Ford Fiesta mHEV mild hybrid – Road Test

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Author: David Miles

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MILD ELECTRIFICATION FOR THE UK'S BEST SELLING CAR in 2020 – THE FORD FIESTA.

David Miles (Miles Better News Agency) puts it to the test…

One of the many recent updates to Britain's best-selling car in 2020 was the introduction of mild hybrid support for their 1.0 litre, 3-cylinder turbo petrol 125 and 155 hp petrol engines used in the Fiesta and other Ford model ranges.

But it's the latest Fiesta 1.0 mHEV 6-speed ST-Line Edition 5-door version I am trying for this part of the lockdown period, priced at £21,160. This price was boosted by £500 for the Chrome Blue premium body colour pack and infuriatingly £900 for the Driver Assistance Pack which contains many desirable safety support functions to make an overall on-the-road price of £22,580.



But before we get behind the wheel of the Fiesta mHEV a few Ford facts facts we need to remember. In 2020 the Ford Fiesta marked the 12th successive year it had captured the top spot as Britain's best-selling passenger vehicle with more than 49,000 sold. Since 2009,

Ford customers in Britain have purchased close to 1.3 million Fiestas.

In addition Ford was also Britain's top-selling passenger vehicle brand in 2020, a position it has held for the past 44 consecutive years. Other passenger vehicle highlights included the Ford Puma which in its first year on sale achieved nearly 26,300 UK sales, making it the best-selling small Crossover/SUV in the country and placing it at number 8 in the UK's overall top ten 10 sales chart. The impressive Ford Focus was the UK's 4th best selling model range for the year with 39,372 registrations.

The UK is Ford's third-largest global market and accounts for 30% of total Ford passenger cars and commercial vehicles sales in the European region. Ford say they intend to retain market leadership and are planning to launch 14 more hybrid and electric vehicles this year.

And it's not just about winning sales, Ford wins accolades as well. Although awards have become two-a-penny from automotive media channels chasing advertising revenue, the main motoring Oscars are widely regarded to come from What Car? magazine. In their 2021 Car of the Year awards Ford scored five 'Best Buy' awards this year as Fiesta and Focus were named Best Small Car to drive and Best Family Car to Drive, the Kuga Best PHEV for long distance travel and the Ford Galaxy best MPV for large families. The Ford Fiesta ST, a three-time winner of the What Car? Hot Hatch of the Year award, was given the Best-Value hot hatch accolade. These were in addition to the Ford Ranger being judged Pick-Up of the Year and the new Ford Puma Small SUV of The Year.

So the updated Ford Fiesta range has Trend, Titanium, Titanium X, SUV styling inspired Active Edition and Active X Edition crossovers, the sporty ST-Line Edition and ST-Line X Edition, the up-specced Vignale Edition and the very sporty high performance ST in grades 2, 3 and ST Edition. Most are available with the choice of three and five door body styles.



The engine choices also depend on the spec level chosen but overall consist of 1.0L Ti-VCT 75 hp, EcoBoost 1.0T turbocharged petrol 95 hp, 125 hp mHEV hybrid, 155 hp mHEV hybrid and 1.5 TDCi turbodiesel 85 hp plus the ST 1.5T EcoBoost 200 hp unit. All engines are matched with a 6-speed manual gearbox but the 1.25 hp mHEV petrol unit has the option of a new 7-speed DCT dual-clutch auto transmission.

Prices are as wide ranging as the engine and spec options starting at £16,640 for the lowest spec lowest powered 3-door version up to £28,770 for the hottest 200 hp ST Edition variant. A range sweet-spot 1.0 EcoBoost 125 hp Titanium manual 5-door version now costs £20,060 on-the-road after a recent price increase. If you want an auto with the same main selling 125 hp mHEV new engine you will need to move up a grade to Titanium X and that model costs £22,785. But in today’s stressed sales market prices are more negotiable than ever.

The new Fiesta mHEV petrol hybrid now has some significant supermini hybrid competition such as the roomier Honda Jazz Hybrid, the Renault Clio Hybrid, Suzuki Swift Hybrid, Fiat 500 Hybrid and perhaps the best of all – the new Toyota Yaris Hybrid which has CVT auto transmission as standard, a longer warranty and costs about the same as my manual Fiesta Hybrid ST-Line model.

To get to the nitty-gritty of the latest Fiesta hybrid and other technical changes for the 1.0 litre EcoBoost 125 and 155 hp engines, it's the same technology as used in the new Puma Crossover Hybrid models launched late in 2019.

The 1.0 litre, 3-cylinder turbo petrol engines for their now standard mHEV hybrid specification feature a belt-driven integrated starter/generator (BISG) in place of the standard alternator, enabling recovery and storage of energy usually lost during braking and coasting to charge a 48-volt lithium-ion air-cooled battery pack.

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The BISG also acts as an electric motor integrating with the engine and using the stored energy to provide torque assistance during normal driving and acceleration, as well as running the vehicle's electrical ancillaries.

The intelligent, self-regulating mild-hybrid system continuously monitors how the vehicle is being used to determine when and how intensively to charge the battery for optimal benefit, and when to utilise the stored battery charge using one of the following two modes.

Mode one: torque substitution which deploys the electric motor functionality of the BISG to provide up to 24 Nm (18 lb.ft) of torque – reducing the amount of work required from the petrol engine and contributing to CO2 emissions as low as 109 g/km WLTP and fuel efficiency from 52.3 mpg WLTP, but these figures vary according to what spec level of equipment is chosen. Using torque substitution the 125 hp EcoBoost Hybrid delivers a fuel

efficiency improvement of almost 5% compared to the former 1.0 litre petrol 125 hp EcoBoost engine.

