit and apex, but this movement wasn't like it had just been branded with an iron, rather it was a playful expression of enjoyment. You can enter turns so deep you're in danger of drowning, and the lean angles achieved are almost as impressive as the level of ground clearance you're given.

Much of this agility came from a very specific set-up on track. Not only had everything been stiffened to within an inch of its

the butterfly closes (or in more extreme cases, the spark is cut) to reduce torque delivery to below threshold levels.

The system is verging on genius, and isn't just an insurance policy in the wet, but a genuine aid in the dry. Even with the sticky Pirellis on, the TC indicator lit up on level two with the throttle to the stop. Valencia's long left at the back of the circuit is where ballsy riders make up masses of time. But thanks to APRC you don't have to be ballsy – you just need to trust it. Have faith in the system and you can hold the throttle wide open in third with your knee on the deck, treating the empty stands to

THANKS TO APRC YOU DON'T HAVE TO BE BALLSY, YOU JUST NEED TO TRUST IT

life, but the fork had been dropped 4mm, the rear shock raised via a ride height adjuster (the stock unit doesn't have one), an Öhlins steering damper from the accessories catalogue replaced the unadjustable stock unit, and the bike was given super sized and super sticky rubber. No wonder it felt amazing.

What was stock was the APRC system, software that took 18 months to build in house, but 18 seconds to appreciate in the right environment. Using a pair of both gyrometers and accelerometers (the second of each is a safety back-up), the algorithms in the software have slip thresholds to abide to. If they don't,

the V4 scream, the flickering light letting you know the bike's tidying up any loose ends.

The anti-wheelie system works on track, too. It allows the front to lift slightly, so you can still drive hard on the rear tyre's shoulder, but there's no frustrating delivery stutters. The intuitive quickshifter works like a hot knife through butter (the harder you ride, the quicker the cut times become) and the launch control system is a gas to use. Add to this a well set-up slipper clutch and fade-free brakes that always have more power in reserve, and the Tuono offers easily accessible track pace to have-a-go heroes. Thanks to the ergonomic differences ▶

TECHNICAL APRILIA TUONO V4 R



ENGINE	Type	999.6cc, liquid-cooled, 16 valve, 65° DOHC, V4
	Bore x Stroke	78.0 x 52.3
	Compression	13.0:1
	Fuelling	Marelli EFI, 48mm throttle bodies, RBW
	Claimed Power	167bhp @ 11,000rpm
	Claimed Torque	110Nm @ 9,000rpm

CHASSIS	Frame	Twin spar, cast aluminium
	F Suspension	43mm Sachs forks, fully adjustable
	R Suspension	Sachs monoshock, fully adjustable
	Front Brakes	4-piston Brembo radial calipers, 320mm discs
	Rear Brakes	2-piston caliper, 220mm disc

DIMENSIONS	Wheelbase	1,440mm
	Seat Height	840mm
	Dry Weight	179kg (kerb mass)
	Fuel Capacity	17L

PRICE	Price	£11,495 (£10,495 non APRC)
	From	Aprilia UK uk.aprilia.com

No opportunity for detail has been missed - it's the complete design package



Highlights

- ▶ WSB winning V4 motor
- ▶ Trick APRC electronics
- ▶ Slipper clutch
- ▶ 167bhp
- ▶ 110Nm torque
- ▶ Sachs suspension
- ▶ £11,495

- ▶ TRACK 9
You won't go faster
- ▶ FAST ROAD 10
As quick as it gets
- ▶ HOOLIGAN 6
Surprisingly reticent
- ▶ NEW RIDER 6
Not even with the electrics
- ▶ DESIRABILITY 8
A performer, not a looker

▶ENGINE The 65-degree V4 motor gets longer intake funnels, a heavier flywheel, advanced valve timing and a new exhaust system from the Special Edition version, losing two kilos and gaining Euro 4 status. 167bhp is the result. The first three gear ratios are lower, giving sharper response. The APRC system incorporates traction control, anti-wheelie, launch control and adaptive quickshifter – all accessed on the bar based joystick. And there's a slipper clutch.

▶CHASSIS The new chassis is based on the RSV4, but with changes to the engine position, swingarm pivot and ergonomics. The swingarm is 5mm lower. The Sachs suspension comes from the base model RSV4, with the fork titanium nitrided for better action. Spring and damping rates are the same, but set-up differs slightly. Brembo provides the braking and there is an unadjustable steering damper. New rims saving two kilos and reduce inertia by a fifth.

APRC? WTF?

