

OFF-ROAD

This manual is an integral part of the motorcycle and must remain with it for its entire life.
The manual must accompany the motorcycle if it is sold or transferred to a new owner.
Please store this manual in a safe a place. In case of damage or loss, request a new copy by contacting:

Ducati North America, Inc.
1292 Reamwood Ave., Sunnyvale,
CA 94089 USA
Tel: 001.888.391.5446
E-mail: customerservice@ducatiusa.com
Web site: www.ducatiusa.com

Quality and safety standards of Ducati motorcycles are constantly being updated consequent to the development of new design solutions, equipment and accessories. Although the manual includes fully updated information at the time of print, Ducati Motor Holding S.p.A. therefore reserves the right to make changes without prior notification or without incurring obligations. For this reason, you may note discrepancies when comparing some illustrations with your motorcycle.

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WARNING: Operating, servicing and maintaining a passenger vehicle or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.
For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

Owner's manual

DESMO450 MX

Dear Ducatista,

thank you for trusting us with the purchase of your new Desmo450 MX.

We recommend that you **read the use and maintenance manual carefully**, to quickly get familiar with your Ducati and **make the most of all its features**. In the manual, we provide lots of useful advice and information on your **safety**, on how to **take care** of your bike and on how to maintain its value through **correct maintenance** by specialist Service Centers.

You can also find this manual in **digital format, always up-to-date, in the dedicated area of the Ducati website** and **in the MyDucati App**, which can be consulted both from a PC and a phone.



In this way, you will always have the **most up-to-date version of the manual** available and you will also find **information and frequently asked questions** regarding your bike and the world of Ducati.

You can send suggestions for improvement regarding the contents of this Use and maintenance manual to the following address: OwnerManual@ducati.com

This manual forms an integral part of the bike and must be kept with it throughout its service life. If the bike is resold, the manual must always be handed over to the new owner. The quality standards and safety of Ducati bikes are steadily improved as new design solutions, equipment and accessories are developed. While the information contained in this manual is current at the time of going to print, Ducati Motor Holding S.p.A. reserves the right to make changes at any time without notice and without any obligations. For this reason, the illustrations in this manual might differ from your bike.

Important

Check the FAQs and tutorials dedicated to your bike on the Ducati website to keep up to date with all the latest news regarding its functions and features.
The information in the manual is current at the time of going to print. The quality and safety standards of Ducati motorbikes are constantly updated. Check on the Ducati website the functions and features in the updated Owner's Manual of your motorbike.

Any and all reproduction or spreading of the contents herein in whole or in part is forbidden. All rights reserved to Ducati Motor Holding S.p.A. Any request for written authorization shall be addressed to this company, specifying the reasons for request. For any servicing or suggestions you might need, please contact our authorized service centers.

For further information, please contact us at:
contact_us@ducati.com
Our Advisors are available to give you suggestions and useful tips.

Important

For further information, please contact the Ducati Support by clicking on “Contact us” in the Services and Maintenance section of the www.ducati.com website.
Our Advisors are available to give you suggestions and useful tips.

Enjoy your ride!

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Warranty

General warranty conditions

"Ducati Limited Warranty" Terms and Conditions

Definitions

Authorized Ducati Dealership: a Dealership within the United States, Puerto Rico, Canada and Mexico authorized by Ducati North America to sell and service the particular Ducati Motorcycle you purchased. There are two options: a Ducati Authorized Dealer and a Ducati Dealer authorized to sell and service Ducati Off-Road Products. Please visit the Ducati Dealer Locator (available at www.ducati.com) to find your local Ducati Dealer authorized to sell and service Ducati Off-Road Products.

Client: a consumer who has purchased the Motorcycle for personal, family, or household use from an Authorized Ducati Dealership. "Client" excludes individuals who purchased, leased, or used the Motorcycle for purposes of resale, Competition, rental, or commercial use.

Competition:a race organized under the aegis of a national or international motorcycling federation, or by a regional Motorcycle club, which requires the owner of the participating Motorcycle to have a race license.

Ducati or Company: Ducati North America, Inc., the Distributor of Ducati Products in the United States and Puerto Rico, Ducati Canada Inc., the Distributor of Ducati Products in Canada, and Ducati Motors de Mexico, S. DE R.L. DE, the Distributor of Ducati Products in Mexico. Located at 1292 Reamwood Ave, Sunnyvale, CA 94089 USA or, Ducati Canada Inc., 777 Bayly Street West, Ajax, Ontario, L1S 7G7.

Limited Warranty: promise provided by the Company to Client for a defined period of time that begins on delivery date and is subject to the terms herein. This Limited Warranty is not a warranty that promises or extends to future performance because this warranty does not make a representation on how the Motorcycle will perform in the future, but instead represents only what the remedy will be if a defect exists.

Misuse, Abuse or Neglect: includes any use not in accordance with the recommendations made in the "How to ride the Motorcycle" section of the "Owner's Handbook" and any use contrary to the warnings given in that same handbook. In addition, includes, but is not limited to, any use of the Motorcycle that violates any applicable law or regulation or that is inconsistent with Normal Riding Conditions and Procedures. Also includes any failure to maintain the Motorcycle in accordance with the specifications in the "Owner's Manual".

Motorcycle: any two-wheeled Motorcycle distributed by Ducati North America.

Normal Riding Conditions and Procedures: conditions that would be encountered by a Motorcycle used for non-competitive or non-commercial activity operated on-road by a properly licensed and qualified rider. Only if the Motorcycle is expressly specified as an off-road, or street legal enduro Motorcycle with displacement of less than 500cc, will normal riding conditions include off-road use.

Normal Use and Maintenance: the owner must use and maintain the Motorcycle in accordance with the "Owner's Manual" and "Owner's Handbook", and in a manner consistent with Normal Riding Conditions and Procedures.

Owner's Manual: document provided to the Client at the time of the purchase of the Motorcycle.

Road Assistance Programme: the road assistance offered by this Ducati Limited Warranty to Clients in the countries and for the Motorcycles for which it is available and whose conditions are indicated in the "Owner's Manual" and on the Ducati website www.ducati.com.

Scheduled Maintenance Plan: Ducati has defined a "Scheduled Maintenance Plan" specific for every model and published it in the "Owner's Manual" in order to maintain the efficiency, performance and safety of its Motorcycles.

1 Ducati Limited Warranty

1.1 This warranty covers defects in workmanship performed and/or materials used to assemble the parts and components of the Motorcycle that are not excluded by this Limited Warranty. 1.2 This Warranty shall be applicable for the following time periods for:
a) all Ducati Motorcycles, for a period of twenty-four (24) months from the date of delivery of the Motorcycle to the first Client, except for
b) all motocross and cross country Motorcycles (off-road vehicle not street legal) with displacement of less than 500cc, for a period of three (3) months from the date of delivery of the Motorcycle to the first Client, or twenty (20) hours of engine operation, whichever comes first, or
c) for all enduro Motorcycles (off-road vehicle street legal) with displacement of less than 500cc, for a period of twelve (12) months from the date of delivery of the Motorcycle to the first Client, or eighty (80) hours of engine operation, whichever comes first.

1.3 If these warranty periods in Section 1.2 are shorter than minimum duration required under the applicable state or federal law, then the warranty period shall be the minimum warranty period required by such law.
1.4 This warranty is transferable, but any subsequent owner after the first retail owner's warranty coverage shall be limited to the unexpired balance of the warranty coverage period the previous retail owner received.
1.5 Ducati's sole and exclusive obligation for any defect verified under this Ducati Limited Warranty is to repair such defect. All such repairs shall be performed by an Authorized Ducati Dealership. The defective parts replaced under this warranty become the property of Ducati.
1.6 Any parts replaced or repaired under this warranty are covered by warranty for the remaining outstanding warranty period applicable to the Motorcycle.
1.7 Ducati provides the Client with additional road assistance services free of charge, according to the specific conditions and methods indicated in the "Owner's Manual" of the Motorcycle. The "Road Assistance Programme" does not apply to motocross, cross country and enduro Motorcycles of less than 500cc.

1.8 The Ducati Limited Warranty is subject to the conditions, obligations, limitations and exclusions set forth herein.

In the event that the Motorcycle has an additional 4Ever Ducati or Factory Ever Red warranty, the Client must refer, for the period in addition to the 24 months, to the relative conditions delivered by the Authorized Ducati Dealership upon activation of the warranty. However, Ducati is not the warrantor for such coverage and any additional warranty does not alter, modify, or change the terms, conditions, and limitations of this limited warranty.

2 Exclusions

2.1 This Limited Warranty offered by Ducati does not cover:

a) parts subject to wear and tear or deterioration as a result of the normal operation of the Motorcycle, including but not limited to:

- Spark Plugs;
- Light Bulbs: in the first six (6) months following the initial retail purchase light bulbs can be replaced under warranty if failure has resulted from defects in material or workmanship. Repair or replacement is at the sole discretion of Ducati North America;
- L.E.D. Lights: in the first twenty-four (24) months following the initial retail purchase L.E.D. Lights can be replaced under warranty if failure has resulted from defects in material or workmanship. This does not relate to enduro Motorcycles, for which the Limited Warranty duration of twelve (12) months is applied. Repair or replacement is at the sole discretion of Ducati North America;
- Fuses;
- Control Cables;
- Coolant;
- Gaskets;
- Belts;
- Filters;
- Lubricants;
- Hoses;
- Clutch plates;
- Brake Pads;
- Brake Rotors;
- Steering Head;
- Wheel Bearings;
- Swing Arm Bearings;
- Chain and Sprockets;
- Hand Grips;
- Tires (which are warranted by their respective manufacturer for defects in material and workmanship);
- Fork Seals: in the first twelve (12) months following the initial retail purchase fork seals can be replaced under warranty if failure has resulted from defects in material or workmanship. This does not relate to motocross and cross country Motorcycles for which the Limited Warranty duration of three (3) months is applied. Repair or replacement is at the sole discretion of Ducati North America;
- exhaust system for changes in tone that do not affect operation.

b) aesthetic or acoustic defects that do not impair the use of the Motorcycle (e.g. hidden or insignificant aesthetic defects, normal running noisiness or vibrations);

c) conditions resulting from immersion in water, penetration of foreign material, or exposure to atmospheric agents due to environmental conditions or circumstances outside what can be expected from where the Motorcycle was sold or to irregular or incorrect washing of the Motorcycle;

d) conditions caused by use in Competitions (including use in qualification runs);

e) conditions caused by normal wear and usage;

f) accessories or equipment added or changed after the Motorcycle leaves the factory, or conditions caused such accessories or equipment;

g) conditions caused by alterations for the purpose of changing performance, tampering with the odometer, abuse, misuse, negligence, or accidents;

h) conditions caused by improper use of the Motorcycle, i.e. not consistent with "Normal Riding Conditions And Procedures";

i) damage due to improper transport or storage;

j) conditions caused by the failure to install, within a reasonable period of time, software updates made available by Ducati.

k) conditions caused by "Misuse, Abuse or Neglect", or failure to service, operate, store, and maintain the Motorcycle in accordance with the "Owner's Manual";

l) maintenance or repairs carried out by parties other than Authorized Ducati Dealerships, including removal and refitting or repair operations carried out with specifications or tools other than those indicated by Ducati, or conditions caused by such maintenance or repairs;

m) spare parts or accessories (both physical components and hardware or software) that are not original Ducati parts or whose use is not approved by Ducati, including their installation;

n) conditions caused by use of fuels and lubricants other than those recommended by Ducati.

2.2 Off-road vehicles, due to their use in challenging and tough environments, are naturally subject to oxidation and wear phenomena (e.g., plastic body parts, friction points with the rider, mechanical linkages, bolts and fittings, suspension seals, seat, etc.). These effects should be considered normal and expected for this type of vehicle and do not constitute manufacturing defects or material faults.

3 Procedure for obtaining warranty coverage

3.1 To obtain coverage under Ducati's Limited Warranty, you must do the following:

a) report any Motorcycle defects to one of the Authorized Ducati Dealerships (in the case of motocross, cross country and enduro Motorcycles with a displacement of less than 500cc, the Client must expressly refer to the specialised Service Centres, as indicated on the website) within seven (7) days from the discovery of the defect;

b) deliver the Motorcycle to the applicable Authorized Ducati Dealership or specialised Service Centres within a reasonable time after reporting the Motorcycle defect(s);

c) comply with the "Scheduled Maintenance Plan" provided for in the "Owner's Manual" and have carried out the updates (also software) provided by Ducati within thirty (30) days from their notification. If the Client is notified of a safety campaign, this must

be carried out immediately in accordance with the notification received;
d) keep adequate documentation of all maintenance and/or repair work carried out on the Motorcycle (tax receipts/invoices detailing the work carried out and the parts used). A copy of this documentation must be handed over to the Authorized Ducati Dealership whose warranty claim is made, which will be able to verify the proper performance of the work.

3.2 Failure to take the steps outlined in Section 3.1 voids any right for the Client to obtain warranty coverage for the applicable warranty defect.
3.3 For tracking purposes required for the implementation of technical and safety update policies in case of transfer of ownership of the Motorcycle, the new owner Client is required to notify Ducati of the change of ownership, reporting it to the Ducati Customer Service using the contact details available at www.ducati.com or at the Authorized Ducati Dealership network within thirty (30) days from the date of transfer of Motorcycle ownership.

4 Limitation and Disclaimer of Implied Warranties and of Limitations of Liability
4.1 The coverage under this Ducati Limited Warranty for Motorcycles and parts is limited solely to the remedying of defects in material or workmanship by an Authorized Ducati Dealership at its place of business during customary business hours. There is no warranty of any nature made by Ducati beyond that contained in this Ducati Limited Warranty.
4.2 TO THE EXTENT PERMITTED BY APPLICABLE LAW, DUCATI NORTH AMERICA DISCLAIMS AND IS NOT LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE SALE, USE, INABILITY TO USE, OR SERVICE OF YOUR MOTORCYCLE. THE WARRANTY AND REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES, AND CONDITIONS, WHETHER ORAL, WRITTEN, EXPRESS, STATUTORY OR IMPLIED. TO THE EXTENT PERMITTED BY APPLICABLE LAW, DUCATI NORTH AMERICA DISCLAIMS ALL IMPLIED AND STATUTORY WARRANTIES, INCLUDING, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF IMPLIED WARRANTIES CANNOT BE DISCLAIMED, THEN SUCH WARRANTIES ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.
4.3 Punitive, exemplary, or multiple damages may not be recovered unless applicable law prohibits their disclaimer. In addition, you may not bring any warranty-related claim as a class representative, private attorney general, member of a class making a claim of any type against an Authorized Ducati Dealership or Ducati North America or in any other representative capacity.No Authorized Ducati Dealership is authorized to modify this Ducati Limited Warranty and Ducati North America is not responsible for any other warranty sold by the dealer. Authorized Ducati Dealers are not Ducati's agents. Ducati is not responsible for any undertaking, representation or warranty made by any dealer or others beyond those expressly set forth within this Ducati Limited Warranty.

5 Scheduled maintenance plan and pre-delivery
5.1 The pre-delivery operations of the Motorcycle are carried out by the Authorized Ducati Dealership.
5.2 The exact performance of "Scheduled Maintenance Plan", under the terms set forth in the "Owner's Manual", is a necessary condition for ensuring that the Motorcycle is maintained in a correct state of use and that this Ducati Limited Warranty is operative. All costs related to the "Scheduled Maintenance Plan", such as for service coupons (labour and materials), shall be borne by the Client.
5.3 All maintenance operations on the Motorcycle must be carried out in accordance with Ducati's recommendations and procedures, without limitations, including those indicated in the "Owner's Manual". Any condition of the Motorcycle caused by improper or insufficient maintenance will be excluded by the Ducati Limited Warranty.
5.4 Authorized Ducati Dealerships digitally record the main scheduled maintenance operations (service coupons) carried out and these are visible in the Service area of the MyDucati App as well as in the Ducati systems. In case of maintenance by a non-authorised workshop, a detailed invoice describing the work carried out during maintenance in accordance with the RMI regulation must be requested. The unauthorised workshop may request Ducati to register the work on the RMI portal in order to keep the warranty and road assistance active, as per European Union regulations. If a defect results from failure to comply with the manufacturer's recommended maintenance intervals and/or manufacturer's recommendations for care and maintenance, the Authorized Ducati Dealership reserves the right to reject any subsequent claim.
5.5 In order to certify that the "Scheduled Maintenance Plan" has been regularly carried out for each service coupon, keep adequate documentation of all maintenance and/or repair work carried out on the Motorcycle (tax receipts/invoices detailing the work carried out and the parts used). A copy of this documentation must be handed over to the Authorized Ducati Dealership whose warranty claim is made, which will be able to verify the proper performance of the work for the purpose of providing the services set forth in these Warranty Conditions.

NOTICE:
Ducati Canada does not guarantee the availability of replacement parts, repair services, and information necessary to maintain or repair a vehicle.

6 Emission Limited Warranties Required By Law
6.1 Rights and Obligations:
a) The following provides an outline of the Emissions Control System Limited Warranty on your Motorcycle. All Ducati Motorcycles are designed and manufactured to be in compliance, at the time of sale, with California

and Federal Emissions Standards required when the Motorcycle was manufactured.
b) Ducati North America is required to warrant the Emission Control System of your Motorcycle for the periods listed below provided there has been no abuse, neglect or improper maintenance of your Motorcycle.
c) Where a warrantable situation exists with regard to the Motorcycle's Emissions Control System, Ducati North America will repair your Motorcycle at no cost to you including diagnosis, parts and labor.

6.2 Coverage:
a) Warranty coverage (on-road Motorcycles) begins on the date of initial purchase (except for California, where coverage will begin on the date of delivery) and continues for the time and maximum mileage listed below, whichever occurs first:
- Time: 60 months
- Mileage: 18,641 miles (30,000km).

b) Warranty coverage (off-road Motorcycles in the United States and Canada, excluding California) begins on the date of initial purchase and continues for the following time period:
- Time: 30 months
- Mileage: Unlimited

c) Replacement parts that are not equivalent to the Motorcycle's original parts may cause a reduction in the effectiveness of the emission control system. If a replacement part is confirmed to be the cause of a failure of a warranted Emissions Control System part, a claim to reinstate the emission system to an applicable standard may be denied.

7 Emissions Warranty Covered Parts List
7.1 The following components are covered under this Limited Emissions Warranty (on-road Motorcycles):
a) Ignition System Parts:
- Electronic Control Unit (ECU);
- Engine Coolant Temp Sensor;
- Oil Temperature Sensor;
- Ignition Coils;
- Throttle Position Sensor;
- Air Pressure Sensors;
- BARO Sensor;
- Spark Plug (covered up to the first replacement);
- Spark Plug Cap;
- Spark Plug Cables;
- Crankshaft Position Sensor.

b) Fuel System Parts:
- Throttle Body;
- Fuel Injector;
- Fuel Pressure Regulator;
- Idle Air Control Valve;
- Fuel Pump;
- Intake Manifold;
- Fuel Filter.

c) Exhaust System Parts:
- Catalytic Converter;
- Oxygen Sensor;
- Exhaust Gas Control Valve;
- Exhaust Pipes (to the Catalysts and between the Catalysts);
- Air Fuel Ratio Sensor.

d) Air Temperature System Parts:
- Air Temperature Sensor.

e) Crank case Emission Control System Parts:
- Air Filter (Covered up to first replacement);
- Air Filter Housing;
- Air Filter Housing Covers;
- Crankcase Breather Valve;
- Crankcase Breather Tube;
- Oil Filler Cap.

f) Associated Parts:
- Tubing Fittings, Clamps, Gaskets, Hoses;
- Warning Lights.

7.2 The following components are covered under this Limited Emissions Warranty (off-road Motorcycles):
a) For exhaust emissions, emission-related components include any engine parts related to the following systems:
- Air-induction system;
- Fuel system;
- Ignition system;
- Exhaust gas recirculation system.

b) The following parts are also considered emission-related components for exhaust emissions:
- Crankcase ventilation valves;
- Sensors;
- Electronic control units.

c) The following parts are considered emission-related components for evaporative emissions:
- Fuel Tank;
- Fuel Cap;
- Fuel Line;
- Fuel Line Fittings;
- Clamps*;
- Pressure Relief Valves*;
- Control Valves*;
- Control Solenoids*;
- Electronic Controls*;
- Vacuum Control Diaphragms*;
- Control Cables*;
- Control Linkages*;
- Purge Valves;
- Vapor Hoses;
- Liquid/Vapor Separator;
- Carbon Canister;
- Canister Mounting Brackets;
- Carburetor Purge Port Connector.

(*) As related to the evaporative emission control system.

8 Coverage for Off-Road Motorcycles in California: California Evaporative Emissions Control Warranty Statement - Your Warranty Rights and Obligations
8.1 The California Air Resources Board and Ducati North America is pleased to explain the evaporative emissions control system warranty on your Off-Road Motorcycle (ORM). In California, new off-highway recreational vehicles must be designed, built, and equipped to meet the State's stringent anti-smog standards. Ducati North America must warrant the evaporative emissions control system on your ORM for the periods of time listed below provided there has been no abuse, neglect, improper maintenance, or unapproved modification of your ORM.
8.2 Your evaporative emissions control system may include parts such as the carburetor or fuel-injection system, fuel tank, fuel hoses, carbon canister, and engine computer. Also included may be hoses, belts, connectors and other evaporative emissions-related

assemblies. Where a warrantable condition exists, Ducati North America will repair your ORM at no cost to you including diagnosis, parts and labor.
8.3 Ducati North America's warranty coverage: The warranty period for this ORM is 60 months (unlimited miles). The following parts are considered emission-related components for evaporative emissions:
a) Fuel Metering System:
- Throttle Body;
- Fuel Pump;
- Fuel Injector;
- Fuel Filter;
- Fuel Feed Hose.
b) Evaporative Emission Control System:
- Fuel Tank Complete;
- Fuel Fill Cap;
- Evaporative Emission Canister;
- Evaporative Emission Canister Purge Valve.
c) Parts Associated with the Systems Above:
- Tubing, Fittings, Clamps, Gaskets, Hoses, O-rings, Mounting Hardware, and other emission-related components and assemblies whose sole purpose is to reduce emissions or whose failure will increase emissions.

If any evaporative emissions-related part on your ORM is defective, the part will be repaired or replaced by Ducati North America.

8.4 Owner's Warranty Responsibilities:
a) As the ORM owner you are responsible for the performance of the required maintenance listed in your "Owner's Manual". Ducati North America recommends that you retain all receipts covering maintenance on your ORM, but Ducati North America cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of a scheduled maintenance.
b) As an owner you are responsible for presenting your ORM to an Authorized Ducati Dealership as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed thirty (30) days.
c) As a ORM owner, you should also be aware that Ducati North America may deny you warranty coverage if your ORM or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.
d) If you have any questions regarding your warranty rights and responsibilities, you should contact Ducati North America at (1-855-801-2716) or (https://www.ducati.com/us/en/home and select "Contact Us") or the California Air Resources Board at 4001 Iowa Avenue, Riverside, CA 92507.

9 Items that are not covered by the Emission Control System Limited Warranty (on-road or off-road)
9.1 Required maintenance services (as specified in the "Owner's Manual") and the replacement of parts (such as spark plugs, fuel, and oil filters, etc.) used in required maintenance.
9.2 Any Motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.
9.3 Prohibited actions as provided under 40 CFR 1068.101(b) and "Competition" use.
9.4 TO THE FULLEST EXTENT ALLOWED BY LAW, NEITHER DUCATI NORTH AMERICA NOR ITS AUTHORIZED DEALERS SHALL BE LIABLE FOR LOSS OF TIME, INCONVENIENCE, TOWING OF THE VEHICLE, LOSS OF MOTORCYCLE USE, COMMERCIAL LOSS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES.
THIS WARRANTY AND ALL APPLICABLE DUCATI WARRANTIES ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN.
10 How to get Emission Warranty Service (on-road or off-road)
10.1 Repairs covered by the above emissions control warranties will be performed at no charge for parts, labor, and diagnosis. Any Authorized Ducati Dealership can perform the adjustment, repair, or replacement within thirty (30) days from the time you take your Motorcycle to the Authorized Ducati Dealership. If an Authorized Ducati Dealership is unable to repair your Motorcycle within thirty (30) days from the time you take your Motorcycle to it, then this situation will be treated as an emergency and you may have your Motorcycle repaired at any repair facility you choose.
10.2 In an emergency outlined above, if you choose a repair facility that is not an Authorized Ducati Dealership, Ducati North America will reimburse you for the repair, including diagnosis. Parts reimbursement is at the manufacturer's suggested retail price, and labor reimbursement is at a geographically appropriate hourly labor rate for Ducati North America's recommended time allowance. For reimbursement, present the replaced parts and a copy of the paid receipt to any Authorized Ducati Dealership.
11 Limited Warranty for Noise Control Systems
Ducati North America warrants that this Motorcycle was designed, manufactured and equipped so that at the time of sale, it would conform with applicable Motorcycle Noise regulations of the United States Environmental Protection Agency applicable at the time of manufacture. This warranty is not limited to any particular part, component or system of the vehicle. Defects in the design, assembly, or in any part, component or system to the vehicle which, at the time of sale to the first purchase, caused noise emission levels to exceed applicable Federal standards in effect at the time of manufacture, are covered by this warranty.Warranty coverage begins on the date of the initial retail purchase and continues for one (1) year or 3,730 miles (6,000km) whichever occurs first.
12 Limited Warranty for Replacement Parts and Accessories
Ducati North America will repair or replace, at its sole option, Ducati genuine parts or accessories, excluding electrical parts and accessories not installed by an Authorized Ducati Dealership, that have a proven defect in material or manufacture resulting from normal use. Any part replaced under this Ducati Limited Warranty will be covered for the remaining period of the warranty covering the original part. The part or accessory must have been purchased from an Authorized Ducati Dealership and used in the application for which it was designed.

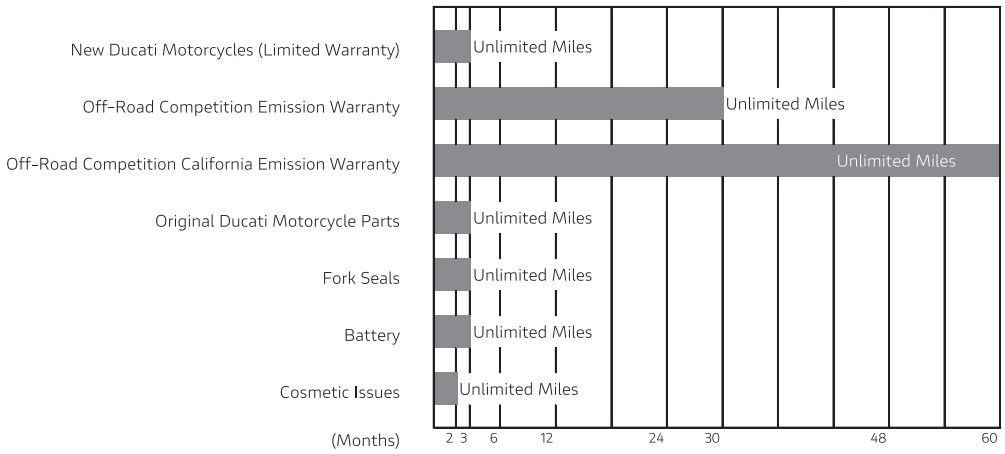


Fig 1

Safety and warnings

General safety rules

Your safety and that of others are very important. Ducati Motor Holding S.p.A. urges you to ride your motorcycle responsibly.
Before using your motorcycle for the first time, please read this manual carefully from start to finish and closely follow the guidelines. This will allow you to obtain all information regarding a correct use and maintenance. In case of any doubts, please contact a Dealer or Ducati Authorized Service Center.

Warning symbols used in the manual

Different forms of information regarding potential hazards that may affect you or others have been used. These include:

- Safety stickers on the motorcycle;
- Safety warnings preceded by a warning symbol and by one or the two words CAUTION or IMPORTANT.

Attention
Failure to observe these instructions may lead to a hazardous situation and cause severe injury to the rider or others, or even death.

Important
Possibility of damaging the motorcycle and/or its components.

Note
Additional information regarding the job being performed.

The terms RIGHT and LEFT are referred to the motorcycle viewed from the riding position.

Hazardous products - warnings

Carbon monoxide

Attention
Exhaust gases contain carbon monoxide, which is a poisonous gas that can cause unconsciousness or even death if inhaled.

Run the engine in an open area or with the aid of an exhaust gas evacuation system if in a closed area.

Brake lining debris

Never attempt to clean the brake assembly using compressed air or a dry brush.

Fuel

Attention
Fuel is highly flammable and can explode under certain conditions. Keep away from children.

Always work in well-ventilated areas. Keep cigarettes, flames, and sparks away from the work area or from the place where fuel is stored.

Hot parts

Attention
The engine and exhaust parts become hot when the motorcycle engine is running and will stay hot for some time after the engine has been stopped. Wear heat-resistant gloves before handling these components or allow the engine and exhaust system to cool down before proceeding.

Used engine oil

Attention
It is advisable to handle engine oil only with special gloves.

Attention
Prolonged or repeated contact with used engine oil may cause skin cancer. If exposed to used engine oil on a daily basis, make it a rule to wash your hands thoroughly with soap immediately after use. Keep away from children.

Brake lining debris

Never attempt to clean the brake assembly using compressed air or a dry brush.

Brake fluid

Attention
Spilling brake fluid onto plastic, rubber or painted parts of the motorcycle may cause damages. Protect these parts with a clean shop cloth before proceeding to service the system. Keep away from children.

Attention
The brake fluid used in the brake system is corrosive. In the event of accidental contact with eyes or skin, wash the affected area with generous quantities of running water.

Coolant

Engine coolant contains ethylene glycol, which may ignite under particular conditions, producing invisible flames. Although the flames from burning ethylene glycol are not visible, they are still capable of causing severe burns.

Attention
Take care not to spill engine coolant on the exhaust system or engine parts.

These parts may be hot and ignite the coolant, which will subsequently burn with invisible flames. Coolant (ethylene glycol) is an irritant and is poisonous when ingested. Keep away from children. Never remove the radiator cap when the engine is hot. The coolant will be scalding hot and is under high pressure.

Battery

Attention
The battery gives off explosive gases; never cause sparks or allow naked flames and cigarettes near the battery. When charging the battery, ensure that the working area is properly ventilated.

Note
The battery must not be disconnected until at least three minutes have elapsed after the engine has been stopped.



Attention

Before performing any maintenance on electrical components and mechanical parts of the frame or engine, and before washing the vehicle, disconnect the battery cables.

Disposal information

For responsible use of the motorbike and to protect the environment, strictly follow the guidelines and laws in force in your country regarding the disposal of used oil and other consumables.
If maintenance operations require the replacement of these products, the following symbol followed by a description will indicate the correct method of disposal:



Disposal

This symbol supplies information on the disposal of a substance/material.

Label layout

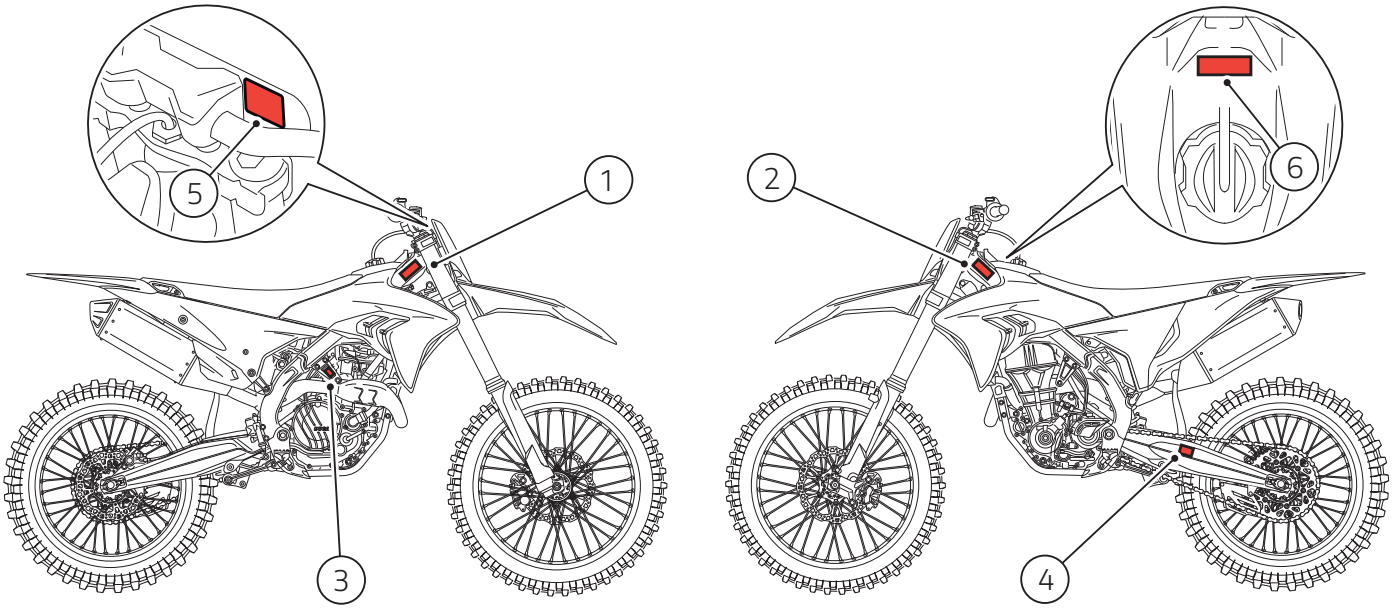
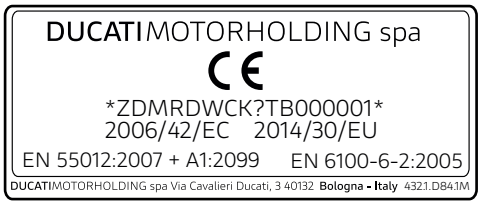
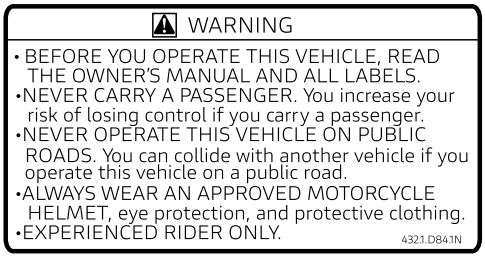
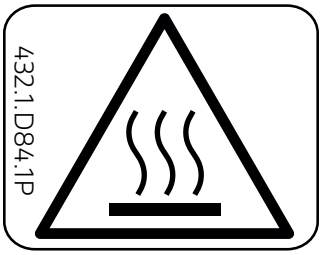
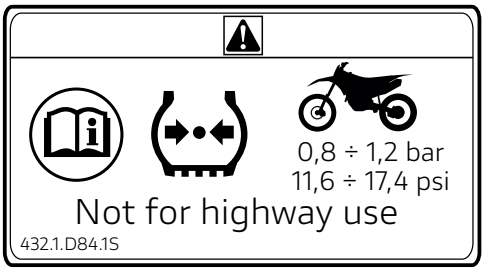
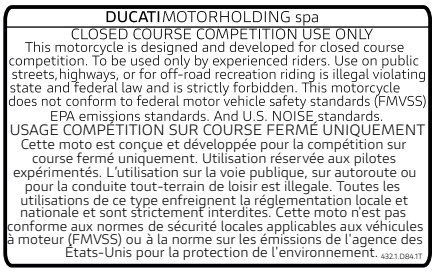
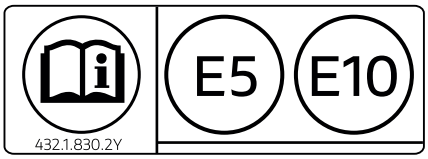


Fig 2

No.	Description	Image
1	Machinery Directive label	 Fig 3
2	Warning label	 Fig 4
3	Heat protection label	 Fig 5

4	General warning label	 Fig 6
5	Competition use only label	 Fig 7
6	European fuel label	 Fig 8

Important
Be careful when removing a label from a painted part of the vehicle, as there is a risk of damaging and removing the paintwork.

Safe vehicle maintenance

Attention

Always disconnect the battery before any disassembly, assembly or maintenance operation on electrical components or the engine.

General rules for maintenance

- Always use high-quality equipment. When lifting the motorcycle, only use devices that fully comply with the relevant national directives.
- During operations, keep tools within reach, preferably in a predetermined order and never on the vehicle or in hidden or difficult-to-reach places.
- Keep the work area tidy and clean.
- Always replace gaskets, seal rings, and split pins with new parts.
- When loosening or tightening nuts or screws, always start with the largest ones or those in the center; tighten to the prescribed torque in a cross pattern.
- Always mark parts or positions that could be mixed up when reassembling.
- Use original Ducati spare parts and recommended brand lubricants.
- Use special tools where specified.

Safety procedures while riding

These few simple operations are critical to people safety and to preserving the full performance of your motorcycle. Never forget to perform them before, while and after riding.

Presence of active Transport Mode

Important

If, after pressing the start button, the engine does not start but the GREEN (1) and RED (2) LEDs on the left switch flash simultaneously after releasing the start button, immediately contact your Ducati dealer, who will remedy the problem and ensure that the motorcycle is fully functional.

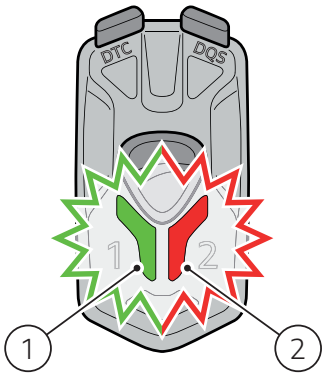


Fig 9

Attention

This motorcycle is designed exclusively for competition.
It is not approved or suitable for use on public roads or highways.
Use is only permitted in authorized races on closed circuits.
It must not be used for recreational off-road riding.
Please read this use and maintenance manual carefully before using the vehicle.

Important

Closely follow the indications provided at chapter "Running-in" during the running-in period.
Failure to follow these instructions releases Ducati Motor Holding S.p.A. from any liability whatsoever for any engine damage or shorter engine life.

Attention

Do not ride the vehicle until you are fully familiar with all the controls necessary for riding.
Before each start, it is essential to carry out the checks indicated in chapter “Checks before riding and maintenance after riding”.

Before each start, perform the checks specified in chapter “Checks before riding and maintenance after riding”.

Attention

Failure to perform checks may cause damage to the vehicle and serious injury to the rider.

Attention

Start the engine when outdoors or in a well ventilated place. Never start the engine in a closed environment.
Exhaust gases are poisonous and may lead to loss of consciousness or even death within a short time.
Use proper body position while riding.

Important

The rider should ALWAYS keep both hands on the handlebar.

Attention

The engine, exhaust pipes and mufflers stay hot for a long time after the engine has been turned off.
Be especially careful not to touch the exhaust system with any part of the body and never park the motorcycle near flammable materials (wood, leaves, etc.).
Do not cover the motorbike with the canvas, when the engine and exhaust system are hot, to avoid damaging it.

For your safety, always wear suitable protective clothing.

Attention

Failure to wear adequate protective clothing, in accordance with the regulations and in perfect condition, can lead to a greater risk to safety and the possibility of even serious injury.

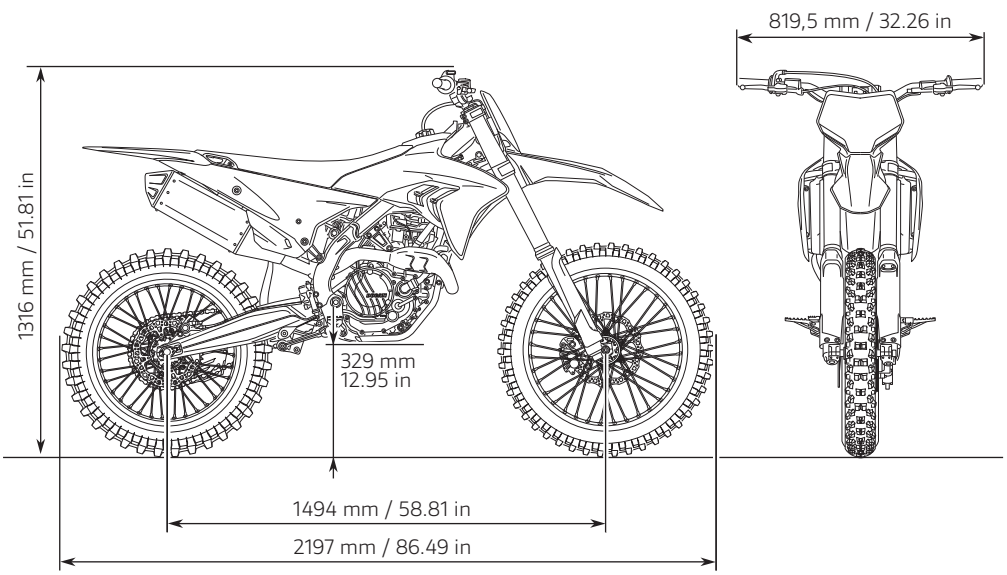
Installation of Ducati Original Accessories

Important

Some accessories require specific equipment and technical skills, as well as compliance with the tightening torques specified by the manufacturer (where necessary). Incorrect installation may compromise the safety of your bike and may invalidate the warranty on components related to incorrect installation. For this reason, it is recommended to always contact a Ducati dealer or authorized service center for the installation of any Ducati accessories.
The installation of non-original accessories should be carefully thought over and, if possible, avoided, as they have not been tested during the development of your bike.

Technical specifications

Vehicle technical features

Overall dimensions

Fig 10

Weights	
Total weight (in running order without fuel):	231.04 lb (104.8 kg)

Fuel, lubricants and other fluids		
Top-up	**Type**	**Quantity**
Fuel tank	Ducati recommends the use of premium-grade unleaded petrol SHELL V-Power with a minimum octane rating of 90 (RON+MON)/2	1.90 US gal (7.2 liters)
Engine oil	Ducati prescribes the only use of SAE 15W-50 API SP and JASO MA2 oil and recommends the use of DUCATI GENUINE OIL Powered by Shell Advance 15W-50 (where available; where not available, Ducati recommends using SHELL Advance 4T Ultra 15W-50)	0.31 US gal (1.2 liters)
Front/rear brake and clutch circuits	DOT 4	-
Protectant for electric contacts	Spray used to protect electric systems	-
Air filter oil	Twin Air BIO LIQUID POWER	-
Front fork	Recommended oil A15-00	21.35 ± 0.15 cu in (350 ± 2.5 cc) per leg
Cooling circuit	ENI Agip Permanent Spezial antifreeze (do not dilute, use pure)	0.29 US gal (1.1 liters)

Important
Do not use any additives in fuel or lubricants. Using them could result in severe damage of the engine and motorcycle components.

Attention
The vehicle is compatible only with fuel having a maximum ethanol content of 10% (E10).
Using fuel with ethanol content over 10% is prohibited. Using it could result in severe damage of the engine and motorcycle components. Using fuel with ethanol content over 10% will render the Warranty null and void.

Note

The information below is valid exclusively for the Indian market. The vehicle is guaranteed and compliant with regulations when using fuels with a maximum ethanol content of 20% (E5, E10, E20). However, if available, it is recommended to use fuels with an ethanol content of no more than 10%, especially in conditions of heavy engine use (sporting use, use with luggage, high temperatures, etc.).

Attention

The use of Ducati Corse Performance Oil by Shell is not allowed on this model as it would damage the engine. The Ducati Corse Performance Shell Advance oil is made exclusively for Desmosedici Stradale engines equipped with dry clutch.

Engine	
Type	Desmo450, single cylinder, desmodromic timing system, 4 valves, double overhead camshafts, hydraulic tensioner, semi-dry casing, liquid-cooled.
Bore	3.77 in (96 mm)
Stroke	2.44 in (62.1 mm)
Total displacement	27.43 in^3 (449.6 cm^3)
Compression ratio	13.5:1
Power	63.5 HP (46.7 kW) at 9,400 rpm
Torque	53.5 Nm (5.46 kgm, 39.5 lb ft) at 7,500 rpm
Max. rpm	11,900 rpm
Idling rpm	2200 rpm
Service intervals	Oil and oil filter change: 15 hours Piston replacement: min. 45 hours / max. 60 hours Valve clearance check: min. 45 hours / max. 60 hours Engine overhaul: min. 90 hours / max. 120 hours
Approved	It complies with FIM “Technical Rules Motocross” and AMA “Supercross Championship Rulebook” technical regulations - CE-certified product

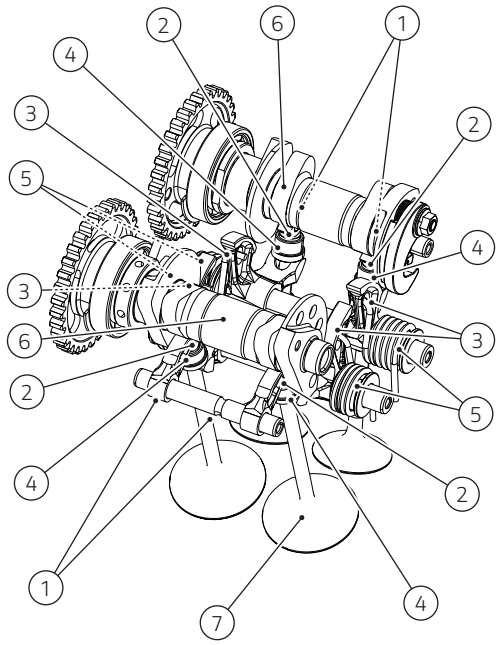
Important

Do not exceed the specified rpm limits in any running conditions.

Performance
Maximum speed in any gear should be reached only after a correct running-in period with the motorcycle properly serviced at the recommended intervals

Important

Failure to follow these instructions will release Ducati Motor Holding S.p.A. from any liability for any engine damage or shortened engine life.

Timing system	
Desmodromic, 4 valves per cylinder **Desmodromic timing system:** **1.** opening (or upper) rocker; **2.** Opening rocker shim; **3.** Closing (or lower) rocker; **4.** Lower rocker arm shim; **5.** Return spring for lower rocker; **6.** Camshaft; **7.** Valve.	 Fig 11

Air filter
Wet element

Spark plugs	
Make	NGK
Type	SILMAR10A9S

Fuel system	
Type	Capacitive discharge electronic injection
Throttle body type	Keihin injector, Mikuni throttle body
Diameter of throttle body	1.73 in (44 mm)
Holes for throttle body injectors	12 holes
Fuel supply	Use the following min. number of octanes: 90 (RON +MON)/2

Front brake	
Type	Single Galfer disc, Ø 260 mm (10.23 in), Brembo floating 2-piston caliper
Nominal disc thickness	0.11 in (3 mm)
Minimum disc thickness (wear limit)	0.9 in (2.5 mm)

Rear brake	
Type	Single Galfer disc, Ø 240 mm (9.44 in), Brembo floating 1-piston caliper
Nominal disc thickness	0.15 in (4 mm)
Minimum disc thickness (wear limit)	0.13 in (3.5 mm)

Attention
The brake fluid used in the brake system is corrosive.
In the event of accidental contact with eyes or skin, wash the affected area with generous quantities of running water.

Transmission	
Gearbox type	5 gears with upshifting Quick Shift Hydraulically-controlled wet multiplate clutch
Primary drive: type	Spur gears; 2.45:1 ratio
Primary drive: primary drive sprocket/gearwheel ratio (number of teeth)	29/71

Transmission	
Final drive: gearbox output front sprocket/rear sprocket ratio	Z13 front sprocket, Z51 rear sprocket
Transmission: total gear ratios	1st: 15/31 2nd: 18/30 3rd: 20/28 4th: 22/26 5rd: 24/24
Drive chain: make and model	DID DMS 520
Drive chain: number of links	115+1

Frame	
Type	Welded aluminum, consisting of cast, forged and extruded elements
Trail	4.66 in (118.4 mm)
Steering head angle	27.3°

Front wheel	
Rim type	Central spoke wheel, Takasago Excel channel
Wheel rim size	1.6" x 21"

Rear wheel	
Rim type	Central spoke wheel, Takasago Excel channel
Wheel rim size	2.5" x 19"

Front tire	
Type	Pirelli Scorpion MX32 Mid-Soft 80/100 R21''
Size	80/100 R21"
Front tire pressure	1.0 bar (0.8 bar MIN - 1.2 bar MAX)

Rear tire	
Type	Pirelli Scorpion MX32 Mid-Soft 110/90 R19"
Size	110/90 R19"
Front tire pressure	1.0 bar (0.8 bar MIN - 1.2 bar MAX)

Attention
As tire pressure is affected by ambient temperature and altitude variations, you are advised to check and adjust it whenever you are riding in areas where ample variations in temperature or altitude occur.
Check and set tire pressure when tires are cold.

Front fork	
Type	Fully adjustable upside-down Showa fork Kashima-coated fork sleeves
Stanchion diameter	Ø 49 mm
Fork leg extension value in relation to the steering head	0.19 in (5 mm)
Stroke	12.20 in (310 mm)
Wheel travel	12.20 in (310 mm)

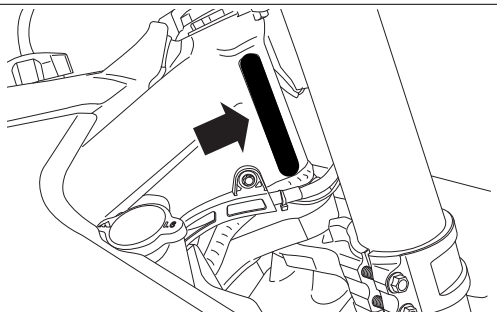
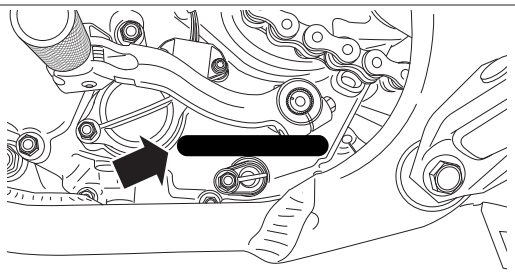
Rear shock absorber	
Type	Fully adjustable Showa monoshock
Spring rate	46 N/mm
Stroke	5.07 in (129 mm)
Wheel travel	11.85 in (301 mm)

Exhaust system	
Type	Steel single silencer with aluminum sleeve Steel primary exhaust pipe with resonator

Electric system	
Instrumentation	Hour meter
Generator	80W @12.5V with warm engine (130° engine oil temperature)
Starter motor	0.5 kW at 12V
Battery	Lithium 2Ah (LiFePO4)

Vehicle Identification Number (VIN) and engine positioning

Note
These numbers identify the motorcycle model and should always be indicated when ordering spare parts.

The vehicle identification number is located on the steering tube, on the right side of the vehicle.	 Fig 12
The engine identification number is located under the gear change pedal, on the left side of the vehicle.	 Fig 13

Main devices - Position and operation

Main components

Attention

This section shows the position and function of the controls used to ride the motorcycle. Be sure to read this information carefully before you use the controls.

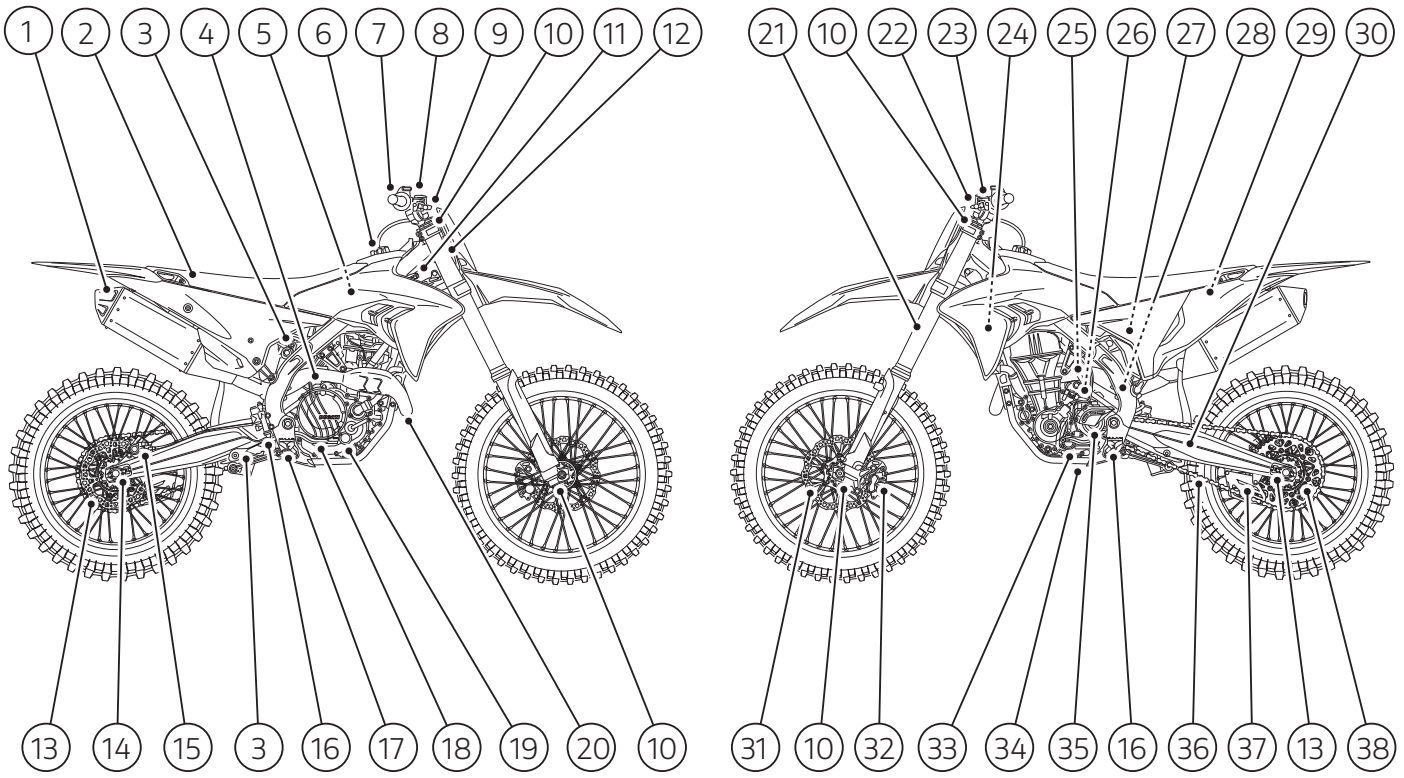


Fig 14

1) Silencer.
2) Rider seat.
3) Rear shock absorber adjusters.
4) Engine oil filler plug.
5) Fuel tank.
6) Tank filler plug.
7) Throttle twistgrip.
8) Front brake master cylinder fluid reservoir.
9) Front brake lever.
10) Front fork adjusters.
11) Radiator plug.
12) Hour meter.
13) Rear brake disc.
14) Chain tensioning adjusters.
15) Rear brake caliper.
16) Rear brake master cylinder.
17) Rider footpegs.
18) Rear brake pedal.
19) Engine oil level control sight glass.
20) Exhaust pipe.
21) Front fork.
22) Clutch lever.
23) Clutch fluid reservoir.
24) Radiator.
25) Cold-start button.
26) Starter motor.
27) Air filter.
28) Rear shock absorber.
29) Battery.
30) Swinging arm.
31) Front brake disk.
32) Front brake caliper.
33) Gear change pedal.
34) Engine oil drain screw.
35) Front sprocket.
36) Drive chain.
37) Chain guide.
38) Rear sprocket.

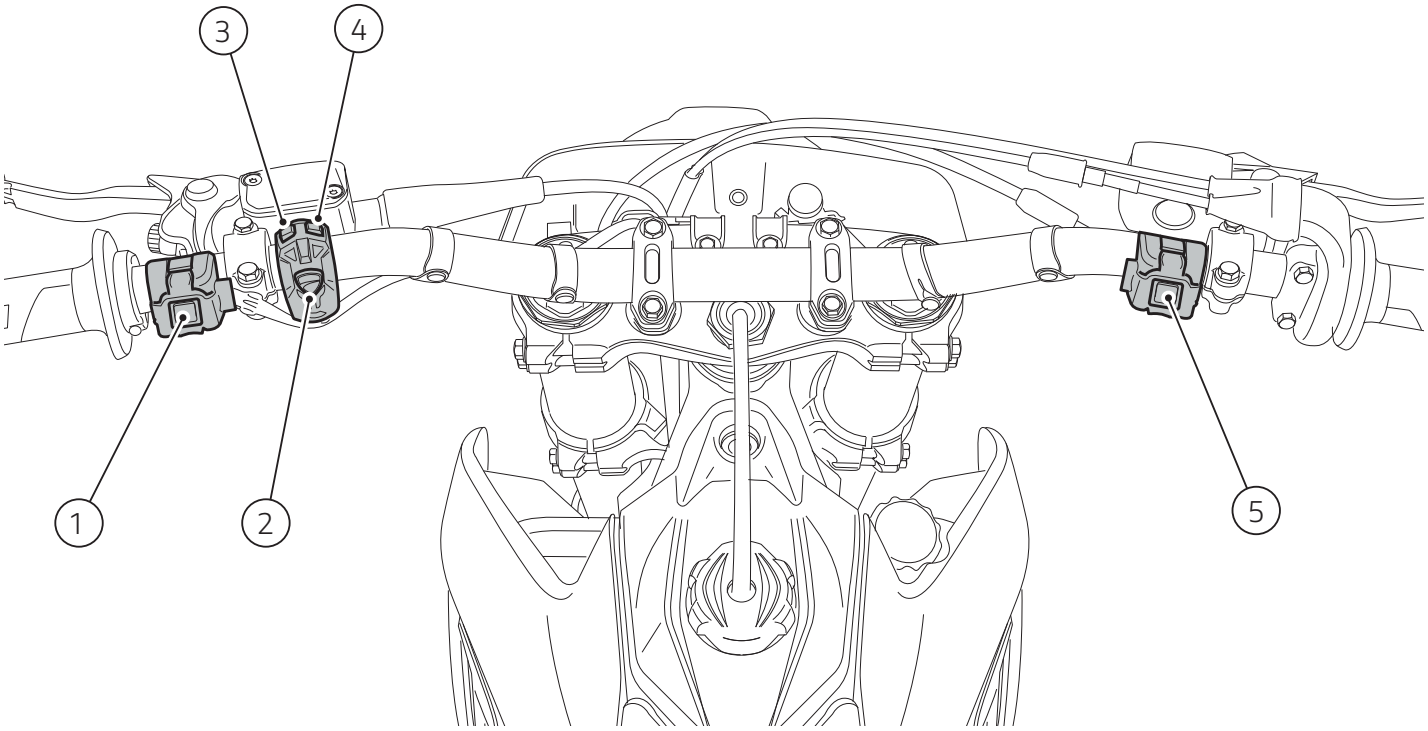


Fig 15

1) Vehicle stop button.
2) Riding Mode confirmation or change button.
3) DTC activation button (Launch Control activation when buttons 3 and 4 are pressed together).
4) DQS activation button (Launch Control activation when buttons 3 and 4 are pressed together).
5) Vehicle starter button.

Vehicle stop button

The vehicle stop button (1) is located on the left side of the handlebar.
To stop the engine, press and hold the button (1) until it stops completely.

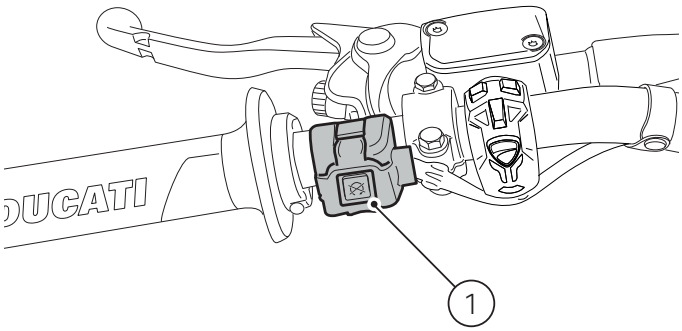


Fig 16

Vehicle start button

The vehicle start button (1) is located on the right side of the handlebar.
For the cold engine start procedure, refer to the chapter "Cold starting".
For the warm engine start procedure, refer to the chapter "Warm starting".

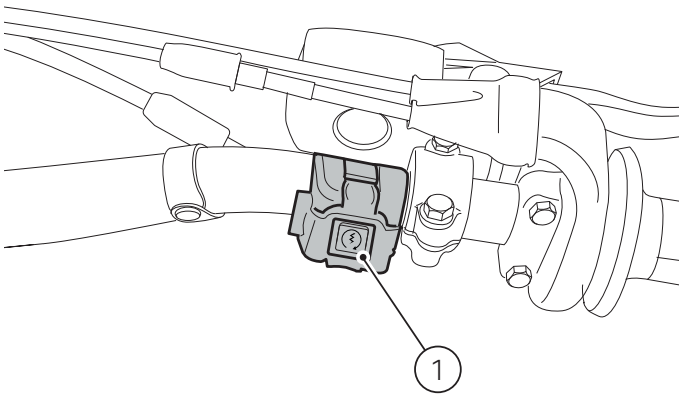


Fig 17

Cold-start button

The cold start button (1) is located on the left side of the motorbike.
Press the button upwards to activate it.
For the cold engine start procedure, refer to the chapter "Cold starting".

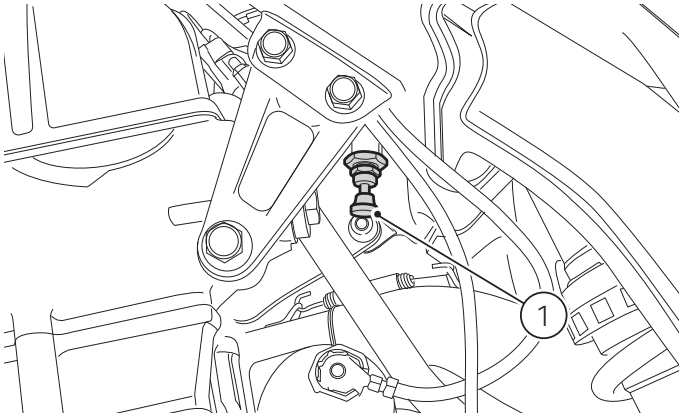


Fig 18

Gear change pedal

The gear change pedal has a rest position (neutral, N position) between the 1st and 2nd gear.
With the clutch lever pulled, the pedal can be operated:

- down = press down the pedal to engage the 1st gear and to shift down;
- up = lift the pedal to engage 2nd gear and then 3rd, 4th and 5th gears.

Each time you move the pedal you will engage the next gear.

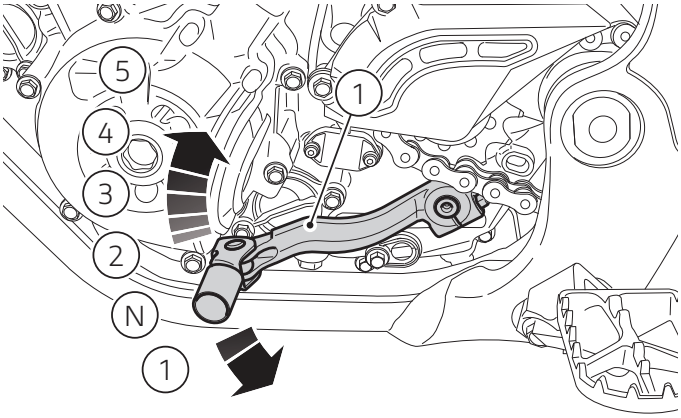


Fig 19

Rear brake pedal

Push down the pedal (1) to operate the rear brake.
The system is hydraulically operated.

