

MULTISTRADA 1200

THE BEGINNING

'A new biking concept'. That was the brief given to the Ducati designers when they started work on the original Multistrada. It arrived on the market in spring of 2003 and created a new and exciting segment, typical of the Bologna manufacturer. A new vision which combined sports performance with trail-blazing capabilities while providing an extremely comfortable ride and unrivalled versatility.

Initially produced with the air-cooled 1000 DS engine, which was later upgraded to 1100cc in 2006, the Multistrada immediately made a name for itself with its bold personality. Thanks to an impressive technical specification it soon became synonymous with pure riding pleasure, being equally at ease on mountain roads and motorways, ideal for long distances while agile and manageable in town.

Now, Ducati have taken the concept further, with a design that satisfies all the demands of a motorcyclist combined into one bike: a Multistrada with the emphasis on *Multi*, a sportbike which is powerful and fun but also easy to ride and whose first priority is safety and comfort. The new Multistrada 1200 has arrived.

Ducati wanted to produce a motorcycle to tackle any kind of journey and road surface, a motorcycle that used technology derived from the Bologna-made race bikes in MotoGP and World Superbike. A bike without limits, which could transform itself to suit the rider's needs and not the other way around. A motorcycle that is four bikes in one.

From a supersport to a tourer for long journeys with a passenger and luggage, to an everyday bike which could breeze through the daily commute and also tackle off-road routes with the agility of an enduro. The goal was a versatile bike able to achieve impressive levels of performance at all times and in all places. A bike that didn't exist until now!

Ducati have once again pushed the limits of motorcycle design by adding Italian innovation to the elegance, style and technology which characterises the motorcycles that come out of its Bologna factory. All it needed was a heart, the perfect engine to realise the potential of this new design. The obvious starting point was the World Championship-winning engine, the *Testastretta*, used on the Superbike 1198 and work started to create the perfect power characteristics for the Multistrada 1200. Engineers in Bologna have succeeded in harnessing the immense power of this engine, making it smooth and adaptable to suit to any occasion. They have created the new *Testastretta 11°* engine, a significant step forward in balancing performance with usability.

MULTISTRADA 1200: *FOUR-BIKES-IN-ONE!*

Four different motorcycles, available at the touch of a button, change the fundamental characteristics of the new Multistrada 1200. Power and torque delivery, suspension settings, and traction control can be changed – even while riding – to enable the motorcycle to adapt to the needs of the rider and not the other way around. With the Multistrada 1200, Ducati introduce the concept of *four-bikes-in-one* with four Riding Modes: *Sport*, *Touring*, *Urban* and *Enduro*.

The *Sport* Riding Mode provides the rider with an adrenalin-fuelled ride, where 150hp and incredible torque delivery are combined with a sports-oriented suspension set-up. To impart precise and focussed handling like a sportbike, it also slightly reduces Ducati Traction Control intervention to level 3 for expert riders whose 'comfort zone' is closer to the limit.

The *Touring* Riding Mode is still programmed to produce 150hp; however, the power characteristic is designed in a touring configuration with much smoother torque delivery, but ready to respond when needed. Safety is enhanced with the most advanced ABS technology and with the Ducati Traction Control system set to level 5 (intermediate intervention), specifically intended for a stable and relaxing ride. The suspension set-up is ideal for touring, ensuring maximum comfort for both the rider and passenger.

Navigating through the urban jungle requires an even more manageable motorcycle that can be used 365 days a year, whether travelling to work or grabbing a coffee in town. Selecting the *Urban* Riding Mode instantly changes the power to 100hp, and the suspension to the perfect setting for tackling the maze of city streets full of speed bumps and drain covers. The traction control level is set to 7, providing high system intervention so the rider can enjoy enhanced safety even in the most chaotic of stop-start traffic.

