



by Dave Searle

Yamaha's FZ-07 the complete package

THE ALL-NEW FZ-07 twin completes a range of practical Yamaha sportbikes in a variety of engine configurations and sizes with prices that are bound to make them very attractive to discerning buyers.

The FZ-09 three-cylinder debuted last year, offering a remarkable combination of light weight and high horsepower. While its flawed ride-by-wire power delivery and curiously unsorted handling held it back in our estimation, its amazing value—priced at just \$7995—made it a hot seller nonetheless, and launched many riders on a frantic search of the aftermarket for its cures (none of which seem to be definitive as of this writing). So we had to steel ourselves to see if the smaller FZ-07 would actually live up to its considerable promise.

Motor

An all-new, liquid-cooled, DOHC, eight-valve, two-cylinder motor provides its motive power. In the interests of providing strong torque from low rpm, the 689cc twin is not radically over-square, using a bore and stroke of 80.0mm x 68.6mm, yet it spins to 10,400 rpm with a solid top-end rush at the same time. And while sporting an 11.5:1 compression ratio, it also runs beautifully on regular grade fuel.

Among its innovations, it uses a 270° crankshaft—what Yamaha calls its “Crossplane Concept”—to provide the inertial advantages of a 90° V-twin, rather than having both pistons “stopping” at TDC together. Plus, it has another feature first employed on Yamaha’s 450cc motocrossers: offset cylinders. Instead of centering the cylinder bores on the crankshaft, the FZ-07’s cylinders are moved forward 7mm (a trick also employed on the FZ-09). As the FZ-07’s crankshaft turns in the same direction as its wheels, this alignment creates less piston side-thrust on the cylinder walls during the high pressure of the combustion

stroke, which significantly reduces friction—freeing some power—and also improving fuel efficiency. In fact, the FZ-07 is claimed to get 34% better fuel mileage than the four-cylinder, 600cc FZ6R (46.9 mpg in our testing), giving it greater range despite a smaller fuel tank (3.7 gal. vs. 4.6 gal.) However, while Yamaha projects a remarkable 58 mpg fuel economy for the FZ-07, we averaged 52.2 mpg (ridden hard), which is still well above average. However, that’s less than 12% better than our last FZ6R, not 34%. Of course, your mileage may vary.

Unlike the FZ-09, it does without any fancy ride-by-wire throttle control. Yet, its fuel injection is remarkable for its smoothness, with no snatchiness to spoil your control (much better in this regard than the expensive Honda VFR800F on the following pages), and it has excellent driveability. Utilizing a quiet gear-driven counterbalancer in front of the crankshaft, it pulls smoothly from idle to redline, with an easily managed and very linear powerband that’s endowed with generous low- and mid-range torque. In fact, we couldn’t help thinking it could power a neat middleweight adventure bike.

Dyno testing revealed that peak power occurs at 9200 rpm, when it delivers 66.85 hp to the rear wheel, and its torque peaks at 6600, with 45.41 lb.-ft. Among its Japanese competitors, that’s better than the Honda NC700 (47.5 hp/42.6 lb.-ft. of torque), the Kawasaki Ninja 650 (61.5 hp/41.2 lb.-ft. of torque) and approximately on par with the Suzuki SV650 (68.2 hp/42.8 lb.-ft.).

Transmission

Keeping costs down, the FZ-07’s clutch is a basic design; no centrifugally assisted pressure plate, back torque limiter or hydraulic actuation. But when a clutch is properly designed, you really don’t need anything more. With an easy pull and plenty of engagement feel, we also found it more than durable enough for dragstrip duty.

And its six-speed transmission is another example of good design. Easy shifting and with perfectly spaced ratios, you’ve got the option of one or two downshifts for virtually every corner speed, depending on your haste. In fact, even clutchless upshifts and downshifts can be accomplished with ease if that’s your preference (it’s certainly not our regular habit, but worth testing when a gearbox appears so capable). And given the engine’s fine throttle response, playing a tune on the shifter as you accelerate and slow is a fluid and almost unconscious exercise.

