

## WORLD'S FAVORITE SPORT-TOURER REBORN

'03 Honda  
ST1300by Dave Searle  
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**T**HE FIRST GENERATION ST1100 lasted a dozen years with only minor revisions and became a cult classic, so naturally the news that Honda was working on a replacement created quite a stir. The 1999 X-Wing prototype (MCN, Jan. 2000), originally suggested as the model for the GL1800, actually revealed the ST1300's styling direction. We had anticipated testing the bike back in March, but it was twice delayed for revisions—Honda wouldn't say what, but they knew it had to be perfect to live up to everyone's expectations.

## Technical

The machine is all-new from the ground up. It retains the longitudinally mounted V-four engine design, but to improve its sporting prowess, the engine is more powerful, increased in size from 1084cc to 1261cc (bore: 78mm, stroke: 66mm), and the compression ratio has been bumped from 10:1 to 10.8:1 (requiring premium fuel). It's still a two-valve per cylinder design, but the valves are much larger for better breathing, with intakes at 31mm and exhausts at 27mm (vs. the ST1100's 27.5/23mm sizes). The latest aluminum composite cylinder sleeves, first introduced on Honda's sportbikes, replace steel liners for improved heat dissipation, longer wear and lighter weight.

The ST1100's 34mm carburetors are swapped for fuel injection, with 36mm throttle bodies, and the injectors feature Honda's trick multipoint nozzles, these with eight laser-drilled holes each, to favor the mid-range torque such a bike needs. Cold starting is now handled automatically.

Internal counterbalancers eliminate the need for the previous rubber engine mount-

ings, stiffening the engine/chassis structure for sharper handling. Also contributing to improved handling is revised engine placement. The crankshaft now sits 20mm lower, reducing its center of gravity. A chain-type camshaft drive, rather than the belt drive used previously, shortens the front of the engine 10mm, plus a new stacked, cassette-type gearbox shortens the rear another 40mm. With the alternator repositioned between the banks of the cylinders, the engine package is two full inches shorter than before, despite its larger displacement.

Rated at 125 hp at the crank, we measured 106.1 hp @ 7500 rpm at the rear wheel on the dyno with a torque peak of 81.6 lb. ft. at 6000 rpm, compared to the old ST1100's 88.3 hp and 70.9 lb. ft.. The red-line is marked at 8500 rpm and a rev limiter activates at 8750. In addition to the extra power, dual catalytic converters and sophisticated engine management allow the new ST to satisfy very strict 2008 CARB emissions standards—impressive.

Satisfying the cooling needs of the extra horses, the radiator is U-shaped to provide 8.2% more capacity, and a new ring-style cooling fan provides greater efficiency at low speeds.

The alternator has also been updated, now with 660 Watts to satisfy the gadget-addicts, up from 540 Watts.

Contributing to its improved overall performance, the ST1300's gearing is approximately 5% shorter than the ST1100 for stronger acceleration. (The transmission remains a 5-speed.)

Also, the bike has lost 22 lbs. An aluminum chassis saves just 2.4 lbs. vs. the ST1100's steel piece, while a new aluminum swingarm, now 30mm longer, saves

another 1.9 lbs. Major weight savings were accomplished in unsprung weight; the front wheel being 2.7 lbs. lighter and its disc carriers an incredible 4.7 lbs. lighter. In back, the rear wheel is 9 oz. lighter and the rear disc 10.5 oz. lighter. Also, to keep the mass centralized, the gas tank is now divided into two volumes, the upper one holding 5.5 gals., with 2.2 gals. more stored under the seat. The total 7.7 gal.-capacity is .3 gal. greater than the ST1100's. With our fuel mileage averaging almost 44 mpg, the ST1300 has a realistic 330-mile range—very impressive.

Taking advantage of what Honda has learned in racing since the first ST was built, the new 1300 has benefitted from new chassis geometry as well. With the shorter engine allowing the rider triangle (bars, seat, pegs) to move 1.6" further forward for better dynamic weight distribution, the wheelbase has been shortened a significant 2.5" for more agile handling. Complementing this change, the steering head, now a massive casting for stiffness, is angled more steeply, with a rake of 26.0°, vs. 27.3° on the old ST1100. Trail is set at 3.9", again a very sporty number. We measured a static wet weight distribution of 46.3% front, 53.7% rear, and Honda says 1% of the mass has been shifted forward vs. the ST1100.

To match the sporty geometry, the forks are now much stiffer as well, with big 45mm stanchions, and carry Honda's excellent HMAS cartridge dampers, but are unfortunately devoid of any external adjustment for damping or preload. At the rear, a linkage-less shock works directly on the swingarm, and allows 1.2" of preload adjustability through a handy external knob on the right side beneath the rider's seat, but preload adjustment on the fly is not possible as the effort is too great. Although Honda's press materials didn't indicate any rebound damping adjustability, we found it, accessible through a small hole in the right side footpeg/muffler bracket!

As on the ST1100, Honda has provided a linked braking system (LBS). The system uses triple piston brakes front and rear, and works so that squeezing the front brake lever activates the outer two pistons of the front calipers and, through a proportioning valve, the inner piston of the rear caliper, with a delay valve that ensures the rear caliper grips first, to minimize chassis dive. When the rear pedal is applied, the outer two rear pistons are combined with the inner front pistons so that slowing is automatically balanced front to back, again working with the delay valve to reduce dive.

This somewhat controversial system (motojournalists especially, traditionally resent having their riding skills overruled by "unnecessary" technology) has been

fine-tuned on the ST1300. The "bias" has been reduced; that is, reducing the proportion of front brake employed when the rear pedal is used, and vice-versa.

