

# OFF-ROAD

Owner’s manual

# DESMO450 EDX

Dear Ducatista,

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

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 Centres.

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 motorcycle and must be kept with it for its whole service life. If the motorcycle is resold, the manual must always be handed over to the new owner. The quality standards and safety of Ducati motorcycles 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 motorcycle.

### 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 authorisation shall be addressed to this company, specifying the reasons for request. For any servicing or suggestions you might need, please contact our authorised service centres.

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 Conventional Warranty" Terms and Conditions**

**Definitions**

**Client:** the party owning the Motorcycle. The definition of Client does not include those individuals (private or not) who have purchased the Motorcycle for the sole purpose of reselling it.

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

**Ducati Dealer:** the dealer or specialised workshop belonging to the Company official sales and service network (list available on www.ducati.com).

**Ducati or Company:** Ducati Motor Holding S.p.A. sole shareholder company subject to management and coordination by Audi AG, having its principal place of business at via Cavalieri Ducati n. 3, 40132, Bologna, Italy.

**Conventional Warranty:** conventional warranty voluntarily provided by the Company to Clients anywhere in the world where its authorised service network is present for its new Motorcycles manufactured for road and non-road use, for a defined period that depends on the Motorcycle and the country of the Ducati Dealer, starting from the delivery date of the Motorcycle to the first owner Client.

**European Legal Warranty:**minimum legal warranty established by European legislation to be borne by the Seller of a good or service to protect the consumer purchaser against defective products/services or those that do not look or operate as advertised.

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

**Motorcycle:** new, previously unregistered Ducati Motorcycle, purchased by the Client, covered by the Ducati Conventional Warranty.

**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 highest possible level of efficiency, performance and safety of its Motorcycles.

**Road Assistance Programme:** the road assistance offered by this Ducati Conventional 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.

**1. Ducati Conventional Warranty Content**

1.1 Ducati warrants, in all countries in the world where it is present with its authorised service network, its Motorcycles, manufactured for road and non-road use, against manufacturing defects found and acknowledged by Ducati as follows:
a) all Ducati Motorcycles, for a period of twenty-four (24) months from the date of delivery of the Motorcycle to the first owner Client, except for;
b) all motocross and cross country Motorcycles (off-road vehicles not approved for use on public roads) with displacement of less than 500cc, for a period of three (3) months from the date of delivery of the Motorcycle to the first owner Client or twenty (20) hours of engine operation, whichever comes first, or;
c) all enduro Motorcycles (off-road vehicles approved for use on public roads) with displacement of less than 500cc, for a period of six (6) months from the date of delivery of the Motorcycle to the first owner Client or forty (40) hours of engine operation, whichever comes first.

1.2 In the cases referred to in section 1.1 above, the Client is entitled to repair or replacement of the defective parts free of charge, at Ducati's discretion.
1.3 Any warranty claim or right under the Ducati Conventional Warranty must be exercised exclusively at a Ducati Dealer.
1.4 The defective parts replaced under warranty become the property of Ducati.
1.5 Any parts replaced or repaired under this warranty are covered by warranty for the remaining outstanding warranty period applicable to the Motorcycle.
1.6 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.
1.7 These general warranty conditions (hereinafter "Warranty Conditions") are without prejudice to the remedies for defects of conformity against the Seller that the consumers have at their disposal by law and free of charge in accordance with European regulations, as implemented in Italy by Legislative Decree of 6 September 2005, No. 206, as amended (the so-called Consumer Code). In the event any one provision of these Warranty Conditions should conflict with mandatory law in force in the country of residence or domicile of the "consumer" Client, such provision shall be treated as null and void.
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 Dealer upon activation of the warranty.

**2. Exclusions**

2.1 This Conventional Warranty offered by Ducati (which only covers manufacturing defects) is not applicable:
a) to parts subject to wear and tear or deterioration as a result of the normal operation of the Motorcycle (such as: tyres, hoses, bearings, hand grips, final drive, belts, flexible cables, spark plugs, seals and oil seals exposed to dust or dirt, friction parts such as brakes and clutches, the exhaust system for changes in tone that do not affect operation, the Motorcycle battery if not properly maintained with a Ducati battery maintainer);
b) to aesthetic or acoustic defects that do not impair, or only marginally impair, the fitness for use of the Motorcycle (e.g. hidden or insignificant aesthetic defects, normal running noisiness or vibrations);
c) to defects resulting from oxidation or the action of atmospheric agents due to environmental conditions or circumstances outside the norm or to irregular or incorrect washing of the Motorcycle;

d) during “Competitions” (including use in qualification runs) or to Motorcycles already used in “Competitions”;
e) in case of improper use of the Motorcycle, i.e. for purposes other than those for which it has been designed (e.g. off-road use of road Motorcycles or vice versa);
f) to damage due to immersion in water and/or penetration of foreign material, unauthorised alterations for the purpose of changing performance, tampering with the odometer, abuse, negligence or accidents;
g) to damage due to improper transport or storage;
h) to the Motorcycle used in commercial or otherwise used for professional use (except for those used for rental services).

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.

2.3 Without prejudice to the mandatory consumer protection provisions relating to the legal warranty as set forth in the national regulations transposing and implementing European legislation in the countries belonging to the European Union, the Client shall not be entitled to exercise this Ducati Conventional Warranty for damage/defects that are extraneous to the Ducati’s production process, such as, for example, any damage/defect resulting from:
a) use of fuels and lubricants other than those recommended;
b) failure to comply with the requirements for use of the Motorcycle and its outfit as set out in the “Owner’s Manual”;
c) negligence in the execution of the "Scheduled Maintenance Plan” specified by Ducati in the "Owner's Manual";
d) maintenance or repairs incorrectly carried out by parties other than Ducati Dealers, including removal and refitting or repair operations carried out with specifications or tools other than those indicated by Ducati;
e) installation of 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;
f) modifications to the Motorcycle made by the Client and/or third parties without the express approval of Ducati;
g) non-adherence of the Client to the recall or update programmes, even if only software, if established by Ducati.

### 3. Procedure for enforcing the Ducati Conventional Warranty

3.1. In order to enforce this Ducati Conventional Warranty, the Client is required to:
a) report any Motorcycle defects to one of the Ducati Dealers (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 moment of their discovery, in order to reduce the consequences that such defects may have on the operation and safety of the Motorcycle. The Client is aware and accepts that if he/she continues to ride the Motorcycle despite the presence of a defect, this Ducati Conventional Warranty may be voided by Ducati;
b) 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;
c) keep adequate documentation of all maintenance and/or repair work carried out on the Motorcycle (service booklet/tax receipts/invoices detailing the work carried out and the parts used). A copy of this documentation must be handed over to the Ducati Dealer whose warranty claim is made, which will be able to verify the proper performance of the work.

3.2 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 Ducati Dealer network within thirty (30) days from the date of transfer of Motorcycle ownership.

### 4. Limitations of liability

4.1 With the exception of the provisions of the mandatory national regulations applicable to the "consumer" and the relative provisions on manufacturer's liability, Ducati shall not be liable in the event of damage to property and/or persons in any way caused by the Motorcycle or during its use.
4.2 Any defects or delays in repairs or replacements relating to the Motorcycle caused by Ducati Dealers do not entitle the Client to any compensation from Ducati, nor to any extension of this Ducati Conventional Warranty, without prejudice to the Client's rights and actions with respect to the Dealer that may be negligent/defaulting.
4.3 Without prejudice to the Client's right to warranty claim in the terms set out above and within the limits permitted by applicable law, it is expressly excluded that the Client may request termination of the contract, replacement of the Motorcycle or reduction of the sales price, as well as compensation for any direct and indirect damages.
4.4 This Ducati Conventional Warranty, under the conditions specified herein, constitutes the only conventional warranty offered by Ducati on the Motorcycle, subject to the possibility of warranty extension through additional warranties offered by Ducati.
4.5 Ducati reserves the right to make changes and improvements to any model of its Motorcycles, without the obligation to make such changes on Motorcycles already sold.
4.6 These Warranty Conditions also extend to the subsequent owners of the Motorcycle, provided that the provisions of the previous art. 3 are respected. In

any case, Ducati shall not be liable for defects of the Motorcycle attributable to failure to notify Ducati of the change of ownership of the same pursuant to clause 3.2.
4.7 Except for the "consumer" or if otherwise provided by a mandatory provision in force in the Client's country, the Court of Bologna (Italy) shall have exclusive jurisdiction in respect of any disputes relating to these Warranty Conditions and these Warranty Conditions are governed by the Italian law.

**5. Scheduled maintenance plan and pre-delivery**
5.1 The pre-delivery operations of the Motorcycle are carried out by the Ducati Dealer.
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 Conventional 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 defect/damage to the Motorcycle caused by improper or insufficient maintenance shall preclude the applicability of the Ducati Conventional Warranty.
5.4 Ducati Dealers 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 Ducati Dealer 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 (service booklet/tax receipts/invoices detailing the work carried out and the parts used). A copy of this documentation must be handed over to the Ducati Dealer 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.

**6. Seller's legal warranty**
The legal warranty rights in favour of the Client arising from the purchase agreement of the Motorcycle and towards its seller remain unaffected and are not limited by this Ducati Conventional Manufacturer's Warranty. Furthermore, this manufacturer's warranty does not limit any contractual rights arising from the conditions of the purchase agreement of the Motorcycle between the Client and the seller, which may only be asserted in accordance with legal requirements against the seller.

**7. Ducati original spare parts**
By contacting the official Ducati Dealer network, the Client acknowledges that his/her Motorcycle will be repaired and maintained with Ducati original spare parts. All Ducati original spare parts and accessories are also conventionally warranted by Ducati in accordance with this Ducati Conventional Warranty, i.e. for three (3) months or twenty (20) engine running hours in case of motocross and cross country models with displacement of less than 500cc, or for six (6) months or forty (40) engine running hours in case of enduro models with displacement of less than 500cc, or for twenty-four (24) months for other Ducati Motorcycle models.

**8. Possible Ducati warranty extension**
By contacting the official Ducati Dealer network or through the website of your country, any additional warranties can be considered.

# Safety and warnings

## General safety rules

Your safety and that of other road users are very important. Ducati Motor Holding S.p.A. recommends that you ride responsibly.
Before using your motorcycle for the first time, read this entire manual carefully and closely follow the guidelines outlined in it. The manual provides full information on proper motorcycle operation and maintenance. In case of any doubts, please contact a Dealer or Ducati Authorised Service Centre.

### Warning symbols used in the manual

Several kinds of warnings are used as an alert of the possible hazards for you or other persons such as:

- Safety labels on the motorcycle;
- Safety messages preceded by a warning symbol and either WARNING or IMPORTANT.

**Attention**
Failure to comply with these instructions may put you at risk, and could lead to severe injury or even death of the rider or other persons.

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

**Note**
Additional information about the current operation.

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

### Dangerous 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 outdoors or, if working indoors, use an exhaust gas extraction system.

#### Brake dust

Never 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 make sure the working area is well ventilated. Keep any sources of ignition, such as cigarettes, open flames or sparks, well away from working area and fuel storage area.

#### 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 working with engine oil on a daily basis, we recommend washing your hands thoroughly with soap immediately afterwards. Keep away from children.

#### Brake dust

Never 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 fluid used in the brake system is corrosive. In the event of accidental contact with eyes or skin, wash the affected area with abundant 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 irritant and poisonous when ingested. Keep away from children. Never remove the radiator cap when the engine is hot. The coolant is under pressure and will cause severe burns.

#### 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 motorcycle 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

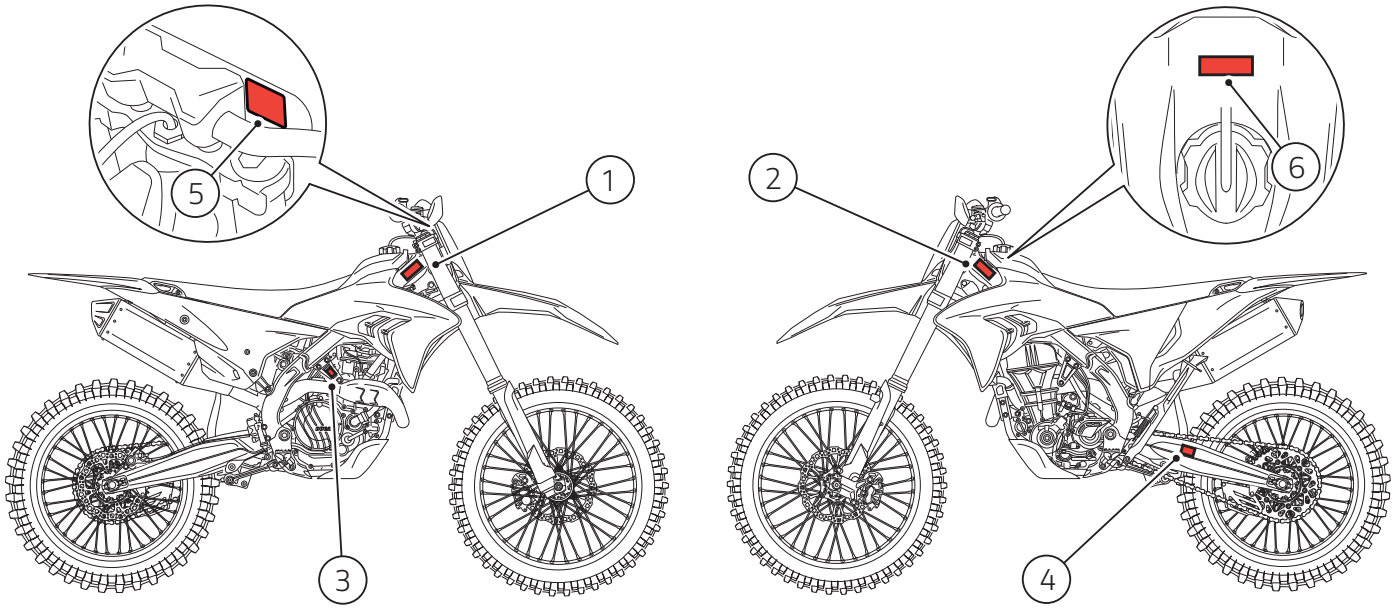
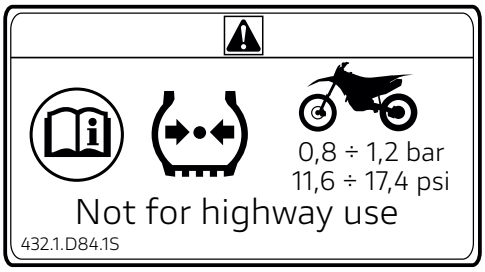
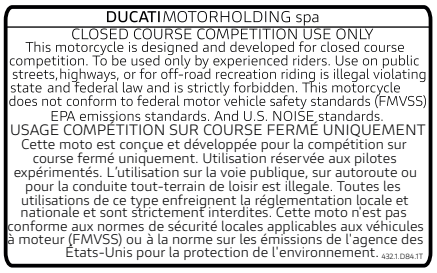
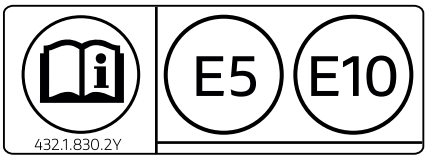



Fig 1

| No. | Description | Image |
|---|---|---|
| 1 | Machinery Directive label | DUCATIMOTORHOLDING spa<br>CE<br>*ZDMRDWCK?TB000001*<br>2006/42/EC 2014/30/EU<br>EN 55012:2007 + A1:2099 EN 6100-6-2:2005<br>DUCATIMOTORHOLDING spa Via Cavalieri Ducati, 3 40132 Bologna - Italy 4321.D841M<br>Fig 2 |
| 2 | Warning label | WARNING<br>• BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS.<br>•NEVER CARRY A PASSENGER. You increase your risk of losing control if you carry a passenger.<br>•NEVER OPERATE THIS VEHICLE ON PUBLIC ROADS. You can collide with another vehicle if you operate this vehicle on a public road.<br>•ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET, eye protection, and protective clothing.<br>•EXPERIENCED RIDER ONLY. 4321.D841N<br>Fig 3 |
| 3 | Heat protection label | 432.1.D84.1P<br>Fig 4 |

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

**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 top quality tools. When lifting the motorcycle, only use devices that fully comply with the relevant national directives.
- When working on the motorcycle, always keep the tools within reach, ideally in the order required, and never put them on the motorcycle or in hard-to-reach or inaccessible places.
- The workplace must be kept clean and tidy at all times.
- Always replace gaskets, sealing rings and split pins with new parts.
- When loosening or tightening nuts or screws, always start with the largest or start from the centre; tighten nuts and screws to the specified torque working in a cross pattern.
- Always mark any parts and positions which might easily be confused upon reassembly.
- Use exclusively Ducati original spare parts and the recommended brands of 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.

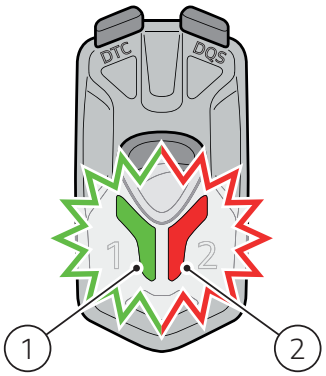



Fig 8

### Attention

This motorcycle is designed exclusively for competition.
It is not approved or suitable for use on public roads or motorways.
Use is only permitted in authorised 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

During the running-in period, closely follow the indications provided in the chapter "Running-in" of this manual.
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 carry out these checks before riding may lead to motorcycle damage and injury to rider.

### Attention

Start the engine outdoors or in a well ventilated area. The engine should never be started or run indoors. 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

Rider must hold the handlebar with both hands at ALL TIMES while riding.

### Attention

Engine, exhaust pipes and silencers stay hot long after the engine is switched off; pay particular attention not to touch the exhaust system with any body part and do not park the vehicle next to flammable material (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 authorised service centre for the installation of any Ducati accessories. The installation of non-original accessories should be carefully though over and, if possible, avoided, as they have not been tested during the development of your bike.

# Technical specifications

## Vehicle technical features

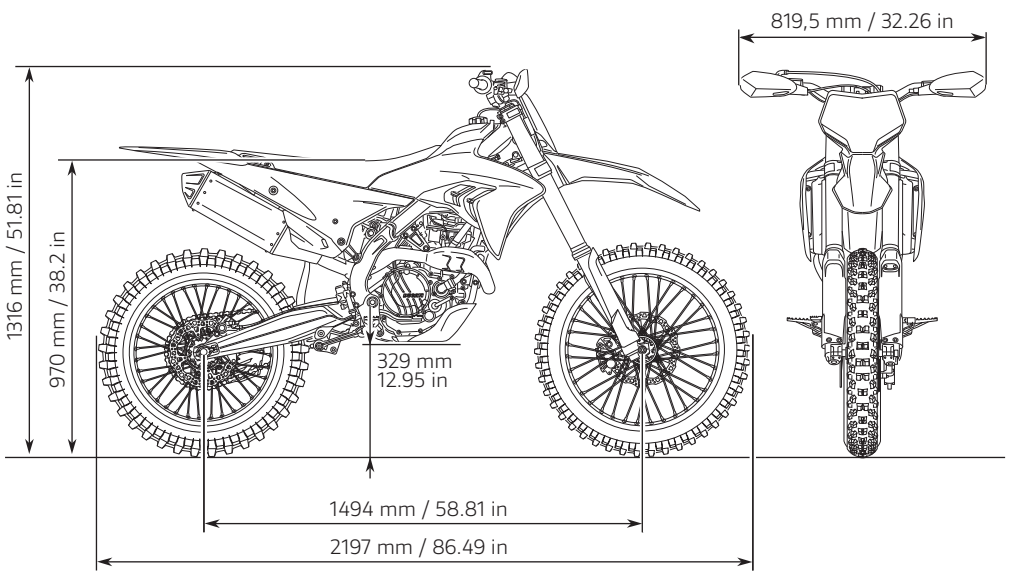
| Overall dimensions |
|---|
|  |

Fig 9

| Weights | |
|---|---|
| Total weight (kerb weight without fuel): | 107.1 kg (236.1 lb) |

| Fuel, lubricants and other fluids | | |
|---|---|---|
| **Top-up** | **Type** | **Quantity** |
| Fuel tank | Ducati recommends SHELL V-Power unleaded premium fuel with a minimum of octane rating of RON 95 | 8.5 litres (1.86 UK gal) |
| 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). | 1.2 litres (0.26 UK gal) |
| Front/rear brake and clutch circuits | DOT 4 | - |
| Protectant for electric contacts | Protective spray for electric systems. | - |
| Air filter oil | Twin Air BIO LIQUID POWER | - |
| Front fork | Recommended oil A15-00 | 350 ± 2.5 cc (21.35 ± 0.15 cu in) per leg |
| Cooling circuit | ENI Agip Permanent Spezial antifreeze (do not dilute, use pure) | 1.1 litres (0.24 UK gal) |

### 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 motorcycle is only compatible with fuel having a maximum content of ethanol of 10% (E10).
Using fuel with ethanol content over 10% is forbidden. Using it could result in severe damage of the engine and motorcycle components. Using fuel with ethanol content over 10% will make 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.).

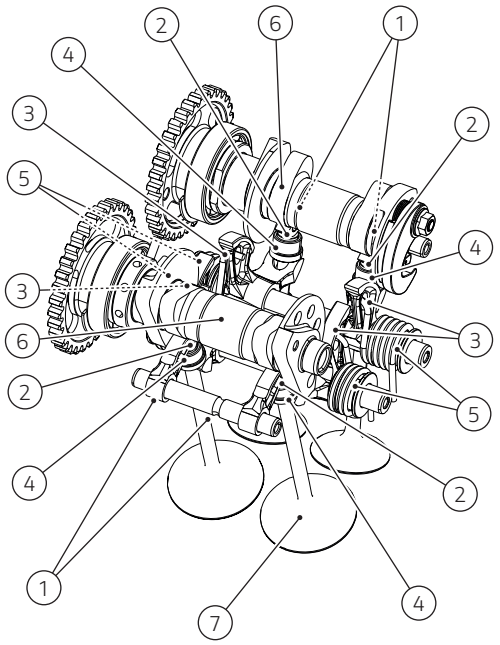
**Attention**
The use of Ducati Corse Performance Oil by Shell is not allowed on this model as it would damage the engine. The Ducati Corse Performance Shell Advance oil is made exclusively for Desmosedici Stradale engines equipped with dry clutch.

| Engine | |
|---|---|
| Type | Desmo450, single cylinder, desmodromic timing system, 4 valves, double overhead camshafts, hydraulic tensioner, semi-dry casing, liquid-cooled. |
| Bore | 96 mm (3.77 in) |
| Stroke | 62.1 mm (2.44 in) |
| Total displacement | 449.6 cu cm(27.43 cuin). |
| 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<br>Piston replacement: 45 hours<br>Valve clearance check: 45 hours<br>Engine overhaul: 90 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 releases Ducati Motor Holding S.p.A. from any liability whatsoever for any engine damage or shorter engine life.

| Timing system | |
|---|---|
| Desmodromic, 4 valves per cylinder<br>**Desmodromic timing system:**<br>**1.** Opening rocker arm (or upper);<br>**2.** Opening rocker shim;<br>**3.** Closing (or lower) rocker;<br>**4.** Lower rocker arm shim;<br>**5.** Return spring for lower rocker;<br>**6.** Camshaft;<br>**7.** Valve. |  <br>Fig 10 |

| 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 | 44 mm (1.73 in) |
| Holes for throttle body injectors | 12 holes |
| Fuel supply | Use the following min. number of octanes: 95-98 RON |

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

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

**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 abundant running water.

| Transmission | |
|---|---|
| Gearbox type | 5 gears with upshifting Quick Shift<br>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, Z49 rear sprocket |
| Transmission: total gear ratios | 1st: 15/31<br>2nd: 18/30<br>3rd: 20/28<br>4th: 22/26<br>5th: 24/24 |
| Drive chain: make and model | DID DMS 520 |
| Drive chain: number of links | 115+1 |

| Frame | |
|---|---|
| Type | Welded aluminium, consisting of cast, forged and extruded elements |
| Trail | 118.4 mm (4.66 in) |
| 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 | 2.15" x 18" |

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

| Rear tyre | |
|---|---|
| Type | Pirelli Scorpion XC Mid-Soft 110/100 R18" |
| Size | 110/100 R18" |
| Front tyre pressure | 1.0 bar (0.8 bar MIN - 1.2 bar MAX) |

**Attention**
As tyre 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 tyre pressure when tyres are cold.

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

| Rear shock absorber | |
|---|---|
| Type | Fully adjustable Showa monoshock |
| Spring rate | 44 N/mm |
| Stroke | 129 mm (5.07 in) |
| Wheel travel | 301 mm (11.85 in) |

| Exhaust system | |
|---|---|
| Type | Steel single silencer with aluminium sleeve<br>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.

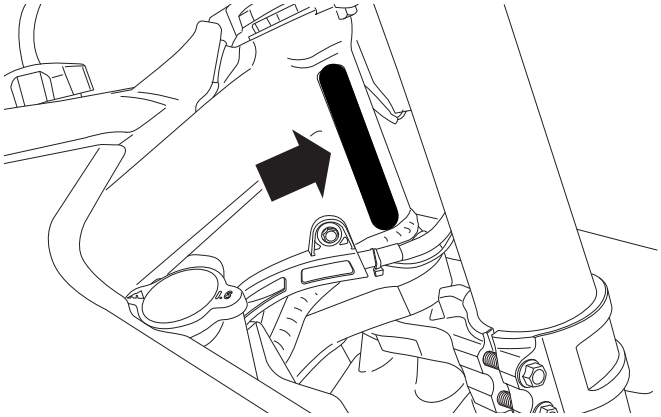


Fig 11

The engine identification number is located under the gear change pedal, on the left side of the vehicle.

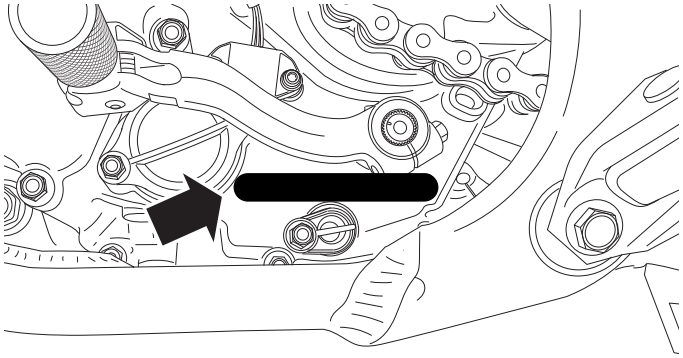


Fig 12

# 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.

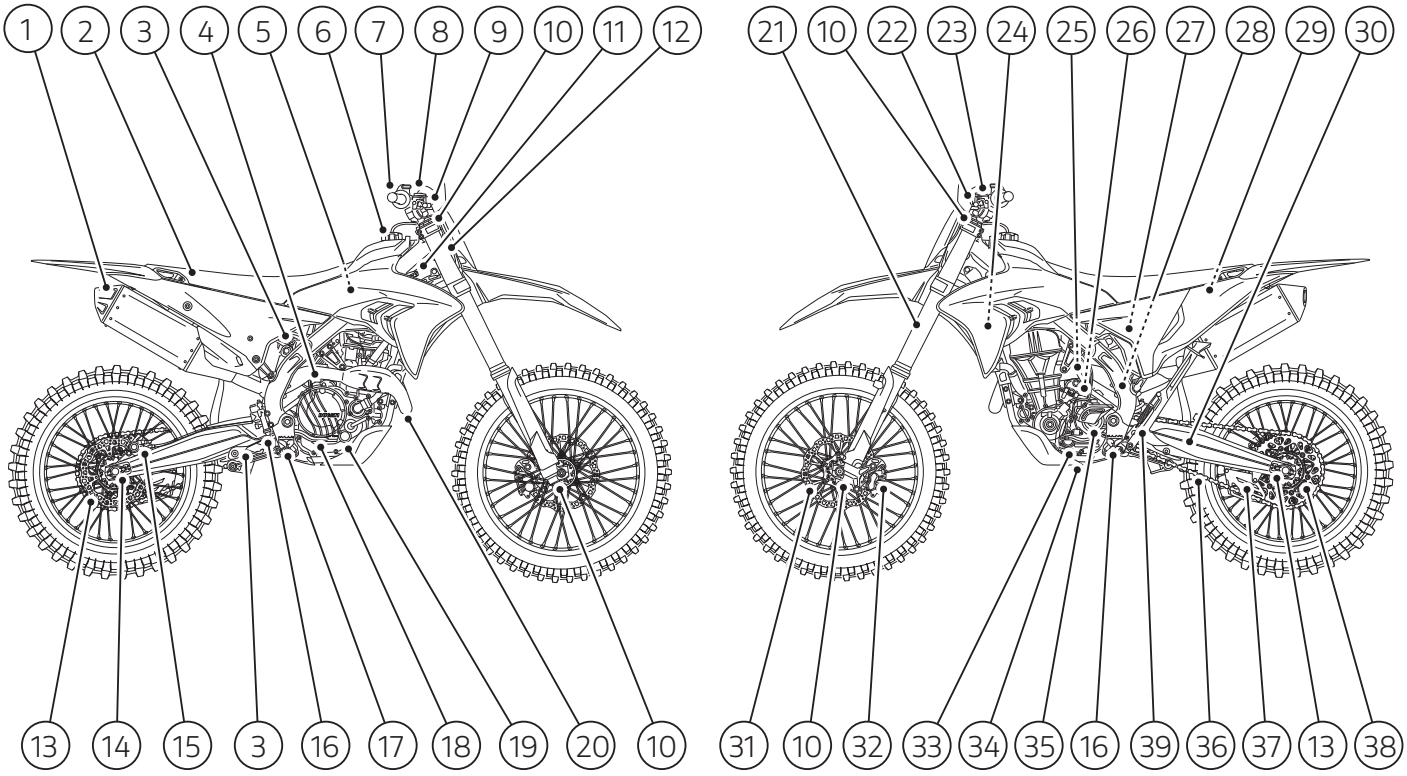



Fig 13

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 calliper.
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 disc.
32) Front brake calliper.
33) Gear change pedal.
34) Engine oil drain screw.
35) Front sprocket.
36) Drive chain.
37) Chain guide.
38) Rear sprocket.
39) Side stand.

## Switchgears

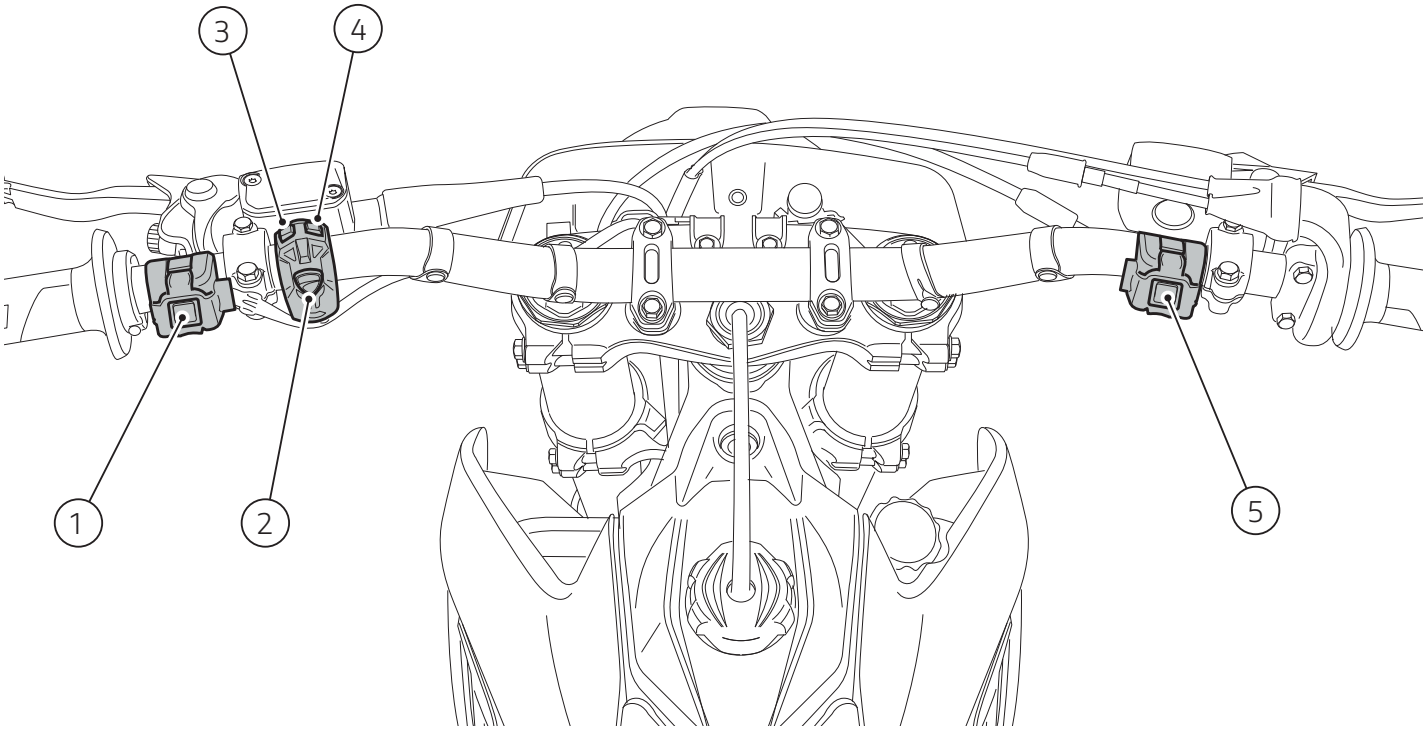



Fig 14

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 at the same time).
4) DQS activation button (Launch Control activation when buttons 3 and 4 are pressed at the same time).
5) Vehicle start 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.

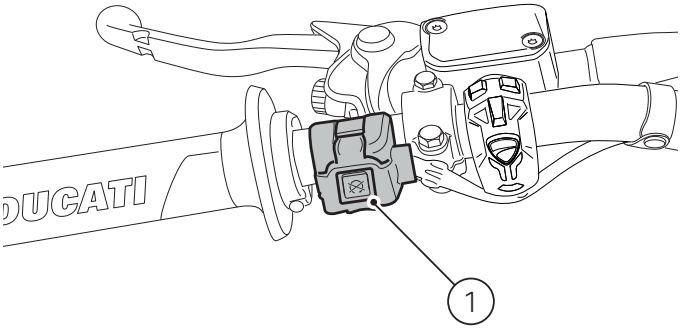



Fig 15

## 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”.

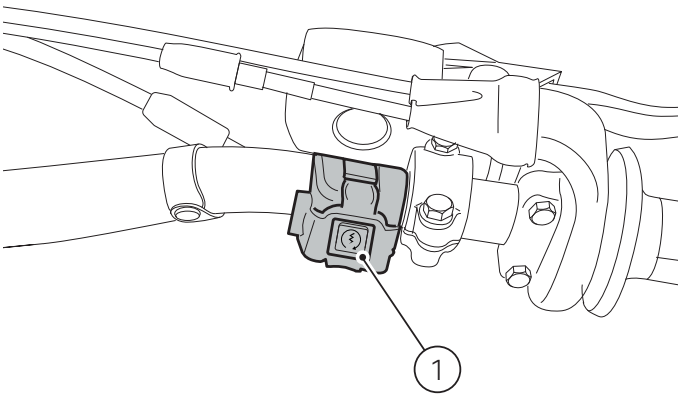



Fig 16

## Cold-start button

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

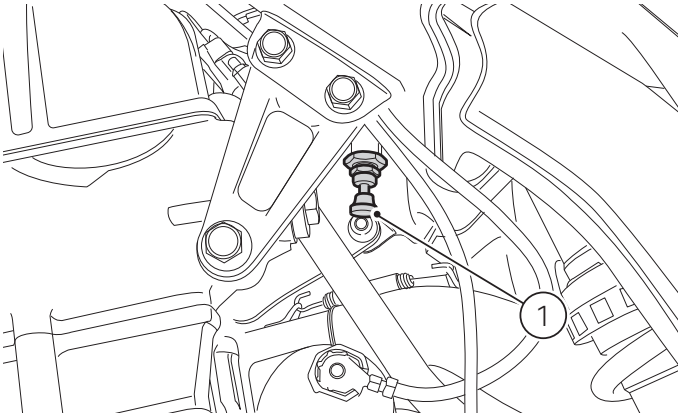



Fig 17

## 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, 5th gears.

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

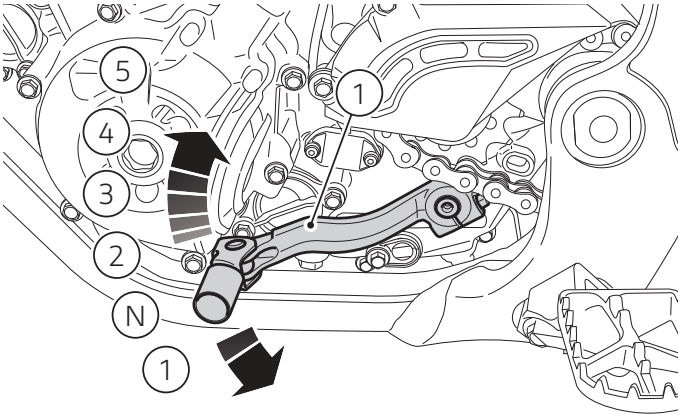



Fig 18

## Rear brake pedal

Press pedal (1) down with your foot to operate the rear brake.
The control system is of the hydraulic type.

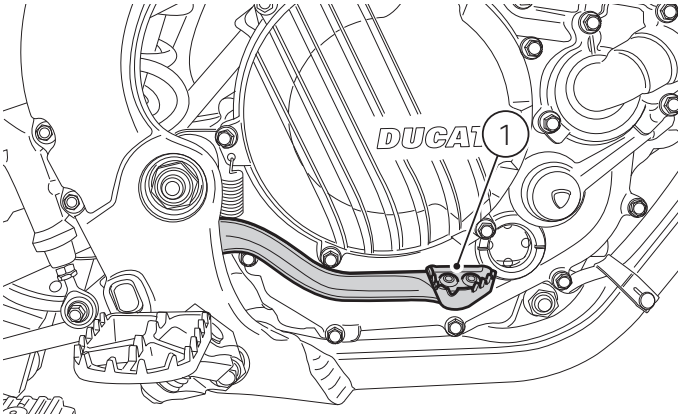



Fig 19

## 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).

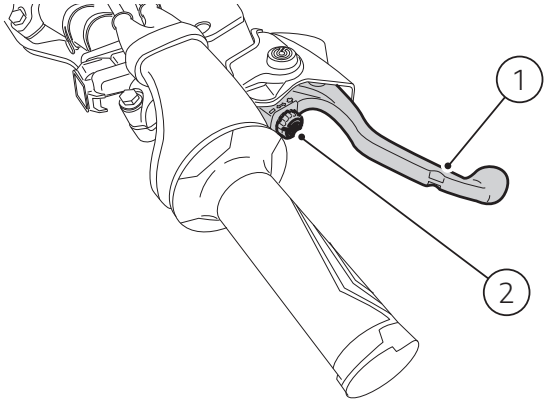



Fig 20

## 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 lever distance from 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.

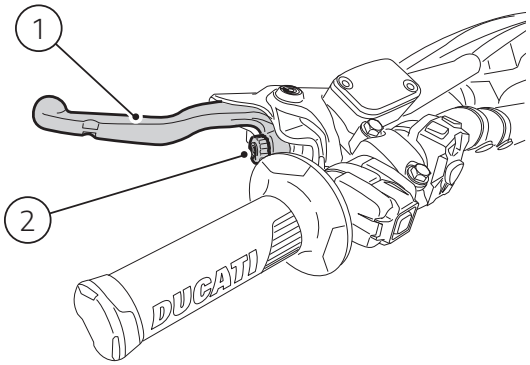



Fig 21

## 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).

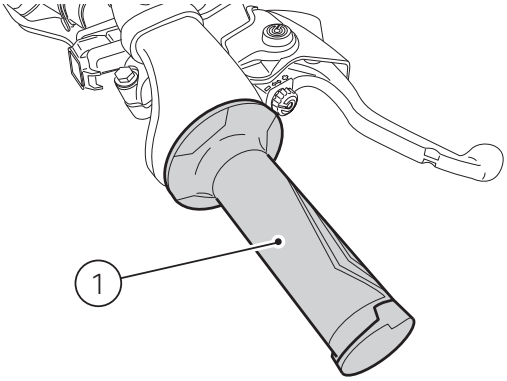



Fig 22

## Fuel cap - Refuelling

### Opening

Turn the fuel cap (1) anticlockwise 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**
After refuelling, always make sure that the plug is perfectly in place and closed.