Suspension

The first 15 miles of our favorite test route are over rough concrete freeways, with expansion joints that make a good test of a suspension’s compliance. On these surfaces, the FZ-07 was exceptionally good, with a plushness better than many dedicated sport-tourers. If you gave it a bit more wind protection, it would make it a fine middleweight for longer distances.

Because the bike is very light, actually under 400 lbs. fully fueled, its 5.1” of travel at each end is enough cushion to handle a variety of surfaces. Although only rear preload is adjustable, the compression damping at both ends is close to perfect. And while it bounced around a bit more than we’d like on rough pavement—its suspension extending too quickly after bigger hits, needing more rebound damping at both ends to feel truly planted, if your local roads are fairly smooth, there’s little reason to criticize the stock setup.

The FZ-07’s rear shock is in a near horizontal position to

reduce the CofG and where its stepped preload collar is easy to access. This position would give *regressive* rather than *progressive* resistance if the shock were directly mounted between the frame and swingarm, but in fact it uses a hard-to-see linkage arrangement for an excellent cushion. Even two-up, the suspension didn't want to bottom out.

Brakes

Fitted with Yamaha's excellent forged monobloc four-piston front calipers to squeeze 282mm petal-edged dual discs, and a single-piston rear caliper on a 245mm fixed disc, the FZ-07 has top-quality braking equipment. However, our tested stopping distances were not as good as we would have predicted, with a best of 130.8' from 60 mph. Although this result is good, the bike would howl the tires loudly (typically an indication of threshold braking) while still needing a stronger squeeze. We believe its Michelin's Pilot Road 3 tires deserve the blame. The fronts have closely spaced cross-sipes that divide the tread rubber into little blocks, and the rears look like racing rain tires, with lots of wide, arched water dispersion channels. After our brake testing, we found the leading edges of the front tires' central tread blocks were torn away, leaving each block with perhaps 20% less surface area than it had originally, which would explain the problem. In addition, the small front tread blocks made the tire feel squirmy, and didn't encourage us to really flick the bike hard into a corner. At the back, we were often surprised to feel rear tire slip when trail braking, so we learned not to push either tire too hard. Note that Bridgestone's BT023 rubber is also slated as standard fitment on the FZ-07, so we'd recommend you look for a set of these tires on the bike you intend to buy.

Handling

All the factors that influence handling; weight distribution (51.7% front, 48.3% rear, without the rider), wheelbase (55.1"), rake (24.0°), trail (3.54"), and other measures too subtle for simple specifications, work together to give the FZ-07 delightfully balanced handling. Its steering is quick, but not too quick, so the bike changes directions easily, yet it has good stability, too. And with better tires, it would have been even more impressive.

Ergonomics

Obviously intended to tempt first-time buyers, the FZ-07 is light with a relatively low seat height—just 31.75" off the deck. And the seat, although flat and fairly thin, is both narrow at the front to make it easier to touch the ground at a stop and broad and supportive at the back to take pressure off your glutes. It kept us quite comfortable on 200-mile loops of our favorite roads.

The FZ-07's handlebars are slightly narrow, but they still have sufficient leverage for a bike that only weighs 398 lbs. fully fueled, and the mirrors are placed wide enough for a better than average rear view past your sleeves. Its footpegs are high enough for good cornering clearance but not so high that a six-footer's knees are cramped, and the overall riding position is comfortably upright—good for long distances.

Of course, as the bike has no fairing, the rider definitely feels the wind at high freeway speeds, but the experience of pressure isn't as great as you'd expect, so we had to imagine the slanted structure over the headlight actually offers some aerodynamic benefits.