Should the journey aboard the Multistrada 1200 leave the beaten track, it has the capability to take off-road routes in its stride. Agile and lightweight and with high, wide handlebars, serrated footrests and specially designed tyres, the Multistrada also features an *Enduro* Riding Mode which instantly transforms the bike with a smooth 100hp engine, higher suspension, and the option to disable the ABS. Traction control is reduced to the minimum of level 1 for almost no intervention.

The four-bikes-in-one concept uses three technologies which interact to instantly change the chassis set-up and character of the Multistrada 1200. Fitted as standard equipment on all versions, the electronic ride-by-wire system administers three different engine mappings to change the character of the engine, while Ducati Traction Control (DTC) uses eight levels of system interaction to enhance control. For the 'S' version, Ducati Electronic Suspension (DES) instantly configures the suspension set-up to suit 'rider only', 'rider with luggage', 'rider and passenger' or 'rider and passenger with luggage'.

RIDE-BY-WIRE

The ride-by-wire system is an electronic interface between the throttle grip and the engine which decides the ideal power delivery of the engine depending on the Riding Mode selected and the rider's throttle input. The throttle grip no longer uses a throttle cable, but instead delivers a signal to the control unit, which in turn operates the throttle body butterflies.

The ride-by-wire system enables three different engine mappings to adjust the total power output and the way in which it is delivered. The three maps offer 150hp with a sports-type delivery, 150hp with a progressive delivery and 100hp also with progressive delivery.

DUCATI TRACTION CONTROL (DTC)

The racing-derived DTC is a highly intelligent system which acts as a filter between the rider's right hand and the rear tyre. Within milliseconds, DTC is able to detect and then control rear wheel-spin, considerably increasing the bike's safety and performance. The system offers eight 'levels of sensitivity', each programmed with a level of rear wheel-spin tolerance in line with progressive levels of riding skills classified from one to eight. Level one is programmed to offer the least amount of interaction while level eight uses the most amount of interaction. DTC is an integral part of the pre-programmed Riding Modes on the Multistrada 1200; however, its setting can be customised by the user.

ÖHLINS SUSPENSION WITH DUCATI ELECTRONIC SUSPENSION (DES)

The 'S' versions of the Multistrada 1200 are equipped with the latest generation 48mm Öhlins suspension featuring the innovative Ducati Electronic Suspension (DES). The brand new fork technology enables spring pre-load and rebound and compression damping adjustments electronically controlled via the instrument panel. The Öhlins rear monoshock is also adjusted electronically in spring pre-load and rebound and compression damping.

The electronic suspension adjustment can either be made by using the pre-set riding modes, which have been developed by Ducati test riders, or in independent mode, which allows riders to use their own personal settings. Adjustments made via the instrumentation send a signal that initiates electronic actuators mounted on the suspension units.

TESTASTRETTA 11° power and control, the ideal travelling companion

The starting point for the complex and innovative Multistrada 1200 project was the engine. As a prestigious model the motorcycle had to be powered by the most advanced, evolved twin-cylinder engine to come out of the Ducati factory. It had to be the Testastretta Evoluzione used on the world-beating 1198.

The challenge, however, was to produce an engine that would be enjoyable to use in all conditions and able to adapt to the rider's character and not the other way around. Making the best ever L-Twin performance engine smoother and more user-friendly was indeed a challenge, but Ducati's innovative designers and engineers met the challenge by creating the revolutionary Testastretta 11° engine.

WHY 11°?

For a motorcycle intended for touring, the smoothness and user-friendliness of the engine is key to achieving an effortless and comfortable ride. The main engine characteristic that enabled this configuration was the valve overlap angle.

The overlap angle is defined as the interval of crankshaft rotation, measured in degrees, during which both the intake and exhaust valves are open at the same time. This overlap occurs between the end of the exhaust stroke and the start of the intake stroke. High performance engines, which are subject to compromising smoothness for extreme power delivery, use high values of this parameter in order to benefit from the pressure waves to improve engine performance by maximising volumetric efficiency.

