THE BEAST OF PESARO

The giant-killer of the world enduro circuit

If you know what a TM is, give yourself a gold star. If you know that a TM just won the E1 World Enduro championship, then you’re probably a ringer. Chances are, you’re at least 50-percent Italian, you have a Ducati and a Ferrari in the garage, and you wear tailored Armani riding gear.

For the rest of you, TM is a small, family-owned motorcycle-maker on the Adriatic coast of Italy. The company prides itself on making limited runs of handbuilt dirt bikes to very high standards. In this age of corporate conglomerates and mass production, it’s amazing to us that TM even exists—but they have been doing essentially the same thing for over 40 years. In 2016, TM’s racing team earned its second consecutive World Enduro Championship in the E1 class. Finnish rider Eero Renes took the title in style, winning 11 of 16 races on his TM 250 four-stroke.
Here in the U.S., TM is better known for its two-strokes, but the company actually has a full line of four-strokes too, including 250cc, 300cc, 450cc and 530cc enduro bikes. We got a chance to test the 450, and we hit the ground running.

**FIRST OF ALL, WHAT IS IT?**

According to the U.S. government, the TM EN 450FI is a closed-course competition off-road bike, like a Yamaha YZ450FX and a Honda CRF450RX. We get the feeling that the TM doesn't really fall into this category by design; it's more an accident of circumstance. TM's importer sees the bike as a pure off-road machine like a Yamaha WR450F, but getting the U.S. government to see it that way would be costly. The Yamaha WR, as well as the Honda CRX450R and the new Suzuki RMX450Z, have gone through an extensive homologation process to meet emission and noise requirements imposed by the EPA and CARB. That kind of certification is beyond the capability of such a small company, so the bike is seen as a motocross bike, as far as the U.S. government goes. In reality, it was designed and tested for off-road riding and racing. It's reasonably quiet. It has electric start, the suspension is soft and the gear ratios have a wide spread. There are even a few street-legal accessories, like a headlight with a high and low beam, a brake light and a kickstand that folds itself up. It's a trail bike first, but it was built by Italians, so it has a lot of racing blood. They can't help themselves.

**TECH, ITALIAN-STYLE**

When we say that these are handbuilt motorcycles, we don't mean they have no tools at the factory; we just mean there aren't any robots involved. The aluminum frame on the TM 450 is welded together by someone who takes pride in his craft, although it's similar in design to the twin-beam layout of a modern Japanese motocross bike. TM is clearly in the minority of European motorcycle-makers, choosing aluminum as a frame material rather than steel. The motor has sand-cast cases and the layout is very unorthodox. The locations for the airbox and fuel tank have been swapped, so

TM did an excellent job with the power delivery. This is a true off-road bike.

The exhaust is extremely quiet but has no spark arrestor.

The TM is a beautifully made Italian off-road bike, but it's not for everyone.
there's a big air filter right in front of the seat and a gas cap recessed into the right-side number plate. The idea isn't that different from Yamaha's, with the mass centralized near the middle of the chassis and a downdraft intake flow going into the head. In TM's case, the head has the exhaust in front, making the motor look more conventional than a Yamaha's. The clutch is hydraulic and the gearbox is a five-speed.

Even the smallest parts get a lot of attention in the TM way of doing things. The rear brake pedal is machined from aluminum. The hubs are made by TM but look like high-end aftermarket items, and they're laced to blue Excel rims. Then there are a surprising number of Japanese components. The brakes are Nissin, the generator is Kokusan and the fork is a 48mm KYB. The rear shock, on the other hand, is made in-house at TM.

**A TRUE OFF-ROAD BIKE**

Regardless of what the EPA thinks or the U.S. government says, the TM EN 450Fi is a true off-road bike. There's nothing quite like it on the market. The other "closed-course" bikes that claim to be for off-road are way too hard-hitting and stiff for the trail, and the EPA-legal bikes are too bottled up and restricted. The TM falls right in the middle. The power has a smooth, soft delivery down low, and that combines with a low first gear to make the bike easy to manage on slow, tight trails. Then, when the trail opens up, the TM motor catches up fast. In the midrange, it runs more like a real 450 motocross bike. On the top, it doesn't make as much power as a full-blooded MX bike, but by the time you get up there, you're already going very, very fast. The TM has a very old-school four-stroke feel to it, building gradually rather than hitting hard. There's very little bark, but a lot of growl.

As far as TM's table manners go, it's surprisingly civil. The fuel-injection mapping is just about perfect. It never flames out or coughs. In fact, the motor is very hard to stall. Even killing it at the end of the ride is difficult. We could never remember where the kill button was (FYI, on the left control pod facing away from the rider), so we often just dropped it into gear with the brakes on. Half the time it would chug forward on its own.

TM's engineers did a great job setting up the suspension for off-road riding. The bike is well balanced and clearly aimed at fast trail work. It has no trouble with the whoops that accompany most overused trails, yet it still picks up trail trash like rocks and sticks. Overall, the bike is extremely stable. When you pick a line through a rock field or across a bunch of criss-crossing ruts, the TM will go straight until you tell it to do otherwise. Conversely, it's not very light on its feet. The bike feels big and cumbersome at low speed. The weight is actually reasonable. On the Dirt Bike scale, it weighs 248 pounds without fuel. That's far lighter than any of Japan's 450 off-road bikes, although it still hefty compared to the KTM or Husky. Regardless of what the readout says, the TM is a bit of a beast. New Year's resolution: Go to the gym more.

**QUIRKS ARE US**

As we said, this is an old-school four-stroke with a lot of old-school traits. It has a lot of engine braking when you chop the throttle. The clutch pull is harder than just about any bike we can think of. And, if you think there's a lot of intake noise on a Yamaha, you ain't heard nothin' yet. The TM sounds like it will suck your goggles off.

All that stuff just adds to the character of the bike. If you want a plain-vanilla type of motorcycle, there are lots of other bikes to choose from. The TM is for someone who wants to stand out. It identifies its rider as a member of a very exclusive club. It's not cheap, it's not common and it's definitely not forgettable. And, it is very Italian.

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**OFF-ROAD TEST: TM EN 450Fi**

At $10,895, the TM is one of the most expensive dirt bikes you can buy in America. Don't expect to find one on a showroom floor. You'll have to contact the importer at www.tm racing-usa.com or (951) 850-6021.

**UPs**
- Electric start
- Good suspension
- Handguards
- Skid plate
- Smooth power delivery

** Downs**
- Hard clutch pull
- No spark arrestor
- Smallish (2-gallon) fuel tank