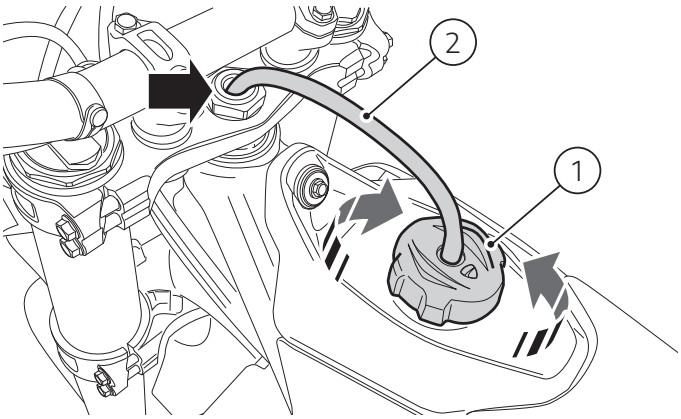



Fig 23

### Refuelling

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

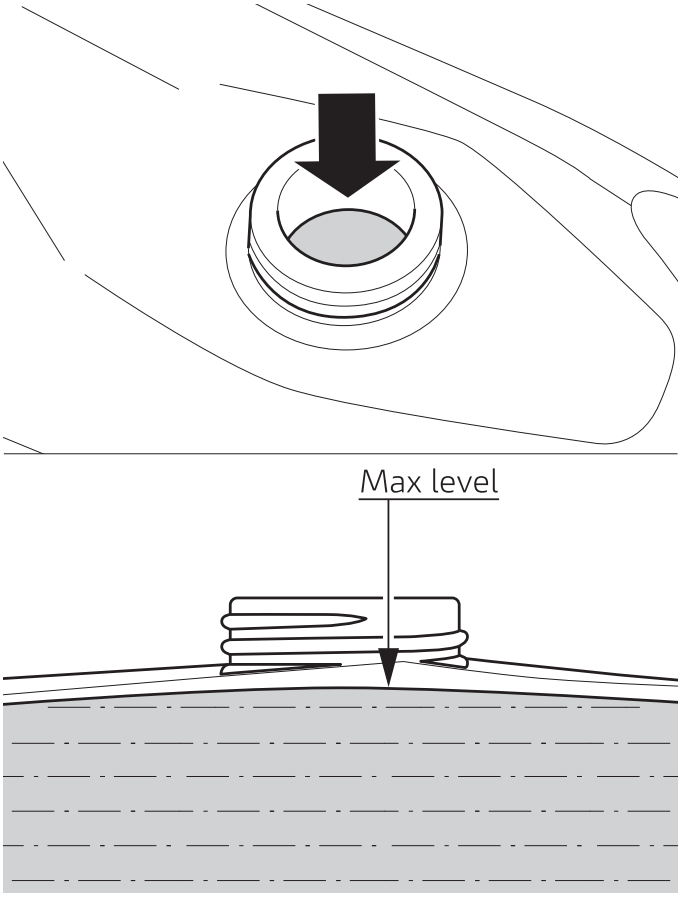



Fig 24

**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.
The sound is residual pressure escaping from the fuel tank, therefore the stop of the hiss indicates that there is no more residual pressure.
The situation described above is more likely in hot weather conditions.

### Attention
Use fuel with low lead content and an original octane number of at least 95.

### Attention
The motorcycle is only compatible with fuel having a maximum content of ethanol of 10% (E10).
Using fuel with ethanol content over 10% is forbidden. Using it could result in severe damage of the engine and motorcycle components. Using fuel with ethanol content over 10% will make 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.).

## Side stand

### Important
Place the motorcycle on the side stand only when you are not going to use it for short periods of time. Before lowering the side stand, make sure that the bearing surface is hard and flat.

Do not park on soft or pebbled ground or on asphalt melted by the sun, etc. or else the motorcycle may fall over. When parking downhill, always position the motorcycle with the rear wheel facing downhill.
To set up the side stand, remove the safety band (A). Push down on the stand (1) with your foot (while holding the motorcycle handlebar with both hands) until it is fully extended. Tilt the motorcycle until the side stand is resting on the ground.

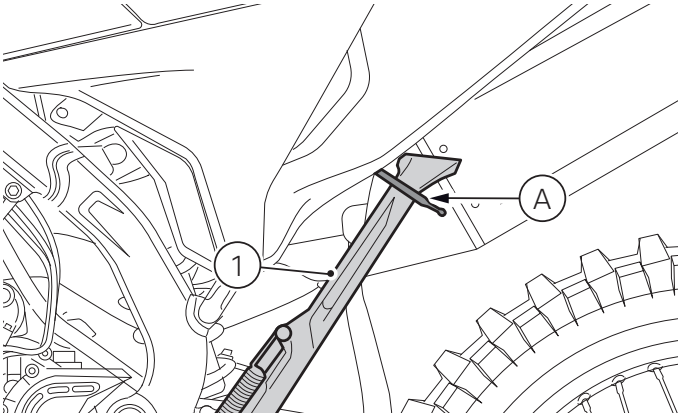



Fig 25

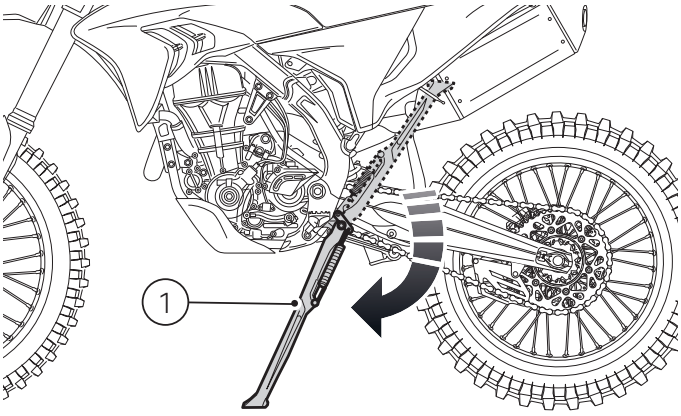



Fig 26

To return the stand to its "rest" position (vertical position), lean the motorcycle to the right while lifting the stand (1) with the top of your foot.
Secure the stand (1) in the rest position using the safety band (A).
To ensure trouble-free operation of the side stand joint, thoroughly clean it and then use SHELL Alvania R3 grease to lubricate all friction points.

### Attention
Do not sit on the motorcycle when it is supported on the side stand.

### Note
It is recommended to periodically check the correct operation of the retention system (consisting of two tension springs, one inside the other).

## Electronic controls

The Desmo450 EDX 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 behaviour 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 colours: green (1) and red (2).

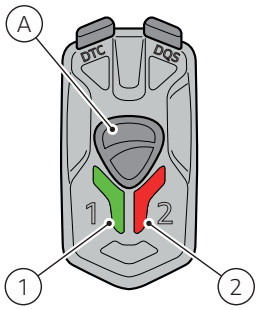



Fig 27

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.

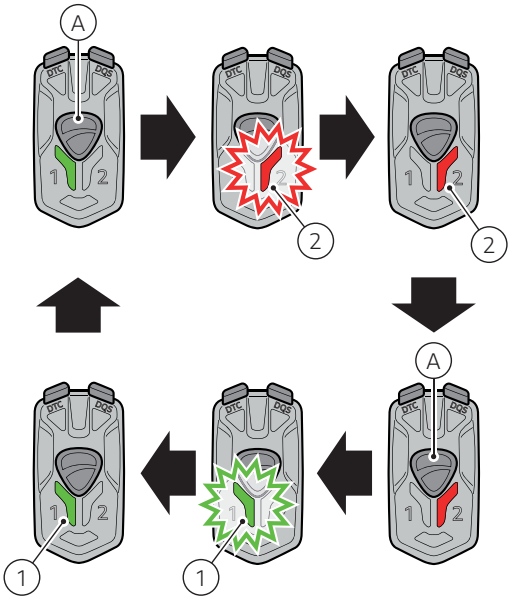



Fig 28

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 cancelled.

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 optimised 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.

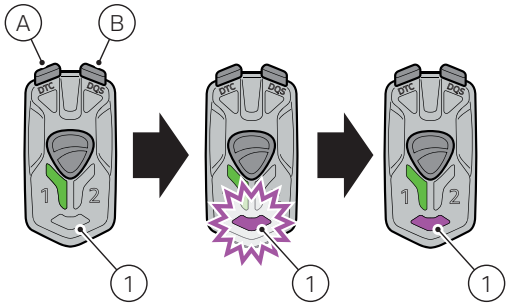



Fig 29

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 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 customised 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 tyre 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.

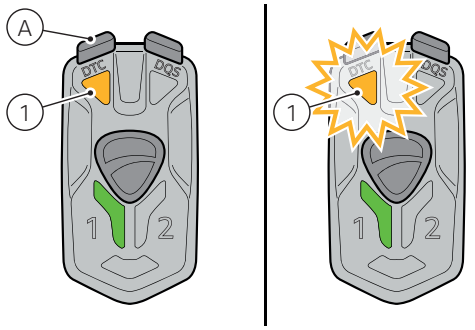



Fig 30

**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 customised 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 tyres and final drive ratio and/or with the ones recommended by Ducati. In particular, OE tyres for this motorcycle are indicated in the “Vehicle technical specifications” section of this manual.

The use of tyres of different size and characteristics to the original tyres 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 tyre, amount of tyre 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 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 recognises 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.

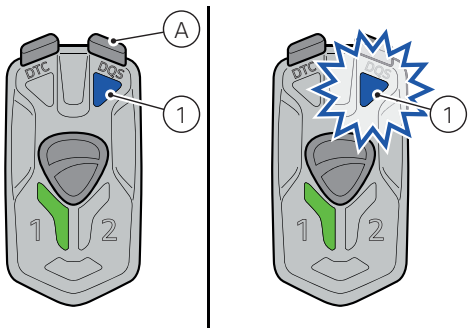



Fig 31

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 customised 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 customised 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.

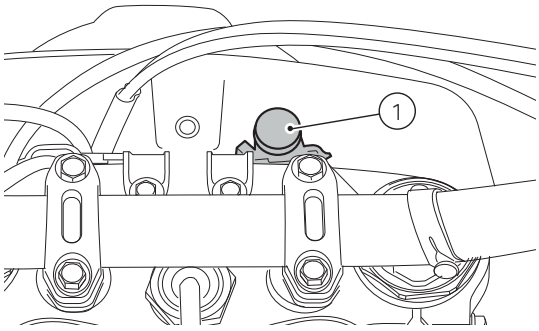



Fig 32

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 customise the Riding Modes.

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

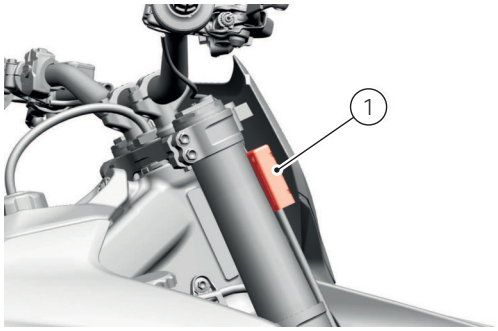



Fig 33

## 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 customise 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

- Customisation 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

- Customisation 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 motorcycle upwards to activate it.

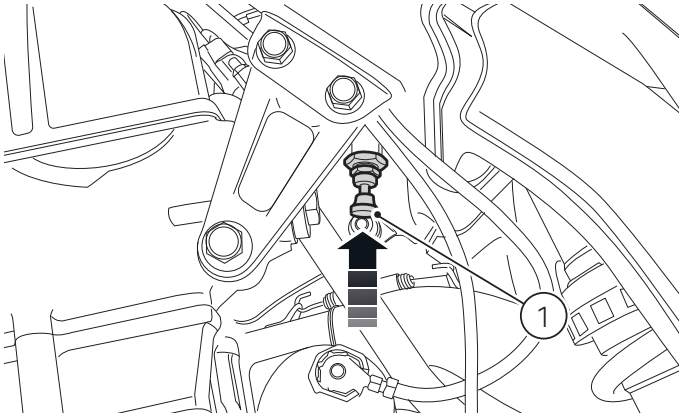



Fig 34

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 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.

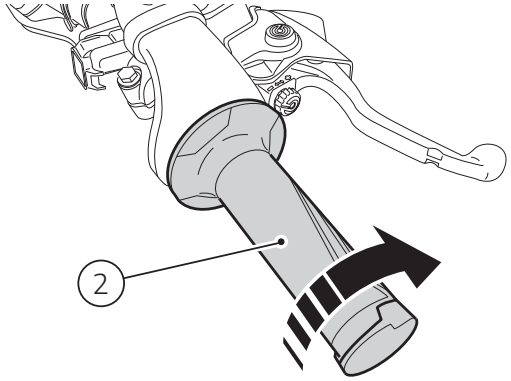



Fig 35

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.

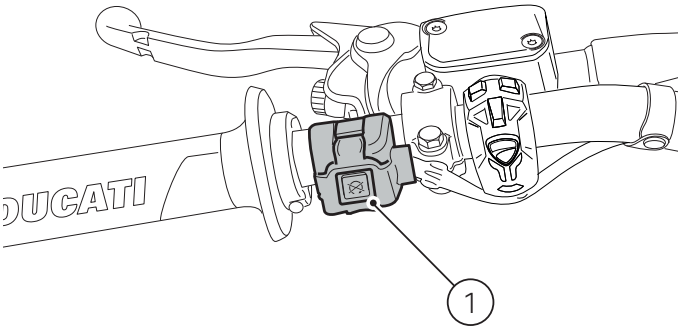



Fig 36

## 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.

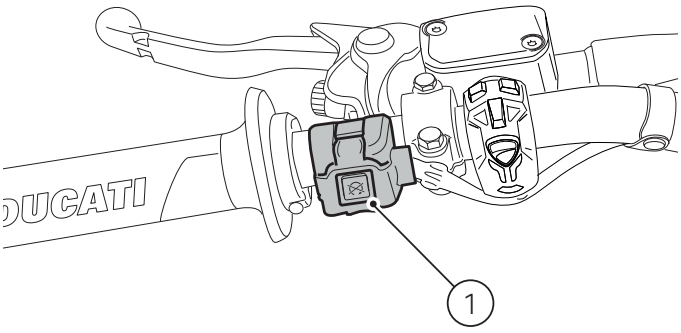



Fig 37

## 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.
In addition, it is a fundamental phase that allows the rider to get to know their EDX 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 motorcycle.

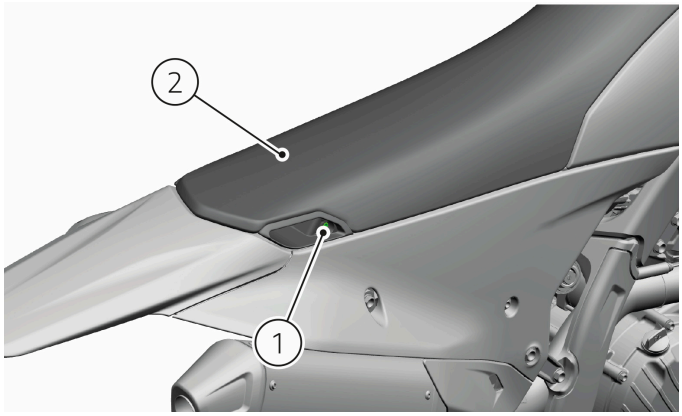



Fig 38

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

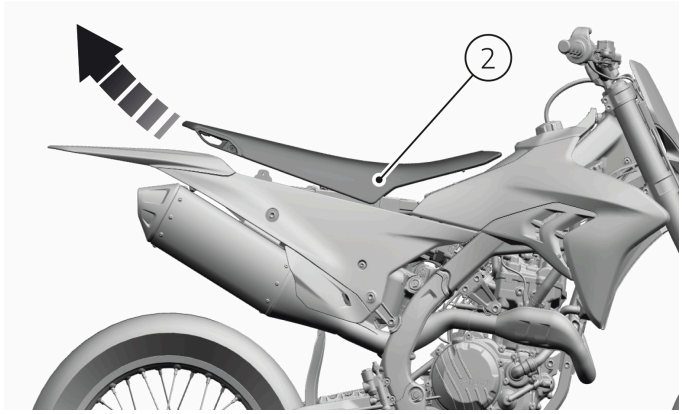



Fig 39

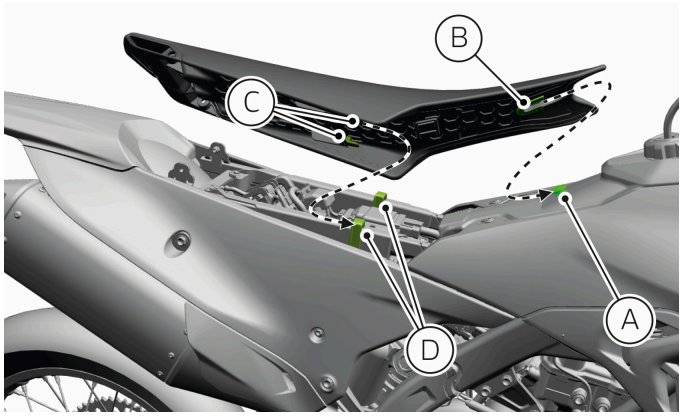



Fig 40

### 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).

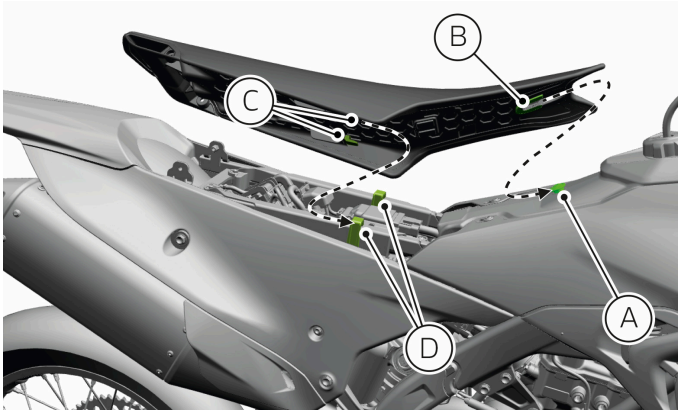



Fig 41

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

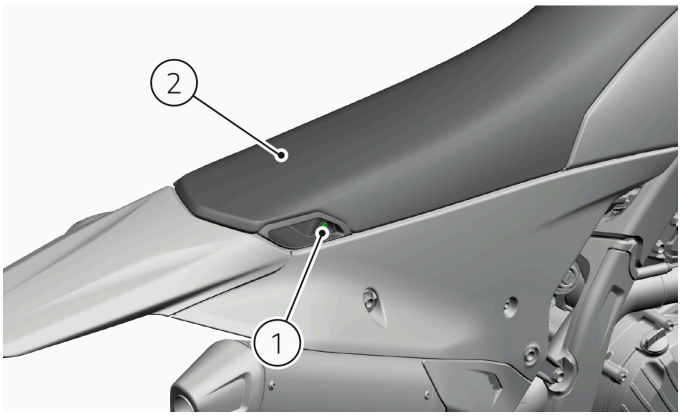



Fig 42

## Front number holder

### Removal procedure

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

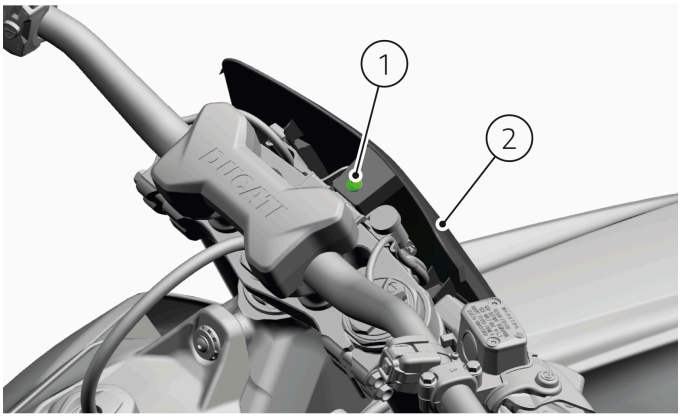



Fig 43

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.

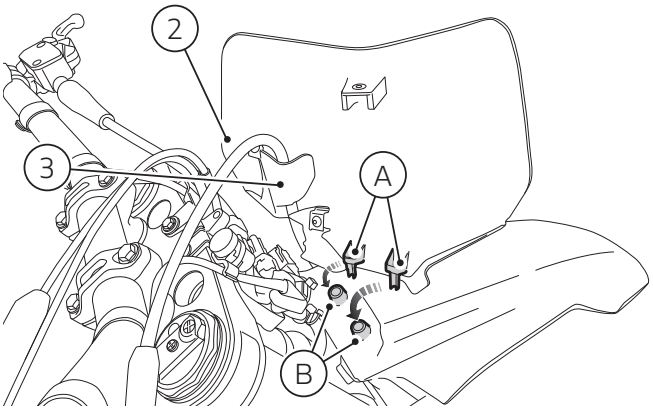



Fig 44

### 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).

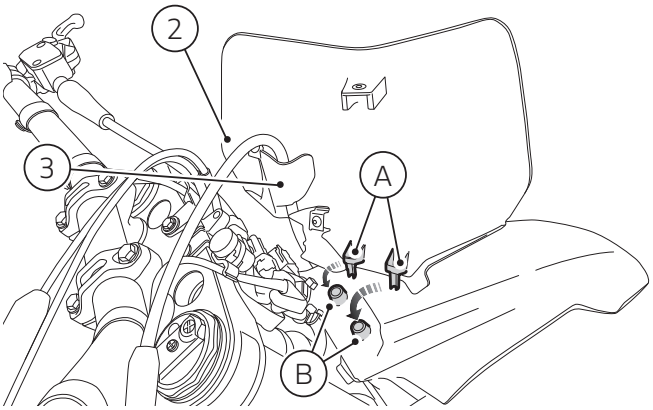



Fig 45

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

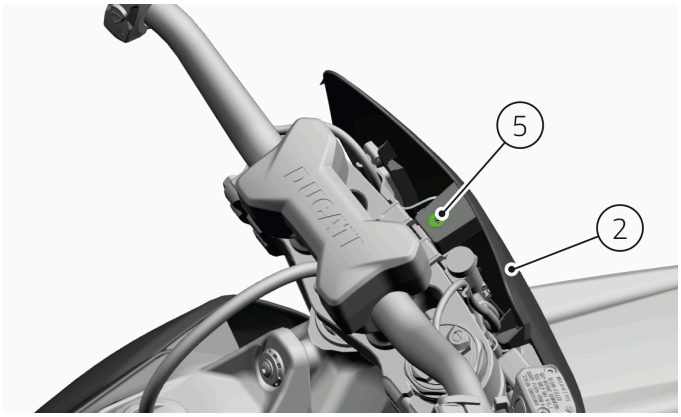



Fig 46

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

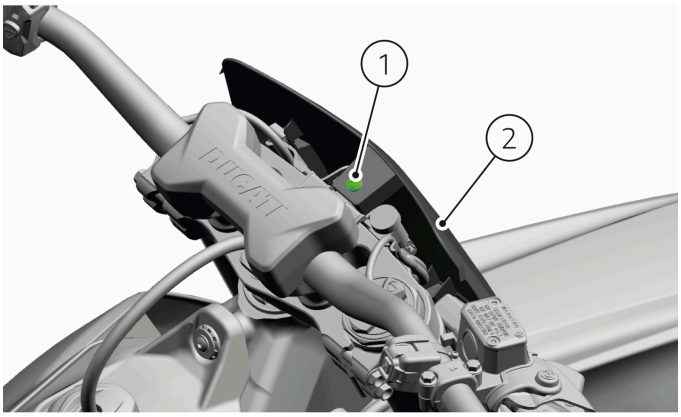



Fig 47

## Hand guards

### LH hand guard

To remove and refit the LH hand guard, follow the procedure described in chapter “Removing and refitting the clutch lever”.

### RH hand guard

To remove and refit the RH hand guard, follow the procedure described in chapter “Removing and refitting the front brake lever”.

## 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).

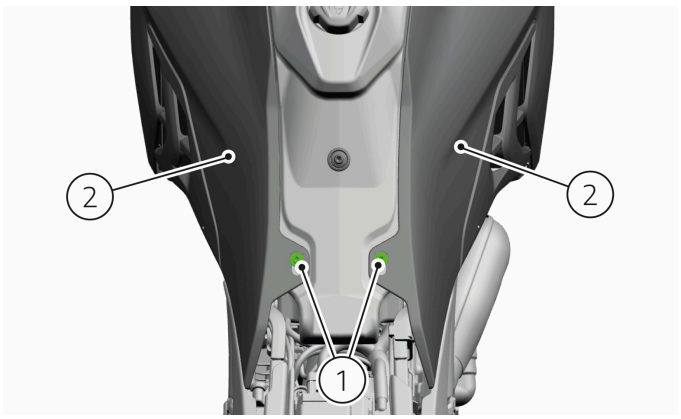



Fig 48

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

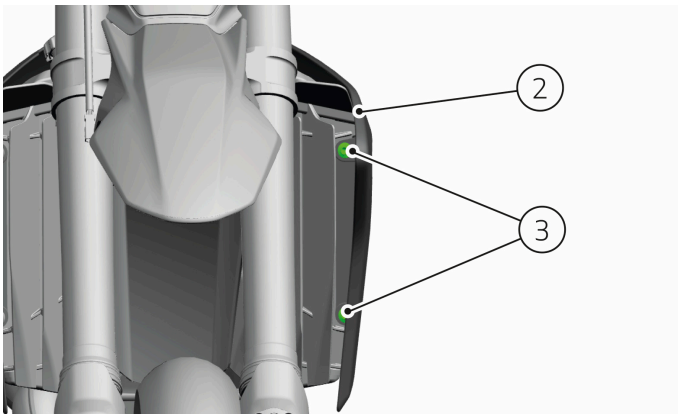



Fig 49

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.

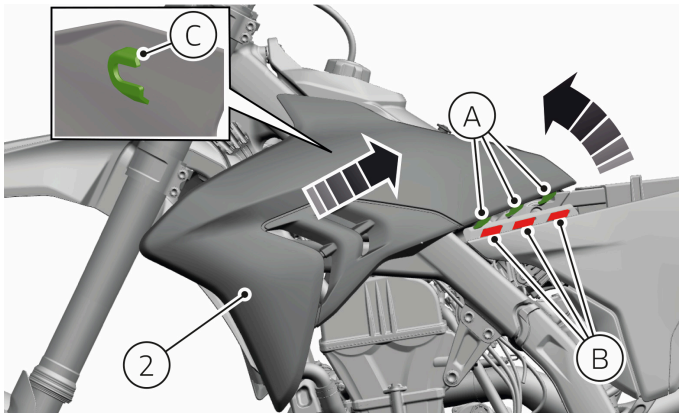



Fig 50

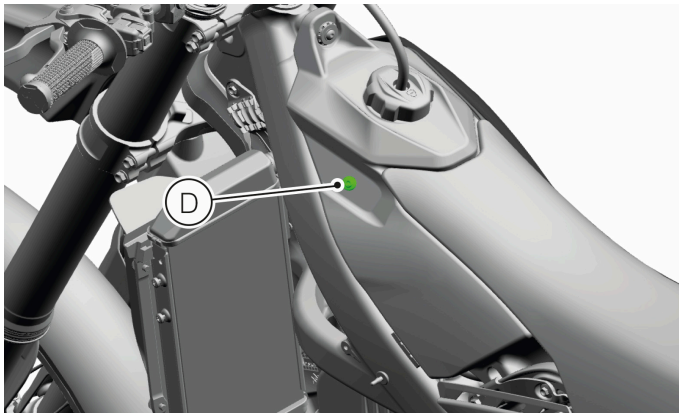



Fig 51

**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).

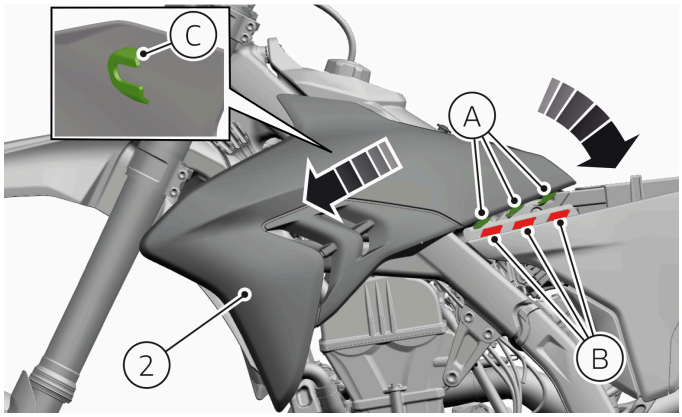



Fig 52

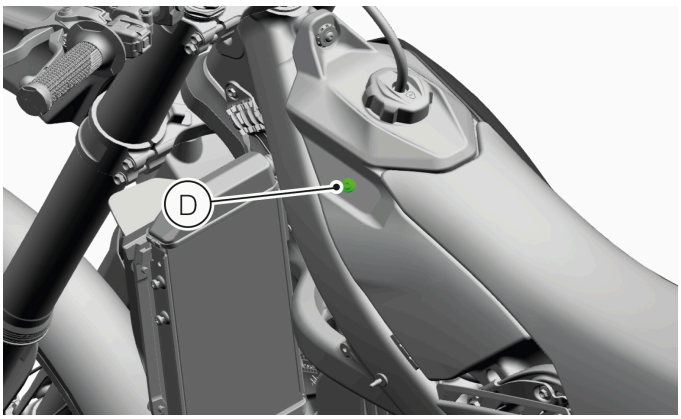



Fig 53

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

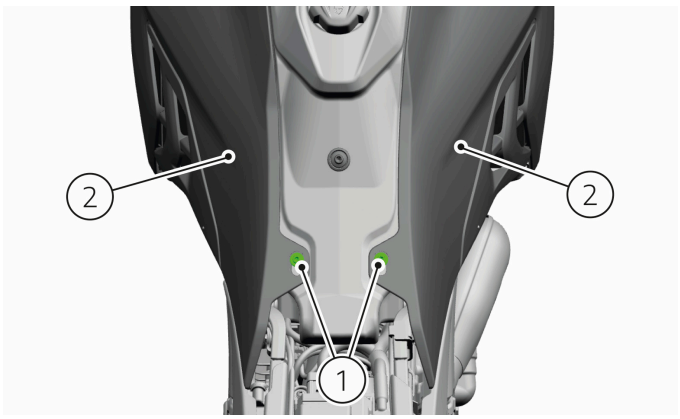



Fig 54

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

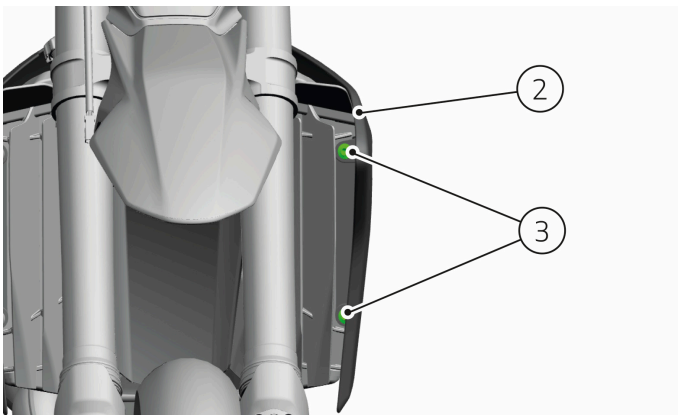



Fig 55

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.

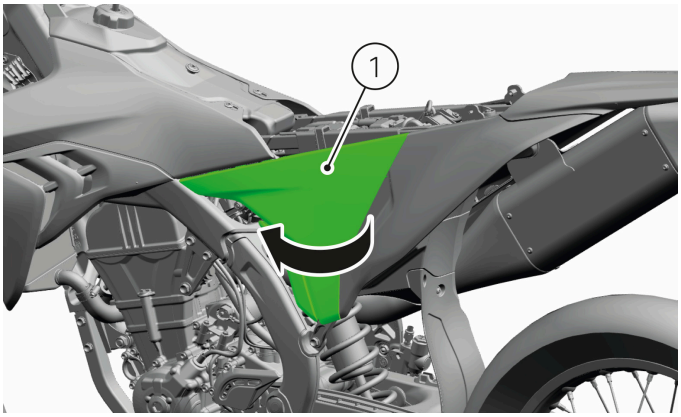



Fig 56

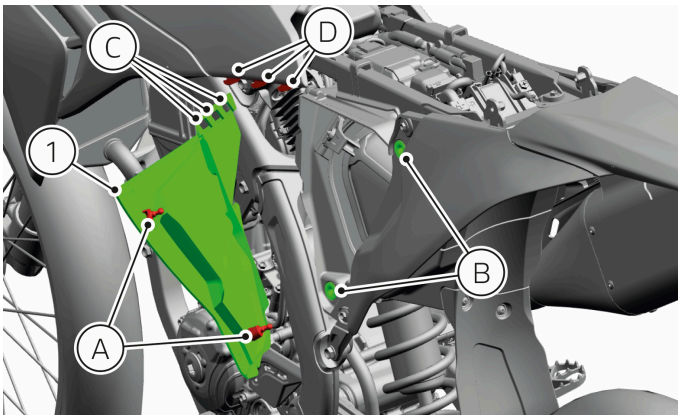



Fig 57

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

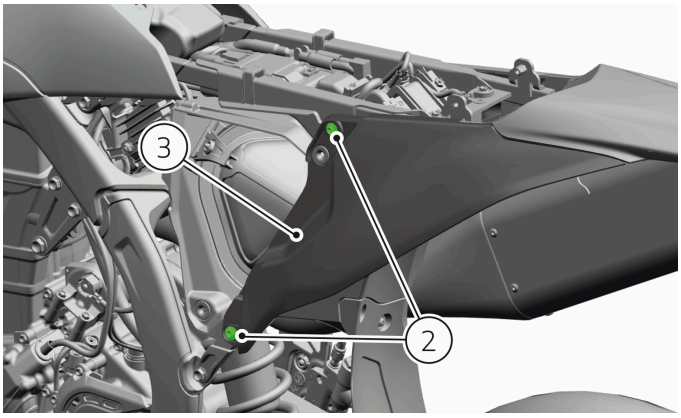



Fig 58

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

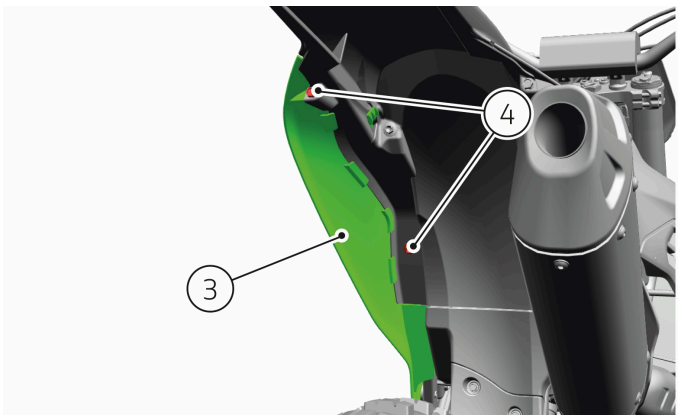



Fig 59

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

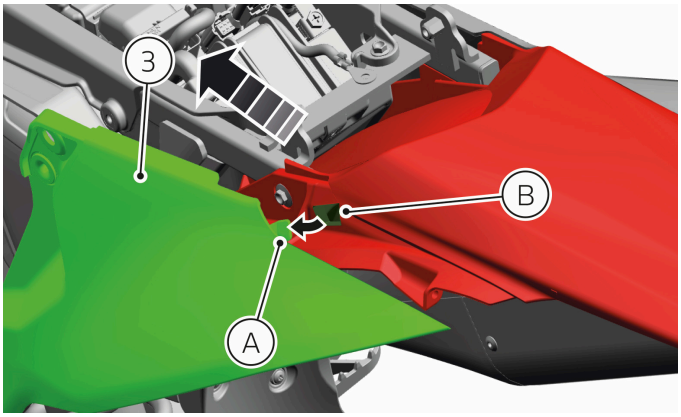



Fig 60

## Removing the rear RH side body panel

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

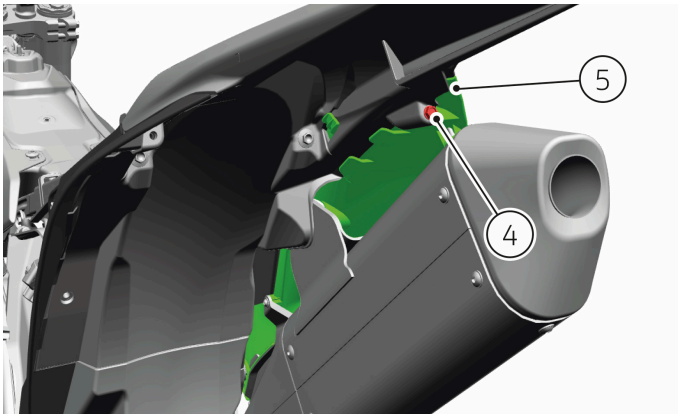



Fig 61

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

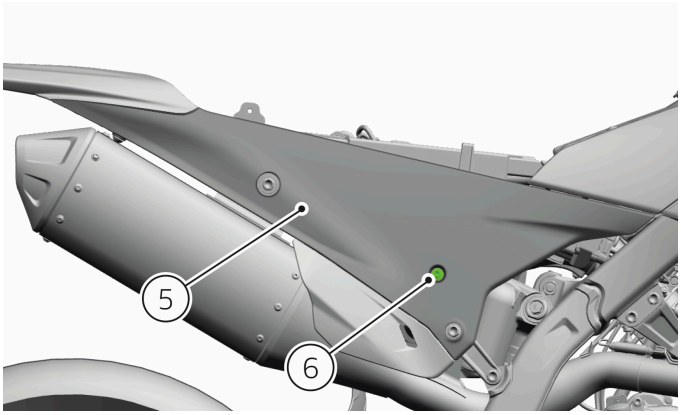



Fig 62

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

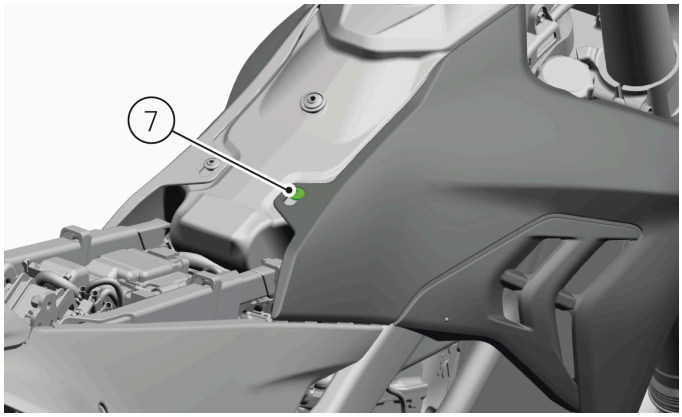



Fig 63

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

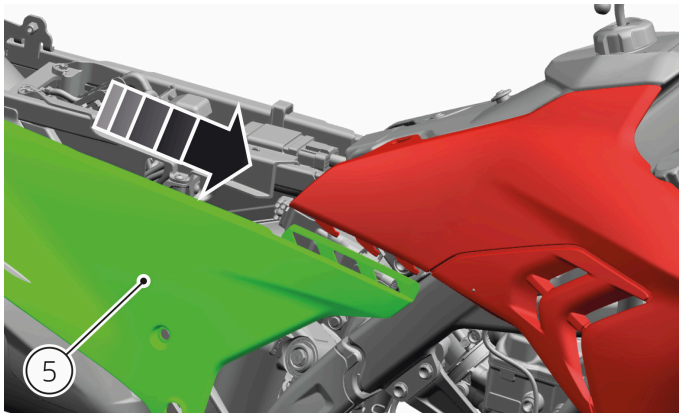



Fig 64

## 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.

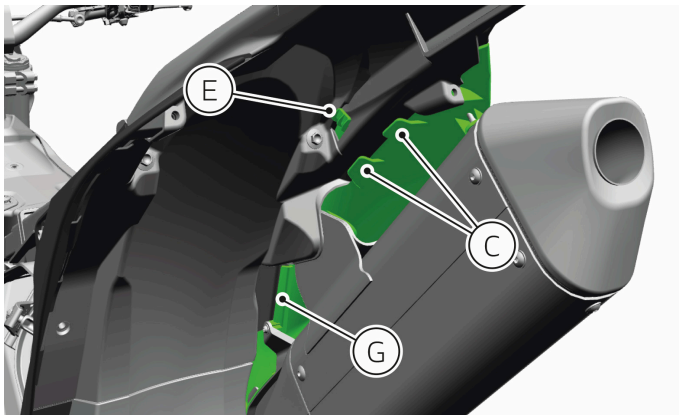



Fig 65

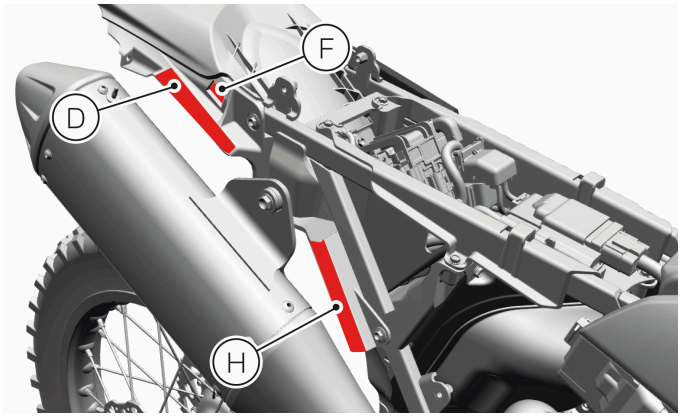



Fig 66

- 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).