Andrea Ricci Iamino came from Ducati to develop Aprilia's electronics package. The system uses two accelerometers and two gyrometers. They measure the roll angle, or lean, and lateral acceleration. We use the roll angle for the traction control because it is important to relate this to acceleration, and we use longitudinal acceleration for the wheelie control, and this can give you a longer or shorter wheelie. Of course we allow you to switch this off! The two systems are separate, this allows you to have a wheelie and it not effect traction control. This is not allowed on the BMW system, for example. We have two ways of cutting torque. The most important way is to manage the air intake to the engine, so we do this with the butterflies. This is smooth and gentle and this happens 98 per cent of the time. For a sudden loss of grip, we can cut the spark. The launch control is not an element of wheelie control, this is separate again. We have three settings and on each the system knows what stage of the launch you are in. The first stage recognises when you are disengaging the clutch and the second stage gives you the best acceleration with the front wheel on the ground. You must give full throttle, and depending on the map, the bike will hold the revs at between 9 and 10,500rpm until you release the clutch. Acceleration targets are then set, and then when you get to 145kph or goes beyond third gear the system disengages.

Track hedonism doesn't supplant the Tuono's incredible road prowess

▶ from the RSV4, you will genuinely struggle to go as fast on the devoted circuit tool.

With the day only getting hotter, we were taken on a 140km ride through the hills behind Valencia. Unlike the bikes on track, the Tuono was bog-stock and on the Diablo Rosso Corsas. On track, the bike rarely dipped below 7,000rpm, with power cresting at 12,000 revs, so it was novel to sample life below this range. In the road-biased Sport mode, there was clean delivery on top from 4,000rpm with the bike's V4 soundtrack turning up the volume from 5,000rpm. It's such a progressive powerplant, and the shorter first three ratios allow eager progressive drive when it's called upon. There are a few vibes through the range, but along



Once upon a time, naked sportsbikes were parts bin specials. We've come a long way, baby

YOU CAN TAKE ABSOLUTE LIBERTIES ON THE EXIT OF TURNS, AND GAP ANYTHING

with the quickshifter and effortless clutch the bike is easy to use on road – something the RSV4 can never be accused of.

The cornering story, despite the lack of special set-up, is as positive as on track. The Sachs suspension is set-up stiffly, so bumpy bits can take their toll, but find some smooth stuff and the bike hunts down corners hungrily. The riding position encourages corner speed, despite the relaxed 25-degree rake, and there's plenty of feedback from the front, so often lacking in naked. There's no ABS version, it'll come once the system's developed in 2012, but in the dry there's no need for outside assistance. With corners coming thick and fast, the Tuono's agility pre, mid and post corner meant it's hard

to imagine anything flowing faster.

The Tuono could really be the fastest machine on the road. Not only does it have the cornering skills, but the APRC means that you can take absolute liberties on the exit of turns and gap anything out there. Stick the system in a lower level and you can start sliding with a safety net if it all goes wrong. One slight downside is, like the RSV4, the Tuono's not the most natural stunter in the world. The ride-by-wire throttle makes wheelies an often haphazard affair, while stoppies have to be executed while the forks shudder their protest. It's all possible, you just need the practice.

But we've yet to come to the best bit – the price. Ducati are asking £14,695 for the traction

controlled Streetfighter S, so you'd expect Aprilia to be in the same ballpark given the Tuono's amazing spec. But at £11,495, Aprilia are properly taking the piss. You can buy an APRC-free machine for £1,000 less but this is a small price to pay for the software's massive ability. If the Tuono's abilities are close to being untouchable then its price certainly is.

If Aprilia is right, and this bike is bought by hardcore riders just popping out for coffee, then they'd better make sure the café is at the end of a twisting ribbon of road – or that there are hot drink facilities at the track. Anything else would mean missing out on one of the most capable, assured and rewarding bikes on the planet. ☒

Verdict

9/10

An easy to ride RSV4 for three grand less than the class leading Ducati Streetfighter S. Where do we form a disorderly queue?

- ➕ MOTOR, CHASSIS, ELECTRONICS, PRICE, DEVASTATING PACE
- ➖ NOT THE EASIEST STUNTER, IT'S NOT FREE

This waspish yellow and black colour scheme will be special order only in the UK



PROJECT MANAGER: MARCO ZULIANI

We could have approached this based on the old Tuono, but we decided we had to begin with the RSV4. But, we had to respect the heritage of the Tuono too, so it was a balance. In using the RSV4, it was a hard job to make it more road based. We did many, many test, focussing initially on the frame. We made made many changes here. You can't make a Tuono just by taking off the RSV4's fairing because it wouldn't be stable. So we move forward the steering angle, lowered the engine, lowered the swingarm pivot point to improve stability at high speed – because this bike will reach 270kph. We had to reach a compromise between comfort on the road and control and feeling on track. We wanted to keep the motor's character, and the architecture of the motor is integral here. We had to smooth the power delivery, so we did this with new valve timing, the profile is the same but we advanced the opening phase, and longer intake funnels to give more regularity to the engine, while giving an aggressive top end. We did this and then gave more inertia to the flywheel to improve stability. We're thinking of a race series, but we'll see.