Riding Impression

The FZ-07's various controls function so well that they allow the rider to become one with the road. The motor's response is strong and utterly predictable, the chassis' balance gives you confidence when trail braking and transitioning into corners, the transmission shifts positively with minimal effort and rev matching is simple with the responsive fuel injection. Yamaha's forged monobloc brake

calipers have always given excellent feel, and even though our FZ's tires could have been more cooperative, we had confidence when braking aggressively. Not many bikes at any price can provide such a fine sense of integration between man and machine. In short, the FZ-07 provides a thoroughly enjoyable riding experience.

Instruments & Controls

Fitted with a stylish LCD instrument panel, the FZ-07 provides plenty of information. In addition to a very accurate digital speedometer and two trip meters, there's a bar type tachometer at the bottom. However actually reading the tach at a glance is almost impossible, as its 1000-rpm increments are indicated by numerals barely 2mm tall. Additional readouts include a gas gauge, coolant and ambient temperature displays, a clock, a gear indicator plus trip computer functions like average and instantaneous fuel consumption. There's even an "ECO" light to tell you when you are



ACTION PHOTOS BY BRUCE STEEVER

maximizing fuel efficiency. Plus, the display also has adjustable brightness, which can be helpful as the LCD screen lacks contrast except when in full sunlight or at night when it's back-lit.

The FZ-07's handlebar controls don't all conform to the pattern we've become accustomed to from the Japanese OEMs. In particular, its horn button is placed to the right of the turn signal switch, rather than the left, where it's not within easy reach of the rider's thumb. And because the horn has to be quickly accessible in traffic situations, this seems a curious change. And, for those of us who can take advantage of lane-sharing, the FZ-07's narrow handlebars are a blessing, and its mirrors don't add too much to its width.

Attention To Detail & Value

The FZ-07 is surprisingly well-equipped, especially for its price. Many low-cost machines don't give you a fuel gauge, or gear indicator, or four-piston front calipers, or even a decent seat. The FZ-07 checks all these boxes and more and does it for a better price than its competition.

Overall

We were very impressed with the FZ-07. It doesn't just have a hot motor at a good price, leaving you to provide expensive fixes for its problems. It's the complete package. If you are in the market for a fun-to-ride middleweight that's easy to manage and gets great gas mileage, you owe it to yourself to wrangle a test ride on the FZ-07. 🍌

MODEL COMPARISON

2. The dashboard display would do justice to a much more expensive motorcycle: a fuel gauge, gear indicator, trip computer functions, ambient and coolant temperature readouts together with a big digital speedo and bar-type tachometer.

3. The rear suspension uses a preload-adjustable monoshock in a near horizontal position. However, unlike many other less-expensive machines, the shock uses a rising-rate linkage to provide a superior cushion against impact. Its freeway ride is actually very impressive, and only on very bumpy canyon roads does it lack for rebound control.

4. The front end uses conventional non-adjustable female-slider forks with 5.1" of travel. The compression damping feels just about perfect, but the rebound damping is noticeably too light for best grip on bumpy roads. The front brakes include a pair of Yamaha's excellent forged monobloc four-piston calipers. However, our tested braking distances were not quite what we'd hope, which we attribute to the Michelin Pilot Road 3 tires.

5. This shot reveals what a narrow waist the FZ-07 has. The seat upholstery is ultra-stylish and climbs the back of the gastank for better protection against frontal impacts. It's very comfortable and a tank protector is also part of the package.

6. While the standard tires' cross-sectional profiles provide very neutral handling, they seem to slip more than we'd expect, and don't offer a secure front end bite for aggressive corner entries. A close-up view may help to explain: hard braking has torn away the leading edges of the tread blocks (see the shreds), reducing the amount of rubber making best contact with the road by about 20%. Bridgestone's BT023 tires are also standard; avoid the Michelins if you can.



1. While the FZ-07 is a delightful ride, its styling can be a mess of shapes from some angles. But its 689cc parallel twin strikes an ideal balance; plenty of low- and mid-rpm torque together with a satisfying top end push. Its driveability is excellent and it has minimal driveline lash as well.