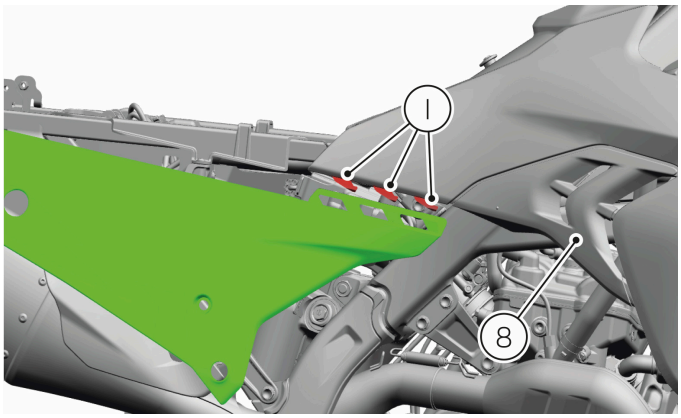



Fig 67

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

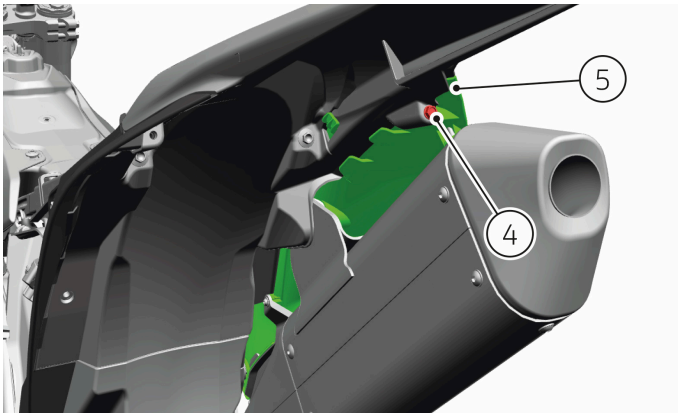



Fig 68

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

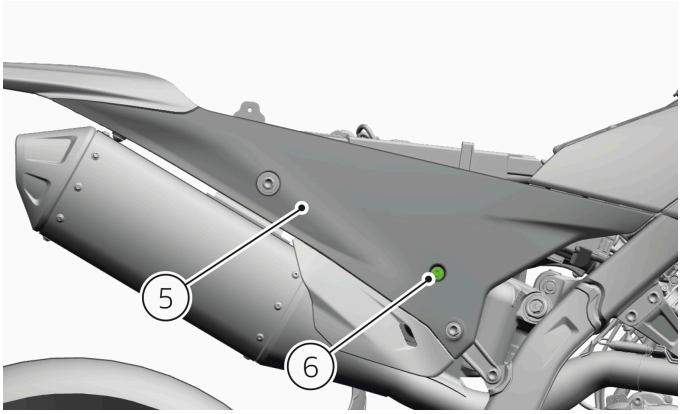



Fig 69

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

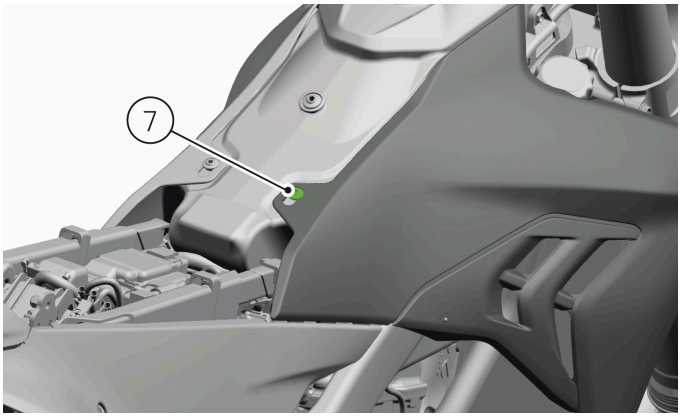



Fig 70

## 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.

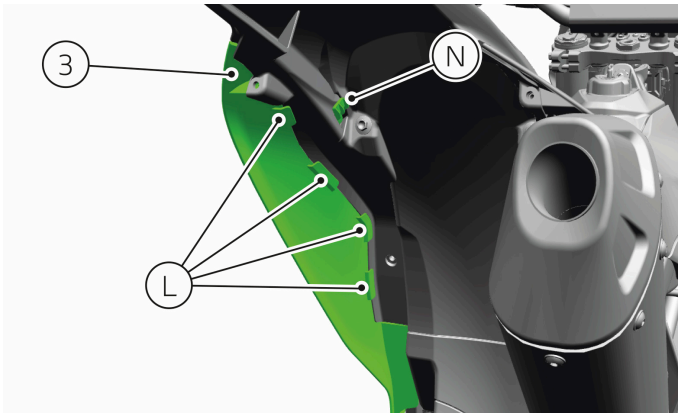



Fig 71

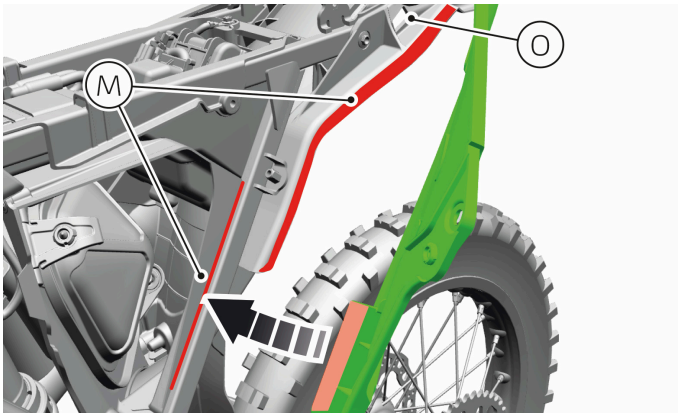



Fig 72

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

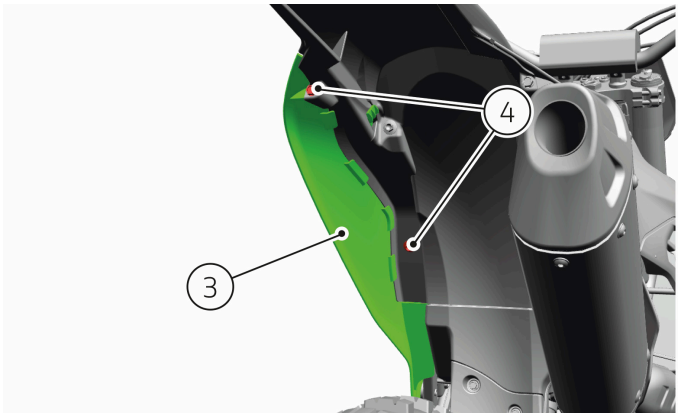



Fig 73

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

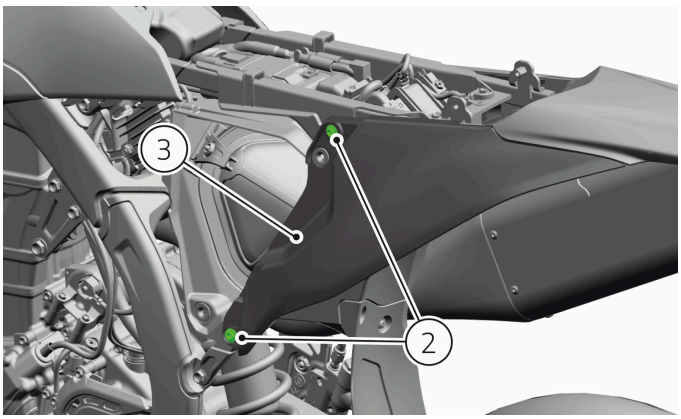



Fig 74

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).

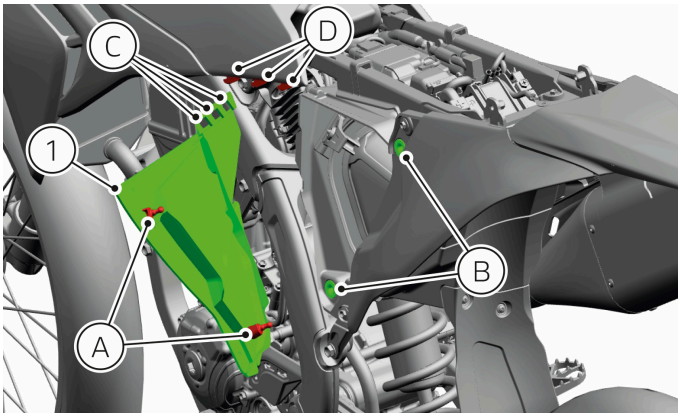



Fig 75

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).

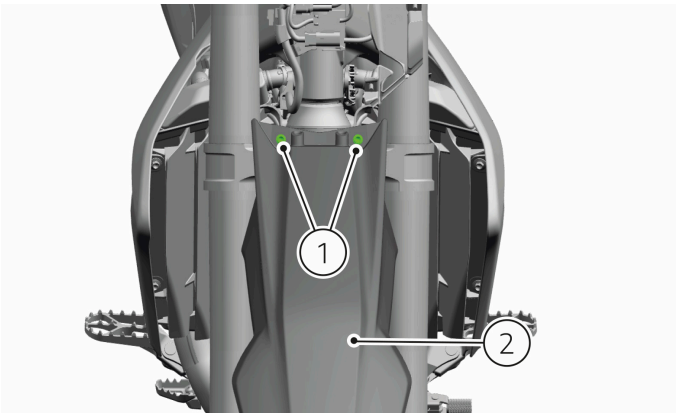



Fig 76

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

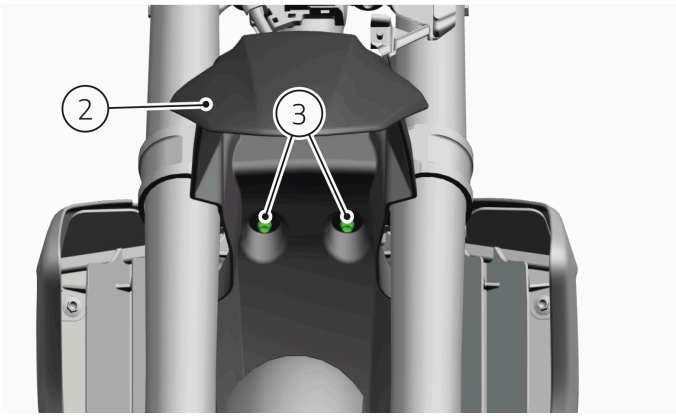



Fig 77

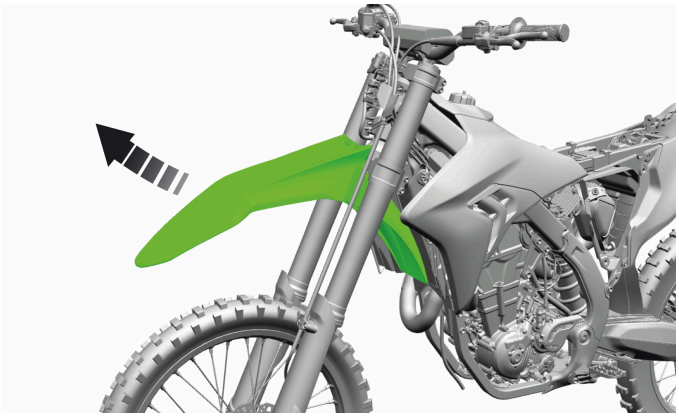


Fig 78

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

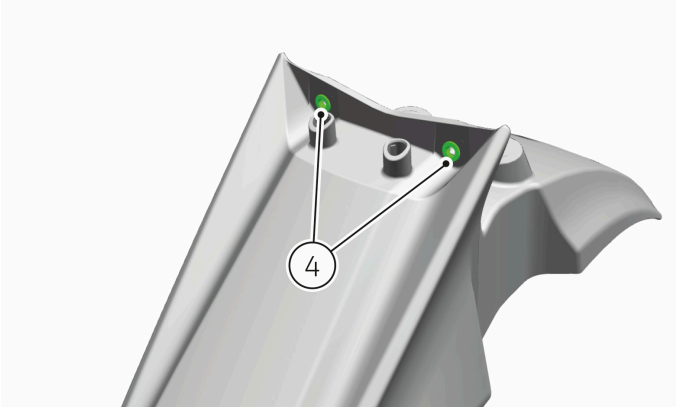



Fig 79




Fig 80

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

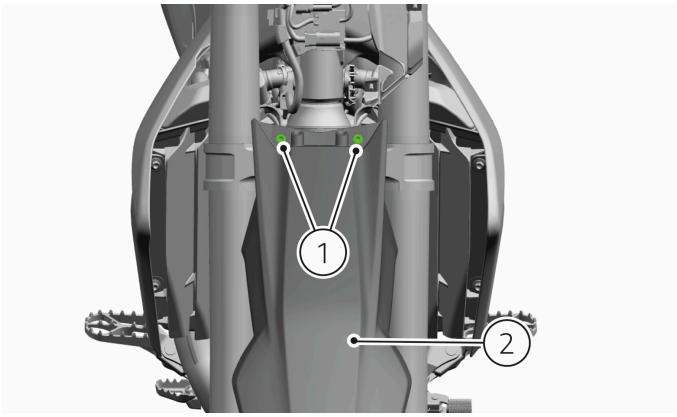



Fig 81

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

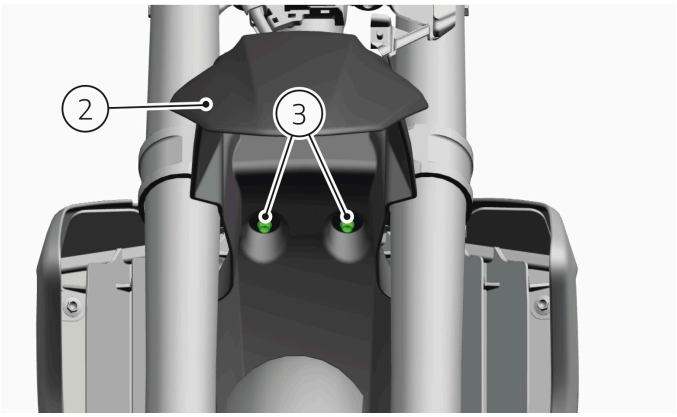



Fig 82

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).

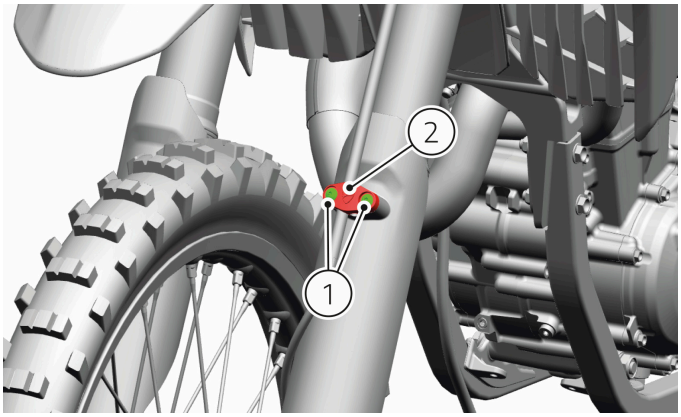



Fig 83

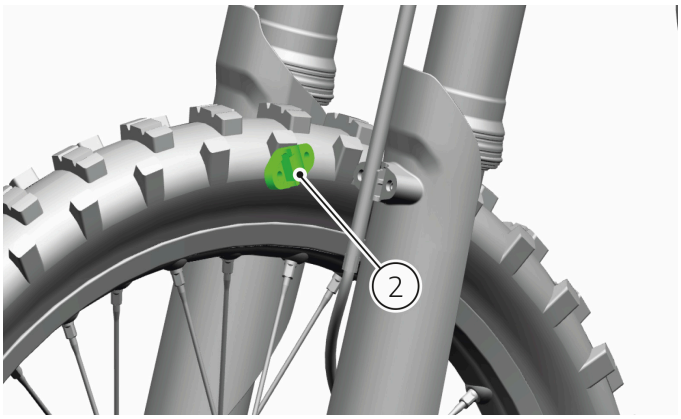



Fig 84

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.

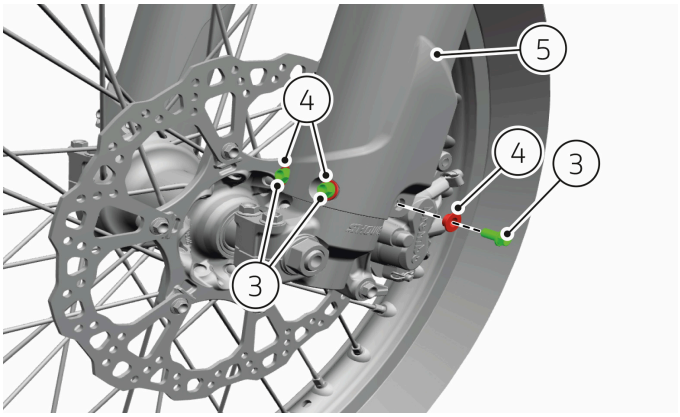



Fig 85




Fig 86

## 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%.

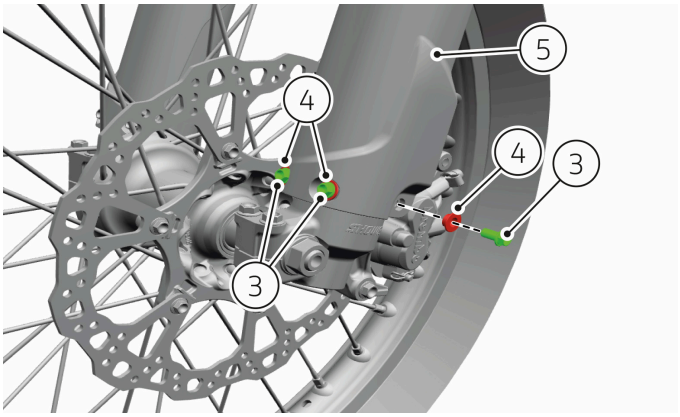



Fig 87

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

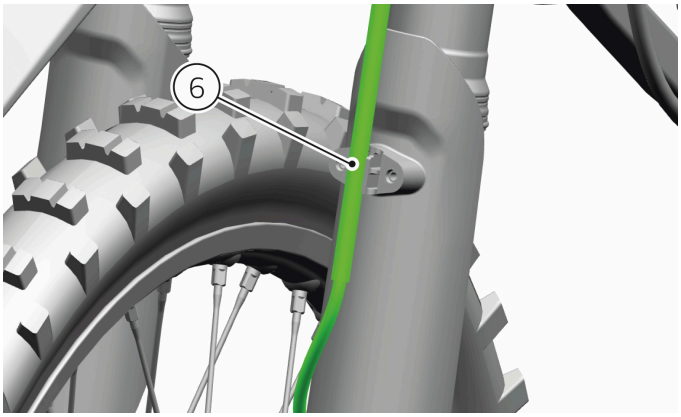



Fig 88

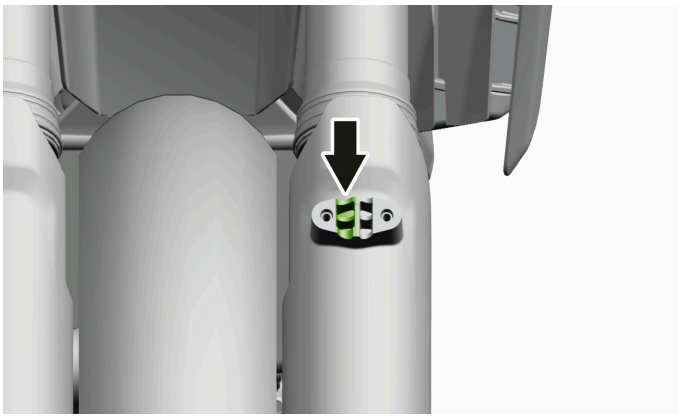


Fig 89

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.

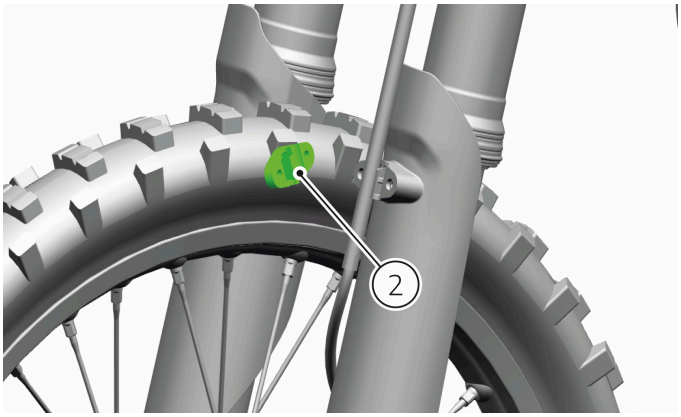



Fig 90

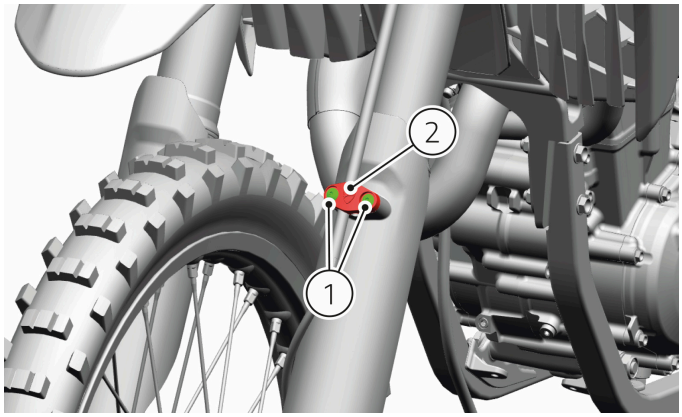



Fig 91

## 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).

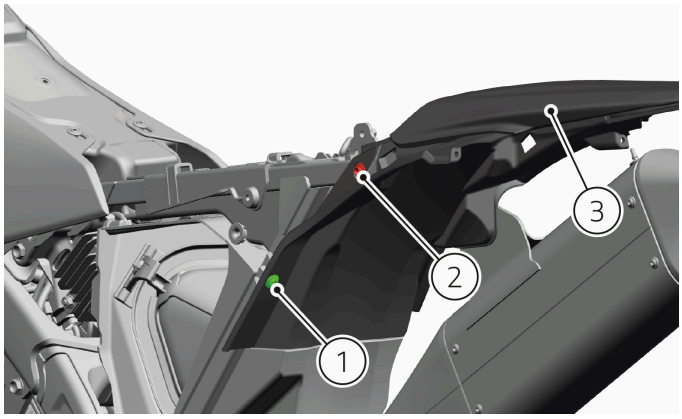



Fig 92

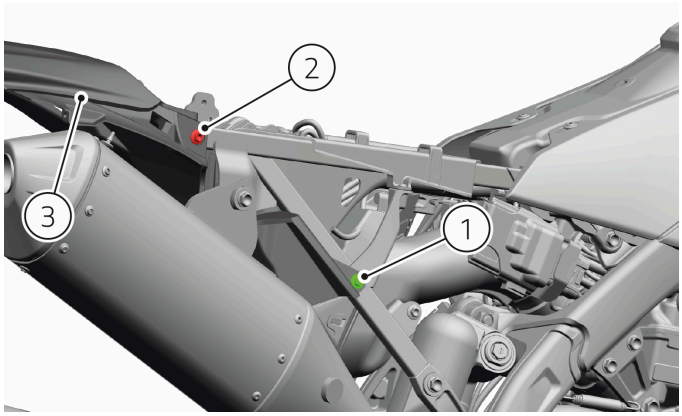



Fig 93

### 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%.

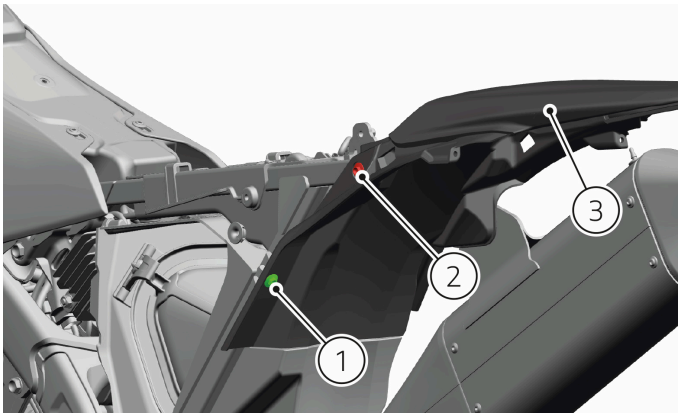



Fig 94

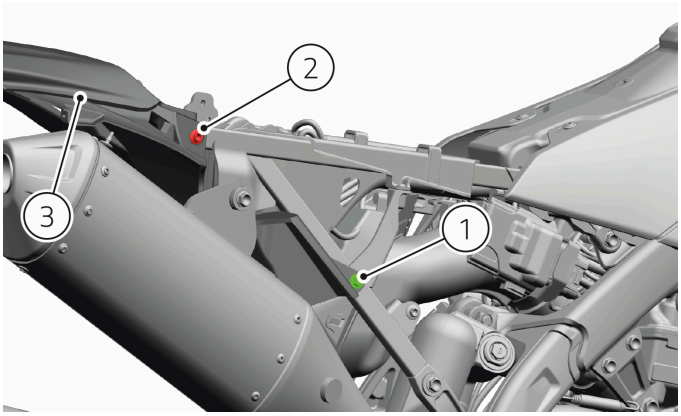



Fig 95

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

## Engine guard

### Removal procedure

Remove the two lower retaining screws (1) and spacers (2).
Remove the engine guard (3) by rotating it downwards and disengaging it from the rear interlock between frame and engine.

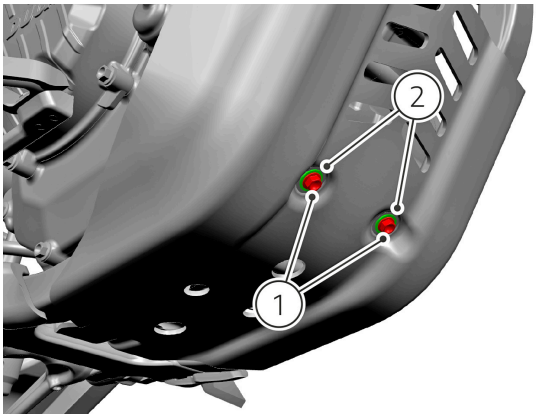



Fig 96

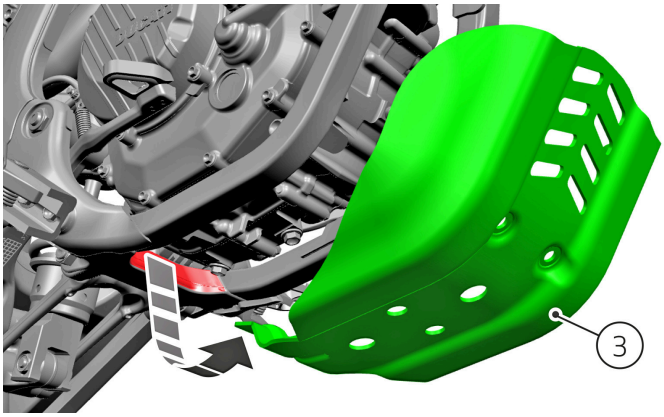



Fig 97

## Refitting

Apply Loctite®243™ to the screws (1).
Position the rear part of the engine guard (3) between the frame and engine at the point indicated.
Turn the engine guard (3) upwards, reposition spacers (2) and tighten screws (1) to a torque of 3.5 Nm ± 10%.

# Maintenance - Main information

## Clean the motorcycle

To maintain the original shine of the metal, painted and plastic surfaces over time, the motorcycle must be washed and cleaned periodically. Use specific products only. Prefer biodegradable products. Avoid aggressive detergents or solvents.
Periodically clean by hand all aluminium components. Use special detergents, suitable for aluminium parts. Do NOT use abrasive detergents 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.

However, 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 aluminium; 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 motorcycle 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 motorcycle 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.

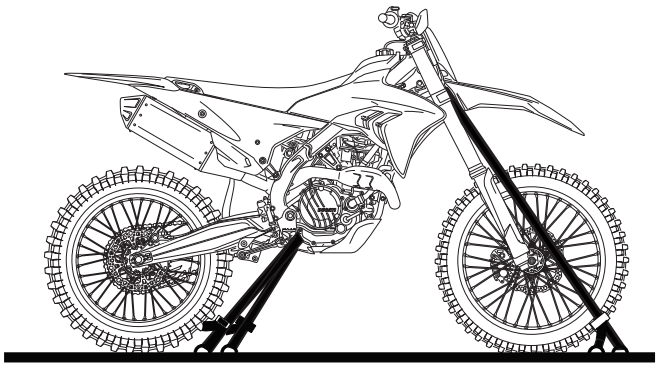


Fig 98

## 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 organised 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 bike 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 authorised Service Centre where you can receive customised service advice according to the sport use you make of your Desmo450 EDX.

| **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. Brake and clutch fluid - level check | • | • |
| 1.6. Throttle control - check freedom of movement, clean and adjust if necessary | • | • |
| 1.7. Front brake lever - check free play and freedom of movement (clean and lubricate if necessary) | • | • |
| 1.8. Rear brake pedal - check free play and freedom of movement (clean and lubricate if necessary) | • | • |
| 1.9. Front brake - check disc and pad wear | • | • |
| 1.10. Rear brake - check disc and pad wear | • | • |
| 1.11. Hoses and gaiters (e.g. fuel hoses, cooling system hoses, drain hoses, brake hoses) - check position and check for deformation or damage | • | • |
| 1.12. Frame and swinging arm - visual integrity check | • | • |
| 1.13. Frame and swinging arm - check safety tightening values according to the Owner's manual | • | • |
| 1.14. Steering tube - check bearing play and freedom of movement | • | • |
| 1.15. Swinging arm bearings - check for play | • | • |
| 1.16. Monoshock linkage - check for play | • | • |
| 1.17. Tyres - check condition and pressure | • | • |
| 1.18. Wheel hubs - visual check for defects and check bearing play | • | • |
| 1.19. Wheel rims - visual check for defects, alignment and spoke tension | • | • |

| 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 - 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. Electric system - battery and charging circuit check | Every 15 hours |
| 2.2. Steering tube - check bearings and preload ring nut tightness | After the first hour |
| 2.3. Steering tube - check bearings, lubrication and preload ring nut tightness | Every 15 hours |
| 2.4. Wheel bearings - check freedom of movement with wheel removed | Every 15 hours |
| 2.5. Silencer - check and replace soundproofing material if necessary | Every 15 hours |
| 2.6. Rear brake pedal - cleaning and lubrication of the pin | Every 15 hours |
| 2.7. Monoshock linkage - check and lubricate bearings* | Every 15 hours |
| 2.8. Rear and front brake calliper - cleaning and lubrication of the sliding pins | Every 15 hours |
| 2.9. Brake and clutch fluid - replacement* | Every 30 hours |
| 2.10. Swinging arm - bearing lubrication | Every 45 hours |
| 2.11. Fork and monoshock - check and overhaul* | Every 45 hours |

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

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

| 4. Additional operations on the engine (to be carried out according to the indicated deadlines) | |
|---|---|
| 4.1. Throttle body bypass screw cleaning | Every 15 hours |
| 4.2. Water pump - replacement of external seal (coolant side) | Every 30 hours |

| 5. Mid Service (dynamic interval, 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. Head - visual check of all components (head, camshafts, rocker arms, etc.) | • | |
| 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 the cap and the spark plug) | • | |
| 5.8. Throttle body cleaning including bypass screw and passage | • | |
| 5.9. Coolant - replacement | Every 24 months | |

| 6. Full Service (dynamic interval, 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 collets - replacement | • | |
| 6.2. Timing chain and sliding shoes - replacement | • | |
| 6.3. Con-rod - replacement, including bearing and pin on the crankshaft | • | |
| 6.4. Gearbox - visual inspection of all components and check of correct operation | • | |
| 6.5. Main bearings and related metal protections - replacement | • | |
| 6.6. Crankcase oil seals - replacement | • | |
| 6.7. Water pump - replacement of both seals | • | |
| 6.8. Starter clutch for starting - replacement | • | |

| 7. Closing operations (at each Service) | Service operations | Before each use |
|---|---|---|
| 7.1. Engine idling rpm - check and adjustment if necessary | • | |
| 7.2. Final check - test ride | • | |
| 7.3. Fault memory reading with DDS X (Ducati Service only) | • | |
| 7.4. Digital maintenance - service coupon registration (Ducati Service only) | • | |

## 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.

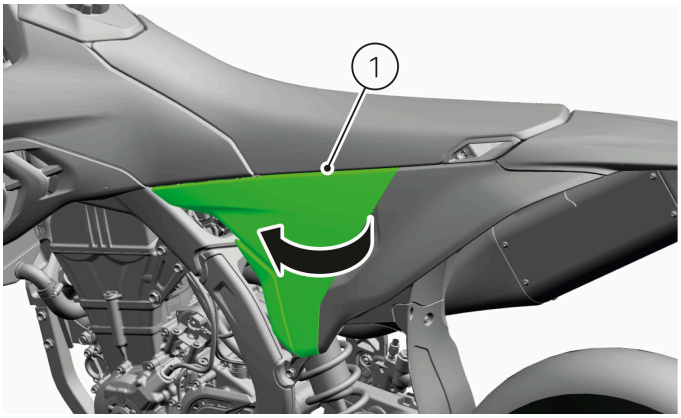



Fig 99

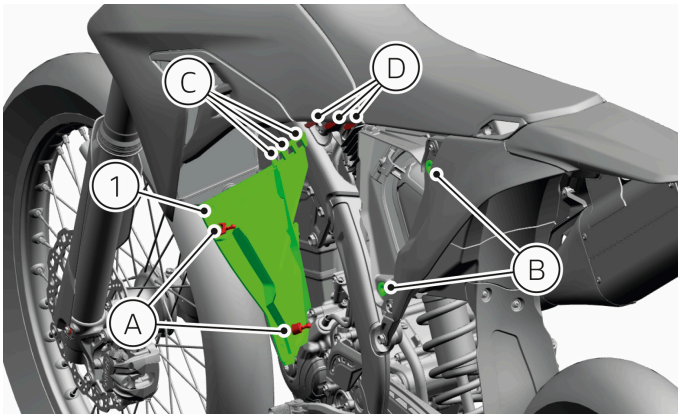



Fig 100

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

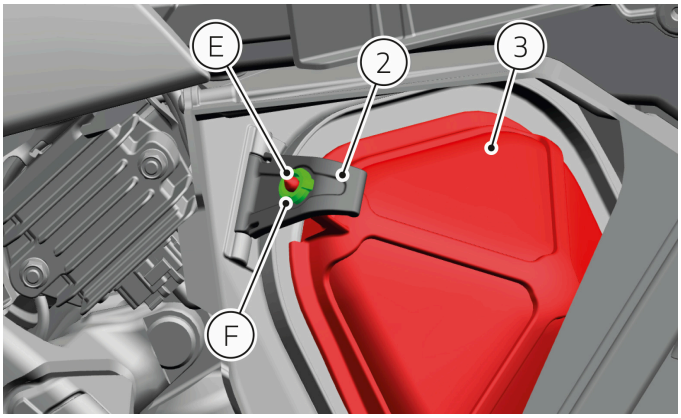



Fig 101

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

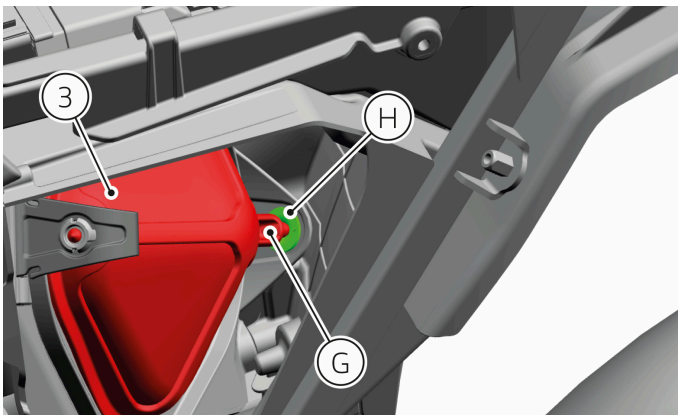



Fig 102

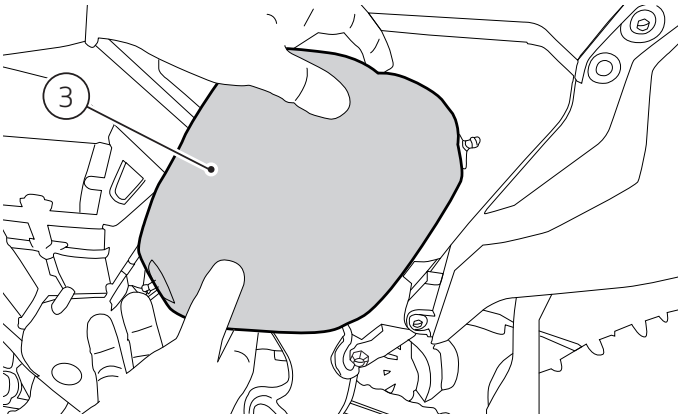



Fig 103

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

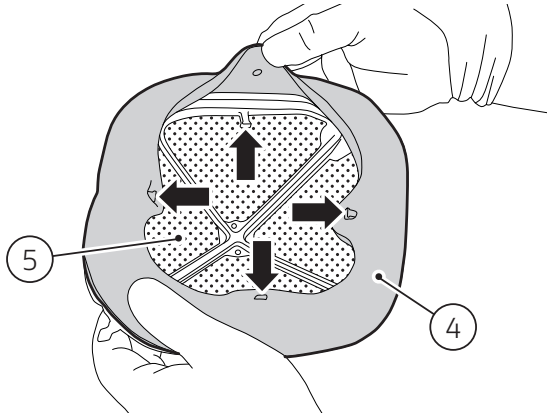



Fig 104

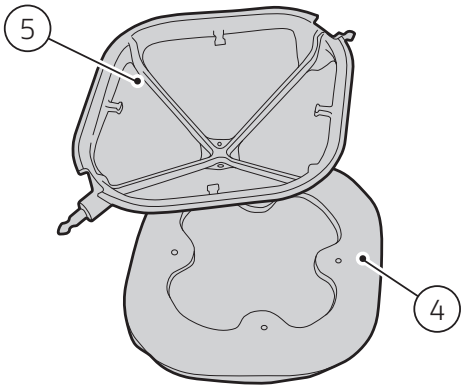



Fig 105

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 stabilise.