ABS is available as part of a "Deluxe" package (as tested) that also includes the electrically adjustable windshield. The extra equipment adds 13 lbs. and ups the price to \$14,499, vs. the standard ST1300's \$12,999.

This is the first time the ST has been offered with an electrically adjustable shield, and it's a very nice one, with a jumbo 188mm (7.4") range that rises from a low position 2mm lower than the ST1100's to a high position that even tall riders will have to look through, not over. As it rises, it also tilts through 13.5°, which struck us as just right. In addition, the windshield can also be repositioned on its mounts a full 60mm even higher. Although that's an extreme setting, the standard ST1300 has only this manual adjustment capability, and its riders will appreciate it.

To hopefully exceed the long-haul comfort offered by the ST1100, Honda has also seen fit to equip the ST1300 with adjustable seating. Three heights are provided; the lowest gets the seat down to just 30.5", but in this position the knees of taller riders will contact the trailing edge of the fairing. The middle position (5mm lower than the ST1100's) suits six-footers, and the tallest position makes one feel as if they are sitting "on" the bike, not "in" it.

Still, the adjustability is welcome, and the seat also allows some forward and back variations: In the lowest position the seat can be set at three different angles, in the middle position at two, but at top, just one. Of course, the flattest angle is usually best for long haul comfort. The new dual density seat foam is firmer than before.

The standard integrated saddlebags have the same 35 liter capacity, and will again swallow a full-face helmet each. A single lock, vs. two latches before, opens them, and removal is handled via separate latches built into the passenger grab rails. Notably, the new cases are rock solid, and do not bounce around, as they did on the ST1100.

The ST1300's styling deserves a page in itself, but we'll be brief. Everyone found the shape attractive and Honda also claims a significant improvement in its aerodynamics. Engine heat is generally well managed, but in hot weather, the rider's lower legs will get uncomfortably warm in slow going. Also, the new mirrors are approximately 1" higher than before and do not provide quite the perfect unobstructed view that the ST1100's did, but are still very good.

An array of instrumentation aids and thoughtful gizmos round out the package. Four-way emergency flashers are now fitted, an electrically adjustable headlight aimer will vary the beams' angle by 2.5°, and the computer engine management system now allows a low fuel countdown of miles remaining as well as a trip computer with average speed and instantaneous mpg figures. However, the instantaneous readings appeared pessimistic, rarely showing over 40 mpg, while we averaged better than 43 mpg. Interestingly, the difference between the adjustable shield full up and full down at 70 mph was 3 mpg.

Two storage compartments are also provided in the fairing, the left one appearing deep enough to hold a music system and provided with a lock, and the right one



nearly as large. That's helpful, as we found the cockpit ergonomics make fitting a tankbag difficult, as the handlebars would foul a standard-size bag at full lock.

A swing-out handle assists with raising the machine on its centerstand, an operation that takes considerable effort.

Breakaway rear view mirrors, which are restrained from crashing to the pavement by tethers as well as wiring, were demonstrated early in the first day of the intro when a collision between two ST1300s left two mirrors dangling. Reinsertion on the spring steel prongs is simple, and neither mirror was any the worse for it. Finally, like the ST1100, Honda has again provided forward crash bars, covered with sacrificial black fins that stick out on either side.

## Riding Impression

Comparing the new ST1300 back-to-back with the ST1100, several things were immediately obvious: The handling has been drastically improved for sporty sport-touring. Where the old ST1100 had to be bent gently into a turn, the ST1300 is much more sure-footed, with none of the understeering tendency of its predecessor.

The ST1300 brakes are also dramatically better than the ST1100's, which were so weak compared to the ST1300's, that they

would give you a fright at the first hard stop when switching from the newer bike. That said, we also noted that the ST1300's braking action is radically progressive, increasing in strength very disproportionately with effort, similar to our complaint with the CBR954RR. The fear of squeezing just a hair too hard on downhill hairpin turns underlined this trait most strongly. Most likely, it's a function of the brake pads used, and it should be easy to correct with a pad change if you wanted.

Despite all the improvements, the old ST was not hopelessly outclassed. Its carburetors actually provide superior driveability, with smoother throttle transitions than the new fuel injection. And, of the three ST1300s we rode, one had noticeably worse throttle response than the others, with very abrupt on/off transitions.

The cockpit of the new ST1300 is much roomier for the rider's knees, which would be in hard contact with the rear edge of the fairing on the ST1100 for all but the shortest riders (and making a bonanza for custom seat-makers).

The engine's performance is a good match for the size and weight of the bike. The extra power creates a noticeable torque rocking when blipping the throttle, something the ST1100 never had. And, with slightly less fly-

wheel effect, it needs a few more revs from a stop, but then pulls very strongly, with an almost automotive smoothness. Like many other bikes, it has a slightly lean response from about 3500 rpm, where the majority of emissions testing takes place. A true 65 mph is achieved at 3830 rpm in top gear. It's also very quiet, just swooshing by at its top speed of 143.6 mph in the desert during testing. However, it danced around a bit at very high speed, not especially stable, and even at high freeway speeds, has a slightly nervous sensation that's aggravated by raising the windshield higher.

A final little gripe is that even though the LCD display is adjustable for brightness, even the brightest setting is hard to read through the smoke tinted plastic of its cover.

## Conclusion

If you ever wanted an ST1100, expect a buyer's market in the next few months as the faithful sign up for the new ST1300. It's truly a worthy successor to a legendary motorcycle. But is it the best sport-tourer you can buy? Yamaha's just-released FJR1300 is 15 hp stronger, 90 lbs. lighter and \$1500 cheaper than the standard ST1300. But, only a full-on comparison test between all the contenders in this now-crowded market segment will tell for sure. We're ready! 🍀