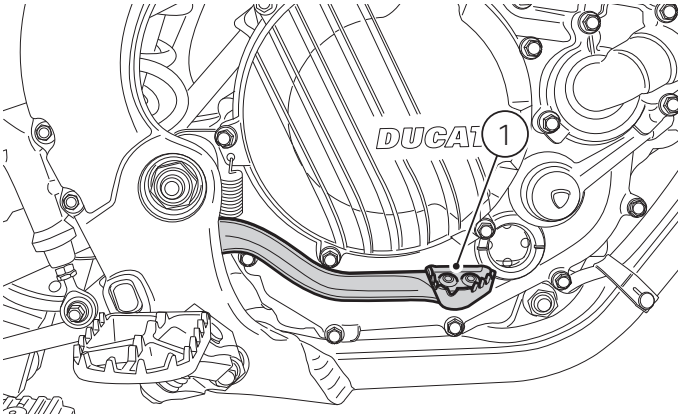


Fig 20

Front brake lever

Pull in the lever (1) towards the twistgrip to operate the front brake. The system is hydraulically operated and you just need to pull the lever gently.
The brake lever (1) has a knob (2) for adjusting the distance between lever and handgrip on the handlebar. To adjust the distance of the lever from the handgrip, turn the knob (2) clockwise (to move the lever away from the handgrip) or anticlockwise (to move the lever closer to the handgrip).

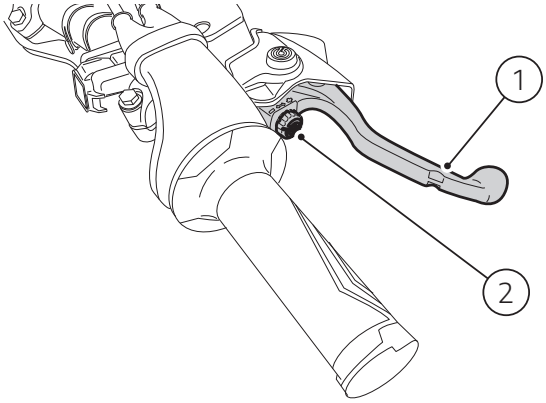


Fig 21

Clutch lever

The lever (1) acts on the clutch, allowing the engine to be disconnected from the drive system and therefore from the wheel. Its use is very important in various phases of use, particularly when starting and stopping.
Lever (1) features a knob (2) to adjust the distance from the lever and the handgrip on handlebar.
To adjust the distance of the lever (1) from the handgrip, turn the knob (2) clockwise (to move the lever away from the handgrip) or anticlockwise (to move the lever closer to the handgrip).

Attention
Set clutch lever when motorcycle is stopped.

Important
Using the clutch properly will avoid damage to transmission parts and spare the engine.

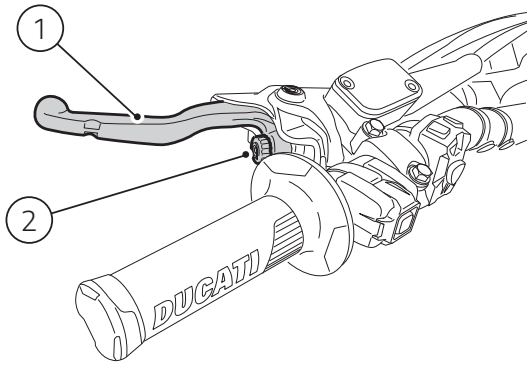


Fig 22

Throttle twistgrip

The twistgrip (1) on the right handlebar opens the throttle of the throttle body.
When released, it will spring back to the initial position (idling speed).

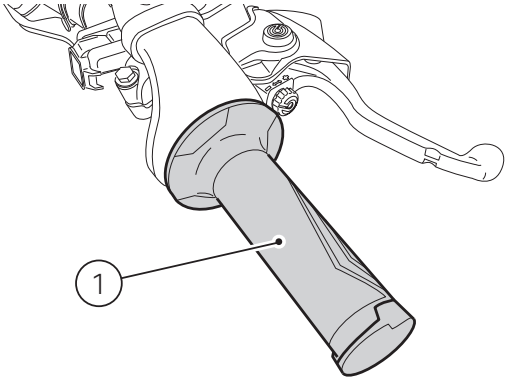


Fig 23

Fuel cap - Refueling

Opening

Turn the fuel cap (1) counterclockwise and remove it.

Closing

Replace the fuel cap (1) and turn it clockwise.
If it has been removed, replace the breather hose (2) inside the steering tube, in the hole between the two handlebar attachments.

Attention
Always make sure you have properly refitted and closed the plug after refueling.

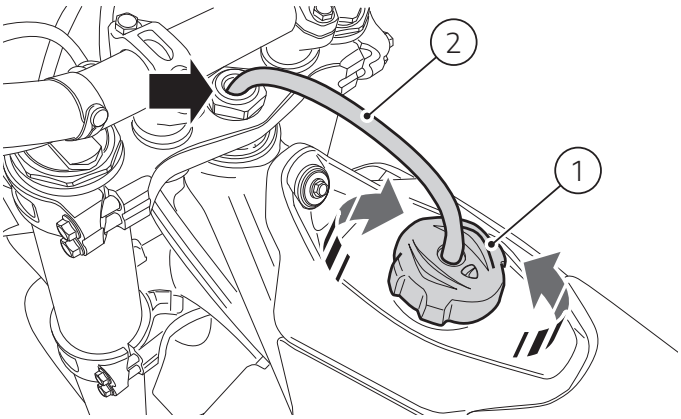


Fig 24

Refueling

Never overfill the tank when refueling. Fuel should never be touching the rim of the tank.

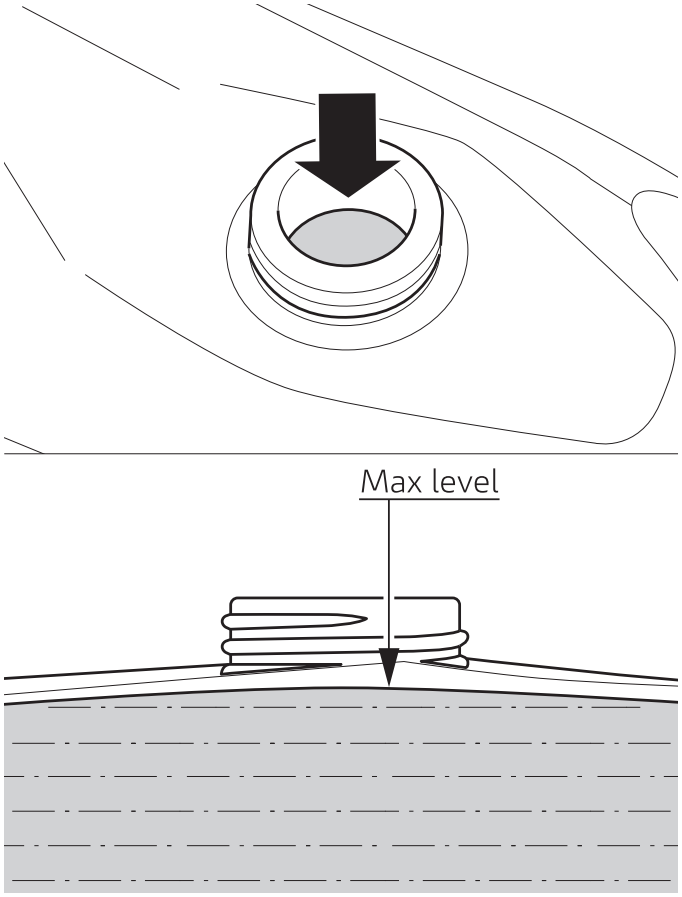


Fig 25

Warning
The fuel pressure inside the tank may, in extreme cases, cause fuel to “spray” when opening the fuel cap.
Always open the fuel cap slowly and carefully during the refill.
If you hear an audible hiss from the cap while opening it, wait until the stop of the hissing before opening it completely.
This noise is caused by the discharge of the residual pressure inside the fuel tank. When this noise stops, it means that the residual pressure has been completely discharged.
The situation described above is more likely in hot weather conditions.

Attention
Use fuel with the lowest octane rating 90 (RON +MON)/2

Attention
The vehicle is compatible only with fuel having a maximum ethanol content of 10% (E10).
Using fuel with ethanol content over 10% is prohibited. Using it could result in severe damage of the engine and motorcycle components. Using fuel with ethanol content over 10% will render the Warranty null and void.

Note
The information below is valid exclusively for the Indian market. The vehicle is guaranteed and compliant with regulations when using fuels with a maximum ethanol content of 20% (E5, E10, E20). However, if available, it is recommended to use fuels with an ethanol content of no more than 10%, especially in conditions of heavy engine use (sporting use, use with luggage, high temperatures, etc.).

Electronic controls

The Desmo450 MX features multi-level adjustable electronic controls:

Control	Available levels
Throttle response	2
Ducati Traction Control (DTC)	4
Engine Brake Control (EBC)	2
Launch Control (LC)	3

The control levels are selected via 2 Riding Modes that recall 2 standard factory configurations.
Riding modes, controls and their operation are described in the following paragraphs.

Attention

As this is a Racing product, all the checks listed below are intended for performance on the track by an experienced rider and are not intended as safety checks. Assistance systems are mechanisms designed to facilitate the riding of the motorcycle in order to achieve maximum performance, but they do not eliminate or mitigate all of the rider's responsibilities in relation to riding behavior and preventing errors.

Attention

The active elements help the rider control the motorcycle, making it as easy to ride as possible. The presence of an active safety system should not encourage the rider to ride at speeds and accelerations beyond the reasonable limits, not in accordance with the road conditions, the laws of physics, good riding standards and the requirements of the road traffic code.

Attention

Any modifications made to the motorcycle, whether to components, spare parts and accessories or to the position of the control units on the vehicle (this affects the calculation of the vehicle's position and the level of vibration on the components) could adversely affect the functionality of the electronic controls with consequences for safety!
Always check the condition of the wiring essential for the correct operation of the control systems before each use.

Riding Mode

The motorcycle has two Riding Modes that can be selected using the central button (A) on the left-hand switch. The two Riding Modes are identified by two colors: green (1) and red (2).

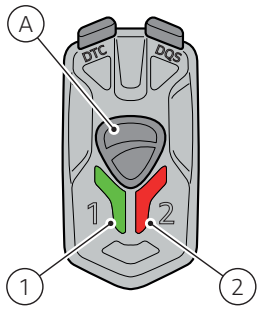


Fig 26

In the factory configuration, the green and red Riding Modes are called Factory Mode 1 and 2, set as follows:

	Factory Mode 1	Factory Mode 2
Throttle Response	Level 1 (Smooth)	Level 2 (Dynamic)
Ducati Traction Control	Level 4 (Maximum activation)	Level 2 (Medium activation)
Engine Brake Control	Level 1 (Maximum engine brake)	Level 2 (Minimum engine brake)
Launch Control	Level 2 (Medium level)	Level 1 (Expert level)

Factory Mode 1 is recommended for amateurs.
Factory Mode 2 is recommended for experienced users.

Pressing the central button (A) will switch the system from one Riding Mode to another. Confirmation of the Riding Mode change will then be visible via the green (1) or red (2) LED.

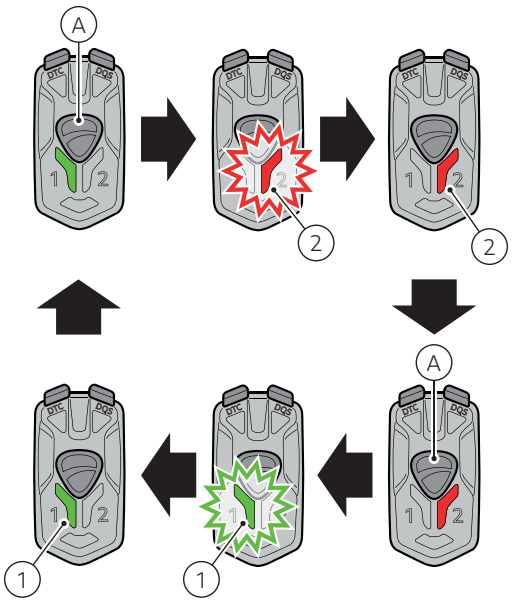


Fig 27

The Riding Mode can only be changed when the engine is running, even when the vehicle is in motion, provided that the engine speed is below 4000 rpm.

If the change is requested above 4000 rpm, the Riding Mode will first be selected (flashing LED) and then activated (LED steady on) only when the engine speed drops below this threshold. The operation must be completed within a maximum of 90 seconds from the request. If the time limit is exceeded, the change request will be canceled.

The DTC and DQS functions can be activated and deactivated regardless of the selected Riding Mode using the dedicated buttons on the top of the left-hand switch.

The selected Riding Mode and the status of DTC and DQS are automatically saved when the engine is stopped and restored when the engine is restarted.

Launch Control

The Launch Control (LC) function allows starting from a standstill using an optimized engine speed strategy to achieve the best power delivery.

It can be activated by simultaneously pressing the DTC (A) and DQS (B) buttons on the left handlebar when the vehicle is stationary, with the engine running at idle speed and no gear engaged.

Visually, LC activation is indicated by a purple LED (1) located at the bottom of the left-hand switch.

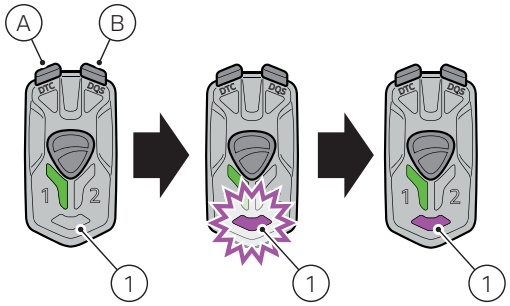


Fig 28

Once activated, it is possible to start the starting procedure:

- Pull the clutch and engage the desired gear for starting.
- Keep the clutch pulled and open the throttle control fully (100%).
- Release the clutch while keeping the throttle control open to start.

After starting, while keeping the throttle open, the control will automatically and gradually increase the rev limit, ensuring maximum acceleration.

The control will be disabled when at least one of the following conditions is true:

- 4th gear is engaged
- The throttle control is released
- The rev limit set by the LC control is reached

The table below shows the characteristics of each level and which of these are set by default in Factory Modes 1 and 2.

The different LC levels can only be associated with customized Riding Modes if the Ducati Com Link Wi-Fi module and Ducati X-Link smartphone app are installed.

LC level	Level of activation	Rider experience	Default
1	High	PRO	Factory Mode 2
2	Medium	EXPERT	Factory Mode 1
3	Low	AMATEUR	

The different settings differ in the progression of the engine speed and its maximum limit.

Note
The LC is not affected by the status and level of the DTC.

Attention
The LC is a performance-oriented system for experienced riders and does not prevent the motorcycle from wheelies.

Ducati Traction Control (DTC)

DTC is a traction control system available to the rider, which can be used when riding off-road and controls the rear tire slip by acting on the engine electronic management system.

Attention
The DTC is a rider assist system available to the rider for off-road riding. This system is designed to make riding easier, but in no way relieves the rider of the obligation to ride responsibly and to maintain a high standard of riding in order to avoid accidents.
The rider must always be aware that active safety systems have a preventive function. The active elements help the rider control the motorcycle, making it as easy to ride as possible. The presence of an active safety system should not encourage the rider to ride at speeds and accelerations beyond the reasonable limits, not in accordance with the road conditions, the laws of physics, good riding standards and the requirements of the road traffic code.

The DTC can be activated or deactivated using the dedicated button (A) regardless of the selected Riding Mode.

The DTC status is indicated by the dedicated orange LED (1). It will be steady on if the system is functioning properly or it will flash if it is unavailable or malfunctioning.

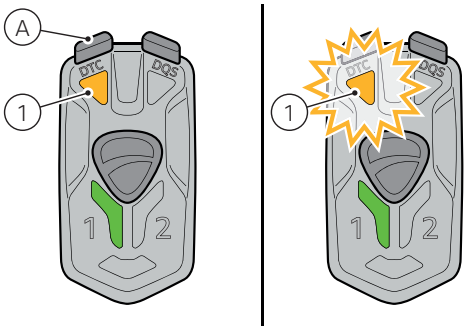


Fig 29

Attention
Although it is possible to activate and deactivate the DTC via the switch while riding, it is recommended to do so with the motorcycle stationary and the engine speed below 3000 rpm.

The table below shows the characteristics of each level and which of these are set by default in Factory Modes 1 and 2. The different DTC levels can only be associated with customized Riding Modes if the Ducati Com Link WiFi module and Ducati X-Link smartphone app are installed.

DTC level	Grip	Level of activation	Rider experience	Default
1 (Min)	High	Low (MIN)	Pro	
2	Medium high	Medium	Pro	Factory Mode 2
3	Low	Medium high	Expert	
4 (Max)	Low	High (MAX)	Amateur	Factory Mode 1

Excellent operation of the DTC system, for all available levels, is ensured only with OE tires and final drive ratio and/or with the ones recommended by Ducati. In particular, OE tires for this motorcycle are indicated in the “Vehicle technical specifications” section of this manual.

The use of tires of different size and characteristics to the original tires may alter the operating characteristics of the system to the point of compromising its operation.

In the event of changes to the final drive ratio (rear and/or front sprocket), it will be necessary to set the change on the motorcycle through:

- X-Link app
- Diagnosis instrument at your dealer

The DTC system will then be adapted to the new final drive ratio.

The optimal level must be selected taking into account:
- The grip of the surface (type of tire, amount of tire wear, track surface, weather conditions, etc.)
- The rider's experience
- The selected Throttle Response level

Note
If you have the Ducati Com Link WiFi module, we recommend using level 3 for a couple of full laps of the track (or a session of equivalent duration) to get used to the system; after that, we recommend trying levels 2 or 1 in succession if level 3 is considered excessive, or level 4 if level 3 is considered insufficient.

Attention
The DTC system recognizes when the clutch is engaged by the rider and when the motorcycle is jumping, inhibiting the engine torque regulation.
Once the clutch is released or the motorcycle lands from a jump, the DTC system will resume automatic operation.

Ducati Quick Shift (DQS)

The Ducati Quick Shift (DQS) system allows the rider to upshift without using the clutch. The system does not work when downshifting.
The DQS function is available from the 1st gear.

The DQS can be activated or deactivated using the dedicated button (A) regardless of the selected Riding Mode.

The DQS status is indicated by the dedicated blue LED (1). It will be steady on if the system is functioning properly or it will flash if it is unavailable or malfunctioning.

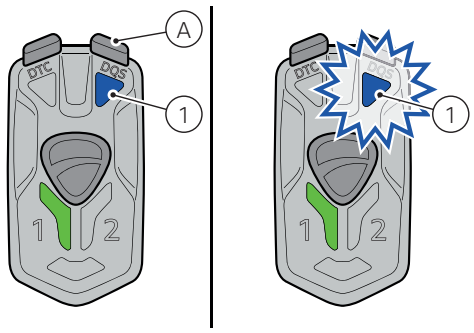


Fig 30

The DQS is managed by the engine control unit, which detects lever actuation via the selector drum position sensor. Here below are some tips that will ensure you properly exploit this feature:
- The Ducati Quick Shift only shifts up when torque is requested by opening the throttle control.
- The Ducati Quick Shift takes the same shift lever operation as with vehicle not equipped with the Ducati Quick Shift.
- The Ducati Quick Shift is not designed for shifting automatically.
- For any gear change, the rider must push the gear lever up from its rest position for the entire lever travel and hold it in this position until the gear shifting is complete.
- Once the gear shifting has been completed, the lever has to be fully released in order to allow another gearshift acted by Ducati Quick Shift.
- If the rider does not move the shift lever up to end stroke during a Ducati Quick Shift request, gears may not be fully engaged.

Attention
The Ducati Quick Shifter is designed to operate at engine speeds above 4000 rpm, therefore it is not possible to change gear using DQS below this threshold.

Attention
While riding, the boot must not interfere with the rest position of the gearchange lever.
If the boot continuously touches the gearchange lever, the DQS system may malfunction when DQS is activated.

For use of the gearbox and clutch with DQS deactivated, refer to the “Gear change pedal” chapter.

Engine Brake Control

This function allows adjusting the engine brake activation to two levels depending on your riding needs and the track.

The MAX level corresponds to maximum engine brake activation and is the default level in Factory Mode 1.

The MIN level corresponds to lowest engine brake activation and is the default level in Factory Mode 2.

The EBC level can be changed in the customized Riding Modes only if the Ducati Com Link Wi-Fi module and Ducati X-Link app are installed.

Throttle Response

This function allows adjusting the throttle response between a more linear “Smooth” response and a more responsive “Dynamic” response.
The Throttle Response level can be changed in the customized Riding Modes only if the Ducati Com Link Wi-Fi module and Ducati X-Link app are installed.

Falldown detection

This system stops the engine in the event of a motorcycle fall. It is activated when a position similar to a fall is detected for a certain period of time.
Among other things, one purpose of the system is to limit possible damage to the engine due to lack of lubrication.
To restart the engine after the system has been activated, provided there are no other technical problems, simply return the motorcycle to an upright position and press the start button.

Attention

Do not change the position of the motorcycle's electronic control units.
If the position of the control units is changed, the system may not be able to accurately detect the fall position.

Warning light table

The engine management system (EFI) fault warning light (1) is used to indicate any faults within the engine control unit.

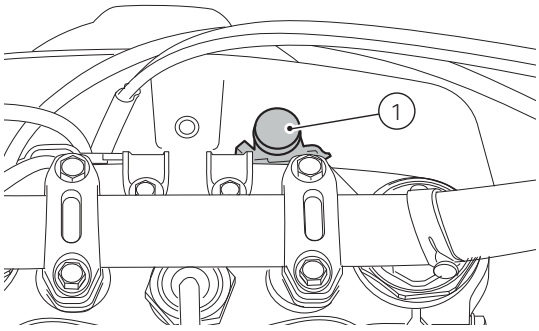


Fig 31

When the starter button is pressed, the EFI warning light will illuminate briefly to indicate that everything is working properly.
If there are no errors, the warning light will remain off.
If there are errors, the EFI warning light will flash to indicate the error code detected using two types of flashes:

- One long flash means: +10
- One short flash means: +1

For example, when one long flash is followed by two short flashes, the EFI value is 12 (one long flash, equivalent to +10 flashes, plus two short flashes: +1 +1).
If there are multiple fault codes, the EFI warning light flashes to indicate them from the lowest to the highest number for several cycles, interrupted by a pause without flashing.
The flashes are repeated continuously while the engine is running and after it is turned off, until the power supply to the engine control unit is interrupted.

Note

The battery must not be disconnected until at least three minutes have elapsed after the engine has been stopped.

The descriptions of the fault codes are shown in the table below:

Flashing code	Fault description
2	Pick-up error
6	Throttle position sensor error
9	Intake pressure sensor error
12	Water temperature sensor error
13	Air temperature sensor error
15	Tilt sensor error
21	Battery voltage too high
22	Gear sensor error
33	Injector 1 error
37	Ignition coil error

Flashing code	Fault description
41	Fuel pump error
65	Memory error
81	Gear position learning incomplete
91	CAN communication error

Position and installation of the Wi-Fi control unit

Using the X-Link app and the Ducati Com Link Wi-Fi connection module (1), available as an accessory (*), it is also possible to customize the Riding Modes.

Note
(*) Not available in some countries; please contact your Dealer for further information.

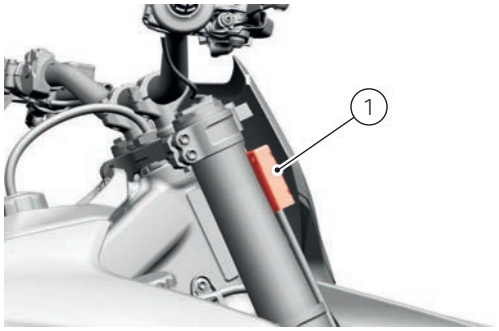


Fig 32

Ducati X-Link App features

Note
X-Link has been designed for use on smartphones.
Operation on tablets is not guaranteed and may be subject to anomalies.

Thanks to the WiFi connectivity unit, available as an accessory (*), and the Ducati X-Link app, users can connect to their smartphone to customize the Riding Modes, keep track of maintenance and monitor the status of the vehicle.

Note
(*) Not available in some countries; please contact your Dealer for further information.

The Ducati X-Link App offers various features to improve the riding experience and maintenance of the bike. The main features include:

TUNING section

- Customization of Riding Modes by accessing multiple levels for each electronic control. Creation and modification of your own Riding Modes, setting the value of each parameter (throttle response, traction control, engine brake control, launch control) according to personal preferences and track conditions.

DASHBOARD section

- Monitoring of certain engine operating parameters and any warnings from the engine control unit.

SERVICE section

- Consultation of engine hours and maintenance service intervals.
- Manual entry of maintenance work carried out on the motorcycle. This function does not represent digital maintenance, so services carried out at the official network will not be recorded.
- Setting of final drive front and rear sprocket values.

SUSPENSION section

- Calculation of the recommended suspension settings for the motorcycle, based on the rider's weight, experience and type of track.

INFO section

- Customization of the name of the connected motorcycle and display of the app and COM LINK control unit specifications.

Cold starting

Put the gearbox in neutral.
Press the cold start button (1) on the left side of the motorbike upwards to activate it.

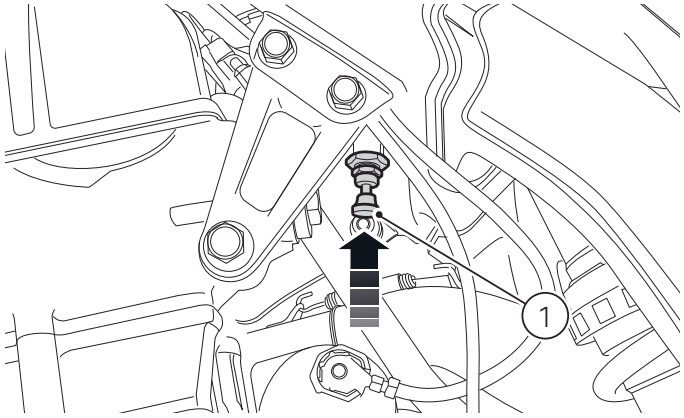


Fig 33

Without using the throttle, press the engine start button. If the engine does not start immediately when you press the start button, release it, wait a few seconds and try again.
When the engine starts, warm it up for one or two minutes at a constant speed, then turn the throttle twistgrip (2) to the closed position, as indicated by the arrow in the image below.
The cold start button (1) will deactivate and return to its initial position.

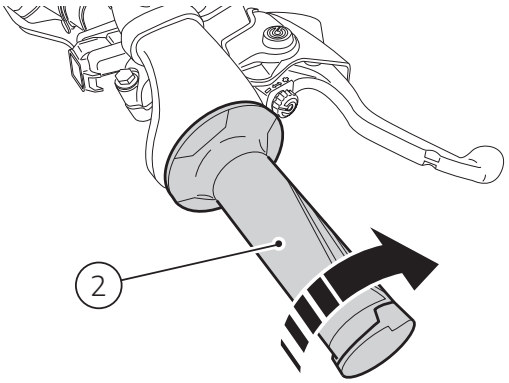


Fig 34

Never start or warm up the engine in a closed or poorly ventilated area.

Attention

Exhaust gases contain carbon monoxide, which is a poisonous gas that can cause unconsciousness or even death if inhaled.

Attention

Avoid leaving the engine running with the vehicle stationary for too long to prevent overheating and consequent damage to the engine.

Engine stop

Press and continue to hold the button (1) until the engine stops.

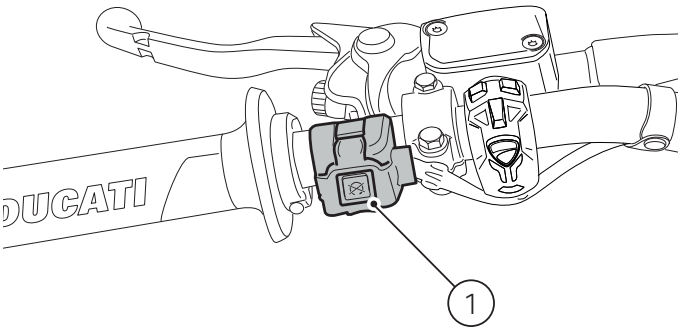


Fig 35

Warm starting

Put the gearbox in neutral.
Without using the throttle, press the engine start button. If the engine does not start immediately when you press the start button, release it, wait a few seconds and try again.
If the gear is engaged, it is possible to start the engine by pulling the clutch lever.
Never start or warm up the engine in a closed or poorly ventilated area.

Attention

Exhaust gases contain carbon monoxide, which is a poisonous gas that can cause unconsciousness or even death if inhaled.

Attention

Avoid leaving the engine running with the vehicle stationary for too long to prevent overheating and consequent damage to the engine.

Engine stop

Press and continue to hold the button (1) until the engine stops.

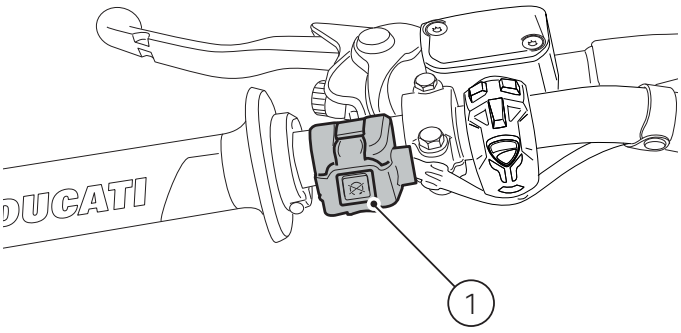


Fig 36

Running-in

Running-in is necessary to obtain the correct operating clearances for the entire engine, but also for the correct settling of the vehicle components, including the suspension.
Furthermore, it is a fundamental phase that allows the rider to get to know their MX and become familiar with all the controls and adjustments available.

The running-in period is divided into **3 phases of 20 minutes** each, for a total of **60 minutes**.

At the end of the 60-minute running-in period, the first engine oil change must be carried out, along with

a series of specific checks that **must be performed meticulously as they are important for safety**.

Attention

1. For the first 20 minutes:

- Start the engine and **warm it up for 1 or 2 minutes at a constant, not high speed (approx. 3000 rpm max)**;
- Ride the motorcycle **for about 20 minutes, warming it up gradually and opening the throttle by max. 50%**;
- Avoid high revs but also excessively low revs in high gears;
- Use the engine in a "smooth" manner, avoiding sudden acceleration.

At the end of the first 20 minutes, stop and check:

- Oil level;
- Any oil, coolant or fuel leaks;
- Visually check for any loose engine or vehicle parts;
- Throttle play;
- Drive chain tension.

2. In the next 20 minutes (for a total of 40 minutes of operation):

- Start the engine and ride the motorcycle **for the next 20 minutes with the throttle open by maximum 75%**.

At the end (after a total of 40 minutes of operation), stop and check:

- Oil level;
- Any oil, coolant or fuel leaks;
- Visually check for any loose engine or vehicle parts;
- Throttle play;
- Drive chain free play.

3. During the last 20 minutes of running-in (for a total of 60 minutes of operation):

- Ride the motorcycle for the remaining 20 minutes, avoiding high engine speeds but also avoiding excessively low speeds in high gears, without limiting throttle opening (always pay attention to your safety!).

At the end of this third running-in session, stop and carry out the **first service** with all the checks listed (see "**Scheduled maintenance chart**").

Attention

In the event of **Mid Service** or **Full Service**, and always in the event of replacement of one or more of the following components, the running-in procedures must be carried out again:

- Cylinder, piston, piston rings;
- Crankshaft or bearings;
- Timing system components.

Fairings

Seat

Removal procedure

Loosen the seat (2) fixing screws (1) on both sides of the motorbike.

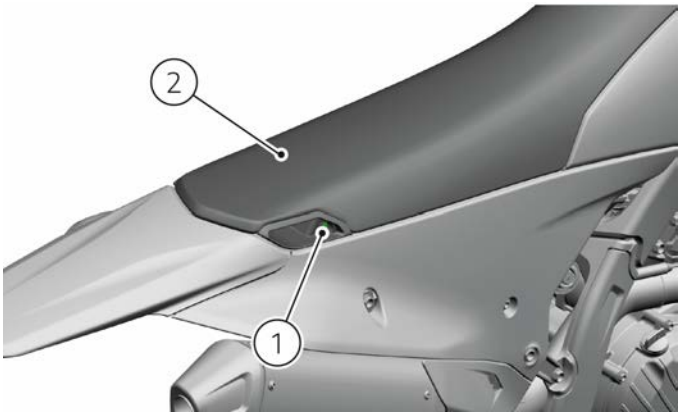


Fig 37

Lift the rear side slightly and remove the seat (2) by sliding it backwards.

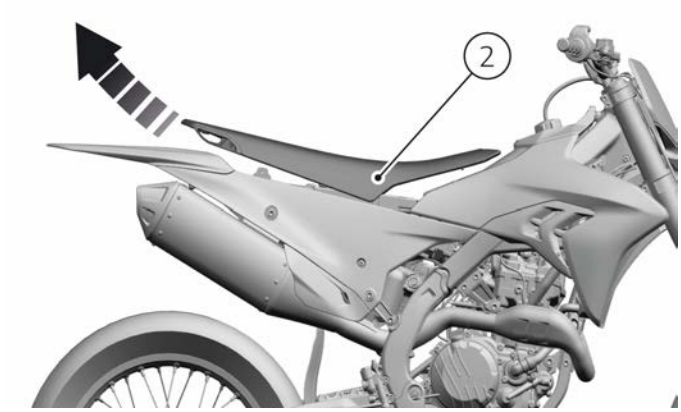


Fig 38

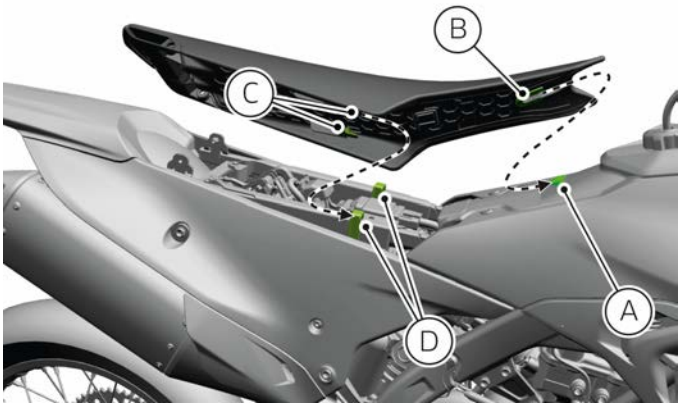


Fig 39

Refitting

Position seat (2) on the vehicle.
Insert the front retainer (A) into the seat (B) and the two retainers (C) into the seats (D).

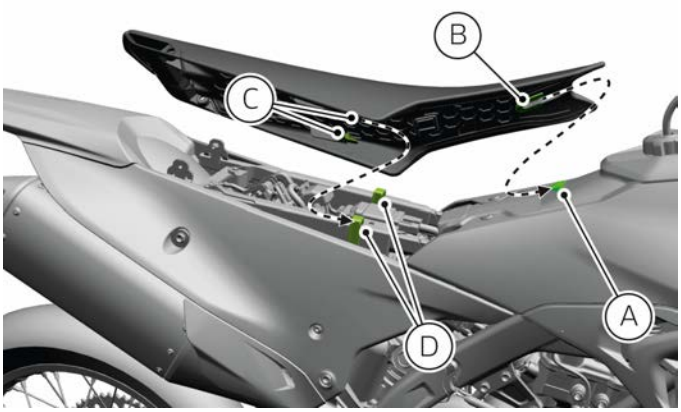


Fig 40

Tighten the screws (1) securing the seat on both sides of the vehicle to 10 Nm ± 10%.

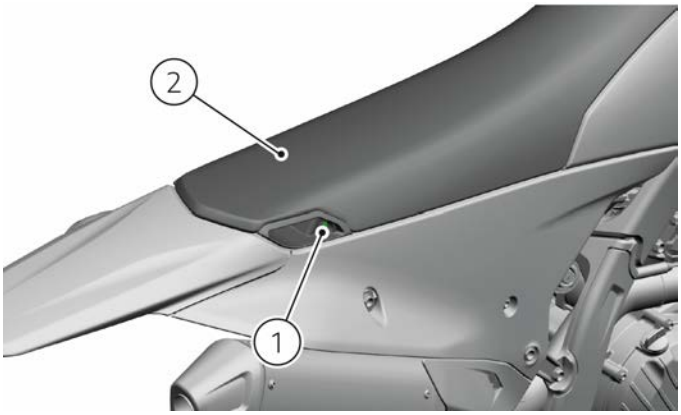


Fig 41

Front number holder

Removal procedure

Loosen the fixing screw (1) on the front number holder (2).

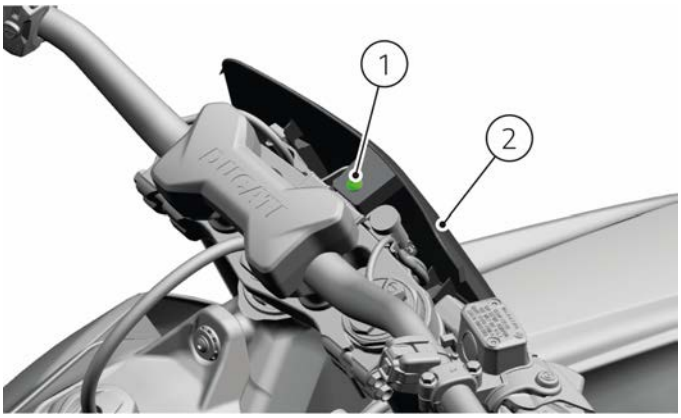


Fig 42

Remove the brake hose (3) from the guide (4) located on the front number holder (2).
Slide out the front number holder (2) by pulling it upwards so that the two pins (A) come out of the seats (B) on the front mudguard.

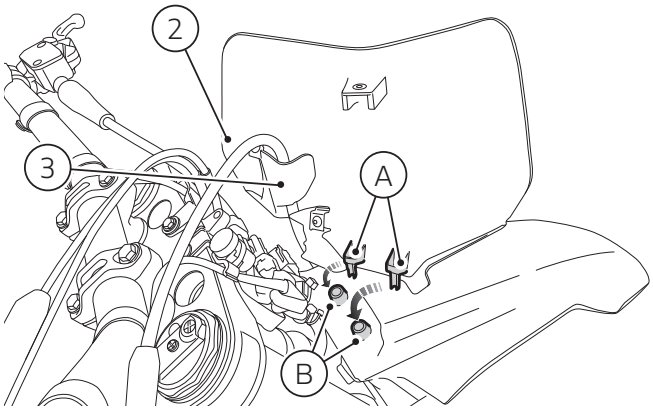


Fig 43

Assembly

Position the front number holder (2) by first inserting the two pins (A) into the seats (B) on the front mudguard, then repositioning the brake hose (3) in the guide (4).

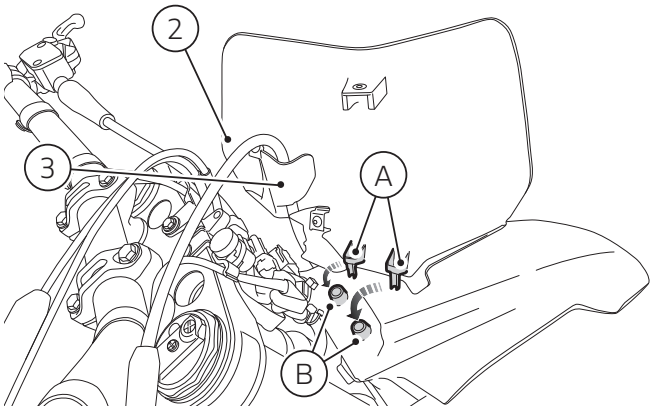


Fig 44

Check that the spacer with collar (5) is present on the number holder (2).

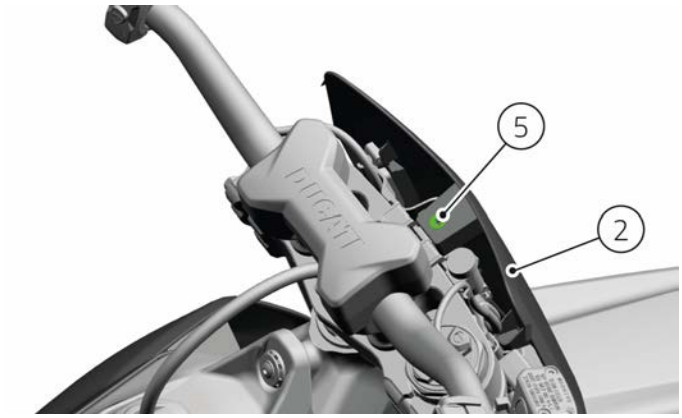


Fig 45

Start and tighten the screw (1) securing the front number holder (2) to a torque of 1.2 Nm ± 10%.

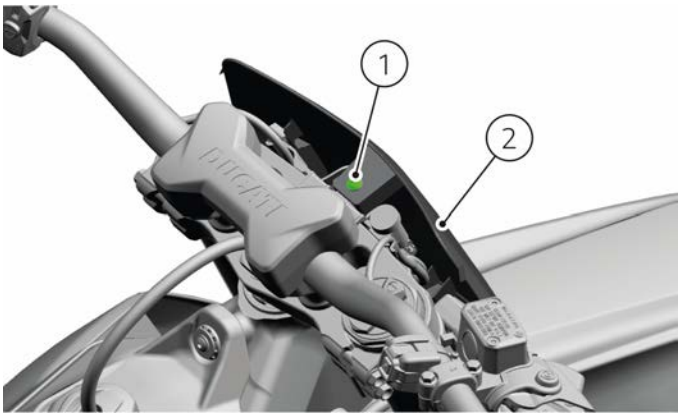


Fig 46

Front side body panels

Removal procedure

Remove the seat as described in chapter “Seat”.
Loosen the retaining screws (1) of the side body panels (2).

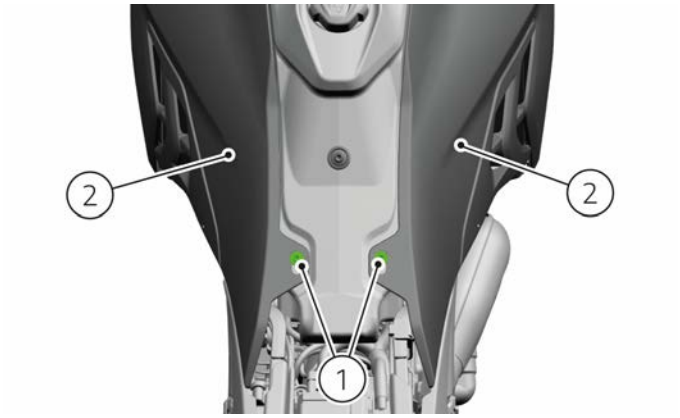


Fig 47

Working on the front side of the motorbike, loosen the retaining screws (3) of the side body panel (2).

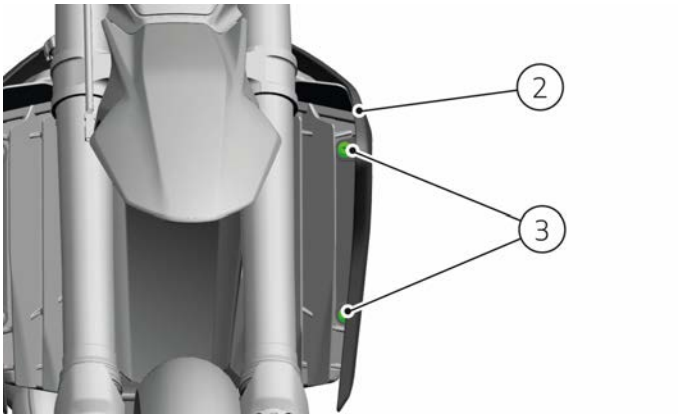


Fig 48

Remove the side body panel (2) by turning the rear part upwards and sliding the teeth (A) out of their seats (B). Pull towards the rear so as to remove the seat (C) from the pin (D) on the tank.
Repeat the operation for the other side body panel.

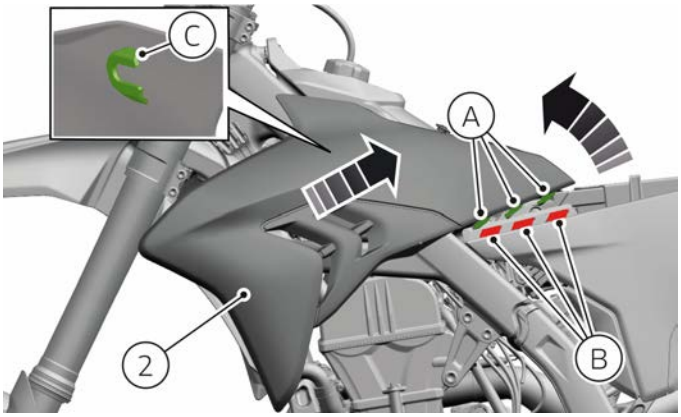


Fig 49

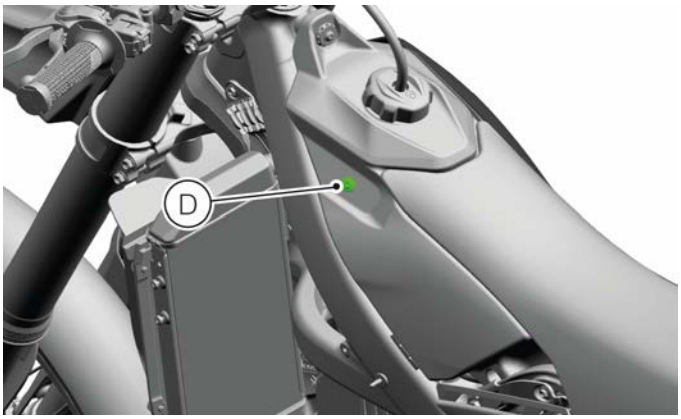


Fig 50

Assembly

Position the side body panel by inserting pin (D) into seat (C) on the tank.
Rotate the side body panel so that the teeth (A) fit into the seats (B).

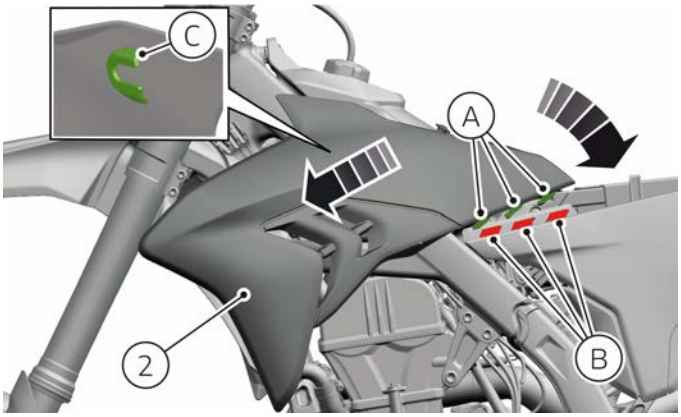


Fig 51

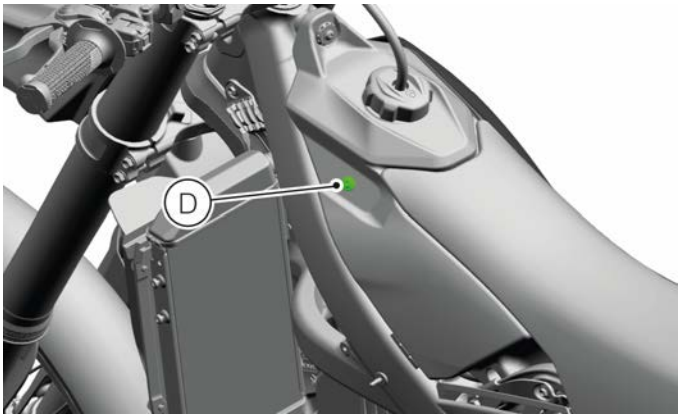


Fig 52

Start the rear fastening screw (1) of the side body panel (2) and tighten it to a torque of 8 Nm ± 10%.

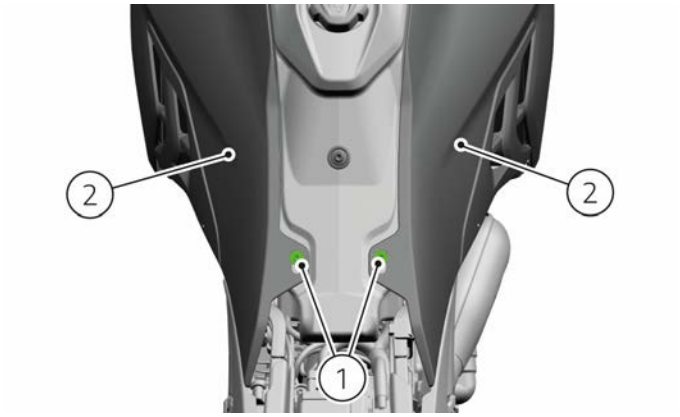


Fig 53

From the front top of the motorbike, start the screws (3) and tighten them to a torque of 8 Nm ± 10%.
Repeat the procedure for the other side body panel.

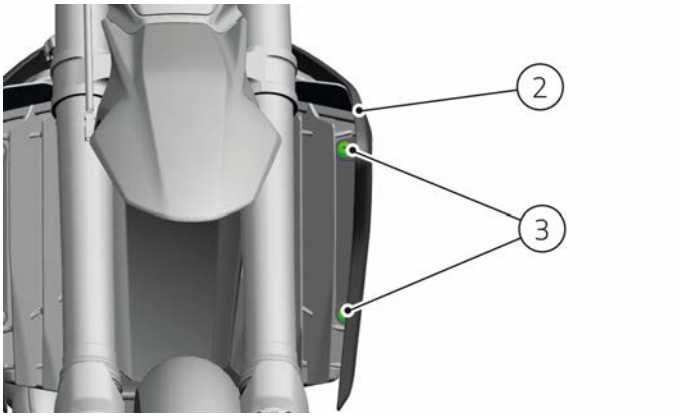


Fig 54

Fit the seat as described in chapter “Seat”.

Rear side body panels

Removing the rear LH side body panel

Remove the seat as described in chapter “Seat”.
Pull the air filter access door (1) outwards, so as to first release the pins (A) from the rubber blocks (B) and then the seats (C) from the teeth (D) on the side body panel.

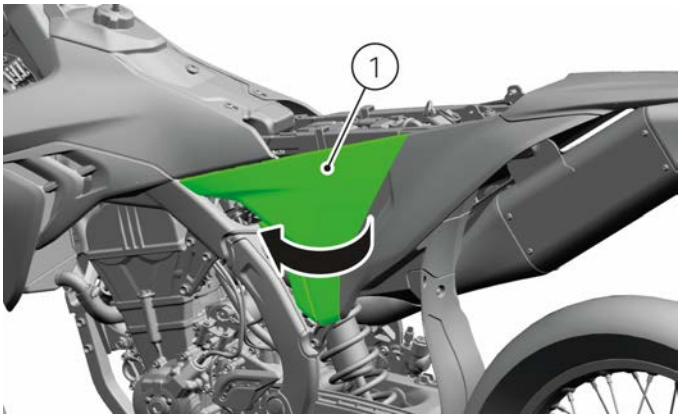


Fig 55

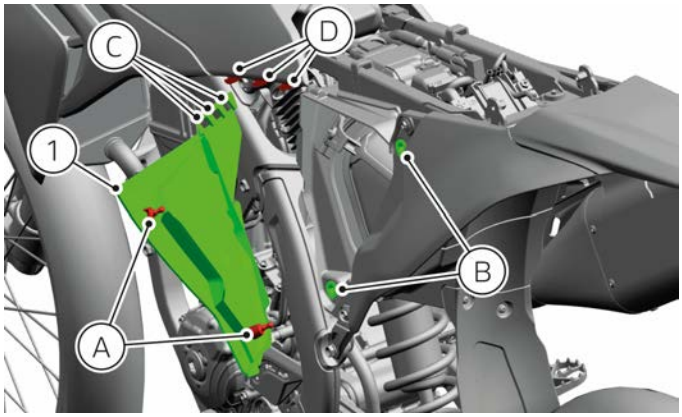


Fig 56

Release the side screws (2) securing the left rear side body panel (3).

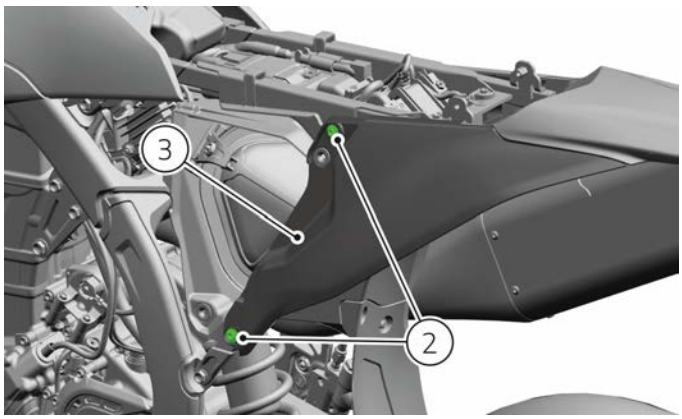


Fig 57

Working on the vehicle rear side, loosen the screws (4) that retain the left rear side body panel (3).

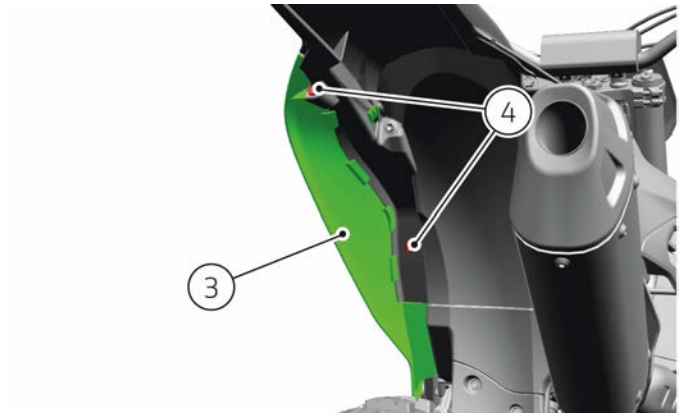


Fig 58

Remove the left rear side body panel (3) by sliding it forward so as to release the tooth (A) from the seat (B).

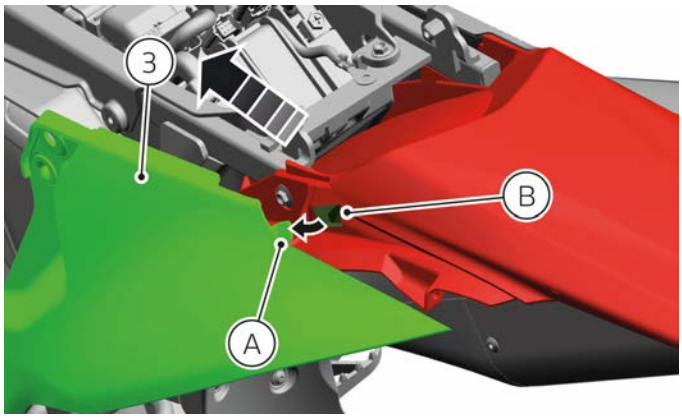


Fig 59

Removing the rear RH side body panel

Release the rear screw (4) securing the right rear side body panel (5).

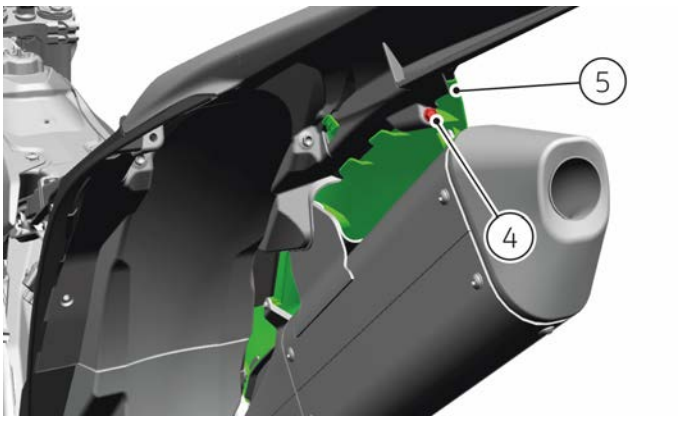


Fig 60

Remove the side screw (6) securing the right rear side body panel (5).

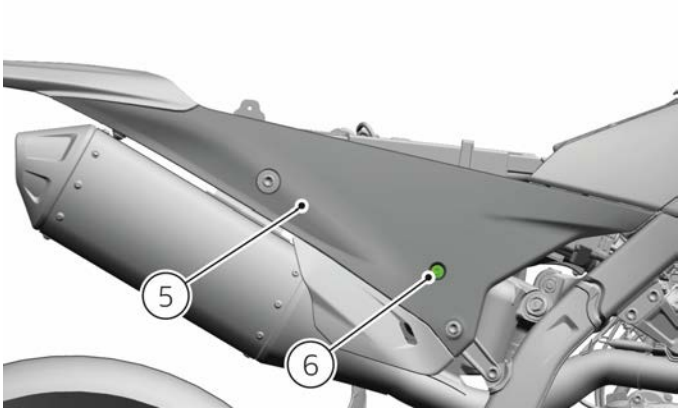


Fig 61

Undo the screw (7) securing the right front side body panel.

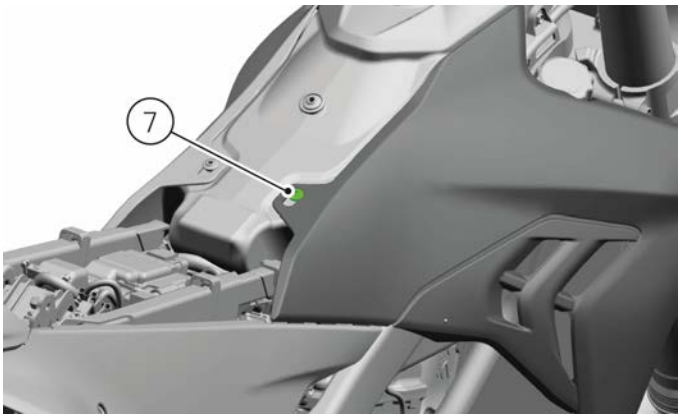


Fig 62

Remove the right rear side body panel by sliding it forward.

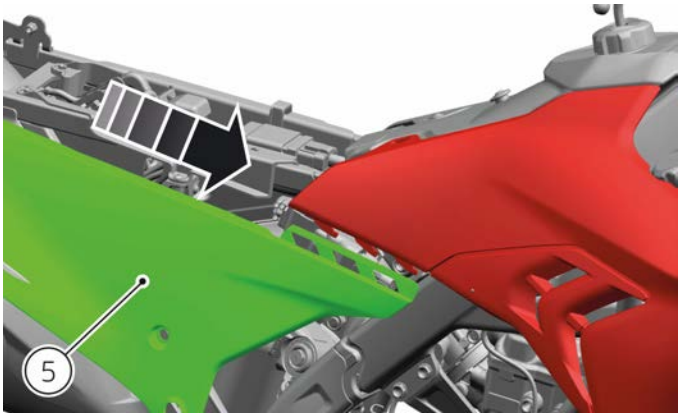


Fig 63

Fitting the rear RH side body panel

Fit the right rear side body panel following the sequence below:

- Insert the two guides (C) into the profile (D) of the rear mudguard;
- Insert the retainer (E) into its housing (F) of the rear mudguard;
- Insert the guide (G) into the profile (H) of the rear mudguard.

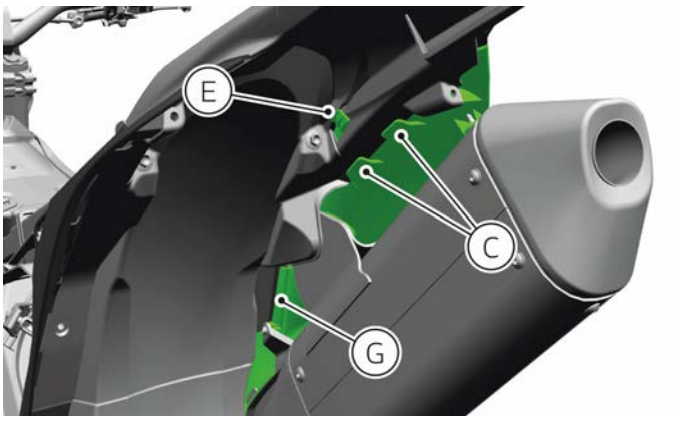


Fig 64

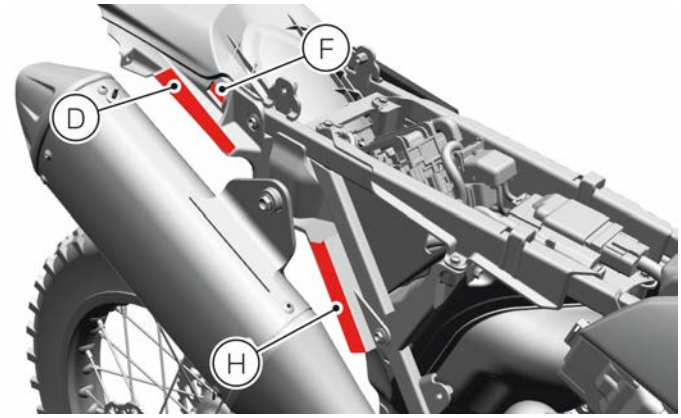


Fig 65

- Keep the right rear side body panel pressed towards the rear subframe;
- Insert the front part of the right rear side body panel into the teeth (I) of the right front side body panel (8).

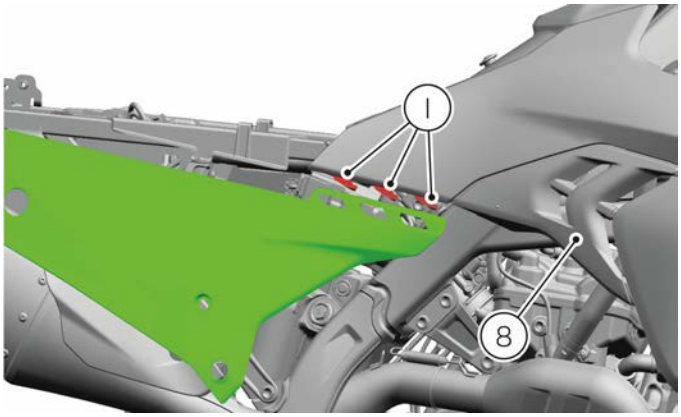


Fig 66

Start and tighten screw (4) to a torque of 1.5 Nm ± 10%.