## 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 support into the four holes of the air filter as shown in the figure.

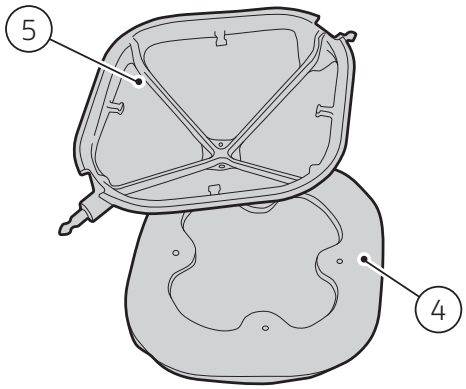



Fig 106

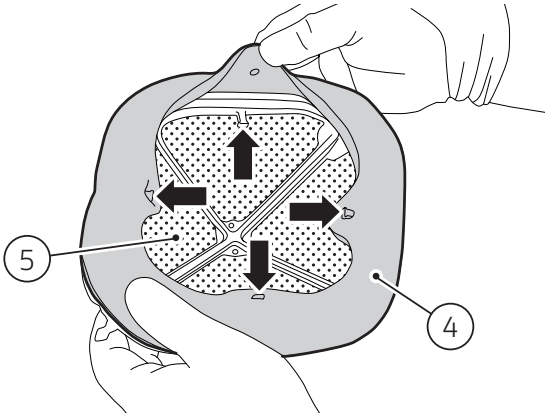



Fig 107

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

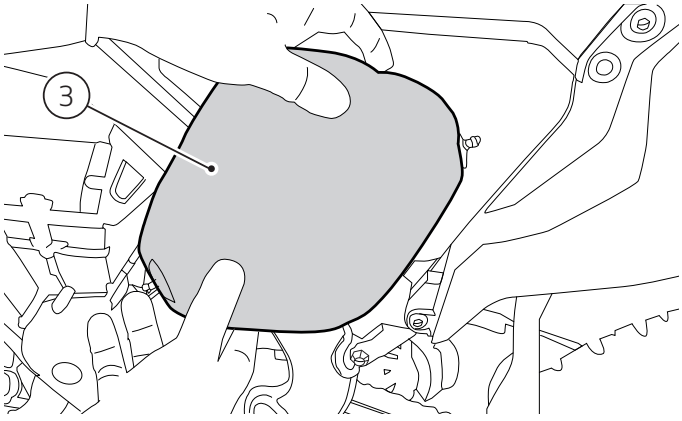



Fig 108

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

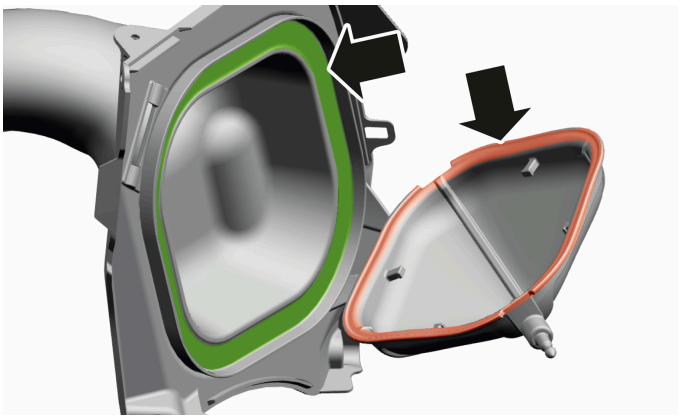


Fig 109

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

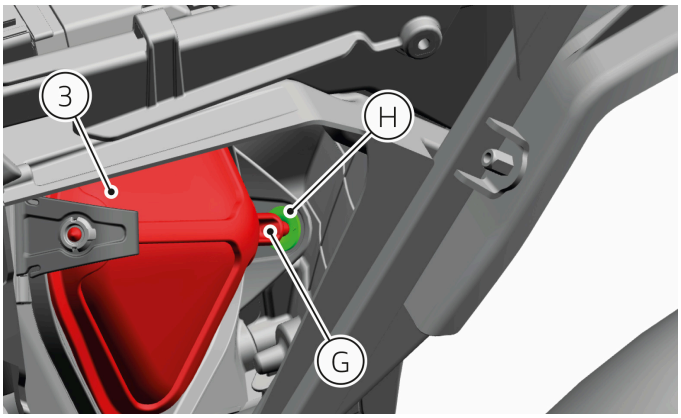



Fig 110

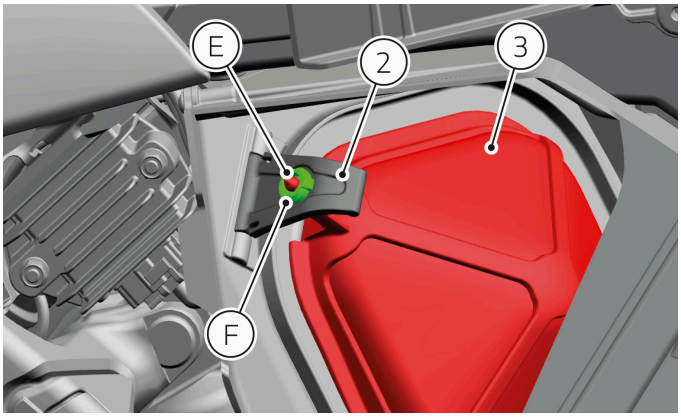



Fig 111

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).

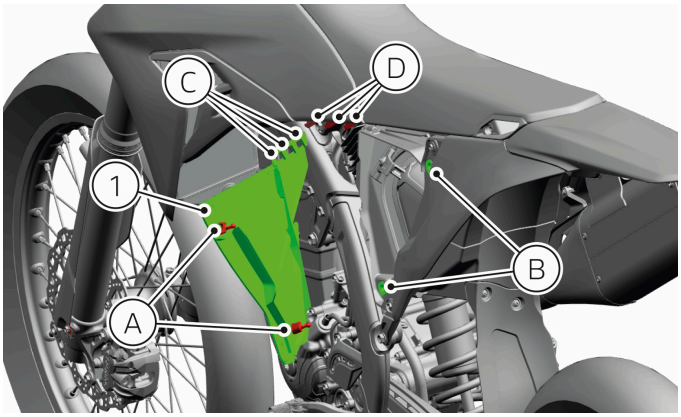



Fig 112

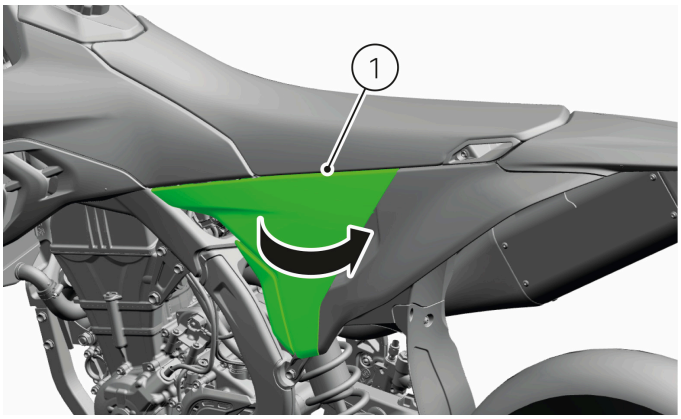



Fig 113

## Engine oil - Level check

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

- The level should be checked at 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.
- Position the motorcycle on level ground with both wheels on the ground and in an upright position.
- 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).

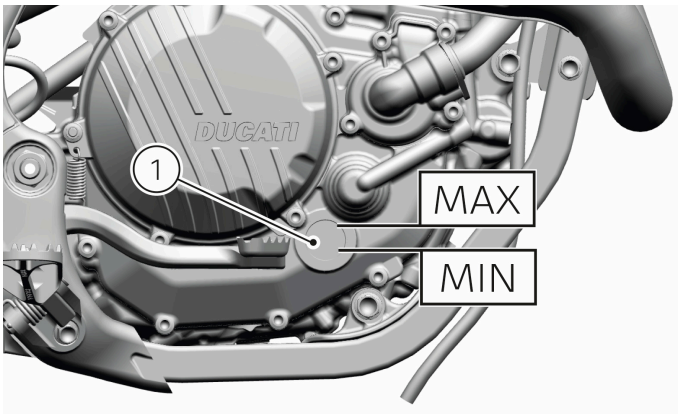



Fig 114

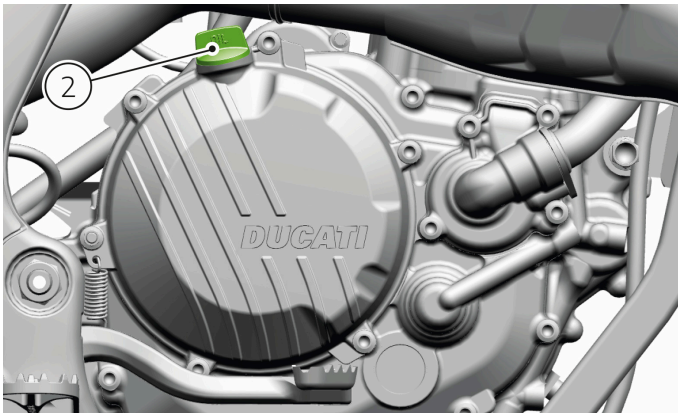



Fig 115

**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.

**Note**
It is recommended to use oil complying with the following specifications:

- Viscosity grade SAE 15W-50.
- Standard API: SN.
- Standard JASO: MA2.

## 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

Remove the engine guard as described in chapter "Engine guard".
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).

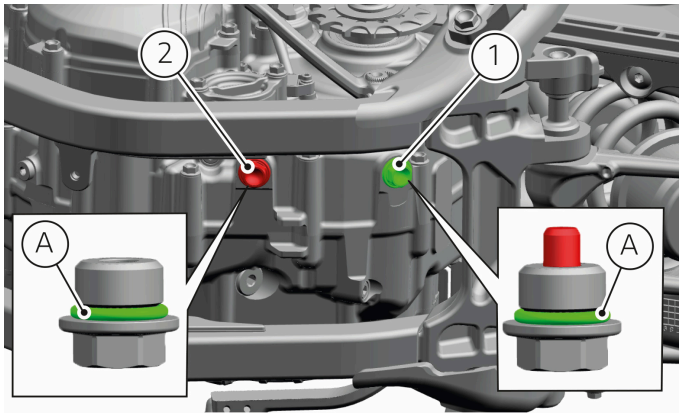



Fig 116

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).

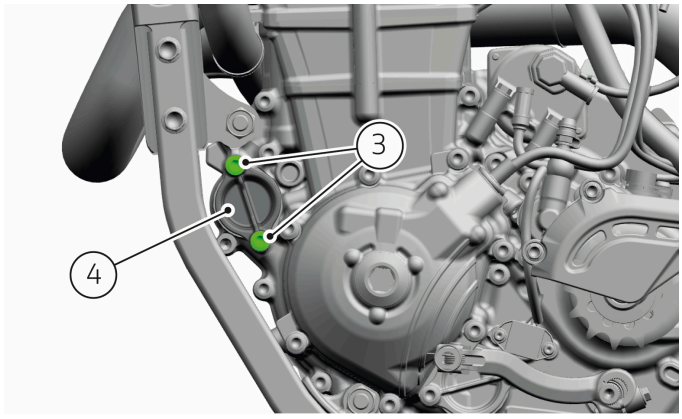



Fig 117

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

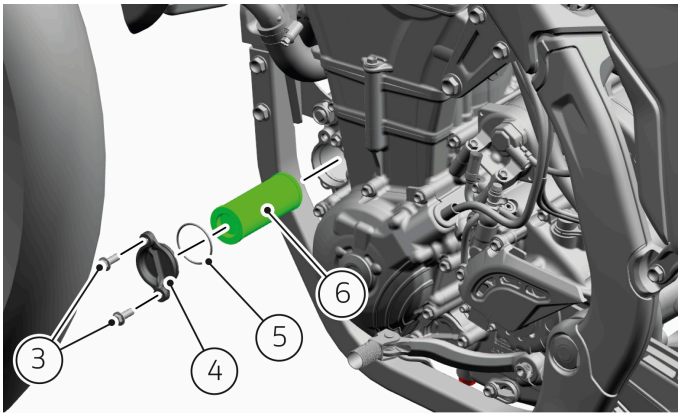



Fig 118

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.

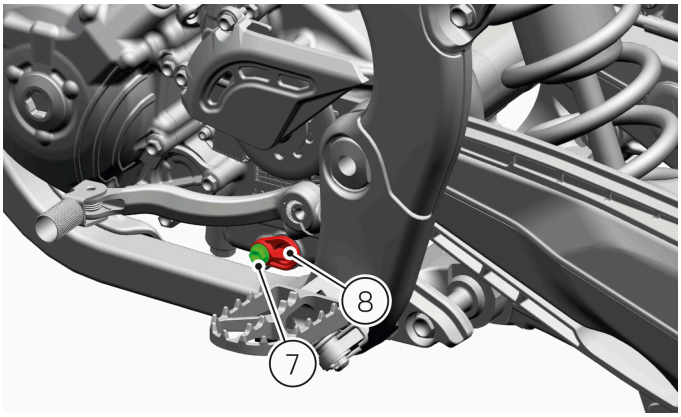



Fig 119

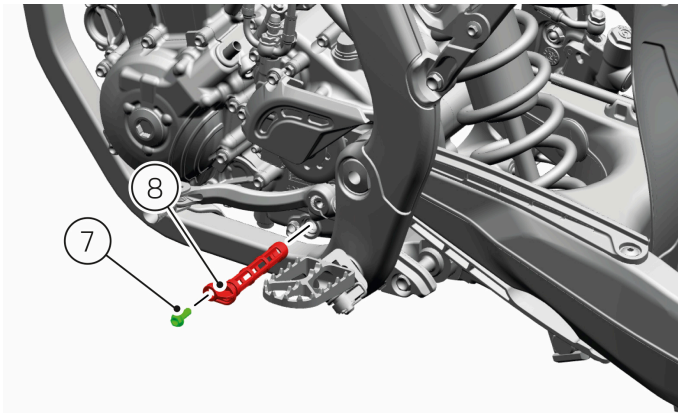



Fig 120

## 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 inserted inside pipe (C).

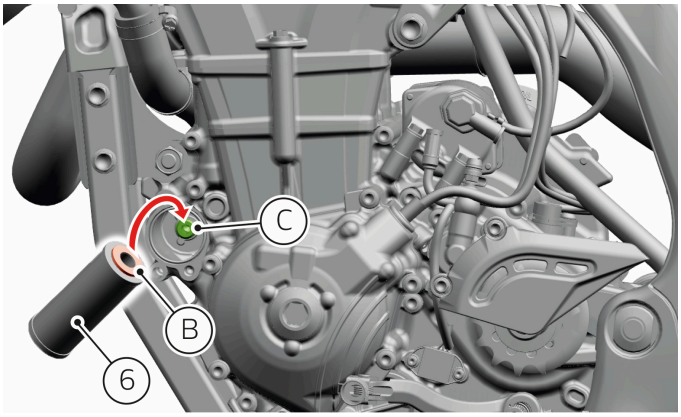



Fig 121

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).

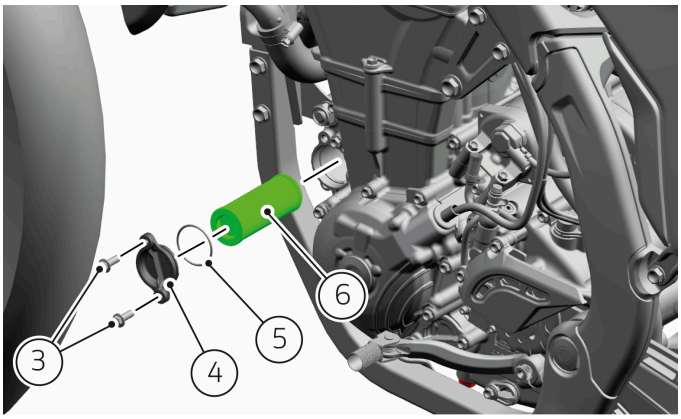



Fig 122

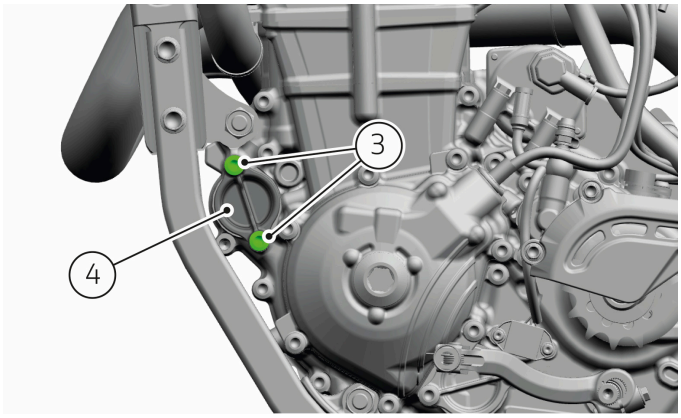



Fig 123

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).

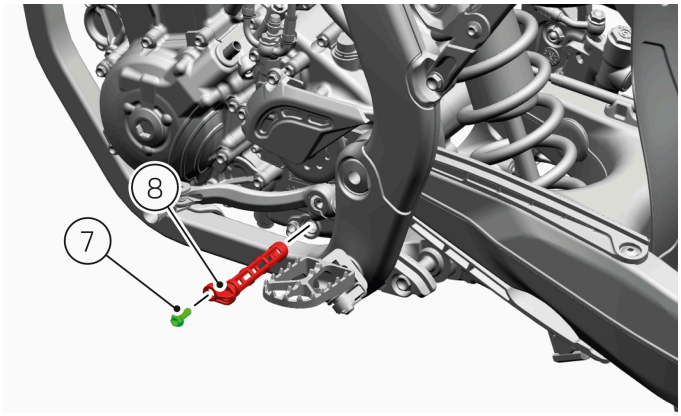



Fig 124

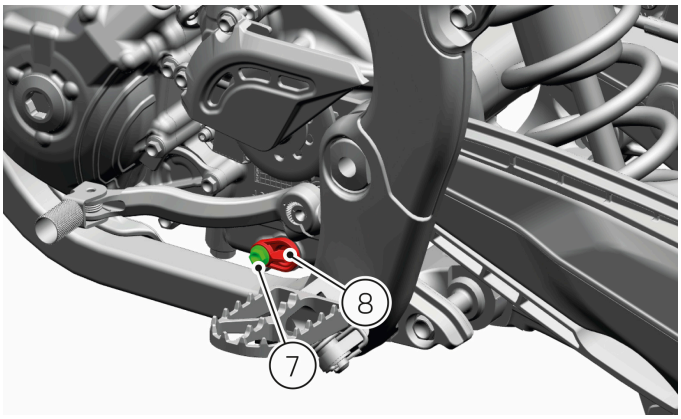



Fig 125

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).

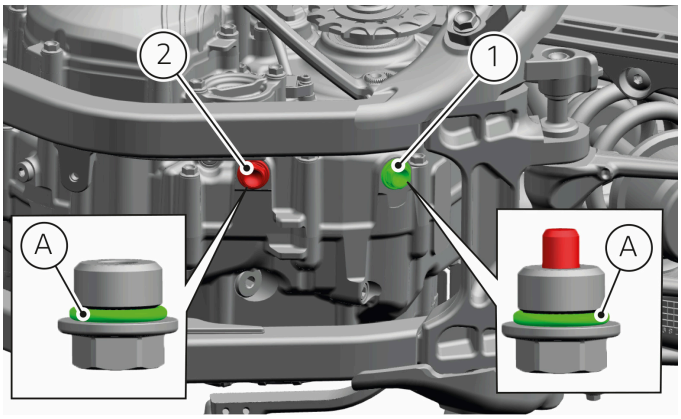



Fig 126

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.
Refit the engine guard as described in chapter “Engine guard”.

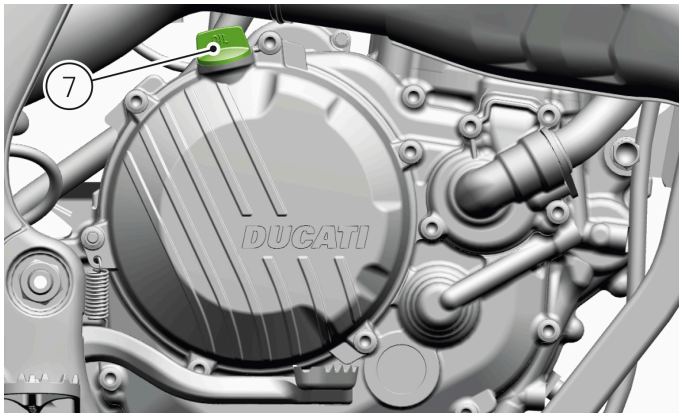



Fig 127

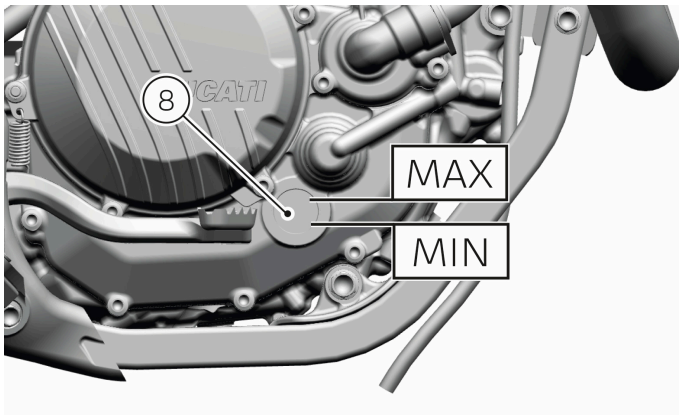



Fig 128

## Coolant - Level check

### Attention

A hot radiator is under pressure and may lead to coolant or hot vapour 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.

### 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.

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




Fig 129

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

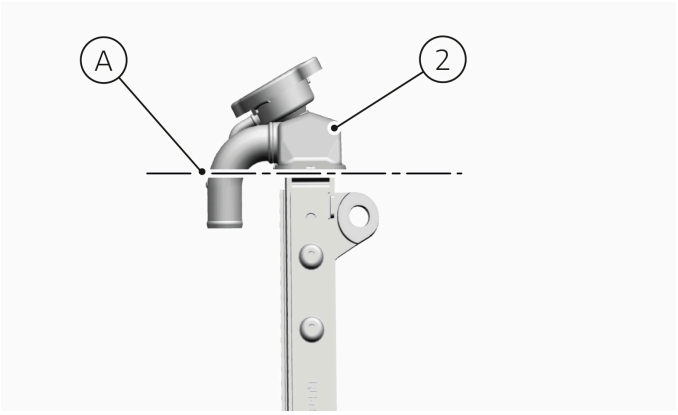



Fig 130

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 131

## 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 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.

## Attention
A hot radiator is under pressure and may lead to coolant or hot vapour 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.

## 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.

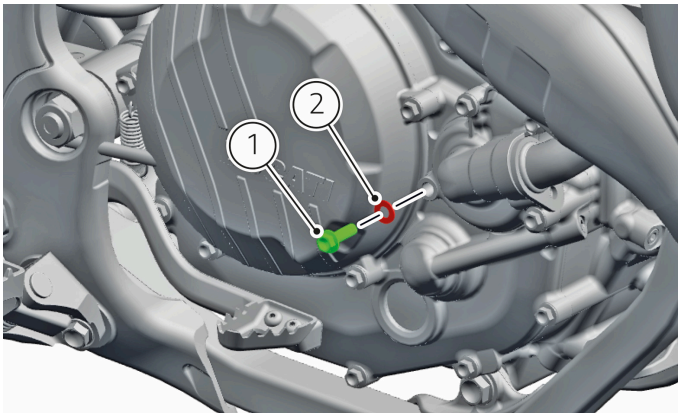



Fig 132

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




Fig 133

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

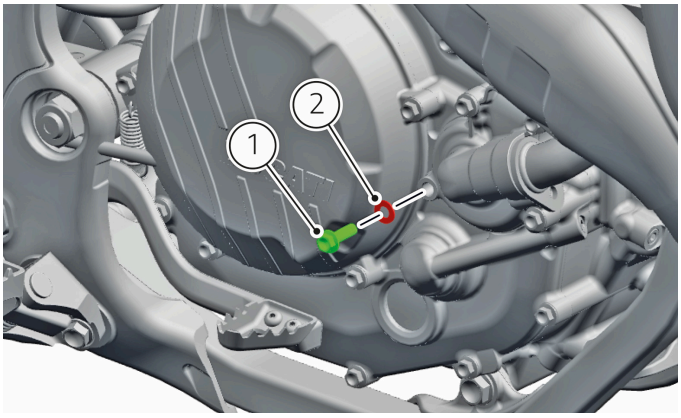



Fig 134

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 135

- 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 fluid level must not fall below the min. notch on the respective reservoir.

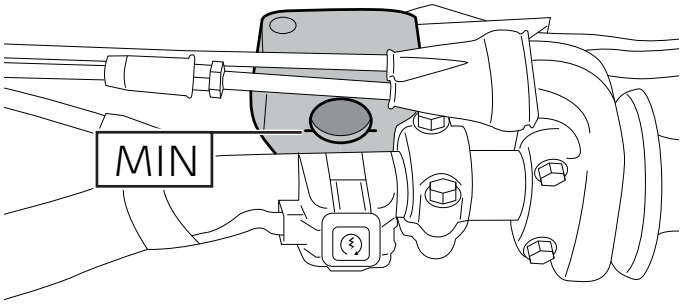



Fig 136

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 authorised Ducati Service Centre 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 fluid 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.
Change both pads if friction material thickness of even just one pad is about 1 mm (0.04 in).

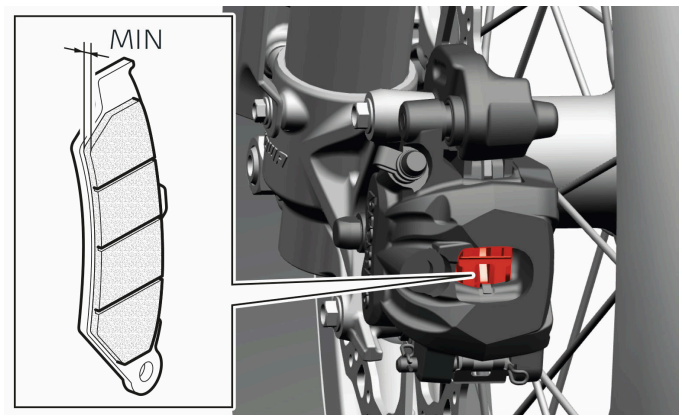



Fig 137

### Removing the front brake pads

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

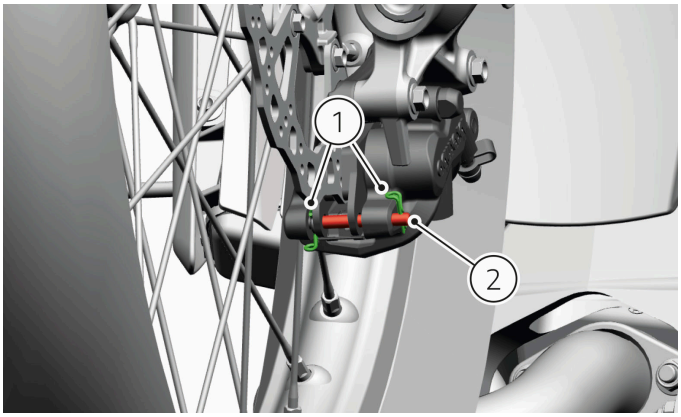



Fig 138

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

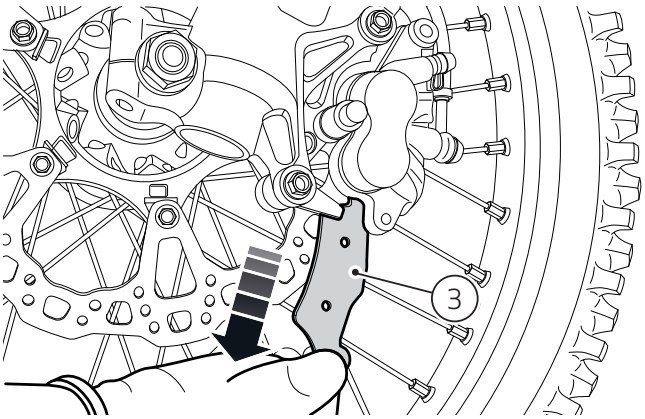



Fig 139

### 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).

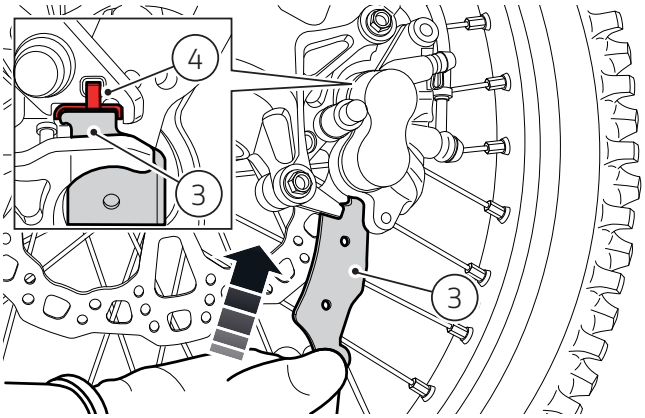



Fig 140

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

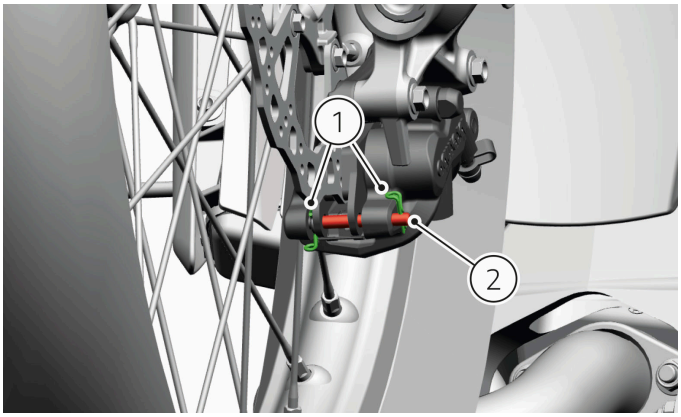



Fig 141

## Checking the rear brake fluid level

The fluid 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 Authorised Service Centre.

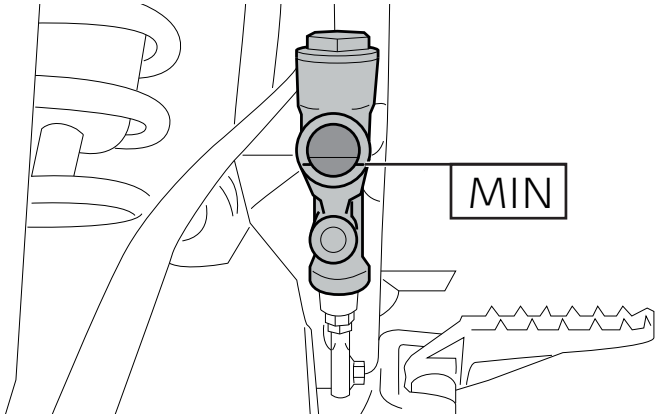



Fig 142

Brake system

If you find exceeding clearance on brake pedal and brake pads are still in good condition, contact your Ducati Dealer or Authorised Service Centre 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 fluid 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.
Change both pads if friction material thickness of even just one pad is about 1 mm (0.04 in).

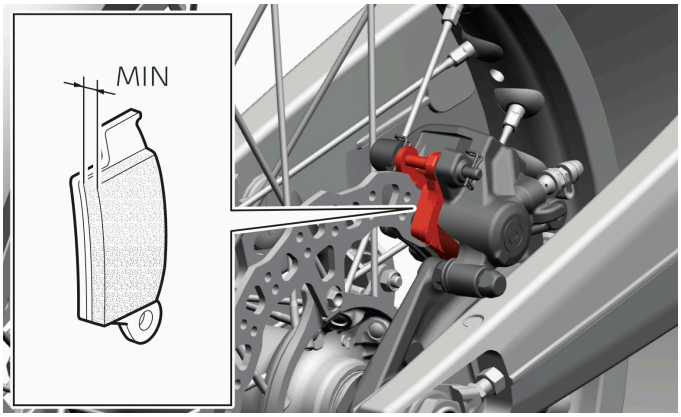



Fig 143

### 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).

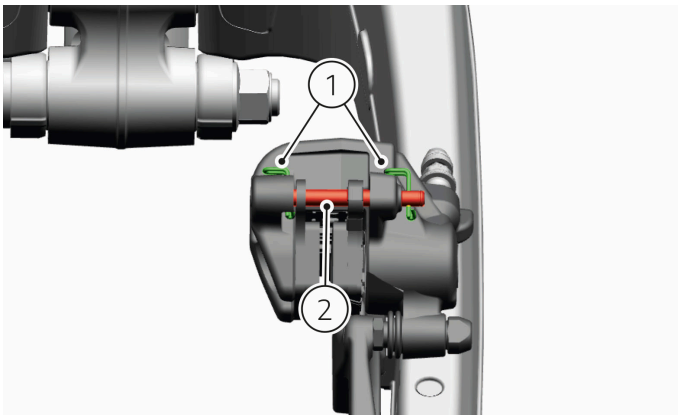



Fig 144

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.

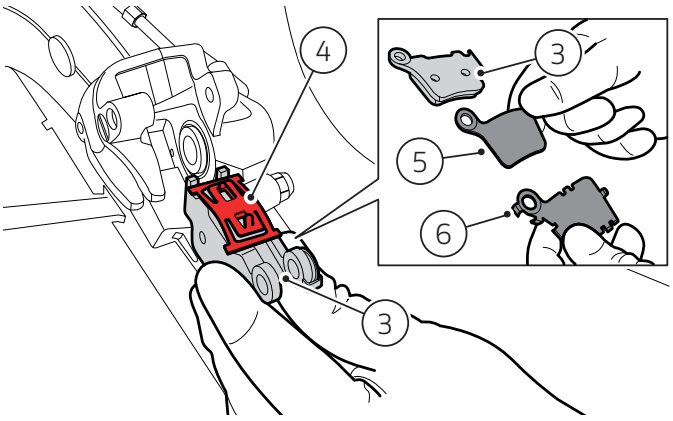



Fig 145

### 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 calliper, checking that they are correctly positioned inside the recess with the plate (7).

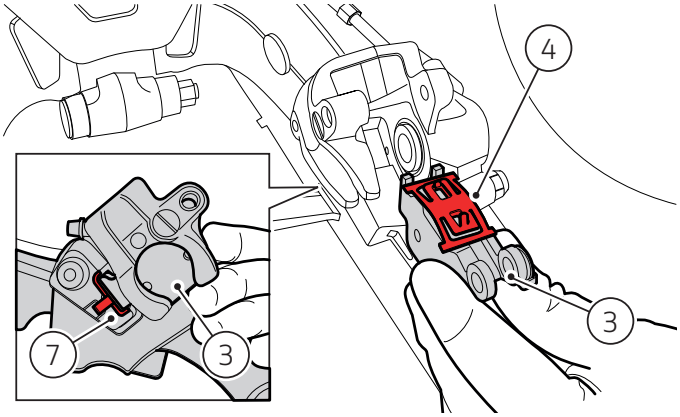



Fig 146

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

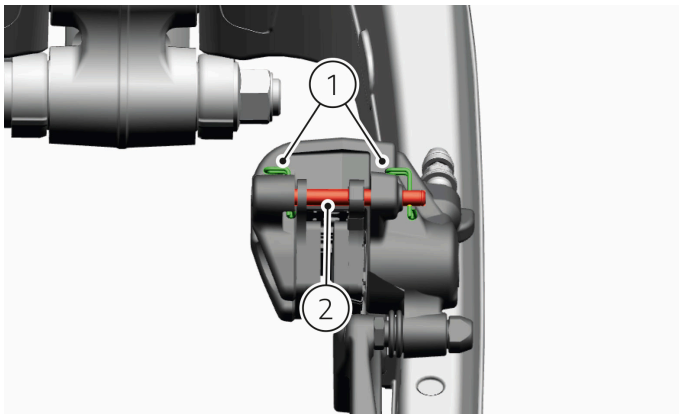



Fig 147

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 front wheel shaft retainer nut (1).