Mode two: Torque supplementation deploys the electric motor functionality to increase the peak torque available from the powertrain by up to 20 Nm (15 lb.ft) above the level available from the petrol engine alone – delivering 210 Nm (155 lb.ft) for the 125 hp unit and 240 Nm (177 lb.ft) for the 155 hp powertrain and up to 50% more torque at lower rpm engine speeds.

The BISG has also allowed Ford engineers to lower the 1.0 litre EcoBoost engine's compression ratio and add a larger turbocharger for more boost pressure, with the torque supplementation rotating the engine revs faster for better turbocharger boost response.

The BISG also allows the EcoBoost Hybrid's Auto Start-Stop system to operate in a wider range of fuel-saving operations such as automatic engine coasting at speeds below 15 mph even when the vehicle is in gear.

Cylinder deactivation also makes an appearance in the latest 1.0 litre EcoBoost petrol engines with the mHEV 125 hp and the non-hybrid 95 hp units both gaining this function. The technology improves fuel efficiency by automatically switching off one of the three cylinders when full capacity is not needed. Such as when in coasting mode or cruising with light demand on the engine, and can disengage or re-engage one cylinder in 14-milliseconds. I found with this cylinder deactivation function there was no obvious compromise in performance or refinement and seamless in real-life motoring conditions.

In test drive operation my 1.0 litre 125 hp mHEV test drive model with the ST-Line Edition spec has a torque figure of 210 Nm (155 lb.ft) with a top speed of 126 mph and zero to 62 mph taking 9.4 seconds with a WLTP Combined Cycle driving range ranging from 45.6 to 62.4 mpg. My week of basically relatively short run driving during the lockdown period but with one longer business trip included, returned 52.1 mpg overall. The engine felt strong as long as the car was driven using the gear-change prompts, fall below the rev-band sweet-

spot and response was limited, requiring a drop of at least one ratio to get the engine in its happy zone again. That was made more obvious by the fitting of tall fifth and sixth gear ratios to minimise Combined Cycle fuel consumption. I'd have thought the extra torque supply from the electric motor would have provided more torque assist at lower rpm speeds. On winding country roads I found it off-putting to be driving in lower gear ratios than is usual even for modern small capacity petrol engines. On the open roads things felt better but it's quite clear fifth and sixth gear ratios are meant for open road cruising to improve fuel economy rather than responsive performance which was a bit out of kilter with my test car's sporty ST-Line specification.

In all other respects, overall the Fiesta 5-door hatch is the Fiesta we buy in significant numbers. It's the sum of its parts that appeal. It is currently the UK's best handling supermini sized hatchback but it's not the roomiest, it is competitively priced, has economical running, servicing and parts costs supported by lots of dealerships, it's a peace of mind purchase.

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The ST-Line spec gives it extra sportier visual image with bespoke badging, sports body styling kit, sports pedals and a good array of specification. Ride comfort is not this version's best attribute with the sports suspension and large 17-inch wheels combining to give it a firm ride over potholes and poor road surfaces. On the plus side the cornering grip was excellent, handling really well balanced and the steering neat and precise with good feedback to the driver.



The ST-Line spec list is more or less comprehensive including SYNC 3 Navigation, 8-inch centrally position floating touchscreen with Apple CarPlay and Android Auto connectivity, trip computer, driving mode selector, Quickclear windscreen, rear parking sensors, Keyless entry and push-button start, cruise control, air-con, electric windows and the standard fit NCAP Pack which includes Lane Keeping Alert, Speed Limiter and auto headlights.

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However not included is the £900 Driver Assistance Pack which includes the should-have as standard Autonomous Emergency Braking function plus nice-to-have, Pedestrian Recognition, Speed Sign Recognition, Driver Alert, Adaptive Cruise Control, Blind Spot Information, Advanced Automatic Parking, Front Parking Sensors and Rear View Camera.

Certainly at the very least the auto braking functions should be standard and not included as an option.

VERDICT

With a raft of other all-electric supermini sized competitors on the market and gaining sales helped by a £3,000 grant off the purchase price and zero, or low cost VED road tax and company car taxes, the Fiesta's reign as the best-seller in its UK supermini sector is under threat. But at least the new mild hybrid versions show Ford are on the road to electrification throughout their model ranges.

For: Sports styling inside and out, seamless in operation new mild-hybrid system with cylinder deactivation, good real-life fuel economy, reasonable tax costs, low insurance group rating, impressive well-balanced handing.

Against: ST-Line sports suspension gives a hard ride at times, usual limited rear seat leg room, new generation driver support braking functions are part of an extra cost options pack and should be standard fit, engine/mHEV system lacks low speed torque response in 5th/6th gears due to high ratios, ungenerous warranty.



MILESTONES AND WHEELS-ALIVE TECH. SPEC. IN BRIEF:

Ford Fiesta ST-Line Edition, 1.0 mHEV, 125 hp, 6-speed manual, 5-door.



Price: £21,160 (£22,580 as tested).

Engine/transmission: 1.0 litre, 3-cylinder, 125 hp, 210 Nm (155 lb.ft) turbo petrol with mild hybrid starter/generator and cylinder deactivation, 6-speed manual.

Performance: 126 mph, 0 – 62 mph 9.4 seconds.

Fuel consumption: WLTP Combined Cycle 45.6 to 62.4 mpg (52.1 mpg on test).

Emissions and taxation: CO2 117 g/km, VED First Year road tax £175 then £150 Standard

rate, BiK company car tax 26%.

Insurance Group: 15E.

Warranty: Three years/60,000 miles.

Dimensions/capacities: L 4,065 mm (13.34 ft), W 1,735 mm (5.69 ft), H 1,466 mm (4.81 ft) wheelbase 2,493 mm (8.18 ft), boot/load space 292 to 1,093 litres (10.31 to 38.60 cu.ft), 5-doors/5-seats.