TESTERS' LOG

Although you can feel some twisting in its chassis and fork when you're pushing hard over bumpy roads, the FZ-07's sweetly balanced handling is never compromised, and it still gives good feedback. Plus, it has a remarkably smooth ride on the freeway.

While it has no "power modes," its EFI is so well-sorted that its driveability is near perfect. With plenty of torque right off the bottom, the delivery is seamless, and it has plenty of power to shorten passing distances when necessary. It also runs very smoothly at all rpm, unlike BMW's F800 twins, for instance, that vibrate too much at higher revs. An yet it's also responsive, with just enough "flywheel" to aid smoothness.

With its light overall weight, great gas mileage, tactile braking feel, slick gearbox, comfortable seating and a suspension system that's in its element on smoother roads, the FZ-07 makes a great commuter and an entirely enjoyable weekend sportbike. With better wind protection, more rebound damping and a set of different tires, there's almost nothing it couldn't do just as well as much more expensive rides.

—Dave Searle

Okay, Yamaha, this redeems some of the disappointment we felt with the FZ-09! With the FZ-07, you've proven that you can build a light, compact sportbike at an ultra-low price that works.

Like the original SV650, the FZ-07 is a fun, torquey package that can serve a huge variety of roles without breaking the bank. Both bikes clearly suffer from Cheap Suspension Syndrome, but at least the FZ-07 offers decent compression response and good balance. The lack of any appreciable rebound damping hurts road feel, but it's not a deal-breaker. The Suzuki also had a stiffer frame, which helped make it such a good budget race bike, but the Yamaha comes with far better brakes straight from the dealership floor and is lighter to boot, despite the added ballast of modern EFI and emissions equipment.

It's strange that Yamaha managed to build two bikes so similar, yet have the less-expensive FZ feel superior. It's easy to blame the YCC-T system on the triple, but its suspension still felt worse than the FZ-07's, too. The FZ-09 was a case of too much engine, but the FZ-07 is just right.

—Bruce Steever

2015 Yamaha FZ-07

SPECIFICATIONS AND PERFORMANCE DATA

ENGINE

Type:	Liquid-cooled parallel twin
Valvetrain:	DOHC, 4 valves per cylinder, shim-under-bucket valve adjustment
Displacement:	689cc
Bore/stroke:	80.0 x 68.6mm
Comp. ratio:	11.5:1
Fueling:	EFI with 38mm throttle bodies and a 3-way catalytic converter
Exhaust:	2-into-1

DRIVETRAIN

Transmission:	6-speed
Final drive:	chain
RPM @ 65 mph/rev-limiter:	4700*/10,400

*actual, not indicated

DIMENSIONS

Wheelbase:	55.1"
Rake/trail:	24°/3.54"
Ground clearance:	5.6"
Seat height:	31.75"
GVWR:	783 lbs.
Wet weight:	398 lbs.
Carrying capacity:	385 lbs.

SUSPENSION

Front:	45mm female-slider, non-adjustable telescopic fork, 5.1" travel
Rear:	Single shock w/ rising rate linkage, adjustable preload, 5.1" travel

BRAKES

Front:	Dual 282mm semi-floating discs, four-piston, forged monobloc calipers
Rear:	245mm fixed disc, single-piston, single-action floating caliper

TIRES & WHEELS

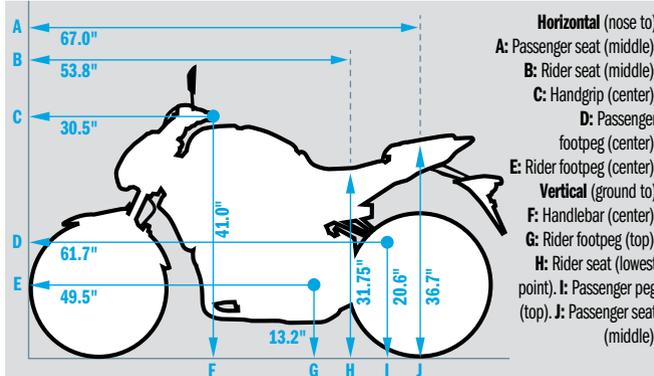
Front:	120/70ZR17 Michelin Pilot Road 3 M/C 58W on 3.50" x 17" wheel
Rear:	180/55ZR17 Michelin Pilot Road 3 A M/C 73W on 5.50" x 17" wheel