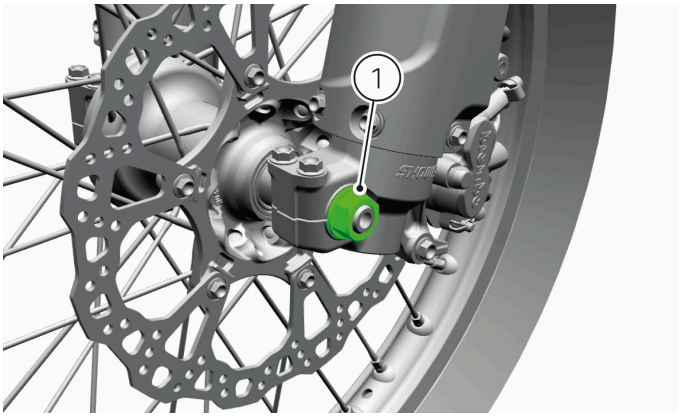



Fig 148

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

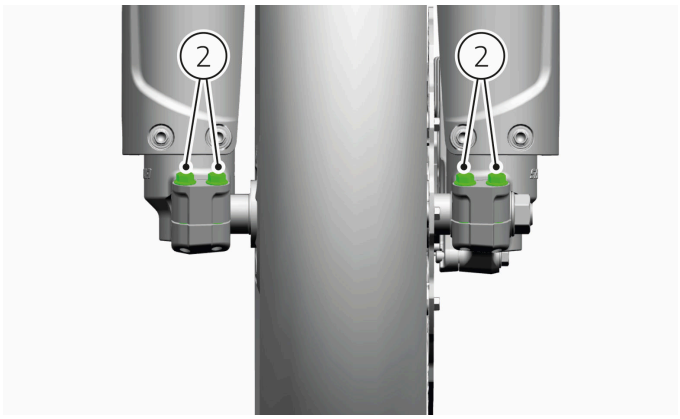



Fig 149

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




Fig 150

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

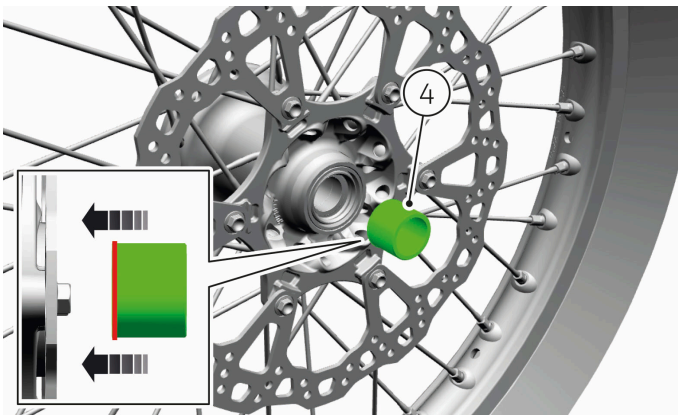



Fig 151

### 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, centring the front brake disc inside the brake calliper.

**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.

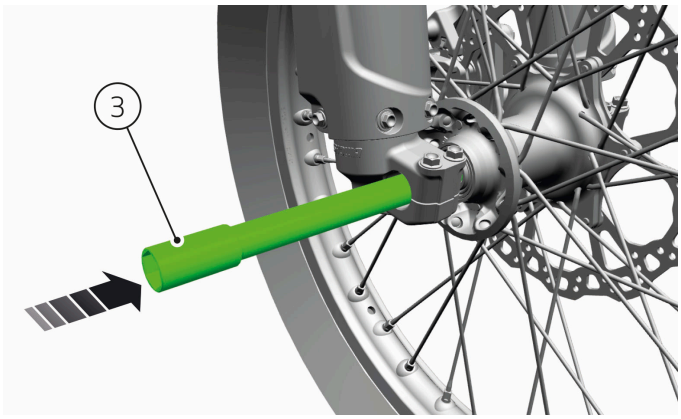



Fig 152

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

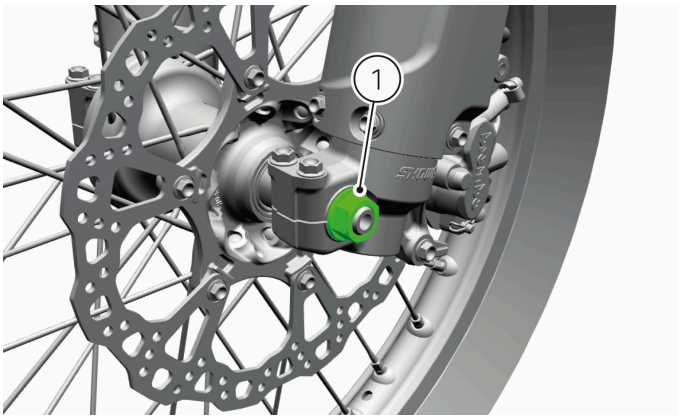



Fig 153

**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%.

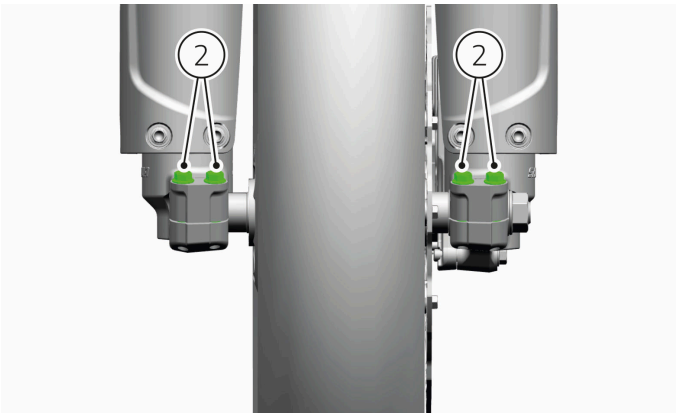



Fig 154

## 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).

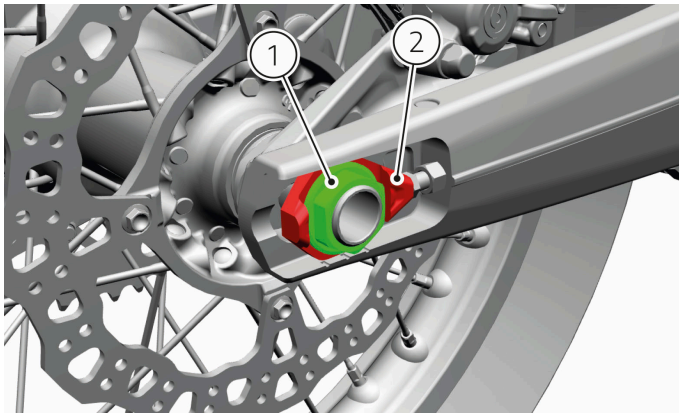



Fig 155

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

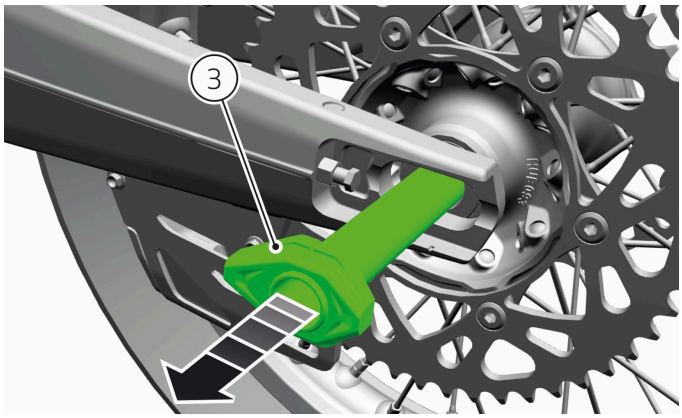



Fig 156

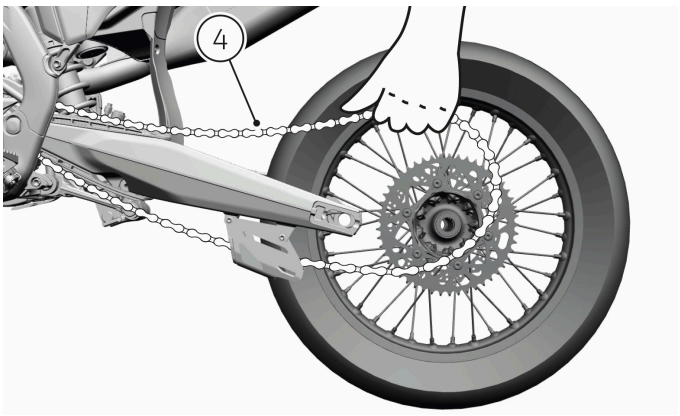



Fig 157

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

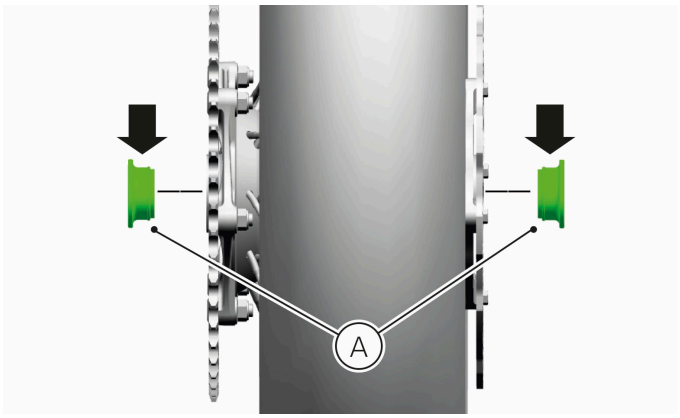



Fig 158

### Refitting

Reposition the spacers (A) on the rear wheel hub.
Reposition the rear wheel in its seat on the swinging arm, centring the rear brake disc inside the brake calliper, then move the rear wheel closer to the motorcycle to fit the drive chain (4) onto the rear sprocket.

### Important

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

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

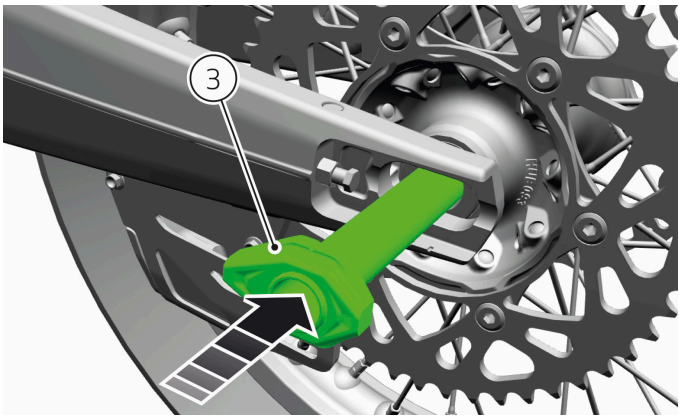



Fig 159

On the right side, reposition the chain tensioner 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%.

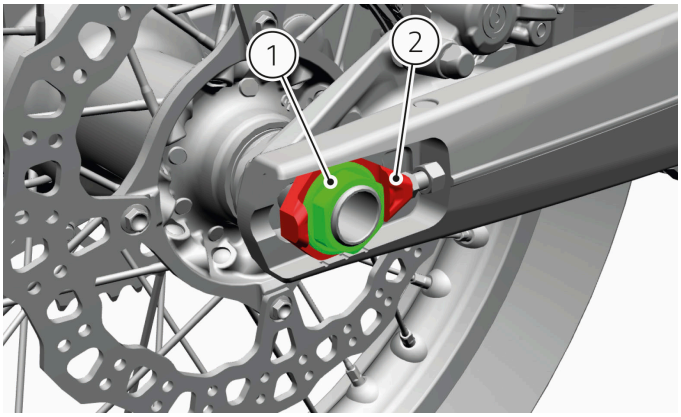



Fig 160

## 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 161

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 gauge 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.

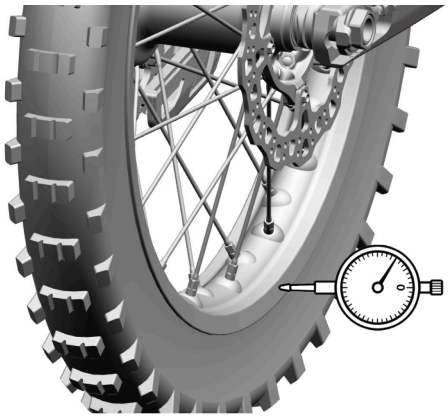


Fig 162

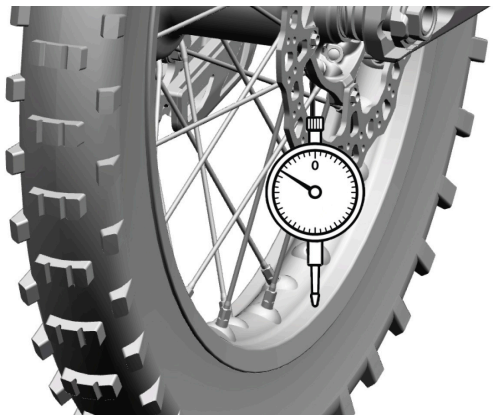


Fig 163

### Adjusting the alignment of the rims

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

### Check tyres

### Attention

Only fit tyres approved and/or recommended by Ducati.

### Attention

To replace tyres or inner tubes, go to a Ducati Dealer or Authorised Service Centre.

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

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

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

To keep the tyre and inner tube correctly positioned on the rim, it is important to check the tyre lock nut (A) and, if necessary, tighten it before using the vehicle. This tyre lock prevents the tyre 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 tyre lock nut (A), correct the position of the tyre 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 tyre lock nut (A) must be tightened to a torque of 12 Nm ± 10%.

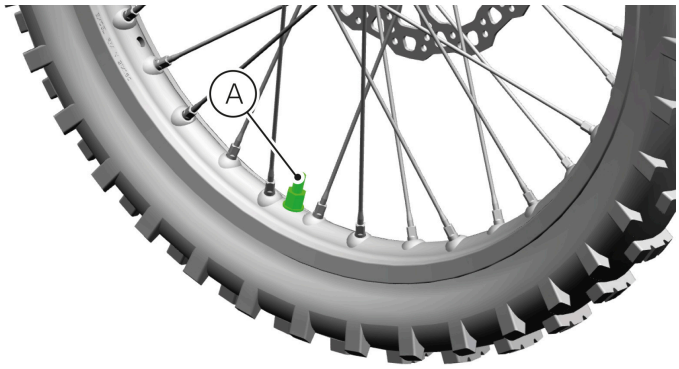



Fig 164

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 tyre slips.

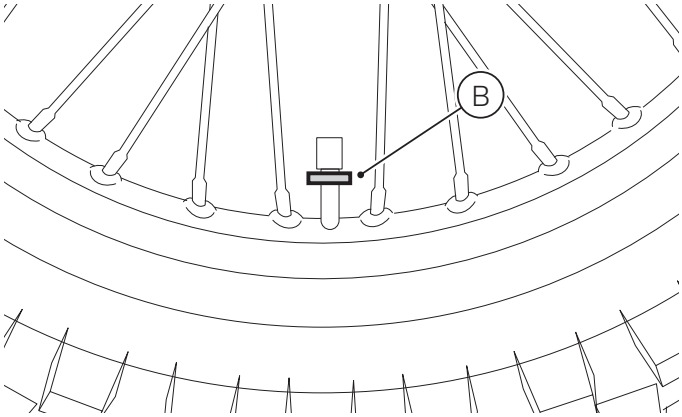



Fig 165

## Removing and refitting the switches

### Removing the vehicle start button

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

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

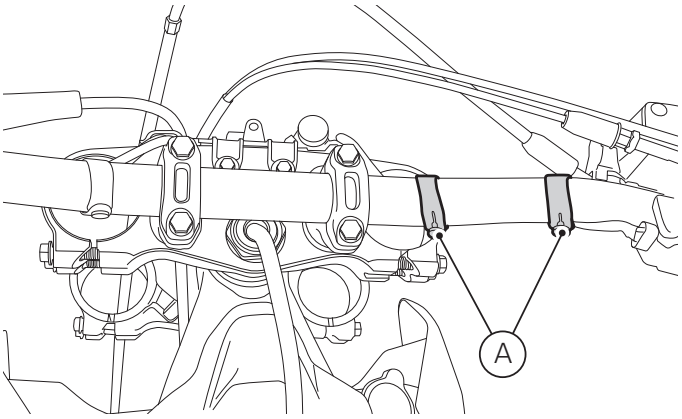



Fig 166

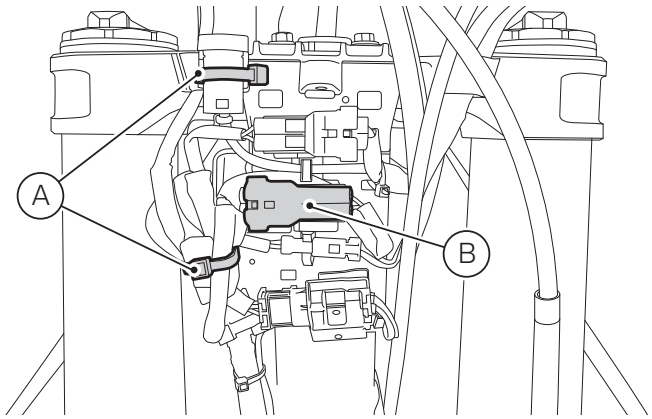



Fig 167

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

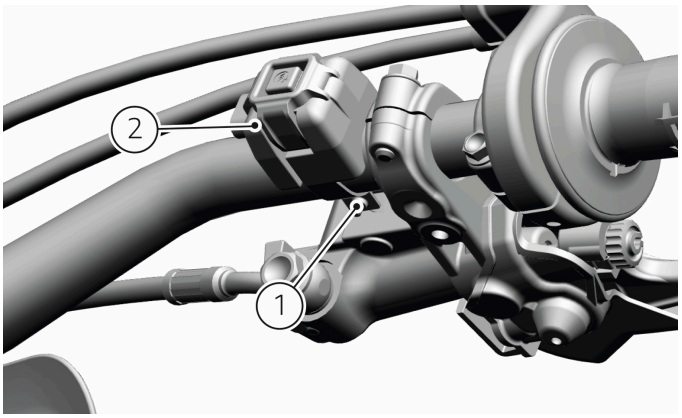



Fig 168

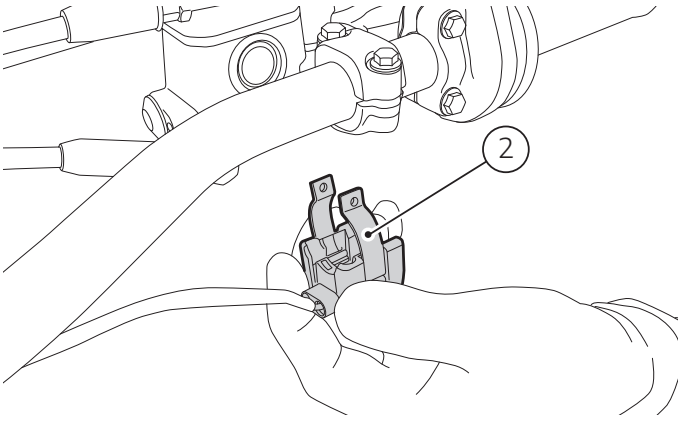



Fig 169

### Removing the vehicle stop button

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

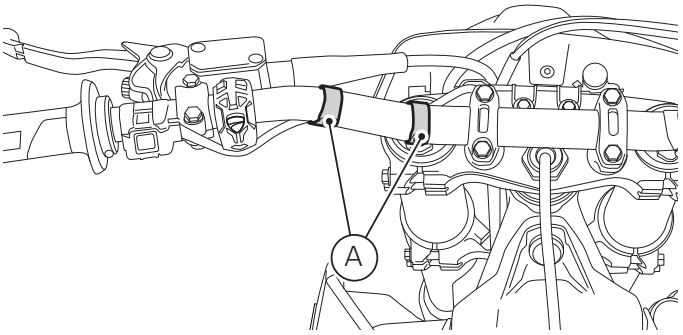



Fig 170

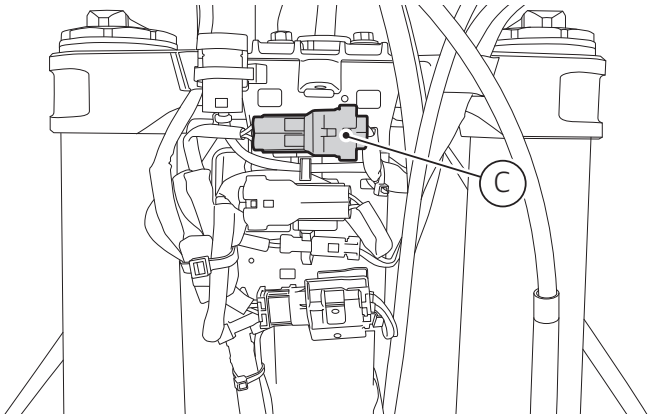



Fig 171

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

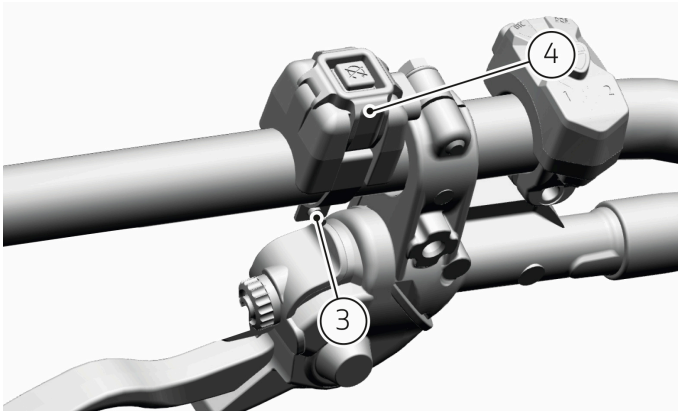



Fig 172

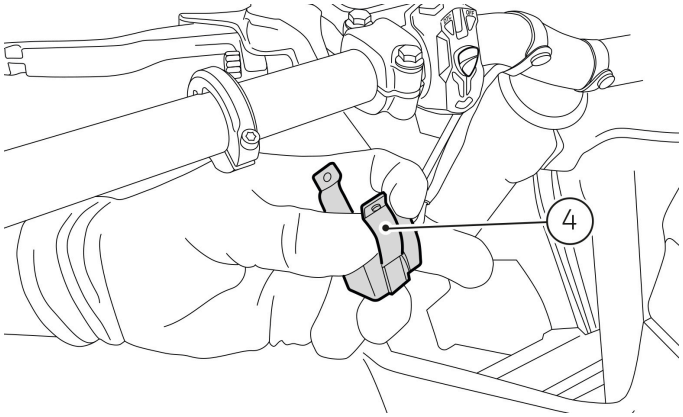



Fig 173

## 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).

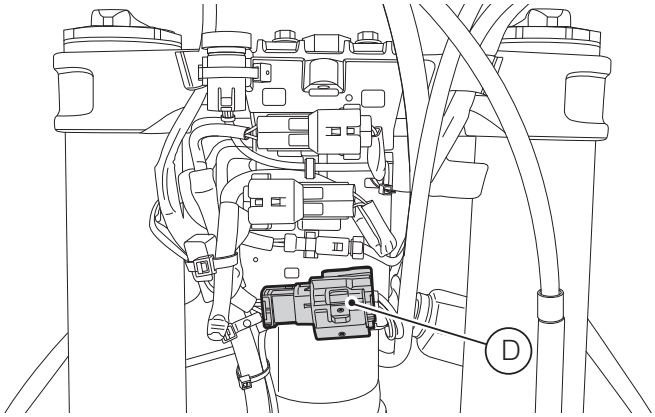



Fig 174

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

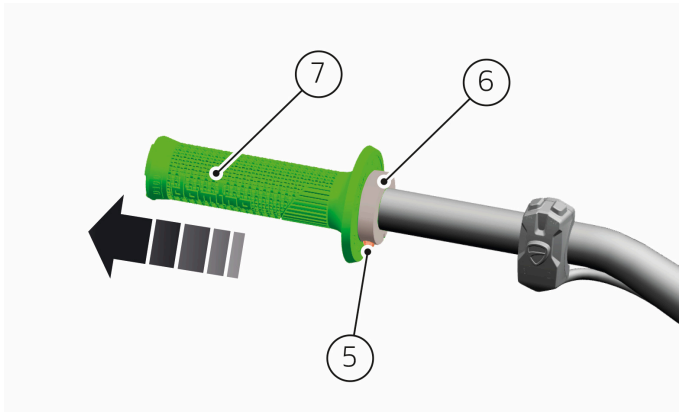



Fig 175

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

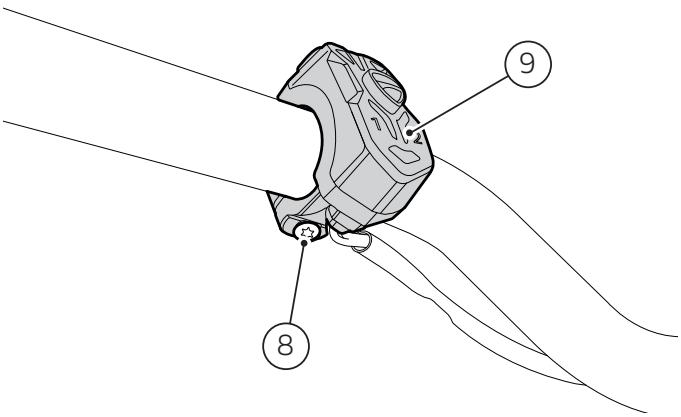



Fig 176

## Refitting the Map Selector

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

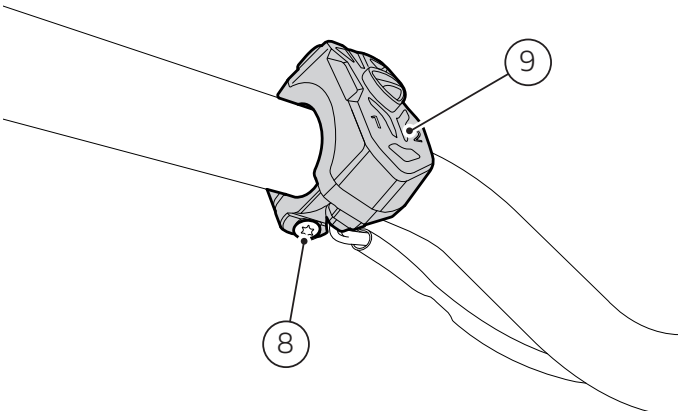



Fig 177

Insert retainer (6) and 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%.

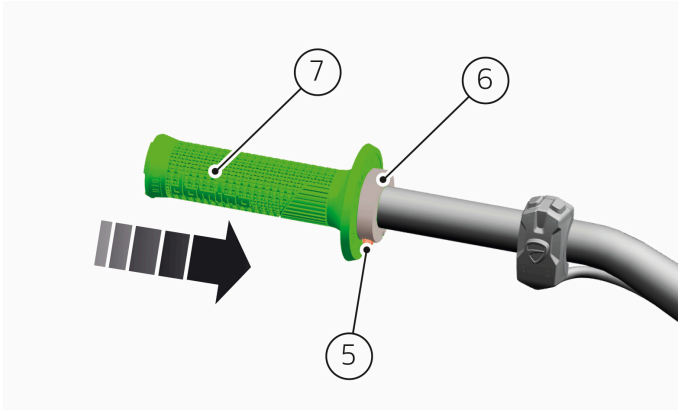



Fig 178

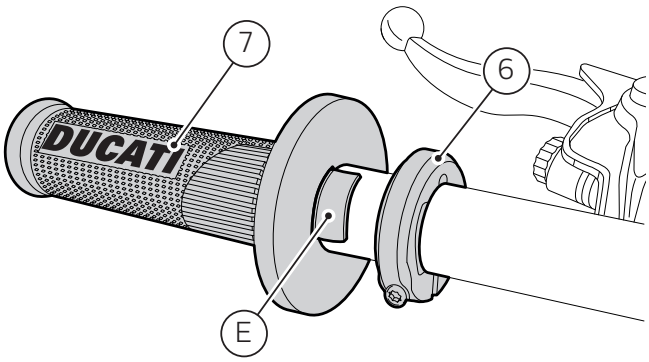



Fig 179

Connect the Map Selector connector (D).

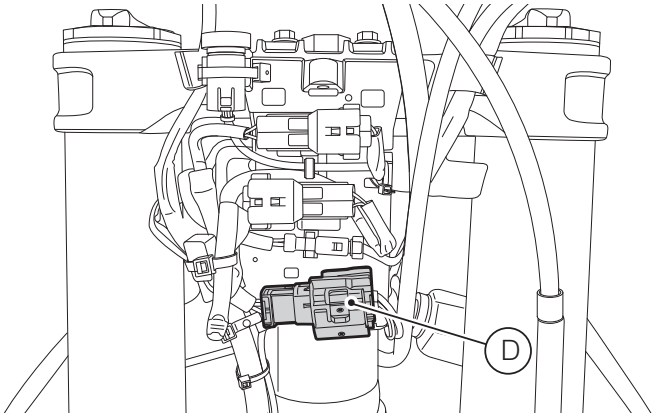



Fig 180

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

### Fitting the vehicle stop button

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

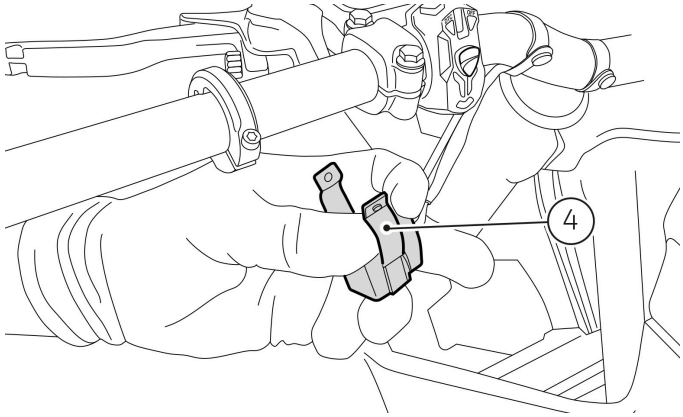



Fig 181

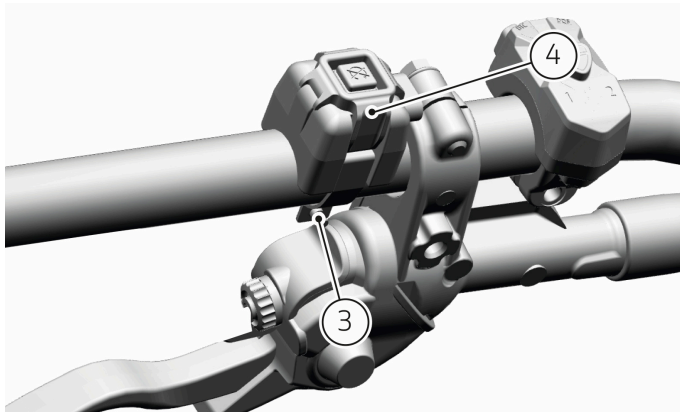



Fig 182

Connect the stop button connector (C).

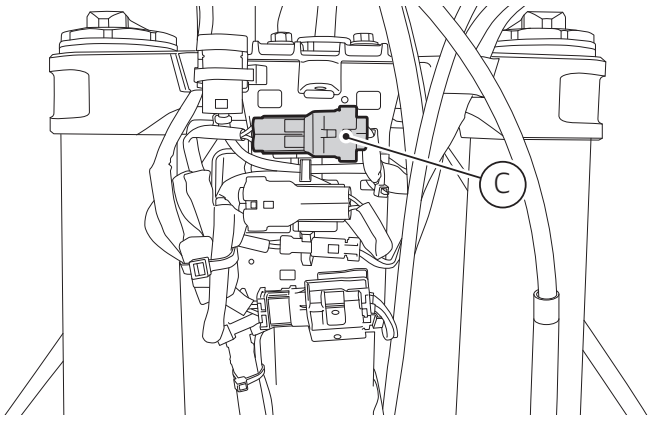



Fig 183

Reposition the wiring using cable ties (A) in the positions shown in the figure.

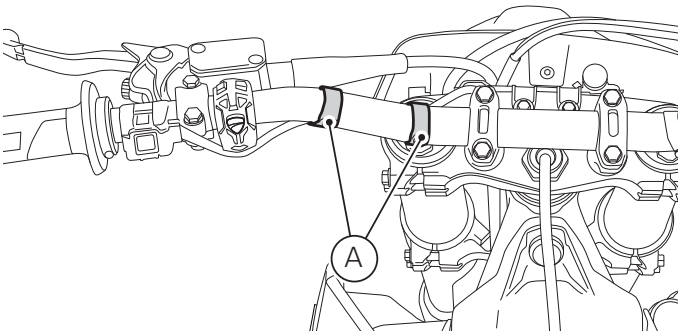



Fig 184

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

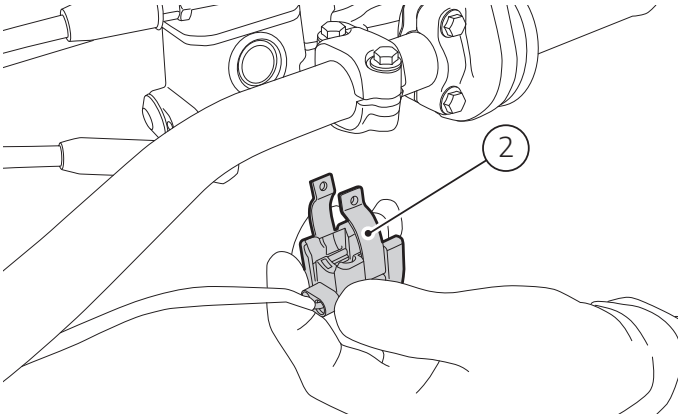



Fig 185

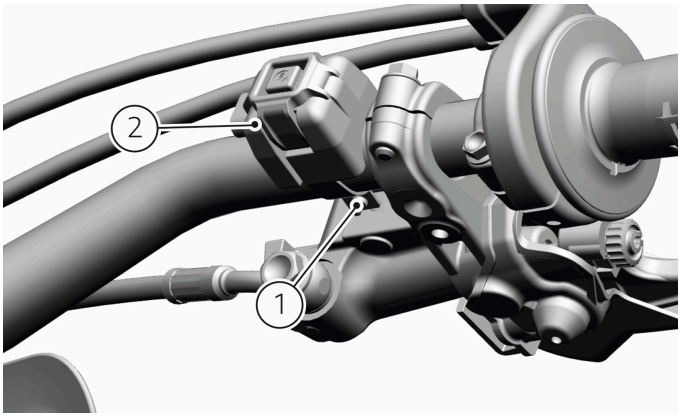



Fig 186

Connect the start button connector (B) and reposition the cable ties (A) in the positions shown in the figure.

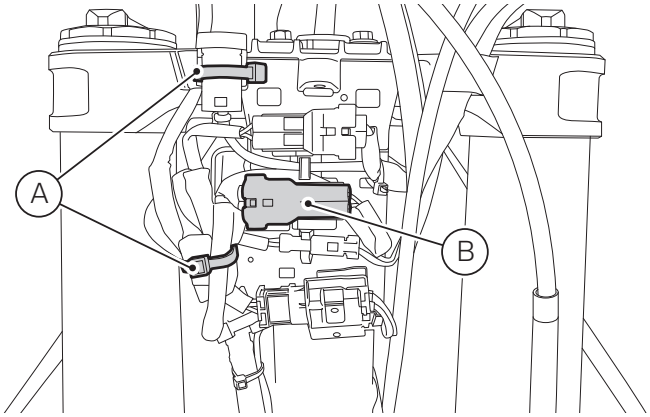



Fig 187

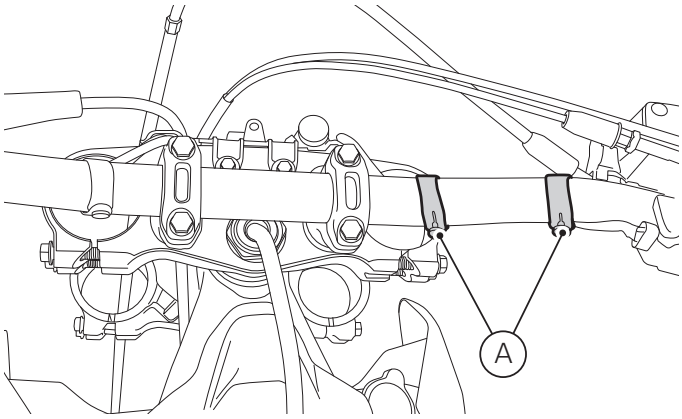



Fig 188

## Adjusting the throttle twistgrip

Check the throttle control play (A) = 3÷6 mm (0.12÷0.24 in).
If not compliant, adjust as follows:

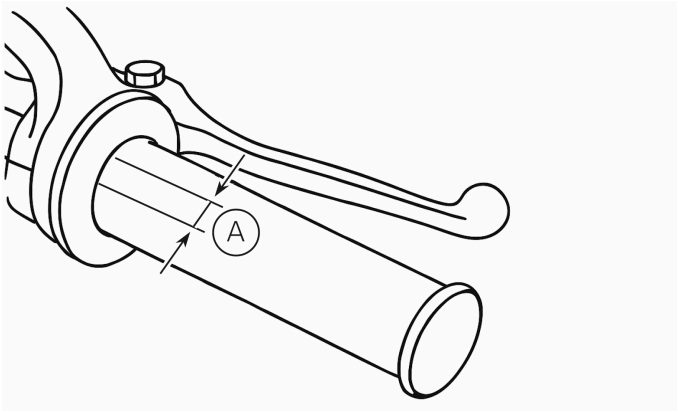



Fig 189

Loosen lock 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 idle speed.

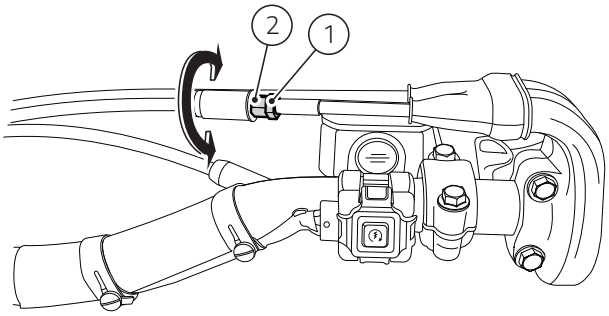



Fig 190

## Removing and refitting the gear change pedal

### Removal procedure

Loosen the screw (1) and remove the gear change pedal (2) by pulling it out of the gear selector.

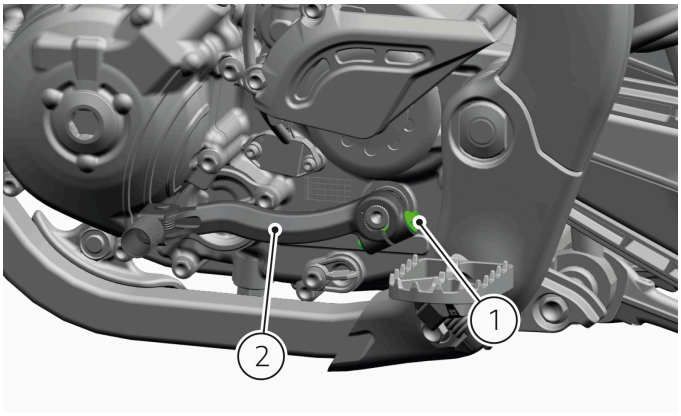



Fig 191

### Assembly

Position the gearchange 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

Cut the clamp (1) securing the hand guard (2) only if you wish to remove also the hand guard (2) from the handlebar; the lever can be removed without cutting the clamp (1).

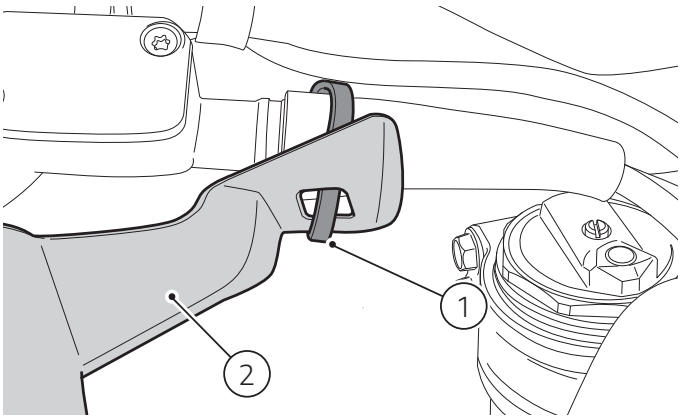



Fig 192

Remove the pin (3) to release both the hand guard (2) and front brake lever (4).

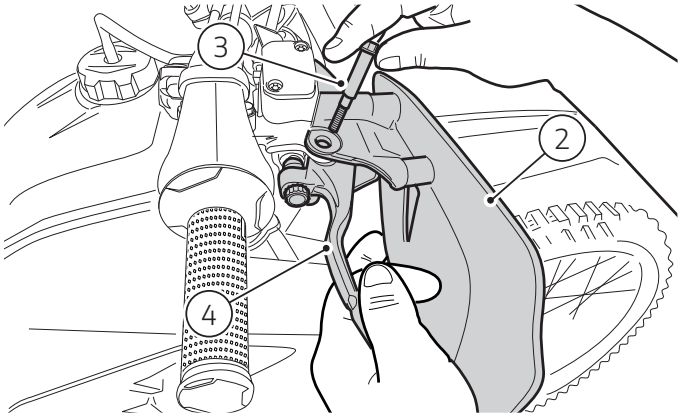



Fig 193

Remove the brake lever (4) paying attention to the spring (5).

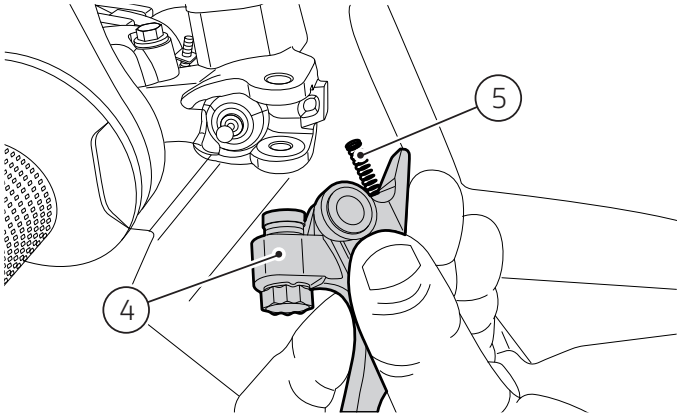



Fig 194

### Assembly

Bring the brake lever (4) closer, inserting the spring (5) into the hole indicated by the arrow.

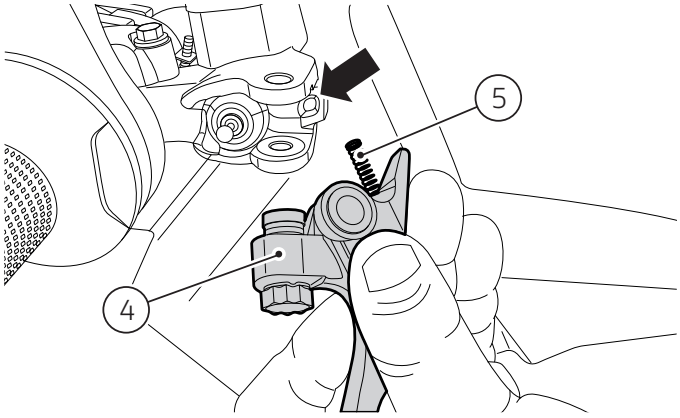



Fig 195

Bring the hand guard (2) closer and secure it together with the front brake lever (4) using pin (3).
Tighten the pin (3) to a torque of 5 Nm ± 10%

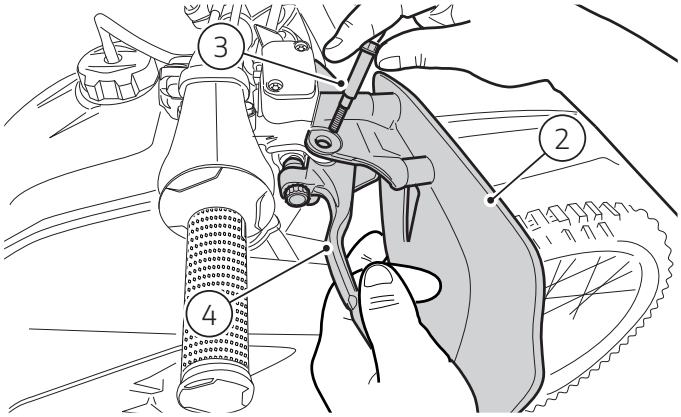



Fig 196

If the hand guard (2) was removed from the handlebar, secure the hand guard (2) with a new clamp (1) at the point indicated.

