

GIANT 125 TWO-STROKE SPECIAL

2020 YAMAHA YZ125 • 2020 TM 144MX • 2020 HUSQVARNA TC125

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**UNOBTAINABLE
FACTORY YAMAHA
GYTR YZ125:
SMUGGLED IN
FROM AMSTERDAM**

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THE BEST AND WORST SEASON EVER!**

**RIG FOR SILENT RUNNING:
HOW ELECTRIC PEE-WEES
COULD SAVE THE SPORT**

**MALCOLM
STEWART
SPEAKS:
"I WAS THE
REDHEADED
STEPCHILD"**

2020 TM 144MX TWO-STROKE

BUILT FOR SPEED

Q: FIRST AND FOREMOST, IS THE 2020 TM 144MX BETTER THAN THE 2019 TM 144MX?

A: *MXA* didn't test a 2019 TM 144MX. We focused on what was updated and new in 2019, such as TM's 300MX two-stroke and its 300FI-MX four-stroke. Back in 2018, the TM 125MX went through the *MXA* wringer, but 2016 was the last time we tested a TM 144MX. Why the long gap? The bike remained virtually the same over the three-year time frame; however, for 2020, the TM 144MX has some updates that our testers love. So, even though we didn't test the 2019 TM 144MX, we tested the 2016 model that was pretty much the same, which brings us to our conclusion that the 2020 TM 144MX is better than the 2016, 2017, 2018 and 2019 models. Keep on reading to find out why.

Q: WHAT UPDATES DID TM MAKE TO THE 144MX FOR 2020?

A: It is no secret that Italians like to talk; however, when it comes to technical information, their lips are sealed. Even though we are on a need-to-know basis with TM Italy, we, as well as American TM importer Ralf Schmidt, never get solid answers. Luckily, Ralf knows each TM like the back of his hand, and when a new model rolls into his warehouse, he tears it down to find out what is new and updated. Here is a list of the five most significant updates to the TM 144MX, according to Ralf.

(1) Cylinder. The cylinder has been reworked.

(2) Power valve. The TM 144's power valve has been updated to the new, push-rod, electronic power valve, just like the TM 300MX two-stroke. In the past, we had issues with the cable-operated TM power valve, so the new push-rod power valve is a breath of fresh air. It requires less maintenance because there is no cable to adjust.

(3) ECU. Since the power valve is now operated electronically, that means the ECU had to get smarter.

(4) Forks. The KYB fork settings have been updated.

(5) Shock. The TM rear shock is new for 2020 with parameters that match the forks.

Q: IS THE TM 144MX JUST A BIG-BORE TM 125MX?

A: Not at all. TM is a boutique builder, meaning it is a small Italian company that produces bikes in limited numbers, not in the tens of thousands like the red, blue, white, orange and green bikes. Hold on, does that mean Suzuki is a boutique builder as well? No, silly. Suzuki isn't producing small batches of bikes on purpose like TM is. Suzuki is small because it doesn't seem to care about the off-road market. TM is small because it wants to stay small and be different. Different is the key word here. TM builds each of its bikes from the ground up, using lots of customized parts, which is reflected in the high price tag. Unlike KTM, who builds its 150SX by installing a bigger piston, the TM 144MX starts from scratch. That means totally new cases, a different crank, and a completely unique bore-and-stroke. Is KTM smart and TM dumb? Not at all. TM dares to be different because it is after a different type of customer. Think of TM as the Ducati of motocross.

Q: WAS BUILDING A COMPLETELY DIFFERENT ENGINE A GOOD IDEA?