On the new Testastretta 11° engine, this angle has been reduced from 41°, used in the Testastretta Evoluzione engine which powers the 1198, to just 11°. As a result, the fresh inlet charge flow is less compromised by the exiting exhaust gases, resulting in a much smoother combustion in addition to improved fuel economy and lower exhaust emissions. Unburnt hydrocarbon emissions (pre-catalyser) are reduced by up to 65% and specific fuel consumption (and consequent CO₂ emissions) by up to 15% (Euro3).

With its 150hp and 12.1kgm (87.5lb-ft) of torque, the new Testastretta 11° sets a new standard for Ducati twin-cylinder engines. Tests on fluid dynamics through the ports and in the combustion chamber have resulted in a modified power delivery profile and specifically the torque. New intake and exhaust ports combined with a radical adjustment of the cam timing and slight reduction of the compression ratio have enabled Ducati to achieve a favourable torque curve at low rpm, which remains strong through a wide range. This particular characteristic considerably enhances the Multistrada 1200's ridability.

The gearbox and final drive ratios have also been optimised to enable the use of a higher-ratio 6th gear. This solution not only enables reduced fuel consumption, but also achieves increased riding comfort by reducing vibration. To give a practical example, if the 1198 reaches its top speed in 6th gear, the Multistrada 1200 is able to reach it in 5th gear and maintain it effortlessly in 6th.

The Multistrada 1200 features an oil bath clutch with 'slipper' function and super-light feel at the lever. Its design uses a progressive self-servo mechanism that presses the plates together when under drive from the engine, enabling the reduction of the clutch spring rates. This results in a much lighter clutch lever at the handlebar, ideal in stop-start traffic or long journeys. When the drive force is reversed, the same mechanism reduces the pressure on the clutch plates, enabling them to provide a race-like 'slipper' action, which reduces the destabilizing effect of the rear-end under aggressive down-shifting and provides a much smoother feeling when closing the throttle or down-shifting under normal riding conditions.

189kg sets a new benchmark

Constantly reducing weight is part of the design brief for all Ducati models. Less weight enables maximum performances both in terms of dynamic behaviour and safety. A lighter motorcycle will brake in a shorter distance, accelerate faster and be easier to steer. Every single component of the Multistrada 1200, therefore, has been designed to achieve weight reduction without compromising its load-bearing capacity. With a dry weight of just 189kg (417lb) the Multistrada 1200 is lighter than any other road enduro, touring or sport touring bike currently available. The light weight combined with an excellent chassis set-up ensures exceptional handling, a key factor for sports, touring, urban or enduro riding.

This weight saving is the result of applying new technologies to Ducati's design and engineering of all major components. Crankcases are now cast using Vacural® technology and frame components use welded Trellis tubes, cast alloy elements and hi-tech polymers. Further savings have also been made with the single-sided swingarm in aluminium and the fuel tank has been developed using blow moulding technology in pursuit of the best compromise between capacity and weight.

Furthermore, the layout of the **exhaust system**, which is simple and minimalistic, uses two primary manifolds flowing directly into the triple chamber single silencer. Apart from carrying out the 2-1-2 compensator function, the silencer also contains the catalyser and sound-absorbent materials. The two compact and lightweight aluminium alloy end pipes depart in a low, lateral configuration to keep the overall weight to a minimum.

ERGONOMICS AND COMFORT

The Multistrada 1200 has undergone an extensive **ergonomic study** using both CAD and repeated prototype testing, in order to guarantee a high level of comfort with a fully loaded bike for long-range touring.

The 'ergonomics triangle' of handlebar, seat and footpegs has been designed for both the rider and passenger, in order to optimise comfort while providing a commanding and upright riding position. The Multistrada 1200 feels spacious and seats two people in complete comfort, even with the top case and panniers in place. Underlining its multi-tasking intention, ergonomic attention was even applied when designing the riding position while standing on the footpegs, off-road style.