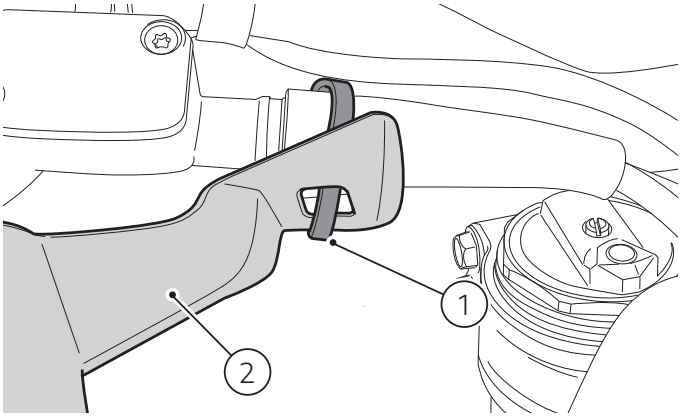



Fig 197

## Removing and refitting the clutch lever

### Removal procedure

Cut the clamp (1) securing the hand guard (2) only if you wish to remove also the hand guard (2) from the handlebar; the lever can be removed without cutting the clamp (1).

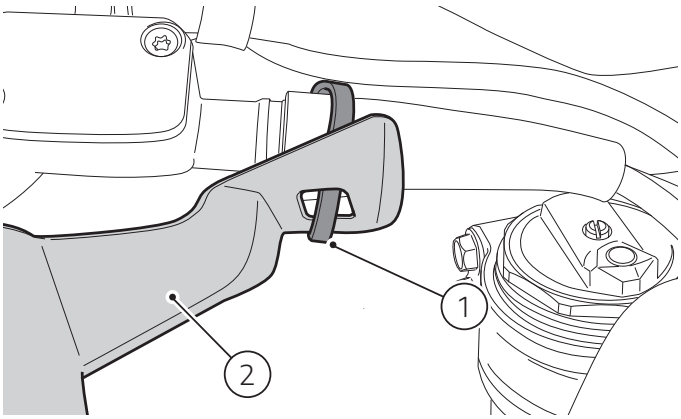



Fig 198

Remove the screw (3) to release both the hand guard (2) and clutch lever (4).

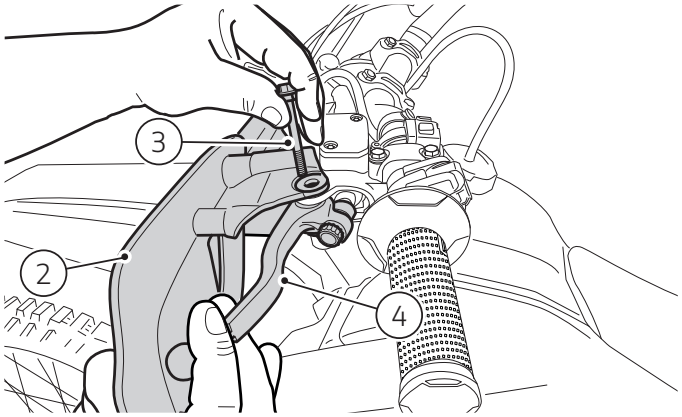



Fig 199

Remove the clutch lever (4) paying attention to the spring (5).

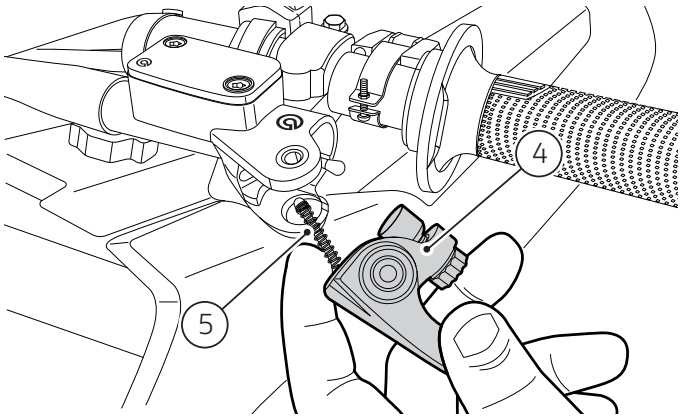



Fig 200

### Assembly

Bring the clutch lever (4) closer, inserting the spring (5) into the hole indicated by the arrow.

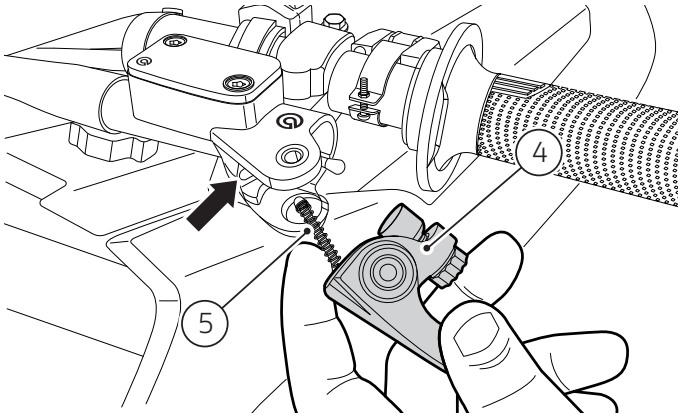



Fig 201

Bring the hand guard (2) closer and secure it together with the clutch lever (4) using screw (3).
Tighten the screw (3) to a torque of 5 Nm ± 10%.

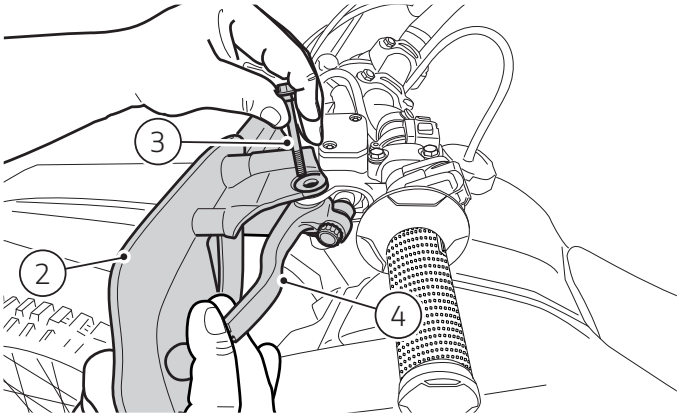



Fig 202

If the hand guard (2) was removed from the handlebar, secure the hand guard (2) with a new clamp (1) at the point indicated.

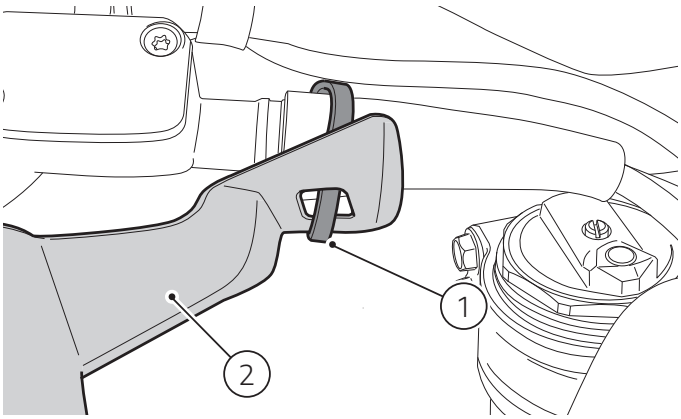



Fig 203

## Removing and refitting the rear brake pedal

**Removal procedure**

Loosen the retaining screw (1) of the brake pedal (2) to the brake master cylinder (3).

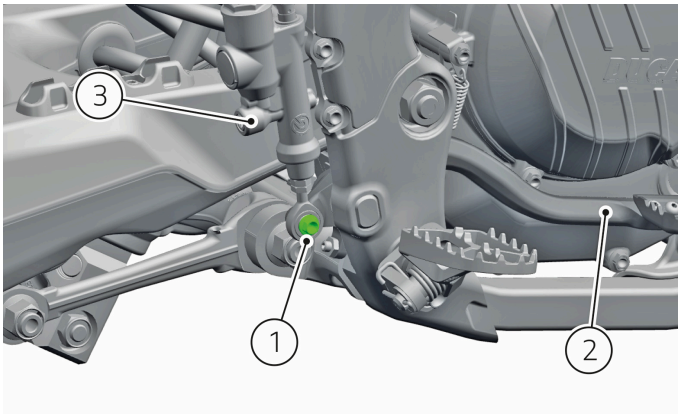



Fig 204

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

**Important**

This component has a left-hand threading. For installation or removal, turn clockwise to unscrew and anticlockwise to screw. Make sure to follow this indication to avoid damage to the component or the fastening system.

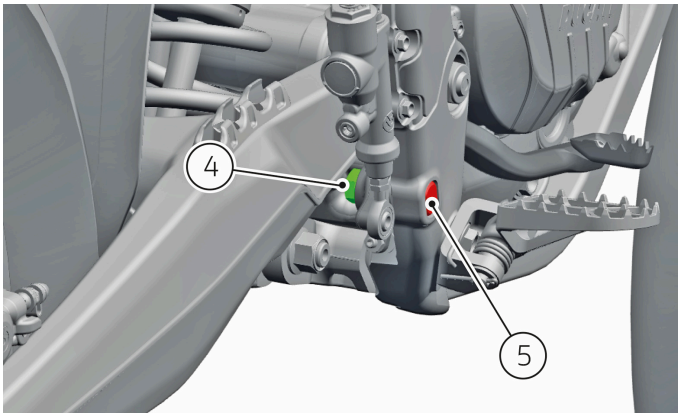



Fig 205

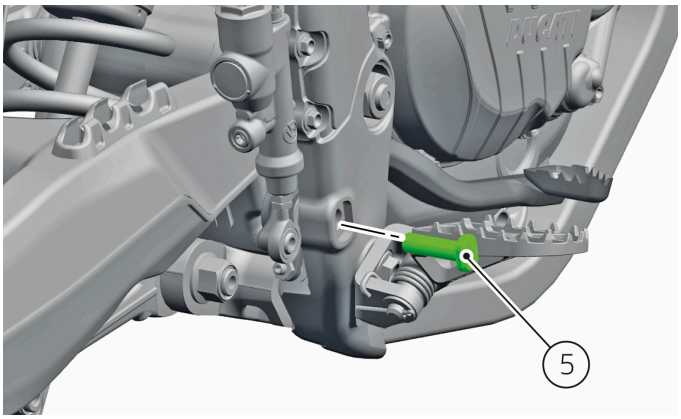



Fig 206

Remove the brake pedal (2).

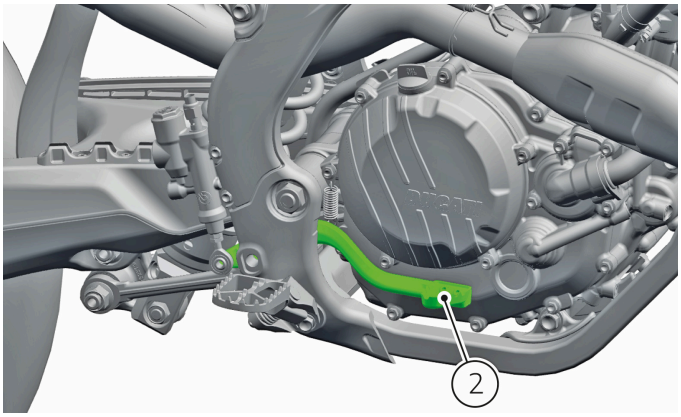



Fig 207

**Assembly**

Position the rear brake lever (2).

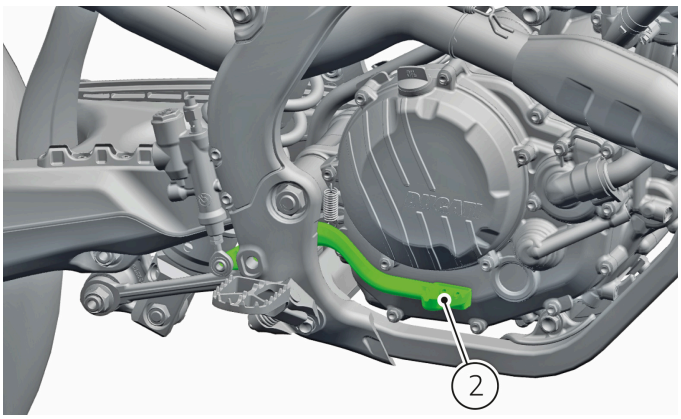



Fig 208

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

**Important**

This component has a left-hand threading. For installation or removal, turn clockwise to unscrew and anticlockwise to screw. Make sure to follow this indication to avoid damage to the component or the fastening system.

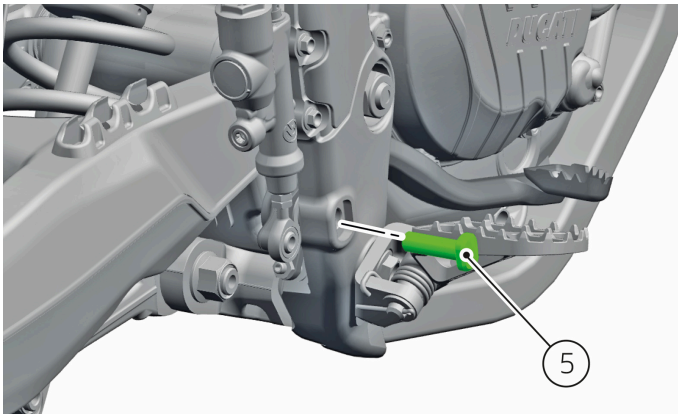



Fig 209

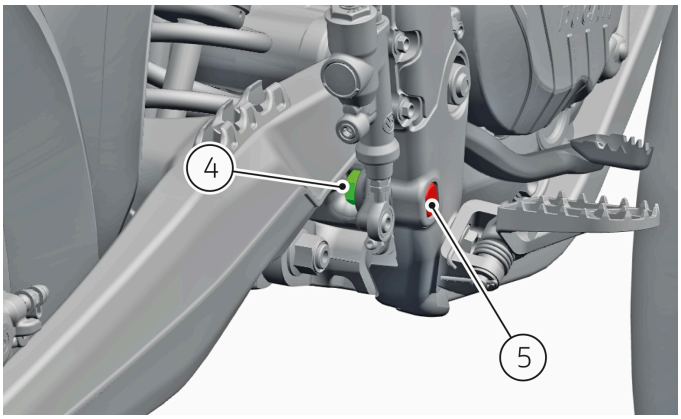



Fig 210

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

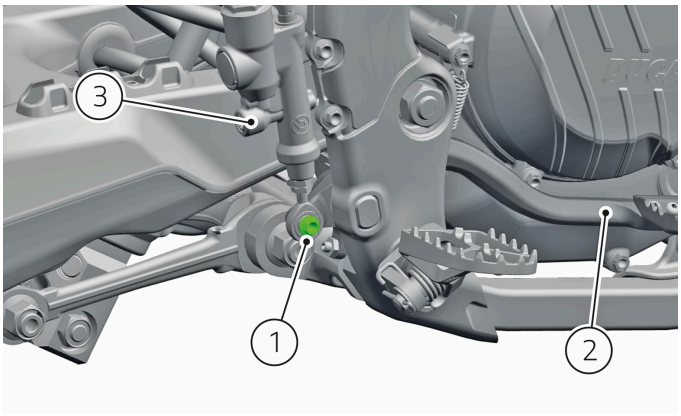



Fig 211

## 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 3 ÷ 5 mm (0.12 ÷ 0.19 in).

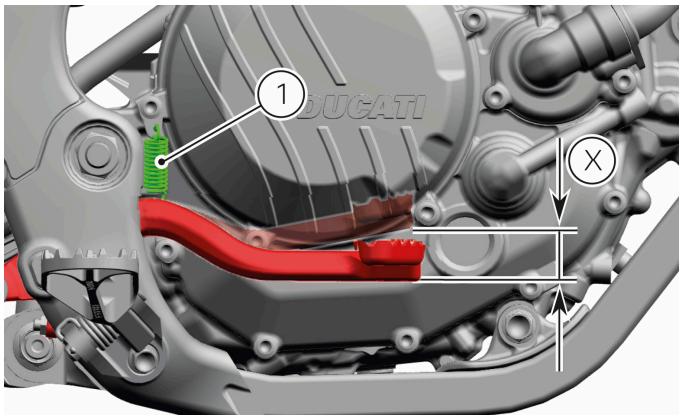



Fig 212

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 spring (1).

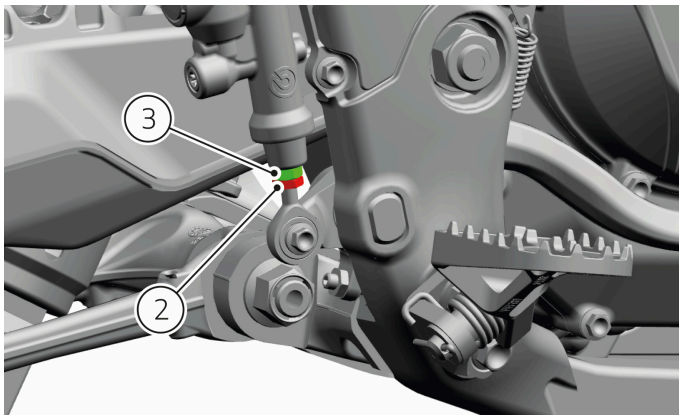



Fig 213

**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”.

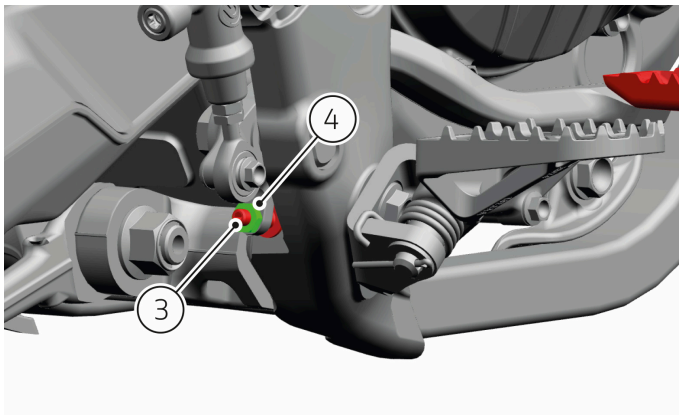



Fig 214

## 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.

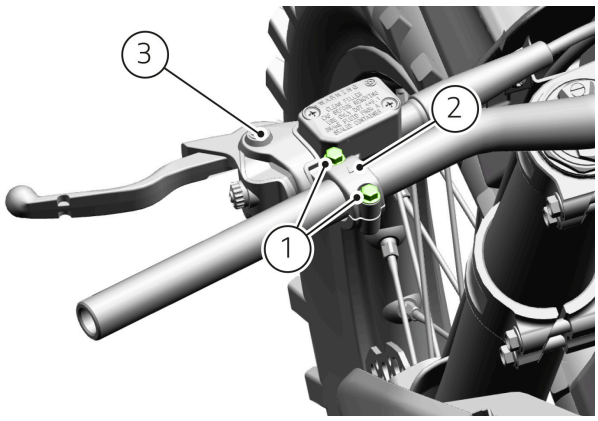



Fig 215

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

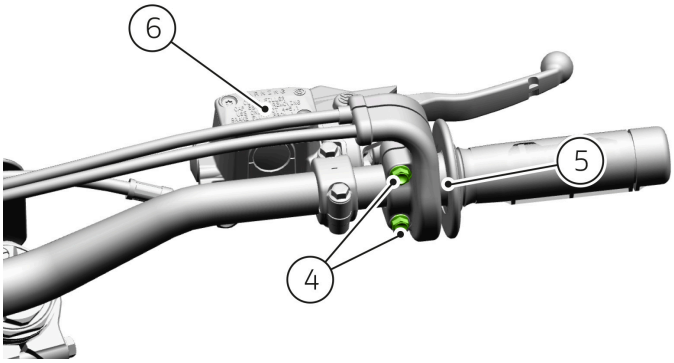



Fig 216

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

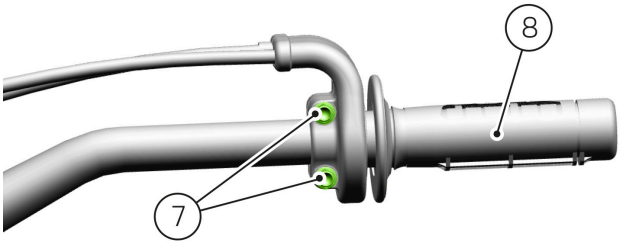



Fig 217

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

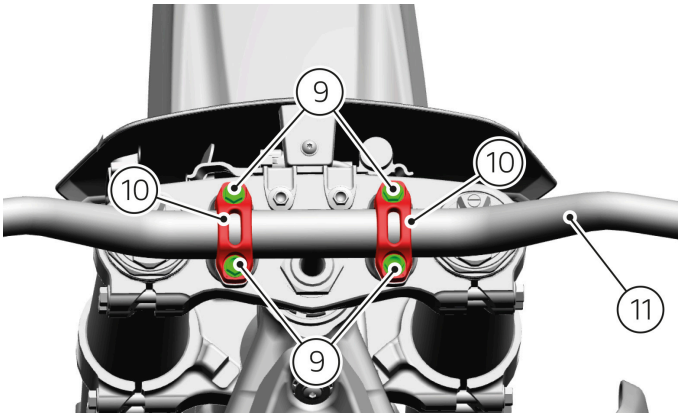



Fig 218

### 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).

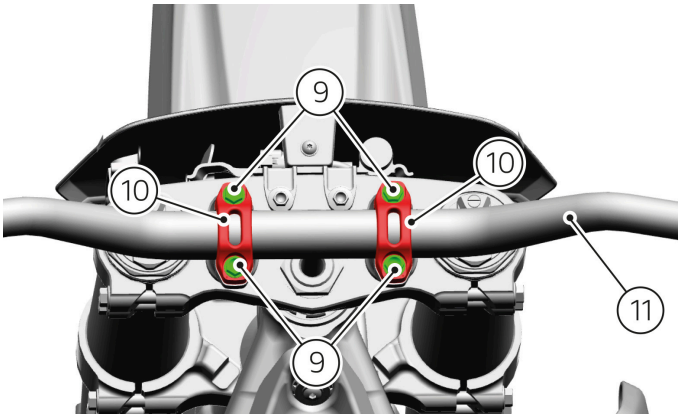



Fig 219

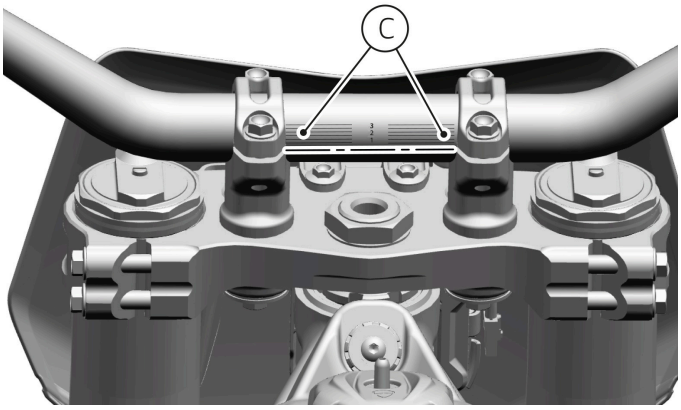



Fig 220

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

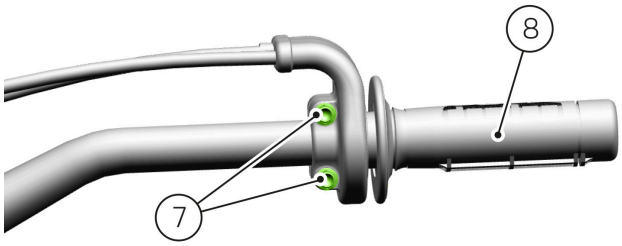



Fig 221

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.

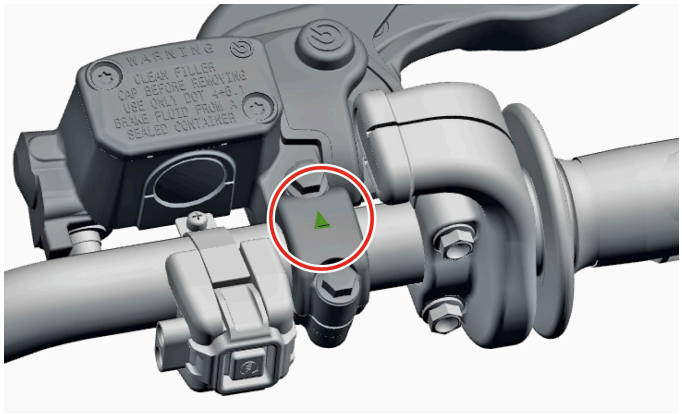


Fig 222

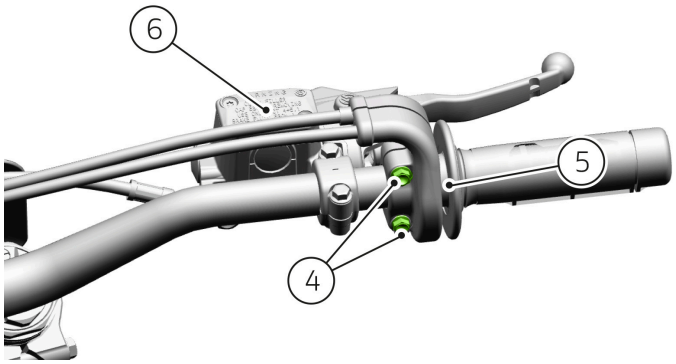



Fig 223

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.

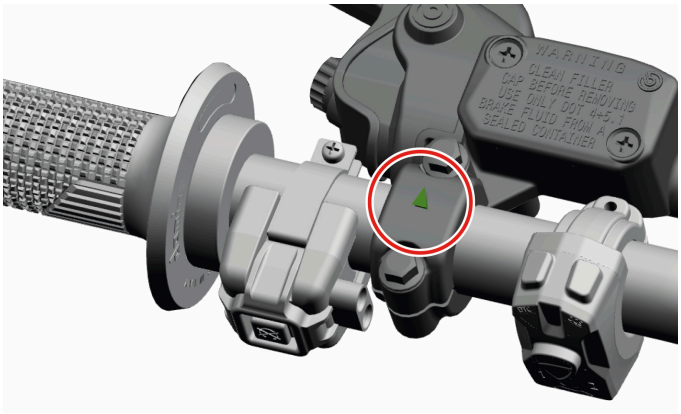


Fig 224

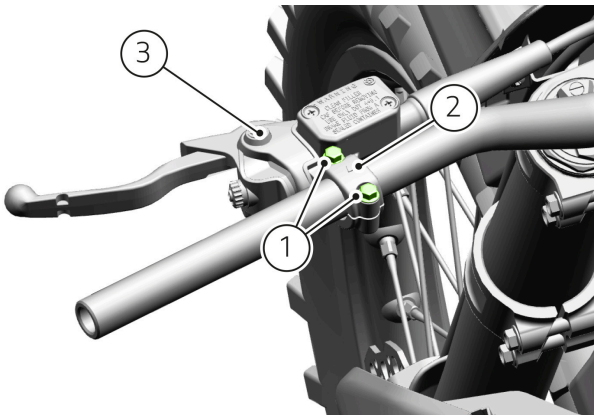



Fig 225

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.

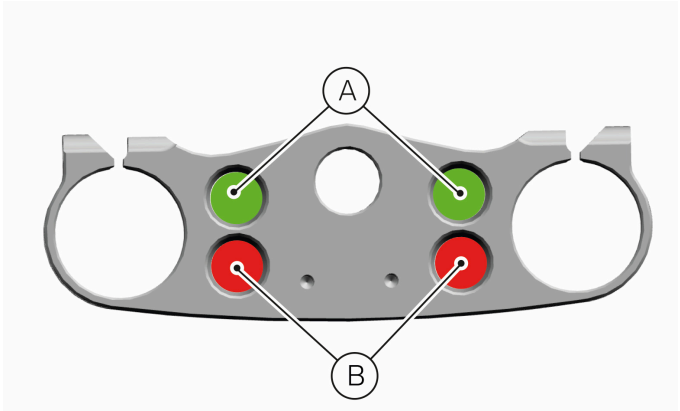



Fig 226




Fig 227

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%.

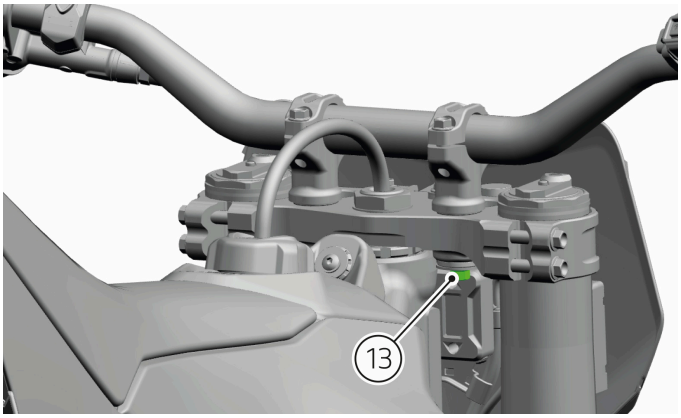



Fig 228

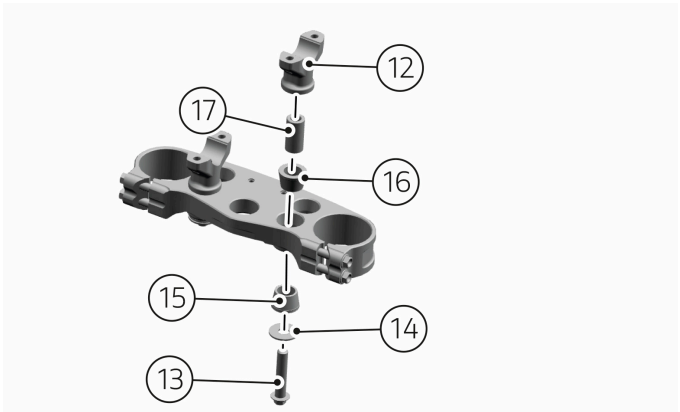



Fig 229

**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).

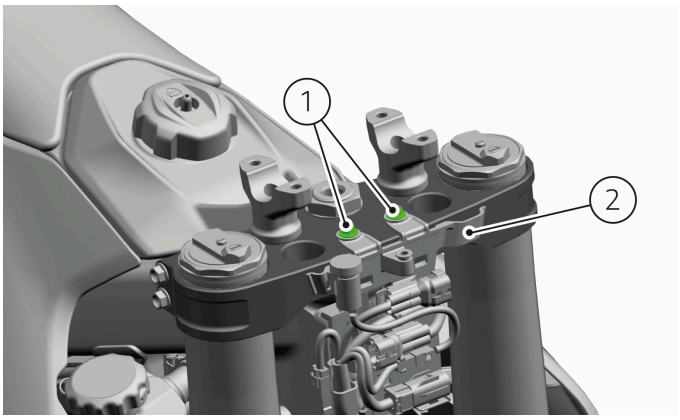



Fig 230

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

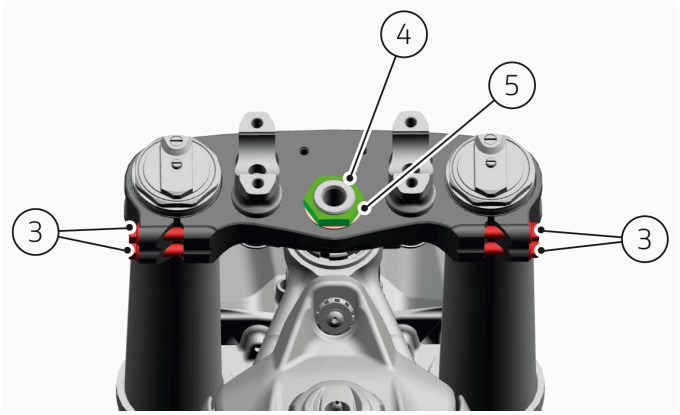



Fig 231

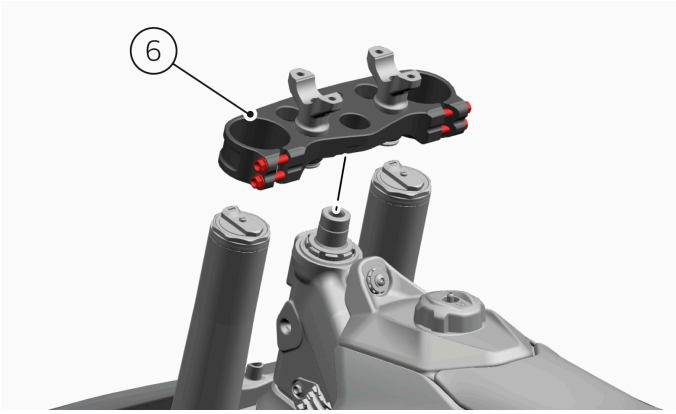



Fig 232

**Assembly**

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

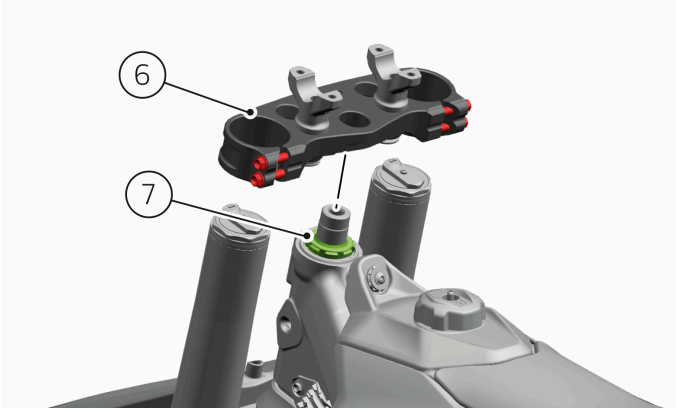



Fig 233

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%.

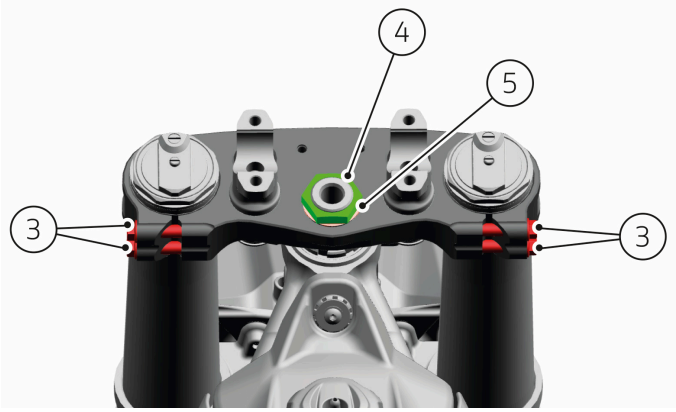



Fig 234

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

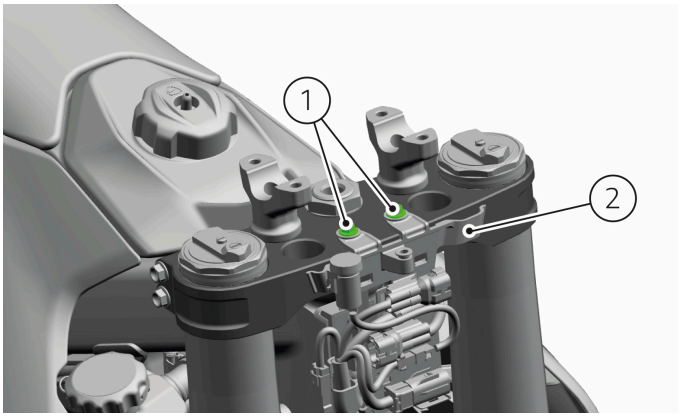



Fig 235

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.

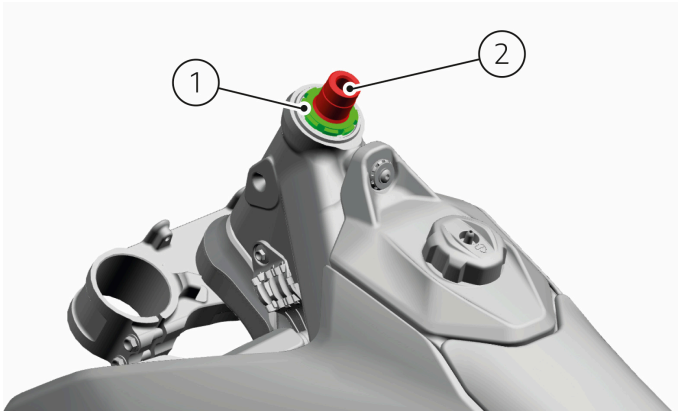



Fig 236

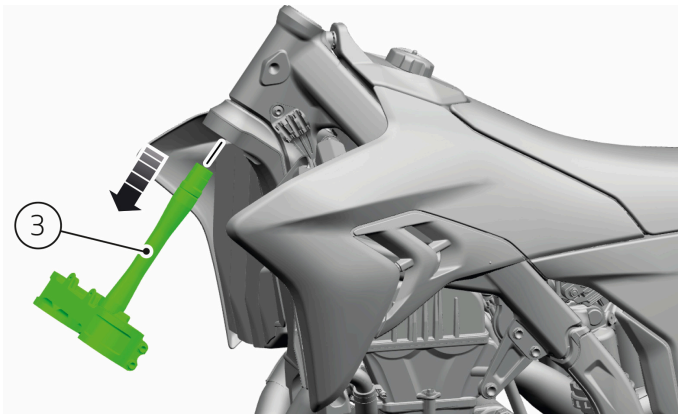



Fig 237

**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%.

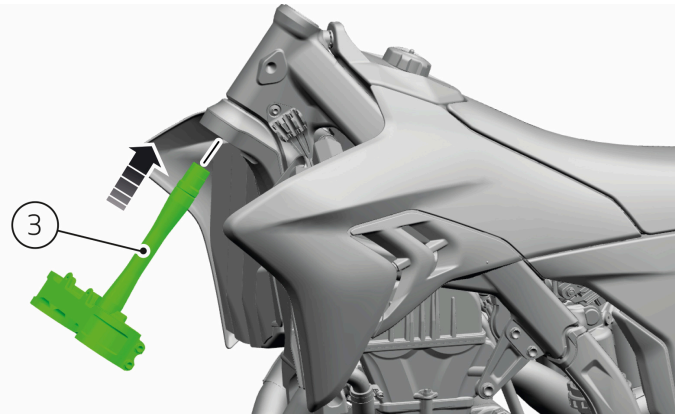



Fig 238

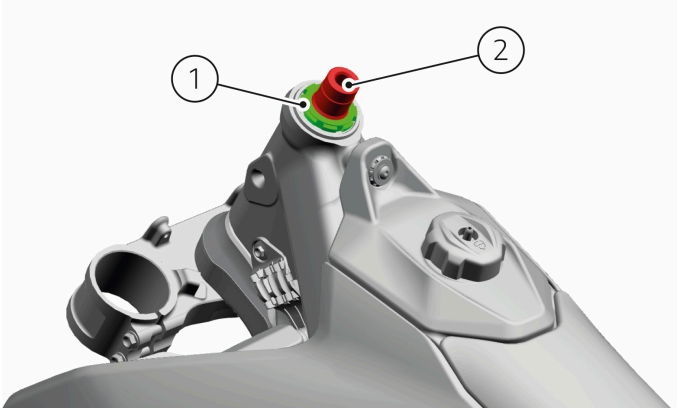



Fig 239

## 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%.

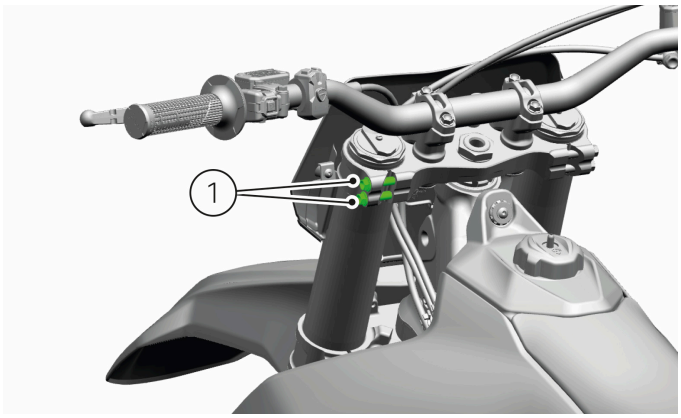



Fig 240

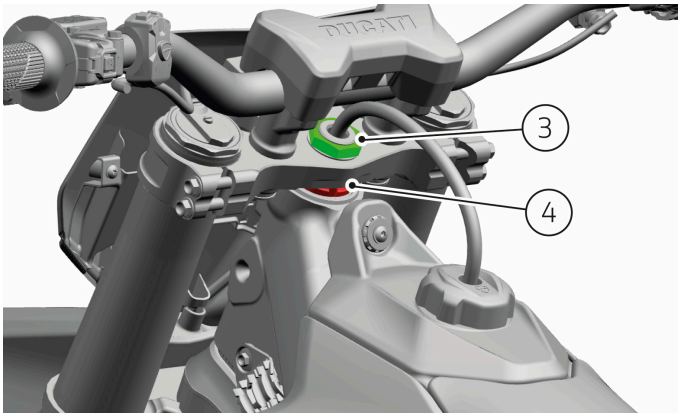



Fig 241

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%.