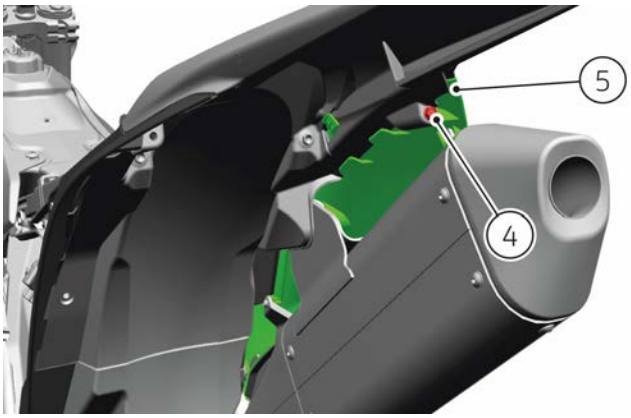


Fig 67

Start and tighten screw (6) to a torque of 8 Nm ± 10%.

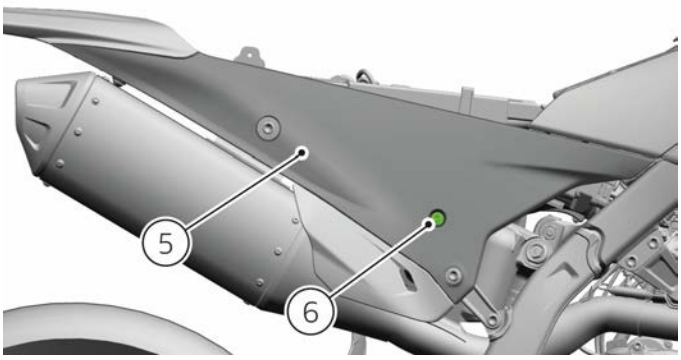


Fig 68

Start and tighten screw (7) to a torque of 8 Nm ± 10%.

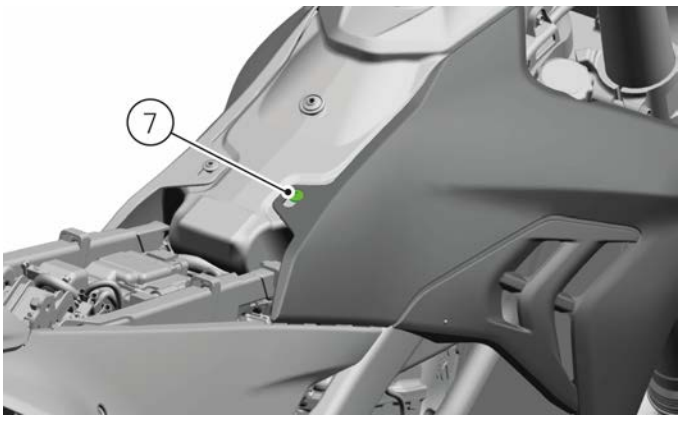


Fig 69

Fitting the rear LH side body panel

Position the left rear side body panel (3) so that the guides (L) fit into the profile (M) as shown in the figure.

During positioning, the retainer (N) must fit into the seat (O) of the rear mudguard.

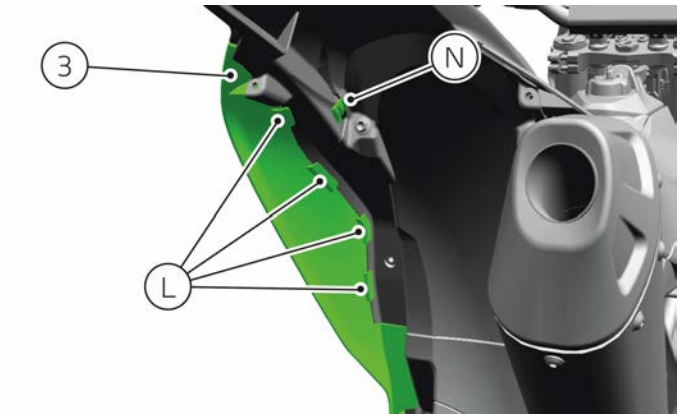


Fig 70

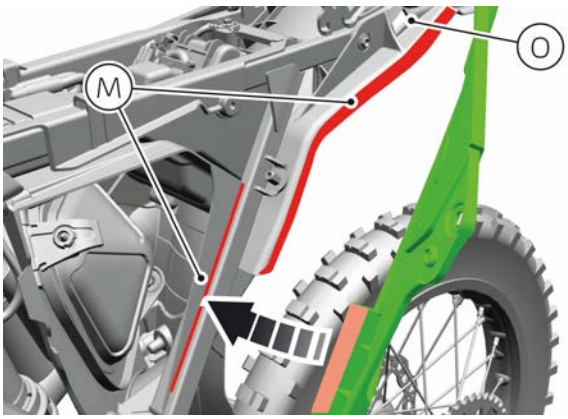


Fig 71

Start the two screws (4) and tighten them to a torque of 1.5 Nm ± 10%.

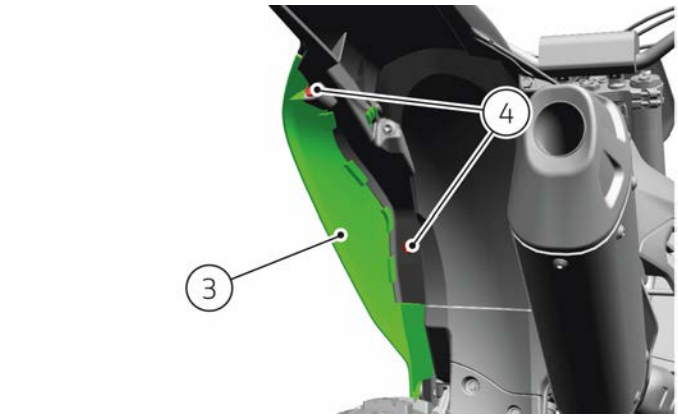


Fig 72

Start screws (2) and tighten them to a torque of 8 Nm ± 10%.

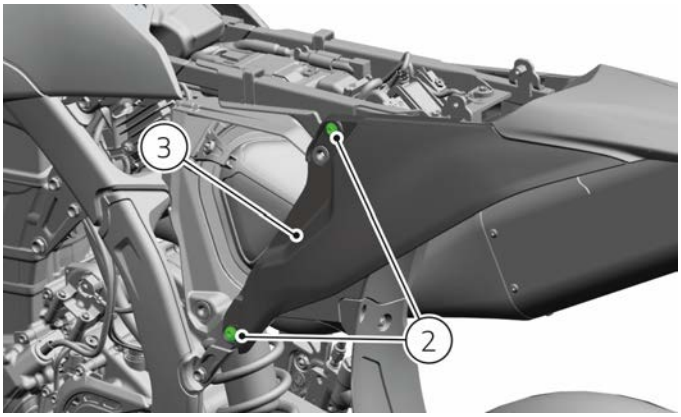


Fig 73

Position the air filter access door (1) by first inserting the front part and securing it to the teeth (D) on the front side body panel, then engaging the pin (A) into the rubber block (B).

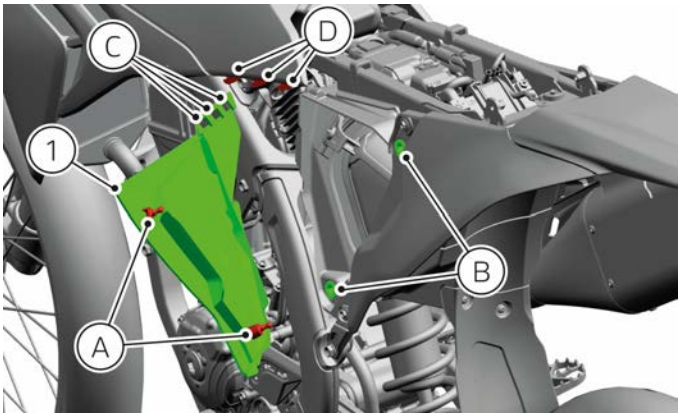


Fig 74

Refit the seat as described in chapter "Seat":

Front mudguard

Removal procedure

Remove the front number holder as described in the chapter "Front number holder".

Loosen the two screws (1) securing the upper front mudguard (2).

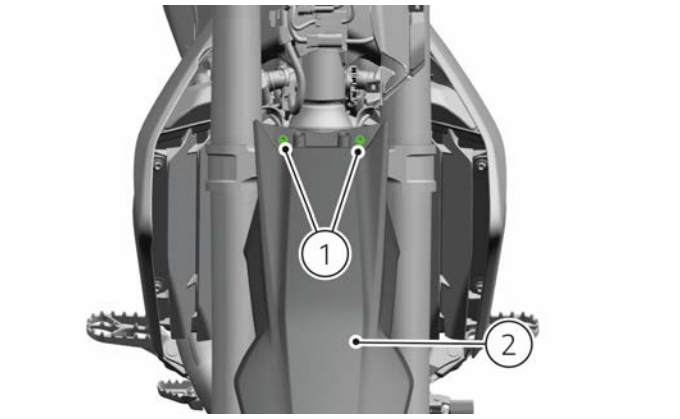


Fig 75

Loosen the two lower screws (3) retaining the front mudguard (2).
Remove the front mudguard (2).

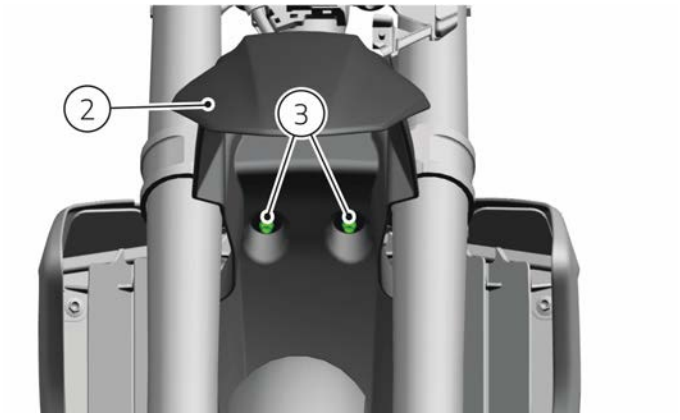


Fig 76

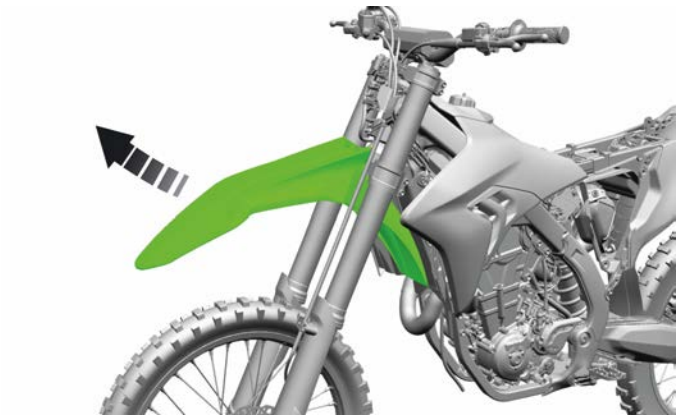


Fig 77

Assembly

Check that the bushings (4) are present on the front mudguard.

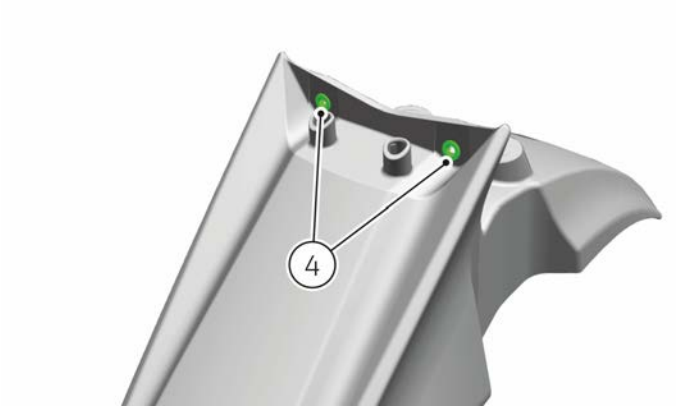


Fig 78



Fig 79

Position the front mudguard (2) and start the two upper screws (1).
Tighten the screws (1) to a torque of 12 Nm ± 10%.

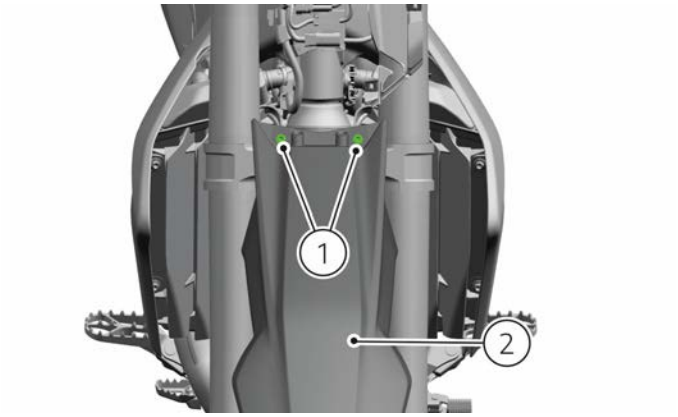


Fig 80

Start the two lower screws (3) and tighten them to a torque of 12 Nm ± 10%.

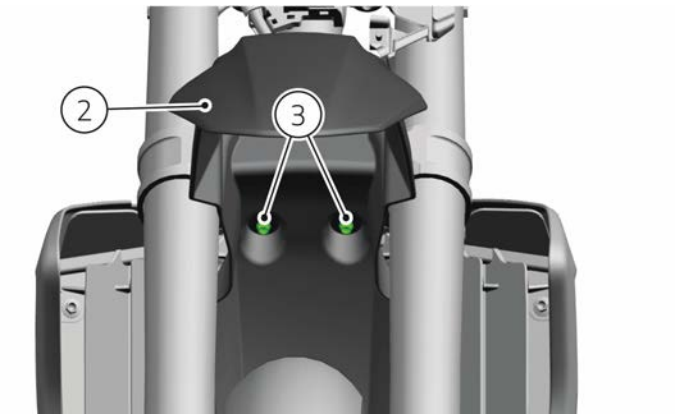


Fig 81

Refit the front number holder as described in the chapter “Front number holder”.

Fork guards

Removal procedure

For the left fork guard only, it is necessary to disconnect the brake hose from the hose guide.
Loosen the two screws (1) and remove the hose guide (2).

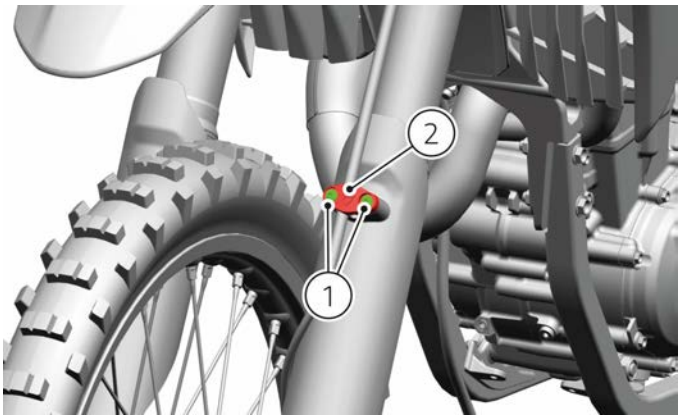


Fig 82

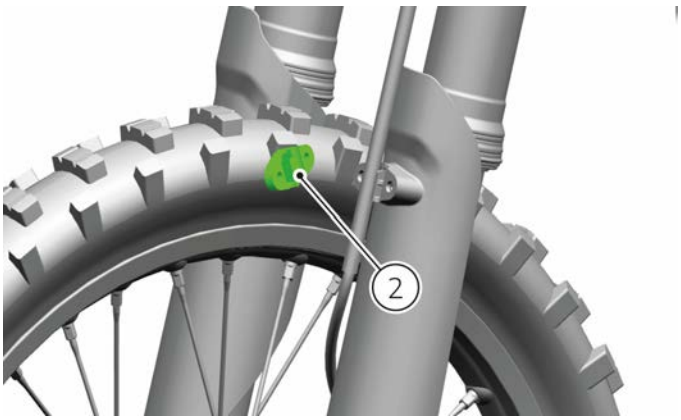


Fig 83

Undo the three fixing screws (3) with their respective spacers with collars (4).
Remove the fork guard (5).
Repeat the operation with the RH fork guard.

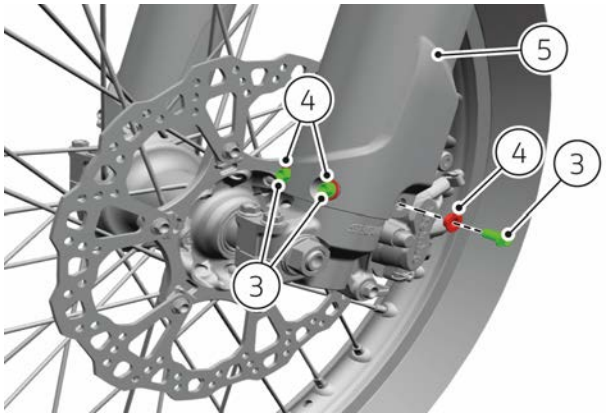


Fig 84



Fig 85

Assembly

Position the fork guard (5) and insert the screws (3) by placing the spacers with collars (4) in-between.
Tighten the screws (3) to a torque of 8 Nm ± 10%.

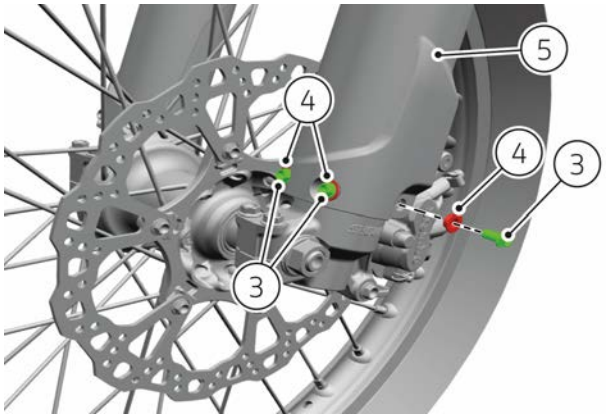


Fig 86

For the left fork guard only, position the brake hose (6) on the left side of the base of the hose guide.

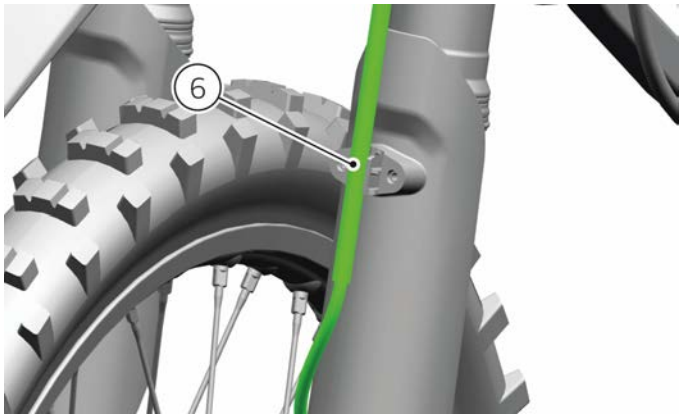


Fig 87



Fig 88

Position the hose guide (2) and start the screws (1).
Tighten the screws (1) to a torque of 1.2 Nm ± 10%.
Proceed by fitting the right fork guard.

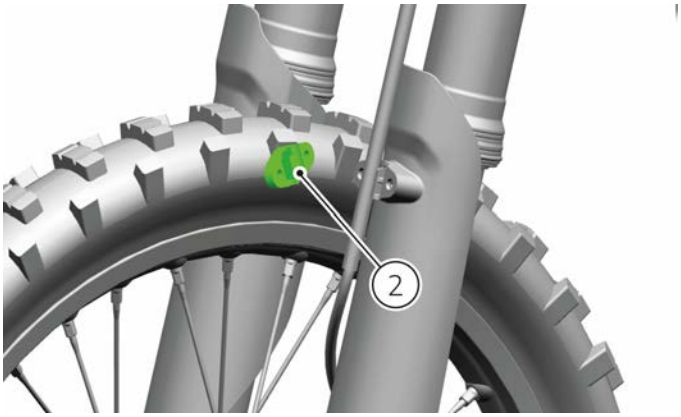


Fig 89

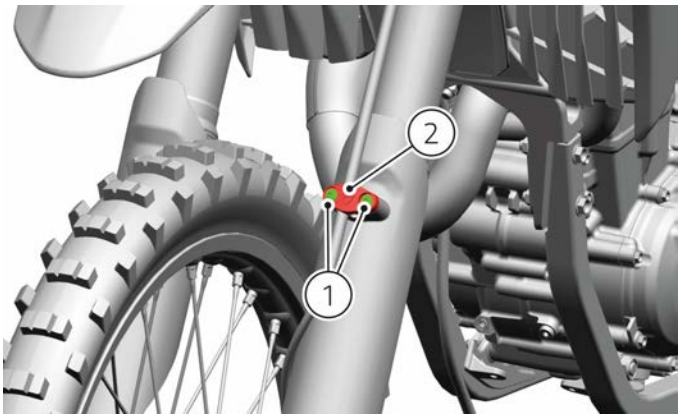


Fig 90

Rear mudguard

Removal procedure

Remove the seat as described in chapter “Seat”.
Remove the rear side body panels as described in chapter “Rear side body panels”.

Loosen screws (1) and (2) retaining the rear mudguard (3).
Remove the rear mudguard (3).

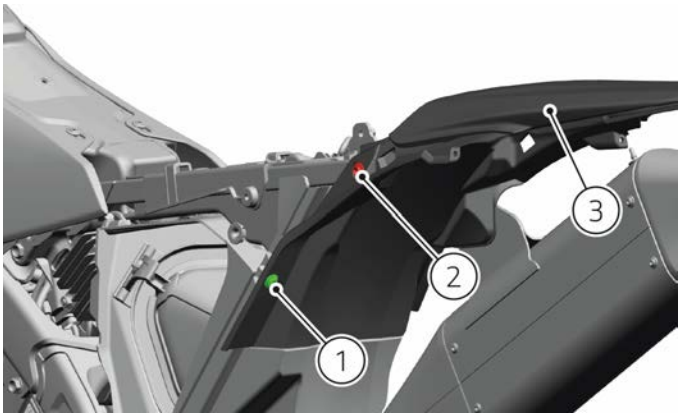


Fig 91

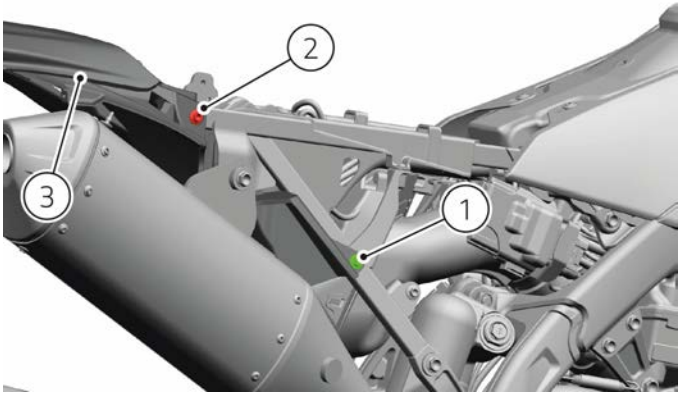


Fig 92

Assembly

Position rear mudguard (3) and start screws (1) and (2). Tighten the screws (1) to a torque of 8 Nm ± 10% and the screws (2) to a torque of 10 Nm ± 10%.

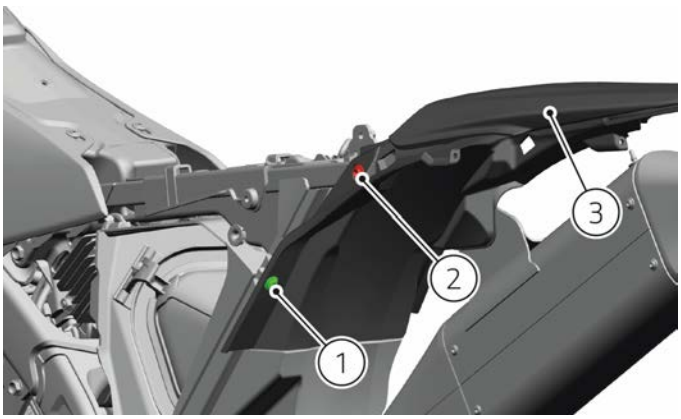


Fig 93

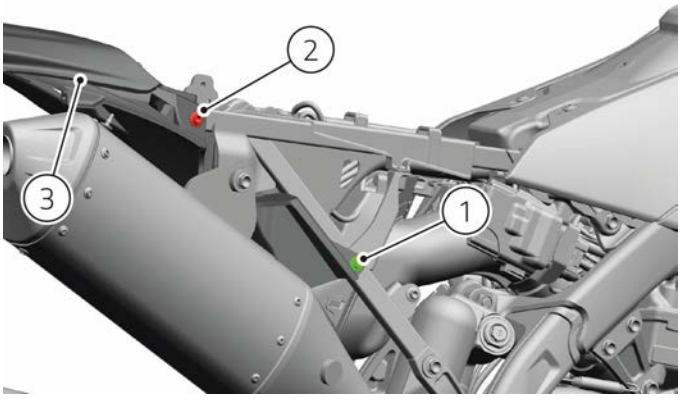


Fig 94

Refit the rear side body panels as described in chapter “Rear side body panels”.
Refit the seat as described in chapter “Seat”.

Maintenance - Main information

Clean the motorcycle

To maintain the original shine of the metal, painted and plastic surfaces over time, the motorbike must be washed and cleaned periodically. Use specific products only. Prefer biodegradable products. Avoid harsh detergents or solvents.
Periodically manually clean all aluminum components. Use special detergents, suitable for aluminum parts FREE of abrasives or caustic soda.

Attention
Before performing any maintenance on electrical components and mechanical parts of the frame or engine, and before washing the vehicle, disconnect the battery cables.

Note
Do not use sponges with abrasive parts or steel wool: only use soft cloths.

In any case, the Warranty does not apply to motorcycles whenever poor maintenance status is ascertained.

Important
Do not wash your motorcycle right after use. When the motorcycle is still hot, water drops will evaporate faster and spot hot surfaces.
Plug the silencer drain hole before cleaning to prevent water ingress.
If using a water jet or pressure washer for cleaning, do not remove the seat and air filter cover from the vehicle and avoid directing the water jet towards:

- Wheel rims, bearings and hubs;
- Seals of any kind;
- Electric components and handlebar switches;
- Battery compartment;
- Seat cover;
- Air filter compartment;
- Exhaust system.

Incorrect use of the pressure washer may cause aesthetic and functional damage to the vehicle (water entering the engine, wiring, connectors, suspension and steering mechanisms, fork, monoshock, etc.). For this reason, carefully follow the precautions below:

- Do not point the jet directly at the components listed above, especially at joints, gaskets and bearings;
- Always install the airbox cover and silencer cap;
- Keep a minimum distance of 60 cm between the gun nozzle and the motorcycle.

If there is any stubborn grease or dirt, specific products can be used, but only after testing their effects on the surfaces concerned.
After washing, dry all surfaces with a chamois leather or absorbent cloth.
To prevent corrosion, it is recommended to use a specific anti-corrosion spray on all metal surfaces except the brake discs and wipe off any excess product.
Clean the brake discs with a specific detergent and dry them thoroughly.
Only use cleaning products specifically designed for vehicle plastics.
If you intend to cover the vehicle with a bike canvas after washing, allow it to dry completely first.

Attention
Braking performance may be impaired immediately after washing the motorcycle. Never grease or lubricate the brake discs to avoid losing braking power. Clean the discs with an oil-free solvent.

Pay special attention when cleaning the wheel rims since they have parts in machined aluminum; clean them with a suitable product and dry them every time you use the vehicle.

Important
To clean and lubricate the drive chain, refer to the paragraph “Lubricating the chain”.

Vehicle transport

Before transporting the bike using another vehicle, follow the safety instructions below.

Remove all loose objects and accessories from the vehicle;
Align the front wheel straight in the riding direction and lock it properly to prevent any movement;
Engage the first gear;
Use the anchoring straps and apply them to strong components (e.g. frame) and NOT to the handlebar or to components that could break (e.g. handgrips, etc.);
The straps or ropes must NOT rub against any painted bike components;
The suspensions, if possible, must be in a partially compressed position so as to allow less movement of the vehicle with respect to the road surface during transport.

Attention
Do NOT attach the ropes to the handlebar.

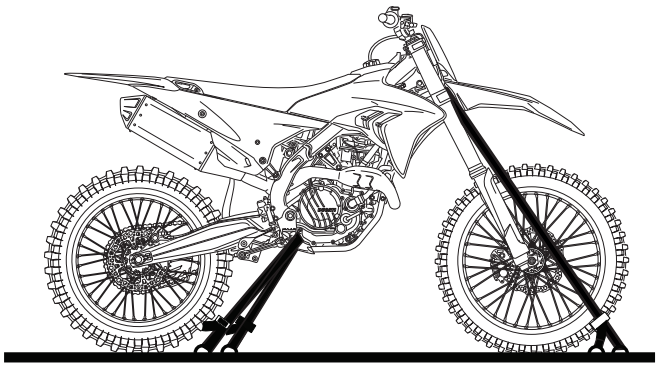


Fig 95

Daily checks

Attention
Failure to perform the following checks may cause damage to the vehicle and serious injury to the rider.

Pre-ride checks

Before each use of the motorcycle, carry out the safety checks described in chapter “Scheduled maintenance chart”.
Follow the instructions in the chart: **“1. Basic operations (at each Service and before each use)”** in the **“Before each use”** column

Maintenance after riding

Always check the motorcycle after each use.
Check for oil or coolant leaks and damage or loosening of mechanical, electrical and electronic components.
Remove the air filter and check that no mud or dust has entered the engine.
Then, clean thoroughly, following the instructions in chapter “General cleaning”.

Vehicle maintenance schedule

The maintenance schedule is divided and organized into two sections:

- Vehicle section - Fixed intervals
- Engine section - Designed for dynamic intervals*

*The Desmo450 features an algorithm in the engine control unit that can adapt engine maintenance intervals based on the intensity of use of the motorcycle. These intervals will range from the minimum value indicated in the checklist (for professional use) to a maximum value (for amateur use).

Therefore, the types of service provided for this model are:

Oil Service	It must be performed after the **first hour of motorcycle use** and subsequently **every 15 hours**.
Mid Service	It must be performed after a minimum of **45 hours** and a maximum of **60 hours** of motorcycle use. Maintenance operations must be carried out in conjunction with the Oil Service operations.
Full Service	It must be performed after a minimum of **90 hours** and a maximum of **120 hours** of motorcycle use. Maintenance operations must be carried out in conjunction with the Oil Service and Mid Service operations.

Scheduled maintenance chart

Attention

The maintenance schedule is highly dependent on the type of use of the motorbike and the ground conditions. In difficult conditions more frequent maintenance may be necessary.
Use on dusty or very muddy terrain may require reducing the maintenance intervals on the most stressed components (air filter, kinematics, bearings, suspension, etc.).
In extreme conditions, cleaning and lubrication may be necessary even after a single use.

Attention

Please contact a Ducati Dealer or authorized Service Center where you can receive customized service advice according to the sport use you make of your Desmo450 MX.

1. Basic operations (at each Service and before each use)	**Service operations**	**Before each use**
1.1. Reading of the error memory with DDS X and check of technical updates and recall campaigns on DCS (Ducati Service only)	•	
1.2. Electric system - general operation check	•	•
1.3. Engine oil - level check	•	•
1.4. Coolant - level check	•	•
1.5. Clutch and brake fluid - level check	•	•
1.6. Throttle control - check for freedom of movement (cleanliness and adjustment)	•	•
1.7. Front brake lever - check for free play and freedom of movement (cleaning and lubrication, if needed)	•	•
1.8. Rear brake pedal - check for free play and freedom of movement (cleaning and lubrication, if needed)	•	•
1.9. Front brake - check for disk and pad wear	•	•
1.10. Rear brake - check for disk and pad wear	•	•
1.11. Hoses and rubber gaiters (e.g. fuel hoses, cooling system hoses, drain hoses, brake hoses) - check for position, deformation or damage	•	•
1.12. Frame and swinging arm - visual integrity check	•	•
1.13. Frame and swinging arm - safety tightening check in accordance with Owner's manual	•	•
1.14. Steering tube - check bearing play and freedom of movement	•	•
1.15. Swinging arm bearings - check for clearance	•	•
1.16. Levers of monoshock absorber - check for clearance	•	•
1.17. Tires - check condition and pressure	•	•
1.18. Wheel hubs - visual check for defects and bearing play check	•	•
1.19. Wheel rims - visual check for defects, alignment and spoke tension verification	•	•

1. Basic operations (at each Service and before each use)	Service operations	Before each use
1.20. Final drive - check for wear on chain, rear sprocket, sprocket, sliding shoes, chain guide and tension - rear sprocket fixing nut and screw tightness check	•	•
1.21. Fork and monoshock absorber - visual check for defects and oil leaks	•	•
1.22. Air filter and airbox - wash and clean (check filter integrity)	•	•

2. Additional operations on the vehicle (to be carried out according to the indicated deadlines or every 12 months)	
2.1. Electrical system - battery and charging circuit check	Every 15h
2.2. Wheel rims - spoke tensioning using a torque wrench	After the first hour
2.3. Steering tube - check bearings and preload ring nut tightness	After the first hour
2.4. Steering tube - check bearings, lubrication and preload ring nut tightness	Every 15h
2.5. Throttle control – cleaning and lubricating the throttle cables and the contact surface between the throttle grip and the handlebar	Every 15h
2.6. Wheel bearings - check for freedom of movement with wheel removed	Every 15h
2.7. Silencer - check and replace soundproofing material if necessary	Every 15h
2.8. Rear brake pedal - pin cleaning and lubrication	Every 15h
2.9. Monoshock linkage - check and lubricate bearings*	Every 15h
2.10. Rear and front brake caliper - cleaning and lubrication of the sliding pins	Every 15h
2.11. Brake and clutch fluid - change*	Every 30h
2.12. Swinging arm - bearing lubrication	Every 45h
2.13. Fork and monoshock absorber - check and overhaul*	Every 45h

*Every 15 hours, in case of very intensive use (continuous participation in competitions, use on sandy terrain, etc.)

3. Oil Service (after 1h and then every 15h)	Service operations	Before each use
3.1. Clutch - check	•	
3.2. Engine oil - cartridge oil change and mesh filter cleaning	•	

4. Additional work on engine (to be carried out according to schedule)	
4.1. Throttle body bypass screw cleaning	Every 15h

5. Mid Service (dynamic due date, minimum 45h/maximum 60h; to be carried out in addition to Oil Service operations)	Service operations	Before each use
5.1. Complete piston - replacement	•	
5.2. Cylinder - check and measurement	•	
5.3. Cylinder head - visual check of all components (head, camshafts, rocker arms, ...)	•	
5.4. Timing chain and sliding shoes - check	•	
5.5. Con-rods - check	•	
5.6. Valve clearance - check and adjustment, if necessary	•	
5.7. Spark plug and spark plug cap - replacement (use specific grease between cap and spark plug)	•	
5.8. Throttle body cleaning including bypass screw and passage	•	
5.9. Water pump - replacement of external seal (coolant side)	•	
5.10. Coolant - change	Every 24 months	

6. Full Service (dynamic due date, minimum 90h/maximum 120h; to be carried out in addition to Oil Service and Mid Service operations)	Service operations	Before each use
6.1. Valves and valve collets - replacement	•	
6.2. Timing chain and sliding shoes - replacement	•	
6.3. Con-rod - replacement, including bearing and pin on crankshaft	•	
6.4. Gearbox - visual check of all components and verification of correct functioning	•	
6.5. Main bearings and relevant metal shielding - replacement	•	
6.6. Crankcase oil seals - replacement	•	

6. Full Service (dynamic due date, minimum 90h/maximum 120h; to be carried out in addition to Oil Service and Mid Service operations)	Service operations	Before each use
6.7. Water pump - replacement of both seals	•	
6.8. Starter clutch - replacement	•	

7. Closing operations (at each Service)	Service operations	Before each use
7.1. Engine idle speed - check and adjustment, if necessary	•	
7.2. Final check - test ride	•	
7.3. Error memory reading with DDS X (Ducati Service only)	•	
7.4. Digital maintenance - service coupon recording (Ducati Service only)	•	

NOTICE:
Ducati Canada does not guarantee the availability of replacement parts, repair services, and information necessary to maintain or repair a vehicle.

Air filter - removal and cleaning

Removal procedure

Pull the air filter access door (1) outwards, so as to first release the pins (A) from the rubber blocks (B) and then the seats (C) from the teeth (D) on the side body panel.

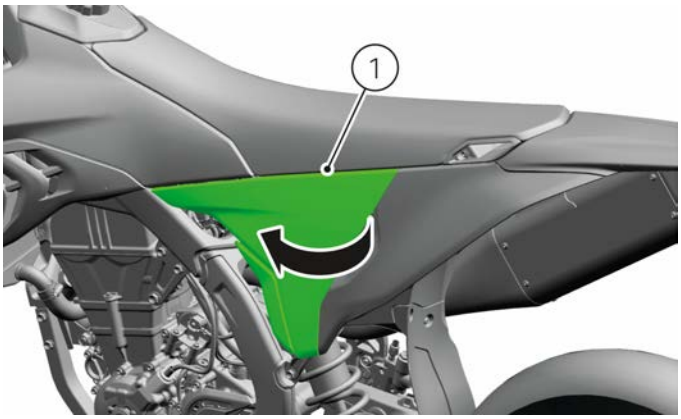


Fig 96

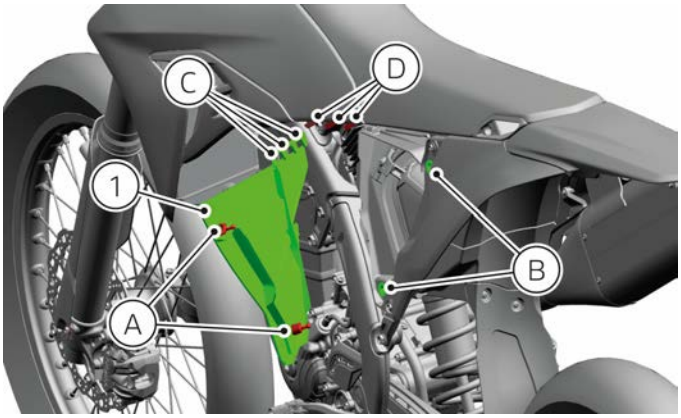


Fig 97

Pull the lever (2) so as to release the pin (E) of the filter (3) from the rubber block (F).

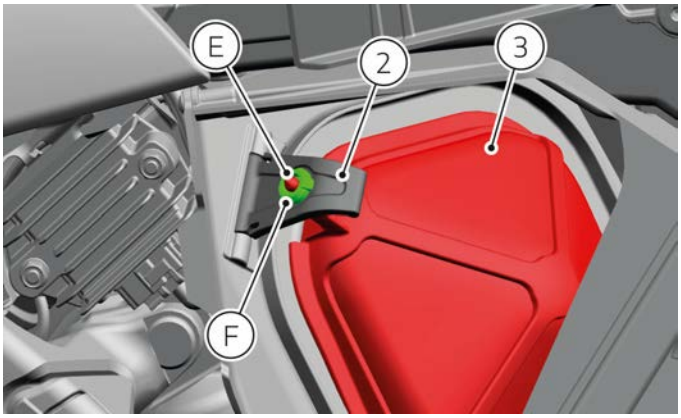


Fig 98

Remove the filter (3) by pulling it outwards so as to release the pin (G) from the rubber block (H).

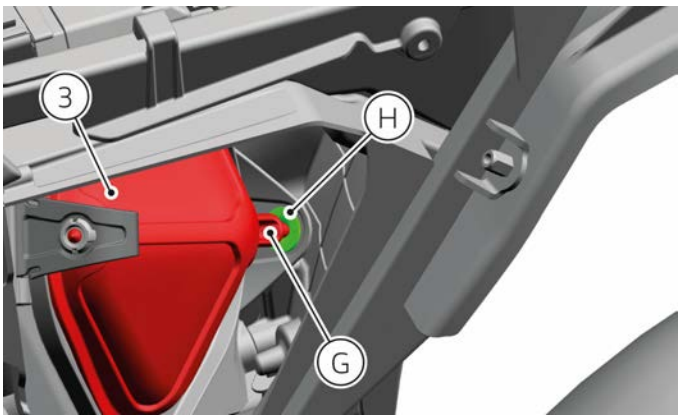


Fig 99

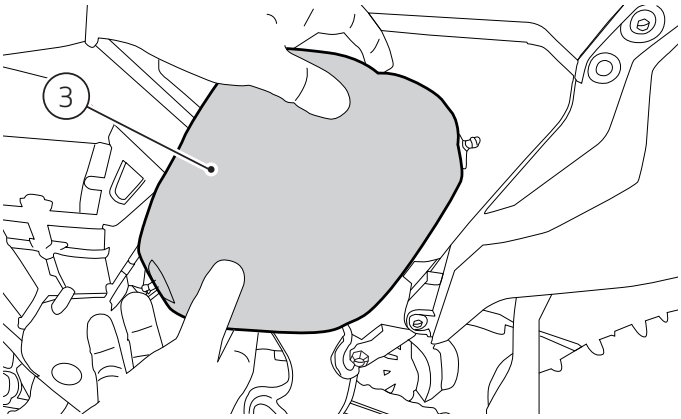


Fig 100

Separate the air filter (4) from the filter support (5) by removing it from the pins shown in the figure.

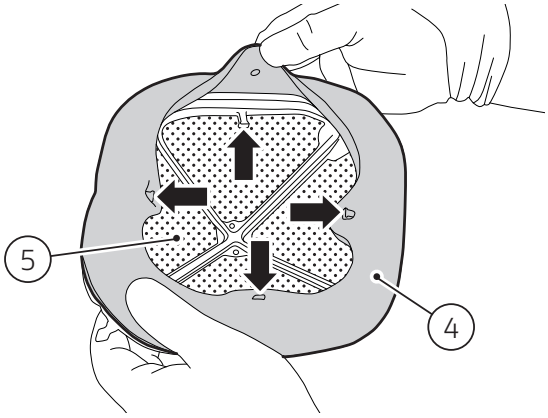


Fig 101

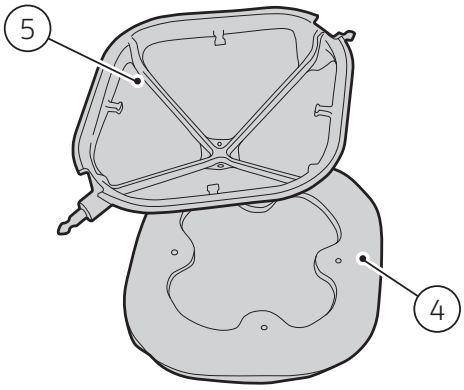


Fig 102

Wash the filter element with an air filter cleaner, squeeze it out and dry it completely.

Important

Do not use fuel or volatile organic oils (acidic/alkaline) for cleaning.

Attention
Do not twist the filter while squeezing.

Check that the air filter is not damaged. If necessary, replace it with a new one.

After cleaning or before installing a new one, apply the appropriate oil to the filter.
Unless otherwise specified by the oil manufacturer, completely immerse the filter in oil and squeeze it thoroughly to remove any excess oil.
Then wait a few hours for the oil to stabilize.

Note
The element must be soaked in oil so that it is wet but not dripping.

Refitting
Insert the air filter (5) into the filter holder (5) by inserting the four pins of the holder into the four holes of the air filter as shown in the figure.

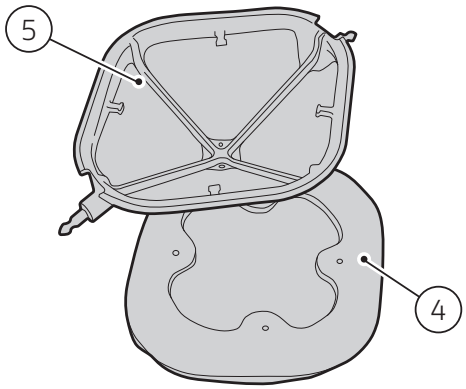


Fig 103

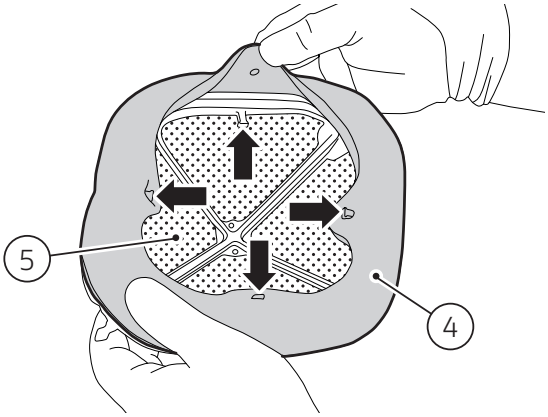


Fig 104

Place the complete air filter (3) inside the airbox.

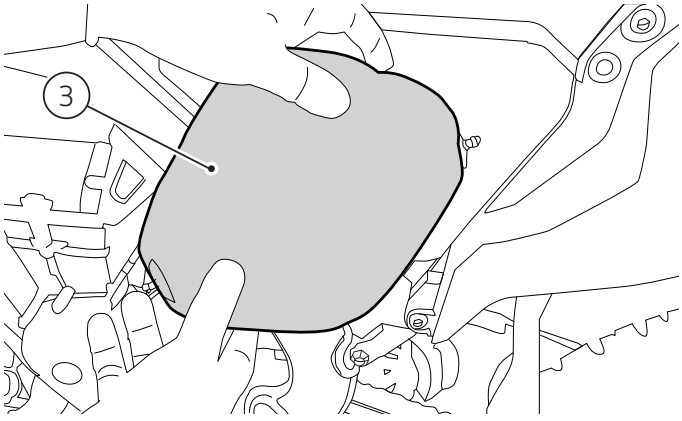


Fig 105

During assembly, make sure that the air filter profile is positioned inside the airbox guide.



Fig 106

First insert pin (G) into rubber block (H), then pin (E) into rubber block (F).
Close lever (2) to secure the air filter (3).

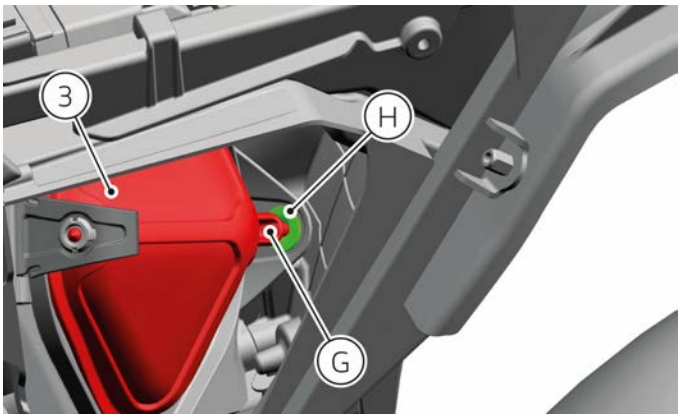


Fig 107

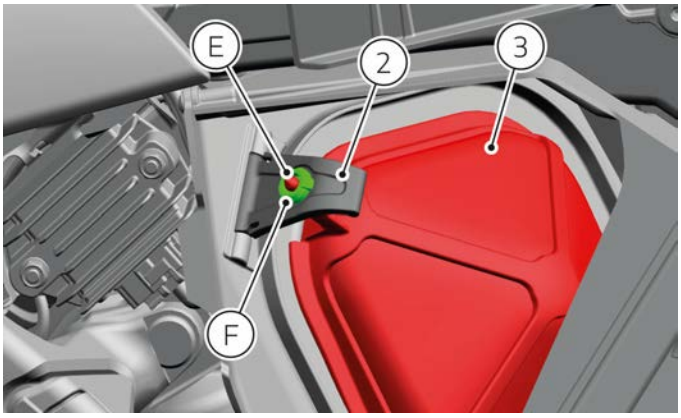


Fig 108

Position the air filter access door (1) by first inserting the front part and securing it to the teeth (D) on the front side body panel, then engaging the pin (A) into the rubber block (B).

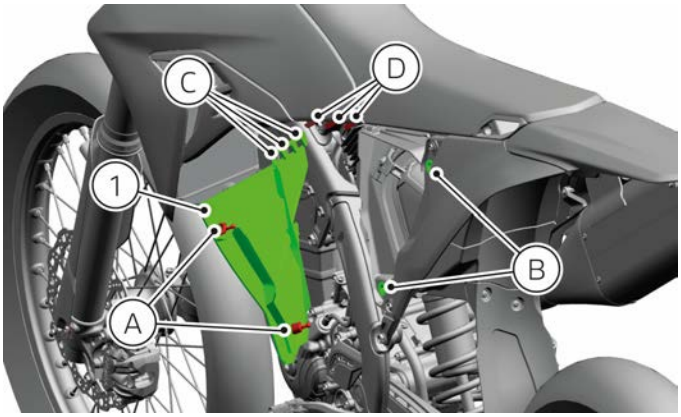


Fig 109

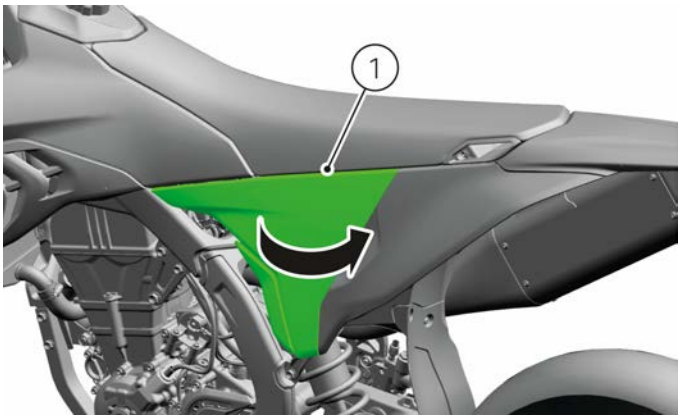


Fig 110

Engine oil - Level check

To check the oil level correctly, carefully follow the instructions below:

- The level should be checked with warm engine, about 15 minutes after the engine has been stopped.
- Turn off the engine and wait 10\15 minutes to allow the oil to flow completely inside the sump.
- Place the motorcycle on a center stand.
- Now check the oil level through the sight glass (1).
- If the oil level is below the middle line between the MIN and MAX notches, oil must be added.
- To do this, remove the filler plug (2) and add the prescribed amount of oil until the MAX notch is reached.
- Refit the filler plug (2).

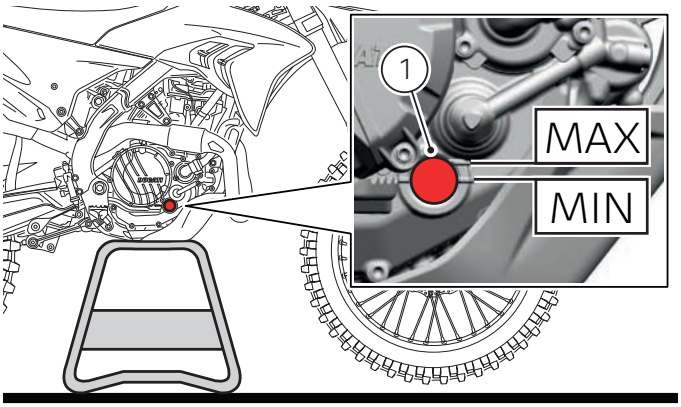


Fig 111



Fig 112

Note

Ducati prescribes the only use of SAE 15W-50 API SP and JASO MA2 oil and recommends the use of DUCATI GENUINE OIL Powered by Shell Advance 15W-50 (where available; where not available, Ducati recommends using SHELL Advance 4T Ultra 15W-50).

Attention

For replacement intervals, refer to the scheduled maintenance chart in chapter “Scheduled maintenance chart”.

Attention

Never exceed the MAX mark.

Engine oil - Oil and filter replacement

Note

This operation has to be carried out with hot engine (but turned off) because the oil in these conditions is more fluid and comes out faster and completely.

Attention

Dispose of oil and/or filter cartridges in compliance with environmental protection regulations.

Disposal

Do not dispose of the waste into the environment; do not pour the product, either new or exhausted, inside drains, water courses or the soil. Collect and deliver waste to authorized collecting centres. Dispose of waste in compliance with the prevailing local and national standards. European Waste Catalogue Codes recommended for waste disposal as indicated by Decision No 2001/118/EC: EWC 13 02 05* (Mineral-based non-chlorinated engine, gear and lubricating oils): EWC 16 01 07* (Oil filters).

Note

It should be noted that the above-mentioned EWC code is a general and non-binding provision, provided based on product original composition and intended use. The user is thus responsible for selecting the EWC code most suitable to the concerned product, based on product real use and taking into account any alterations and/or contaminations of the product, as well as any amendments to the prevailing standard on waste disposal.

Changing the engine oil and removing the filter

Position a suitable container under the lower part of the engine.

Loosen the magnetic plug (1) and plug (2) located at the bottom of the engine.
Allow the used oil to drain off completely.
Check the conditions of the two O-rings (A).

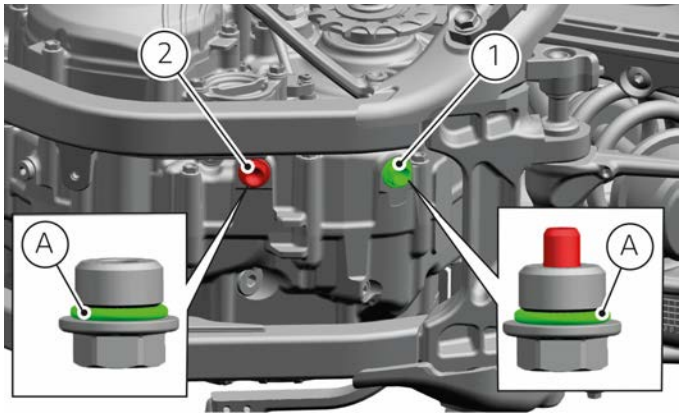


Fig 113

If the oil filter also needs to be replaced, follow the procedure below.

Loosen the retaining screws (3) of the oil filter cover (4).
Remove the oil filter cover (4).

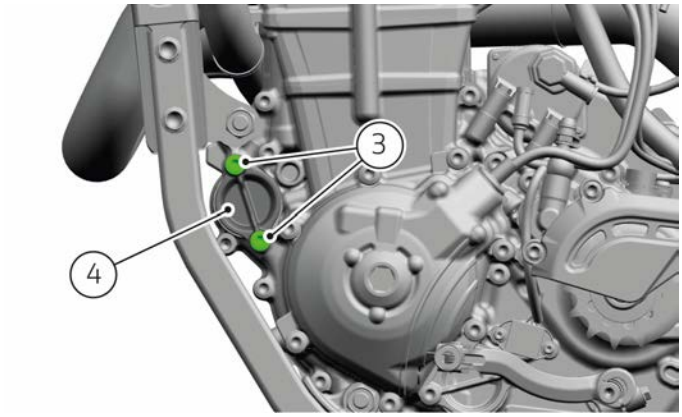


Fig 114

Remove the oil filter (6).
Check the conditions of the O-ring (5).

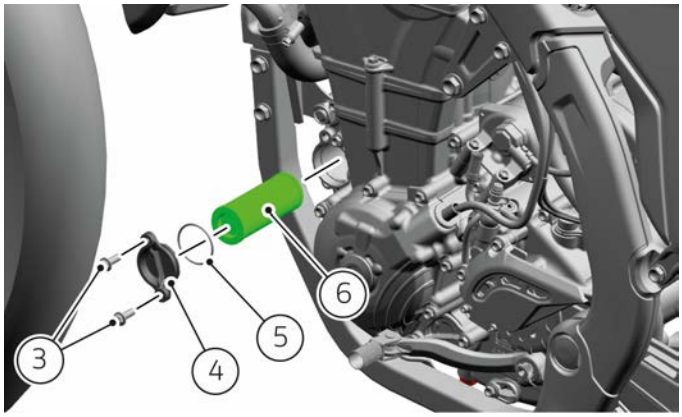


Fig 115

Loosen the screw (7) and remove the mesh filter (8).
Clean the mesh filter (8) using fuel and compressed air. Take care not to damage the mesh. If the filter is damaged, replace it.

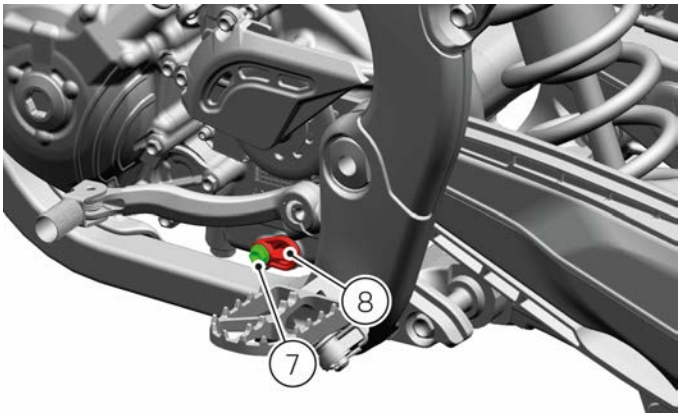


Fig 116

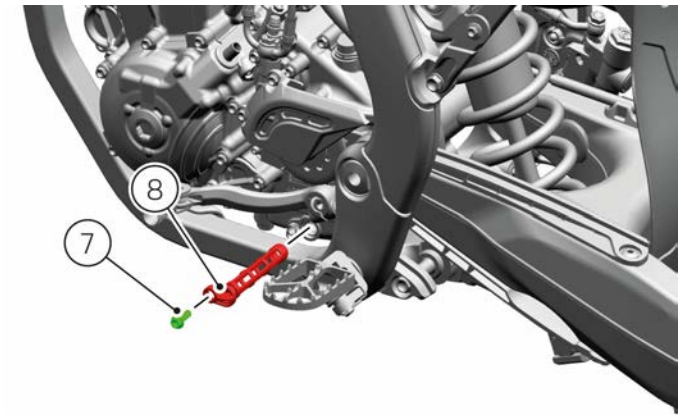


Fig 117

Refitting the filter and refilling with engine oil

Replace the oil filter (6) with a new one.
Apply engine oil on the rubber-coated surface (B) of the new oil filter (6).
Lay the motorcycle on its side and fill the oil filter through the opening on the generator-side casing with approximately ⅓ of the engine oil.
Perfectly drive the new oil filter (6) fully home inside the special slot on the generator-side casing, making sure that rubber side hole (B) is correctly insert inside pipe (C).

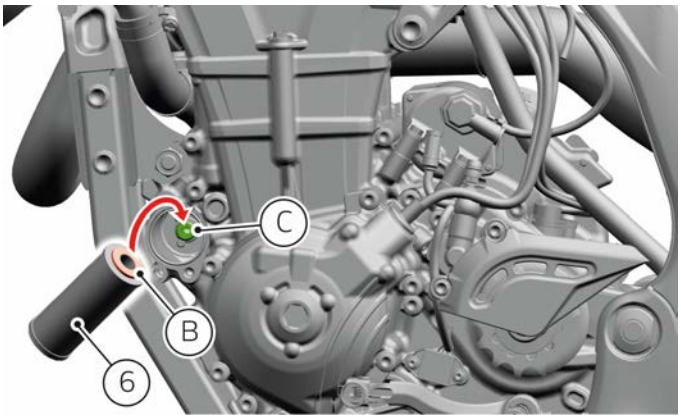


Fig 118

Check the integrity of the O-ring (5) and, if damaged, replace it.
Apply engine oil on the O-ring (5) installed on the oil filter cover (4).
Insert the oil filter cover (4) fully home into its seat on the generator-side casing.
Start the screws (3) on oil filter cover (4).
Tighten the screws (3) to a torque of 13 Nm (Min. 12 Nm. - Max. 14 Nm).

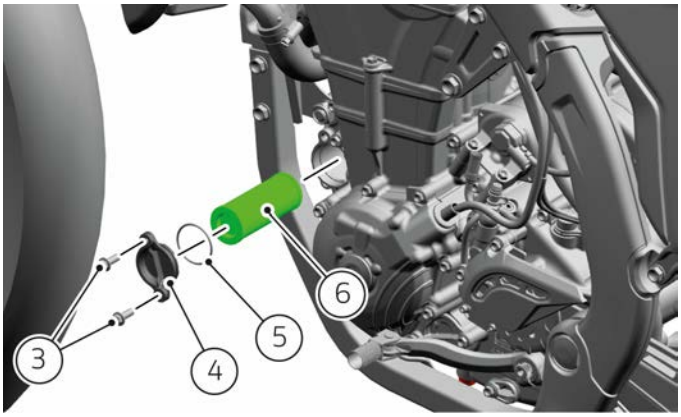


Fig 119

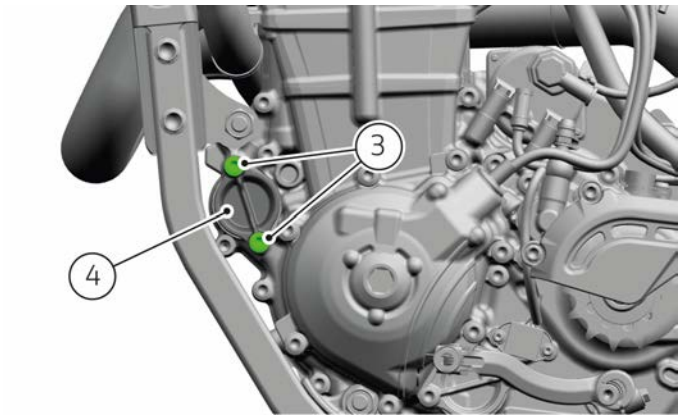


Fig 120

Insert the mesh filter (8) fully home into its seat on the generator-side casing.
Apply Loctite®243™ to the thread of the screw (7).
Start and then tighten the screw (7) to a torque of 10 Nm (Min. 9 - Max. 11).

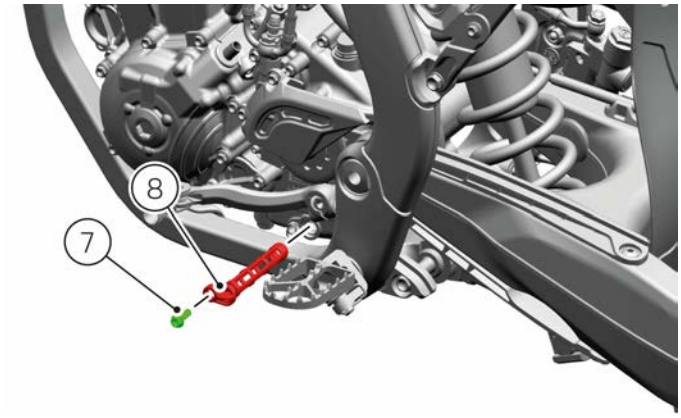


Fig 121

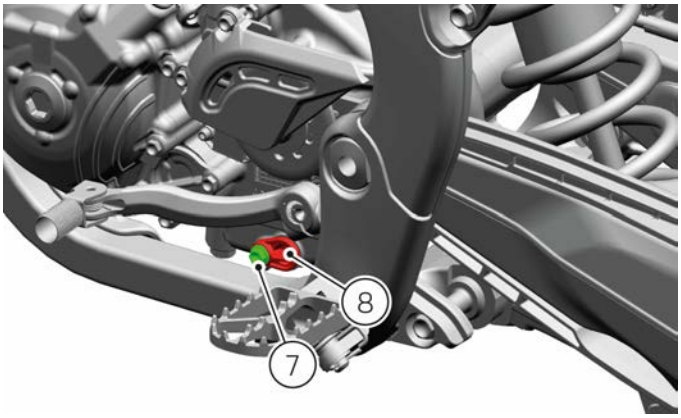


Fig 122

Clean plug thread (1), check that there are no metal deposits on the end of the magnetic plug. Check the integrity of the O-ring (A) and, if damaged, replace it.
Clean the plug (2) thread. Check the integrity of the O-ring (A) and, if damaged, replace it.
Start plugs (1) and (2) and tighten them to a torque of 15 Nm (Min. 14 Nm - Max. 16 Nm).

