

Tohatsu TLDI 90 2-stroke

Low Rider

A day of fishing is the perfect showcase for Tohatsu's new 2-stroke engine, the TLDI 90.

Pointing the 18-foot FlyCraft Bay Stalker toward the channel leading to Boca Grande Pass, Ryan Blumberg of Omni Marine jams the throttle on the Tohatsu TLDI 90-hp engine to wide-open. Crisply accelerating to 25 mph in just 7.5 seconds, the Tohatsu pulls strongly through the power curve toward its top speed of 38 mph. Not bad for a boat that is rated to accept a 130-hp engine. Even at wide-open throttle, the Tohatsu is burning only 8.5 gallons per hour, and at idle, a ridiculously low .15 gallons per hour, according to recent Tohatsu fuel-flow tests.

Tohatsu and its co-brand Nissan have carved out their own little slice of the outboard market by providing direct-injected technology in the lower horsepower ratings. Their TLDI (Two-stroke Low-pressure Direct-Injected) lineup includes 40-, 50-, 70- and 90-hp models that all use Orbital's OCP technology. Like most Japanese outboard companies, they were in no rush to bring these motors to the market, taking six years to test them before deciding to release them.

The TLDI system relies on a small compressor to supply air at a relatively low 80 psi to first move the fuel into an air chamber. Next, the fuel is sheared into tiny particles as it accelerates and expands through the direct-injector nozzle and directly into the combustion chamber, unlike 4-strokes that induct the fuel using ports. The injected air also supplies additional oxygen at the spark plug, which is especially important to helping reduce emissions during partial load situations.

Because the system's integrated rail gets air and fuel from different injectors, the mix can be adjusted for each load to give a more complete burn. Orbital uses an ECU, a computerized brain, to process all aspects of the engine's performance and to decide what ratio of air and fuel is needed to achieve the best performance. The ECU also can change the amount of oil being burned to match the rpm selected, allowing owners to reduce oil consumption up to 30 percent.

For those who troll, a unique feature is the User Adjustable Idle Setting, which allows the driver to change the idle from between 700 and 900 rpm by simply pressing in the key switch. It even remembers the setting you choose the next time you start it up.

As the boat approaches the pass, the channel greets it with a nasty two-foot chop, which requires Blumberg to make abrupt throttle changes to keep from overcooking the small FlyCraft when the occasional larger wave crops up. Just before reaching the pass, taking a left gets the crew out of the 15-mph winds and into tranquil Turtle Bay. Skimming over water that is often only 18 inches deep takes them to a smaller bay, surrounded by mangroves. Shutting down the engine and using the electric tilt to trim the lower unit out of the water allows them to drift stealthily over the shallow water. They cast topwater Mirrolures and "walk the dog" until an eight-pound redfish engulfs Blumberg's offering.

After catching some nice trout, they call it a day, but instead of idling a long distance out of the two-foot deep flat and heading for deeper water, Blumberg trims the engine down, gooses the throttle, and the FlyCraft pops up on plane without touching bottom. This is possible because, in addition to snappy throttle response, the Tohatsu 90 weighs just 315 pounds, more than 100 pounds less than a popular 4-stroke and 54 pounds less than its only direct-injected rival.

Tohatsu/Nissan has been making outboards since 1956 and has been a popular choice for commercial fishermen around the world who need a reliable engine. Tohatsu/Nissan is confident enough in its product to offer a 3+1 year warranty on all 2003 or later TLDI engines. The first three years cover parts and labor for the engine's major components, with the fourth year covering parts and labor for all TLDI related items. The TLDI engines meet or exceed the new 2006 Environmental Protection Agency regulations for reduced emissions and have a two-star California Air Resource Board rating, designating it as a very low emissions engine. With a manufacturer's suggested retail price of \$7,649, you can get a lightweight, eco-friendly, fuel-efficient transom rocket at a reasonable price. While Tohatsu may not now be a household name, expect that to change.