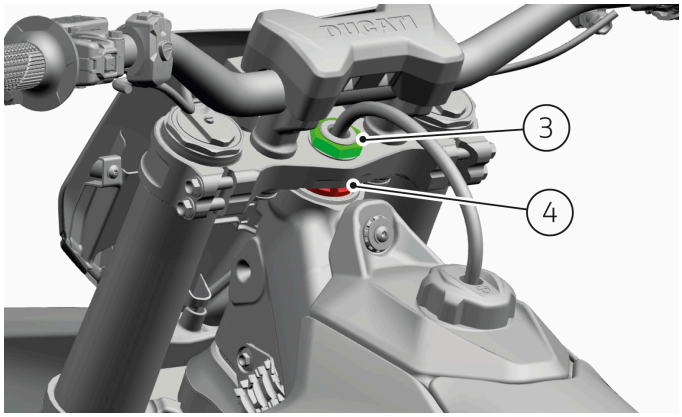



Fig 242

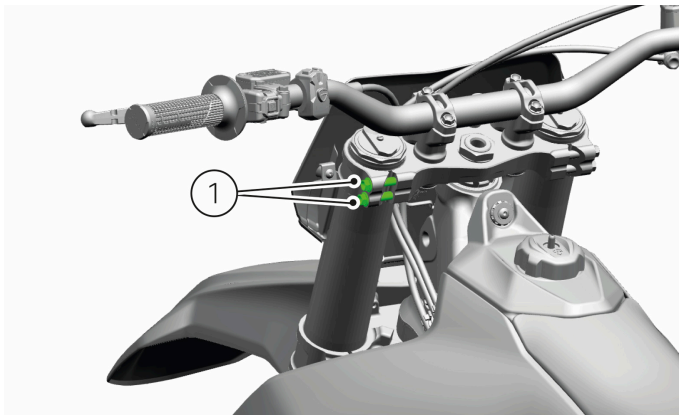



Fig 243

## 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).

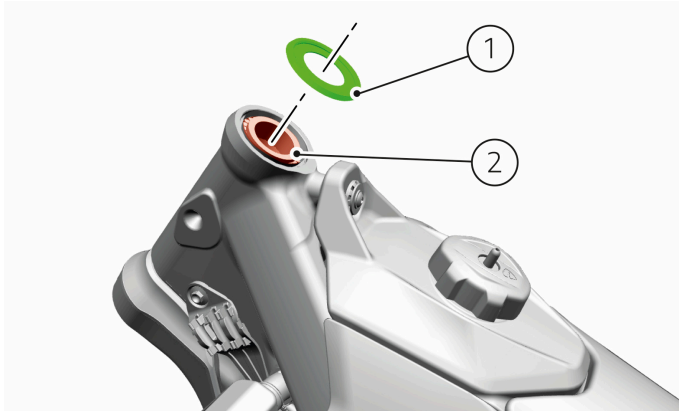



Fig 244

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

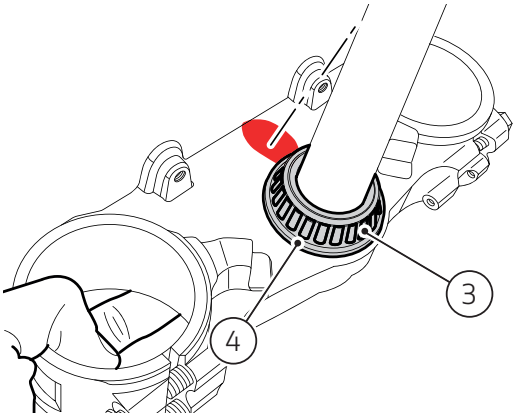



Fig 245

Remove the two bearing races (5).

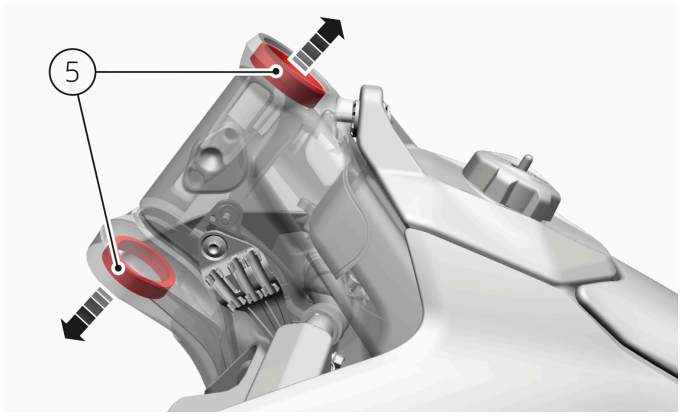



Fig 246

### Assembly

Insert the two bearing races (5).

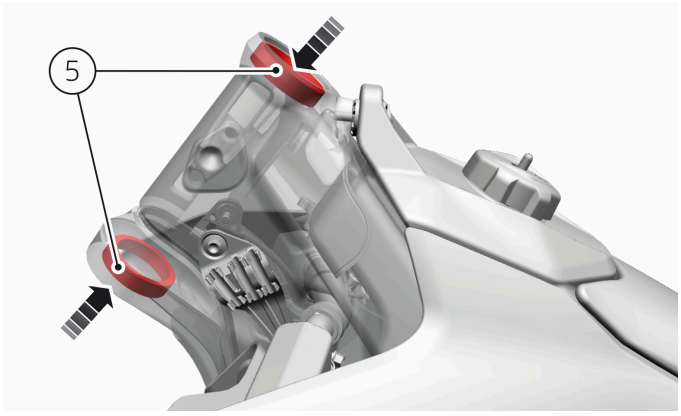



Fig 247

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

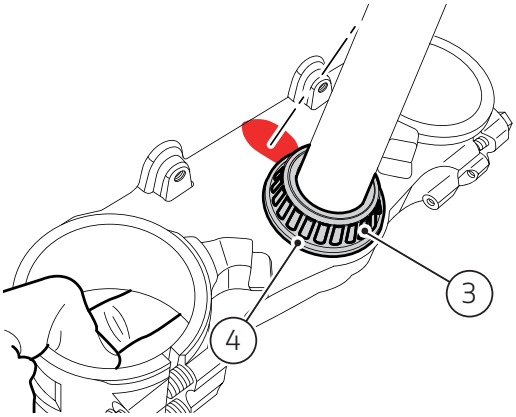



Fig 248

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

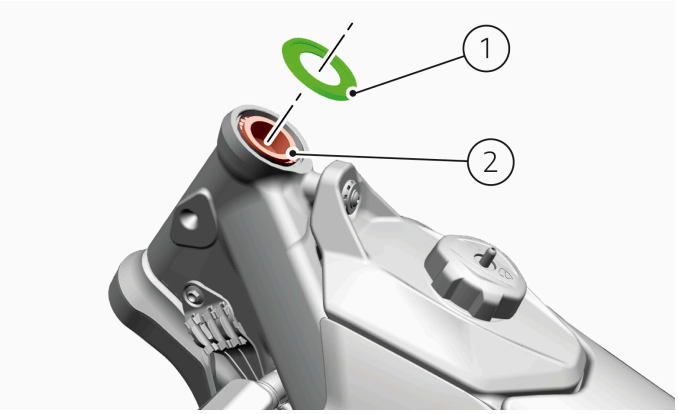



Fig 249

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**
Adjust both fork legs to same settings.

By adjusting the shims (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.

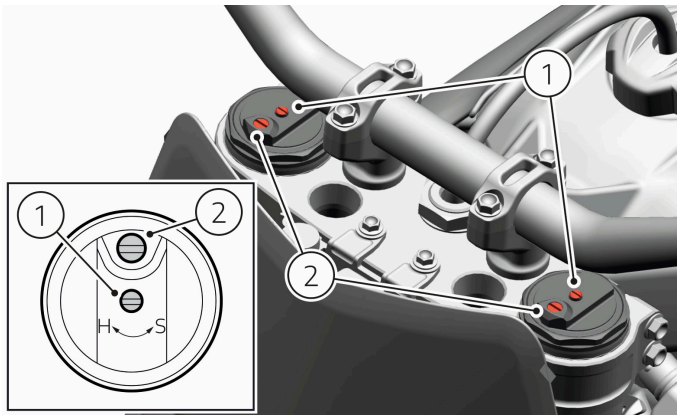



Fig 250

By adjusting the adjusters (3), it is possible to modify the front fork damping during 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.

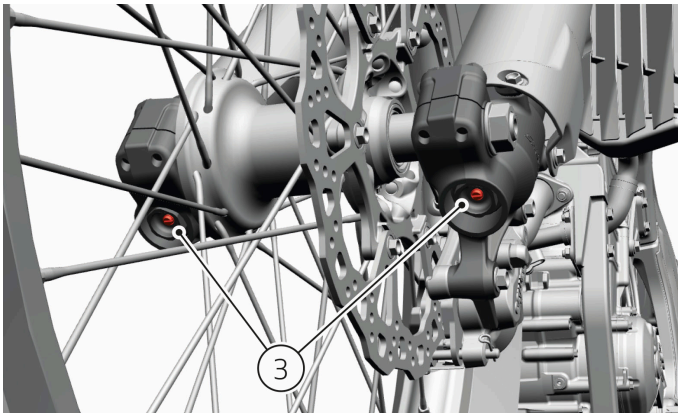



Fig 251

| Front fork adjustment table | | |
|---|---|---|
| Adjuster | Adjustment range | Factory setup (starting from fully closed) |
| Compression adjuster | 16 clicks | 14 clicks |
| Rebound adjuster | 16 clicks | 11 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 centre 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 the 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 calliper (5) retaining screws (6).
Remove the front brake calliper (5) from the left leg bottom end (4).

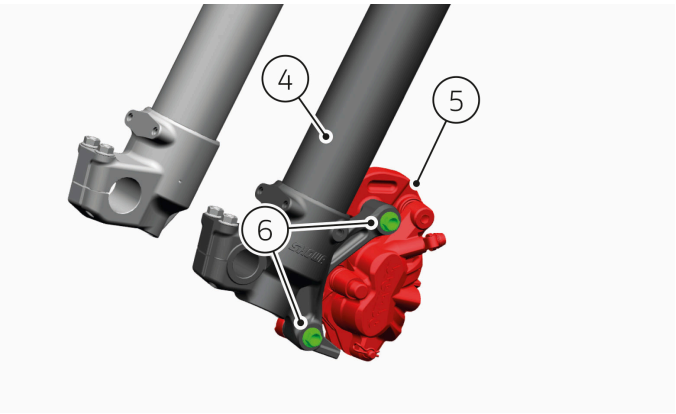



Fig 252

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

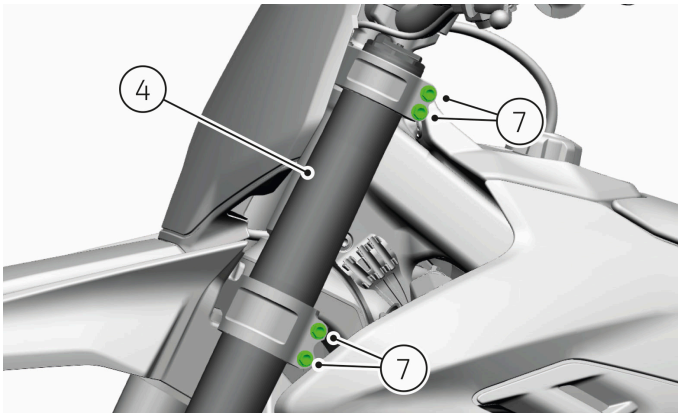



Fig 253

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 calliper (5).

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

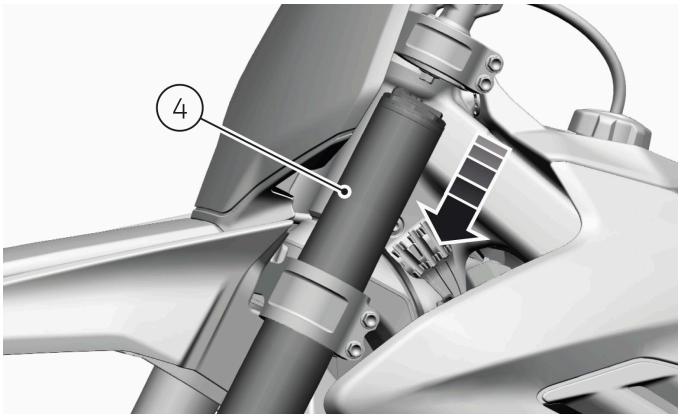



Fig 254

## Refitting the front fork legs

Insert the left fork leg (4) into the steering plates.
Ensure that the front brake hose (8) passes through the inner side of the fork leg and below the lower steering plate.

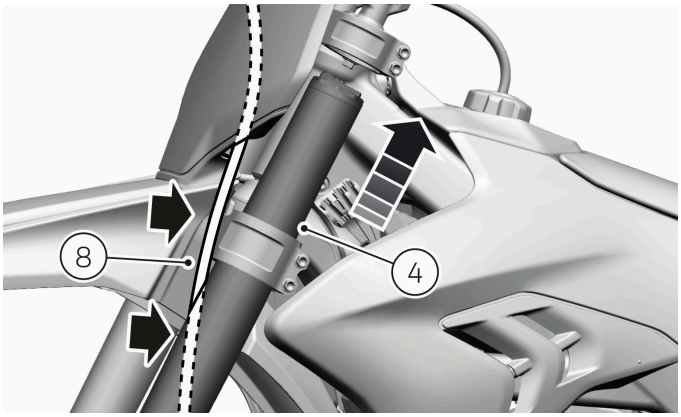



Fig 255

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

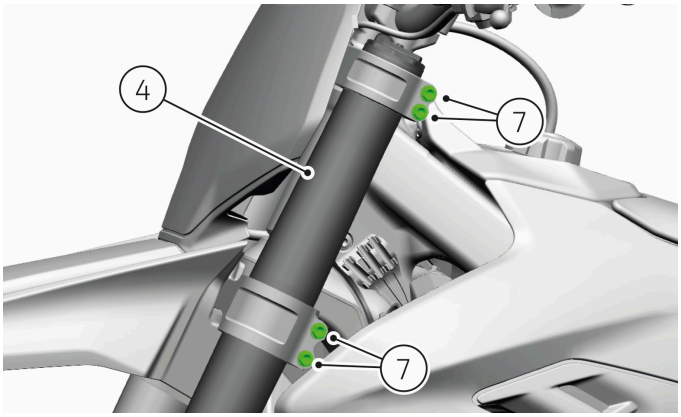



Fig 256

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

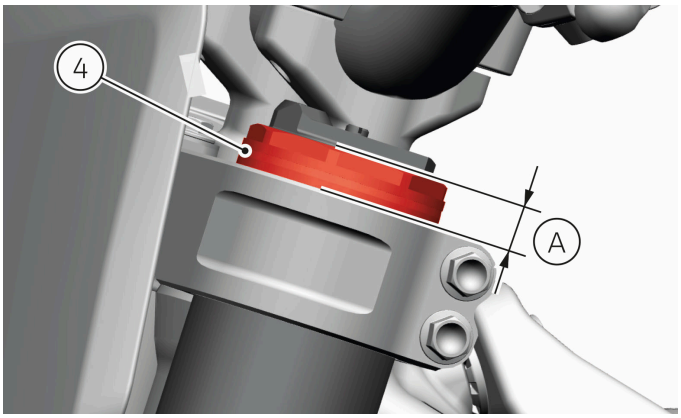



Fig 257

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

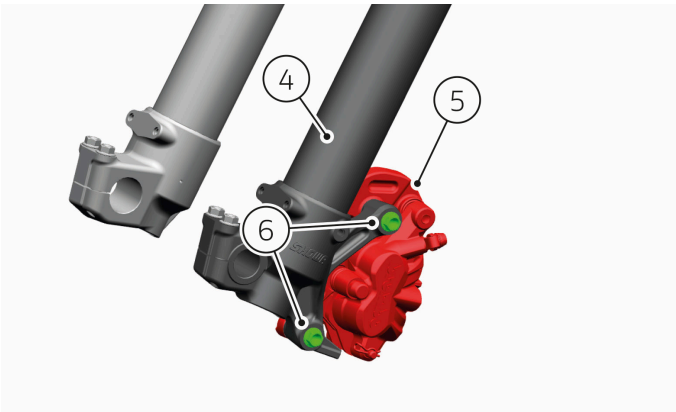



Fig 258

Proceed in the same way for refitting the right fork leg, with the exception of the front brake calliper (5) refitting and piping operations.
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 unskilled persons.

### 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, turn anticlockwise and count the clicks on the adjuster (1) while counting the turns on the adjuster (2).

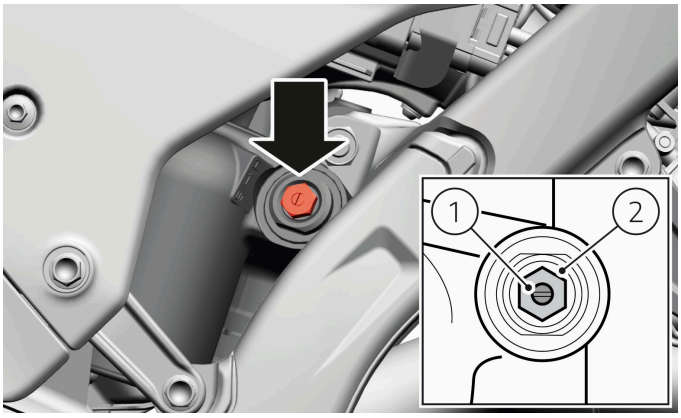



Fig 259

By adjusting the adjuster (7), it is possible to modify the rear shock absorber damping during 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.

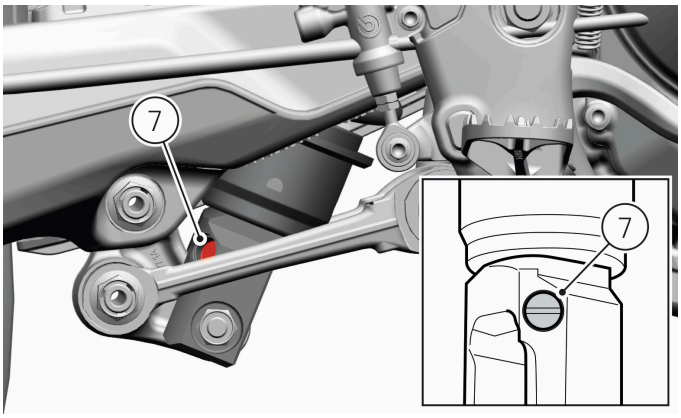



Fig 260

| 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 | 2.75 turns |
| Rebound adjuster | 22 clicks | 15 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 (4) and adjust the ring nut (5) using a special wrench.
Measure the length of the spring (6) when completely uncompressed, then adjust the preload by measuring the mm (in) 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.

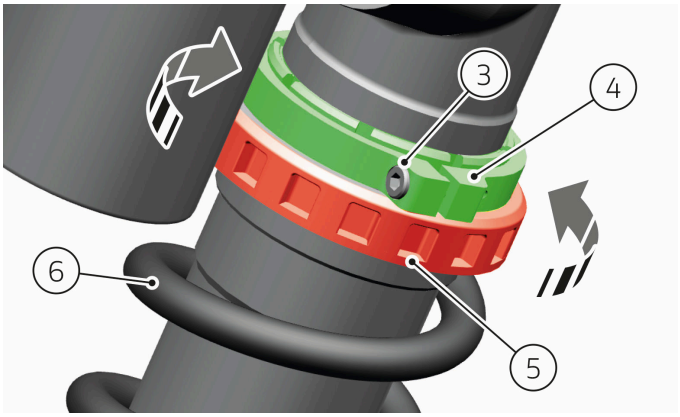



Fig 261

| Spring preload adjustment table | | |
|---|---|---|
| | Adjustment range | Factory setup (from uncompressed spring) |
| Spring preload | 5 mm (0.19 in) min / 20 mm (0.78 in) max | 9.1 mm (0.35 in) |

## Free sag adjustment (static SAG)

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

- Position the motorcycle on a centre stand and measure distance (A);
- Remove the centre 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: 35 - 45 mm (1.37 in - 1.77 in).
If the measured value is less than or greater than the prescribed value, adjust the shock absorber spring preload and take the measurements again.

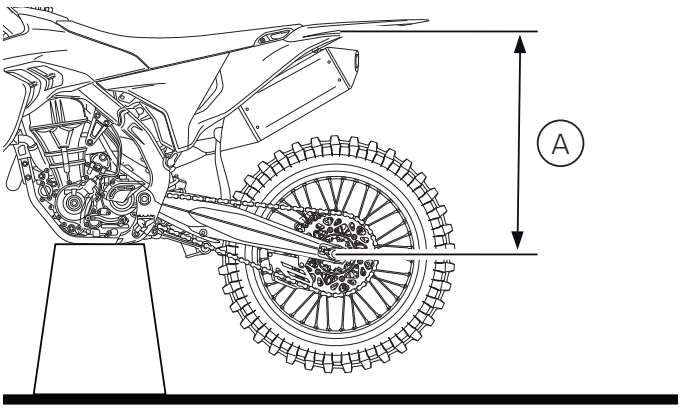



Fig 262

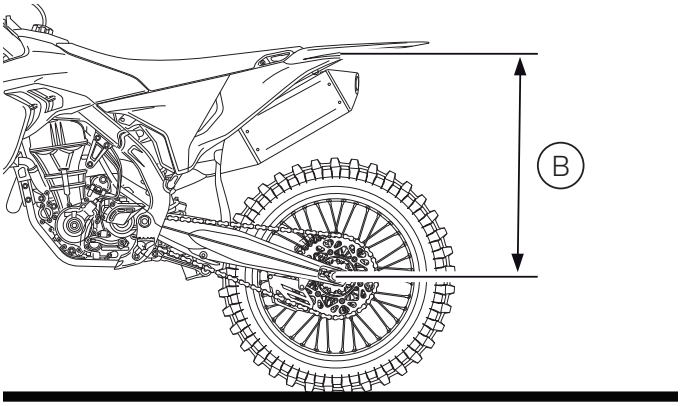



Fig 263

## Rider sag adjustment (dynamic SAG)

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

- Position the motorcycle on a centre stand and measure distance (A);
- Remove the centre 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: 105 - 115 mm (4.13 in - 4.52 in).
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: 44 N/mm.
In this case, contact a Ducati dealer or Authorised Service Centre.

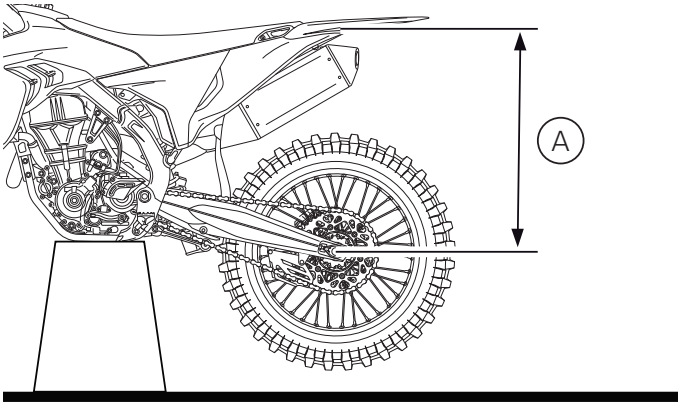



Fig 264

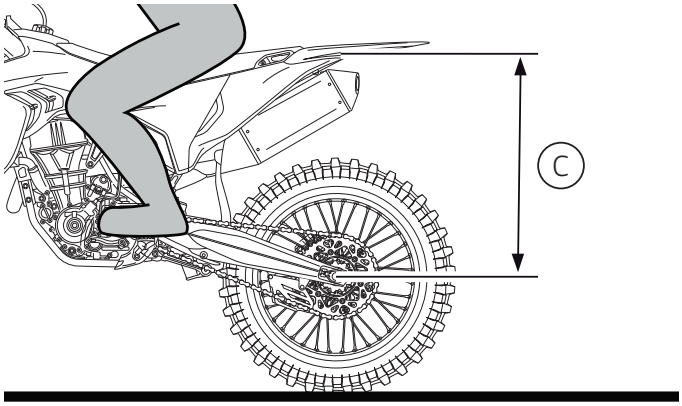



Fig 265

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

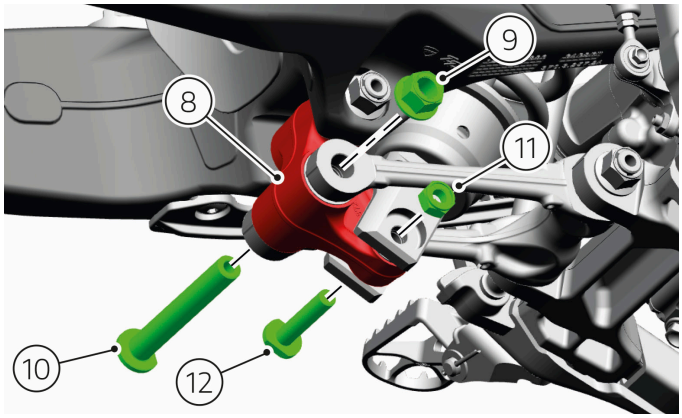



Fig 266

Remove the 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.

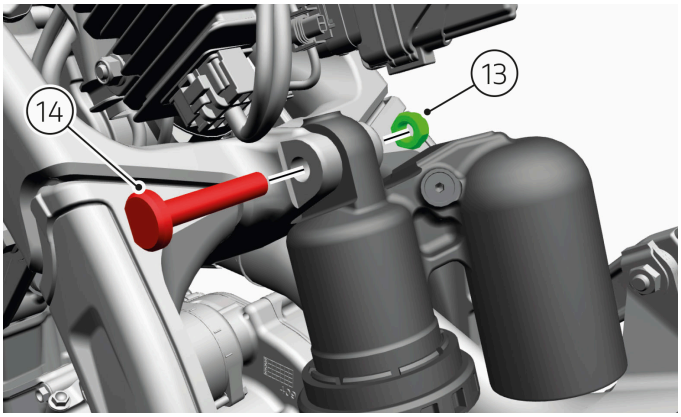



Fig 267

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

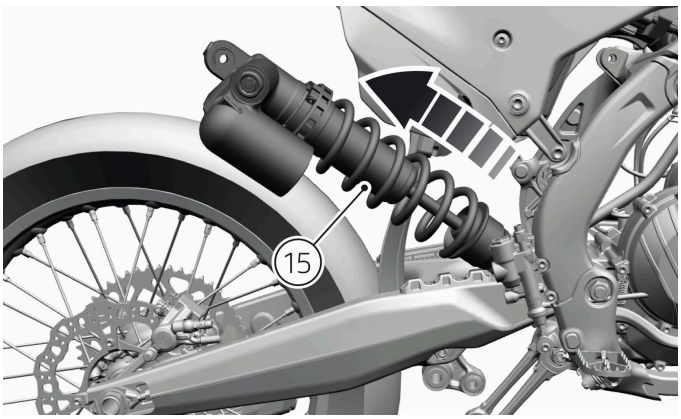



Fig 268

## Refitting the rear shock absorber

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

Refit the pin (14) and nut (13) securing the rear shock absorber to the frame and tighten the nut (13) to a torque of 42 Nm ± 5%.

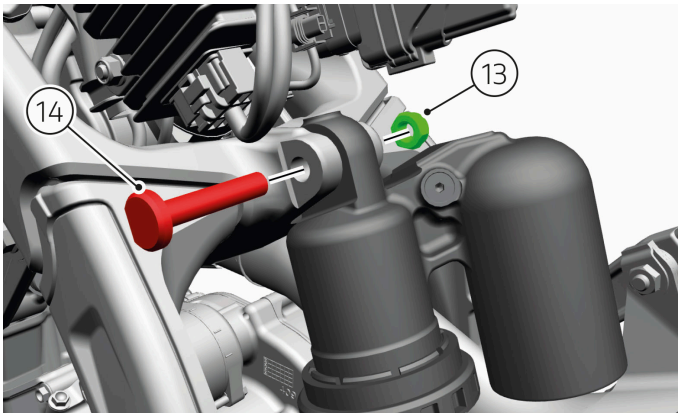



Fig 269

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 pin (12) and nut (11) securing the shock absorber 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”.

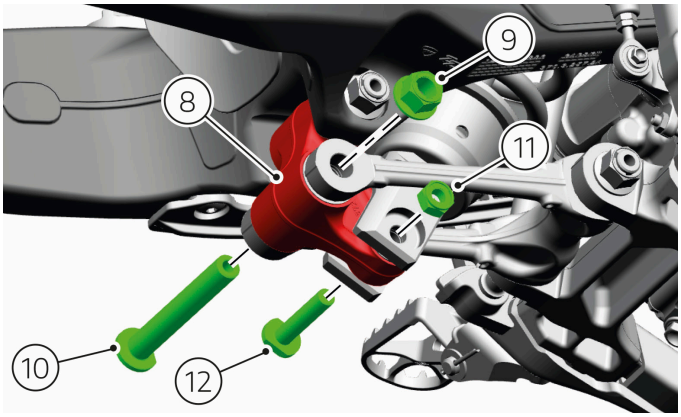



Fig 270

## 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 Authorised Service Centre.

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 Authorised Service Centre.

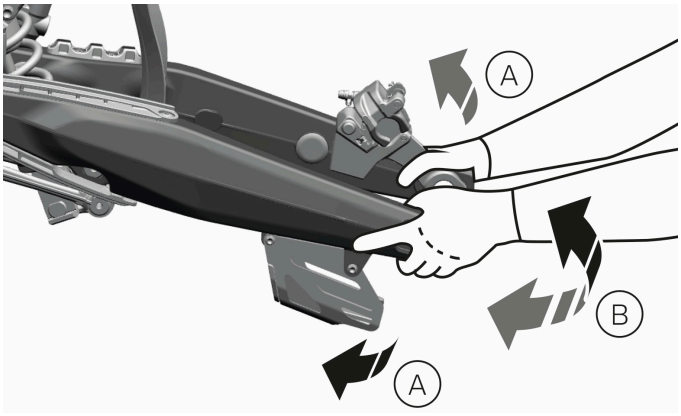



Fig 271

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 centre 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: 60 mm (2.36 in).

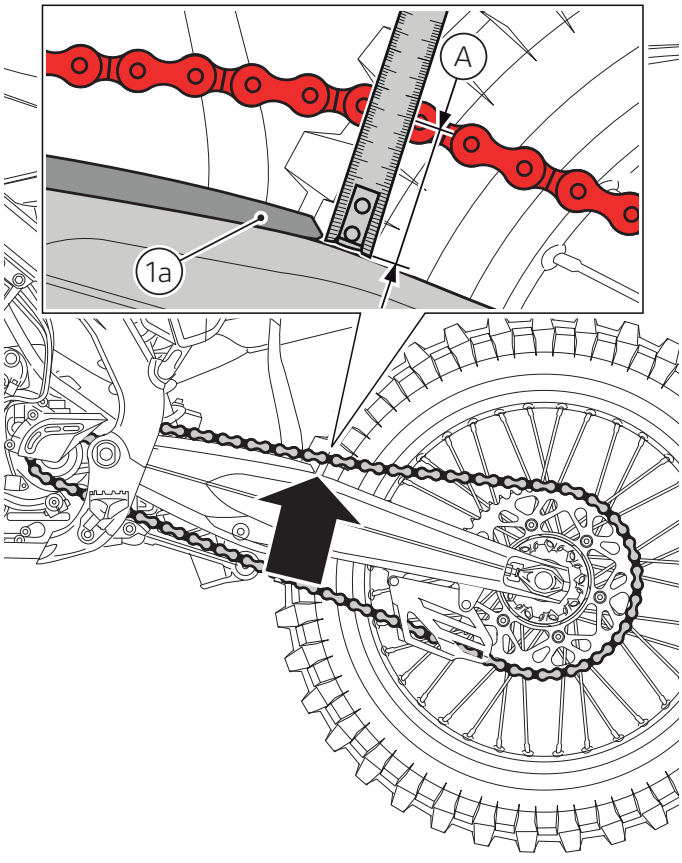



Fig 272

### 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.

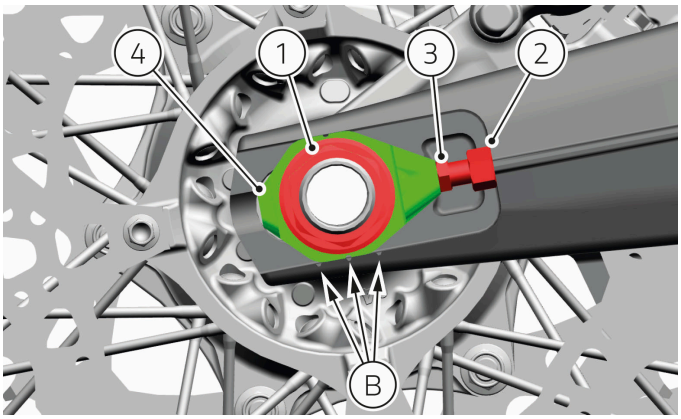



Fig 273

**Attention**

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

**Important**

If drive chain is too tight or slack, adjust tension so as to bring values back to the specified range.

**Important**

Improper chain tension will lead to early 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 30 cm (11.81 in).

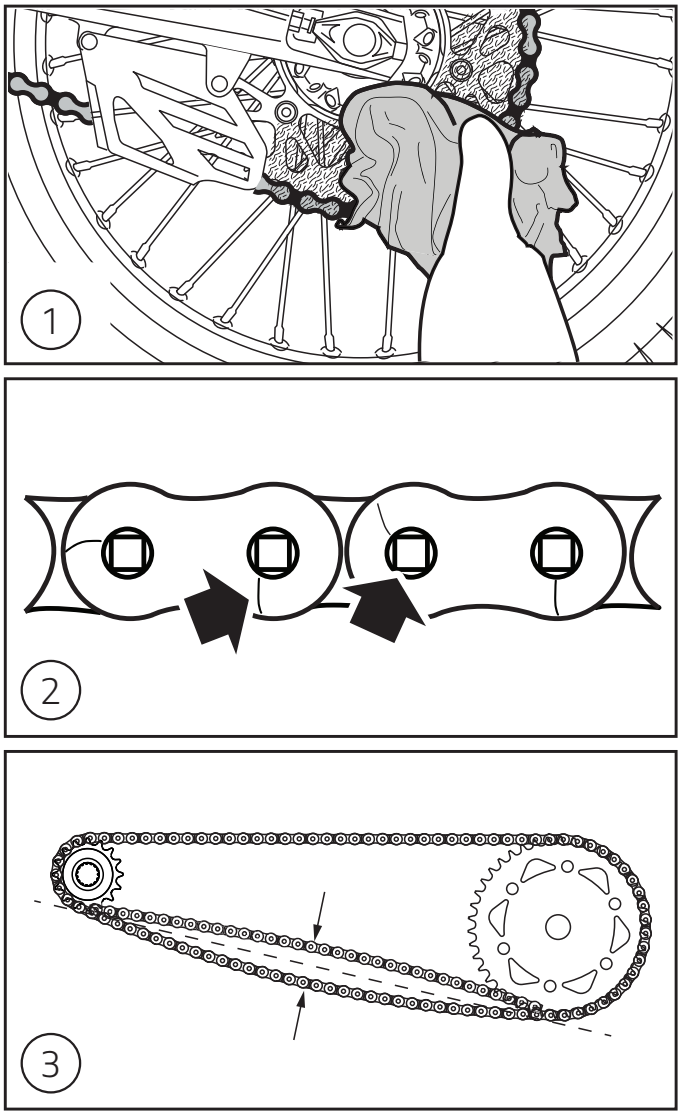



Fig 274

### 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 centre 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.

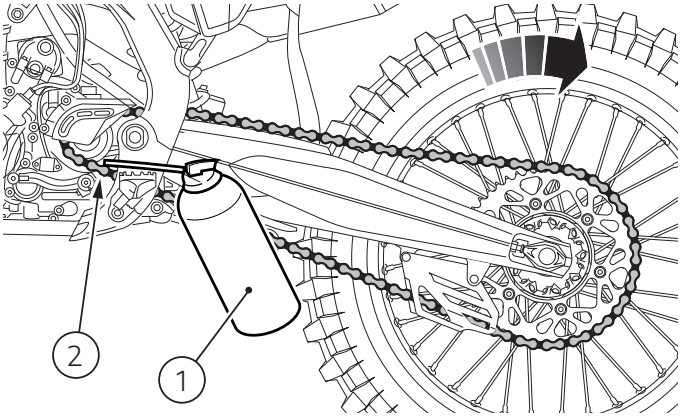



Fig 275

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.

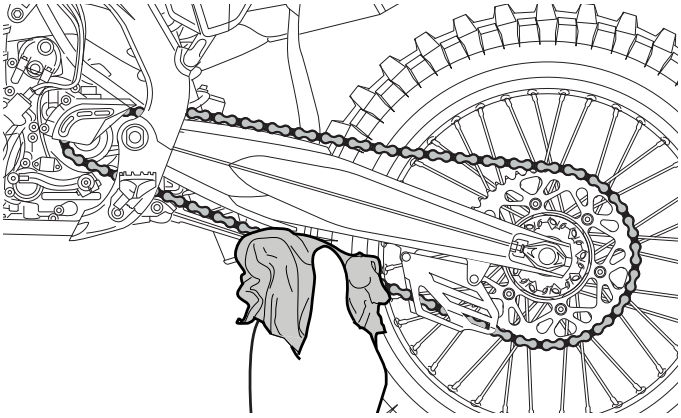


Fig 276

**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 authorised service centre.
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.