ELECTRICS

Battery:	12V, 8.6Ah
Ignition:	Transistor Controlled Ignition
Alternator Output:	410W @ 5000 rpm
Headlight:	1x 60/55W
Tank capacity:	3.7 gal.
Fuel grade:	Regular 87 octane
High/low/avg.mpg:	56.5/40.9/ 52.2



ERGONOMICS TEMPLATE



MISCELLANEOUS

Instruments: Digital speedo, bar-type tach, fuel gauge, odometer, 2 trips, clock, gear indicator, instant & average mpg, coolant temp, ambient temp, display brightness

Indicators: hi-beam, t/s, neutral, low fuel, engine fault warning, Eco indicator

MSRP: **\$6,995**

Routine service interval: 4000 mi.

Valve adj. interval: 26,600 mi.

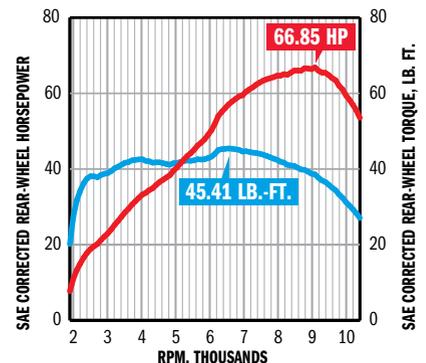
Warranty: 1 year/unlimited mi.

Colors: Liquid Graphite, Rapid Red, Pearl White

Low end	●●●●●
Mid-range	●●●●●
Top end	●●●●●

The FZ-07's parallel twin is delightful. Its overall driveability is superb; with plenty of steady torque from down low and a solid top-end hit. Plus, it's very smooth-running at all rpm and is backed by a sweet shifting transmission with perfectly spaced ratios.

DYNAMOMETER DATA



PERFORMANCE

Measured top speed:	124.6 mph
¼ mile:	12.13 sec. @ 107.70 mph
0-60 mph	3.80 sec.
0-100 mph	10.51 sec.
60-0 mph (w/ABS)	130.8'
Power to Weight Ratio	1:5.95
Speed @ 65 mph indicated	64.3 mph

MC RATING SYSTEM

EXCELLENT	●●●●●
VERY GOOD	●●●●○
GOOD	●●●○●
FAIR	●●○○○
POOR	●○○○○

MIDDLEWEIGHT NAKED

Engine	●●●●●
Transmission/Clutch	●●●●●
Suspension	●●●●○
Brakes	●●●●●
Handling	●●●●●
Ergonomics	●●●●●
Riding Impression	●●●●●
Instruments/Controls	●●●●●
Attention to Detail	●●●●●
Value	●●●●●
OVERALL RATING	●●●●●

TEST NOTES

PICKS

- Balanced performance at a bargain price
- Excellent smooth road ride quality and good seat comfort
- Full-featured instrument package

PANS

- Suspension needs more rebound damping
- Michelin Pilot Road III tires hurt traction feel
- Revised horn button position is hard to reach

STANDARD MAINTENANCE

Item	Time	Parts	Labor
Oil & Filter	0.5	\$34.25	\$40.00
Air Filter	0.5	\$67.85	\$40.00
Valve Adjust	4.0	\$26.30	\$320.00
Battery Access	0.2	MF	\$16.00
Final Drive	0.3		\$24.00
R/R Rear Whl.	0.5		\$40.00
Change Plugs	1.0	\$57.00	\$80.00
Synch EFI	1.0		\$80.00
Totals	8.0	\$185.40	\$640.00

labor prices are best-guess estimates at this time