A: We will answer this question by taking the long way around it. Most *MXA* test riders prefer to race the KTM 125SX over the KTM 150SX. Why? Because the 150SX's style of power is harder to ride. The power hits hard,

THE GEAR

Jersey: FXR Racing Revo

Pants: FXR Racing Revo

Helmet: 6D ATR-2

Goggles: Viral Brand Factory Series Pro

Boots: Sidi Crossfire 3SR

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signs off fast, and upsets the chassis with its more erratic delivery. It's a great play-bike engine and perfect for jumping big jumps, but every MXA test rider wished that the KTM 150SX had the fluid and broad powerband of the 125SX—only with more power. And, that is why TM didn't just big-bore its 125MX. TM wanted to produce a 125cc style of power that delivered the vibes throughout the entire rpm range. To accomplish this, TM needed to build an all-new engine.

Yes, we think boring and stroking the TM 1440MX engine was a good idea.

Q: WHAT DID THE MXA TEST RIDERS THINK OF THE TM 144MX ENGINE?

A: It surprised them. They expected a big-bang engine like the KTM 150SX, but the 2020 TM 144MX wanted to scream at the top of its lungs. It ran best when held wide open. The power spread was reminiscent of an

old-school, factory, 125cc engine. Our faster test riders couldn't say enough about the power, because their skill allowed them to keep the throttle pegged to the stops. Slower testers had some issues at first. They felt the bike lagged off the bottom, which hampered their ability to get on top of

the power right away. We fixed some of this with a needle change to clean up the low-to-mid transition, which connected the power better. To close the gaps between gears and allow the engine to rev out faster for our lower-level riders, we went from the stock 13/52 gearing to 13/53. This gearing

change made a big difference, helping our Vet and Novice riders use more of the power output.

Q: HOW DID THE TM 144MX HANDLE?

A: Over the years, the European feel that TMs used to have has slowly eroded away, and the American style of handling has replaced the Italian style. That translates into less oversteer, quicker handling and a more connected feel. We couldn't be happier, because we are Americans. This change in philosophy means no more stinkbug rear ends, harsh forks,

A few years ago TM's race bikes had a very distinct European flavor in terms of setup, layout and handling. The new models have been Americanized for the better.

cow-horn handlebars, front-end push and over-sprung rear shocks. The 2020 TM 144MX offers a rigid and stable chassis that turns exceptionally well. It doesn't shake or wiggle at speed, and the cockpit is big, which suits taller riders well. Test riders had zero complaints.

Q: HOW WELL DID THE MIX-AND-MATCH KAYABA FORKS AND TM SHOCK WORK?

A: Very well. We are happy to say that, because a few years ago TM had nightmare settings in its Kayaba SSS forks. Now TM has great forks, and the nightmare days are long gone. The 2020 forks were on the soft side for our Pro test riders. They went in on the compression for better hold up. As for the TM shock, nobody said a thing! All of the test riders liked the standard setting best—only the race sag was changed to accommodate different rider weights. Overall, the suspension setup worked well. We could see riders only changing a few clicks here and there to get a proper base setting. Ride the bike before you send the suspension to your favorite tuner. You might be surprised.

Q: WHAT DID WE HATE?

A: The hate list:

(1) Rear sprocket bolts. Does the rear sprocket really need nine bolts to ensure it doesn't fall off? No! Not even TM's factory race team runs nine sprocket bolts. They take three out. The plus side of the nine-bolt pattern is that the sprocket will never fall off. We can't say that about every six-bolt pattern.

(2) Maps. The TM offers two maps to choose from via an easy-access handlebar toggle switch. Both maps were very similar.

(3) Price. The TM 144MX is just shy of \$1200 more than the KTM 150SX at \$8695.