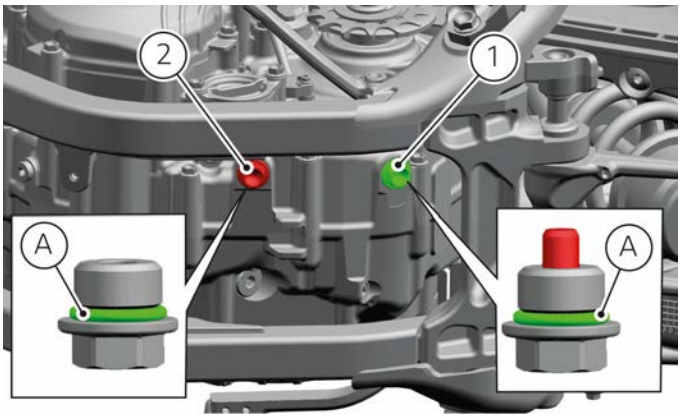


Fig 123

Remove the filler plug (7) and fill the lubrication circuit, restoring the exact amount of engine oil prescribed and checking the level through the sight glass (8).
Refit the filler plug (7). Run the engine at idle speed for a few minutes.
Check the oil level again through the sight glass (8). If the level is low, add more engine oil.



Fig 124

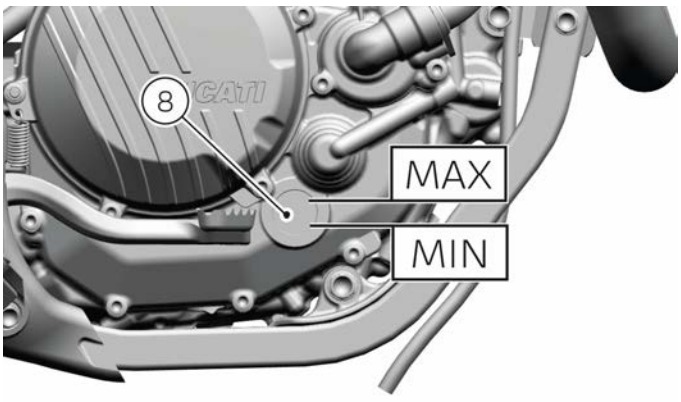


Fig 125

Coolant - Level check

Attention

A hot radiator is under pressure and may lead to coolant or hot vapor leakage with possible consequent severe burns.
Therefore, do not remove the radiator cap when the engine is warm. When the engine has cooled down, open the radiator cap as follows: place a thick rag or cloth above the radiator cap and slowly unscrew the cap anticlockwise towards the retainer to release any residual pressure. When you no longer hear the typical hissing sound, press down on the radiator cap and unscrew it anticlockwise to remove it.

Place the vehicle upright on a flat surface.
Remove the radiator plug (1).



Fig 126

Check the coolant level (A) inside the radiator (2).
If it is below the level (A) shown in the figure, add coolant.

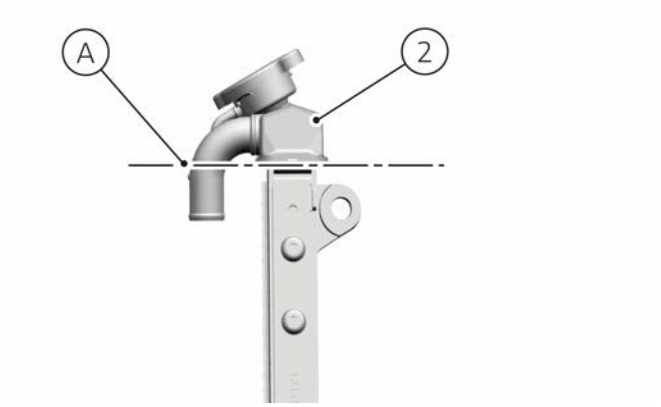


Fig 127

Refit the cap (1), start the engine and, after warming it up for a few minutes, switch it off again.
After waiting for the engine to cool down, open the cap again and check the level.



Fig 128

Coolant - Change

Attention

A hot radiator is under pressure. Therefore, do not remove the radiator cap when the engine is warm. This could lead to leakages of hot liquid and steam, causing serious injury. When the engine has cooled down, open the radiator cap as follows: place a thick rag or cloth above the radiator cap and slowly unscrew the cap counterclockwise towards the retainer to release any residual pressure. When you no longer hear the typical hissing sound, press down on the radiator cap and unscrew it counterclockwise to remove it.

Attention

Do not dispose of coolant into the environment.

Disposal

Do not dispose of the waste into the environment; do not pour the product, either new or exhausted, inside drains, water courses or the soil. Collect and deliver waste to authorized collecting centres.
Dispose of waste in compliance with the prevailing local and national standards.
European Waste Catalogue Codes recommended for waste disposal as indicated by Decision No 2001/118/EC: EWC 16 01 14* (Antifreeze fluids containing dangerous substances).

Note

It should be noted that the above-mentioned EWC code is a general and non-binding provision, provided based on product original composition and intended use. The user is thus responsible for selecting the EWC code most suitable to the concerned product, based on product real use and taking into account any alterations and/or contaminations of the product, as well as any amendments to the prevailing standard on waste disposal.

Draining the coolant

Place the vehicle upright on a flat surface.
Place a container under the engine and loosen the screw (1) to drain the coolant. Replace the seal (2) before refitting.

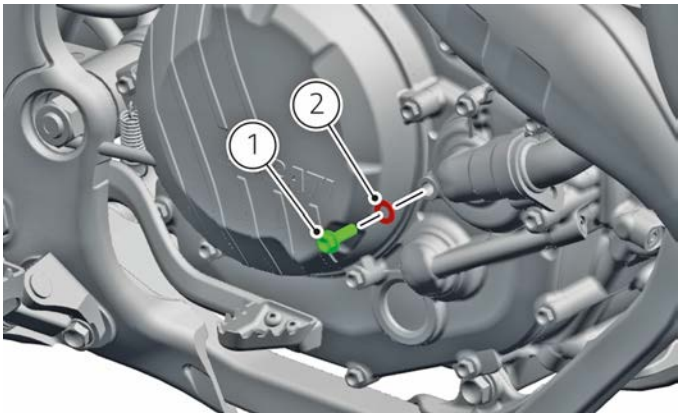


Fig 129

Open the radiator plug (3) and allow all the coolant to drain out completely.



Fig 130

Once coolant has been completely drained, screw plug (1) again with a NEW seal (2).
Tighten the plug (1) to a torque of 13 Nm (Min. 12 Nm. - Max. 14 Nm).

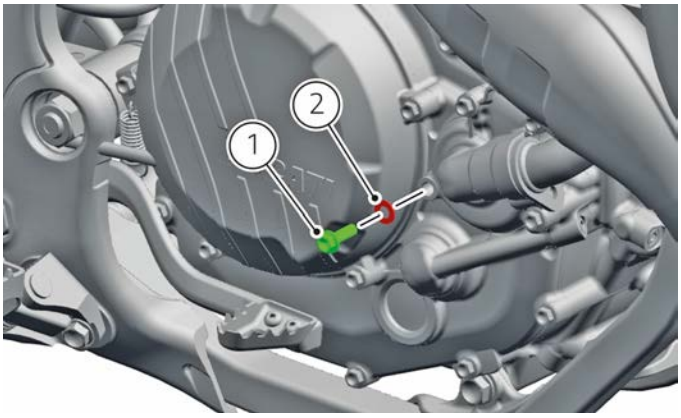


Fig 131

Working on the right side of the motorcycle, fill the circuit with new coolant through the opening on the radiator.
Add coolant until all the air has been removed from the circuit.
Screw the radiator cap (3).



Fig 132

- Start the engine and warm it up to operating temperature. After switching off the engine, wait for it to cool down.
- After waiting for the engine to cool down, open the cap (3) again and check the level.

If the level is low, add new specified coolant to the water radiator until the maximum level is reached.

Important
Check the circuit for possible leaks.

Checking the front brake fluid level

The level must not fall below the MIN notch on the respective reservoir.

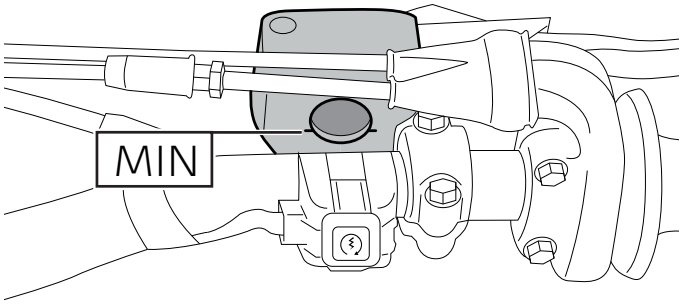


Fig 133

If level drops below the limit, air might get into the circuit and affect the operation of the system involved. A low brake fluid level normally indicates that the friction material on the pads is worn. Perform the check as indicated in paragraph “Checking and replacing the front brake pads”.

If in doubt or if other problems arise (too soft lever, excessive play, etc.), contact a Ducati Dealer or an authorized Ducati Service Center to carry out the necessary maintenance or to have the system checked.

Attention

Brake and clutch fluid can damage paintwork and plastic parts, so avoid contact.
Hydraulic oil is corrosive; it may cause damage and lead to severe injuries. Never mix fluids of different qualities. Check seals for proper sealing.

Checking and replacing the front brake pads

Checking for wear

Check the front brake pads for wear.
If the thickness of the friction material, even in just one pad, is about 0.04 in (1 mm) replace both pads.

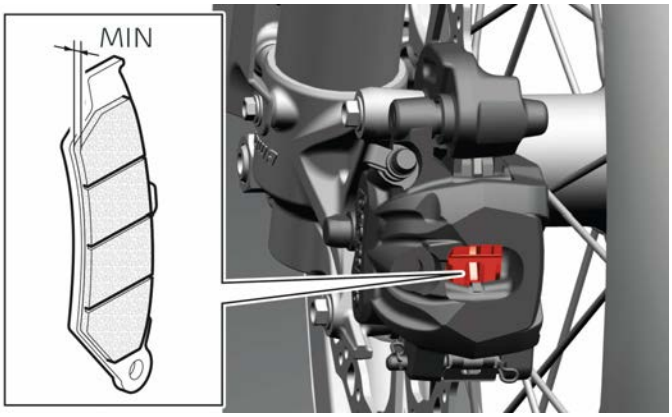


Fig 134

Removing the front brake pads

Remove the split pins (1) and the pin (2).

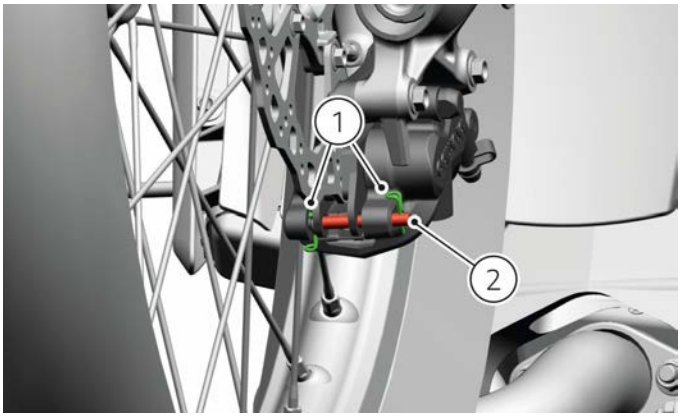


Fig 135

Remove the front brake pads (3) by pulling them downwards.

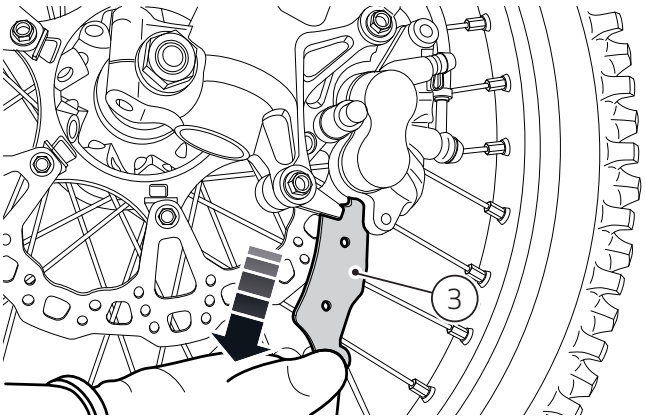


Fig 136

Refitting the front brake pads

Insert the front brake pads (3) from the bottom upwards, checking that they are correctly positioned inside the recess with the metal plate (4).

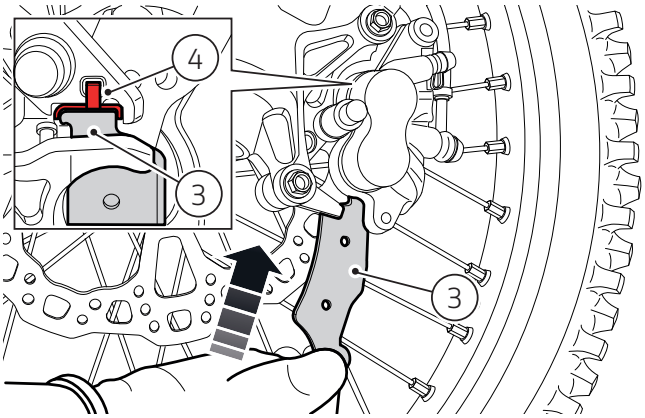


Fig 137

Reinsert the pin (2) and secure it with the split pins (1).

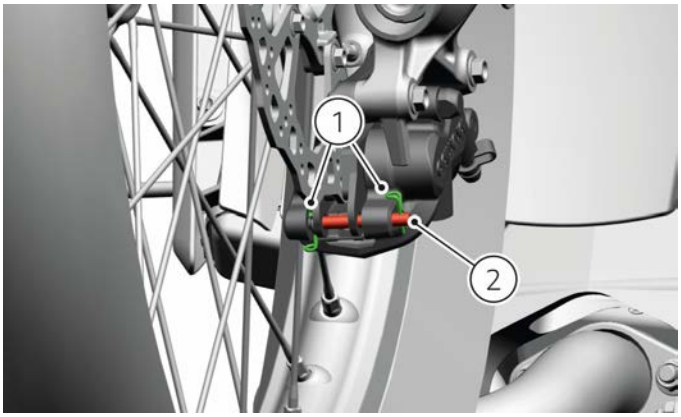


Fig 138

Checking the rear brake fluid level

The level must not fall below the MIN notch on the respective reservoir.

If level drops below the limit, air might get into the circuit and affect the operation of the system involved. Brake and clutch fluid must be topped up and changed at the intervals specified in the scheduled maintenance chart under “Scheduled maintenance chart”; please contact a Ducati Dealer or Authorized Service Center.

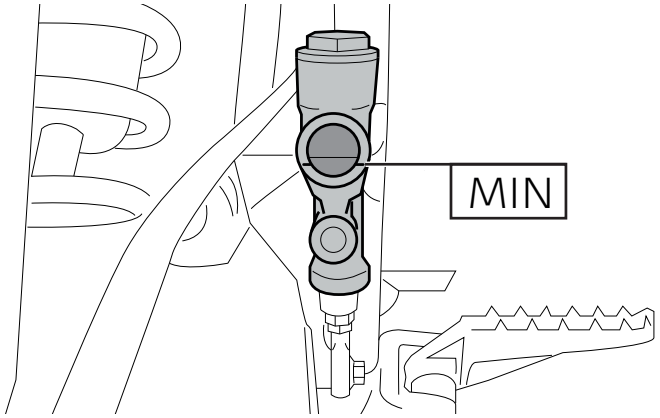


Fig 139

Brake system

If you find exceeding clearance on brake pedal and brake pads are still in good condition, contact your Ducati Dealer or authorized Service Center to have the system inspected and any air drained out of the circuit.

Attention

Brake and clutch fluid can damage paintwork and plastic parts, so avoid contact.
Hydraulic oil is corrosive; it may cause damage and lead to severe injuries. Never mix fluids of different qualities.
Check seals for proper sealing.

Checking and replacing the rear brake pads

Checking for wear

Check the rear brake pads for wear.
If the thickness of the friction material, even in just one pad, is about 0.04 in (1 mm) replace both pads.

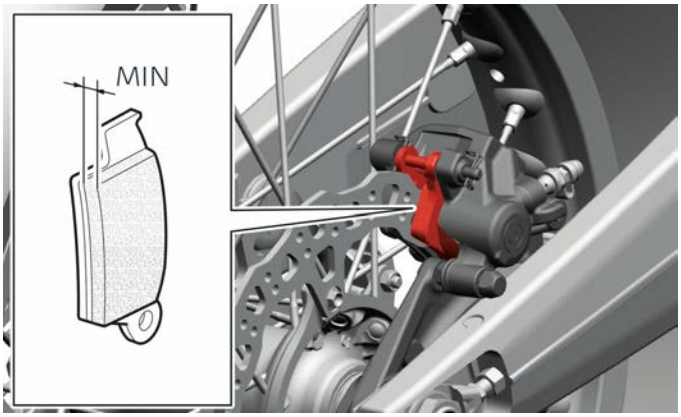


Fig 140

Removing the rear brake pads

Remove the rear wheel as described in chapter “Removing and refitting the rear wheel”.
Remove the split pins (1) and the pin (2).

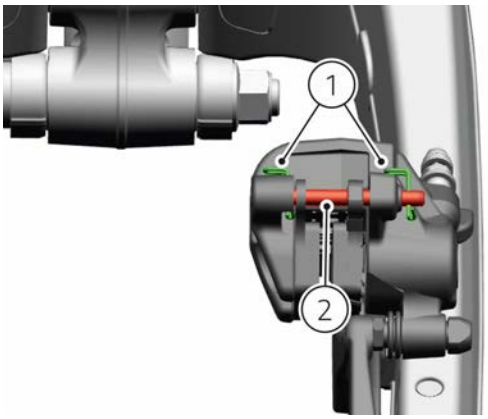


Fig 141

Remove the pads (3) together with the spring plate (4). The right-side pad has an intermediate plate (5) and an outer plate (6), which must be refitted in the same position when refitting.

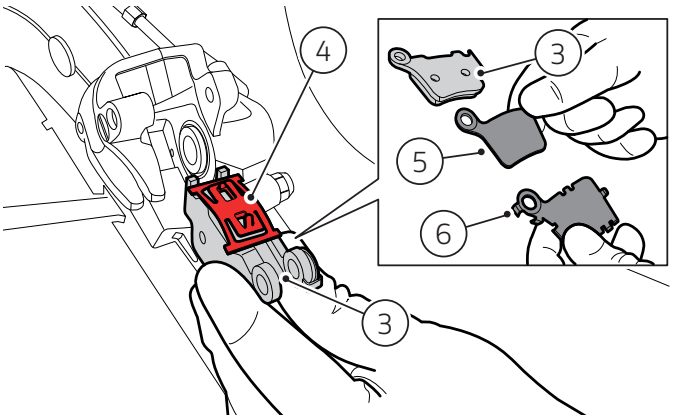


Fig 142

Refitting the rear brake pads

Place the intermediate plate (5) and the outer plate (6) on the right-side pad in the same position as when they were removed.
Insert the rear brake pads (3) with the spring plate (4) positioned on top in the same position as noted during removal, inside the rear brake caliper, checking that they are correctly positioned inside the recess with the plate (7).

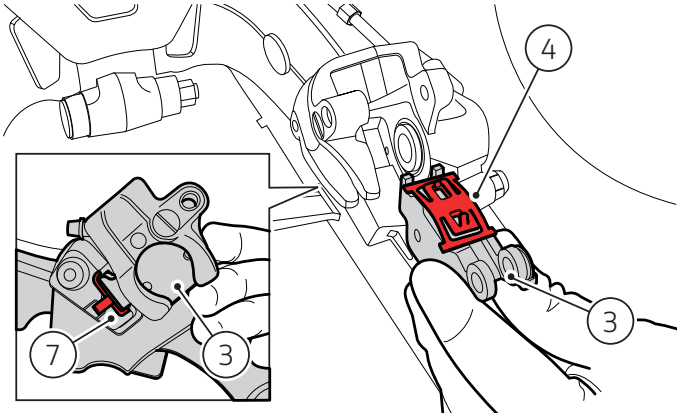


Fig 143

Refit the pin (2) and secure it with the split pins (1).

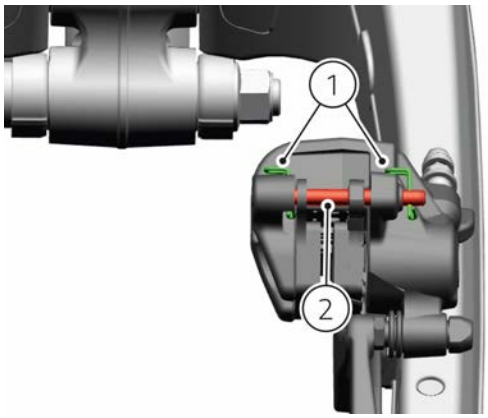


Fig 144

Refit the rear wheel as described in chapter “Removing and refitting the rear wheel”.

Removing and refitting the front wheel

Attention

Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removal procedure

Position the vehicle so that the rear wheel is off the ground.
Remove the retaining nut of the front wheel shaft (1).



Fig 145

Loosen the screws (2) on both front fork bottom ends.

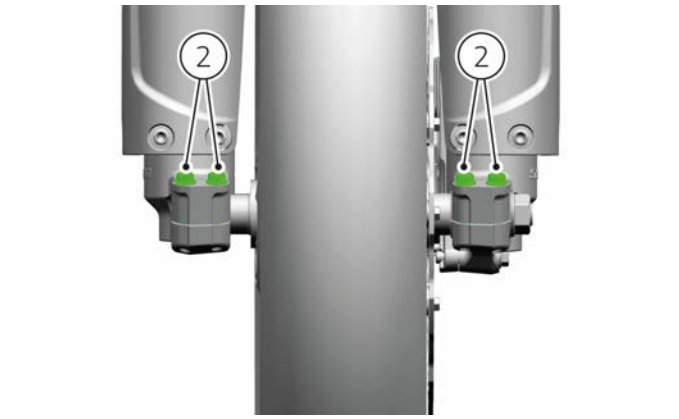


Fig 146

Remove the front wheel shaft (3) from the right side and remove the front wheel.



Fig 147

Once the wheel has been removed, remove the spacer (4) from the left side of the wheel. When refitting, the part of the spacer (4) with the collar must be positioned on the wheel side.

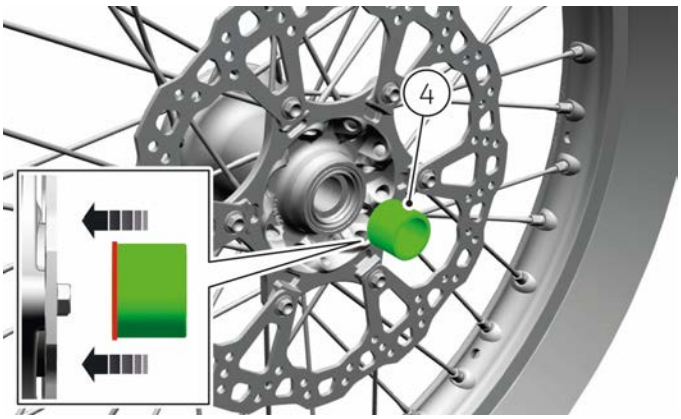


Fig 148

Refitting

Reposition the spacer (4) in its seat on the front wheel hub, positioning the part of the spacer (4) with the collar on the wheel side.
Reposition the front wheel in its seat on the front fork, centering the front brake disc inside the brake caliper.

Important

Apply GADUS S2 V220 AD 2 grease on underhead and shank of front wheel shaft before reinstalling it.

Reinsert the front wheel shaft (3) from the right side until fully home.



Fig 149

Position the fixing nut (1) on the front wheel shaft and tighten it to a torque of 80 Nm ± 5%.

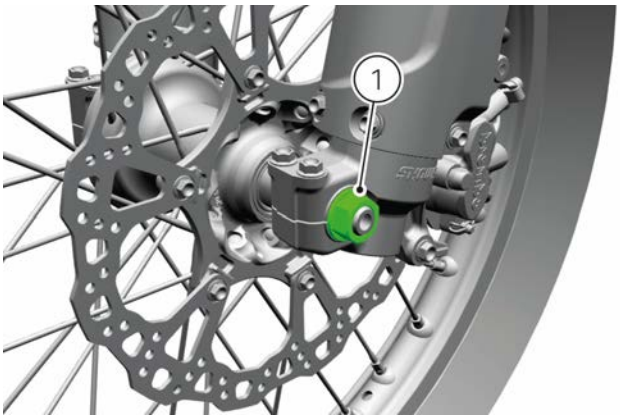


Fig 150

Important

Before tightening the screws on the fork bottom ends, place the wheel on the ground and press down firmly on the handlebar several times to check that the fork moves smoothly.

Smear the screws (2) with GADUS S2 V220 AD 2 grease.

Tighten the screws (2) on the fork bottom ends, following a cross pattern, to a torque of 17 Nm ± 5%.

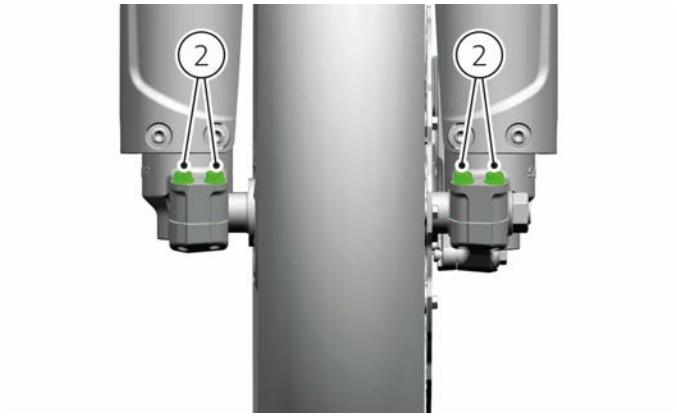


Fig 151

Removing and refitting the rear wheel

Attention

Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removal procedure

Position the vehicle so that the rear wheel is off the ground.
Remove the wheel shaft retainer nut (1) and the chain tensioner sliding shoe (2).

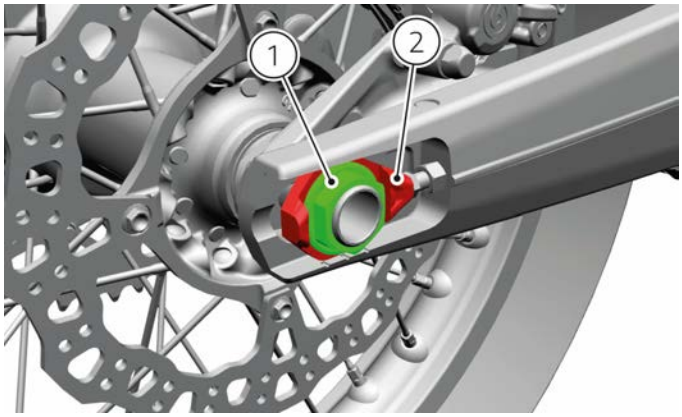


Fig 152

From the left side, remove the rear wheel shaft (3), while supporting the rear wheel, then move the rear wheel closer to the motorbike to disengage the drive chain (4) from the rear sprocket.
Remove the rear wheel.

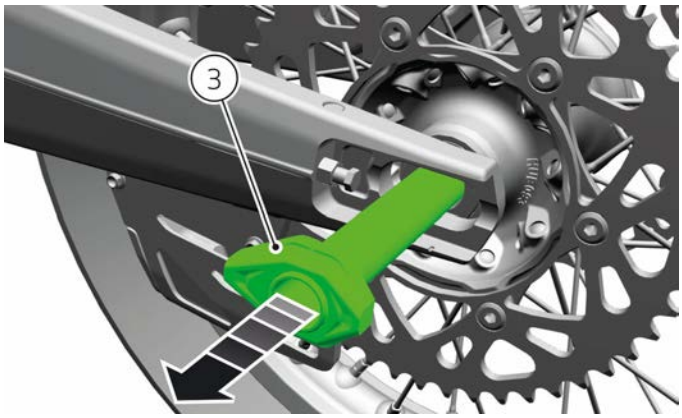


Fig 153

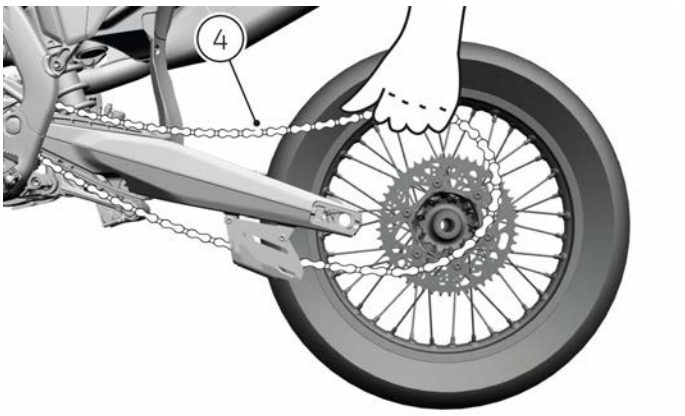


Fig 154

Remove the spacers (A) from the rear wheel hub.

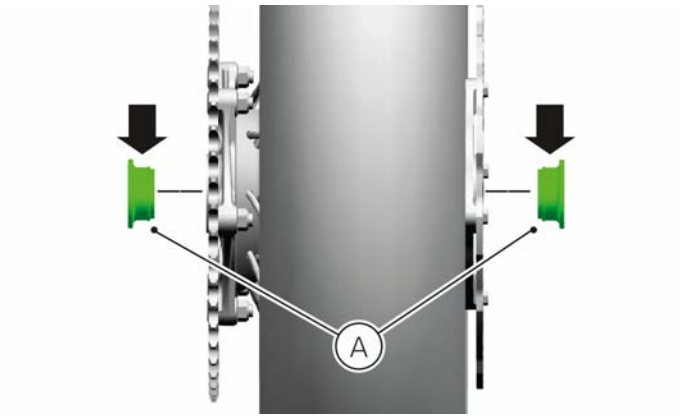


Fig 155

Refitting

Reposition the spacers (A) on the rear wheel hub.
Replace the rear wheel in its seat on the swingarm, centering the rear brake disc inside the brake caliper, then move the rear wheel closer to the motorbike to engage the drive chain (4) on the rear sprocket.

Important

Apply GADUS S2 V220 AD 2 grease on underhead and shank of rear wheel shaft before reinstalling it.

Important

The wheel shaft and the chain adjuster spacer can be fitted in either position, depending on the chain length, the gear ratios used and the wear condition of the final drive, provided that the specified chain tension is maintained.

Reinsert the rear wheel shaft (3) from the left side until fully home.

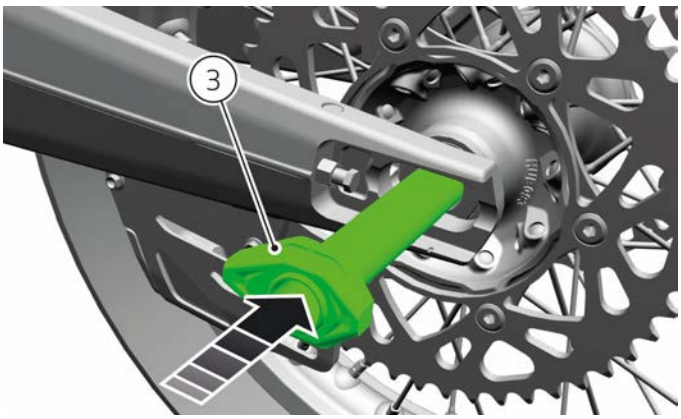


Fig 156

On the right side, reposition the chain tensioning spacer (2) and the rear wheel shaft nut (1) on the rear wheel shaft (3).
Check and, if necessary, adjust the chain tension as described in the chapter “Checking the chain tension”.
Tighten nut (1) to a torque of 120 Nm ± 5%.

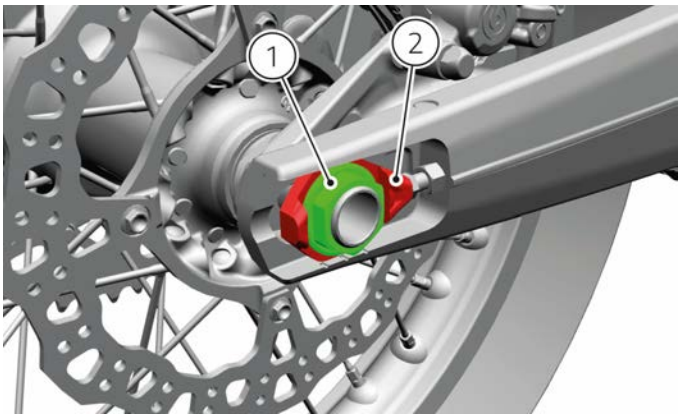


Fig 157

Checking the wheels

Attention

Check the spoke tension at regular intervals, especially after the first few rides with a new wheel or after significant impacts.

Attention

Avoid overtightening the spokes, as this may cause damage to the rim or hub.

Note

Use a torque wrench for the spokes to achieve precise and uniform tension.

Checking the spoke tension

Briefly tap each spoke with the blade of a screwdriver; you should hear a clear sound.
The frequency of the sound depends on the length and diameter of the spokes.

If spokes of the same length and thickness produce different sounds, this means that the spokes are not tensioned evenly.



Fig 158

If the spokes are not evenly tensioned, correct them and check the tightening torque of the spokes:

Component	Pre-tightening	Tightening
Front wheel spoke nipple	3 Nm	5 Nm
Rear wheel spoke	3 Nm	5 Nm

Checking the alignment of the rims

Use a dial gage or a fixed indicator positioned near the rim to detect any deviations.
Slowly rotate the wheel and observe the distance between the rim and the indicator. Mark the points where the rim moves closer to or further away from the indicator; these indicate axial or radial deviations.

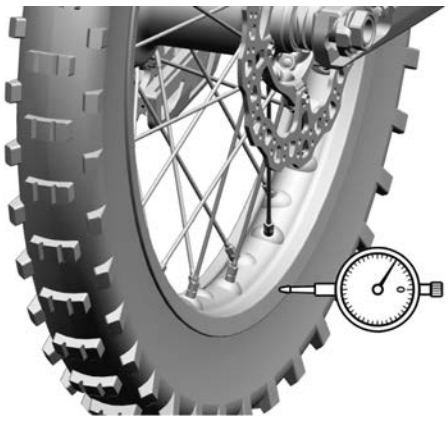


Fig 159



Fig 160

Adjusting the alignment of the rims

If the check reveals rim misalignment, take the vehicle to a Ducati Dealer or Authorized Service Center to have the rim aligned correctly.

Check tires

Attention

Only fit tires approved and/or recommended by Ducati.

Attention

To replace tires or inner tubes, go to a Ducati Dealer or Authorized Service Center.

Place the vehicle on a central support with the wheels off the ground.
Check that both tires are free of cuts, punctures, foreign objects and other damage.
If one or more of these types of damage are found, replace the damaged tire.

Check the tire pressure when cold and adjust it according to the following table:

Front tire pressure	1.0 bar (0.8 bar MIN - 1.2 bar MAX)
Rear tire pressure	1.0 bar (0.8 bar MIN - 1.2 bar MAX)

To keep the tire and inner tube correctly positioned on the rim, it is important to check the tire lock nut (A) and, if necessary, tighten it before using the vehicle. This tire lock prevents the tire and inner tube from slipping on the rim, thus avoiding damage to the valve stem.
If the inner tube valve stem is tilted, loosen the tire lock nut (A), correct the position of the tire until the valve stem is aligned, then tighten the nut (A).
Damage to the valve stem can cause air leaks and make it necessary to replace the inner tube.

The tire lock nut (A) must be tightened to a torque of 12 Nm ± 10%.

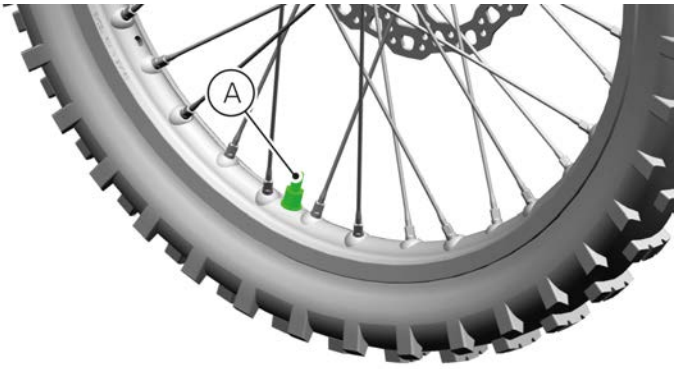


Fig 161

Check that the nut (B) on the inner tube valve is not hitting the rim, but is positioned towards the valve cap, in order to prevent the valve from being torn off if the tire slips.

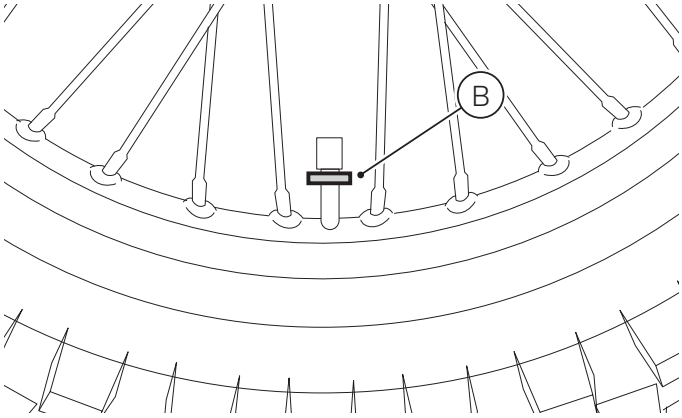


Fig 162

Removing and refitting the switches

Removing the vehicle starter button

Remove the front number holder as described in the chapter “Front number holder”.

Remove ties (A) and disconnect the connector (B).

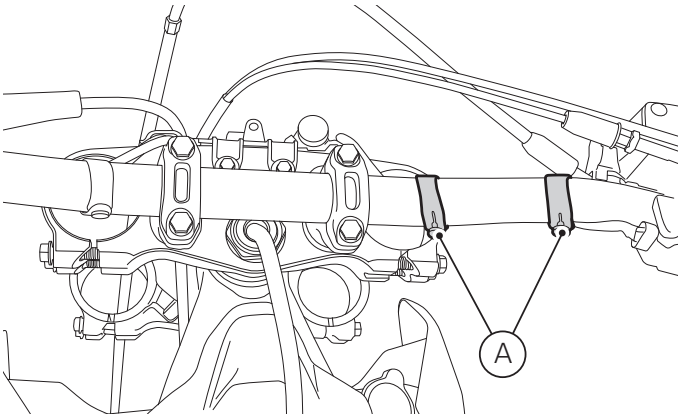


Fig 163

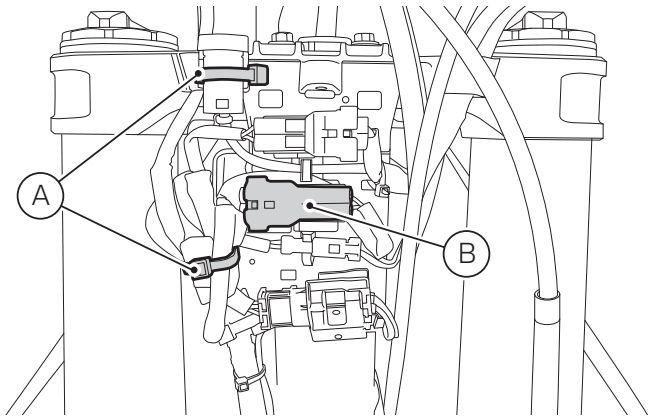


Fig 164

Loosen screw (1) securing starter button (2).
Remove the starter button (2).

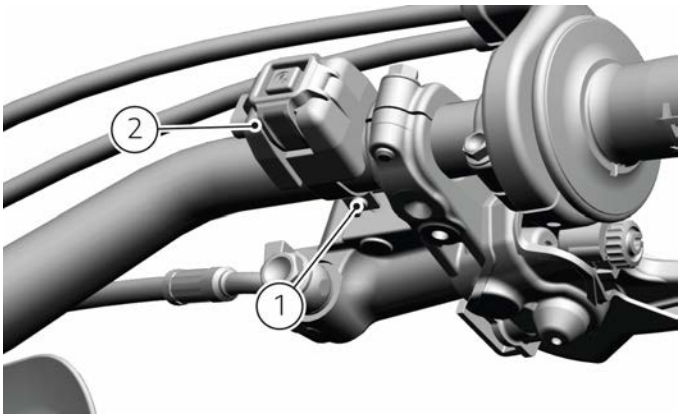


Fig 165

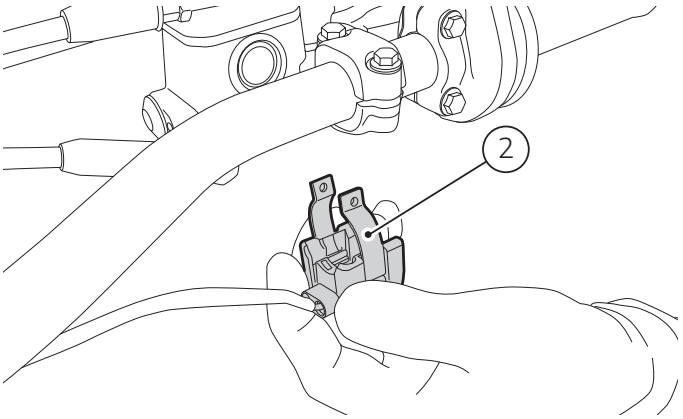


Fig 166

Removing the vehicle stop button

Remove ties (A) and disconnect the connector (C).

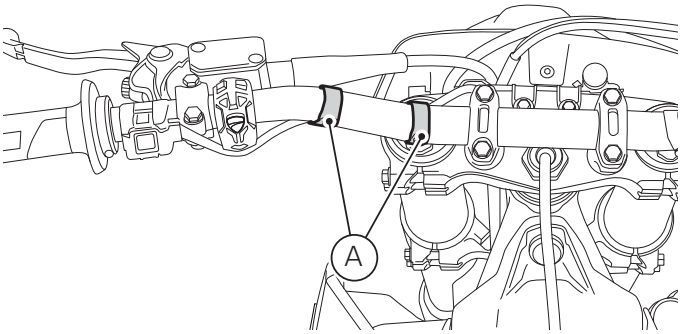


Fig 167

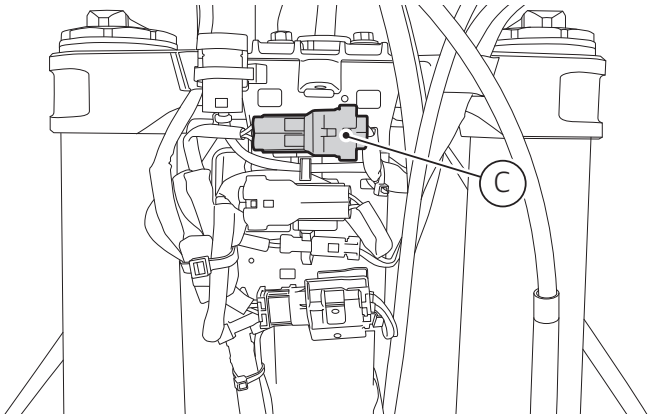


Fig 168

Loosen screw (3) securing stop button (4).
Remove the stop button (4).

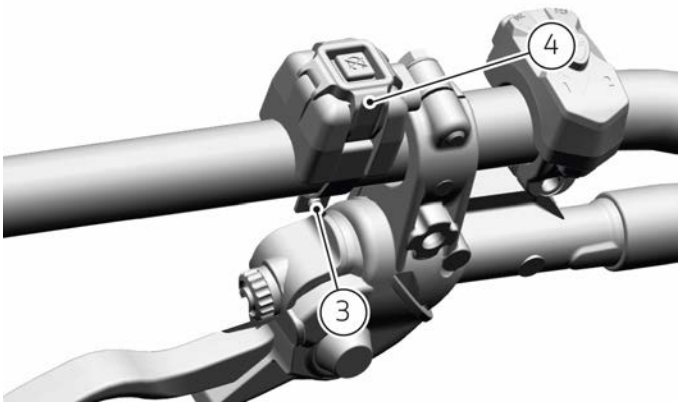


Fig 169

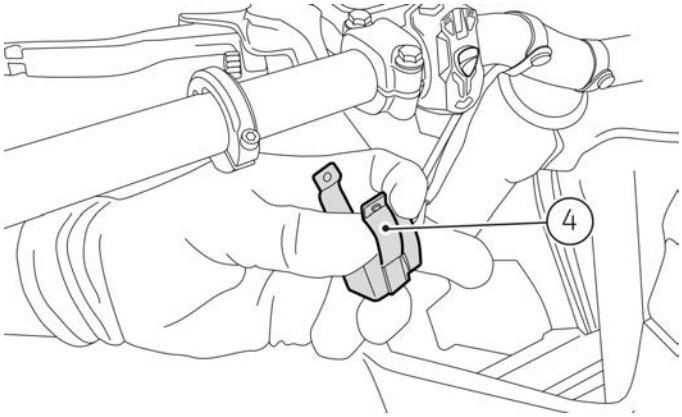


Fig 170

Removing the Map Selector

To remove the Map Selector, the following parts must be removed:

- clutch master cylinder;
- vehicle stop button.

Disconnect the connector (D).

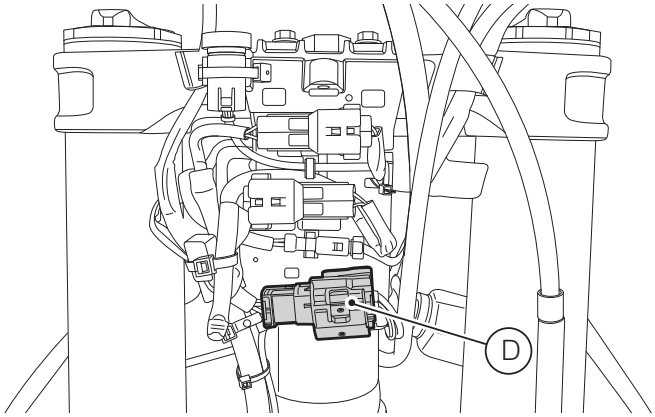


Fig 171

Loosen screw (5) securing handgrip retainer (6).
Remove the left handgrip (7) and the retainer (6).

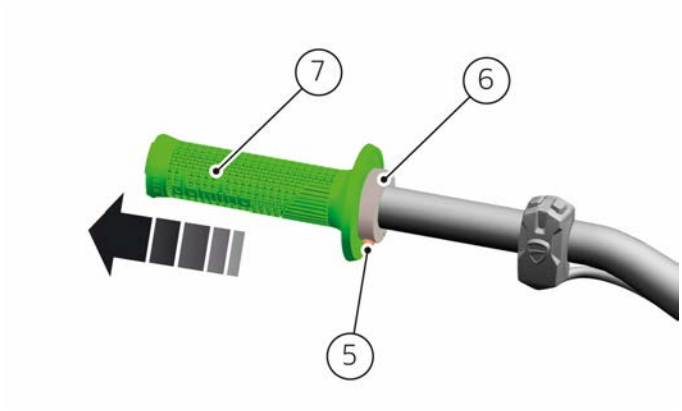


Fig 172

Loosen screw (8) securing Map Selector (9).
Remove the Map Selector (9).

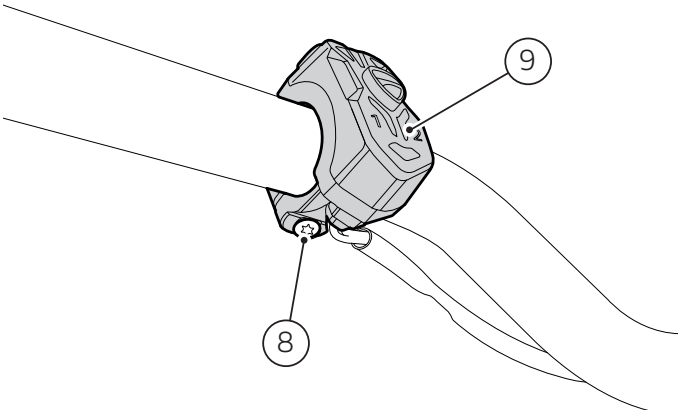


Fig 173

Refitting the Map Selector

Position the Map Selector (9) and start the screw (8).
Tighten the screw (8) to a torque of 1 Nm ± 10%.

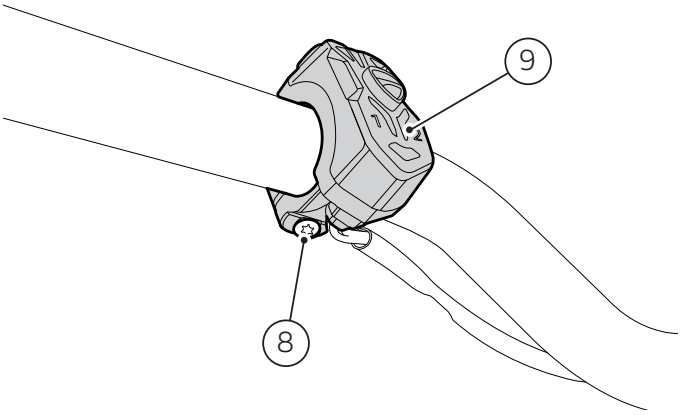


Fig 174

Insert the retainer (6), position the left handgrip (7).
Move the retainer (6) closer so that it overlaps the edge (E) of the left handgrip (7).
Tighten the screw (5) to a torque of 5 Nm ± 10%.

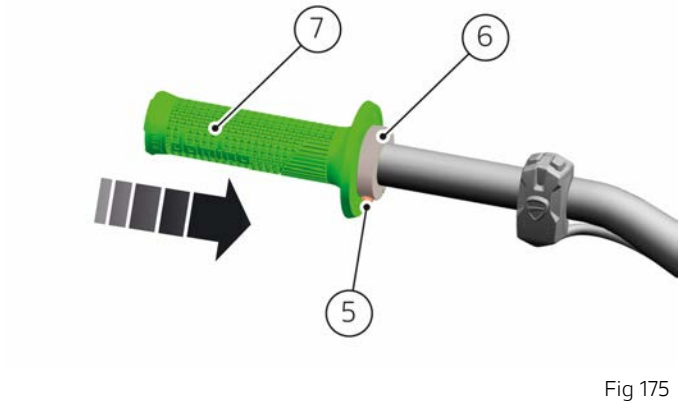


Fig 175

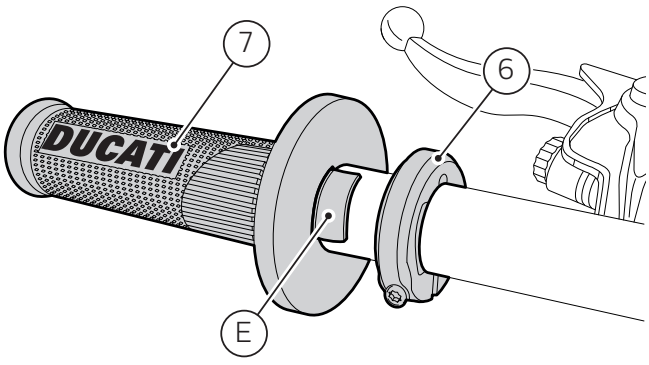


Fig 176

Connect the Map Selector connector (D)

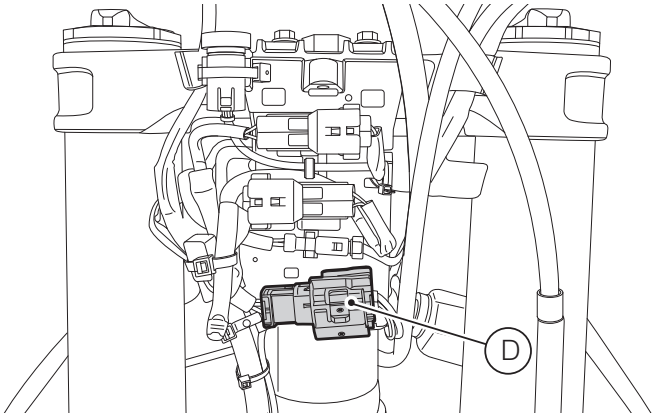


Fig 177

Refit the following parts:
- clutch master cylinder;
- vehicle stop button.

Refitting the vehicle stop button

Position the stop button (4).
Start and tighten screw (3) to a torque of 0.5 Nm ± 10%.

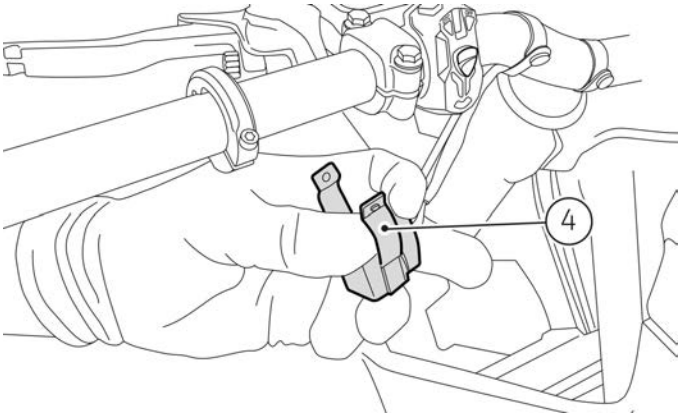


Fig 178

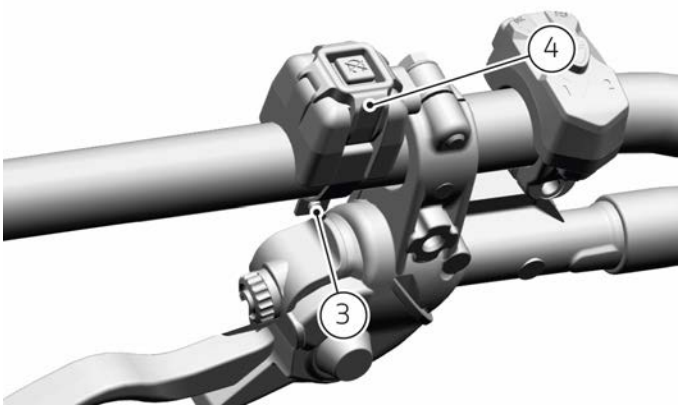


Fig 179

Connect the stop button connector (C).

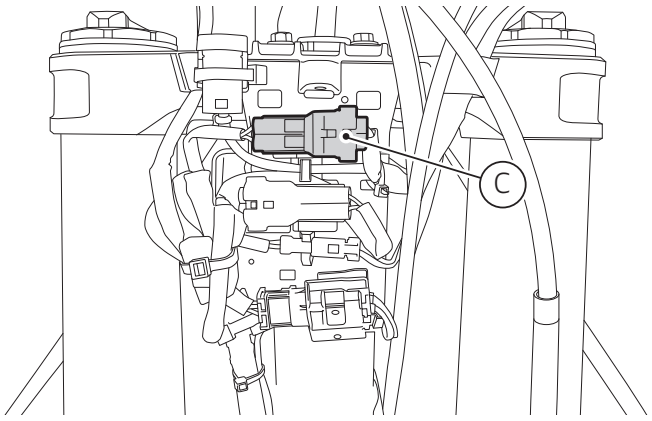


Fig 180

Reposition the wiring by means of ties (A) in the positions shown in the figure.

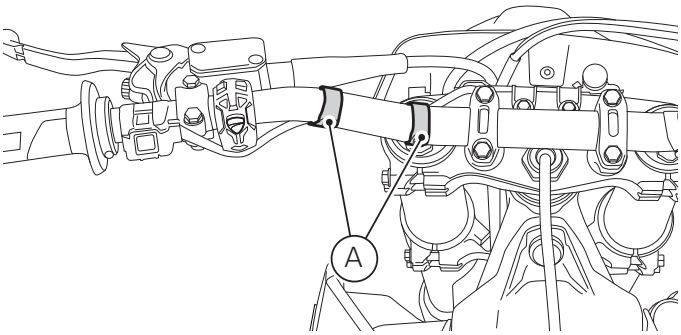


Fig 181

Position the vehicle starter button (2).
Start and tighten screw (1) to a torque of 0.5 Nm ± 10%.

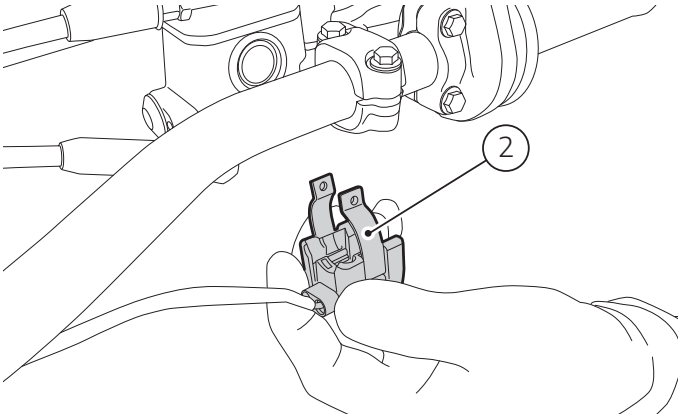


Fig 182

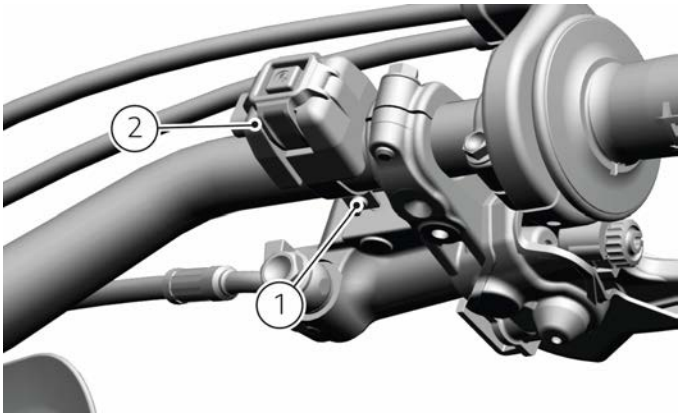


Fig 183

Connect the starter button connector (B) and reposition the ties (A) in the positions shown in the figure

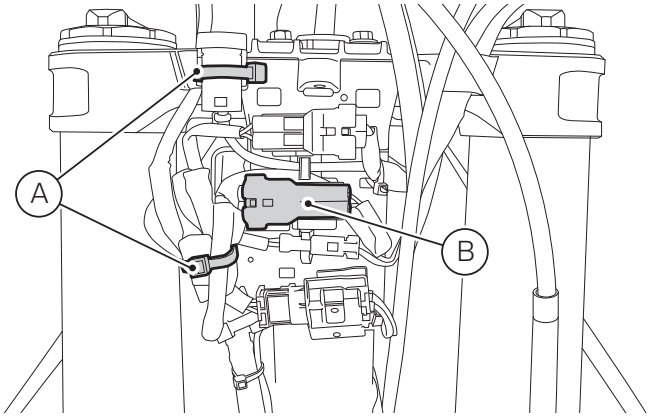


Fig 184

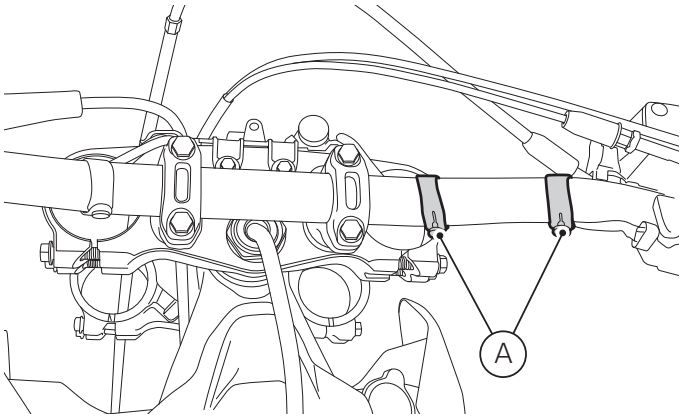


Fig 185

Adjusting the throttle twistgrip

Check the throttle control play (A) = 3÷6 mm (0.12÷0.24 in).
If non-conforming, adjust according to this procedure:

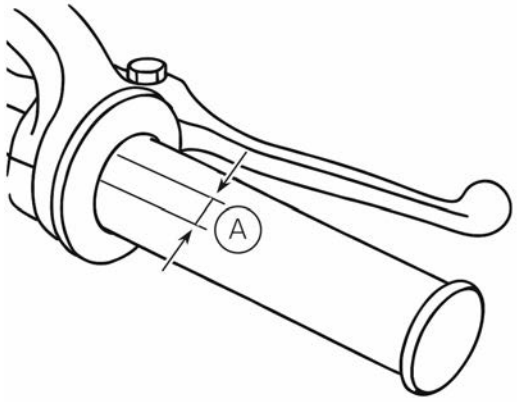


Fig 186

Loosen counter nut (1).
Turn the adjuster (2) until the specified throttle control play is obtained.
Tighten the lock nut once the adjustment has been made.

Attention

After adjusting the throttle control clearance, start the engine and turn the handlebar to the right and left to ensure that this does not cause a change in the idle speed.

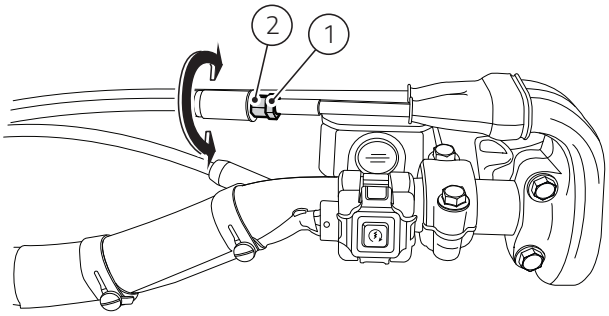


Fig 187

Removing and refitting the gear change pedal

Removal procedure

Undo screw (1) and remove the gear change pedal (2) from the gear selector.

