A few months ago we got to throw our legs over an exotic handmade Italian TM MX 144, and we came away pretty impressed with the bike's snappy powerband and exciting special features: the hand-welded aluminum chassis, the billet aluminum shock absorber that's made in-house at TM and paired with a mechanical spring KYB fork, and the laundry list of high-performance aftermarket parts, all of which come stock.

If the MX 144 was that impressive, we were curious about the performance of the MX 250 and even the larger MX 300 two-stroke TMs. Gravity TM Racing was happy to let us spin some laps aboard the blue bikes, and we spent a full day on them at Milestone MX Park. US importer Ralf Schmidt was on hand to help tune the bikes and answer any questions that test rider Rich Taylor had about the machines.

INSIDE THE MX 250 AND 300
At the heart of the MX 250 is its 249cc engine, which really has a handmade appearance thanks to its sand-casted cases. The case-reed, six-speed, liquid-cooled powerplant is fed by a Keihin PWK 38-mm carburetor and a Moto Tassinari VForce reed valve, and like the MX 144, its most distinguishing factor is the electronic power valve, which is controlled by a Kokusan ignition, which powers a servo motor that actuates the power valve via two small cables. The MX 300 engine is based on the 250 powerplant, but boasts a square 72 mm x 72 mm bore and stroke to gain the extra 43cc (the MX 250's bore and stroke is 66.4 mm x 72 mm).

The aluminum perimeter frame on the 250 and 300 is unique to the line, as TM handcrafts every chassis to match each specific MX bike in its line. A unique combination of suspension components grace the bikes: a set of Kayaba twin chamber forks up front and a billet aluminum shock absorber out back that's made in-house at TM with Showa internals. Like the MX 144 we tested a couple months ago, air is channeled to the filter via a complex intake that's mounted on top of the gas tank between the rider's thighs.

The triple clamps and hubs are machined from billet aluminum and clear anodized. The brakes are a unique combination of Nissin master cylinders, mated to Brembo calipers and Braking wave rotors. Oversized aluminum handlebars round out the rider controls.

ON THE TRACK
The biggest surprise every test rider has when throwing a leg over a TM motorcycle is how easy it is to get used to the ergonomics. Gone are the days when European motocross bikes felt drastically different than those from Japan, and the MX 250 and 300 were relatively easy to adapt to from the get-go. The MX line of TMs do have a larger overall feel than that of, say, a Yamaha YZ, but it's nothing that you don't get used to within a motor or two.

Both bikes are stable at speed and fairly quick handling in the corners. Front-to-rear weight balance is very even, and the suspension components perform quite well together in spite of their odd KYB/Showa/TM spec. The fork, of course, works marvelously, as it's a twin-chamber KYB unit equipped with mechanical springs and traditional double-sided internals (non-single function). Air forks are, in our opinion, a cost-cutting invention that falls short of the older, traditional spring perfor-
mance, and it's good to see the TM equipped with a quality front-end. The TM-made shock, which utilizes Showa internals, is matched to the front quite well, and our fastest and pickiest test rider, Rich Taylor, was very impressed with the rear-end's ability to soak up hard hits and small acceleration chop alike.

The MX 250 and 300 are essentially the same bike with different cylinders to accomplish the two different displacements. Contrary to what one might think about adding roughly 50cc of power to the MX 250, the MX 300 doesn't simply have more power everywhere, but a completely different powerband altogether.

The MX 250—for all intents and purposes—is a classic two-stroke. The bike has minimal low-end roll-on power in spite of its electronic power valve. As the RPMs begin to rise, watch out, because the MX 250 comes to life with a big, violent surge of power in the midrange that's at the same time thrilling and scary. Our day of riding came at Milestone MX with perfect conditions, and it was easy to loft the front wheel skyward with the big hit—we can only imagine how hard the bike would be to manage in dry, hard-packed conditions. As the RPMs continue to build, the power continues to pull, but it does taper off sooner than other current 250 two-strokes. This bike is best suited for fast, highly skilled riders who can take full advantage of the massive hit in the middle of the powerband.