The wide, tapered steel handlebars have been designed for maximum comfort and ensure a commanding riding position enhanced by a generous steering lock of 76° (38° left and right). In addition, the handlebars have been mounted on anti-vibration isolators, specially designed to balance riding comfort with precise road 'feel'.

The Multistrada 1200 seat immediately transmits a sense of comfort. Constructed in two separate sections for the rider and passenger, they were designed with particular focus on form and cushion density to ensure maximum comfort during long journeys. A confidence-inspiring passenger grab-handle offers a secure and comfortable grip.

The footpeg position represents part of the optimum 'ergonomics triangle' for both the rider and passenger with added consideration to ground clearance during maximum lean angle and position of pannier luggage. The footpegs have rubber inserts that insulate vibration, removable to expose a motocross-style serrated edge that provides enhanced boot grip when riding off-road.

The Multistrada 1200's rear view mirrors have both vertical and horizontal adjustment and increased surface area to provide the most efficient visibility.

Two handy onboard stowage areas are built into the motorcycle, one suitable for mobile phones or toll road tickets situated in the right cockpit side panel and a larger 3 litre area situated under the passenger seat.

IDEAL FOR LONGER JOURNEYS

The Multistrada 1200's screen is designed with 60mm of vertical adjustment to ensure efficient wind protection for all rider heights and effortless high-speed riding over long distances.

The fuel tank has been developed using a new moulding technology which enables a favourable balance between capacity and weight. Subject to riding style, the 20 litre (5.3 gallon US) capacity provides more than 300km (186 miles) of riding pleasure between fuel stops.

Two 12V power outlets situated on either side of the area below the rider's seat can be used to power up to 3A (fused) accessories such as thermal apparel, intercoms or mobile phone chargers. A special connection point for powering the GARMIN satellite navigator (optional feature) is situated near the instrumentation.

DESIGN: "Character" of the Multistrada 1200

EXHAUST: style and sound

For Ducati, design is not just creating an attractive look. It is about knowing how best to combine exciting appearance with intelligent function and outstanding performance. The Multistrada 1200's exhaust tail pipes are a feature that perfectly demonstrates this concept.

Their innovative design is well integrated with the motorcycle's overall shape and positioned so as to improve overall weight distribution. The tailpipes are short so they do not impinge on the space needed for the large panniers. The internal structure of the silencer is designed to achieve the characteristic Ducati sound without compromising compliance with sound and hydrocarbon emission standards (Euro3).

The frontal air intakes, which are carbon fibre on the 'S' Sport version, are not just a characteristic design aesthetic, but carry out the important function of acting as air flow conveyors, one to the oil coolers and the other to the airbox to feed the engine.

The single-sided rear swingarm is also a good example of Ducati's blend of design and functional engineering. It is made using a single piece casting, with fabricated and welded sections creating a strong, hollow and lightweight component that contributes considerably to the Multistrada's sure-footed handling.

The headlight is a characteristic feature of the face of the Multistrada 1200; its symmetrical layout uses four halogen lamps, two for low and two for high beam to provide excellent illumination. In addition, the front and rear side lights use LEDs, and feature a special shape of intense white light guidance, which both improves road illumination and makes the motorcycle more visible to other road users.

CHASSIS SET-UP: frame, brakes and suspension

All components used on the Multistrada 1200 are of the highest quality both in terms of design and build, and technical specification. Their selection and subsequent assembly is the result of a design brief based on uncompromised performance.

Chassis geometry, such as wheelbase, swingarm length, and rake, trail and offset is the result of a quest for the best balance of stability at high speeds and dynamic agility. The chassis is designed to achieve lean angles of up to 45° and the combination of reduced weight and generous steering lock of 76° (38° left and right) makes tight manoeuvres at low speeds very easy to manage.

FRAME

The Ducati signature Trellis frame uses large diameter, light gauge tubing with two central cast aluminium sections and a Trellis rear subframe. The frame has 19% more torsional rigidity than the Multistrada 1100.