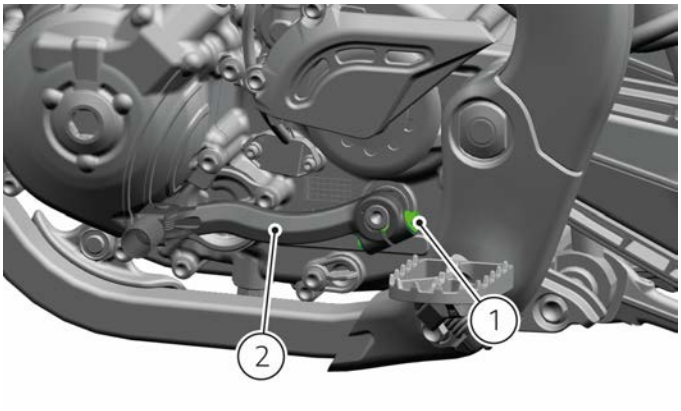


Fig 188

Assembly

Position the gear change lever (2) by inserting it into the gear selector shaft.
Start and tighten screw (1) to a torque of 10 Nm ± 10%.

Removing and refitting the front brake lever

Removal procedure

Remove guard (A) by pulling it out of brake lever.



Fig 189

Unscrew the fixing nut (1).

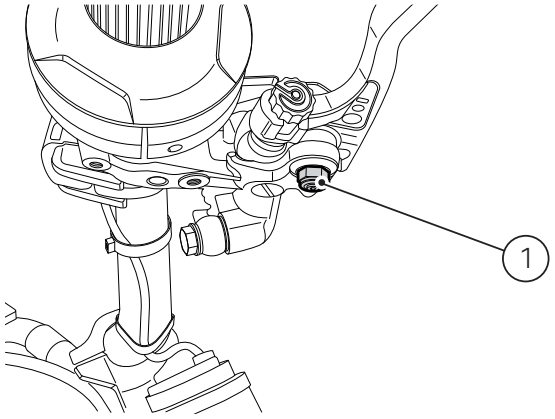


Fig 190

Remove the pin (2).

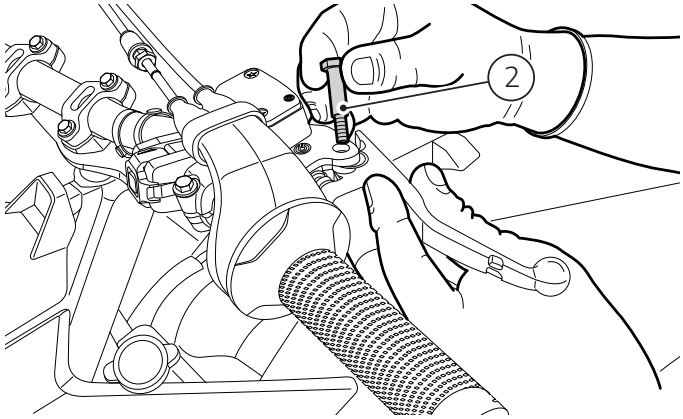


Fig 191

Remove the brake lever (4), paying attention to the spring (3).

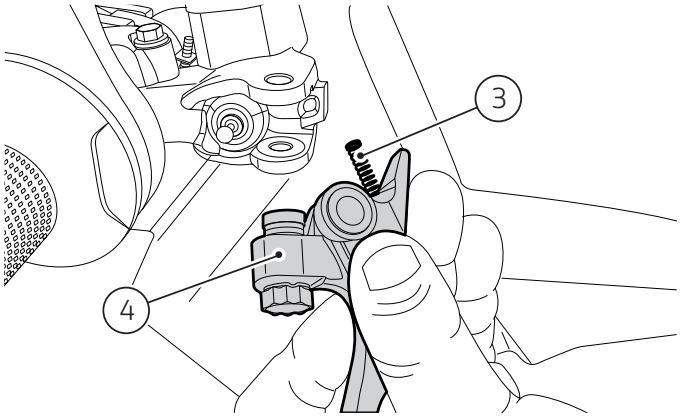


Fig 192

Assembly

Move the lever (4) closer, inserting the spring (3) into the hole indicated by the arrow.

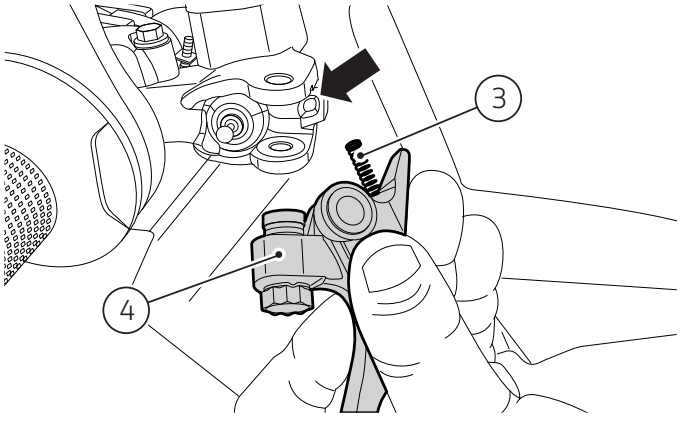


Fig 193

Insert the pin (2) and secure it with the nut (1).

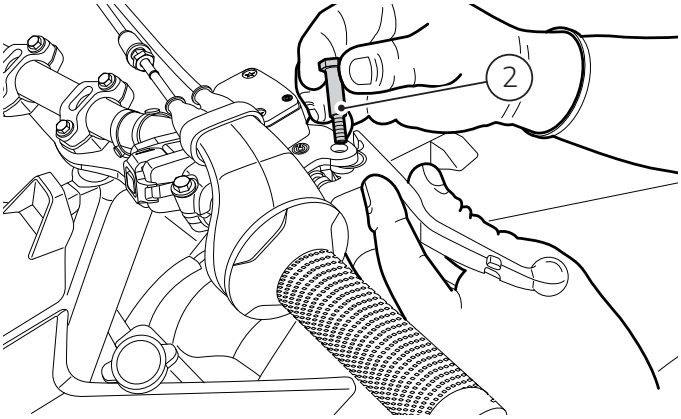


Fig 194

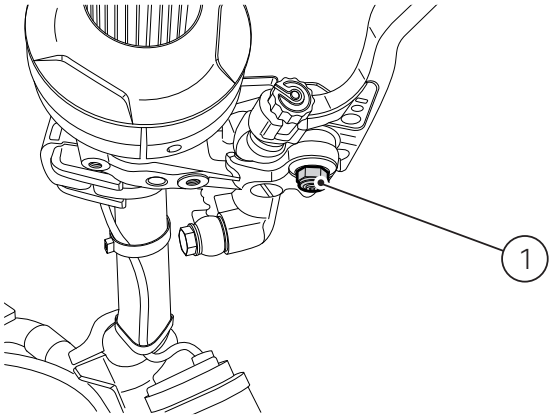


Fig 195

Position guard (A).



Fig 196

Removing and refitting the clutch lever

Removal procedure

Remove guard (A) by pulling it out of the clutch lever.

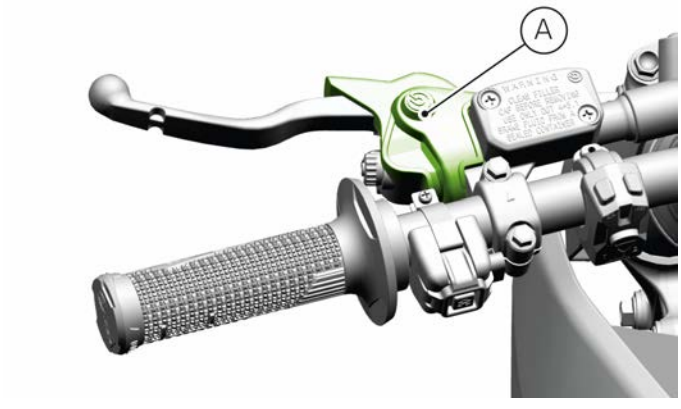


Fig 197

Unscrew the fixing nut (1).

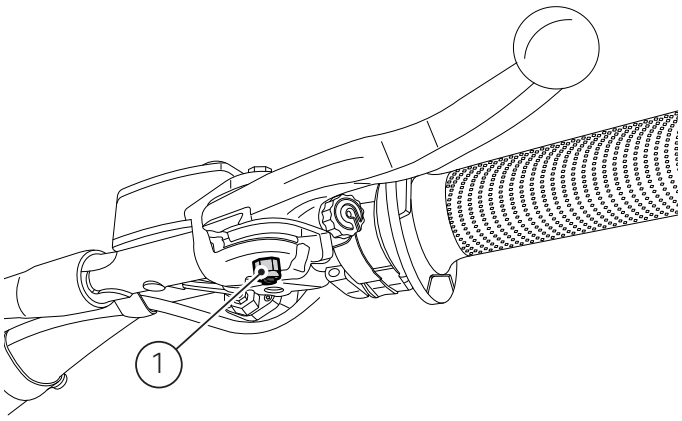


Fig 198

Remove the pin (2).

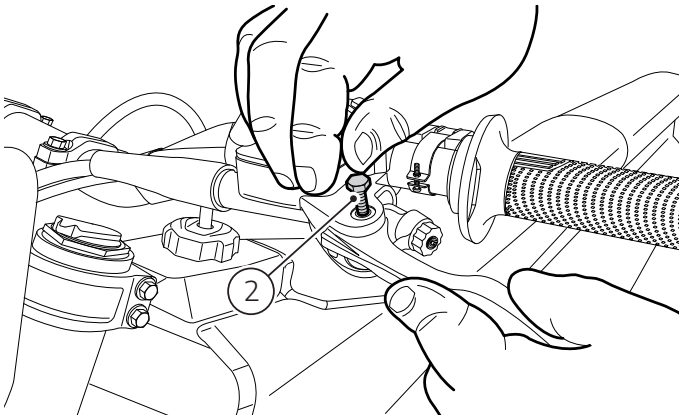


Fig 199

Remove the clutch lever (4), paying attention to the spring (3).

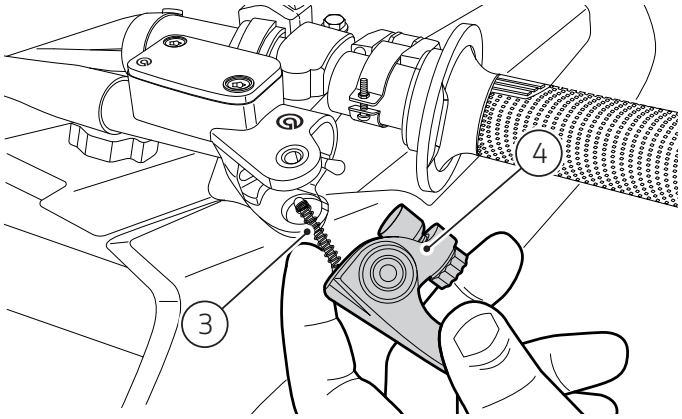


Fig 200

Assembly

Move the lever (4) closer, inserting the spring (3) into the hole indicated by the arrow.

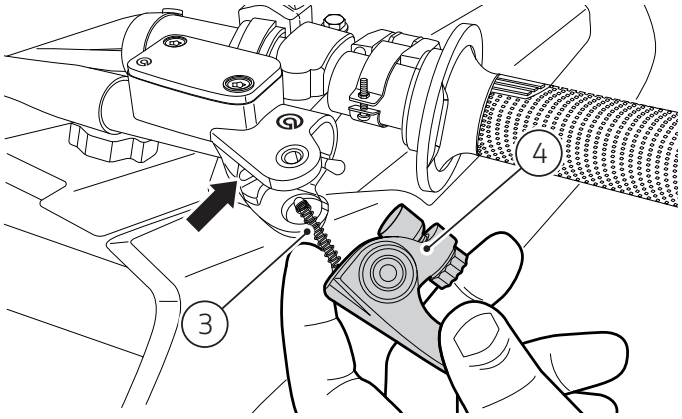


Fig 201

Insert the pin (2) and secure it with the nut (1).

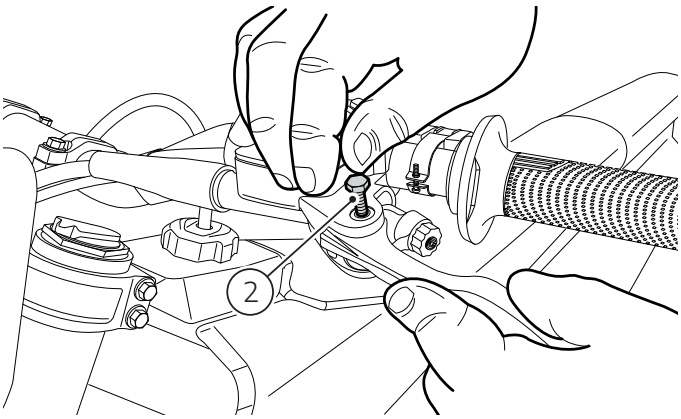


Fig 202

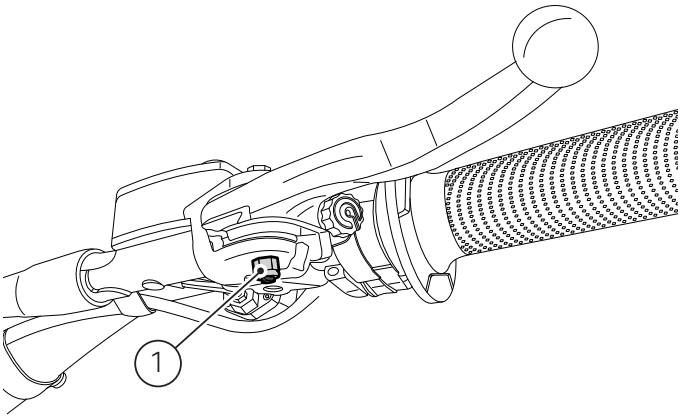


Fig 203

Position guard (A).

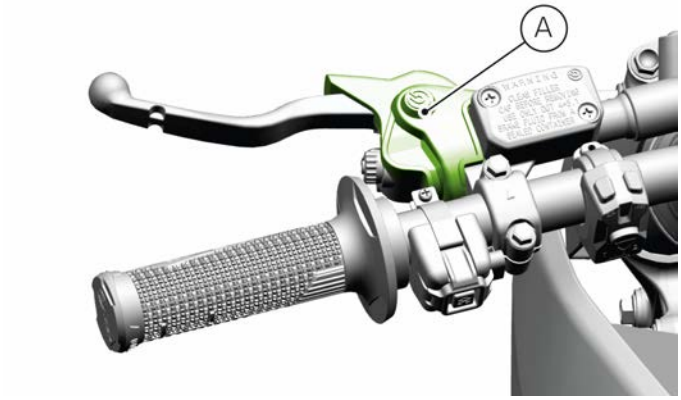


Fig 204

Removing and refitting the rear brake pedal

Removal procedure

Loosen screw (1) securing brake pedal (2) to brake master cylinder (3).

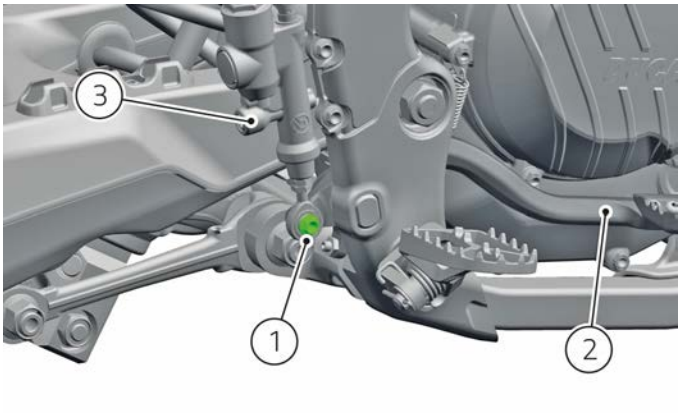


Fig 205

Unscrew nut (4) and remove the fixing pin (5).

Important
This component has a left threading. For installation or removal, turn clockwise to unscrew it and anticlockwise to screw it. Be sure to follow this direction to avoid damage to the component or the fastening system.

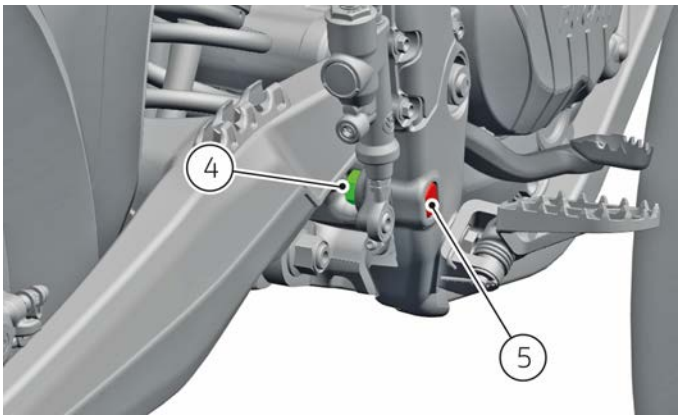


Fig 206

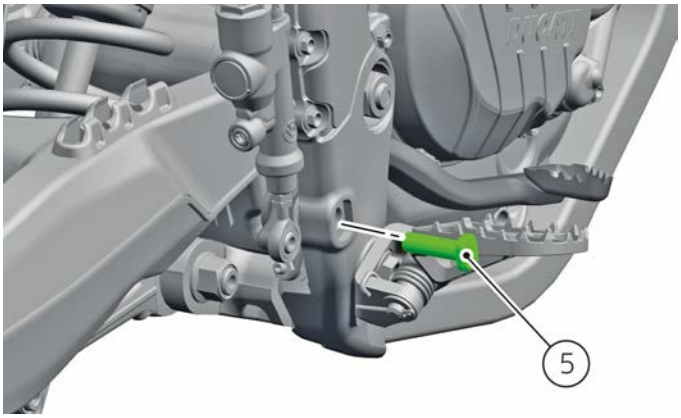


Fig 207

Remove the brake pedal (2).

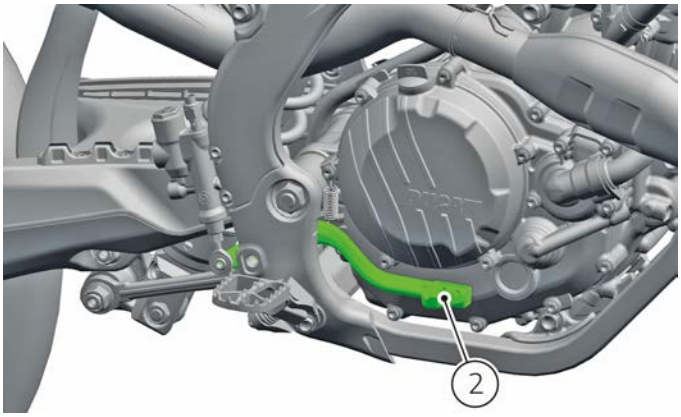


Fig 208

Assembly
Position the rear brake lever (2).

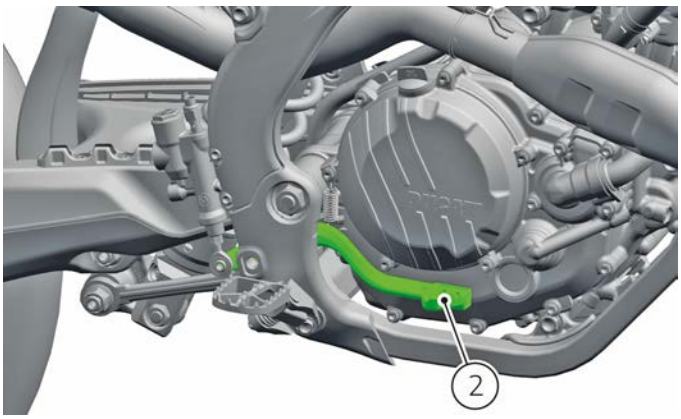


Fig 209

Insert the pin (5) and start the nut (4) on the opposite side.
Smear LOCTITE ®243 ™ on the thread of nut (4).
Tighten nut (4) to a torque of 36 Nm ± 10%.

Important
This component has a left threading. For installation or removal, turn clockwise to unscrew it and anticlockwise to screw it. Be sure to follow this direction to avoid damage to the component or the fastening system.

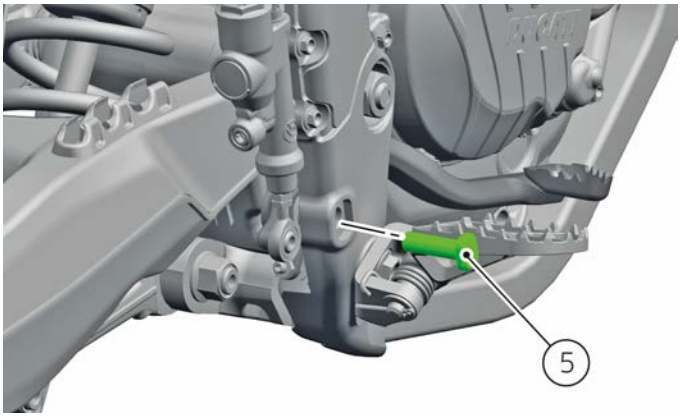


Fig 210

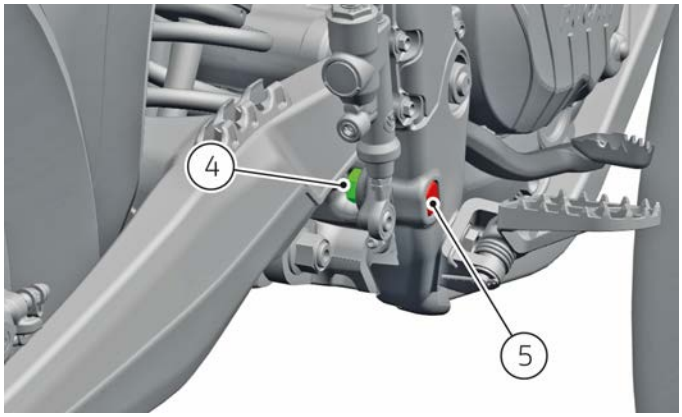


Fig 211

Smear LOCTITE ®243 ™ on the thread screw (1).
Tighten the screw (1) securing the brake lever (2) to the brake master cylinder (1) to a torque of 10 Nm ± 10%.

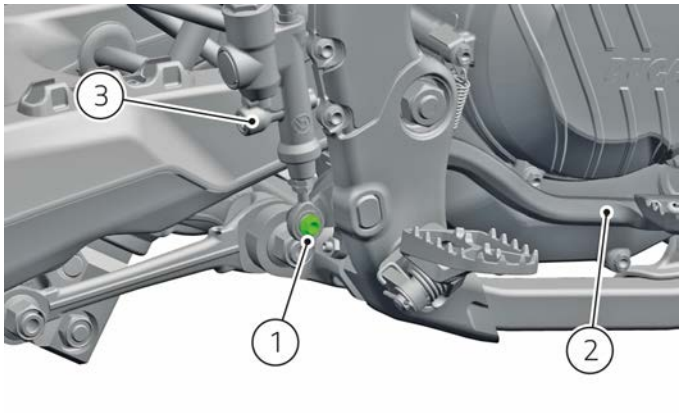


Fig 212

Adjusting the free play of the rear brake pedal

Attention

Incorrect free play can lead to overheating of the braking system, damage to the system and safety issues. Always check that the free play complies with the prescribed values.

Checking and adjusting the free play.
Remove the spring (1) to allow the pedal to move freely in its free play. The free play (X) must be 0.12 ÷ 0.19 in (3 ÷ 5 mm).

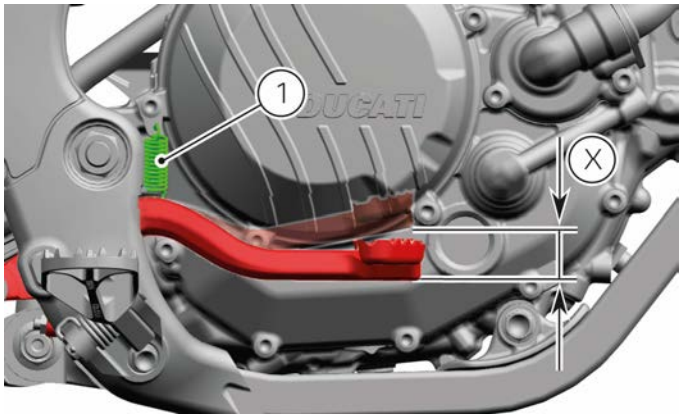


Fig 213

If not correct, loosen the lock nut (2) and adjust the travel by turning the nut (3).
After adjustment, measure again and, if correct, tighten the lock nut (2) to a torque of 10 Nm ± 10%, keeping the nut (3) tight so as not to alter the adjustment made.

Refit the spring (1).

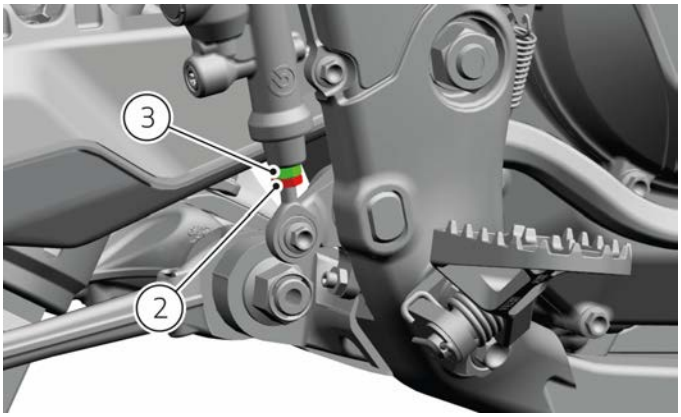


Fig 214

Adjusting the pedal position
To change the rest position of the brake pedal, turn the screw (3) after loosening the lock nut (4).
When the adjustment is complete, tighten the lock nut (4), holding the screw (3) steady.
Then, carry out the procedure described in “Checking and adjusting the free play”.

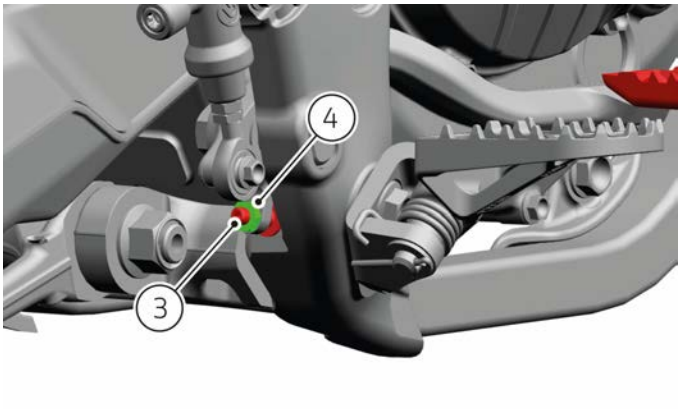


Fig 215

Removing and refitting the handlebar

Removal procedure

Remove the switches as described in chapter "Removing and refitting the switches".
Loosen screws (1) and remove the upper U-bolt (2).
Remove the clutch master cylinder (3).
The Map Selector switch can now be removed.

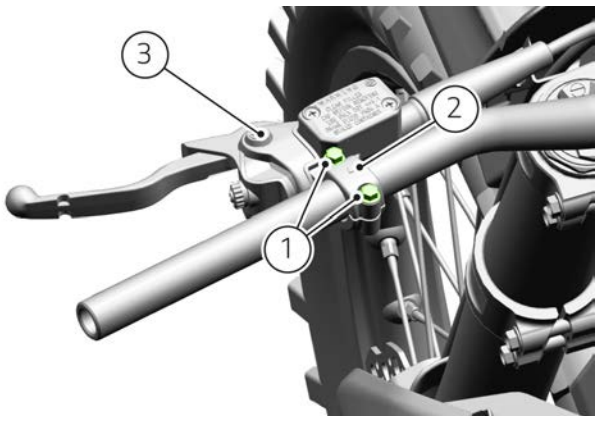


Fig 216

Loosen screws (4) and remove the upper U-bolt (5).
Remove the brake master cylinder (6).

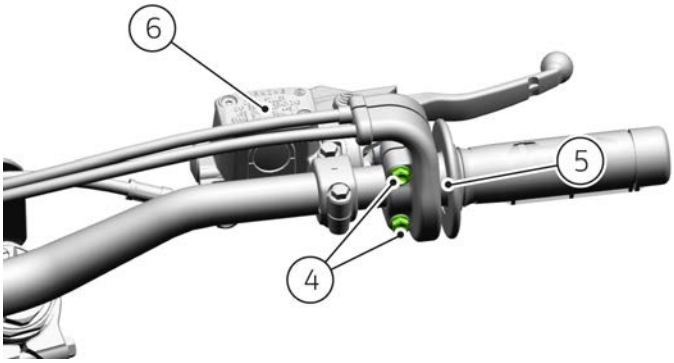


Fig 217

Loosen the two screws (7) securing the throttle control (8).
DO NOT slide out the throttle control (8).

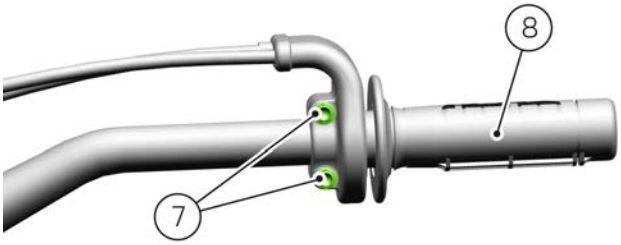


Fig 218

Loosen screws (9) and remove the U-bolts (9).
Remove the handlebar (11) and pull out the throttle control (8).

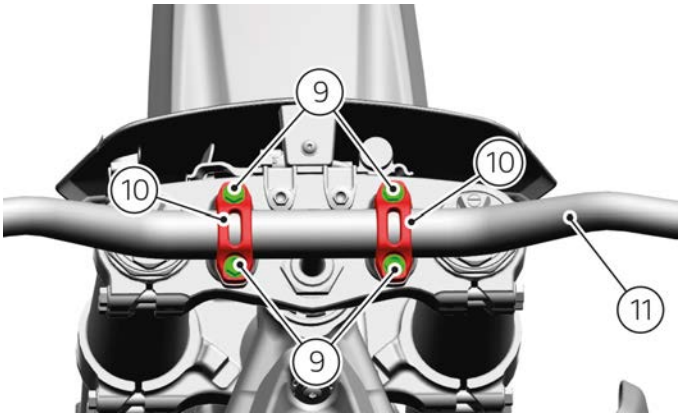


Fig 219

Assembly

Position the throttle control on the handlebar.
Position the handlebar (11) on the lower U-bolts, fit the two upper U-bolts (10) and start the screws (9).
Adjust the inclination of the handlebar by referring to the notches (C).
Tighten the screws (9) to 22 Nm ± 5%, following the tightening sequence (1-2-1).

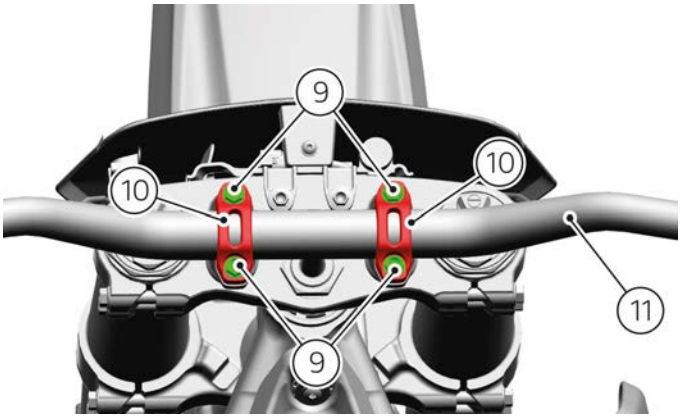


Fig 220

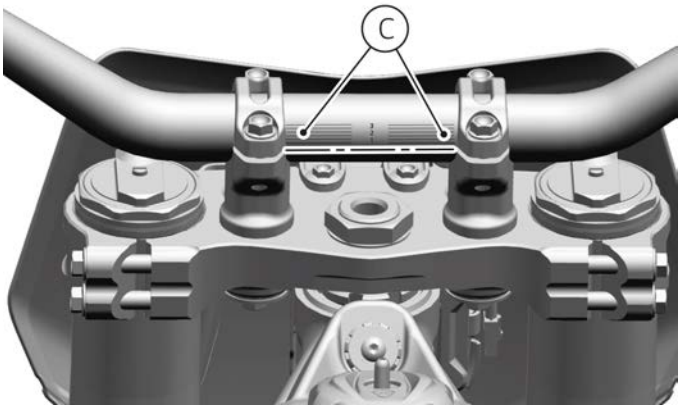


Fig 221

Tighten the retaining screws (7) of the throttle control (8) to a torque of 5 Nm ± 10%.

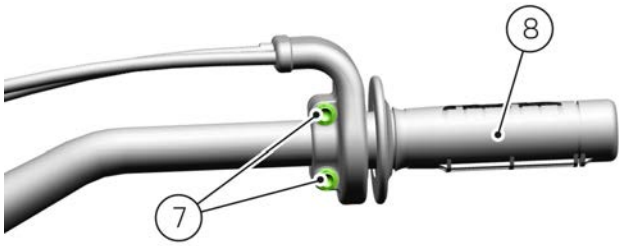


Fig 222

Position front brake master cylinder (6) on the handlebar.
Fit the upper U-bolt (5) with the arrow pointing towards the front of the vehicle (as shown in the figure).
Start screws (4) and tighten them to a torque of 10 Nm ± 10% in the sequence 1 (UP)-2-1.



Fig 223

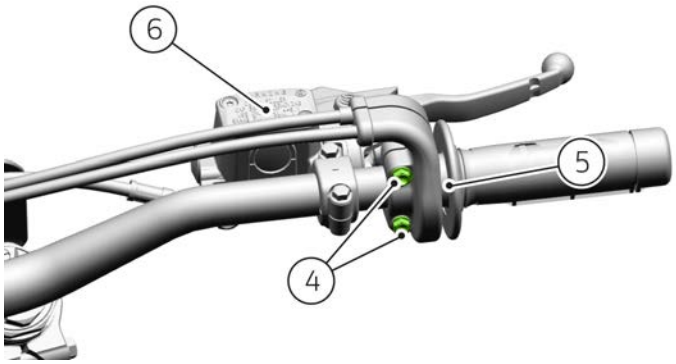


Fig 224

Position the Map Selector switch on the handlebar.
Position front clutch master cylinder (3) on the handlebar.
Fit the upper U-bolt (2) with the arrow pointing towards the front of the vehicle (as shown in the figure).
Start screws (1) and tighten them to a torque of 10 Nm ± 10% in the sequence 1 (UP)-2-1.



Fig 225

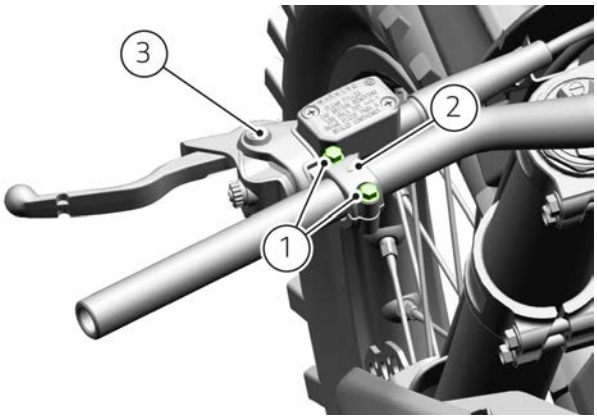


Fig 226

Fit the switches and the left handgrip as described in chapter “Removing and refitting the switches”.

Adjusting the handlebar position
The handlebar can be mounted on the steering head in two positions (A) and (B), so that the rider can find the optimal riding position.
In addition, the U-bolts (12) can be rotated by 180° for two further positions.

Note
The steering head shown in the images has been removed from the vehicle for illustrative purposes only, to allow a clearer and more detailed view of the component. **When performing the standard procedure, removal of the steering head is not necessary.** Always follow the official instructions.

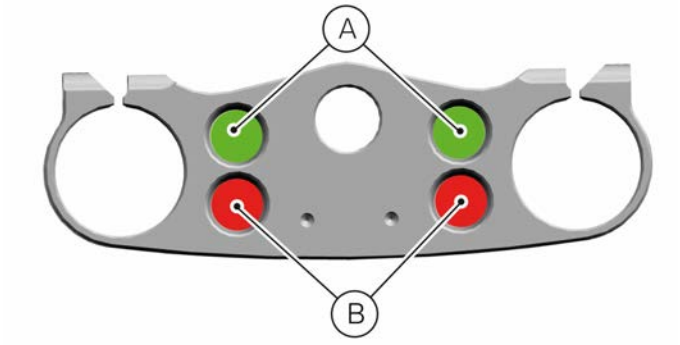


Fig 227



Fig 228

To adjust the handlebar, proceed as follows:

- Loosen screws (13) retaining the U-bolt (12).
- Remove the U-bolts and collect washers (14), lower vibration dampers (15), upper vibration dampers (16) and spacers (17).
- Position the handlebar according to your ergonomic and riding requirements, ensuring that the adjustment allows for a comfortable posture and optimal control of the vehicle. Refit the previously removed components in the desired position. During refitting, smear screws (13) with Loctite ®243™
- Once the adjustment has been completed, tighten the screw (13) to a torque of 45 Nm ± 5%.

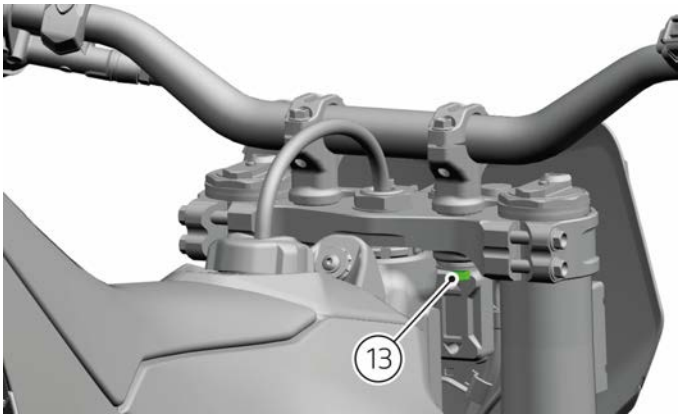


Fig 229

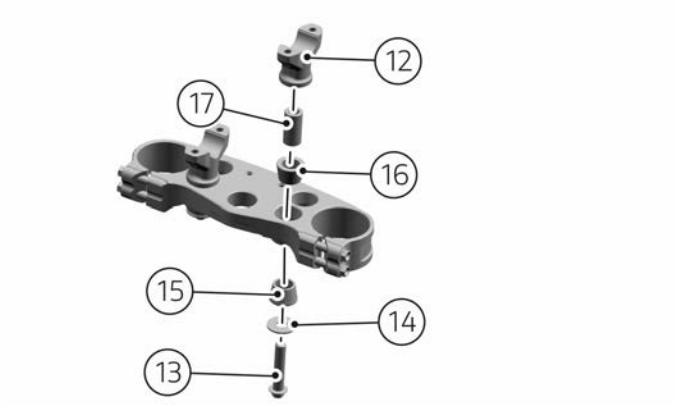


Fig 230

Note

The handlebar can be adjusted **without having to remove it completely from the vehicle**. The operation can be carried out by acting on the provided tightening points, as indicated in the procedure. It is recommended to carefully respect the torque values and instructions provided to ensure the correct safety and functionality of the component.

Removing and refitting the steering head

Attention

Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removal procedure

Remove the front number holder as shown in chapter “Front number holder”.
Remove the handlebar as shown in chapter “Removing and refitting the handlebar”.

Loosen screws (1) and remove the fork connector support (2).

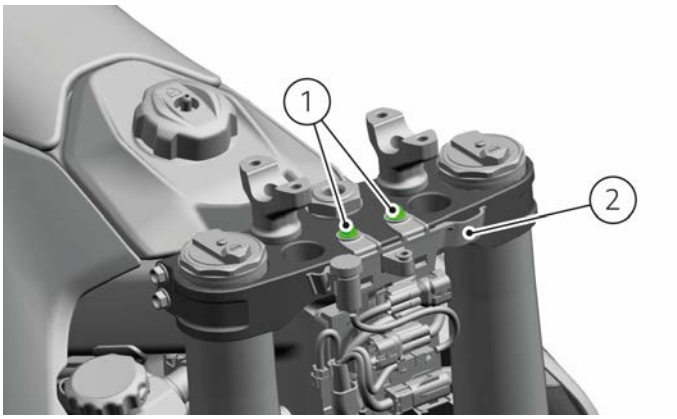


Fig 231

Loosen the four retaining screws (3) of the steering head (6) to the forks.
Loosen the steering head nut (4) and remove washer (5).
Remove the steering head (6) by pulling up.

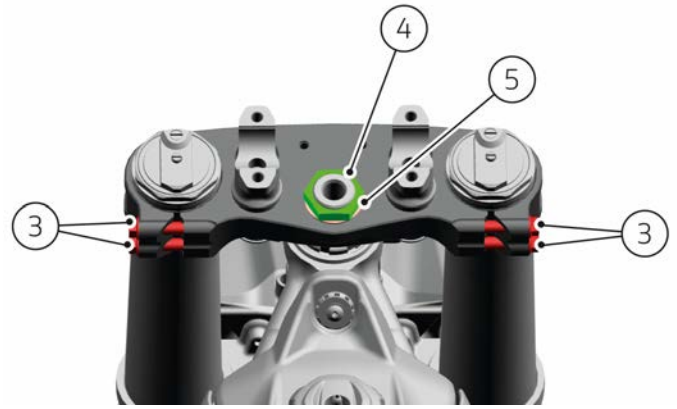


Fig 232

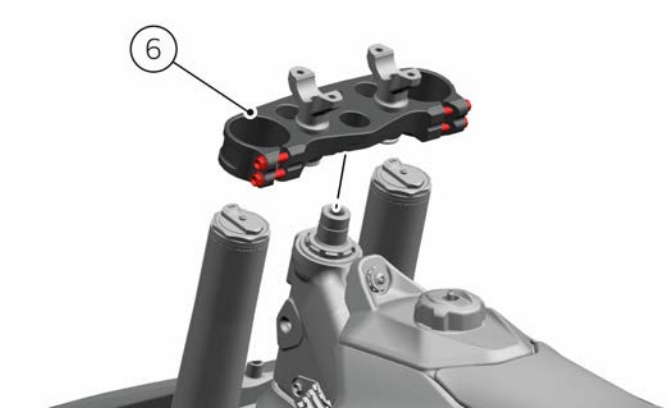


Fig 233

Assembly
Insert the steering head (6) until it stops on the ring nut (7).

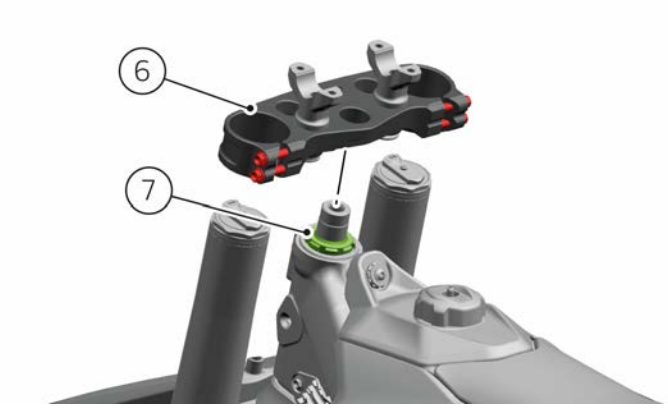


Fig 234

Fit the washer (5) and tighten the steering head nut (4).
Tighten the steering head nut (4) to a torque of 108 Nm ± 5%.
Apply **Gadus S2 V220 AD 2** to the screws (3) and insert them into the steering head.
Tighten the screws (3) to a torque of 17 Nm ± 5%.

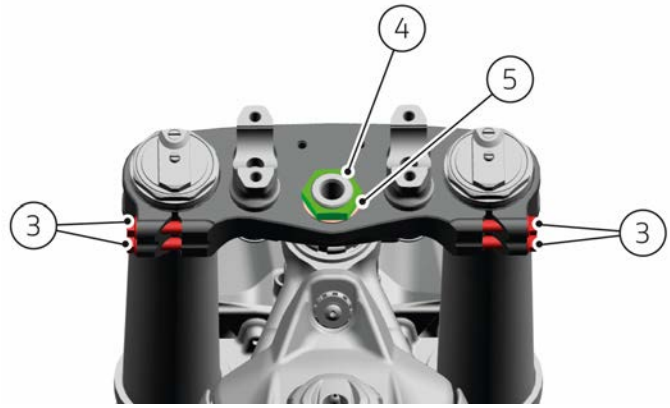


Fig 235

Position the fork connector support (2) and start the screws (1).
Tighten the screws (1) to a torque of 10 Nm ± 10%.

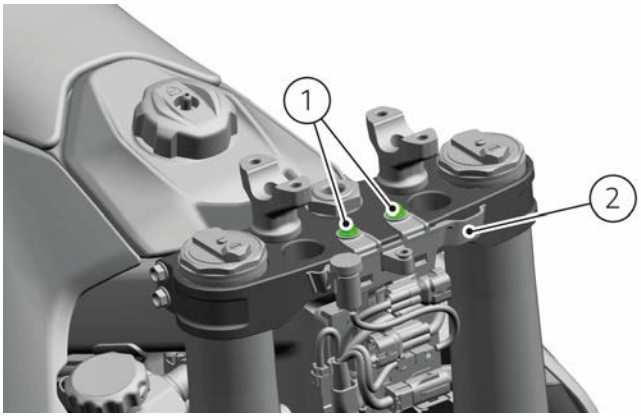


Fig 236

Refit the handlebar as shown in chapter “Removing and refitting the handlebar”.
Refit the front number holder as shown in chapter “Front number holder”.

Removing and refitting the bottom yoke

Attention
Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removal procedure
Remove the steering head as shown in chapter “Removing and refitting the steering head”.
Remove the front wheel as shown in chapter “Removing and refitting the front wheel”.
Remove the front mudguard - “Front mudguard”.

Using a pin wrench, loosen the ring nut (1) securing the steering shaft (2).
Remove the bottom yoke (3) by sliding it out from the bottom.



Fig 237

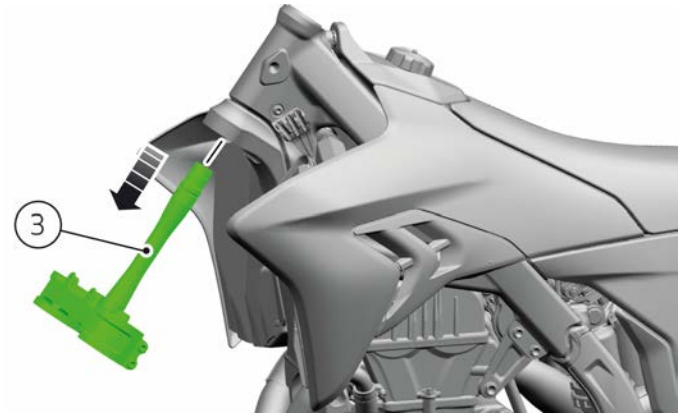


Fig 238

Assembly

Important
Before inserting the bottom yoke, **carefully check the integrity of the steering head bearings**. If there are signs of wear, abnormal clearance, seizure or visible damage, **they must be replaced** with new components. The correct operation of the bearings is essential to ensure safety and precision when riding.

Fit the bottom yoke (3) in the frame.
Apply **Gadus S2 V220 AD 2** to the threaded part of the shaft (2).
Pre-tighten the ring nut (1) to a torque of 29 Nm ± 10% so that the bearings are close together.
Loosen the ring nut (1) and tighten it to a torque of 7 Nm ± 10%.

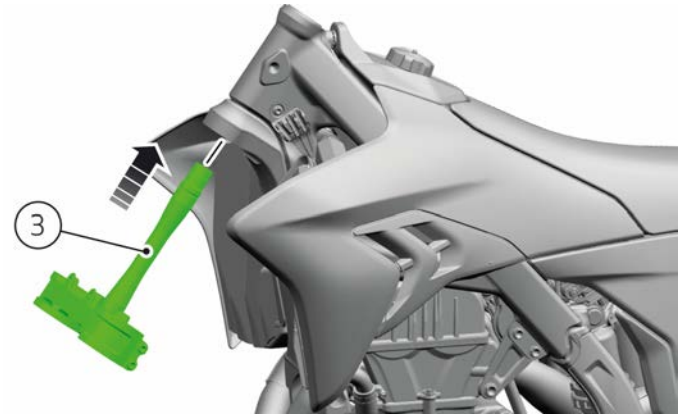


Fig 239

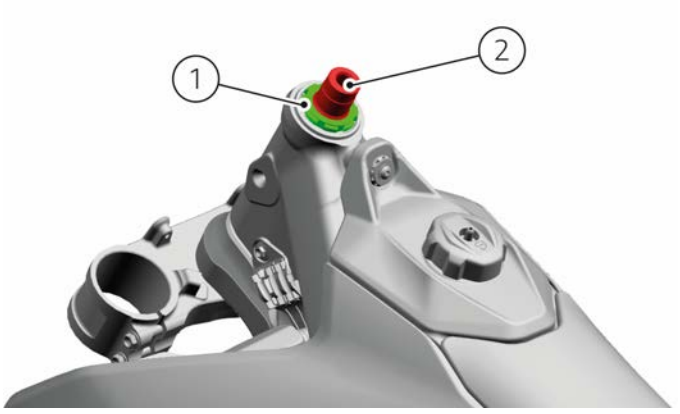


Fig 240

Checking and adjusting the bearing clearance

Important
Incorrect clearance in the steering head bearing can seriously compromise the vehicle's handling. Excessive clearance can cause instability, vibrations and loss of control, while excessive tightening can stiffen the steering and damage components. Always check that the clearance is correct and that the bearings are in good condition **before each use**.

Important
Prolonged use of the vehicle **with clearance in the steering tube bearings** can cause **permanent damage to both the bearings and the frame seat**. Continuous abnormal movement under load can lead to early wear, oval seat and structural damage to the frame. It is recommended to **take prompt action** to adjust or replace the bearings as soon as clearance is detected.

Attention
Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Check
Place the motorcycle on a central stand or suitable support, lifting the front wheel off the ground to take the weight off the steering.
Grasp the fork in the lower area (near the bottom ends) and move it back and forth (as if braking and releasing) to check for any clearance in the steering tube.
Any noticeable movement indicates clearance in the bearings.
Slowly turn the handlebar from one end to the other.
If there is any noise, roughness or hard spot, check the condition of the bearings and replace them if necessary.

Attention
Never use the vehicle if there is clearance in the steering tube: in addition to compromising riding safety, this may cause **irreversible damage to the bearings and the frame seat**.

Adjustment
Loosen the steering head (2) retaining screws (1) on both sides.
Loosen the retaining nut (3).
Using a special wrench (pin wrench), turn the ring nut (4) tightening it to a torque of 29 Nm ± 10% so as to bring the bearings closer together.
Loosen the ring nut (4) and tighten it to a torque of 7 Nm ± 10%.

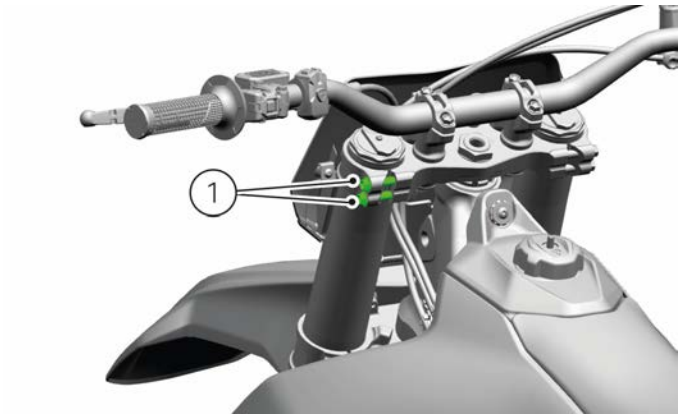


Fig 241

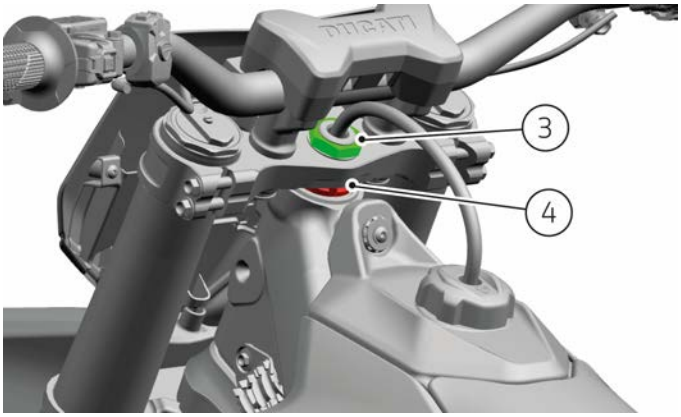


Fig 242

Tighten nut (3) to a torque of 108 Nm ± 5%.
If screws (1) are removed, smear them with **Gadus S2 V220 AD 2** and insert them into the steering head.
Tighten the screws (1) to a torque of 17 Nm ± 5%.

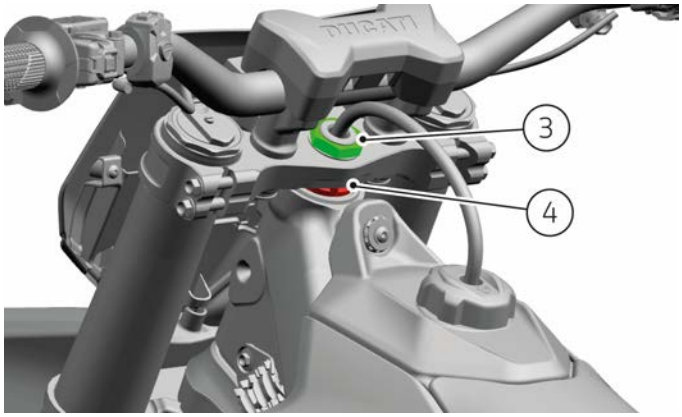


Fig 243

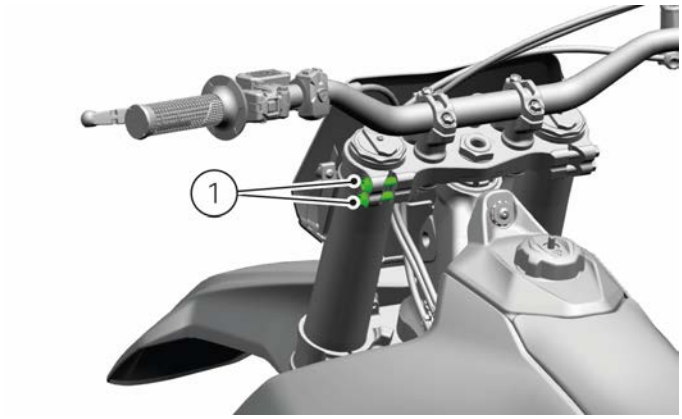


Fig 244

Replacing the steering tube bearings

Removal procedure

Remove the bottom yoke as shown in chapter “Removing and refitting the bottom yoke”.

Working from the top, remove the seal (1) and the bearing (2).

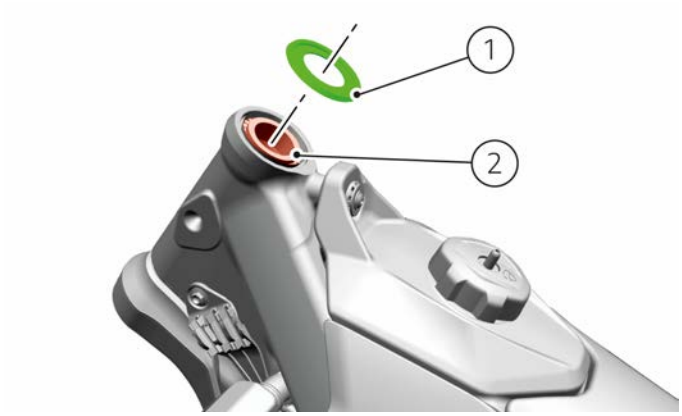


Fig 245

Working on bottom yoke, slide the bearing (3) and seal (4) out from the top.

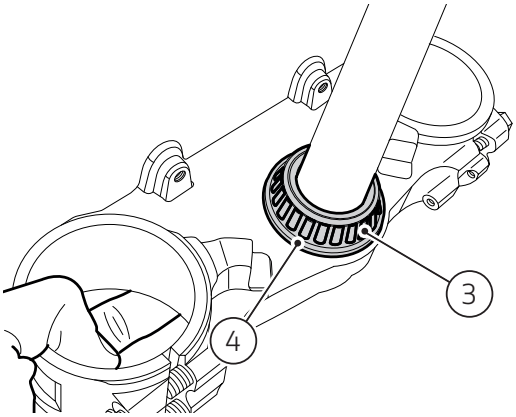


Fig 246

Remove the two bearing races (5).



Fig 247

Assembly

Insert the two bearing races (5).



Fig 248

Acting on the bottom yoke, insert the seal (4) and the bearing (5).

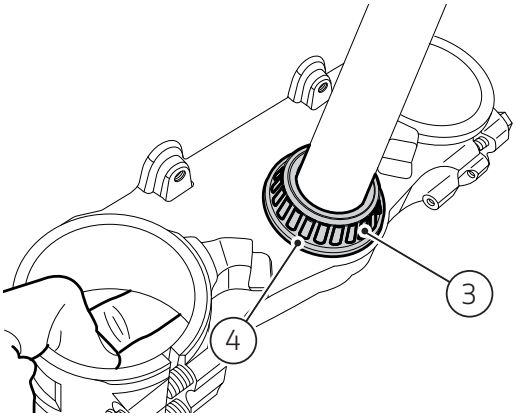


Fig 249

Working from the top, insert the bearing (2) and the seal (1).

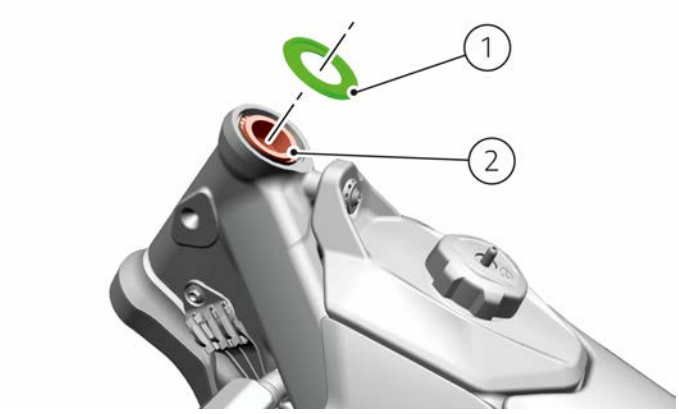


Fig 250

Fit the bottom yoke and the previously removed components as described in chapter “Removing and refitting the bottom yoke”.
Refit the steering head as described in chapter “Removing and refitting the steering head”.
Refit the handlebar as described in chapter “Removing and refitting the handlebar”.

Frame and suspensions

Front fork

Attention
Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Front fork adjustments

Attention
To avoid damage, do not force the adjusters beyond their maximum adjustment point.

Attention
Regulate the adjusters on both legs to the same positions.

By adjusting the adjusters (1) it is possible to modify the damping of the front fork in compression.
Turning clockwise increases compression damping (more resistance).
Turning anticlockwise reduces compression damping (less resistance).
To proceed with the adjustment, turn adjusters (1) on both legs fully clockwise (fully closed). Starting from this position, turning counter clockwise, you can count the clicks.

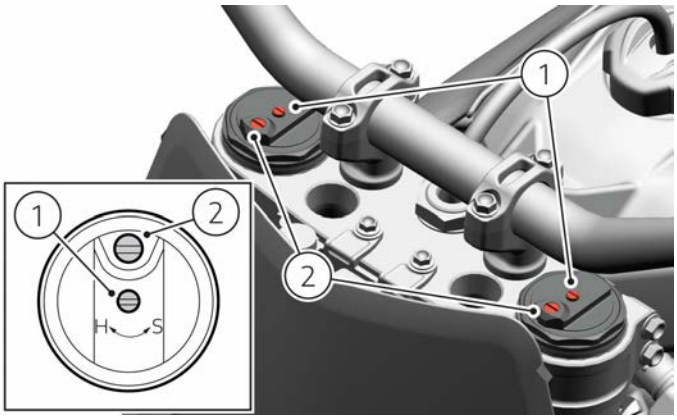


Fig 251

By adjusting the adjusters (3) it is possible to modify the damping of the front fork in rebound.
Turning clockwise increases compression damping (more resistance).
Turning anticlockwise reduces compression damping (less resistance).
To proceed with the adjustment, turn adjusters (3) on both legs fully clockwise (fully closed). Starting from this position, turning counter clockwise, you can count the clicks.

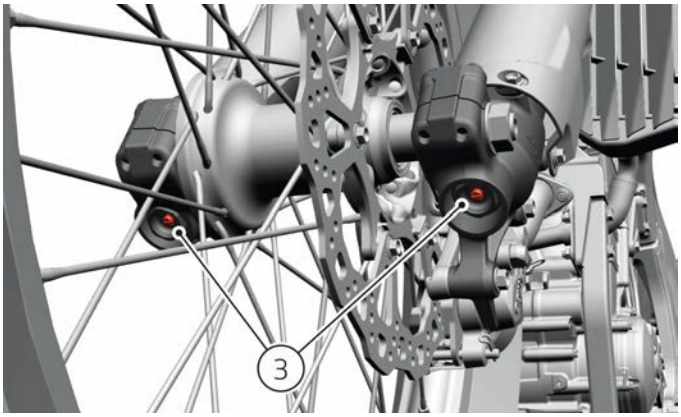


Fig 252

Front fork adjustment table		
Adjuster	Adjustment range	Factory setup (starting from fully closed)
Compression adjuster	16 clicks	11 clicks
Rebound adjuster	16 clicks	10 clicks

Air bleeding

On the top of each leg there is a bleed screw to remove excess air that accumulates during normal operation.
To bleed the system, place the motorcycle on a center stand with the front wheel off the ground and the fork fully extended.
Remove the screws (2) on both legs to release the pressure inside the fork.
Once this operation is complete, tighten the screws (2).

Important
In order to ensure optimal fork performance, we suggest to vent any excess air from the legs using the specially provided vent screws (2). This has to be done whenever you use the bike, before using it.
To ensure consistent and repeatable fork performance, carry out this operation when the fork is cold.

Important
The air must only be bled from the front fork when the fork legs are at ambient temperature.
Bleeding with 'hot' fork legs (after use) can lead to unexpected internal pressure when the legs return to ambient temperature.

Removing the front fork legs

Remove the front wheel as described in chapter "Removing and refitting the front wheel".
Remove the fork guards as described in chapter "Fork guards".

Loosen the front brake caliper (5) retaining screws (6).
Remove the front brake caliper (5) from the LH leg bottom end (4).

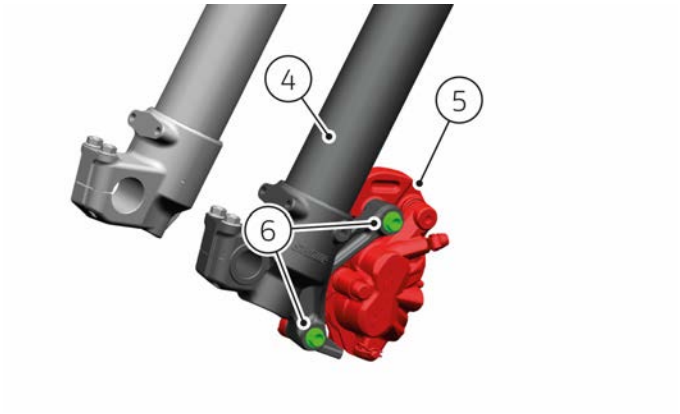


Fig 253

Loosen the screws (7) securing the fork leg to the steering plates.