The MX 300, meanwhile, is a torque monster with plenty of roll-on power on tap. The larger piston gives the machine a slower-revving feel, and this in turn makes the bike feel a tad heavier and slower handling. Power continues to pull hard through the midrange, but the bike signs off hard on top. The best way to ride the MX 300 is without a doubt to short shift it and keep it in the lower RPMs.

THE VERDICT
While we were thoroughly impressed with the MX 144 we threw our legs over a couple months ago, we were less dazzled by the performance of the larger TM two-strokes. They are indeed built nicely and perform very well, just not better than the other current midsize two-stroke options. Still, there are plenty of motocross consumers who like to stand out from the crowd and ride something different, and the TM MX 250 and 300 are just the ticket. So which size did we prefer? While the MX 300 would be good in tight off-road conditions, the MX 250 is clearly the better choice for motocross use.
RIDER IMPRESSION

Rider: Rich Taylor
Age: 47
Height/Weight: 5'9", 175 lbs.
Ability: Pro
Bikes Ridden: '16 Husqvarna FC 450,
'16 Yamaha YZ450F

In 1989 I was doing some testing for another magazine, and I remember being told I was going to test a Cagiva 125. At the time, those bikes were doing very well in Europe and they had Mike Healy ripping on one over here in the United States. I was so stoked to get to ride it to see just how great it was. Well, that bike was so awkward and hard to ride I couldn't believe it was winning races overseas. It stunk! I vowed right then never to ride another "exotic" Euro bike. Well, then these TMs showed up. I have watched some of my buddies riding and testing these bikes, and I had to admit that they do look pretty legit and trick! Not to mention that in this day and age, I am always down to rip around on a two-stroke.

I rode the MX 300 first. Right off the bat, I noticed that the bike's ergos were on point. It has a typical Japanese ride position and feel. On the track the motor was unique. It had tons of bottom-end torque and midrange power. The 300 requires you to ride a gear high due to the meaty bottom and flat top-end character of the powerband. After figuring out the motor, the bike was super fun to ride. The suspension was pretty good and the handling was also predictable.

Unlike the MX 300, the MX 250 didn't have much bottom at all. Instead it had a screaming powerband with a midrange hit that will have you on your butt if you're not ready for it. After the violent hit, it revved and pulled hard. With some more setup and gearing changes, this bike would be my choice for racing. The 250 handles and feels very similar to the 300, but has a lighter feel due to the lighter motor character.

Overall, I was much more impressed with the TMs than I was with the Cagiva back in the day!
MX 250 SPECIFICATIONS

• Bore and Stroke: 66.4 mm x 72 mm
• Displacement: 249cc
• Compression ratio: NA
• Induction: Moto Tassinari VForce reed valve
• Carburetor: Keihin PWK 38
• Ignition: Kokusan CDI Electronic with variable advance and two selectable maps through handlebar switch
• Clutch: Multiple-disc in oil bath with hydraulic control
• Transmission: 5-speed
• Cooling system: Coolant liquid with pump
• Frame: Perimeter aluminum section
• Front fork: KYB USD 48-mm twin-chamber
• Rear shock: TM Racing
• Front tire: 90/90-21
• Rear tire: 110/90-19
• Front brake: Braking Wave 270-mm disc with Nissin master cylinder and Brembo caliper
• Rear brake: Braking Wave 245-mm disc with Nissin master cylinder and caliper
• Fuel capacity: 8.7 liters

MX 300 SPECIFICATIONS

• Bore and Stroke: 72 mm x 72 mm
• Displacement: 294cc
• Compression ratio: NA
• Induction: Moto Tassinari VForce reed valve
• Carburetor: Keihin PWK 38
• Ignition: Kokusan CDI Electronic with variable advance and two selectable maps through handlebar switch
• Clutch: Multiple-disc in oil bath with hydraulic control
• Transmission: 5-speed
• Cooling system: Coolant liquid with pump
• Frame: Perimeter aluminum section
• Front fork: KYB USD 48-mm twin-chamber
• Rear shock: TM Racing
• Front tire: 90/90-21
• Rear tire: 110/90-19
• Front brake: Braking Wave 270-mm disc with Nissin master cylinder and Brembo caliper
• Rear brake: Braking Wave 245-mm disc with Nissin master cylinder and caliper
• Fuel capacity: 8.7 liters