The high pressure, die casted, magnesium front subframe reduces the high, frontal weight and contributes to chassis feel and control. Even if the front subframe is hidden below the fairing, it is precious and beautiful designed: why? Because we want our bikes to be beautiful inside as they are outside.

TYRES

Pirelli worked alongside Ducati as its technical partner throughout the project, developing the new Pirelli Scorpion Trail tyres specifically for the Multistrada 1200. They represent the first dual compound tyre for on/off road use with the central section of the tyre a harder compound than the outer sections. Combined with a special tread design and carcass structure, their 190/55 section delivers racing performance on the road in terms of grip and lean angles, while ensuring high mileage for touring and good off-road performance. The new generation tyres are purposely designed for the four-bikes-in-one concept.

BRAKING SYSTEM

The front brakes use twin radially mounted Brembo four piston, two pad callipers actuated by a master cylinder with an adjustable lever. The front is fitted with 320mm discs, while a single 245mm disc on the rear is gripped by a single Brembo calliper. Typical of all Ducatis, these components ensure high performance braking and set the standard in this segment. The Multistrada 1200 is also equipped with a Bosch-Brembo ABS system, optional for the standard version and fitted as original equipment on the 'S' version. It delivers outstanding braking performance in all conditions and provides a major contribution towards performance safety. An option to disable the ABS is available via the instrumentation, but is automatically reactivated at the next ignition-on.

SUSPENSION

The standard version Multistrada 1200 uses 50mm Marzocchi front forks, featuring a special forged fork bottom and full adjustability in spring pre-load, rebound and compression damping. The rear is controlled by a Sachs monoshock adjustable in spring pre-load, and rebound and compression damping. Both front and rear have 170mm of travel, the extra-long movement

providing excellent comfort even when fully loaded and even if the rider decides to leave the asphalt for an off-road route. The 'S' version features the Ducati Electronic Suspension (DES) system, developed in conjunction with Öhlins.

TECHNOLOGY

HANDS FREE

The Multistrada 1200 ignition is not actuated with a normal key. Instead, an electronic key in the rider's pocket communicates with the Multistrada within a distance of approximately 2 metres, recognising the dedicated key code and automatically enabling the ignition. Pressing the key-on switch then activates the motorcycle's electrics and the engine can then be started.

The electronic key, which consists internally of a circuit with two radio systems, externally doubles as a mechanical flip-key, required to open the seat and fuel tank cap. When parking the motorcycle an electric steering lock, which is actuated by pressing a button, is automatically disabled upon the next ignition-on.

ON-BOARD COMPUTER

The on-board computer system is made up of a large, high visibility LCD with the main data and a dot-matrix circular LCD which visualises various functions according to whether the bike is stationary or moving.

The main LCD displays speed, rpm, gear, total mileage, trip1/trip2, tyre pressures (as standard on the 'S' version Touring package), engine coolant temperature, fuel level and time.

When the motorcycle is in motion, the dot-matrix LCD displays the selected riding mode, remaining fuel/distance, current fuel consumption, average fuel consumption, average speed, air temperature, trip time, and 'freezing conditions' alarm. When stationary, it enters a setting menu from where adjustments to the various functions can be made.

The *Sport*, *Touring*, *Urban* or *Enduro* Riding Mode can be changed while either stationary or in motion, as well as the load settings for 'rider only', 'rider with luggage', 'rider and passenger' or 'rider and passenger with luggage'.

'S' VERSION

The main features of the 'S' version consist of the ABS system and the innovative Ducati Electronic Suspension (DES) system, developed specifically for the Multistrada 1200 by Öhlins in partnership with the Ducati engineers. The 'S' version is available in the two equipment options of *Sport Edition* and *Touring Edition*.

SPORT EDITION

The Sport Edition is enhanced with special carbon fibre components which further accentuate the distinctive character of the Multistrada 1200. They consist of front air intakes, cam belt covers, rear hugger and lateral air extractors.