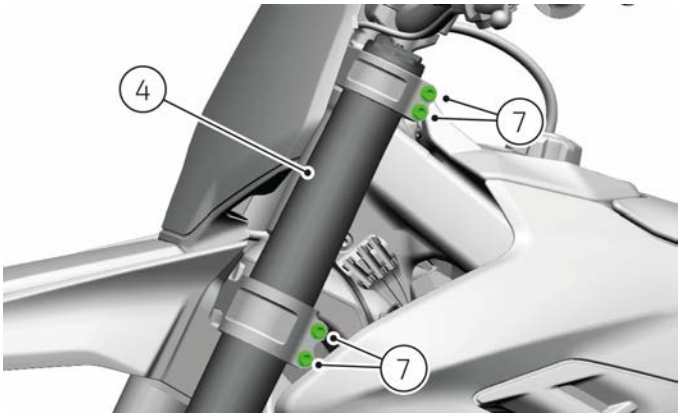


Fig 254

Carefully slide the left fork leg (4) downwards and remove it.
Proceed in the same way to remove the right fork leg, except for the removal of the front brake caliper (5).

Attention
Before loosening the leg lock screws on the steering plates, support the leg adequately to prevent it from falling.

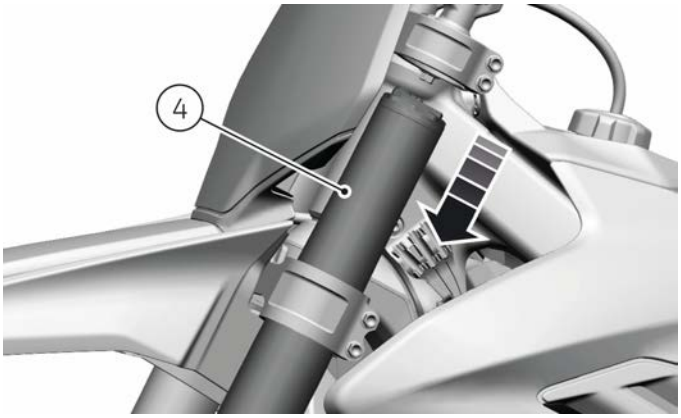


Fig 255

Refitting the front fork legs

Insert the LH fork leg (4) in the steering plates.
Check that the front brake hose (8) passes through the inside of the fork leg and below the lower steering plate.

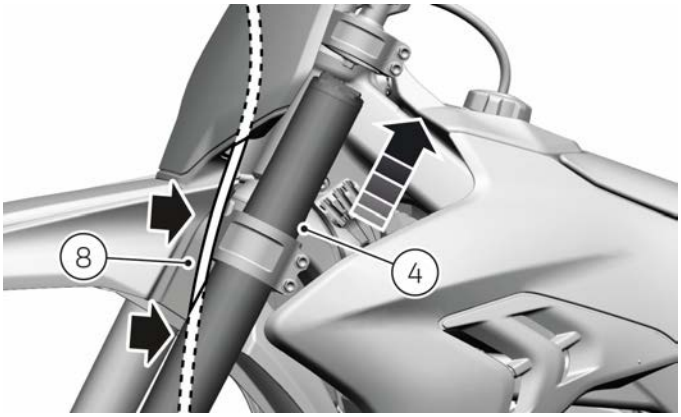


Fig 256

Start the screws (7) into the lower steering plate only, without tightening them, to support the leg.

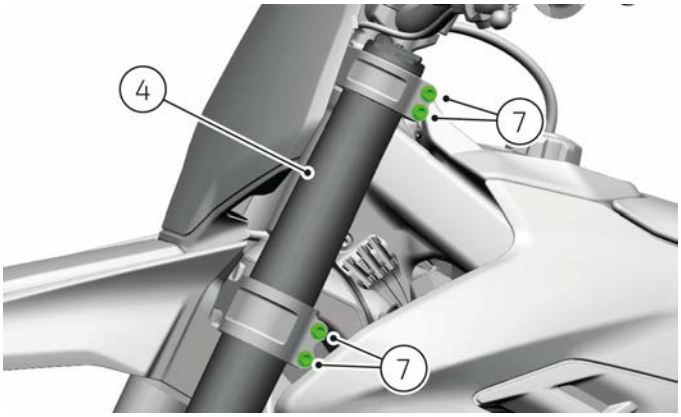


Fig 257

Adjust the leg (4) extension (A) in relation to the steering head: standard value 0.19 in (5 mm).

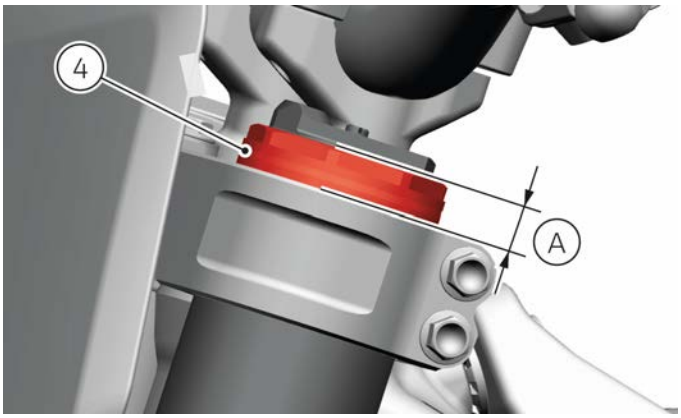


Fig 258

Tighten the screws (7) in a cross pattern to a torque of 17 Nm ± 5%.
Refit the brake caliper (5) on the fork bottom end (4) and tighten the screws (6) to a torque of 25 Nm ± 10%.

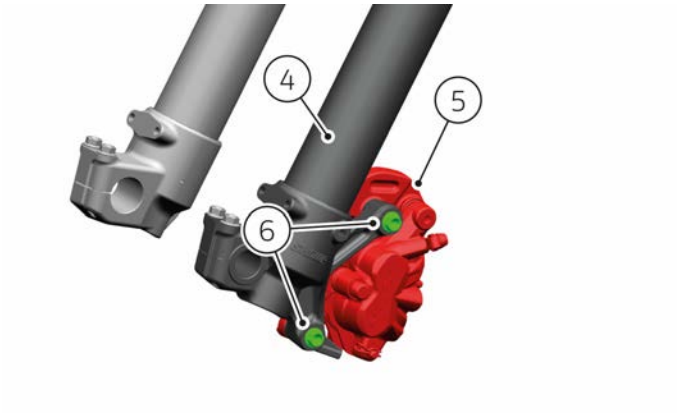


Fig 259

Proceed in the same way to refit the right fork leg, except for the refitting and routing of the front brake caliper hose (5).
Refit the fork guards as described in chapter “Fork guards”.
Refit the front wheel as described in chapter “Removing and refitting the front wheel”.

Rear shock absorber

Attention

Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Attention

The shock absorber is filled with gas under pressure and may cause severe damage if taken apart by someone who is unskilled.

Adjusting the rear shock absorber

Attention

To avoid damage, do not force the adjusters beyond their maximum adjustment point.

The adjuster (1) adjusts the damping at low compression speeds (LOW).
The adjuster (2) adjusts the damping at high compression speeds (HIGH).
Turning clockwise increases rebound damping (more resistance).
Turning anticlockwise reduces rebound damping (less resistance).
To proceed with the adjustment, turn adjusters (1) and (2) fully clockwise (fully closed). Starting from this position, turning anticlockwise, you can count the clicks on the adjuster (1), while you can count the turns on the adjuster (2).

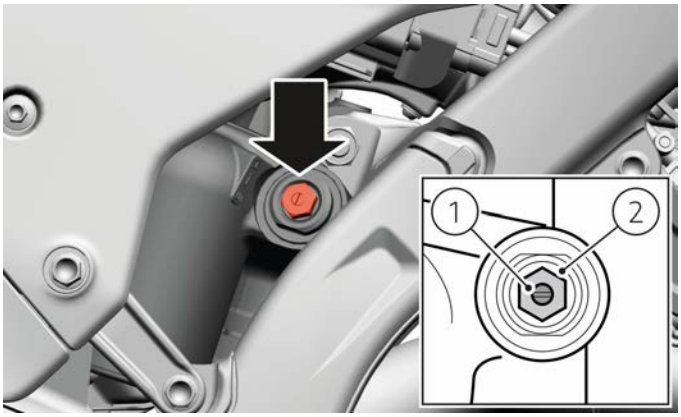


Fig 260

By adjusting the adjuster (7), it is possible to change the rear shock absorber damping in rebound.
Turning clockwise increases rebound damping (more resistance).
Turning anticlockwise reduces rebound damping (less resistance).
To proceed with the adjustment, turn adjuster (7) fully clockwise (fully closed). Starting from this position, turning counter clockwise, you can count the clicks.

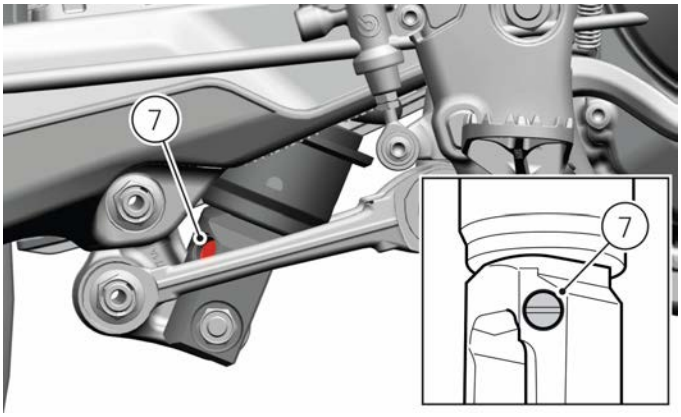


Fig 261

Rear shock absorber adjustment table		
Adjuster	Adjustment range	Factory setup (starting from fully closed)
Low speed compression adjuster (LOW)	19 clicks	13 clicks
High speed compression adjuster (HIGH)	4 turns	2.5 turns
Rebound adjuster	22 clicks	9 clicks

Shock absorber spring preload

Place the motorcycle on a suitable stand with the rear wheel off the ground.
To adjust the spring preload (6), loosen the screw (3) on the ring nut retainer (4) and adjust the ring nut (5) with a special wrench.
Measure the length of the spring (6) when completely uncompressed, then adjust the preload by measuring the in (mm) of preload from this position.
Then TIGHTEN or SLACKEN the ring nut to INCREASE or DECREASE spring preload.
Once the adjustment is complete, tighten screw (3) to a torque of 5 Nm.

Attention

To turn the preload adjuster ring nut use a pin wrench. Pay attention to avoid hand injuries by hitting motorcycle parts in case the wrench tooth suddenly slips on the ring nut groove while moving it.

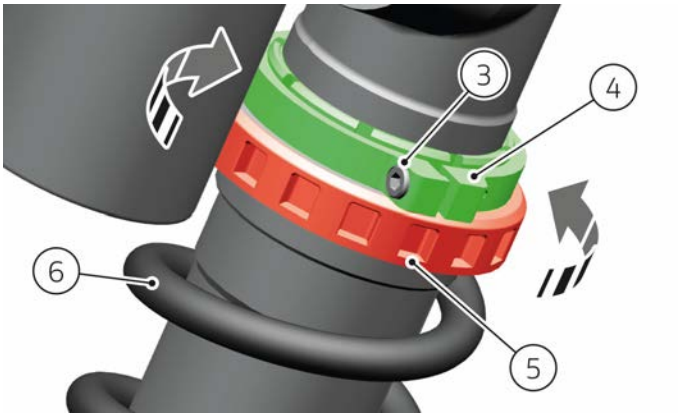


Fig 262

Spring preload adjustment table		
	Adjustment range	Factory setup (from uncompressed spring)
Spring preload	0.19 in (5 mm) min / 0.78 in (20 mm) max	8.3 mm

Free sag adjustment (static SAG)

The free sag (static SAG) is the difference in height between the motorcycle off the ground (on the center stand) and the motorcycle on the ground with no rider on board.
The reference distance (A) is the distance between the rear wheel shaft center and the corresponding point vertically below the rear mudguard.
To measure these values, proceed as follows:

- Position the motorcycle on a center stand and measure distance (A);
- Remove the center stand and, with the help of a second person, hold the motorcycle with the wheels on the ground and in an upright position, then measure distance (B);
- The difference between measurements (A) and (B) indicates the free sag.

The free sag must correspond to: 1.37 in - 1.77 in (35 - 45 mm).
If the measured value is less than or greater than the prescribed value, adjust the shock absorber spring preload and take the measurements again.

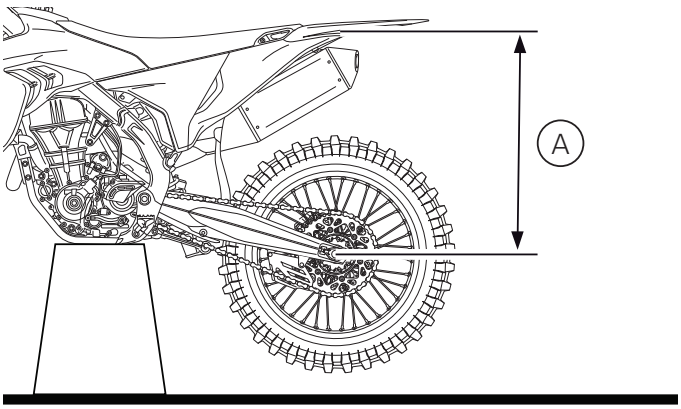


Fig 263

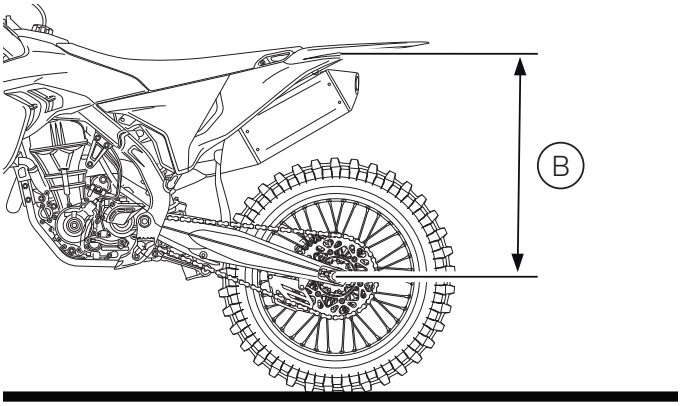


Fig 264

Rider sag adjustment (dynamic SAG)

The rider sag (dynamic SAG) is the difference in height between the motorcycle off the ground (on the center stand) and the motorcycle on the ground with rider on board.
The reference distance (A) is the distance between the rear wheel shaft center and the corresponding point vertically below the rear mudguard.
To measure these values, proceed as follows:

- Position the motorcycle on a center stand and measure distance (A);
- Remove the center stand and, with the help of a second person, support the motorcycle, have the rider sit on the seat with his feet on the footpegs and wearing protective gear, then have him move up and down a few times to settle the shock absorber;
- Take measure (C);
- The difference between measurements (A) and (C) indicates the rider sag.

The rider sag must correspond to: 4.13 in - 4.52 in (105 - 115 mm).
If the measured value is less than or greater than the prescribed value, adjust the shock absorber spring preload and take the measurements again.
If, by adjusting the spring preload, it is not possible to comply with the specified static and dynamic sag values at the same time, the spring must be replaced with one of lower or higher hardness.
Standard spring rate value: 46 N/mm.
In this case, contact a Ducati dealer or Authorized Service Center.

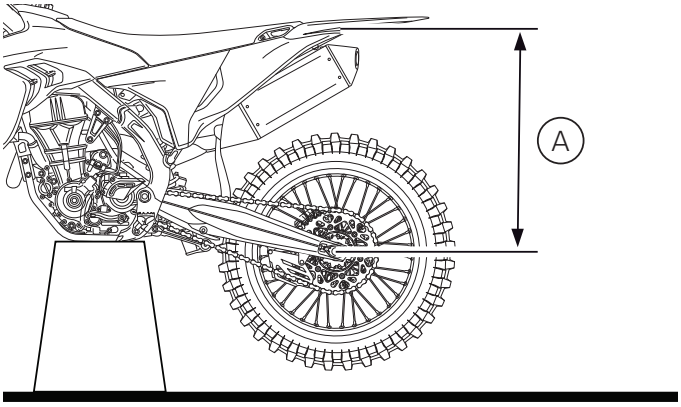


Fig 265

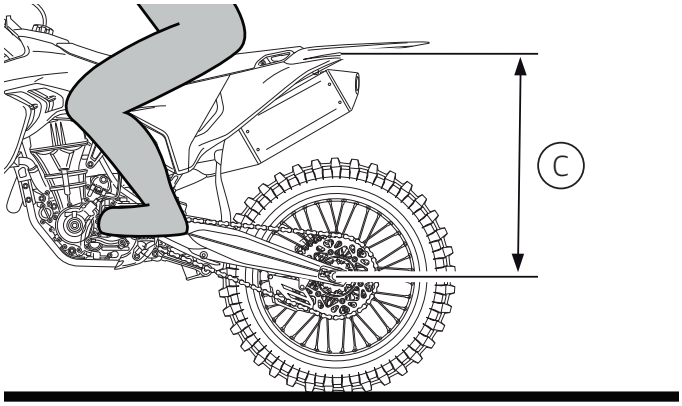


Fig 266

Once you have established that the spring load is correct, the use of a certain sag value rather than another is inextricably linked to the ground conditions, grip and rider feel. Having established that the preload affects the stiffness of the suspension in the first part of the travel, we can say that:

- On dry, slippery ground with small potholes and ridges, it will be usually better to apply less preload and therefore using a softer suspension in the first part and with greater sag, greater comfort and less nervousness;
- On freshly milled terrain with lots of grip, leaning corners and banks, it will be better to apply more preload (less sag) and therefore use a stiffer, more stable suspension that maintains its position and transfers less load during strong acceleration and corner exits.

Removing the rear shock absorber

Remove the silencer as described in chapter “Removing and refitting the silencer”.

Remove nut (9) and pin (10) securing the lever system to the swinging arm and nut (11) and pin (12) securing the shock absorber to the swinging arm to release the swinging arm joint (8).

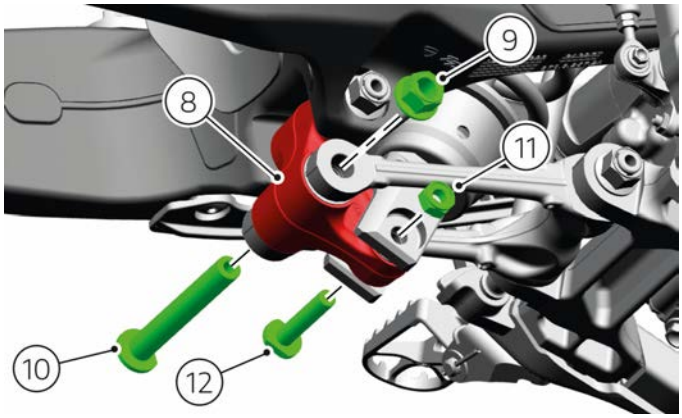


Fig 267

Remove nut (13) and pin (14) securing the rear shock absorber to the frame.

Attention

Support the shock absorber properly before disconnecting it from the frame to avoid injury or damage to components.

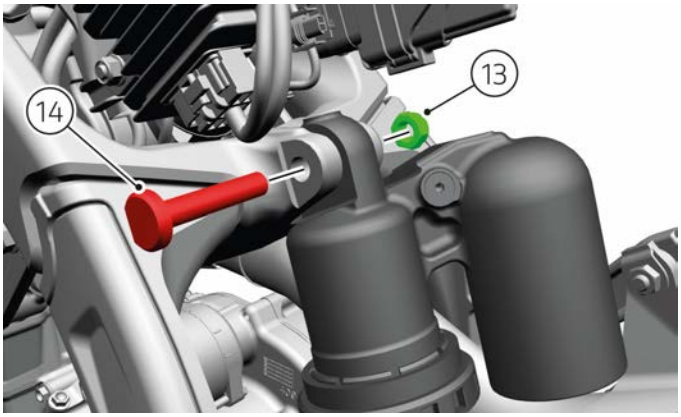


Fig 268

Lower and then remove the rear shock absorber (15) from the right side of the vehicle.

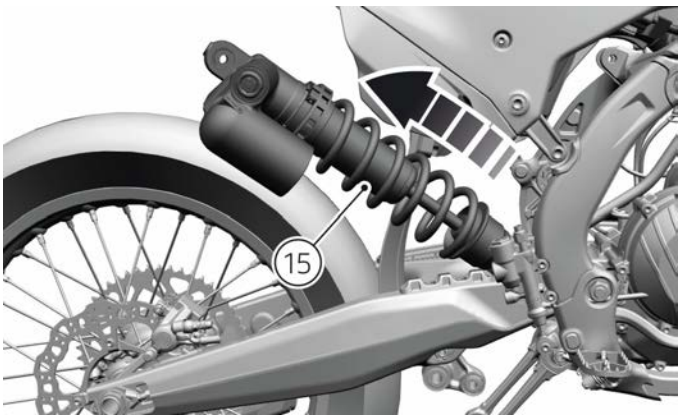


Fig 269

Refitting the rear shock absorber

Reinsert the rear shock absorber (15) in the opposite direction to which it was removed.

Apply GADUS S2 V220 AD 2 grease on thread, underhead and pin shank.
Refit the rear shock absorber retaining pin (14) and nut (13) to the frame and tighten the nut (13) to a torque of 42 Nm ± 5%.

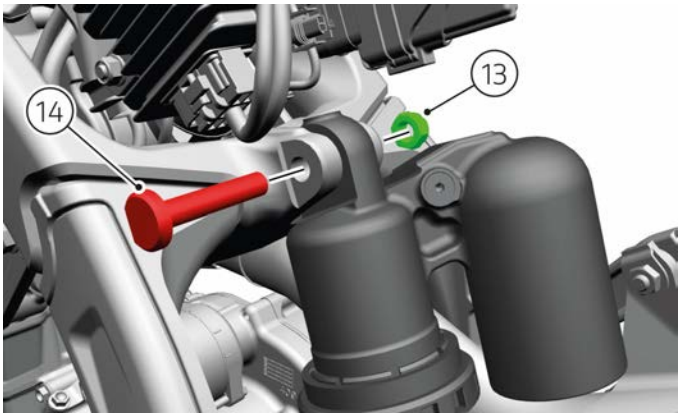


Fig 270

Apply GADUS S2 V220 AD 2 grease on thread, underhead and shank of pins (10) and (12).
Refit the pin (10) and nut (9) securing the lever system to the swinging arm and tighten the nut (9) to a torque of 65 Nm ± 5%.
Refit the shock absorber retaining pin (12) and nut (11) to the swinging arm and tighten the nut (11) to a torque of 42 Nm ± 5%.
Refit the silencer as described in chapter “Removing and refitting the silencer”.

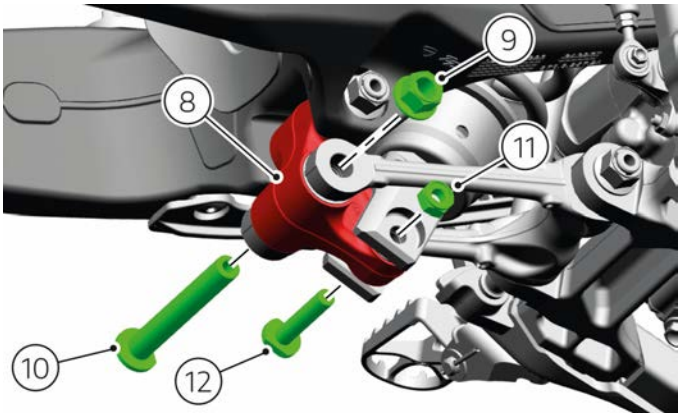


Fig 271

Frame fastening hardware

Attention

After running-in and before riding, always check the points indicated in the chapter “Frame fastening hardware” and check the correct tightening torques.

Note

For the tightening torques, refer to the chapter “Vehicle tightening torques”.

Chain-sprocket assembly	Front sprocket fastening
Front fork assembly	Fork bottom end tightening
	Steering head bearing tightening
	Steering shaft to steering head tightening
	Bottom yoke to fork sleeve (LH/RH) fastening
	Steering head to fork sleeve (LH/RH) fastening
	Lower U-bolt to steering head (LH/RH) fastening
	Upper U-bolt to lower U-bolt (LH/RH) fastening
Rear swinging arm assembly	Swingarm shaft to frame fastening
Rear suspension assembly	Shock absorber to frame fastening
	Shock absorber to suspension link fastening
	Linkage to suspension link fastening
	Linkage to frame fastening
	Suspension link to swinging arm fastening
Front wheel assembly	Front brake disc to front wheel hub fastening
	Front wheel nut tightening
Rear wheel assembly	Rear sprocket to rear wheel hub fastening
	Brake disc to rear wheel hub fastening
	Rear wheel shaft nut tightening
Frame assembly	RH upper engine plate to frame fastening
	LH upper engine plate to frame fastening
	RH lower engine plate to frame fastening
	LH lower engine plate to frame fastening
	Upper engine plate to engine fastening
	Frame to engine lower fastening
	Lower engine plate to engine fastening
	Subframe to frame upper fastening
	Subframe to frame lower fastening
	RH footpeg holder plate to frame upper fastening
	RH footpeg holder plate to frame lower fastening
	LH footpeg holder plate to frame upper fastening
	LH footpeg holder plate to frame lower fastening

Checking the swingarm bearing clearance

Attention

Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Position the vehicle so that the rear wheel is off the ground.
Remove the rear wheel as described in chapter “Removing and refitting the rear wheel”.
Check that the swingarm shaft nut is tightened correctly to 80 Nm ± 5%.

Check for lateral play (A) of the swinging arm by moving it horizontally. If play is detected, check the integrity of the swinging arm bearings; if necessary, contact a Ducati Dealer or a Ducati Authorized Service Center.

Check the vertical movement (B) of the swinging arm by moving it vertically. If the movement is not smooth or if there is any hard spot, friction or clearance, check the integrity of the swinging arm and swinging arm link bearings. If necessary, contact a Ducati Dealer or a Ducati Authorized Service Center.

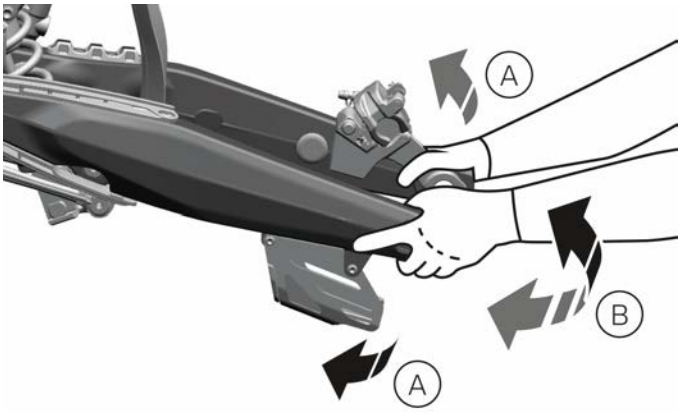


Fig 272

Once the checks have been completed, refit the rear wheel as described in chapter “Removing and refitting the rear wheel”.

Final drive

Checking the chain tension

Attention

Carry out these inspection operations with the engine off, the vehicle at a standstill, on a flat ground and on the stand.

Check, adjust and lubricate the chain and transmission parts at regular intervals to prevent excessive wear of the components.
Excessive wear or incorrect chain adjustment can cause the chain to break or jump off the front and rear sprocket.

Checking the tension

To check the drive chain tension, proceed as follows:
Place the motorcycle on a suitable stand with the rear wheel off the ground.
Pull the chain upwards and measure the distance (A) between the center of the chain pins and the surface of the swinging arm at the end of the chain sliding shoe (1a).
The value (A) must be: 2.36 in (60 mm).

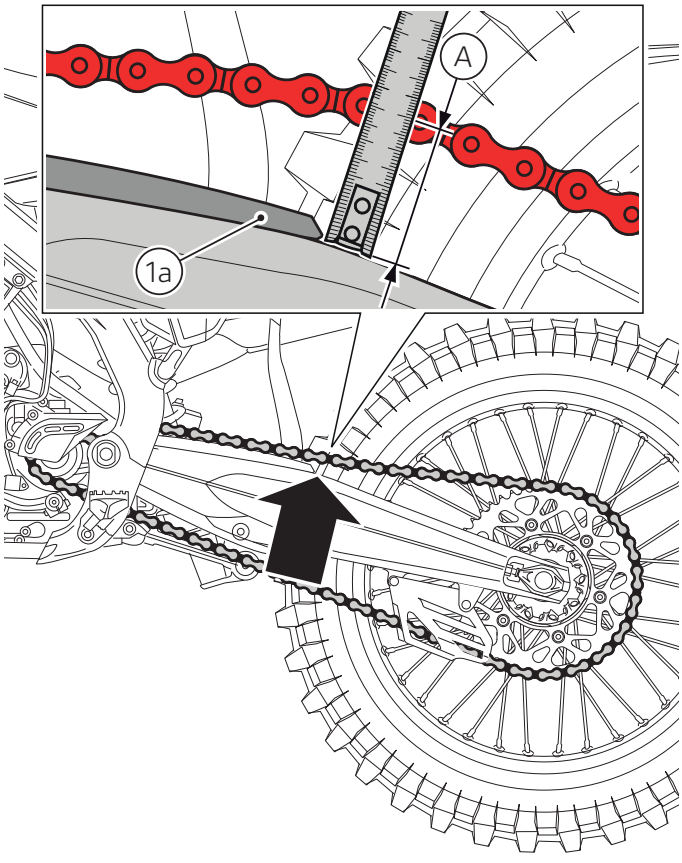


Fig 273

Tension adjustment

Loosen the rear wheel shaft retaining nut (1) and the lock nuts (2) on the left and right sides of the swingarm.
Adjust the chain tension by adjusting the position of the chain tensioner spacers (4) using the screws (3) on the left and right sides of the swingarm.
Check the position of the chain tensioner spacers (4) by referring to the notches (B); both chain tensioner spacers (4) must be adjusted to the same distance to prevent wheel misalignment.
Tighten the lock nuts (2) on the adjustment screws (3).
Check that the chain tensioner spacers (4) are flush with the screws (3) and tighten the nut (1) to a torque of 120 Nm ± 5%.

Important

This only applies to the motorcycle STANDARD settings, available upon delivery.

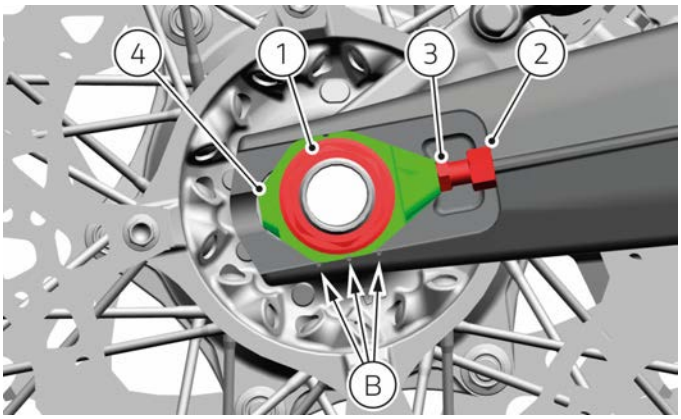


Fig 274

Attention

Correct tightening of the rear wheel shaft (1) is critical to rider and passenger safety.

Important

If the drive chain is too tight or too slack, adjust it so that tension reading will fall within specified range.

Important

Improper chain tension will lead to rapid wear of transmission parts.

Important

To ensure the best performance and long life of the chain, please follow the information related to chain cleaning, lubrication, inspection and tensioning.

Lubricating the chain

Attention

Carry out these inspection operations with the engine off, the vehicle at a standstill, on a flat ground and on the stand.

Cleaning

Before proceeding with the chain lubrication it is important to correctly wash and clean it.
The chain cleaning is extremely important for its duration. In fact, it is necessary to remove any mud, soil, sand or dirt from the chain first using a soft damp cloth (1) to soften the most resistant dirt and then with a jet of water and then dry it immediately using compressed air at a distance of at least 11.81 in (30 cm).

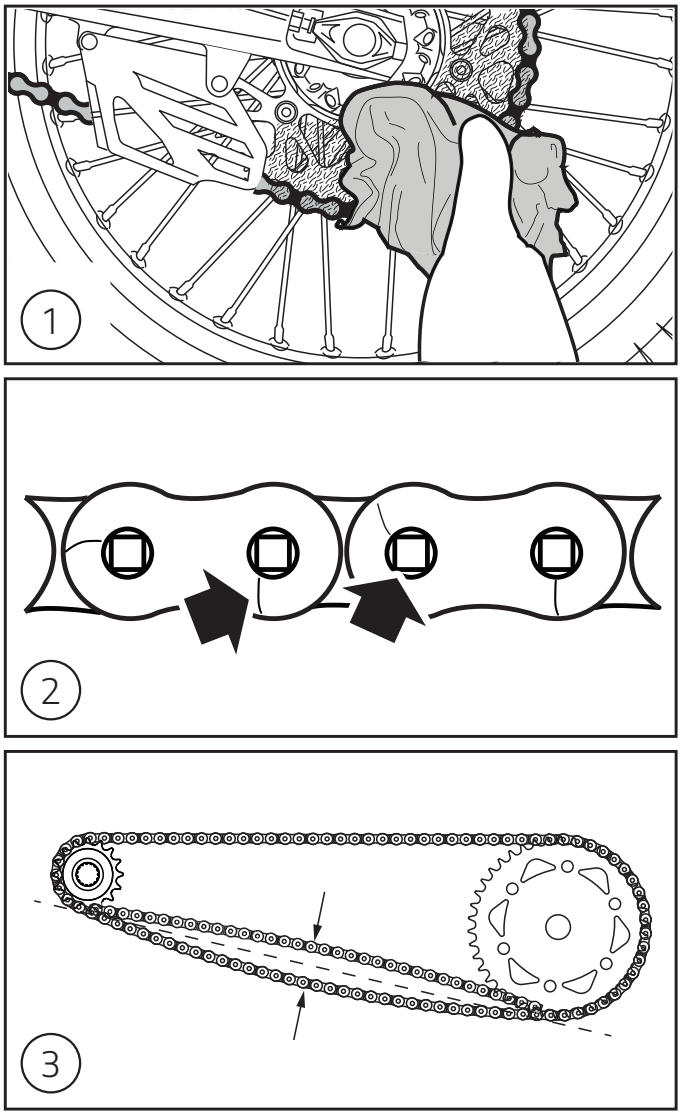


Fig 275

Checking the chain

Check the chain for wear by checking the links at the points indicated (2).

Checking the tension

Check the chain tension (3) as indicated in the sub-section “Checking the drive chain tension”.

Lubrication

Attention
Use SHELL Advance Chain for chain lubrication.

It is recommendable to lubricate the chain without waiting for it to cool down after using the motorcycle, so that the new lubricant can penetrate better between the inner and outer links and be more effective in its protective action.

Place the motorcycle on a center stand. Make the rear wheel turns fast in the opposite direction to the direction of travel.

Apply the lubricant jet (1) inside the chain between the inner and outer links, in point (2) immediately before the engagement point on the sprocket.

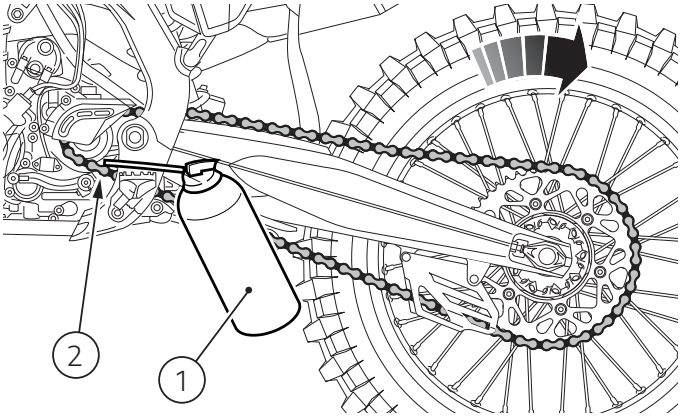


Fig 276

After lubrication, wait 10-15 minutes to allow the lubricant to act on the internal and external surfaces of the chain and then remove the excess lubricant with a clean cloth.

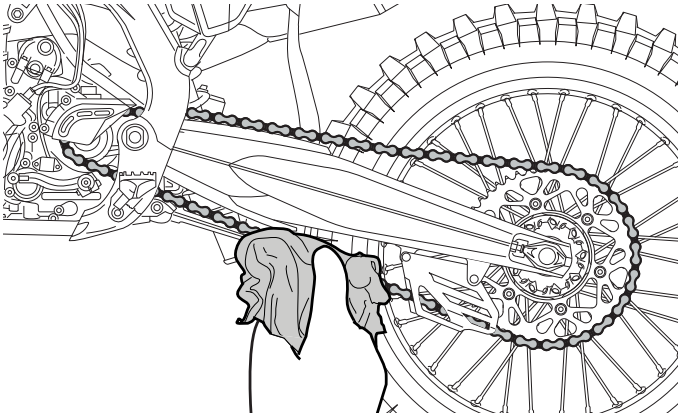


Fig 277

Attention
Always check the adjustment and lubrication of the drive chain before each use of the motorcycle.

Replacing the chain

Attention
This section is intended for those who already have basic knowledge and skills in motorcycle maintenance.
If you are not familiar with these operations, please contact a Ducati Dealer or a Ducati authorized service center.
Incorrect replacement of any of these components could seriously compromise your safety and cause irreparable damage to the motorcycle.

Attention
Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removing the chain

Remove the retainer (1) of the main link by pushing it in direction (A), towards the direction of rotation of the chain, and pulling it out.

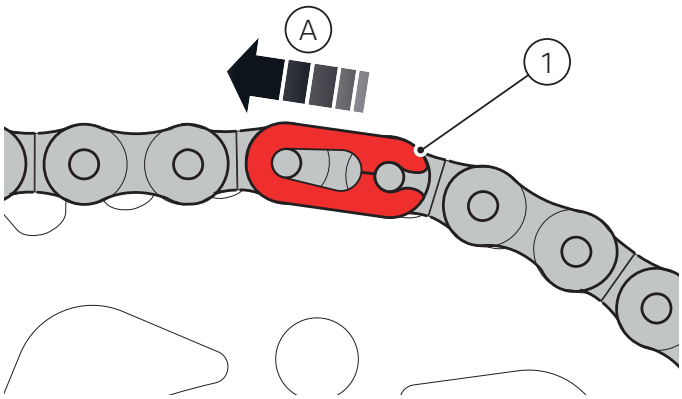


Fig 278

Remove parts (2) and (3) from the main link and remove the drive chain.

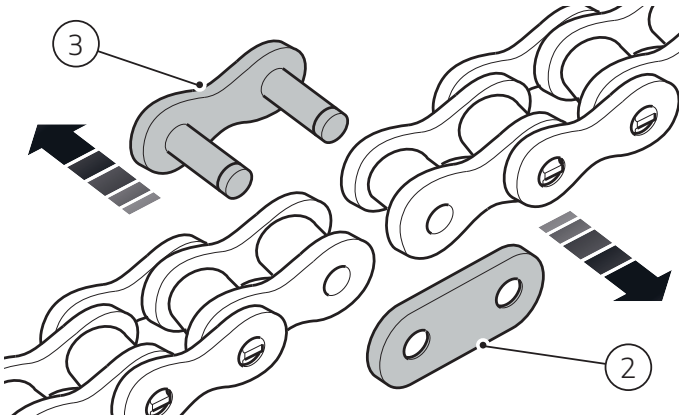


Fig 279

Refitting the chain

Place the drive chain on the front and rear sprocket, passing it through the chain guard (4) on the swinging arm.

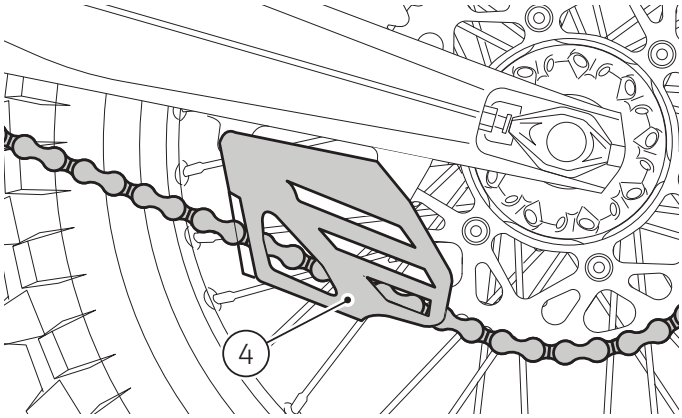


Fig 280

Reconnect the two ends of the chain using parts (2) and (3) of the main link. Position part (2) of the main link towards the outside.

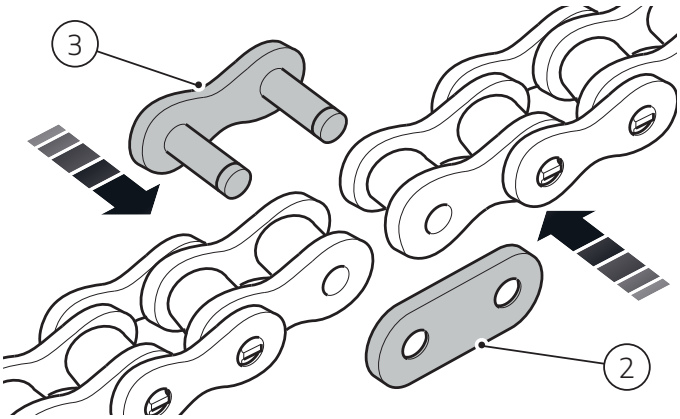


Fig 281

Reinsert the retainer (1) of the main link by pushing it in direction (B), in the opposite direction of chain rotation.

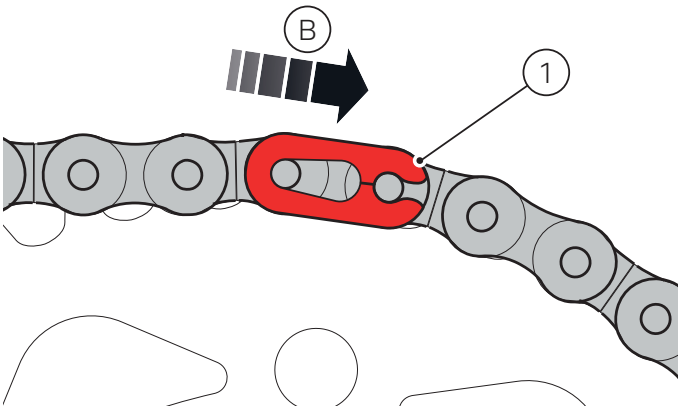


Fig 282

Replacing the sprocket

Attention

This section is intended for those who already have basic knowledge and skills in motorcycle maintenance.
If you are not familiar with these operations, please contact a Ducati Dealer or a Ducati authorized service center.
Incorrect replacement of any of these components could seriously compromise your safety and cause irreparable damage to the motorcycle.

Attention

Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removing the sprocket

Remove the chain as described under "Replacing the chain".
Remove the screws (1), the spacers (2), the sprocket guard (3) and the plate (4).

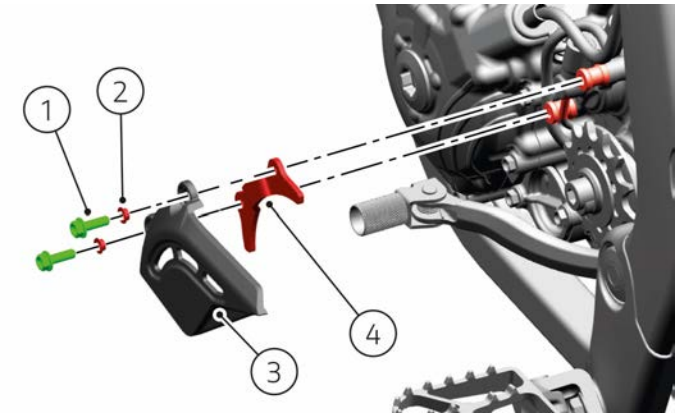


Fig 283

Remove the screw (5), the spacer (6) and the washer (7). Remove the sprocket (8).

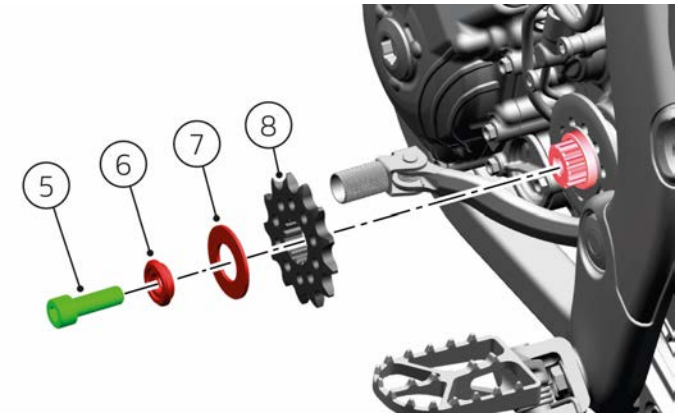


Fig 284

Refitting the sprocket

Place the sprocket (8) on the toothed support.
Place the washer (7), spacer (6) and screw (5).
Apply **Gadus V2 V220 AD 2** grease only to the underside of the screw head (5) and start it.
Tighten screw (5) to the specified torque of 55 Nm ± 5%.

Reposition the plate (4), the sprocket guard (3) and the spacers (2) and start the screws (1).
Tighten the screws (1) to a torque of 6 Nm ± 10%.
Refit the chain as described under "Replacing the chain".

Replacing the rear sprocket

Attention
This section is intended for those who already have basic knowledge and skills in motorcycle maintenance.
If you are not familiar with these operations, please contact a Ducati Dealer or a Ducati authorized service center.
Incorrect replacement of any of these components could seriously compromise your safety and cause irreparable damage to the motorcycle.

Attention
Place the vehicle on a stable support and secure it with suitable equipment to prevent it from tipping over.

Removing the rear sprocket

Remove the rear wheel as described in chapter “Removing and refitting the rear wheel”.

Undo the screws (2), holding the flanged nuts (1) on the opposite side, and remove the rear sprocket (3) from the rear wheel hub.

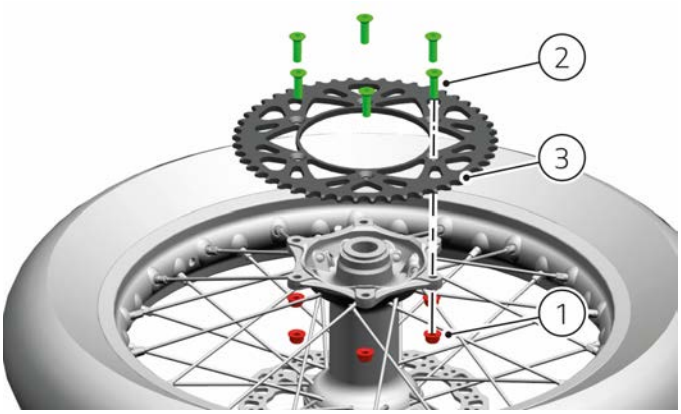


Fig 285

Refitting the rear sprocket

Attention
Carefully remove any existing Loctite® residue from nuts and screws before applying new product.

Smear Loctite ® 243 ™ on the thread of the screws (2).
Reposition the rear sprocket (3) on the rear wheel hub, aiming it as shown in the figure and start screws (2).
On the opposite side, screw the flanged nuts (1) onto the threaded end of screws (2) and tighten them in a cross pattern to a torque of 30 Nm ± 5 %.

Attention
The tightening torque must always be applied from the nut side.

Refit the rear wheel as described in chapter “Removing and refitting the rear wheel”.

Changing the gear ratios

Changing the final drive ratio affects the effectiveness of Traction Control.
For this reason, if the ratio is changed, the information in the motorcycle's control units must be updated.
To do this, use the Ducati X-link App, connected to the motorcycle via the Ducati Com Link Wi-Fi connection module, available as an accessory. Alternatively, contact a Ducati Dealer or Authorized Service Center.

Supply system

Visual inspection of the intake manifold and airbox

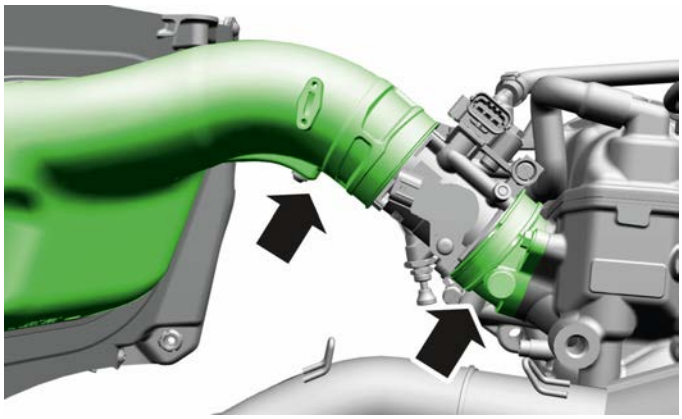


Fig 286

Check that the throttle body is correctly secured to the intake manifold and airbox.
Check that there are no signs of air or fuel leaks.
If any defects are found, replace the necessary components or contact a Ducati Dealer or Authorized Service Center.

Throttle body bypass screw cleaning

Important
This operation must be performed **every 15 hours**, as indicated in the chapter "Scheduled maintenance chart".
After cleaning the screw, adjust the idling rpm.

Important
To perform the adjustment, the vehicle must be equipped with a Ducati Wi-Fi module connected to the X-Link app.
If the module is not present, contact a Ducati dealer or authorized service center.

With the engine off, remove the bypass screw (1) on the right side of the vehicle.
The passage (2) on the throttle body in which the bypass screw is fitted, as well as the screw itself (1), must be cleaned thoroughly using a cotton swab or a lint-free cloth.
Once cleaning is complete, refit bypass screw (1).

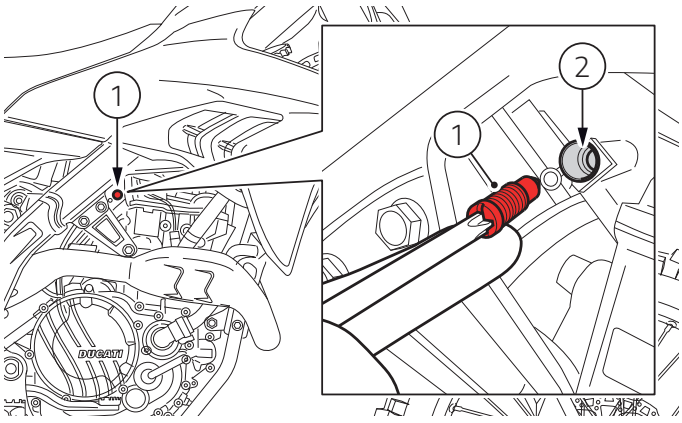


Fig 287

Adjusting the idling rpm

Important
To perform the adjustment, the vehicle must be equipped with a Ducati Wi-Fi module connected to the X-Link app.
If the module is not present, contact a Ducati dealer or authorized service center.

Verification procedure via X-Link app

1. Start the engine.
2. Wait until the coolant temperature exceeds **70 °C**, checking the value on the app (A).
3. Check from the app (B) that the idling rpm range is between **2,100 and 2,300 rpm for at least 5 seconds**.
4. Adjust the screw until the engine idle speed is between **2,100 and 2,300 rpm for at least 5 seconds**.

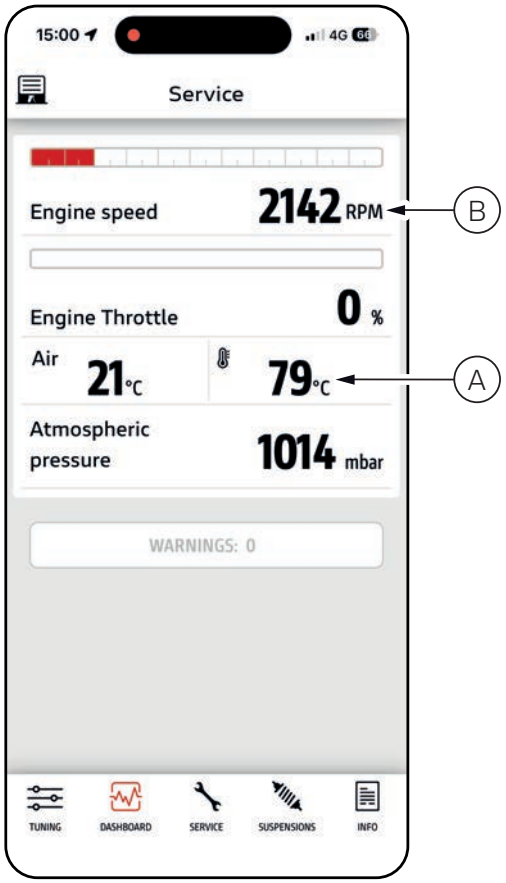


Fig 288

Adjustment procedure

1. Find the bypass screw (1) on the throttle body.
2. Turn the screw **½ turn at a time**, tightening or loosening it according to the speed detected.
3. Check the engine speed (B) using the X-Link app.
4. Adjust the screw until the idling rpm range is between **2,100 and 2,300 rpm for at least 5 seconds**.

Adjustment table

Engine speed	Bypass screw adjustment
Lower than 2,100 rpm	Loosen bypass screw
Higher than 2,300 rpm	Tighten bypass screw

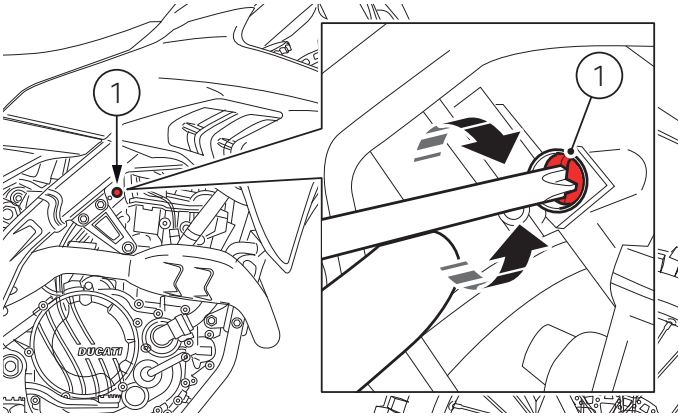


Fig 289

Fuel tank - Removal and refitting

Attention

Fuel is highly flammable.

- Do not top-up near open flames or lit cigarettes.
- Stop the engine when topping up.
- Make sure that no fuel is spilled, especially on hot parts of the vehicle.
- Dry any spilled fuel immediately.

Attention

Fuel is harmful to health.

- Avoid fuel coming into contact with your skin, eyes or clothing.
- If fuel is swallowed, seek medical advice immediately.
- Do not breathe fuel vapors.
- In case of contact with skin, rinse immediately with plenty of water.
- Rinse eyes thoroughly with water and seek medical attention if fuel gets into the eyes.
- Store fuel properly in a suitable container.

Removal procedure

Remove the front side body panels as shown in chapter “Front side body panels”.

Loosen screw (1) securing the fuel tank (2).

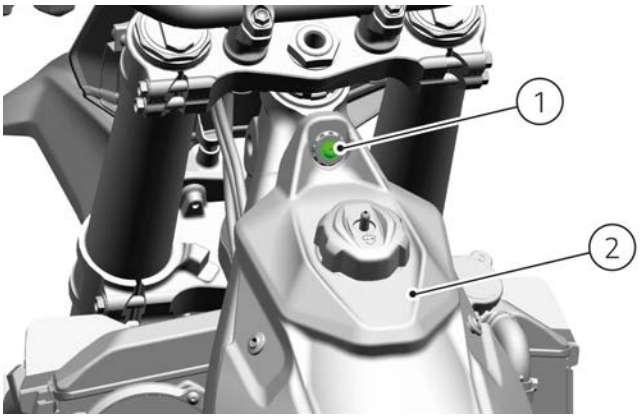


Fig 290

Raise the tank just enough to access the GAG flange on the rear.

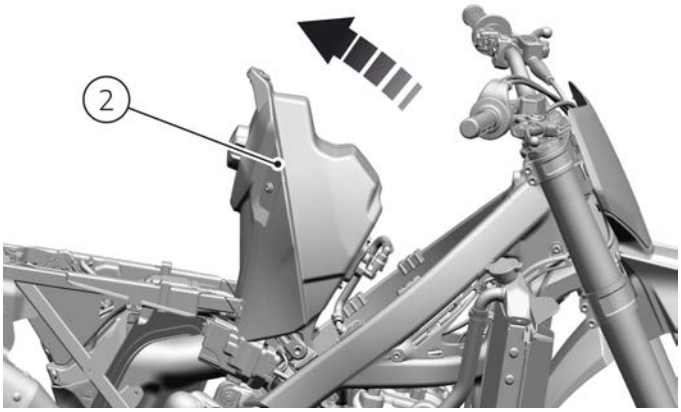


Fig 291

Disconnect the quick coupling (A) and the fuel pump connector (B).
To disconnect the quick coupling (A), push the release button (C) upwards as shown in the figure.



Fig 292

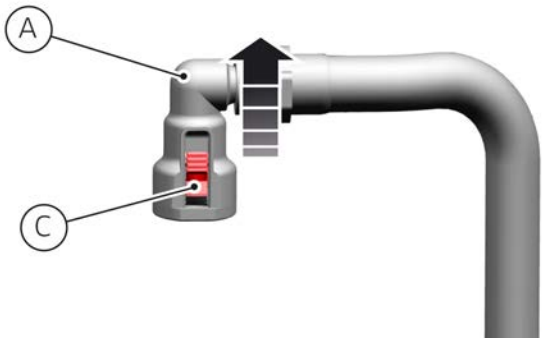


Fig 293

Remove the fuel tank (2) by lifting it upwards and sliding it out of the rubber fasteners (3).

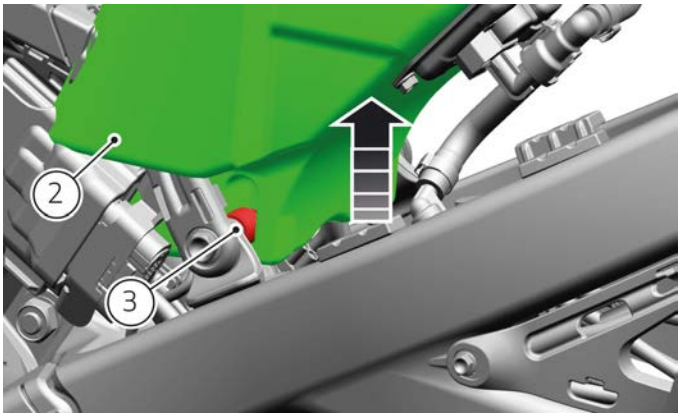


Fig 294

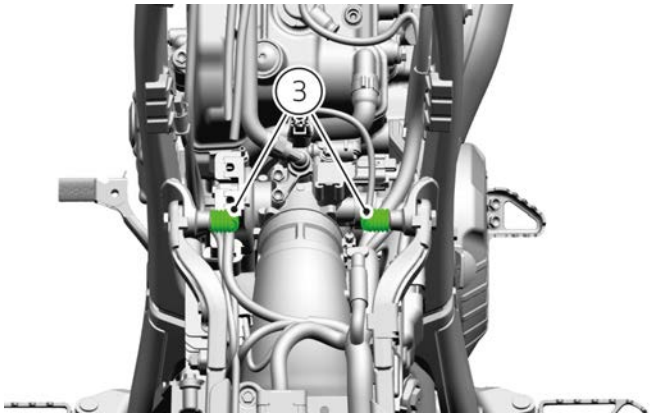


Fig 295

Refitting

Position the tank (2) by inserting the rubber fasteners (3) into the slots (D) on the frame.

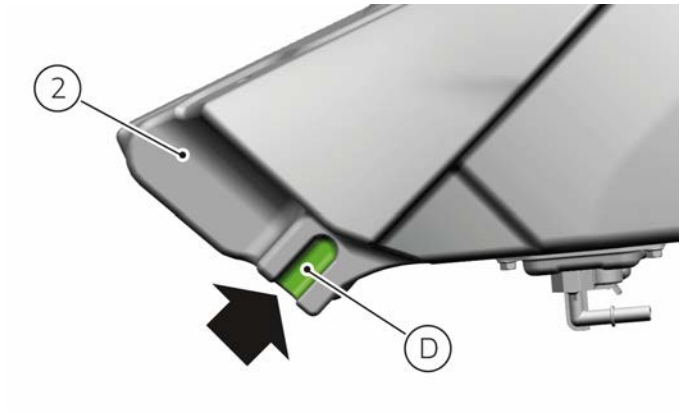


Fig 296

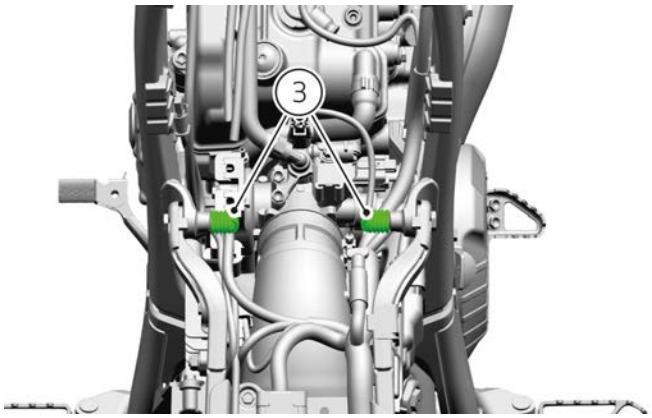


Fig 297

Connect the quick coupling (A) and the fuel pump connector (B).
To connect the quick coupling (A), push the release button (C) downwards to the position shown in the figure.

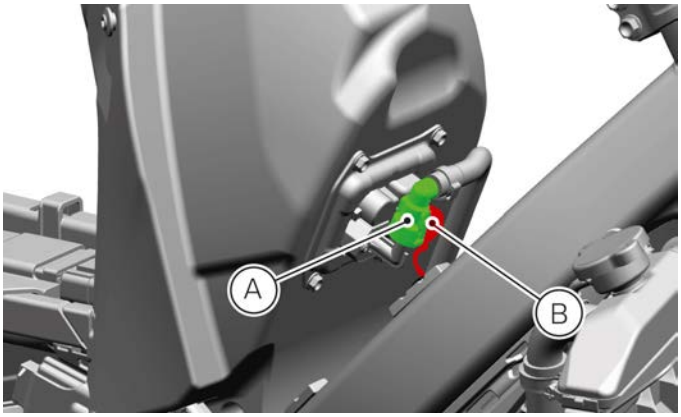


Fig 298

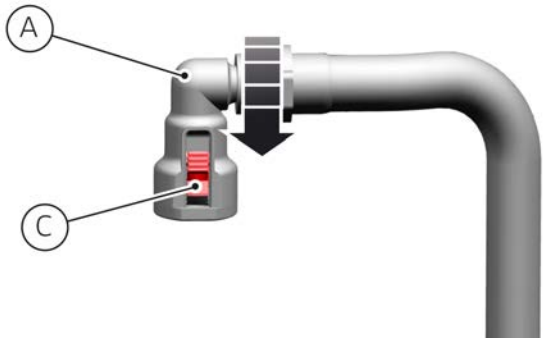


Fig 299

Move the tank (2) into position by turning it downwards.

