



# 2011 Ossa TR280i

## A Two-Stroke With Fuel Injection

Story By Jimmy Lewis • Photos By Scott Hoffman

**T**here is plenty to talk about here. A lot of history, a glimpse into the future and the fun fascination with trials, but I'll try and keep it brief.

Making a two-stroke motor fuel-injected is not any more complicated than doing it for a four-stroke, it just has not had enough of a reason to be done. But Ossa decided right from the restart that it was going this direction. Like all FI systems this one uses a throttle body but locates the injector above the reed cage and shoots the fuel into the crankcase on the pressurized side of the system. Only air is coming in through the reed valve. The bike runs on premixed gasoline (100:1) and has an air-pressure sensor and a temperature sensor using an open-loop system. Of course, the ignition is bigger than on most two-strokes to put out the power it needs for the fuel pump. A battery is not needed.

The most noticeable thing FI does to the power delivery is make it instantaneous and without any lag, just like it does on a four-stroke. Properly jetted two-strokes rarely have bogs, so the improvement is in the ability to have big throttle openings, way more than with a carb, and still have the motor fire and turn over. I'd be willing to bet performance increases, especially for trail riding, would be possible for any two-stroke motor through smoother and more consistent air-fuel mixtures over a wider rpm range judging by the FI Ossa.

The basic idea is to slant the 272cc cylinder rearward to allow room for the airbox

and radiator to be housed inward on the chassis. It is a combination of cast-aluminum pieces, the front downtube/gas tank/head tube and the footpeg/swingarm carrier piece, bonded and connected by chrome-moly tubing. The gas tank is in the front, where the radiator would usually be. There is a fan on the radiator, and in its location it stays clean. The airbox draws air from a high position near the head tube and provides a straight shot for air to flow.

How does it ride? The TR280i is a very friendly and forgiving machine with an easy-to-use nature. It feels light and agile but never too squirrely. The clutch engagement is controlled and has great feel, the clutch itself is using a diaphragm spring design and the transmission has six speeds. Brakes are strong but not too touchy and with plenty of control. The power delivery matches the chassis' nature and doesn't pack a lot of hit or a light flywheel feel. It torques and pulls; snap can be had with a hit of the clutch and extra rpm.

The new U.S. importer is gearing up, getting dealers and excited to be bringing the Spanish brand back into the States after a 29-year break. And if you know your history, a lot of new technology and concepts have first appeared in production on trials bikes. This is a fun bike, painting a bright future for two-strokes at the same time.

The FI is really no different than the systems on a four-stroke. This one just spits premix.



Altering the position of components is a trials thing. And sometimes it works.

The Ossa is built in a unique way, starting right with the bonded frame.



### Specifications: 2011 Ossa TR280i

Price: \$8,495

Seat height: 25.8 in.

Claimed dry weight: 148 lb

Fuel capacity: 0.8 gal.

Contact: [www.ossaworld.com](http://www.ossaworld.com)