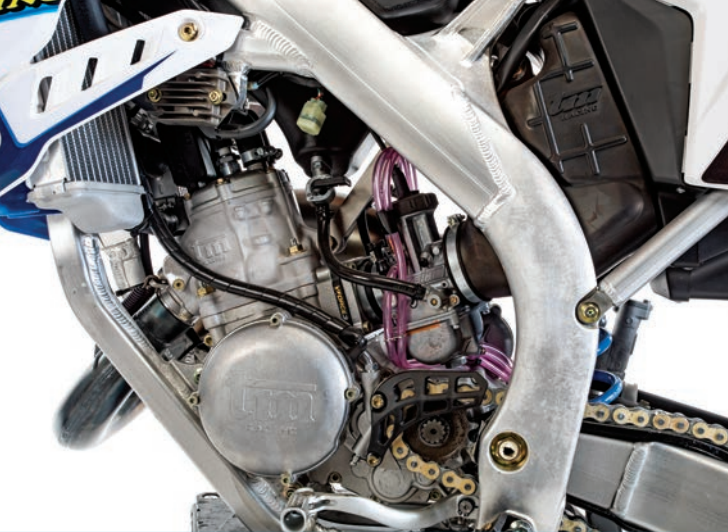
(4) Jetting. We started tuning the carb with the air screw. Then we gave up on that and swapped out the pilot. When that didn't satisfy us, we changed the needle. We made the final adjustments with the clip position. One caveat: we race in a mild Mediterranean climate with very low humidity and warm temperatures, so the best we can offer as far as jetting suggestions for your locale is a starting point.

Q: WHAT DID WE LIKE?

A: The like list:

(1) Brakes. The Brembo brakes with a 270mm Galfer Wave were fan-





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tastic. The rear might squeak here and there, but these brakes do the job better than anything else in the business.

(2) Wheels. We like the blue Takasago Excel rims with their polished spool hubs.

(3) Suspension. The Kayaba SSS forks and TM shock work in unison.

(4) Hydraulic clutch. The self-adjusting hydraulic clutch is excellent.

(5) Handling. This is a great-handling bike. It can turn on a dime and has excellent straight-line stability.

(6) Balance. After years of having to run super low sag and shorter shocks, the 2020 TM 144MX now offers a good balance at an average sag height.

(7) Tires. TM has recently switched from Dunlop to Bridgestone X20 tires; we liked them.

(8) Engine. This 144cc TM engine is built to race. It offers a powerband that racers want.

Q: WHAT DO WE REALLY THINK?

A: The TM 144MX reminds us of what factory 125cc machines were like back in the two-stroke heyday. This bike needs to be revved to the moon to get the most out of it. Skilled two-stroke riders will love this bike through and through; it is just about the complete package. It handles well and has good suspension. The engine can take a beating, and it has brakes and a clutch that hold up well. If you are a serious racer, love tiddlers and dare to be different, this bike is right up your alley.

MXA'S 2020 TM 144MX SETUP SPECS

This is how we set up our 2020 TM 144MX for racing. We offer it as a guide to help you find your own sweet spot.

KAYABA SSS FORK SETTINGS

For hard-core racing, we ran this setup on the 2020 TM 144MX (stock clickers are in parentheses):

Spring rate: 0.40 kg/mm

Compression: 6 clicks out (9 clicks out)

Rebound: 12 clicks out

Fork height: Standard position

Notes: The forks were best for Novice riders. Faster riders went in on the compression so the KYB forks would ride higher in the stroke.

TM SHOCK SETTINGS

For hard-core racing, we ran this setup on the 2020 TM 144MX (stock clickers are in parentheses):

Spring rate: 4.2 kg/mm

Race sag: 105mm

Hi-compression: 12 turns out

Lo-compression: 16 clicks out

Rebound: 20 clicks out

Notes: No test riders complained about the shock. We only had to set the sag for the rider's weight.

MXA'S JETTING SPECS

Here is what we ran with the Keihin PKW 38mm carb. (stock settings are in parentheses):

Main jet: 188

Pilot jet: 50

Needle: NOZG (NOZH)

Clip: 2nd (3rd) □



Imagine a KTM front brake with a 270mm rotor. That would be a TM front brake.



There are two maps, but they aren't very different.



TM four-strokes have the airbox where the gas tank used to be, but the TM two-strokes have the gas in the conventional location.



The OEM tires are Bridgestone X20s.



Count them, nine rear sprocket bolts.

Kayaba SSS forks grace the front of the TM 144MX.