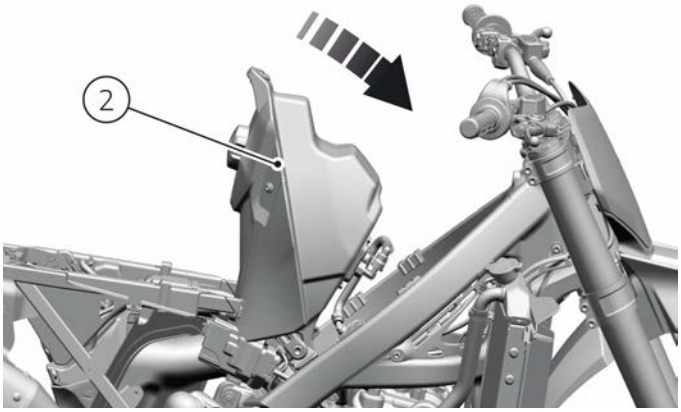


Fig 300

Start and tighten the fuel tank (2) fastening screw (1) to a torque of 10 Nm ± 10%.

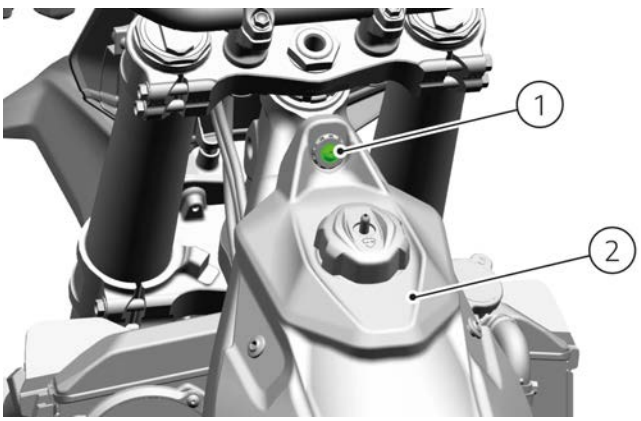


Fig 301

Fit the front side body panels as shown in the chapter “Front side body panels”.
Fit the seat as shown in chapter “Seat”.

Fuel tank - Checking the fuel pipe and fastener

To reach the fuel hose, remove the fuel tank as shown in chapter “Removing and refitting the fuel tank”.

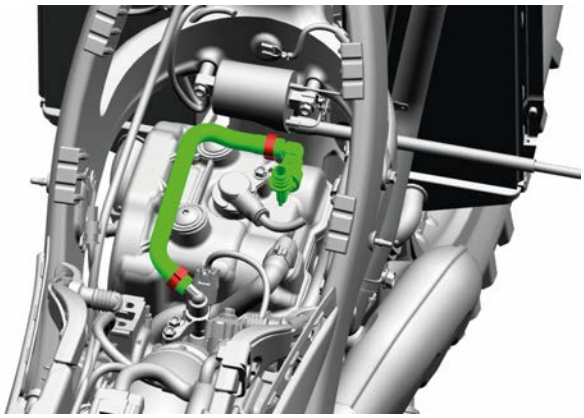


Fig 302

Visual check

Check the hose along its entire length for:

- cracks or cuts;
- hardening or stiffening of the material;
- damp areas or traces of fuel;
- abnormal discoloration.

If the hose has any of these problems, replace it.

Checking the fastening elements

Check the clamps; they must be in position and securely fastened at both ends of the hose.
Pull the hose slightly near the connections to see if it slips or moves. It must remain fixed.
If the clamps are worn or loose, replace them with new ones.

Cleaning and prevention

- Clean the outside of the hose with a dry cloth to remove dust, mud or debris.
- Avoid letting the hose touch hot parts of the engine or sharp edges (risk of melting or cutting).
- Make sure it is not kinked or pinched at any point.

Final test

Restart the motorcycle and check for fuel leaks around the hose and fittings.

Fuel tank - Checking the fuel quick coupling correct fastening on GAC

Visual inspection

Check that the coupling is fully engaged and that the locking clip (A) is in the correct position.
For correct locking, the clip must be facing as shown in the figure.

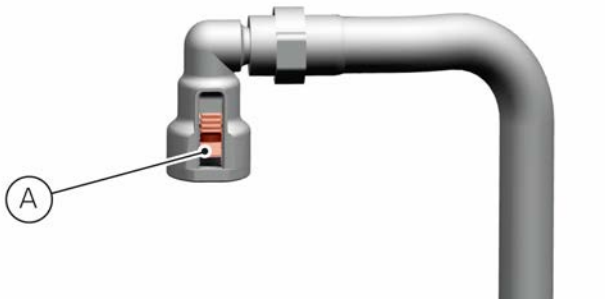


Fig 303

Mechanical check of the fastening

Pull the tube slightly to make sure that the coupling does not come off. If the fitting moves or is loose, remove it and reinsert it firmly until you hear it click into place.

Exhaust system

Removing and refitting the silencer

Attention
The exhaust system reaches high temperatures during operation.
Carry out the following operations after the engine and exhaust system have cooled down completely.

Removing the silencer

Remove the spring (3) connecting the silencer to the manifold and the screws (1) and (2) securing silencer (4).

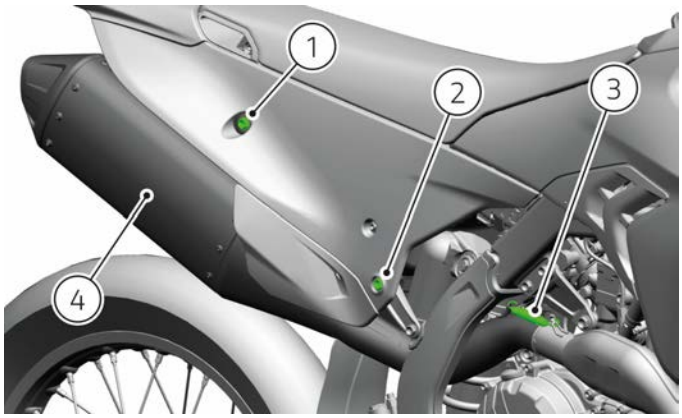


Fig 304

Remove the silencer (4) towards the rear of the vehicle.

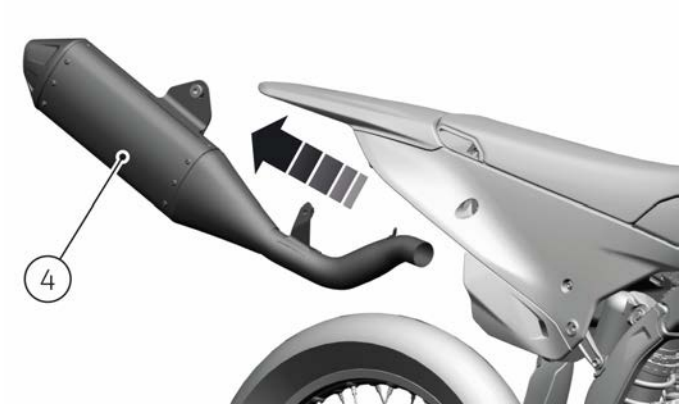


Fig 305

Refitting the silencer

Reposition the silencer (4) on the vehicle.

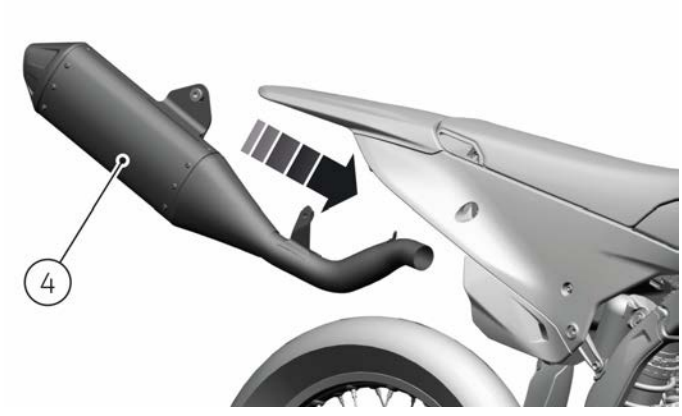


Fig 306

Reconnect the silencer (4) to the exhaust manifold and make sure it is driven fully home.

Position the screws (1) and (2) without tightening them momentarily.
Refit the spring (3) connecting the silencer (4) to the manifold and tighten the screws (1) and (2) to a torque of 20 Nm ± 10%.

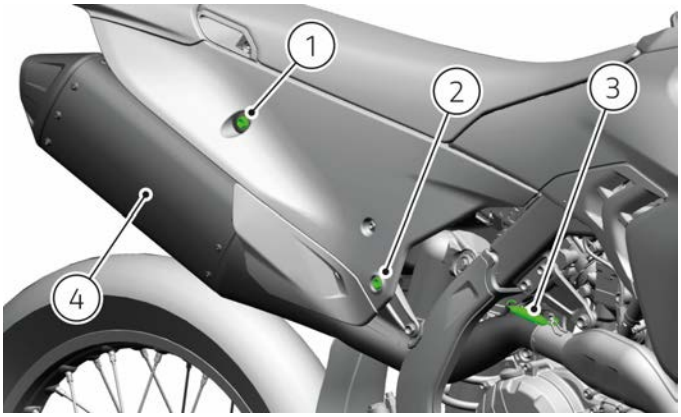


Fig 307

Removing and refitting the manifold

Attention
The exhaust system reaches high temperatures during operation.
Carry out the following operations after the engine and exhaust system have cooled down completely.

Removing the manifold

Remove the spring (1) connecting the manifold (2) to the silencer.

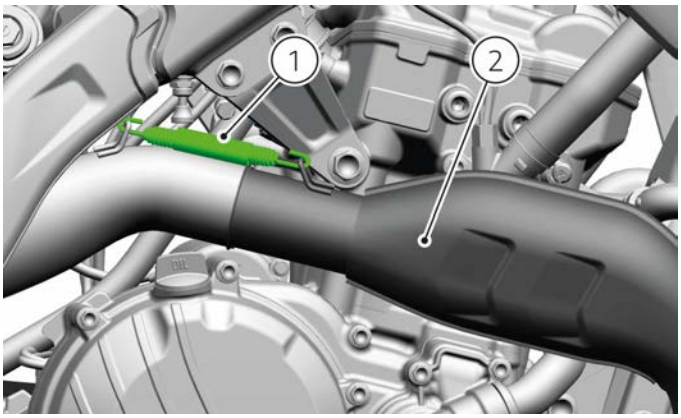


Fig 308

Remove the nuts (3) securing the manifold flange (2) to the engine head.

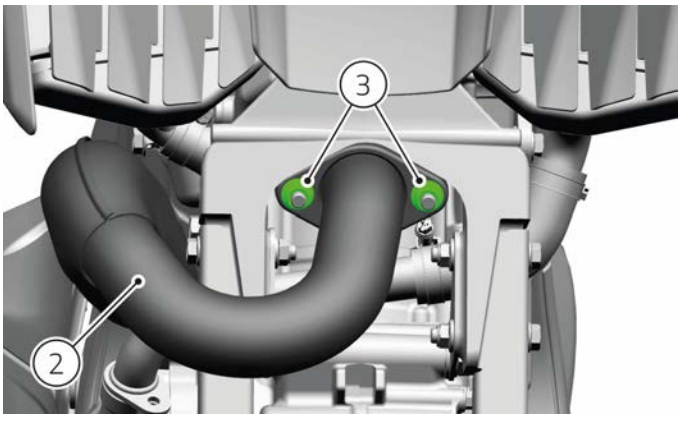


Fig 309

Remove the exhaust manifold (2).

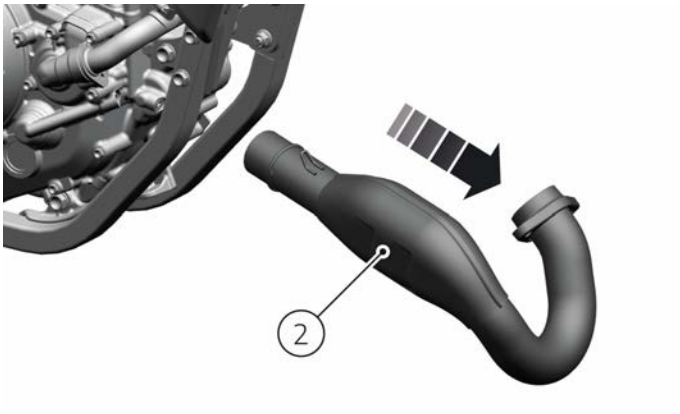


Fig 310

Remove the exhaust gasket (4) from its seat on the engine head.
Check its integrity and replace it if necessary.

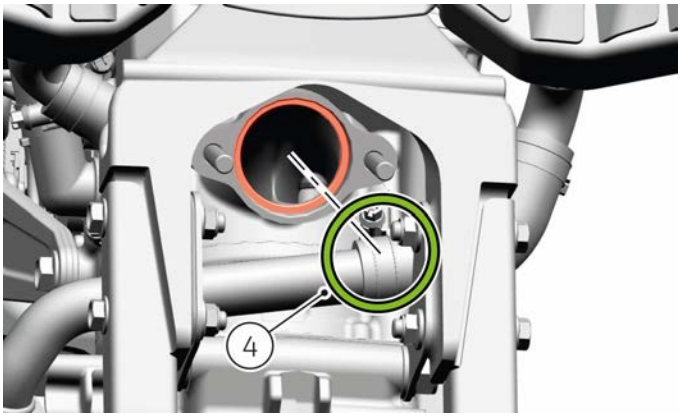


Fig 311

Refitting the manifold

Reposition the exhaust gasket (4) in its seat on the engine head.
Check its integrity and replace it if necessary.
Refit the exhaust manifold (2) to the engine head and inside the silencer, making sure it is driven fully home.

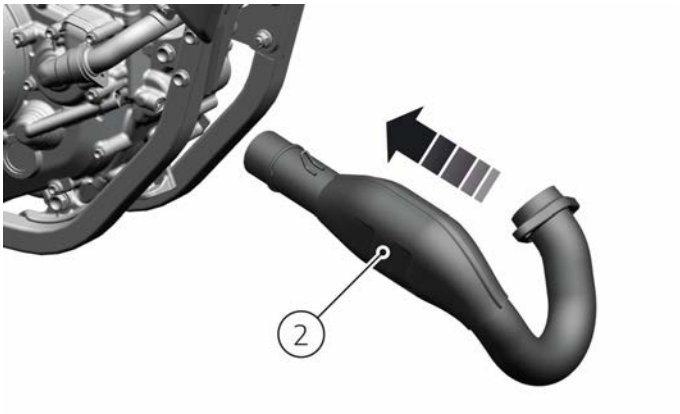


Fig 312

Position the nuts (3) by applying copper grease to the thread, without tightening them momentarily.

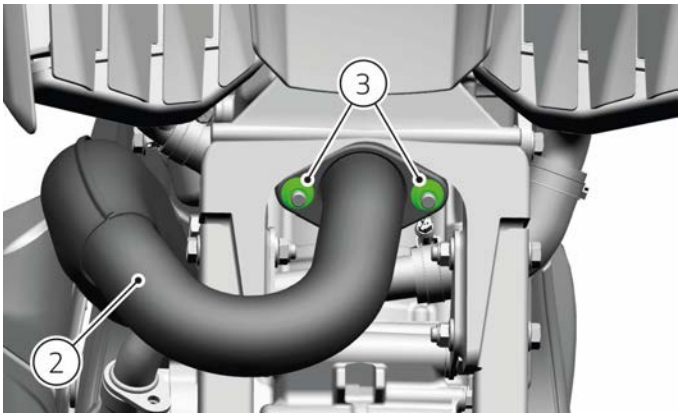


Fig 313

Refit the spring (1) connecting the manifold (2) to the silencer.
Tighten nuts (3) to a torque of 15 Nm ± 10%.

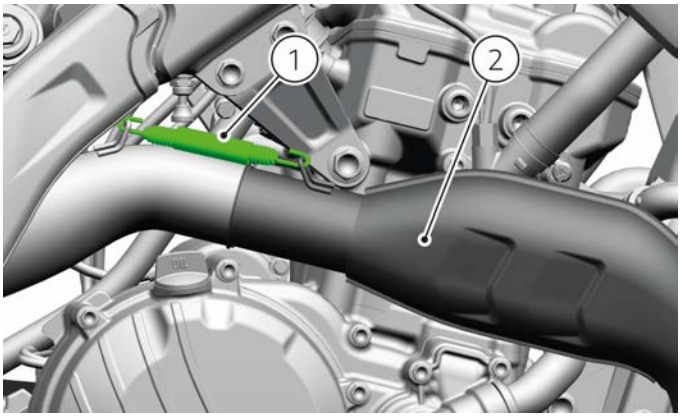


Fig 314

Clutch - checking wear and replacing clutch plates

Removing the clutch plates

Drain the lubrication system as described in the chapter “Changing the oil and filter”.

Remove the brake spring (1).

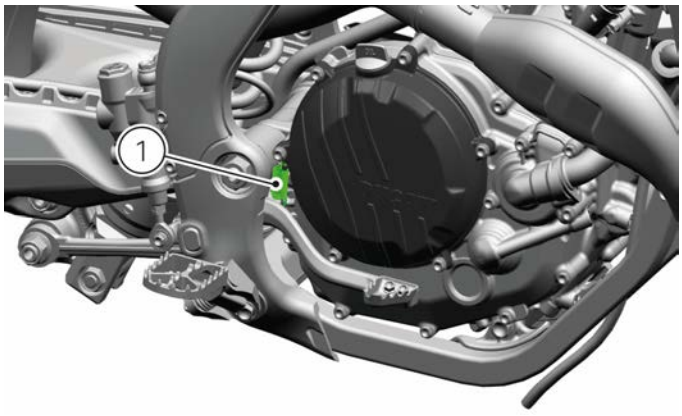


Fig 315

Loosen the fastening screws (2) on the clutch cover (3). Remove the clutch cover (3).

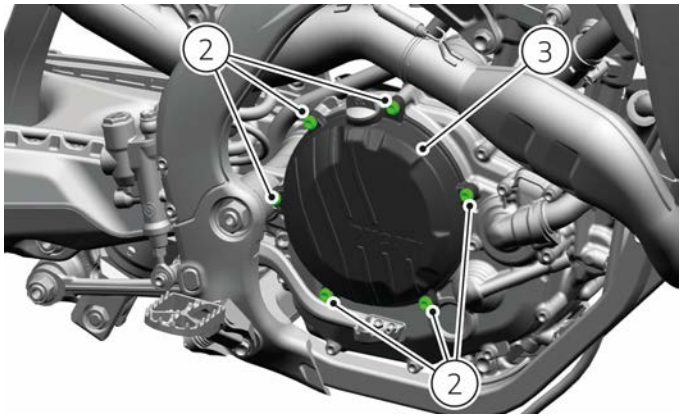


Fig 316

Loosen screws (4) retaining the Belleville washer (5). Remove the preload plate (A) and the Belleville washer (5).

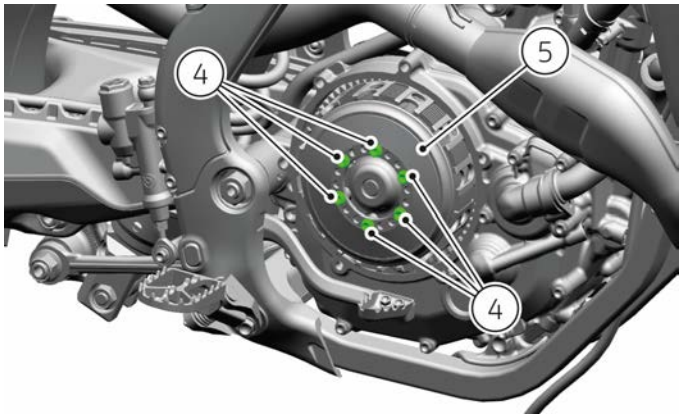


Fig 317

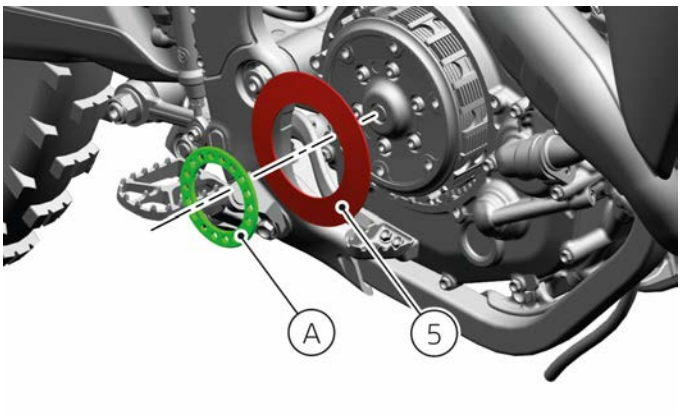


Fig 318

Remove the pressure plate with the clutch spring shim (B).

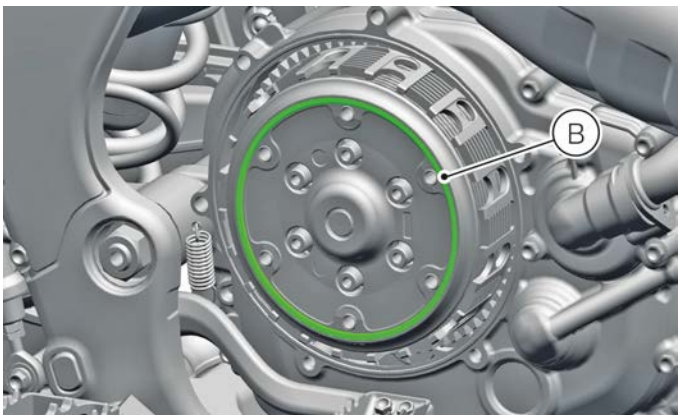


Fig 319

Remove the clutch control pin (6) and the clutch pushrod (7).

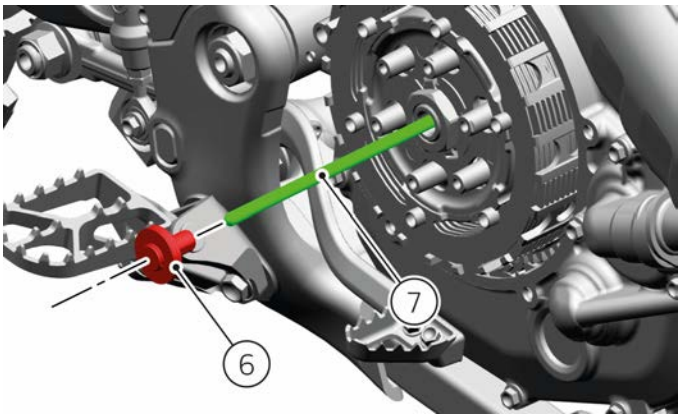


Fig 320

Remove the clutch drive pins (8).

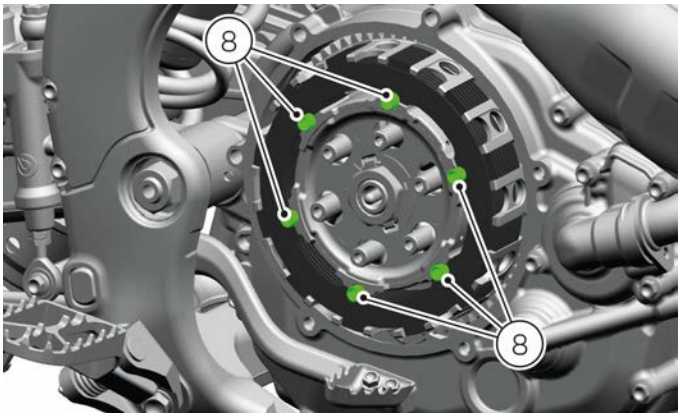


Fig 321

Remove the driven and driving clutch plates.

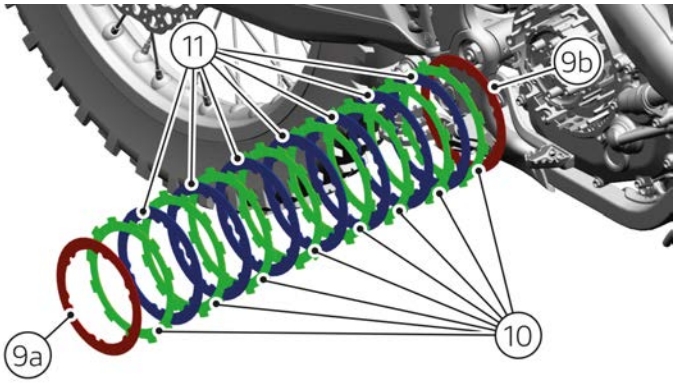


Fig 322

POSITION	NAME	QUANTITY	THICKNESS
(9a)	Driven plates	1	0.04 in (1 mm)
(9b)	Driven plates	1	0.04 in (1 mm)
(10)	Driving plates	8	0.08 in (2 mm)
(11)	Driven plates	7	0.05 in (1.4 mm)

Check wear

Visually inspect the friction plates and steel plates to check for signs of wear or seizure.
If one or more plates are damaged, replace the entire plate pack.
Using a reference surface and a feeler gage, measure the thickness of the friction plates at various points and check by referring to the table below.
If worn, replace them.

DESCRIPTION	VALUE
Wear limit for driven plates	0,004 in (0.1 mm)
Wear limit for driving plates	0,004 in (0.1 mm)
Maximum wear limit for clutch plate pack	0,031 in (0.8 mm)
Nominal thickness of NEW plate pack	1,079 ± 0,009 in (27.4 ± 0.25 mm)
The total thickness of clutch plate pack must not be less than (maximum wear)	1,037 in (26.35 mm)
The maximum flatness error for each clutch plate is	0,006 in (0.15 mm)

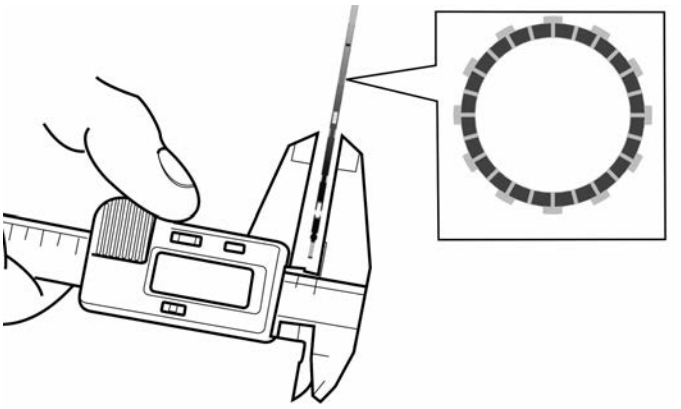


Fig 323

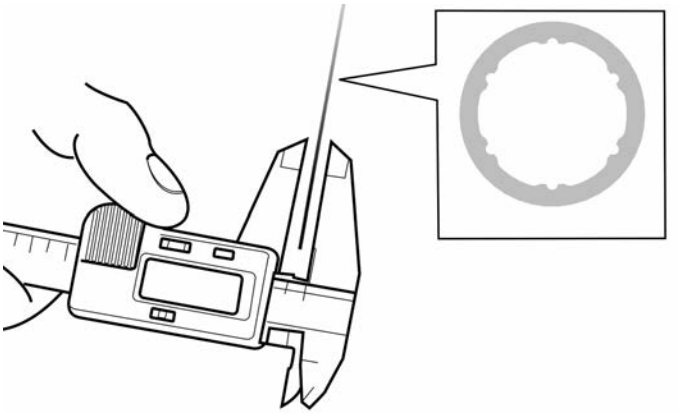


Fig 324

Check that the clutch pushrod (7) and clutch drive pins (8) are not cracked, damaged or showing signs of wear. Also check that they are not deformed.

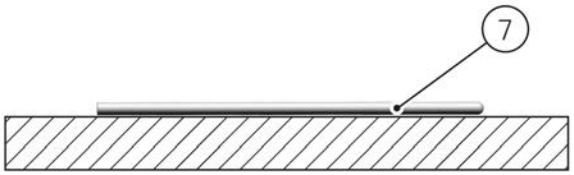


Fig 325

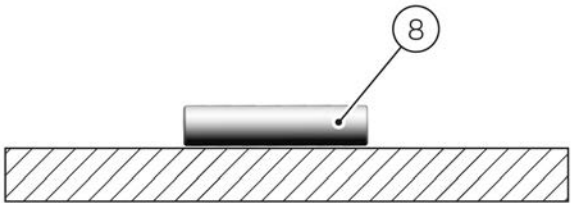


Fig 326

Refitting the clutch plates

Insert the clutch drive pins into the hub. If they are difficult to position, use grease to help.

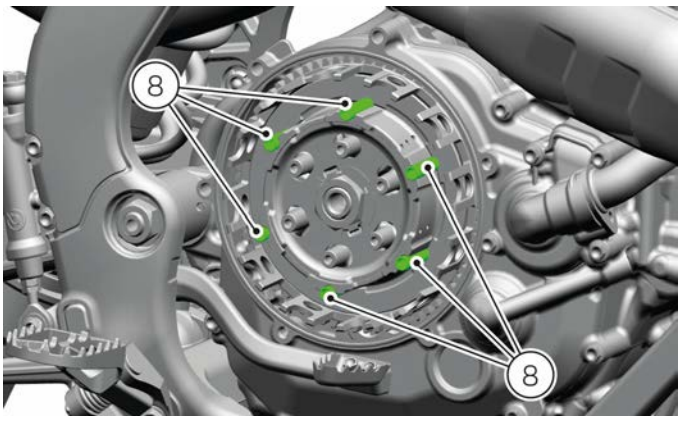


Fig 327

Then insert the driven and driving plates, referring to the following table.
Pay attention to the first 0.004-in (1 mm) plate (9b), which must have the reference letter "W" facing the inside of the vehicle as shown in the figure.

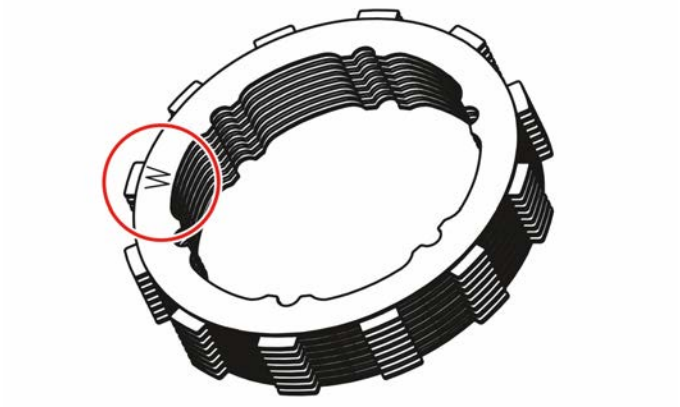


Fig 328

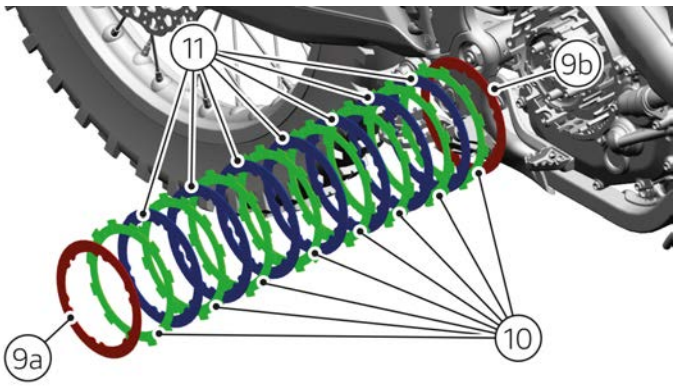


Fig 329

DESCRIPTION	VALUE
Wear limit for driven plates	0,004 in (0.1 mm)
Wear limit for driving plates	0,004 in (0.1 mm)
Maximum wear limit for clutch plate pack	0,031 in (0.8 mm)
Nominal thickness of NEW plate pack	1,079 ± 0,009 in (27.4 ± 0.25 mm)

DESCRIPTION	VALUE
The total thickness of clutch plate pack must not be less than (maximum wear)	1,037 in (26.35 mm)
The maximum flatness error for each clutch plate is	0,006 in (0.15 mm)

Fit the clutch pushrod (7) and the clutch control pin (6).

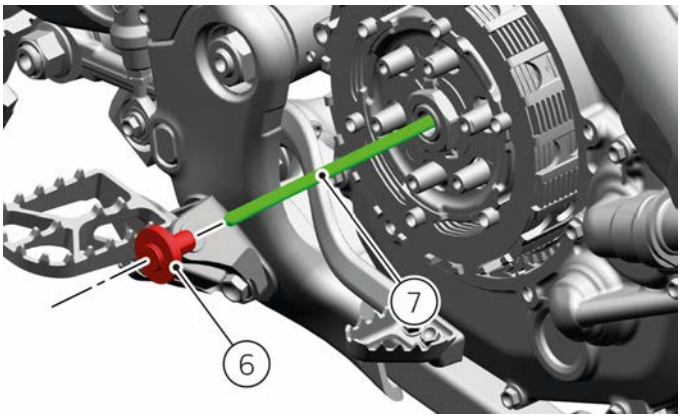


Fig 330

Fit the pusher plate (12) on the clutch drum.
Insert the spring shim (B) onto the pusher plate (12), orienting it with the word “OUT” facing outwards, as shown in the figure.

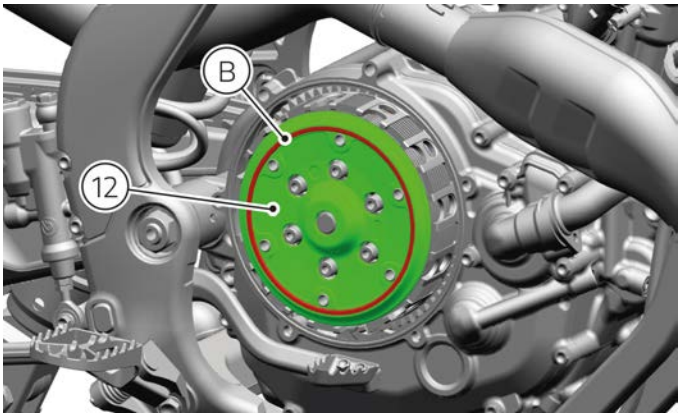


Fig 331

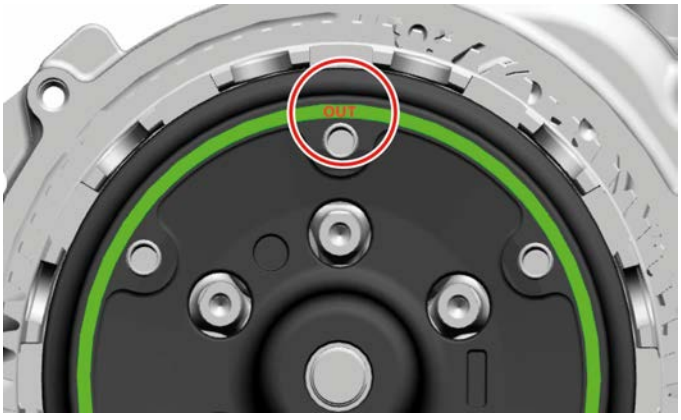


Fig 332

Position the Belleville washer (5) on the pusher plate, orienting it as shown in the figure.
Position the preload plate (A).

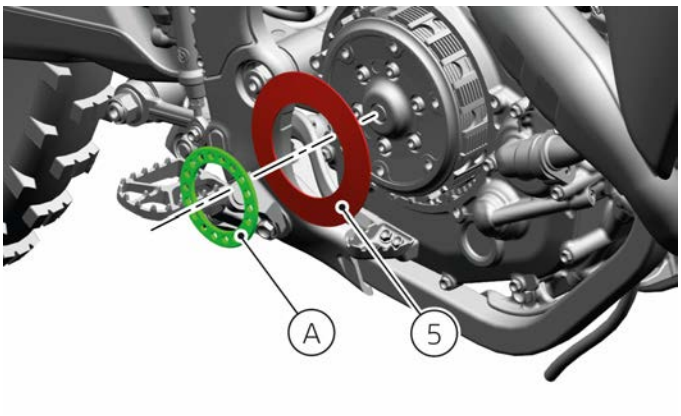


Fig 333



Fig 334

Start the screws (4), centering them on the pins of the clutch drum.
The screws (4) must be inserted into the holes in the intermediate load tracks of the plate (A), indicated by the red arrows, indicated by the two reference marks as shown in the image below by the red arrow.
Tighten the screws (4) to a torque of 6 Nm (Min. 5 - Max. 7) in a cross pattern.

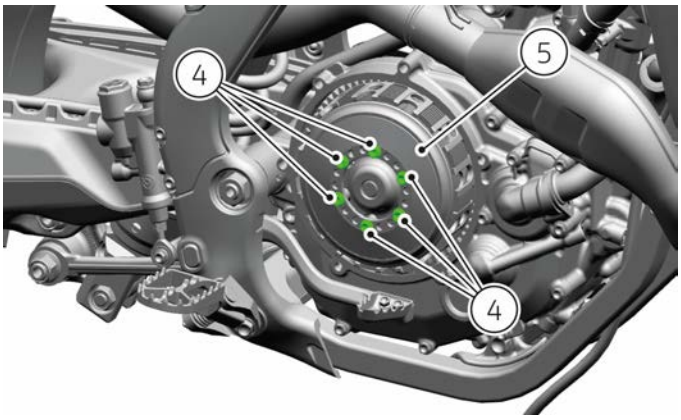


Fig 335

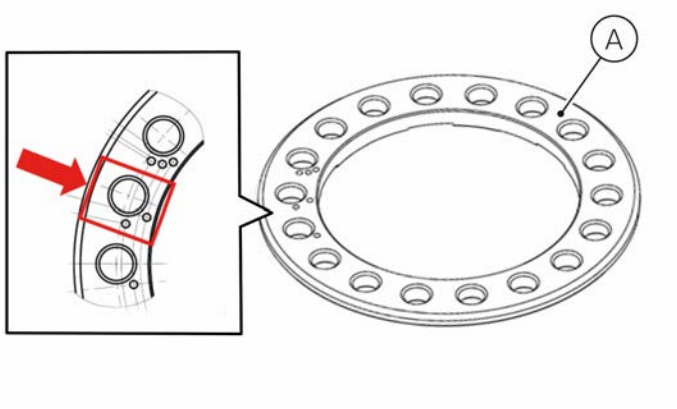


Fig 336

Note
Once the screws (4) have been tightened to the correct torque, check the preload as shown in the chapter “Belleville washer adjustment”.

Check that the gasket (13) is present on the clutch cover; if damaged, replace it.

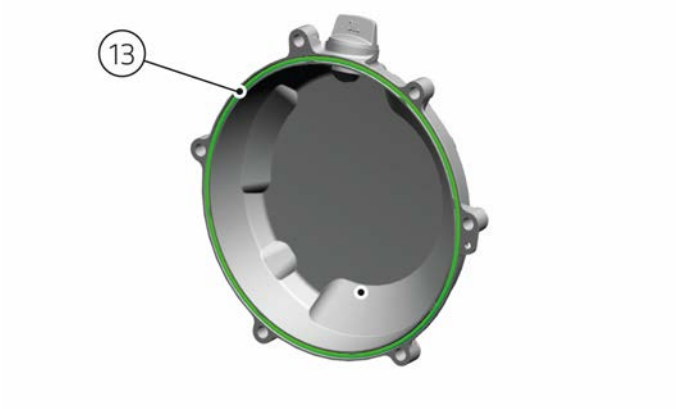


Fig 337

Position the clutch cover (3) and start screws (2). Tighten the screws (2) to a torque of 13 Nm (Min. 12 - Max. 14) following a cross pattern.

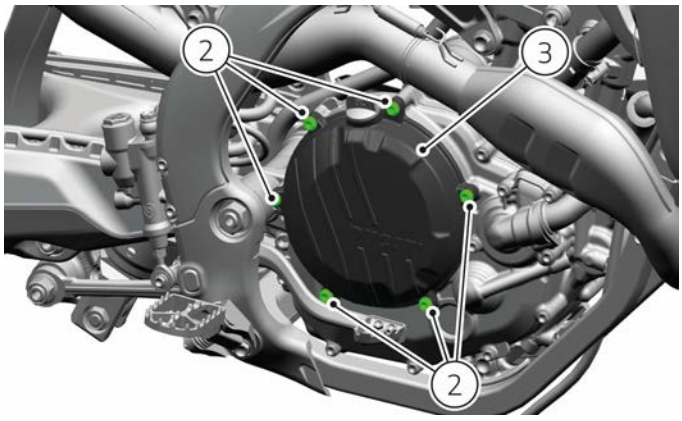


Fig 338

Refit the brake control spring (1).

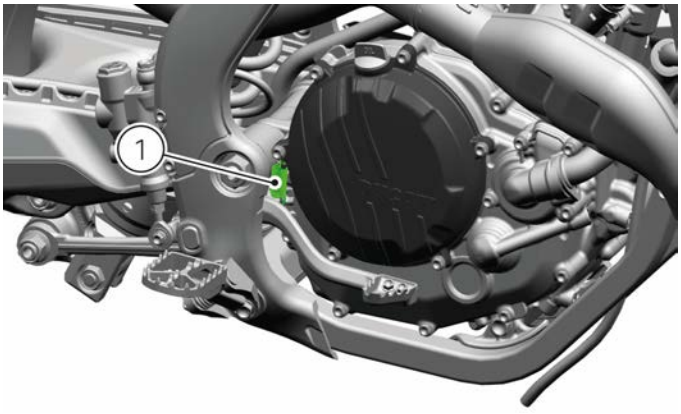


Fig 339

Fill the lubrication system as described in the chapter “Changing the oil and filter”.

Clutch - adjusting the Belleville washer

Removal procedure

Drain the lubrication system as described in the chapter “Changing the oil and filter”.

Remove the brake spring (1).

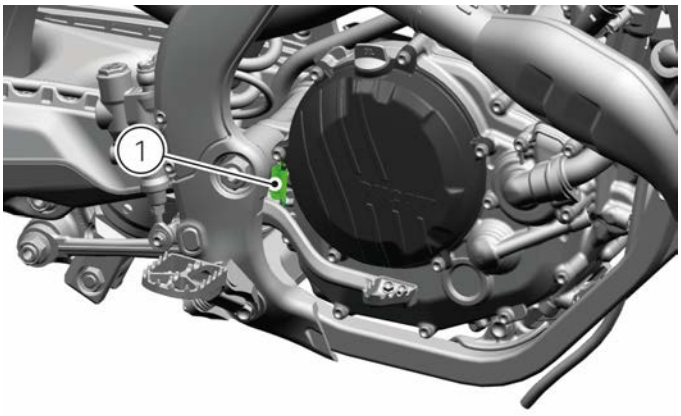


Fig 340

Loosen the fastening screws (2) on the clutch cover (3). Remove the clutch cover (3).

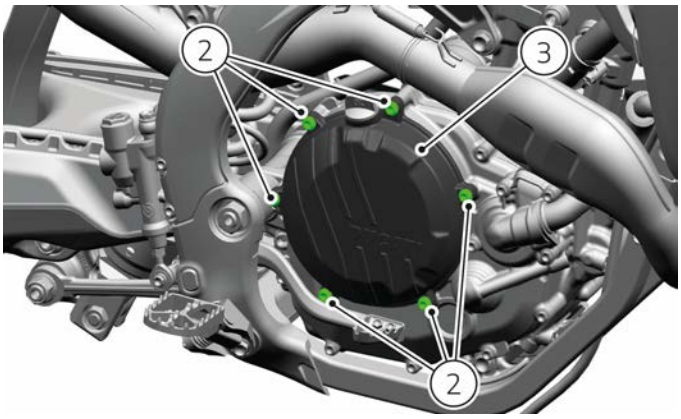


Fig 341

Check and adjustment

The clutch is equipped with a Belleville washer.
The spring preload can be adjusted to three positions by installing the disc (A) in three different angular positions. The three positions are marked by the dots shown in the figure.
Each position corresponds to a different level of preload on the Belleville washer:

- Position 1 (•), minimum preload;
- Position 2 (••), medium preload;
- Position 3 (•••), maximum preload.

The standard position is the central position (2 dots).

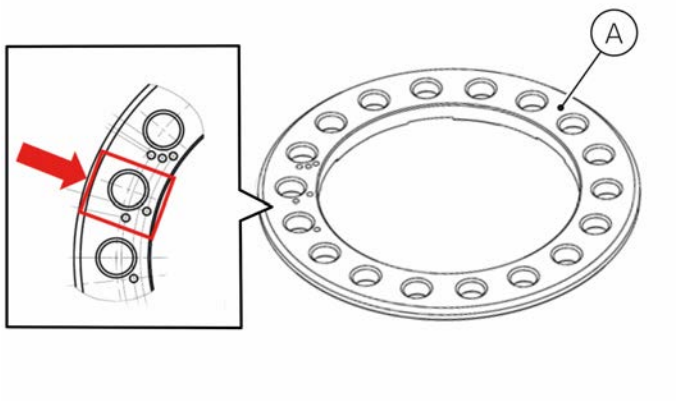


Fig 342

Proceed as follows to check it:

- check the flatness of the Belleville washer using a ground bar, positioned as shown in the figure;
- if the ground bar does not adhere perfectly to the profile, within a tolerance of 0÷0.004 in (0÷0.1 mm), it is necessary to reposition the preload plate using one of the other two holes available.
- Repeat the check with the new position. If, despite the adjustment, the Belleville washer is not perfectly flat, measure the thickness of the plate pack and check that it has not reached the minimum wear limit.

DESCRIPTION	VALUE
Nominal thickness of NEW plate pack	1,079 ± 0,009 in (27.4 ± 0.25 mm)
The total thickness of clutch plate pack must not be less than (maximum wear)	1,037 in (26.35 mm)



Fig 343

To change the position of the preload plate, proceed as follows:

- loosen the screws (4) that retain the Belleville washer (5);
- remove the preload plate (A) and the Belleville washer (5);
- change the position of the preload plate (A) as required;
- reposition the Belleville washer (5) and the preload plate (A);
- start the screws (4) and tighten them to a torque of 6 Nm (Min. 5 - Max. 7) in a cross pattern.

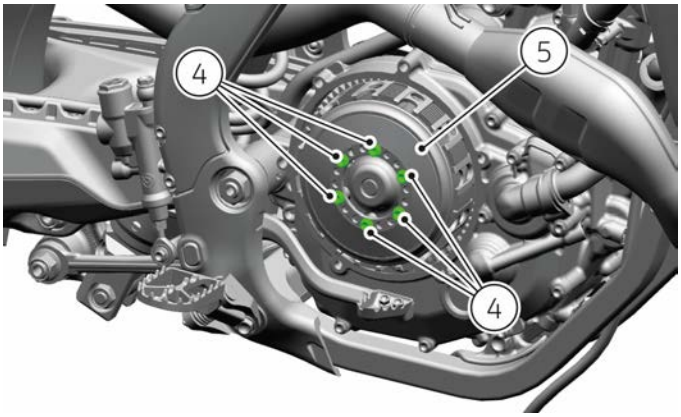


Fig 344

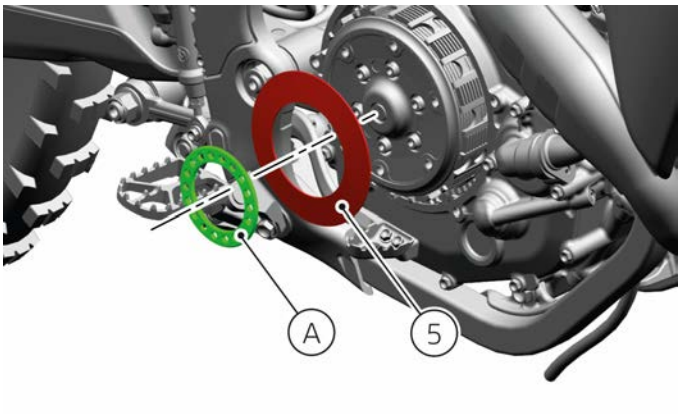


Fig 345

Refitting

Check that the gasket (13) is present on the clutch cover; if damaged, replace it.

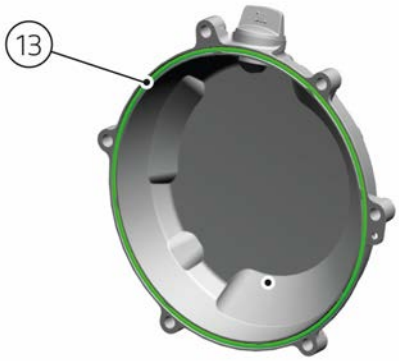


Fig 346

Position the clutch cover (3) and start screws (2). Tighten the screws (2) to a torque of 13 Nm (Min. 12 - Max. 14) following a cross pattern.

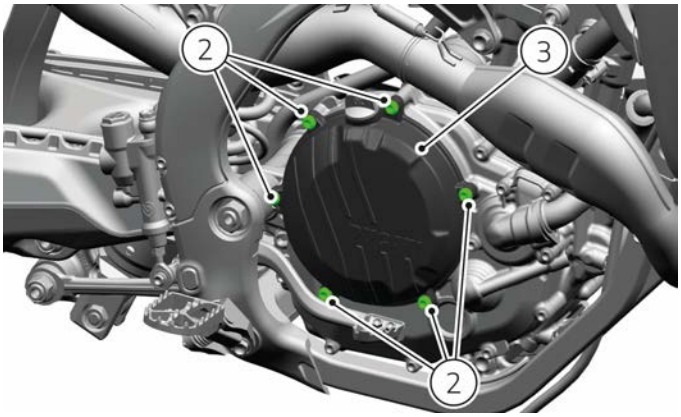


Fig 347

Refit the brake control spring (1).

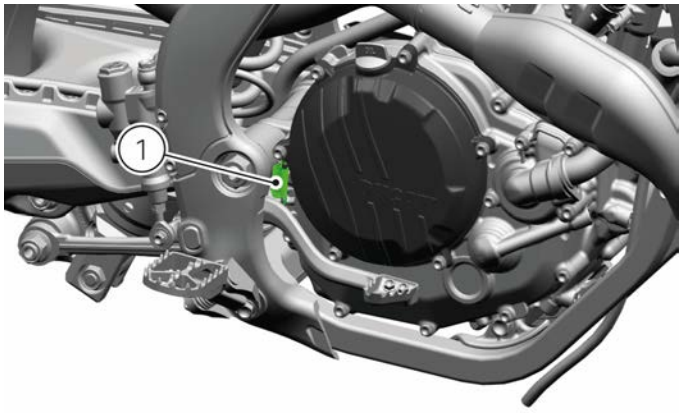


Fig 348

Fill the lubrication system as described in the chapter "Changing the oil and filter".

Valve clearance - Check

Note

This section is intended for those who already have basic knowledge and skills in motorcycle maintenance. Those who are not familiar with these operations are advised not to carry out inspection, adjustment, disassembly or reassembly relying solely on this manual, as this could result in maintenance errors or mechanical damage.

The valve clearance should be checked at the same time as the piston is replaced (Mid Service). In this case, check the clearances with the head on the bench. If the check is carried out with the engine installed, proceed as follows:

- the engine must be at room temperature (approx. 20°);
- the piston must be at TDC.

To access the head, remove the following parts:

- Seat;
- Side body panels;
- Fuel tank.

Loosen screws (1) retaining the coil (3).
When removing the coil (3), take care not to drop the two spacers (2).
Remove the coil (3).

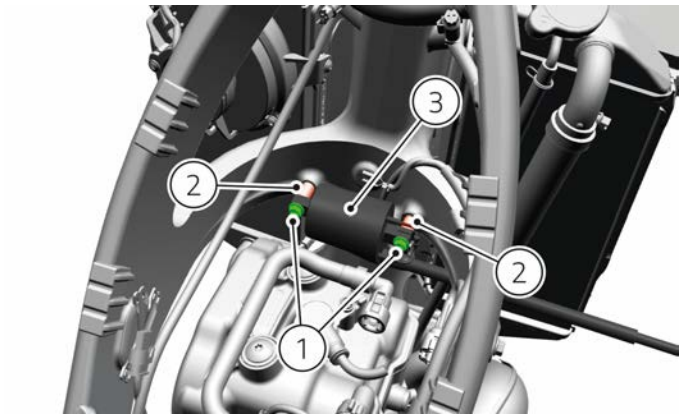


Fig 349

Loosen the screw (4) and remove the spark plug cap retainer (5).
Remove the spark plug cap (6).

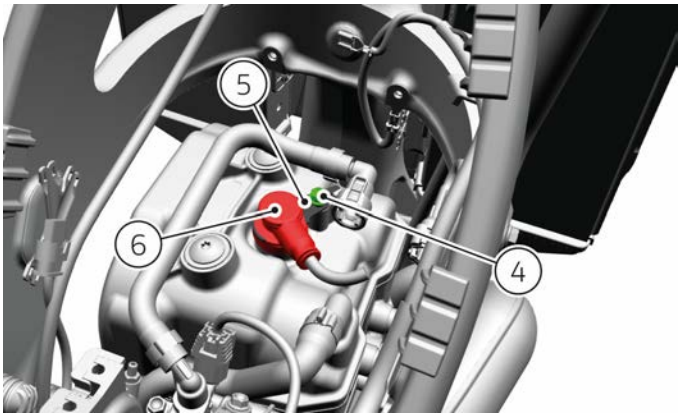


Fig 350

Remove the metal clamp (7) and disconnect the blow-by pipe (8) from the head cover.

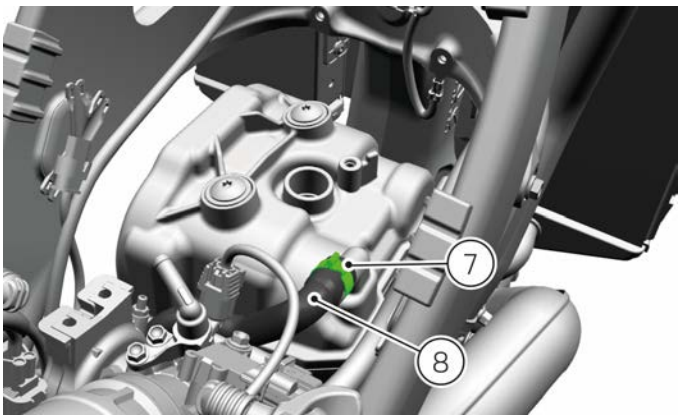


Fig 351

Using tool part no. **88713.2877** remove the spark plug (9).

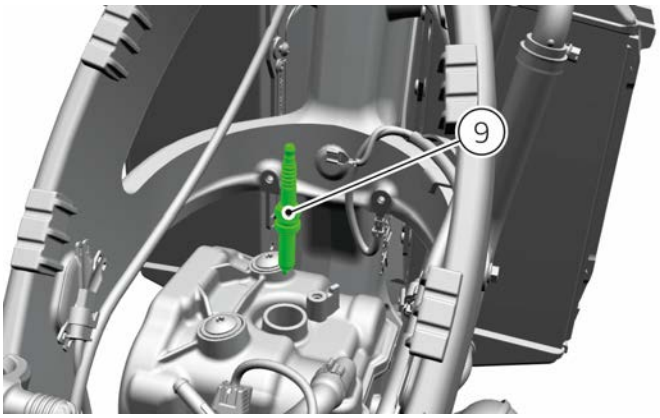


Fig 352

Loosen and remove the fastening screws (10) with washers (11) on the head cover.

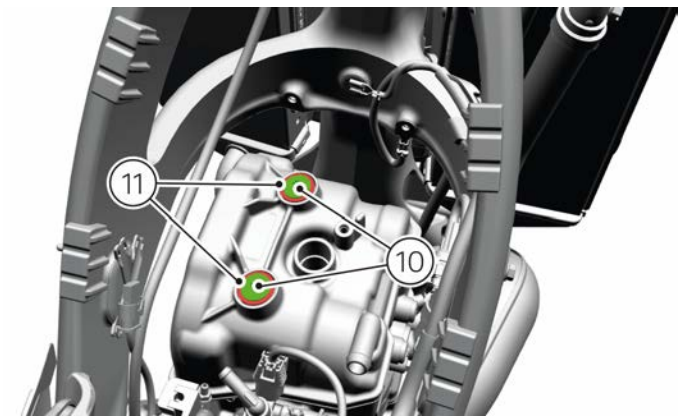


Fig 353

Lift the head cover (12) slightly, turn it in the direction of the arrow and remove it from above.

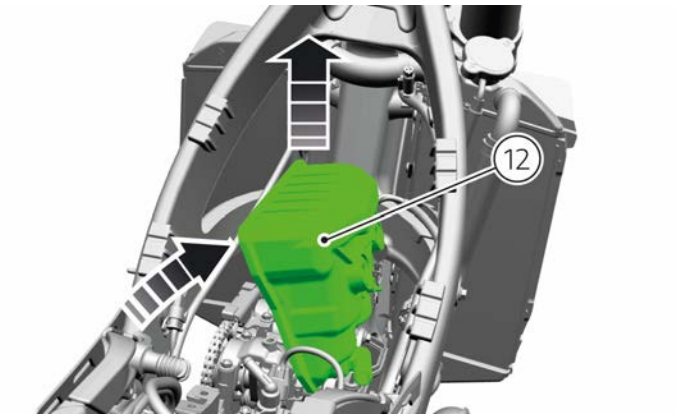


Fig 354

During the head cover (12) removal, pay attention not to damage seal (A).

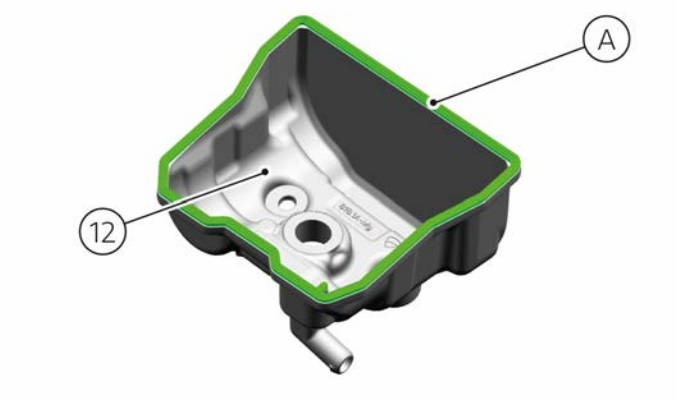


Fig 355

From the left side of the vehicle, remove the timing cap (13).

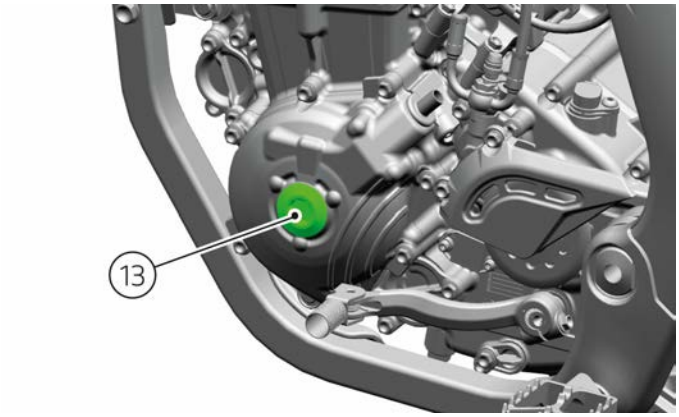


Fig 356

Each valve has:
- a rocker arm that opens the valve (a);
- a rocker arm that closes the valve (b).

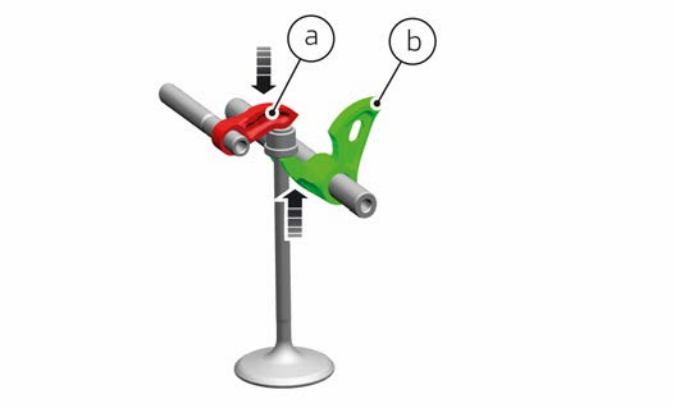


Fig 357

To check the valve clearance, insert a feeler gage between the cam and the rocker arm, first the opening and then the closing one.

Valve clearance check

Turn the crankshaft anticlockwise until it reaches the TDC.

To check that the position is correct, the notches on the two timing gears (14) must be aligned with the cover (15) (as shown in the figure).



Fig 358

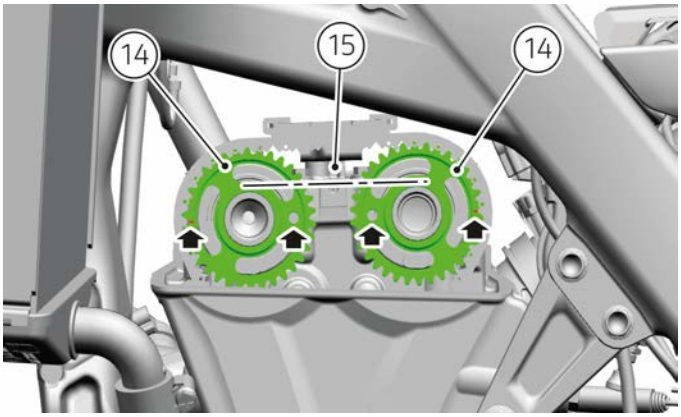


Fig 359

In this condition, the opening valves will be in the rest position and it will be possible to check the valve clearance on the intake and exhaust sides.

Check the clearance using a feeler gage, referring to the following table.

Clearance adjustment values

The clearance values are expressed in 2 ways:
- Assembly - this is the measurement to be used when assembling new components, such as valves and related valve collets (Full Service) or the complete head.