TOURING EDITION

The Touring Edition focuses on comfort and convenience. A centre stand not only provides parking practicality, but is also essential in the event of tyre maintenance during a long distance journey. Easily connected heated grips are controlled via the instrument panel to three settings and are a must for any tour where adverse weather conditions threaten rider comfort.

Stylish luggage panniers, designed together with the bike, offer a load capacity of 57 litres (or 77 litres with large lid versions) and use a fast and secure attachment system that blends perfectly when the panniers are removed.

TAILOR-MADE ACCESSORIES

With its wide range of potential uses and benchmark performance, Ducati decided to manage the development of some key **Multistrada 1200** accessories in cooperation with both the product development and the design departments. This integration right from the start of the project has optimised both style and performance.

Accessories such as the Garmin GPS system, a lower seat, panniers with capacity-increasing lids, a matching top case, an anti-theft alarm, electric filler cap, carbon fibre spray guards and front mudguard and a tyre pressure monitoring system.

The current collection of accessories is in addition to those already included on the Sport and Touring Edition, which are also available individually. They include carbon fibre air intakes, cam belt covers, rear hugger and lateral air extractors, panniers, heated grips and centre stand.

Garmin GPS

The synergy between Ducati's experience in the world of motorcycling and that of Garmin, the leading producer of satellite navigation systems, has led to the creation of a navigation system which offers advanced performance and perfect integration with the Multistrada 1200. Its various customisation options include the addresses of the entire official Ducati dealer network in addition to the main MotoGP and World Superbike circuits, which are pre-loaded into the system. The Ducati navigation system has an anti-glare touch screen, 18 bit LCD display, a lithium battery which remains charged for up to 8 hours, and a microSD expandable memory. It includes a mounting kit and dedicated plug-and-play cables.

Low seat

The lowered seat reduces height by 25mm and provides sure-footed confidence when fully loaded.

Top case

With 48 litres of capacity, the top case is able to hold two full-face helmets. Combined with the side panniers it provides the ideal way to pack for long journeys, or when used on its own, ideal for the daily commute. It comes with a soft cushion to provide passenger comfort with a backrest and an integrated fixing system that makes it easy to attach. When removed, its support plate acts as a practical luggage rack.

Anti-theft alarm

Ducati has developed an integrated anti-theft system, including movement, anti-tamper and lifting sensors, as well as a sound alarm to act as a further deterrent.

Electric filler cap

Thanks to the hands-free system, the Multistrada 1200 can be started without the key leaving the rider's pocket. With the electric filler cap there is also no need to use the flip-key or remove gloves as it is opened simply by raising a tab and closed by pressing it down. At every power-down, the hands-free system allows 60 seconds for the electric filler cap to be opened.

Carbon fibre spray guards

From a protective part to a designer accessory – the carbon fibre spray guards on the rear wheel not only carry out their traditional function but also make the bike lighter and add enduro style details.

Carbon fibre front mudguard

The carbon fibre front mudguard with its criss-cross pattern enhances the aggressive beauty of the front end.

Tyre pressure monitoring system

As well as the ABS, DTC and ride-by-wire, Ducati offers an additional safety tool. The system is made up of two sensors inserted inside the special tyre valves which communicate via the radio system inside the hands-free electronic key. This real time communication displays temperature and pressure information on the instrument panel and signals any problems.

VERSIONS

- **Standard**
- ABS Package
- **'S'** - with ABS and Öhlins suspension fitted with Ducati Electronic Suspension (DES) in ***Sport Edition*** or ***Touring Edition*** version

MULTISTRADA 1200 S	
SPORT EDITION	TOURING EDITION
Carbon fiber engine covers	Side Bags
Carbon fiber front air intakes	Heated handgrips
Carbon fiber rear mudguard	Center stand
Carbon fiber spoilers	

COLOUR SCHEMES

The new Multistrada 1200 will be available in the two color schemes: **red** or **arctic white** for the standard version, while **the 'S' version** will be available in **red, arctic white or diamond black**.