- Restoration - this is the measurement to be used for checking valve clearance or when adjusting clearance without replacing components (Mid Service)

Valve clearance adjustment in OPENING [mm]			
INTAKE		EXHAUST	
Assembly	Restoration	Assembly	Restoration
0.05 ÷ 0.10	0.05 ÷ 0.12	0.13 ÷ 0.18	0.11 ÷ 0.20
(0.0020 ÷ 0.0039 in)	(0.0020 ÷ 0.0047 in)	(0.0051 ÷ 0.0071 in)	(0.0043 ÷ 0.0079 in)

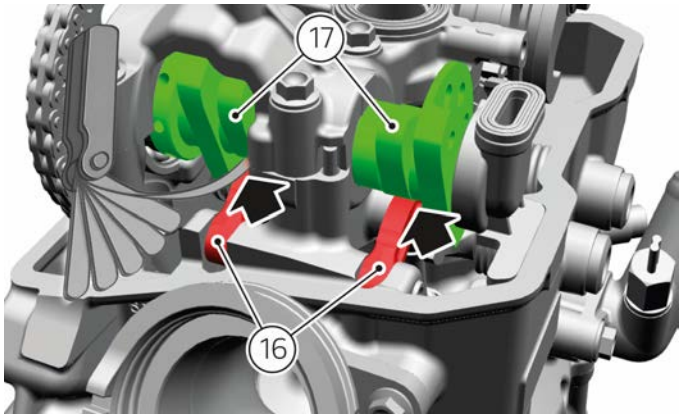


Fig 360

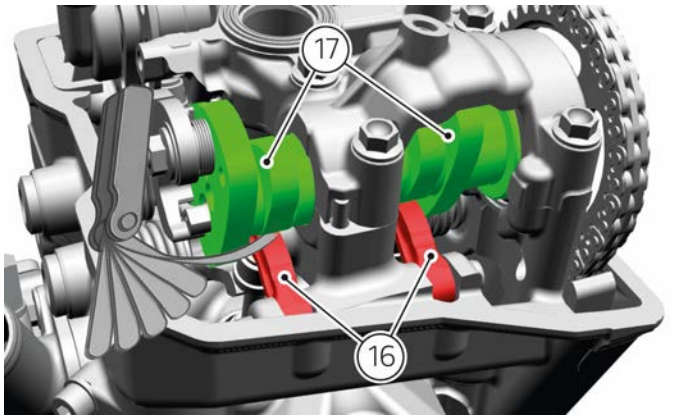


Fig 361



Fig 362

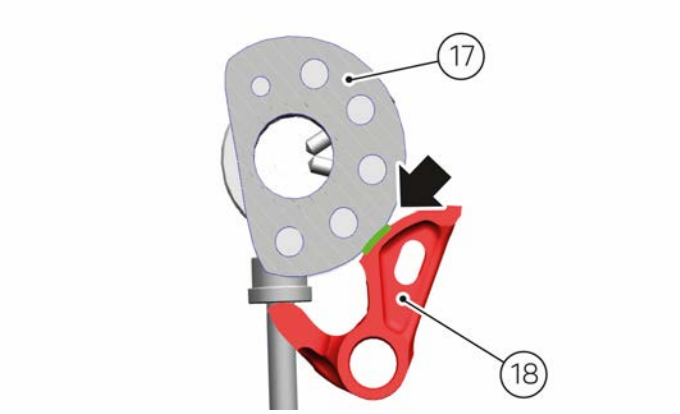


Fig 363

Valve clearance adjustment in CLOSING [mm]			
INTAKE		EXHAUST	
Assembly	Restoration	Assembly	Restoration
0.10 ÷ 0.15	0.08 ÷ 0.18	0.05 ÷ 0.10	0.05 ÷ 0.16
(0.0040 ÷ 0.0060 in)	(0.0030 ÷ 0.0070 in)	(0.0020 ÷ 0.0040 in)	(0.0020 ÷ 0,006 in)

Note
If the clearance is not correct, contact a Ducati Dealer or Authorized Service Center to have it adjusted.

Once the valve clearance has been checked, proceed with refitting the components.

Start the timing inspection cap (13).
Tighten the timing inspection cap to a torque of 24 Nm (Min. 21 - Max. 27).

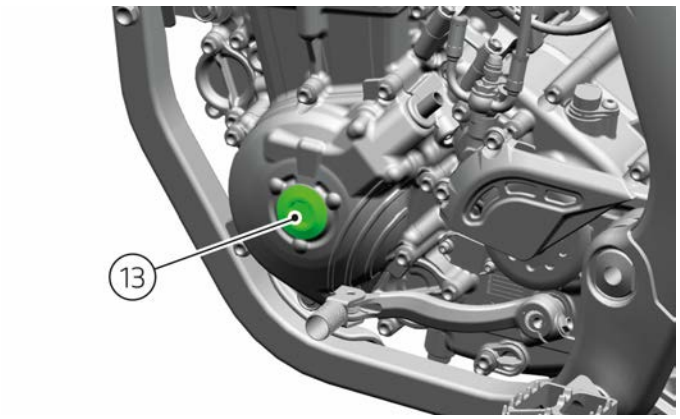


Fig 364

Fit the head cover gasket (A) so that it is perfectly flush with the head cover (12).
Check that the spark plug seal (B) is present. If it has been removed or is missing, fit it, centering it on the spark plug recess.

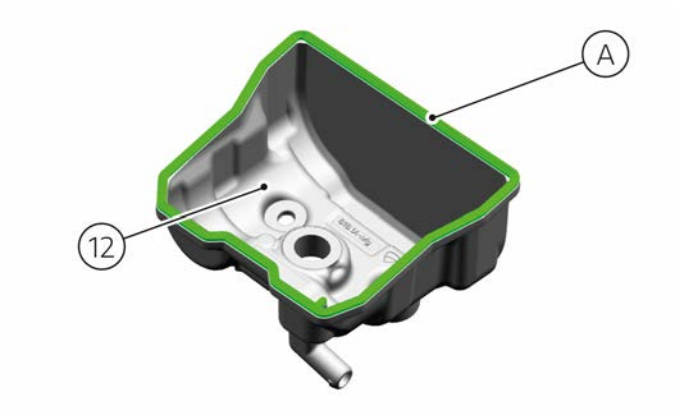


Fig 365

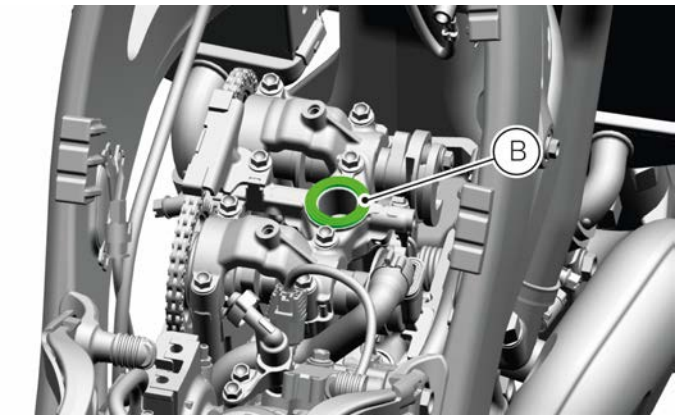


Fig 366

Position the head cover, inserting it from above as shown in the figure.

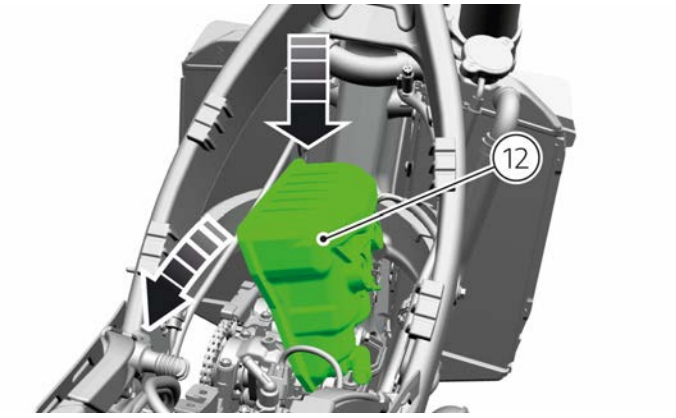


Fig 367

Start screws (10) by placing the two washers (11) in-between.
Tighten the two screws (10) to a torque of 10 Nm (Min. 9 - Max. 11).

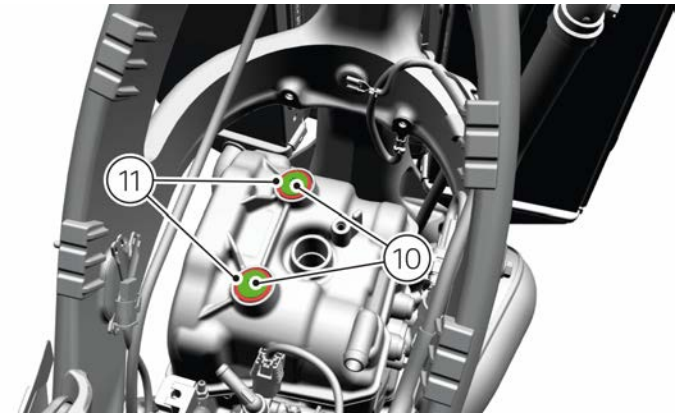


Fig 368

Start the spark plug (9).

Use tool part no. **88713.2877** to tighten the spark plug (9) to a torque of 12 Nm (Min. 11 - Max. 13).

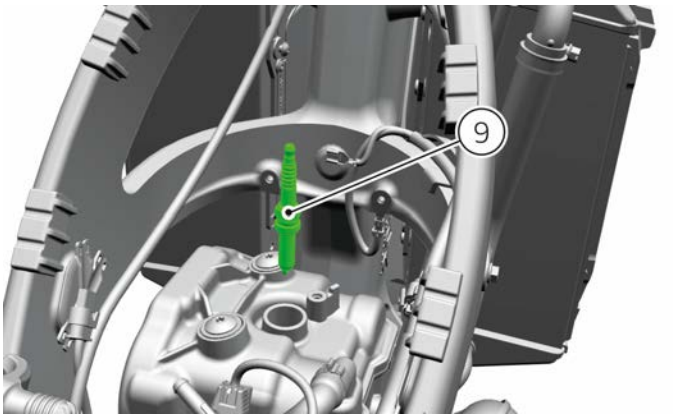


Fig 369

Position the blow-by hose (8) and fasten it with clamp (7).

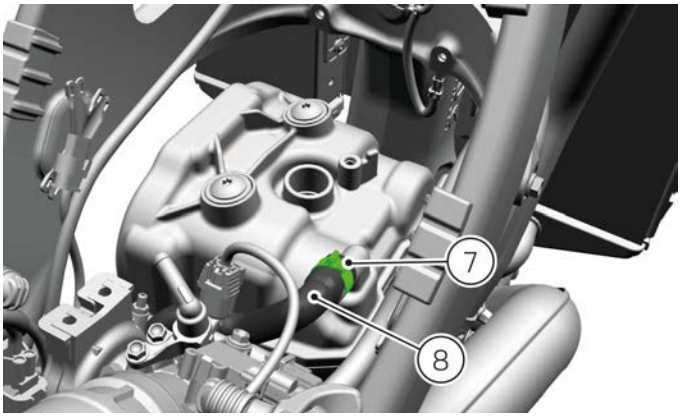


Fig 370

Note

Apply Fluortec 9940 grease or generic grease (labeled “High temperature fluorinated PFPE grease, resistant to chemical attack”) to the electrode inside the spark plug cap (6) to prevent oxidation of the electrode at the bottom of the cap.

Position the spark plug cap (6) and retainer (5).
Apply Loctite®243™ to the screw (4).
Tighten the screw (4) to a torque of 10 Nm (Min. 9 - Max. 11).

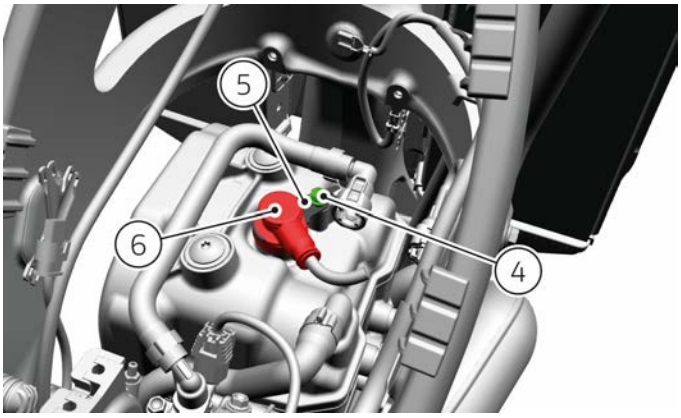


Fig 371

Position the ground cable (C), the spacers (2) and the coil (3).
Check that the pre-applied threadlocker is still present on the screw threads (1). We recommend a maximum of three removal/refitting cycles.

Start screws (1) and tighten them to a torque of 8 Nm ± 10%.

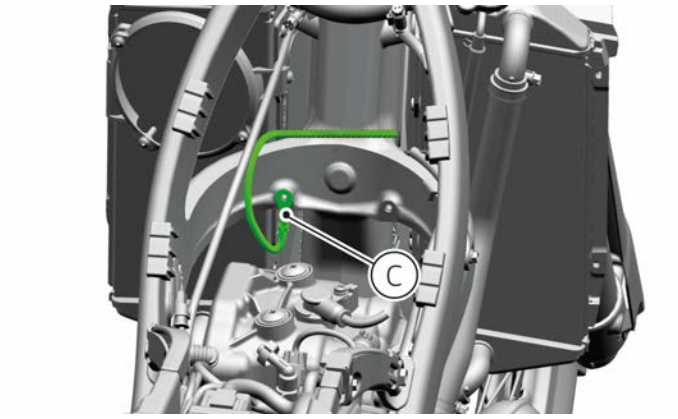


Fig 372

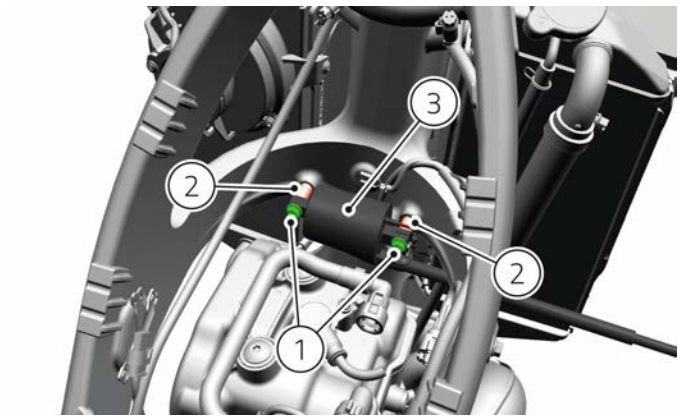


Fig 373

Refit the following components:

- Fuel tank;
- Side body panels;
- Seat.

Wiring diagram

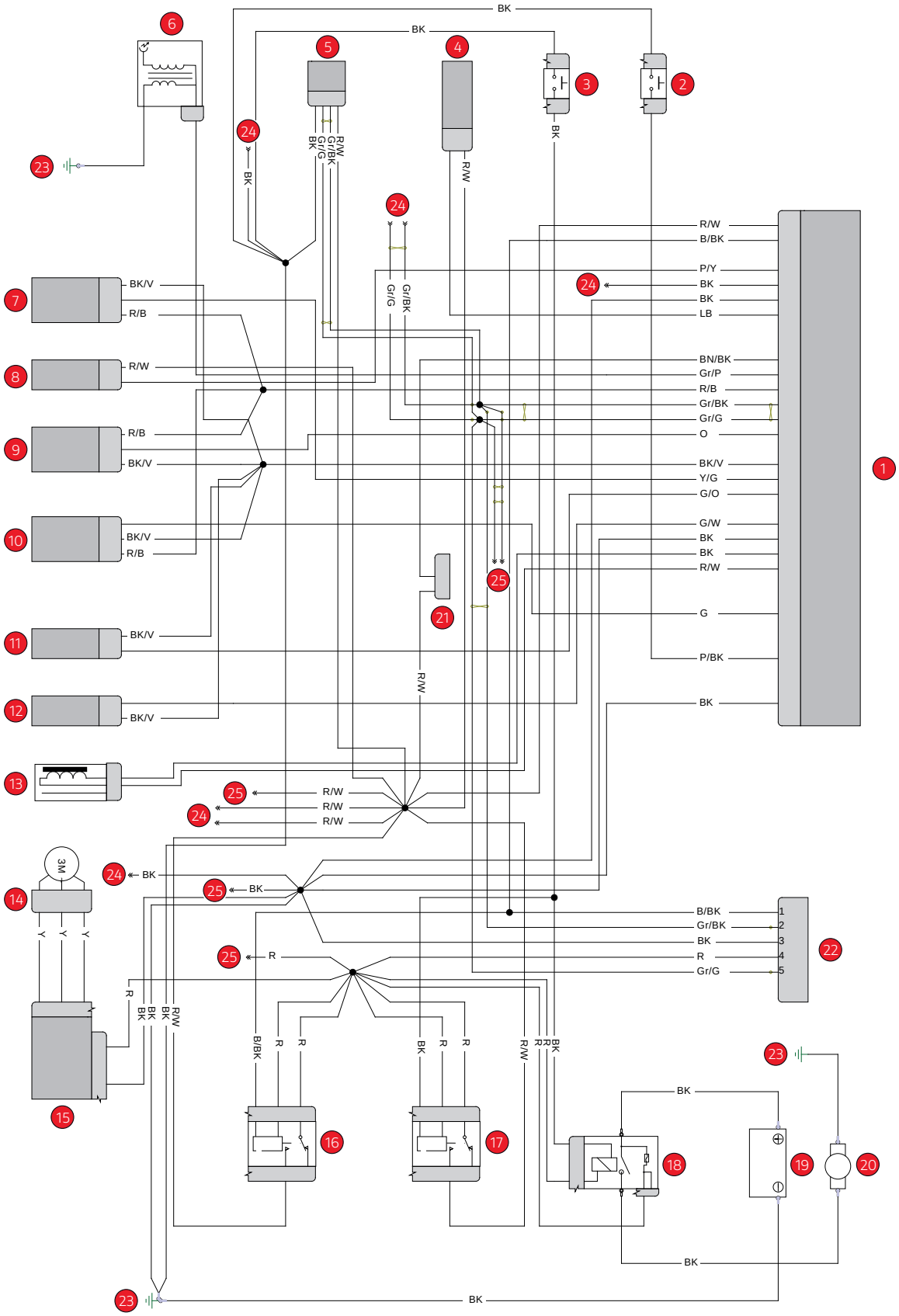


Fig 374

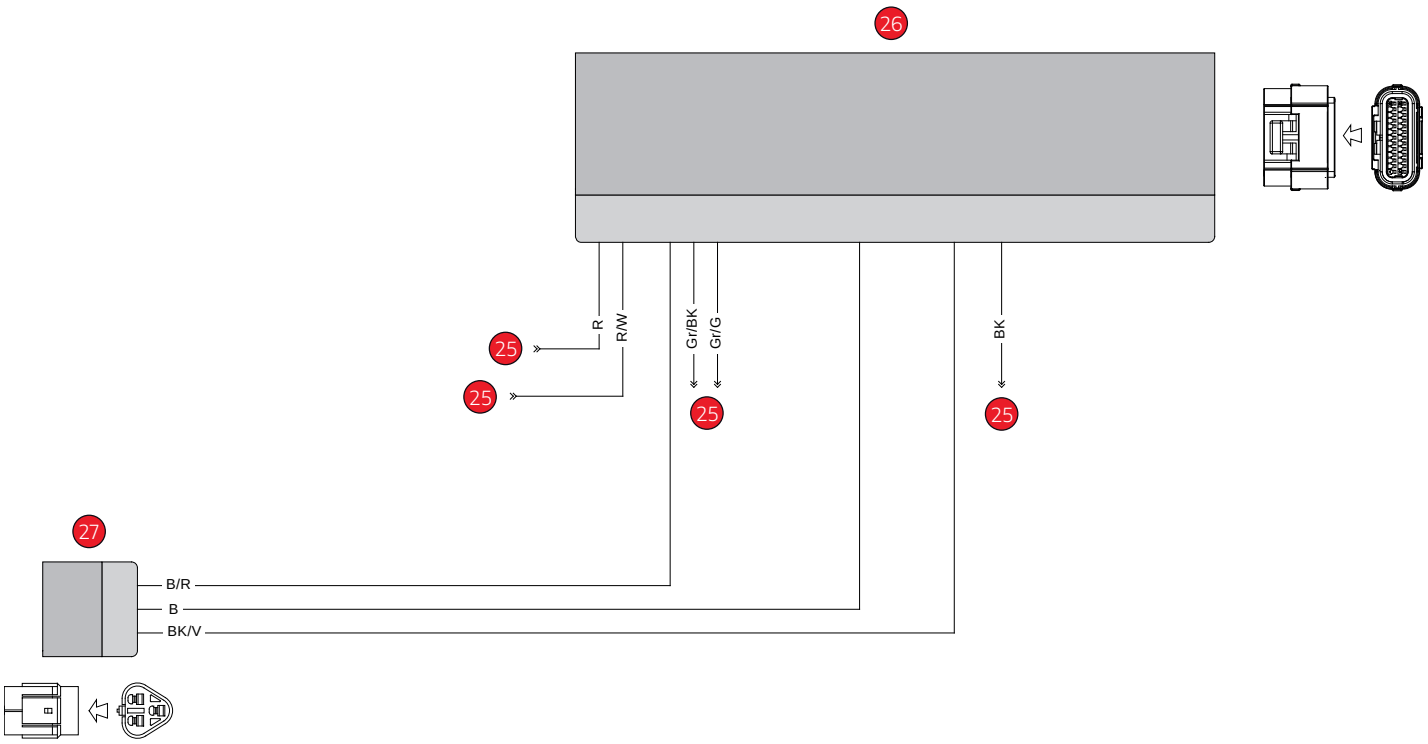


Fig 375

Description of the wiring diagram	
Numbering	Description
1	ECU (engine control unit)
2	Start button
3	Stop button
4	EFI light
5	Map selector
6	Ignition coil
7	Gear sensor
8	Injection
9	Throttle valve position sensor
10	Map sensor
11	Air temperature sensor
12	Coolant temperature sensor
13	Pick-Up sensor
14	ACG
15	Voltage regulator
16	Starter relay
17	Main relay
18	Remote control switch
19	Battery
20	Starter motor
21	Fuel pump
22	Diagnosis
23	Ground
24	Wiring connection / optional
25	Wiring connection / BBS
26	BBS control unit
27	Speed sensor

Electric cable identification	
Part no.	Color
Y	Yellow
R	Red
Bk	Black
O	Orange
V	Purple
W	White
Bn	Brown
G	Green
Gr	Gray
Lb	Light blue
B	Blue
P	Pink

Fuses - position and description

To gain access to the fuses, remove the seat as described in chapter “Seat”.
Lifting the cover (1) of the solenoid starter gives access to the fuses protecting the electrical components.

Fuse key		
Pos.	El. item	Rat.
A	Spare fuse	30 A
B	Main fuse	20 A

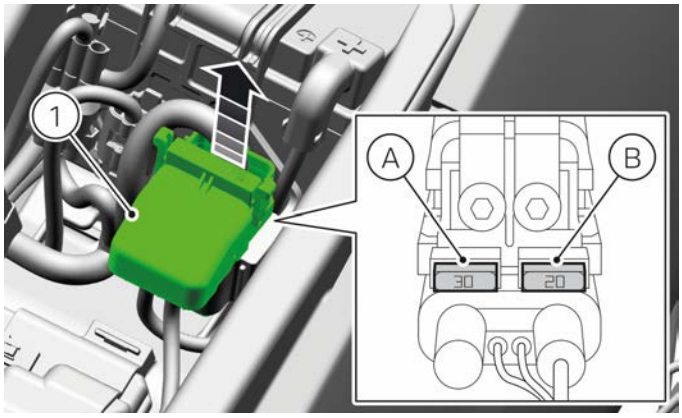


Fig 376

A blown fuse can be identified by breakage of the inner filament (C).

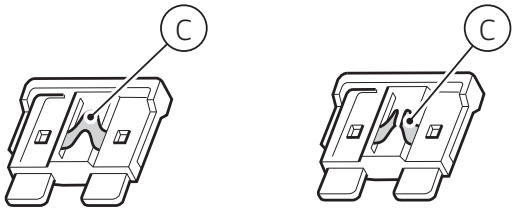


Fig 377

Important

To avoid possible short circuits, disconnect the black (-) negative cable from the battery before replacing the fuses.

Attention

Never use a fuse with a rating other than specified. Failure to observe this rule may damage the electric system or even cause fire.

Battery - Replacement

Removing the battery

Note

The battery must not be disconnected until at least three minutes have elapsed after the engine has been stopped.

Attention

To disconnect the battery, always disconnect the negative (-) terminal first, then the positive one (+).
To reconnect the battery, always reconnect the positive (+) terminal first, then the negative (-) one.

Remove the seat as described in chapter “Seat”.

Remove the connector (1), the diagnostic socket (2) and the remote control switch (3) from their seats on the battery mount (4). Move them slightly to allow the battery mount (4) to be removed.

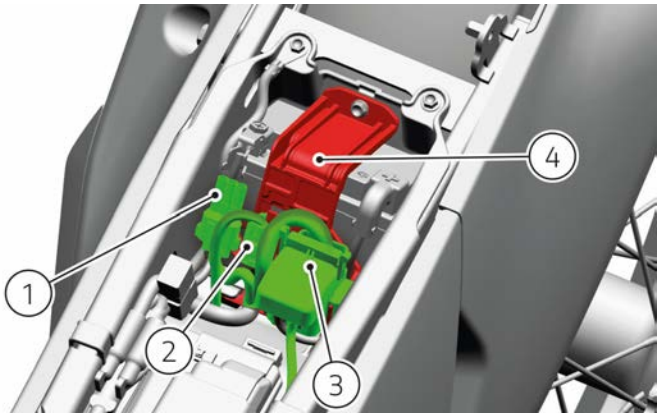


Fig 378

Starting from the negative terminal (-), remove the screw (6) and disconnect the black negative cable (7). Lift the protective cap (5) from the positive terminal (+), remove the screw (6) and disconnect the red positive cable (8).

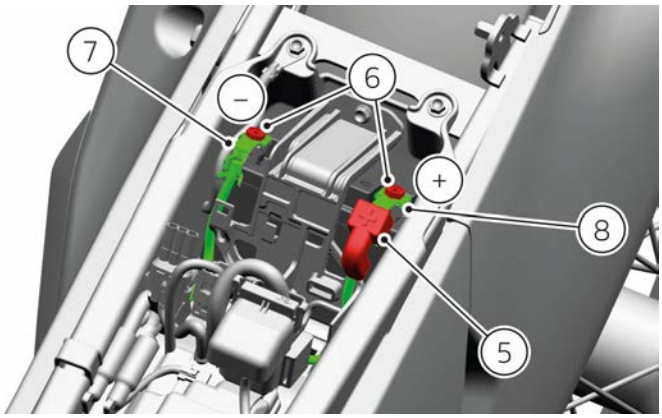


Fig 379

Loosen the screw (9) and remove the battery mount (4), removing it from the lower attachment points (A) and pulling it out.

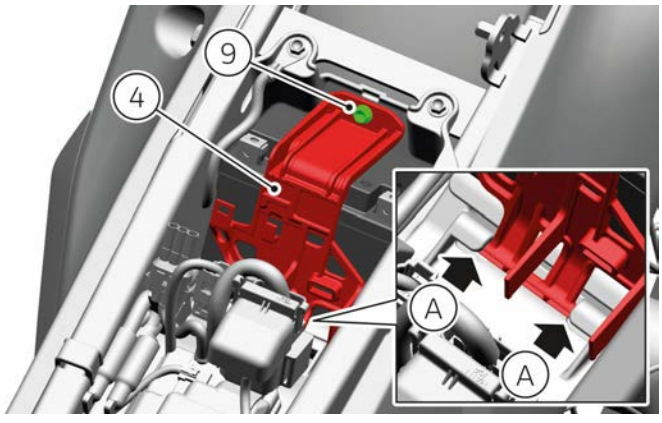


Fig 380

Remove the battery (10) from its seat.

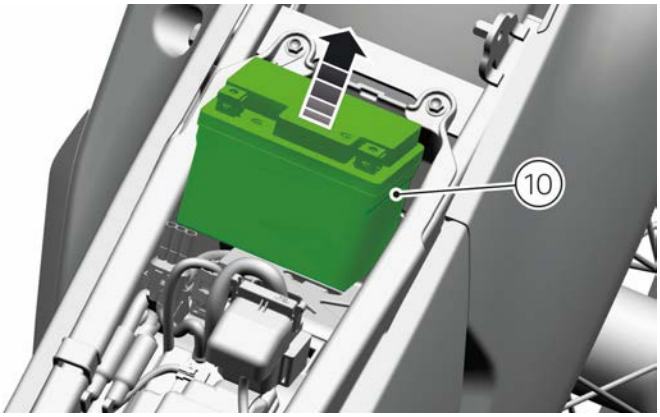


Fig 381

Refitting the battery

Attention

To disconnect the battery, always disconnect the negative (-) terminal first, then the positive one (+).
To reconnect the battery, always reconnect the positive (+) terminal first, then the negative (-) one.

Reposition battery (10) in its seat.

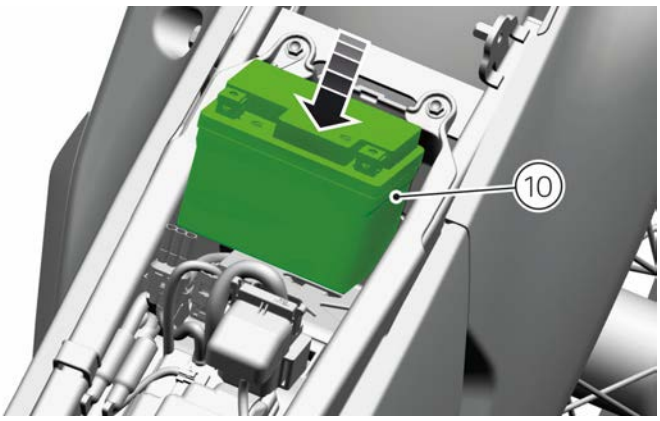


Fig 382

Reposition the battery mount (4), securing it in the lower attachment points (A).
Reposition and tighten screw (9) to a torque of 3 Nm ± 10%.

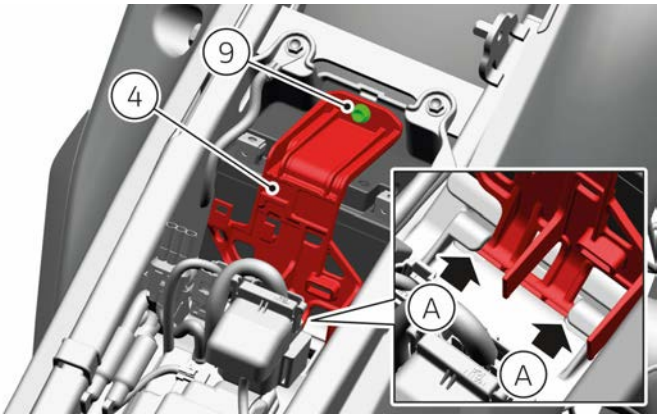


Fig 383

Starting again from the positive terminal (+), reposition the positive red cable (8) on the positive terminal (+) and secure it with the screw (6) to a torque of 3 Nm ± 10%.
Reposition the protective cap (5) on the positive terminal (+).
Reposition the black negative cable (7) on the negative terminal (-) and secure it with the screw (6) to a torque of 3 Nm ± 10%.

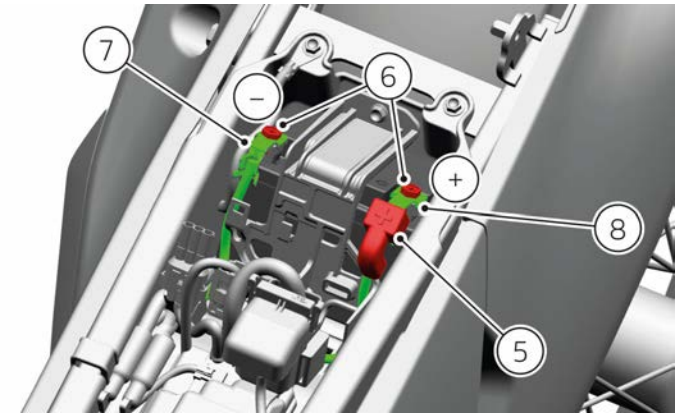


Fig 384

Reposition the connector (1), the diagnostic socket (2) and the remote control switch (3) in their seats on the battery mount (4).
Refit the seat as described in chapter “Seat”.

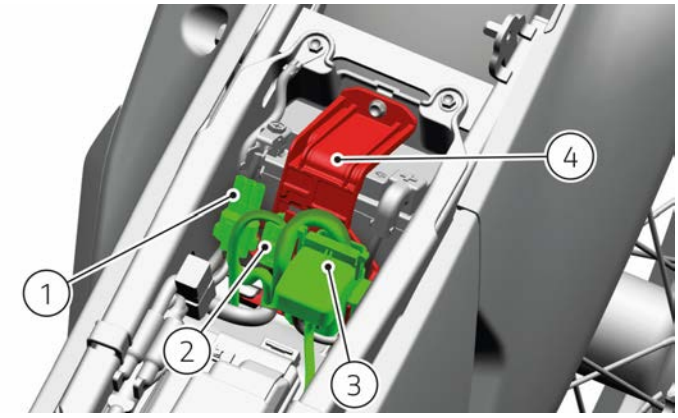


Fig 385

Charging the battery

The motorcycle is equipped with a lithium-ion battery. For charging and maintenance, strictly follow the instructions below.

Attention

Only use battery chargers and maintainers specifically designed for lithium-ion batteries.
Only charge the battery if the voltage is above 8V. If not, the battery must be replaced.

Attention

The battery gives off explosive gases; never allow naked flames and cigarettes near the battery. Store the battery in a well-ventilated place at a temperature below 104 F (40 °C).

To recharge the battery, remove the seat and connect the positive (+) terminal of the battery charger to the positive (+) terminal of the battery. Then connect the negative (-) terminal of the battery charger to the negative (-) terminal of the battery.

Attention
If the vehicle cannot be started because of a fully flat battery, the bike cannot be started by connecting an external starter or battery in parallel.
The battery charger, in fact, is not designed to ensure proper supply voltage to the engine electronics (including ignition/injection system) with fully flat battery.
This could result in a serious operational issue.
Please replace the battery or charge and check it before using the bike.

Attention
Never start the bike by pushing it.

Important
Vehicles equipped with lithium batteries must never use devices such as Jump Starters or auxiliary batteries connected in parallel to the lithium battery if the latter has discharged to a level that does not allow starting. The cells of a lithium battery, if deeply discharged, can be irreparably damaged if they are recharged with unlimited currents, as is the case with connections to Jump Starters and/or parallel connections to charged batteries.

When the motorcycle is left unused (approximately for more than 30 days). We recommend owners to use the Ducati battery charge maintainer (Battery maintenance kit) since its electronics monitors the battery voltage. Connect the battery maintainer to the diagnostic socket.

Battery charge maintaining

Attention
The electric system of this motorcycle is designed so as to ensure there is a very low power drain when the motorcycle is OFF. Nevertheless, the battery features a certain self-discharge rate that is normal and depends on ambient conditions as well as on "non-use" time.

For this reason, we recommend using a charge maintainer if the motorcycle is not used for more than 30 days.
Use the Ducati charge maintainer for lithium batteries, equipped with internal electronics for voltage monitoring and with a maximum charging current of 1.5A.
Connect the maintainer to the diagnostics socket (11).

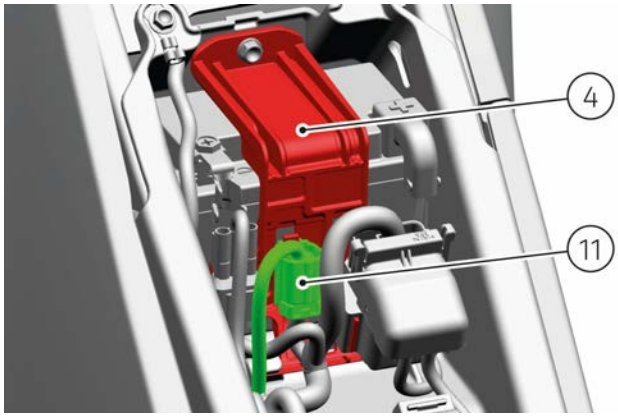


Fig 386

Note
Using charge maintainers or battery chargers for lithium batteries not approved by Ducati could damage bike electric system and/or lithium battery; bike warranty does not cover the battery if damaged due to failure to comply with the above indications, since it is considered as improper maintenance.

Battery disposal

Disposal
For battery disposal, always check and strictly comply with the laws in force in your country.
Incorrect disposal of the battery can cause damage to the environment and human health.
Always completely discharge the battery before disposing of it.

Tightening torque settings

Vehicle tightening torques

Chain-sprocket assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Front sprocket fastening	1	M10	55*	Apply GADUS S2 V220 AD 2 grease (on underhead only)
Sprocket cover and clutch slave cylinder protection fastening	2	M5	6	
Upper chain roller to frame fastening	1	M8	14	Pre-applied threadlocker
Lower chain sliding shoe to linkage screw fastening	1	M8	14	Pre-applied threadlocker

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Instrument panel assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Handlebar turn off switch (LH) fastening	1	M3	0.5	
Handlebar turn on switch (RH) fastening	1	M3	0.5	
Riding Mode selector to handlebar fastening	1	Self-tapping	1	
Hour meter to fork connector support fastening	2	Self-tapping	0.5	

Front fork assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Fork bottom end tightening	2+2	M8	17*	Apply GADUS S2 V220 AD 2 grease (Seq. 1-2-1)
Steering head bearing tightening	1	M30	7*	Apply GADUS S2 V220 AD 2 grease Pre-tightening to 29 Nm
Steering shaft to steering head tightening	1	M26	108*	
Bottom yoke to fork sleeve (LH/RH) fastening	2+2	M8	17*	Apply GADUS S2 V220 AD 2 grease (on thread and underhead)
Steering head to fork sleeve (LH/RH) fastening	2+2	M8	17*	Apply GADUS S2 V220 AD 2 grease (on thread and underhead)
Lower U-bolt to steering head (LH/RH) fastening	1+1	M10	45*	Apply Loctite ® 243 ™
Upper U-bolt to lower U-bolt (LH/RH) fastening	2+2	M8	22*	(Seq. 1-2-1)
Fork connector support to steering head fastening	2	M6	10	

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Electric-electronic system assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Battery cable to battery terminal fastening	1	M6	3	
Ground cable to battery terminal fastening	1	M6	3	

Electric-electronic system assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Battery cable to solenoid starter fastening	1	M5	3	
Solenoid starter cable to solenoid starter fastening	1	M5	3	
Solenoid starter to starter motor fastening	1	M6	5	Apply AGIP PV2 (White Grease)
Battery support to electrical components compartment fastening	1	M5	3	
Electrical components compartment to rear subframe fastening	2	M6	10	
Electrical components compartment to intake manifold guard fastening	2	Self-tapping	2	
BBS support to rear subframe fastening	1	M6	8	
Voltage regulator to regulator mount fastening	2	M6	5	
Regulator support to rear subframe fastening	1	M6	8	
Coil to frame fastening	2	M6	8	Pre-applied threadlocker
Spark plug retainer plate to engine fastening	1	M6	12	
Wiring cableway to frame fastening	1	M5	5	
Steering tube wiring cableway to frame fastening	1	M6	8	
Bowden cable support to frame fastening	1	M6	8	
BBS wiring cable ring to rear subframe fastener	1	M6	2.5	

Front brake assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Front brake master cylinder to handlebar fastening	2	M6	10	(Seq. 1-(UP)-2-1)
Front brake caliper support to fork bottom end fastening	2	M8	25	Apply Loctite ® 243 ™
Brake hose connection to front brake caliper fastening	1	M10	27*	
Brake hose connection to the front brake master cylinder fastening	1	M10	27*	

Rear swinging arm assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Chain sliding shoe to swinging arm fastening	3	M6	10	Pre-applied threadlocker
Rear brake hose guide to swinging arm fastening	2	M5	5	Pre-applied threadlocker
Chain tensioner slider adjuster fastening	2	M8	8	Apply GADUS S2 V220 AD 2 grease Pre-tightening to 2 Nm
Chain guide to swinging arm fastening	2	M6	12	
Swingarm shaft to frame fastening	1	M14	80*	Apply GADUS S2 V220 AD 2 grease (on thread and pin shank)

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Rear brake assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Rear brake master cylinder to frame fastening	2	M6	10	Pre-applied threadlocker
Push rod lock nut on rear brake master cylinder fastening	1	M6	5	
Brake hose connection to rear brake caliper fastening	1	M10	27*	
Brake hose connection to the front brake master cylinder fastening	1	M10	27 *	

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Handlebar assembly - clutch control				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Throttle to handlebar fastening	2	M6	5	
LH handgrip to handgrip fastening	1	M4	5	
Clutch actuator to engine fastening	1	M6	13	(Seq: 1-2-3-1) (Apply CARBON FLUORTEC 9740 on the seals)
Clutch actuator to engine fastening	2	M6	13	(Seq: 1-2-3-1) (Apply CARBON FLUORTEC 9740 on the seals)
Clutch master cylinder to handlebar fastening	2	M6	10	(Seq: 1-(UP)-2-1)
Clutch hose connection to the clutch master cylinder fastening	1	M10	14	
Clutch hose union to clutch slave cylinder fastening	1	M10	27*	

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Rear suspension assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Shock absorber to frame fastening	1	M10	42*	Apply GADUS S2 V220 AD 2 grease (on thread, underhead and pin shank)
Shock absorber to suspension link fastening	1	M10	42*	Apply GADUS S2 V220 AD 2 grease (on thread, underhead and pin shank)
Linkage to suspension link fastening	1	M14	65*	Apply GADUS S2 V220 AD 2 grease (on thread, underhead and pin shank)
Linkage to frame fastening	1	M14	65*	Apply GADUS S2 V220 AD 2 grease (on thread, underhead and pin shank)
Suspension link to swinging arm fastening	1	M14	65*	Apply GADUS S2 V220 AD 2 grease (on thread, underhead and pin shank)

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Front mudguard assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Front mudguard to bottom yoke fastener	4	M6	12	
Leg cover to fork bottom end (LH/RH) fastening	3+3	M6	8	
Front brake hose guide to leg cover fastening	2	Self-tapping	1.2	
Number holder to fork connector support fastening	1	Self-tapping	1.2	
Hose guide to number holder fastening	2	Self-tapping	2	

Liquid cooling assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Radiator and RH radiator grille fastening to frame	2	M6	10	
Radiator and LH radiator grille fastening to frame	2	M6	10	
Water hose clamps on engine and radiator fastening	8		3	
Water return hose fastening to engine	1	M6	10	

Footpeg - lever and linkage assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Gearchange lever to gear selector shaft fastening	1	M6	10	
Rear brake lever to frame fastening	1	M10-LH	36	Apply Loctite ® 243 ™
Rear brake fork pin to brake lever fastening	1	M6	10	Apply Loctite ® 243 ™
Brake lever limit stop fastening (screw + nut)	1	M6	6	Apply Loctite ® 7414 ™
Rear brake lever pedal to brake lever fastening	2	M5	5	Apply Loctite ® 243 ™

Rear mudguard assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Splash guard mudguard to airbox support fastening	2	Self-tapping	2	

Front wheel assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Front brake disc to front wheel hub fastening	6	M6	16*	Pre-applied threadlocker
Front wheel nut tightening	1	M16	80*	Apply GADUS S2 V220 AD 2 grease (on underhead and pin shank)
Tire retainer fastening	1	M8	12	
Valve to front wheel rim fastening	1	M8		
Front wheel rim spoke nipple fastening	36		5	Pre-tightening to 3 Nm

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Rear wheel assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Rear sprocket to rear wheel hub fastening	6	M8	30*	Apply Loctite ® 243 ™
Brake disc to rear wheel hub fastening	4	M6	16*	Pre-applied threadlocker
Rear wheel shaft nut tightening	1	M25	120*	Apply GADUS S2 V220 AD 2 grease (on underhead and pin shank)
Tire retainer fastening	1	M8	12	
Valve to rear wheel hub fastening	1	M8		
Rim nipple to rear wheel rim fastening	36		5	Pre-tightening to 3 Nm

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Tank assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
GAC flange to tank GAC fastening	4	M5	4	(Seq: 1-2-3-4 (cross-pattern tightening))
Tank to frame fastening	1	M6	10	
Seat retaining spacer to tank fastening	1	M6	10	
Front side body panel retaining screws to fuel tank fastening	1+1	M6	8	

Exhaust assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Exhaust manifold flange to engine head fastening	2	M8	15	Apply copper grease (on thread and underhead)
Exhaust silencer to subframe fastening	1+1	M8	20	

Seat assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Seat handle to seat fastening	3	M5	5	
Seat to rear subframe fastening	1+1	M6	10	

Frame assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
RH upper engine plate to frame fastening	2	M8	35*	
LH upper engine plate to frame fastening	2	M8	35*	
RH lower engine plate to frame fastening	2	M8	35*	
LH lower engine plate to frame fastening	2	M8	35*	
Upper engine plate to engine fastening	1+1	M10	60*	
Frame to engine lower fastening	1	M10	60*	Apply GADUS S2 V220 AD 2 grease (on pin shank only)
Lower engine plate to engine fastening	1	M10	60*	Apply GADUS S2 V220 AD 2 grease (on pin shank only)
Subframe to frame upper fastening	1+1	M8	35*	
Subframe to frame lower fastening	1+1	M8	35*	

Frame assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
RH footpeg holder plate to frame upper fastening	1	M10	48*	Apply Loctite ® 243 ™
RH footpeg holder plate to frame lower fastening	1	M8	32*	Apply Loctite ® 243 ™
LH footpeg holder plate to frame upper fastening	1	M10	48*	Apply Loctite ® 243 ™
LH footpeg holder plate to frame lower fastening	1	M8	32*	Apply Loctite ® 243 ™

*dynamic safety-critical point; tightening torque tolerance must be **Nm ± 5%**.

Air intake - oil breathing assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Rigid sleeve to intake sleeve fastening	1	Self-tapping	2	
Air temperature sensor to intake sleeve fastening	2	Self-tapping	0.3	
Intake union to throttle body fastening	1	M4	2	
Airbox support to intake sleeve plate fastening	4	Self-tapping	2	

Fuel supply assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
MAP sensor to throttle body fastening	1	M6	10	Apply Loctite ® 243 ™
Pulley cover to throttle body fastening	1	M5	5	
Injector support to throttle body fastening	2	M5	4	Apply Loctite ® 243 ™
Throttle body to cylinder head coupling fastening	1	M4	2	
Bowden cable to throttle body fastening	2	M6	3	Apply Loctite ® 243 ™ to the upper nut

Fairing assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
Front RH side body panel to RH radiator grille fastening	2	M6	8	
RH front side body panel to tank fastening	1	M6	8	
Front LH side body panel to LH radiator grille fastening	2	M6	8	
Front LH side body panel to tank fastening	1	M6	8	
Rear RH side body panel to subframe fastening	1	M6	8	
Rear RH side body panel to electrical components compartment fastening	1	M6	8	
Rear mudguard to subframe upper fastening towards the side	1+1	M6	10	
Rear mudguard and intake sleeve plate to subframe RH fastening	1	M6	8	
Rear mudguard to subframe lower fastening	1	M6	8	

Fairing assembly				
Application	Quantity	Thread (mm)	Torque (Nm) ± 10%	Notes
RH side body panel to rear mudguard fastener	1	M6	1.5	
LH side body panel to rear mudguard fastener	1	M6	1.5	
Rear LH side body panel to rear subframe fastener	1	M6	8	
Rear mudguard to subframe upper fastener	1+1	M6	8	

Engine tightening torque values

Gearbox-clutch assembly							
Application	Quantity	Thread (mm)	Length (mm)	Min.	Torque	Max.	Notes
Clutch spring screw	6	M5	16	5	6	7	

Cover assembly - clutch side							
Application	Quantity	Thread (mm)	Length (mm)	Min.	Torque	Max.	Notes
Oil filler cap	1	M20	11.5	4.5	5	5.5	
Clutch cover retaining screw	3	M6	60	12	13	14	
Clutch cover retaining screw	3	M6	50	12	13	14	
Clutch cover retaining screw	3	M6	25	12	13	14	

Cover assembly - generator side							
Application	Quantity	Thread (mm)	Length (mm)	Min.	Torque	Max.	Notes
Timing inspection plug	1	M27	7	21	24	27	

Crankcase assembly							
Application	Quantity	Thread (mm)	Length (mm)	Min.	Torque	Max.	Notes
Oil drain steel plug from sump with magnet	1	M14	9	14	15	16	
Oil drain steel plug from scavenge pump	1	M14	9	14	15	16	
Mesh filter fixing screw	7	M6	18	9	10	11	Apply Loctite ®243™ or ThreeBond ® 1324 (on thread only)

Oil pump assembly							
Application	Quantity	Thread (mm)	Length (mm)	Min.	Torque	Max.	Notes
Oil filter cover retaining screw	2	M6	18	12	13	14	

Cylinder head assembly							
Application	Quantity	Thread (mm)	Length (mm)	Min.	Torque	Max.	Notes
NGK spark plug	1	M10	26.5	11	12	13	
Head cover retaining special screw	2	M6	12	9	10	11	
Spark plug cap plate retaining screw	2	M6	14	9	10	11	Pre-applied threadlocker

Regulations

Declaration of conformity

EU Declaration of Conformity (DoC)	
Company name:	DUCATI Motor Holding spa
Manufacturer's address:	Via Cavalieri Ducati, 3
Post Code:	40132
City:	Bologna, Italy

We declare that the DoC is issued under our sole responsibility and belongs to the following product:

Equipment/Product model:	Racing motorcycle
Type:	Desmo450 MX
Serial number:	ZDM1R45AA******** or ZDMRDWCK*********

The subject of the above declaration complies with the relevant EU harmonization legislation:

EMC Directive 2014/30/EU

The following harmonized standards and technical specifications have been applied:

EN 55012:2007 + A1:2009 (Emissions)
EN 61000-6-2:2005 (Immunity)

Signed on behalf and in the name of:

Place of issue:	Date of issue (day/month/year):	Name, position, signature:
Bologna	14/04/2025	Andrea Gesi (Production Manager)



Radio equipment certification

Table 1 (Data relevant to frequency bands and maximum transmission power of radio equipment)

Radio equipment installed in the vehicle	Model Name	Frequency band	Max. transmission power
DCL	WFCOM4	2412 ÷ 2484 MHz	20.5 dBm

Table 2 (Addresses of radio component manufacturers)

Radio equipment installed in the vehicle	Brand Name	Manufacturers' addresses
DCL	Athena S.p.A.	Via delle Albere 13, 36045 Alonte (VI) Italia

CANADA

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.
L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1) L'appareil ne doit pas produire de brouillage;
(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
RF Exposure Information:
This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

Déclaration d'exposition aux radiations:
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.
Cet appareil numerique classe B est conforme à la norme NMB-003 du Canada.
CAN ICES-3(B) / NMB-3(B)

DCL	IC: 21098-ESPC3MINI1

Canadian Representative:
DUCATI CANADA
777 Bayly Ave. Ajax ON Canada L1S7G7
Tel No.: +1 705 786 7768

EUROPA

EU Directive 2014/53/EU

CE

Frequency bands and maximum transmission power

Data relevant to frequency bands and maximum transmission power of radio equipment are given in radio device Table.

Addresses of radio component manufacturers

All radio components must carry the manufacturer's address according to the provisions of directive 2014/53/EU. For components that, due to their size or nature, cannot be furnished with a sticker, the respective manufacturers' addresses as required by law are listed in the table 2.

Note
Only skilled people can handle and install this equipment.

Simplified EU declaration of conformity
[Austria]
Ihr Fahrzeug ist mit einer Reihe von Funkgeräten ausgestattet. Die Hersteller dieser Funkgeräte erklären, dass diese, wo gesetzlich vorgeschrieben, mit der Richtlinie 2014/53/EU übereinstimmen. Der vollständige Text der EU-Konformitätserklärung ist unter folgender Adresse verfügbar: certifications.ducati.com

[Belgium]
Votre véhicule est équipé d'une série d'appareillages radio. Les constructeurs de ces appareillages radio déclarent que ces derniers sont conformes à la directive 2014/53/UE lorsque la loi le requiert. Le texte complet de la déclaration de conformité UE est disponible à l'adresse suivante : certifications.ducati.com

[Bulgaria]
Твоят мотоциклет е оборудван с различна по вид радиоапаратура. Производителите на тази радиоапаратура декларират, че тя съответства на Директива 2014/53/ЕС, съгласно изискванията по закон. Пълният текст на декларацията за съответствие ЕС, ще намерите на следния адрес: certifications.ducati.com

[Croatia]
Vaše vozilo je opremljeno nizom radio uređaja. Proizvođači ovih radio uređaja tvrde da su uređaji u skladu s Direktivom 2014/53/UE ako je propisano zakonom. Cjelokupan tekst deklaracije o sukladnosti dostupan je na: certifications.ducati.com

[Cyprus]
Το όχημά σας εξοπλίζεται με μια σειρά από ραδιοσυσκευές. Οι κατασκευαστές των συσκευών αυτών δηλώνουν ότι οι συσκευές συμμορφώνονται με την οδηγία 2014/53/ΕΕ, όπου απαιτείται από το νόμο. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ είναι διαθέσιμο στη διεύθυνση: certifications.ducati.com

[Czech Republic]
Vaše vozidlo je vybaveno řadou rádiových zařízení. Výrobci těchto radio zařízení, prohlašují, že zařízení jsou v souladu se směrnicí 2014/53/EU, pokud to vyžaduje zákon. Úplné znění prohlášení o shodě EU je k dispozici na internetových stránkách: certifications.ducati.com

[Denmark]
Dit køretøj er udstyret med et udvalg af radioudstyr. Producenterne af dette radioudstyr erklærer, at dette udstyr overholder direktiv 2014/53/EU, hvis det kræves i henhold til loven. Den komplette tekst af EU-overensstemmelseserklæringen findes på følgende webadresse: certifications.ducati.com

[Estonia]
Teie sõiduk on varustatud raadioseadmete seeriaga. Selle raadioseadme tootjad kinnitavad, et see seade vastab direktiivile 2014/53/EÜ, kui seadus seda nõuab. EÜ vastavusdeklaratsiooni terviktekst on saadaval järgmisel veebisaidil: certifications.ducati.com

[Finland]

Ajoneuvossasi on radiolaitteita. Näiden radiolaitteiden valmistajat vakuuttavat, että laitteet vastaavat direktiiviä 2014/53/EU lain edellyttämällä tavalla. EU-vaatimustenmukaisuusvakuutuksen täydellinen teksti on saatavilla seuraavasta osoitteesta: certifications.ducati.com

[France]
Votre véhicule est équipé d'une série d'appareillages radio. Les constructeurs de ces appareillages radio déclarent que ces derniers sont conformes à la directive 2014/53/UE lorsque la loi le requiert. Le texte complet de la déclaration de conformité UE est disponible à l'adresse suivante : certifications.ducati.com

[Germany]
Ihr Fahrzeug ist mit einer Reihe von Funkgeräten ausgestattet. Die Hersteller dieser Funkgeräte erklären, dass diese, wo gesetzlich vorgeschrieben, mit der Richtlinie 2014/53/EU übereinstimmen. Der vollständige Text der EU-Konformitätserklärung ist unter folgender Adresse verfügbar: certifications.ducati.com

[Greece]
Το όχημά σας εξοπλίζεται με μια σειρά από ραδιοσυσκευές. Οι κατασκευαστές των συσκευών αυτών δηλώνουν ότι οι συσκευές συμμορφώνονται με την οδηγία 2014/53/ΕΕ, όπου απαιτείται από το νόμο. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ είναι διαθέσιμο στη διεύθυνση: certifications.ducati.com

[Hungary]
Járműved egy sor rádió készülékkel van felszerelve. Ezeknek a rádióberendezéseknek a gyártói kijelentik, hogy a készülékek megfelelnek a 2014/53/EU irányelvnek, ahol ezt a törvény megköveteli. Az EU megfelelőségi nyilatkozat teljes szövege az alábbi címen érhető el: certifications.ducati.com

[Ireland]
Your vehicle is equipped with a range of radio equipment. The manufacturers of this radio equipment declare that these equipment complies with Directive 2014/53/EU where required by law. The complete text of the EU declaration of conformity is available at the following web address: certifications.ducati.com

[Italy]
Il tuo veicolo è dotato di una serie di apparecchiature radio. I costruttori di queste apparecchiature radio dichiarano che esse sono conformi alla direttiva 2014/53/UE laddove richiesto per legge. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo: certifications.ducati.com

[Latvia]
Jūsu transportlīdzeklis ir aprīkots ar dažādām radioierīcēm. Šo radioierīču ražotājs apliecina, ka ierīces atbilst Direktīvas 2014/53/ES prasībām, ja to paredz attiecīgie tiesību akti. Pilnīgo ES atbilstības deklarāciju skatiet šajā tīmekļa vietnē: certifications.ducati.com

[Lithuania]
Jūsų transporto priemonėje įdiegta daug įvairios radijo įrangos. Šios radijo įrangos gamintojai patvirtina, kad ji atitinka 2014/53/ES direktyvos reikalavimus, kaip tai numato galiojantys įstatymai. Visas ES atitikties deklaracijos tekstas pateikiamas svetainėje adresu certifications.ducati.com

[Luxembourg]
Votre véhicule est équipé d'une série d'appareillages radio. Les constructeurs de ces appareillages radio déclarent que ces derniers sont conformes à la directive 2014/53/UE lorsque la loi le requiert. Le texte complet de la déclaration de conformité UE est disponible à l'adresse suivante : certifications.ducati.com

[Malta]
Il-vettura tiegħek hija mgħammra b'firxa ta' tagħmir tar-radju. Il-manufatturi ta' dan it-tagħmir tar-radju jiddikjaraw li dan it-tagħmir jikkonforma mad-Direttiva 2014/53/UE fejn meħtieġ mil-liġi. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli fuq l-indirizz tal-web: certifications.ducati.com

[Netherlands]
Uw voertuig is voorzien van diverse draadloze apparatuur. De fabrikanten van deze draadloze apparatuur verklaren dat deze, daar waar dit door de wet voorschreven wordt, overeenstemmen met de richtlijn 2014/53/EU. De volledige tekst van de EU-verklaring van overeenstemming is beschikbaar op het volgende webadres: certifications.ducati.com

[Poland]
Państwa pojazd został wyposażony w szereg urządzeń radiowych. Producenci tych urządzeń radiowych oświadczają, że są one zgodne z dyrektywą 2014/53/UE, tam, gdzie wymaga tego prawo. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: certifications.ducati.com

[Portugal]
O seu veículo é dotado de uma série de equipamentos de rádio. Os construtores desses equipamentos de rádio declaram que os mesmos estão em conformidade com a diretiva 2014/53/UE sempre que a lei o determinar. O texto completo da declaração de conformidade UE está disponível no seguinte endereço: certifications.ducati.com

[Romania]
Vehiculul dvs. este dotat cu o serie de aparate radio. Producătorii acestor aparate radio declară că acestea sunt conforme cu directiva 2014/53/UE, dacă legea impune acest lucru. Textul complet al declarației de conformitate UE este disponibil la următoarea adresă: certifications.ducati.com

[Slovakia]

Vaše vozidlo je vybavené rádiofónnymi zariadeniami. Výrobcovia týchto rádiofónnych zariadení prehlasujú, že tieto zariadenia sú v zhode so smernicou 2014/53/EÚ v rozsahu predpísanom zákonom. Úplný text ES prehlásenia o zhode je k dispozícii na nasledujúcej adrese: certifications.ducati.com

[Slovenia]
Vaše vozilo ima tudi vrsto radijske opreme. Proizvajalci eteh radijskih naprav izjavljajo, da so ti v skladu z uredbo 2014/53/UE, kjer zakon to predvideva. Celotno besedilo izjave o skladnosti EU je na voljo na spodnjem naslovu: certifications.ducati.com

[Spain]
Su vehículo está equipado con una serie de equipos de radio. Los fabricantes de dichos equipos de radio declaran su conformidad con la directiva 2014/53/UE, como requiere la ley. El texto completo de la declaración de conformidad UE está disponible en el siguiente sitio: certifications.ducati.com

[Sweden]
Ditt fordon är utrustat med radioutrustning. Radioutrustningens tillverkare förklarar att denna utrustning uppfyller direktiv 2014/53/EU där så lagen kräver det. Fullständig text om EU-försäkran om överensstämmelse finns på följande adress: certifications.ducati.com

[Turkey]
Aracınız bir dizi radyo ekipmanı ile donatılmıştır. Bu telsiz ekipmanının üreticileri, yasaların gerektirdiği durumlarda bu ekipmanın 2014/53/EU Direktifine uygun olduğunu beyan eder. AB uygunluk beyanının tam metnine aşağıdaki web adresinden ulaşılabilir: Certificates.ducati.com

[United Kingdom]
Your vehicle is equipped with a range of radio equipment. The manufacturers of this radio equipment declare that these equipment complies with Directive 2014/53/EU where required by law. The complete text of the EU declaration of conformity is available at the following web address: certifications.ducati.com

JAPAN

当該機器には電波法に基づく、技術基準適合証明等を受けた特定無線設備を装着している。
This equipment contains specified radio equipment that has been certified to the technical regulation conformity certification under the Radio Law.

本無線機器の改造を禁ずる（これに反した場合は当該認証登録番号は無効となる）
This radio device should not be modified (otherwise the granted designation number will become invalid)

DCL - contains certified RF module No: 201-210888 / 00

UK

UK CA

Frequency bands and maximum transmission power

Data relevant to frequency bands and maximum transmission power of radio equipment are given in table 1.

Radio equipment installed in the vehicle	Frequency band	Max. tx power	Antenna features
DCL	2412 ÷ 2484 MHz	20.5 dBm	Antenna PCB

Addresses of radio component manufacturers

According to S.I. No. 2017/1206, radio equipment must bear the name, registered trade name or registered trade mark of the manufacturer, as well as the contact mailing address. If the size or nature of the radio equipment prevents a manufacturer from meeting the above requirements, the manufacturer must provide the information on the packaging of the radio equipment or in a document accompanying the radio equipment. Table 2 shows the legal requirements.

Note
Only skilled people can handle and install this equipment.

Attention
Please read the operating instructions carefully!



This device should normally be used at a distance of more than 20 cm from the human body.
The operating temperature of the device is between -20°C and +60°C. If the device reaches temperatures above +60°C, Bluetooth® and Wi-Fi are switched off.

Simplified UK declaration of conformity

Your vehicle is equipped with a range of radio equipment. The manufacturers of this radio equipment declare that it complies with the current regulation.
In the UK, the relevant regulation is as follows: S.I. no. 2017/1206 “The Radio Equipment Regulations 2017”, as amended by S.I. 2019 no. 696, SCHEDULE 29. The full text of the UK Declaration of Conformity is available at the following Internet address: certifications.ducati.com.

UNITED STATES

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."
"Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment." "NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment gene rates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interfere nee to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help."

- RF exposure Information according 2.1091/2.1093 / OET bulletin 65:
Radiofrequency radiation exposure Information: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
The manufacturers of these radio equipment declare that devices comply with the FCC

DCL	FCC ID: 2AC7Z-ESPC3MINI1

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Updated on 09/2026 ED.00

Ducati Motor Holding spa
ducati.com

Via Cavalieri Ducati, 3
40132 Bologna, Italy
Ph. +39 051 6413111
Fax +39 051 406580

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