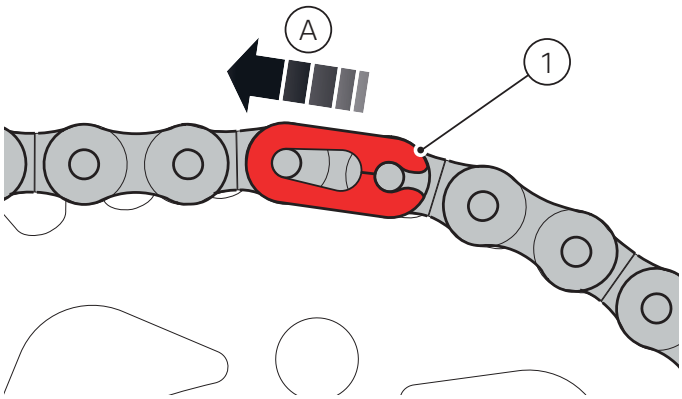



Fig 277

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

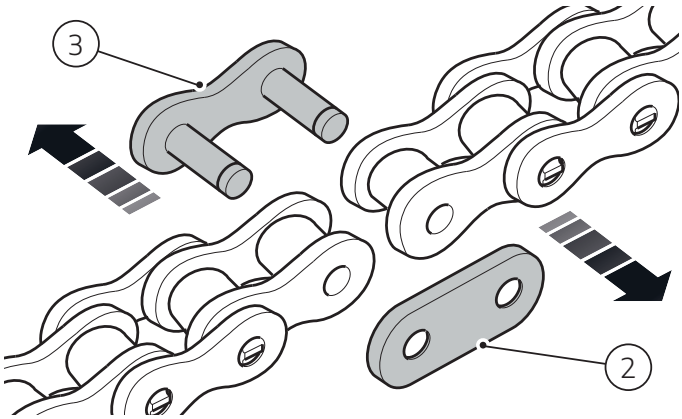



Fig 278

### Refitting the chain

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

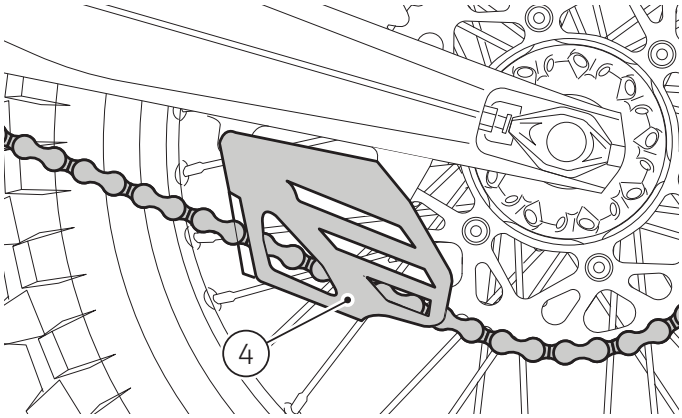



Fig 279

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.

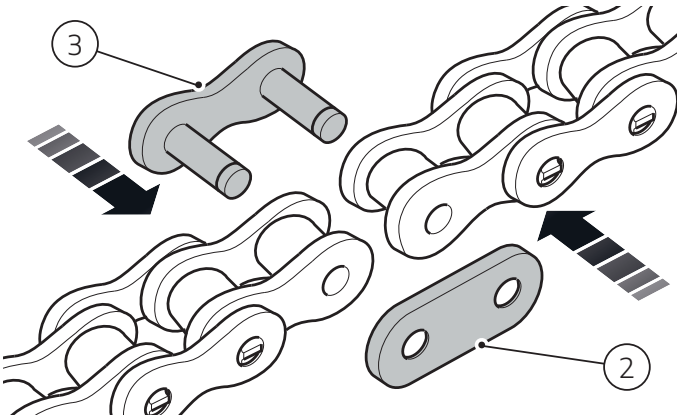



Fig 280

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

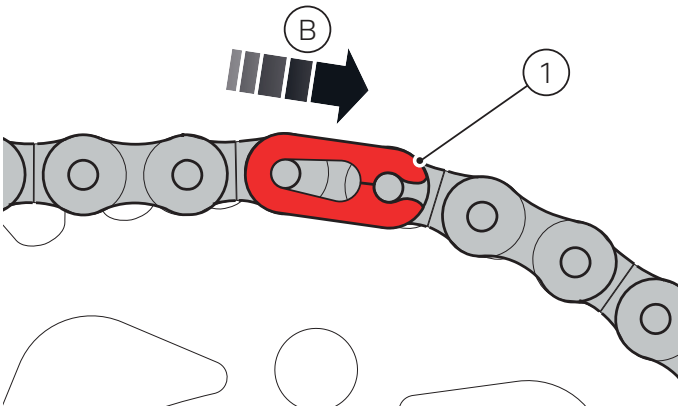



Fig 281

## 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 authorised service centre.
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).

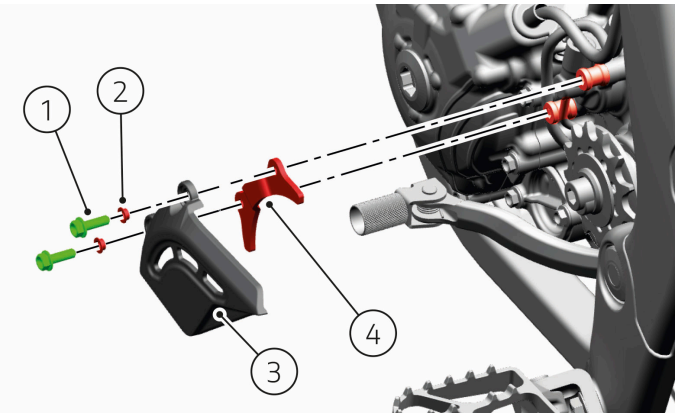



Fig 282

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

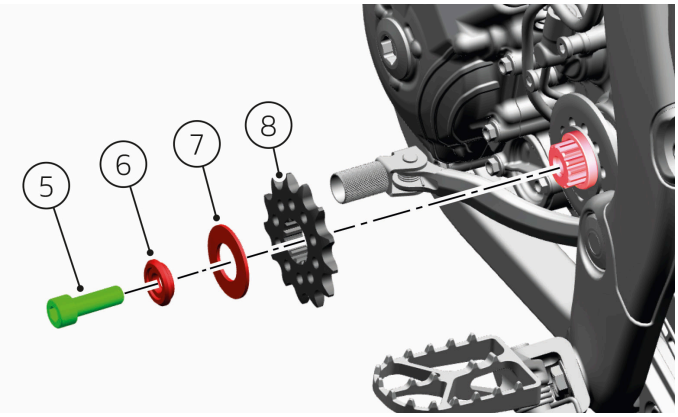



Fig 283

### 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 authorised service centre.
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.

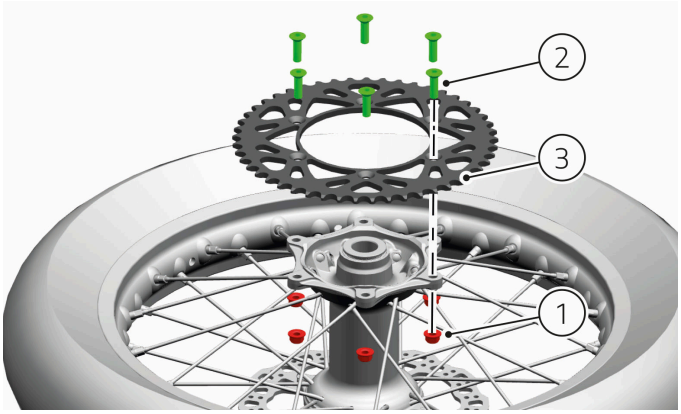



Fig 284

### Refitting the rear sprocket

### Attention

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

Apply Loctite ® 243 ™ to the screw thread (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 Authorised Service Centre.

# Supply system

## Visual inspection of the intake manifold and airbox

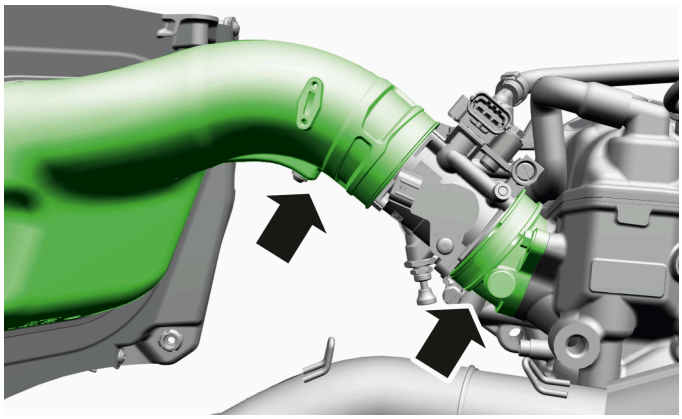


Fig 285

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 Authorised Service Centre.

## 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 authorised service centre.

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).

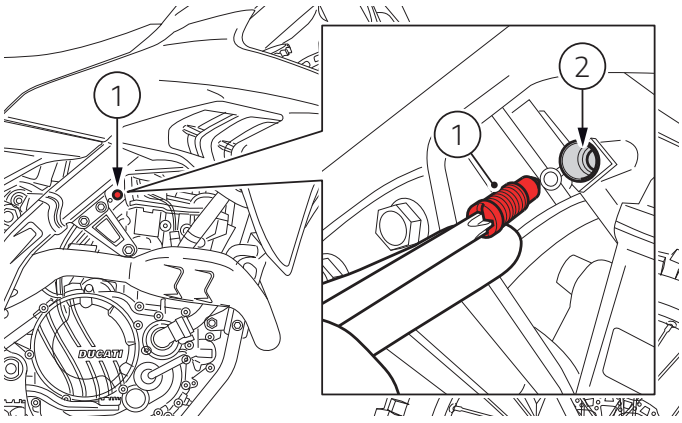



Fig 286

## 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 authorised service centre.

### 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**.

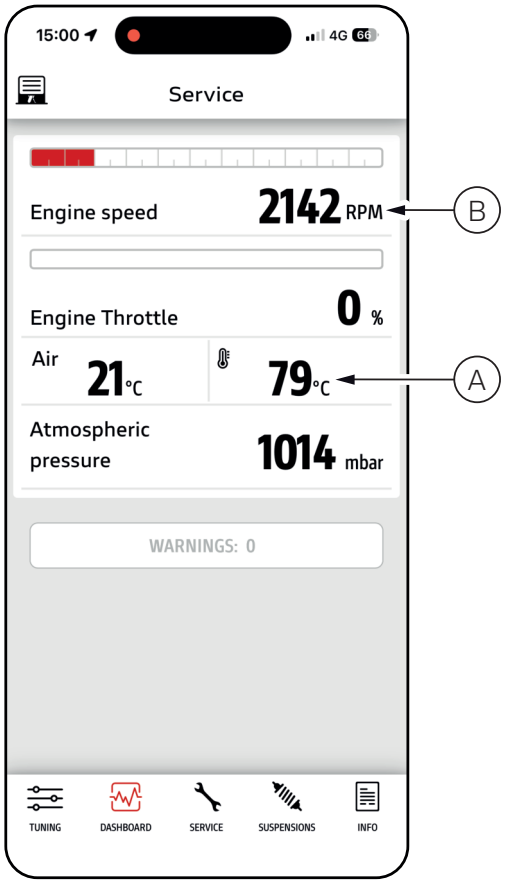



Fig 287

### 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 |

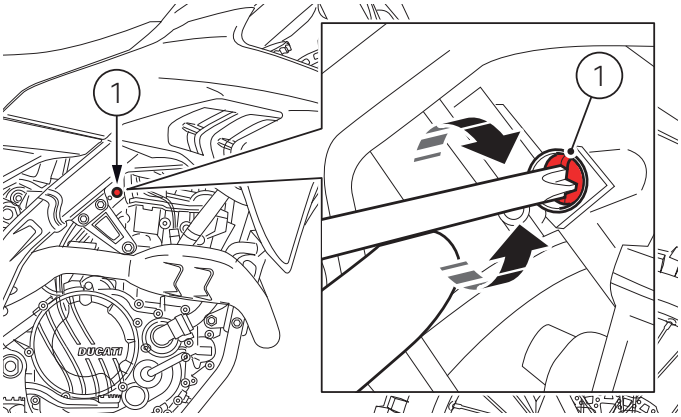



Fig 288

## 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 vapours.
- 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 screws (1) securing the fuel tank (2) on both sides.

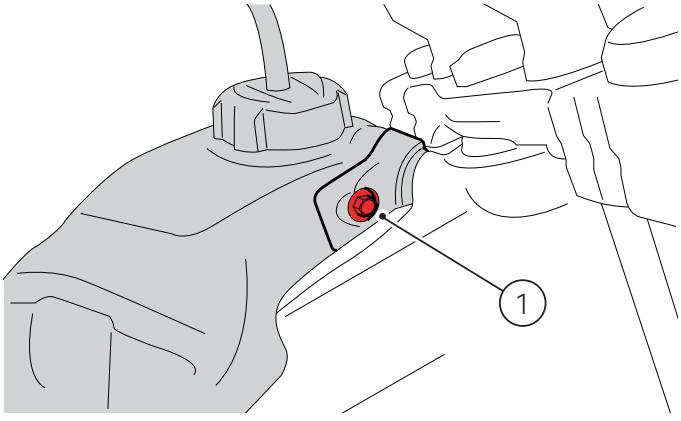



Fig 289

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

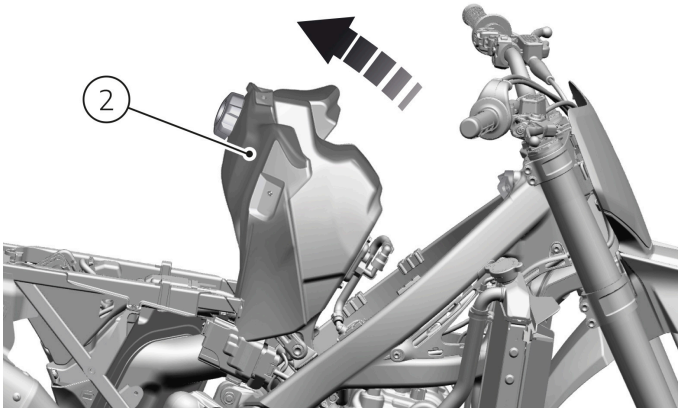



Fig 290

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.

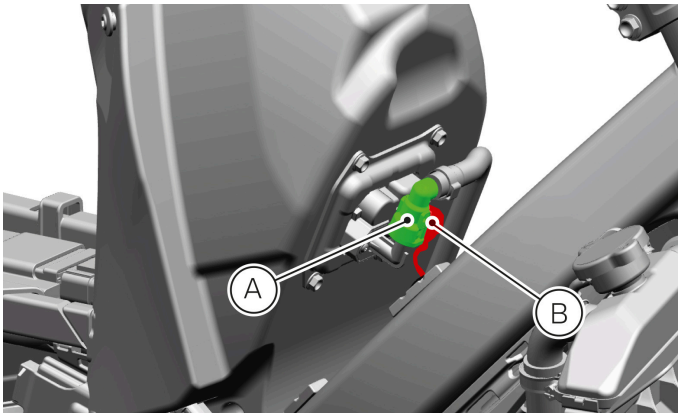



Fig 291

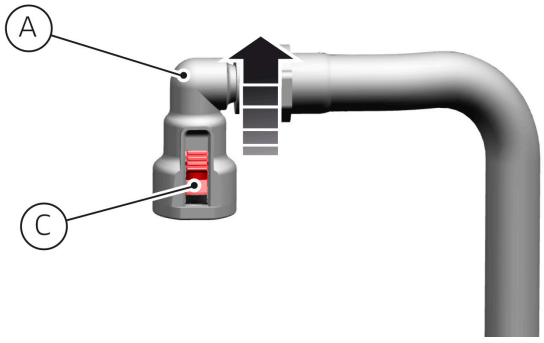



Fig 292

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

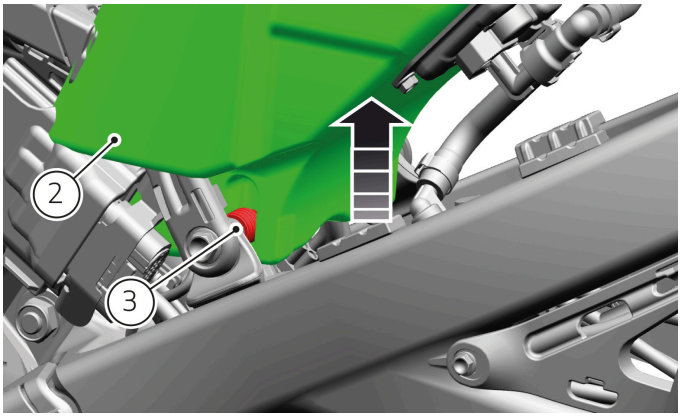



Fig 293

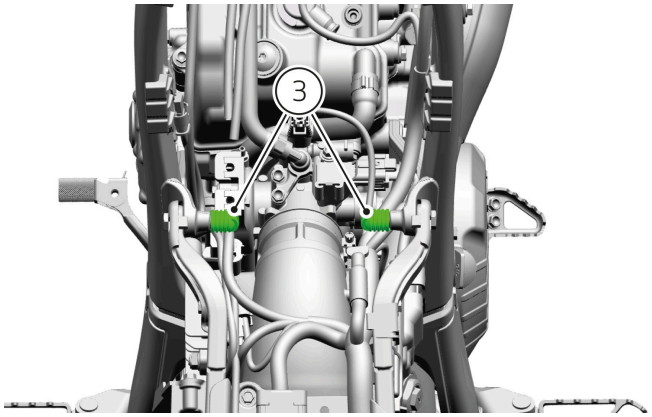



Fig 294

## Refitting

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

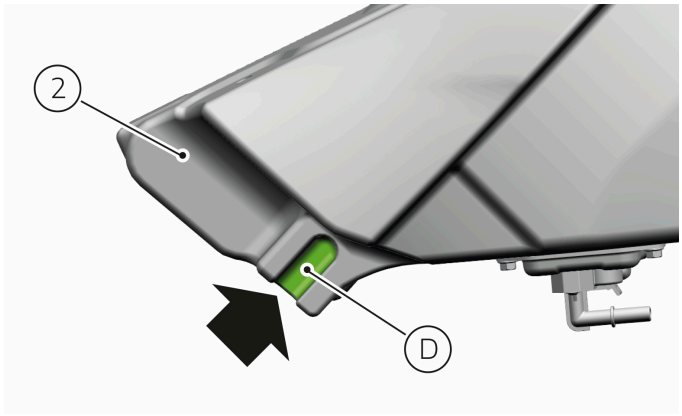



Fig 295

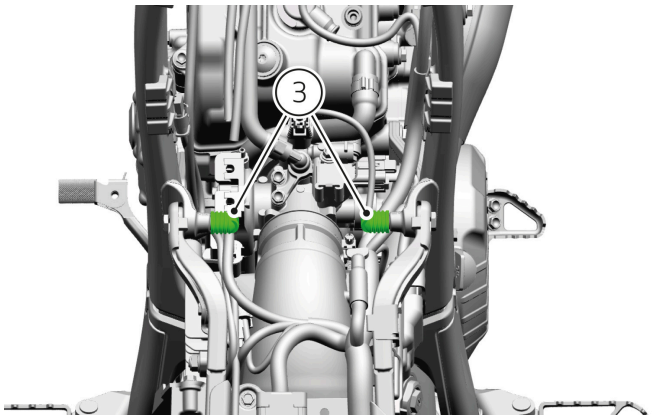



Fig 296

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.

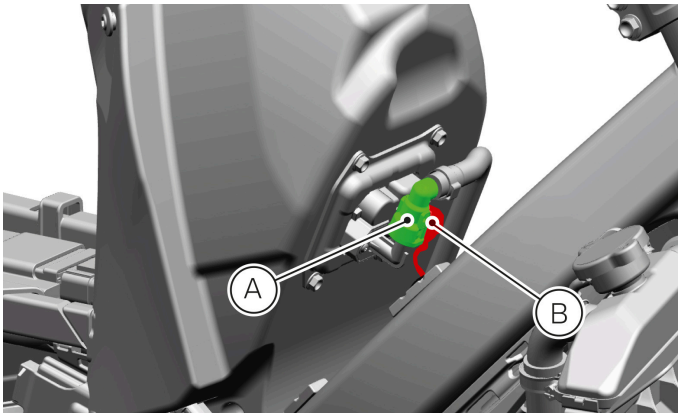



Fig 297

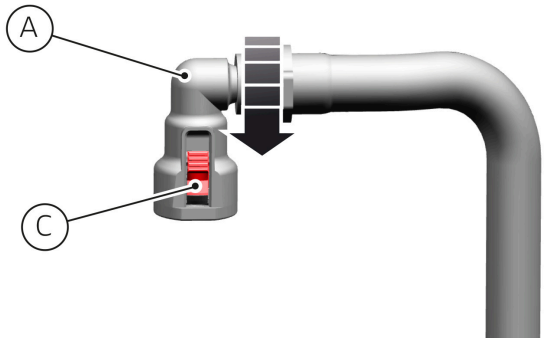



Fig 298

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

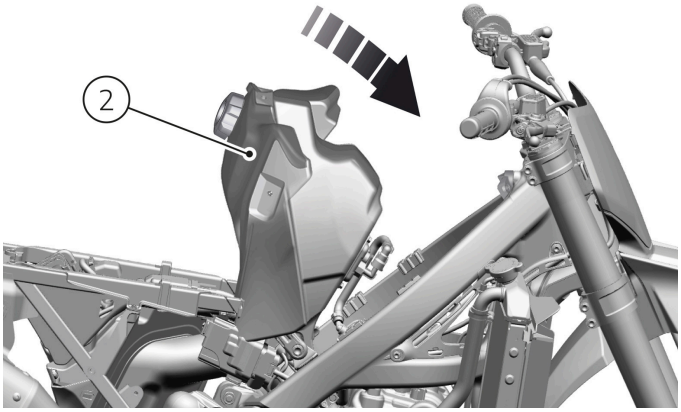



Fig 299

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

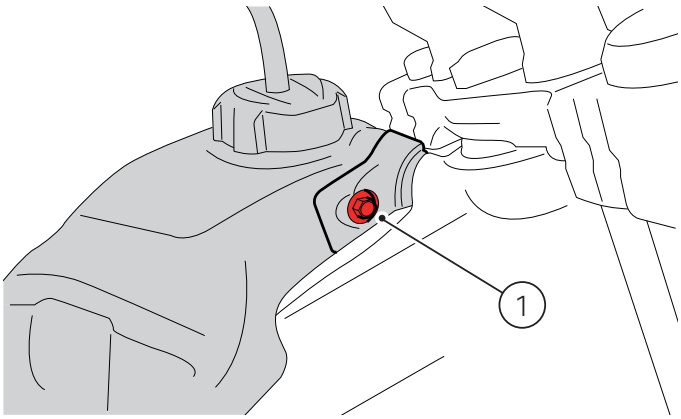



Fig 300

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”.

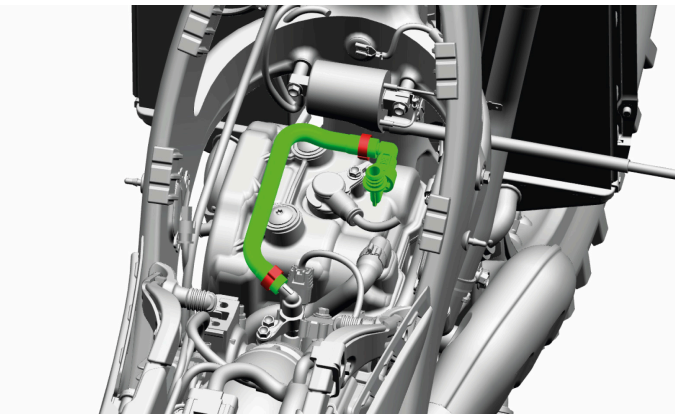


Fig 301

### 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 discolouration.

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.

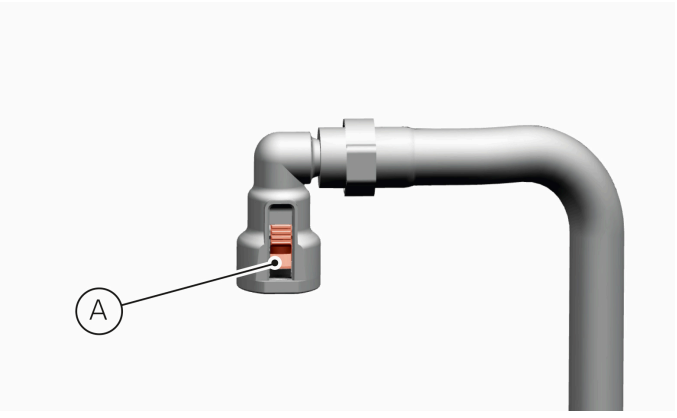



Fig 302

### 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) that connects the silencer to the manifold and the screws (1) and (2) securing the silencer (4).

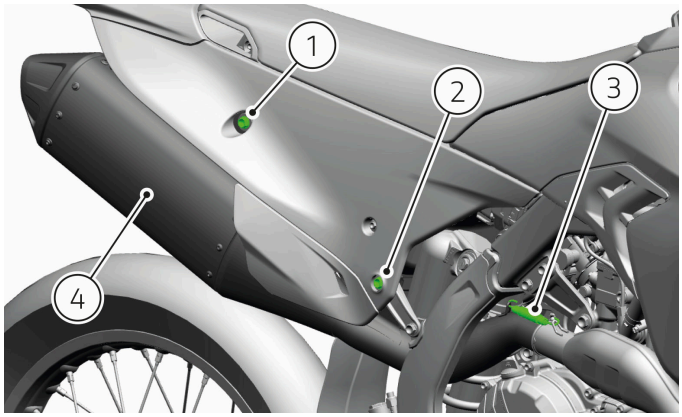



Fig 303

Remove the silencer (4) by pulling it out towards bike rear end.

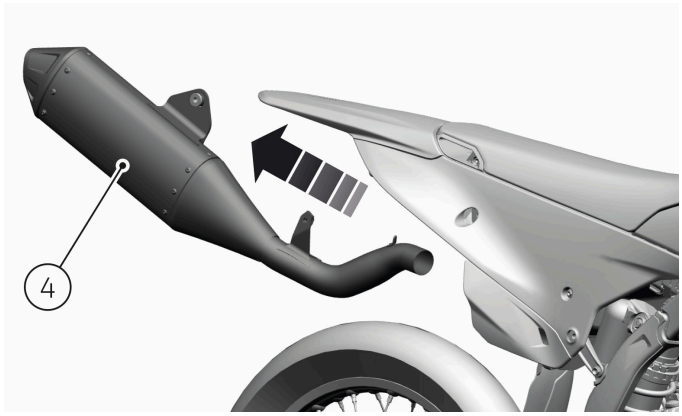



Fig 304

### Refitting the silencer

Reposition the silencer (4) on the vehicle.

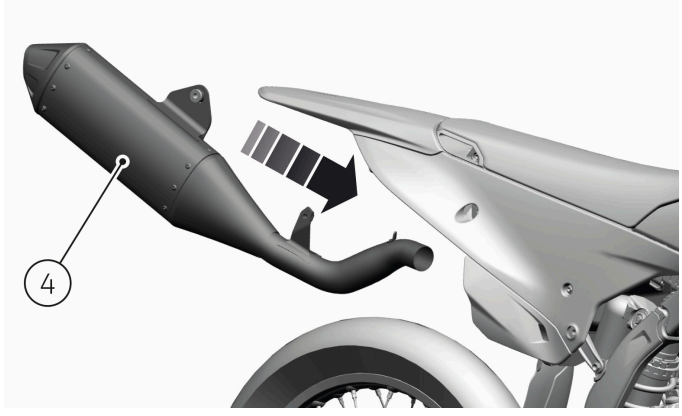



Fig 305

Reconnect the silencer (4) to the exhaust manifold and make sure it is fully home on it.
Position the screws (1) and (2) without tightening.
Refit the spring (3) that connects the silencer (4) to the manifold and tighten the screws (1) and (2) to a torque of 20 Nm ± 10%.

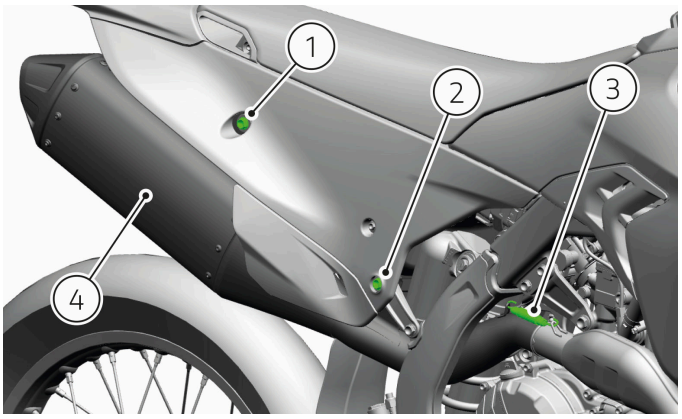



Fig 306

## 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.

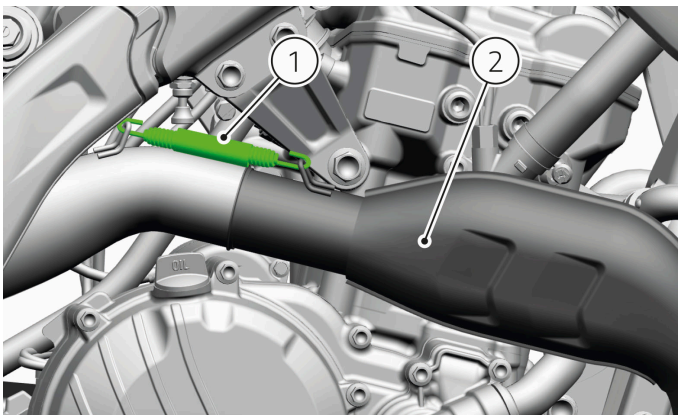



Fig 307

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

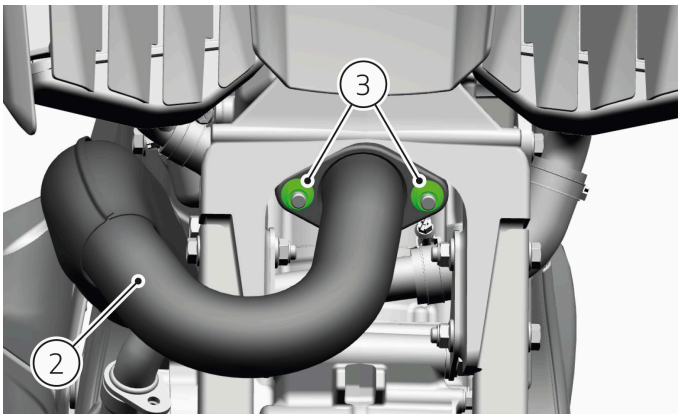



Fig 308

Remove the exhaust manifold (2).

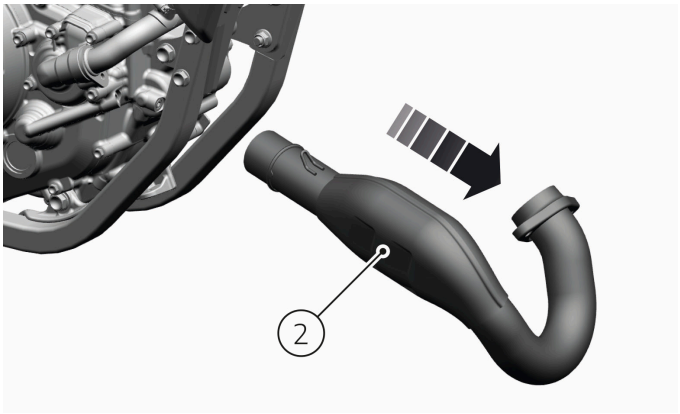



Fig 309

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

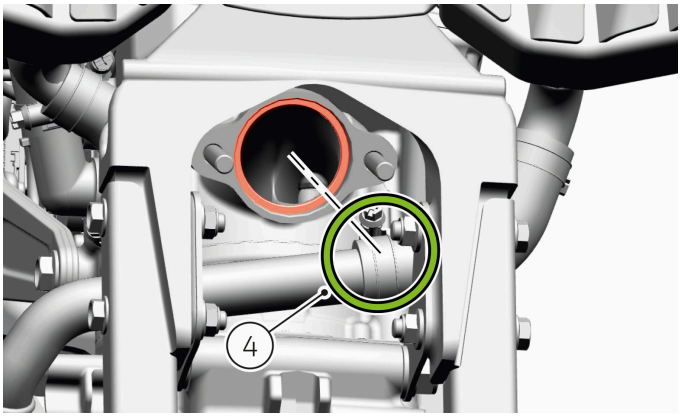



Fig 310

## Refitting the manifold

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

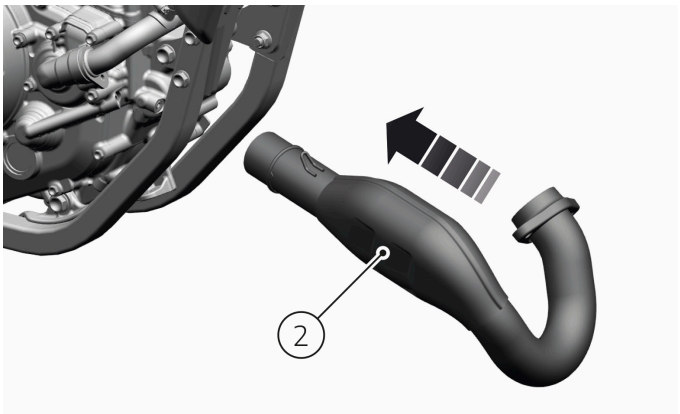



Fig 311

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

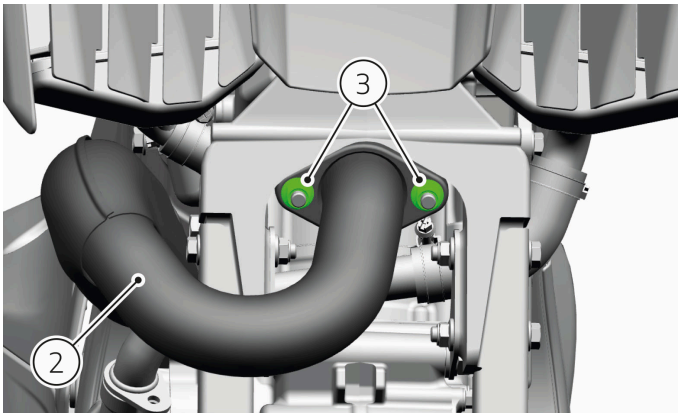



Fig 312

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

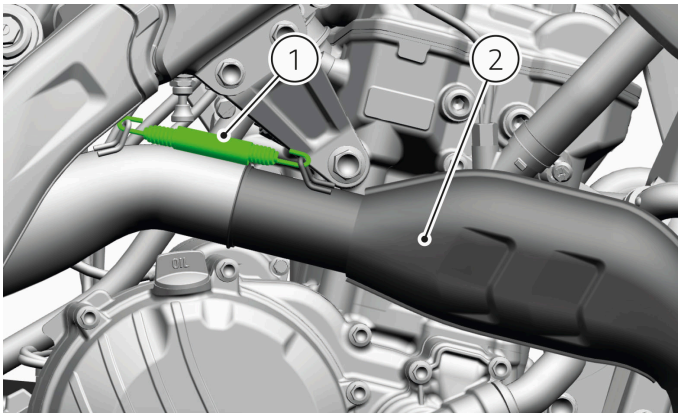



Fig 313

## 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).

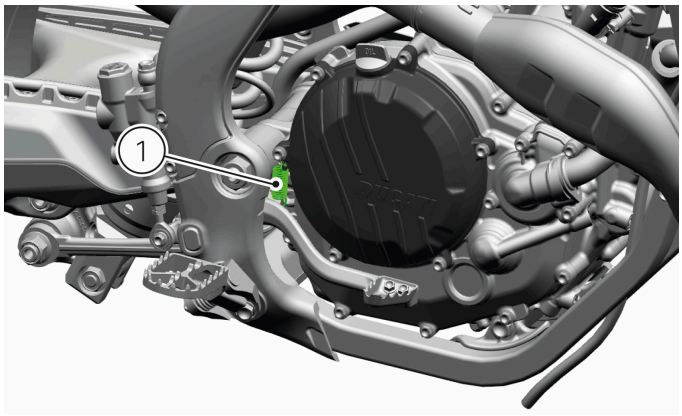



Fig 314

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

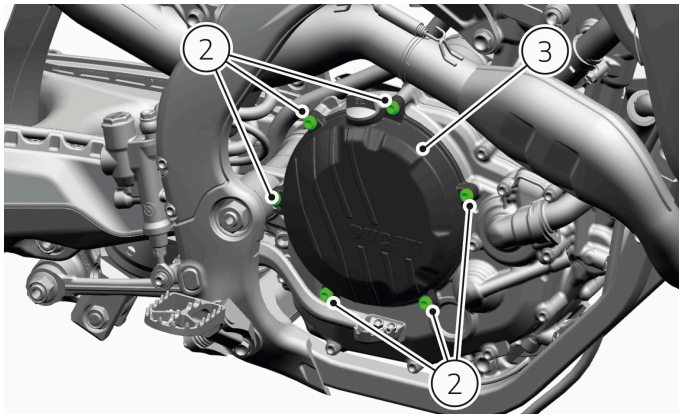



Fig 315

Loosen screws (4) retaining the Belleville washer (5). Remove the pre-load plate (A) and the Belleville washer (5).

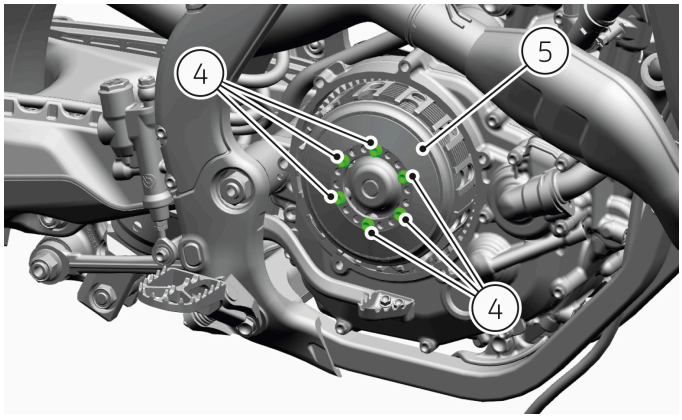



Fig 316

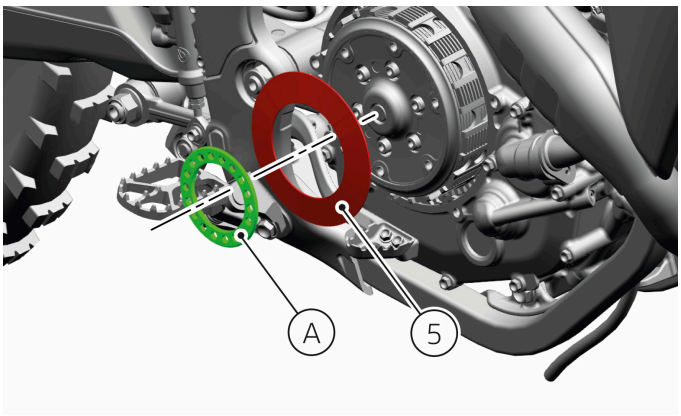



Fig 317

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

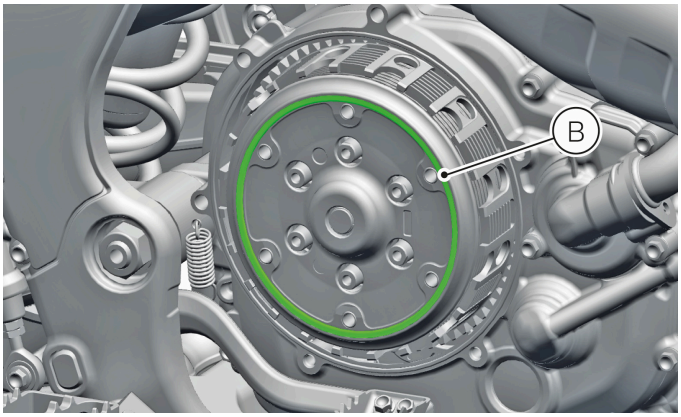



Fig 318

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

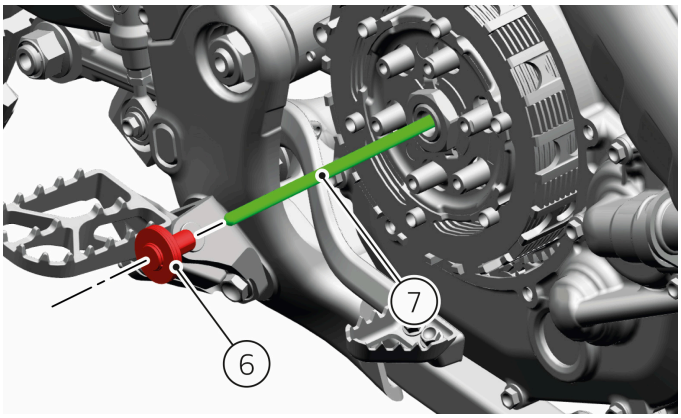



Fig 319

Remove the clutch drive pins (8).

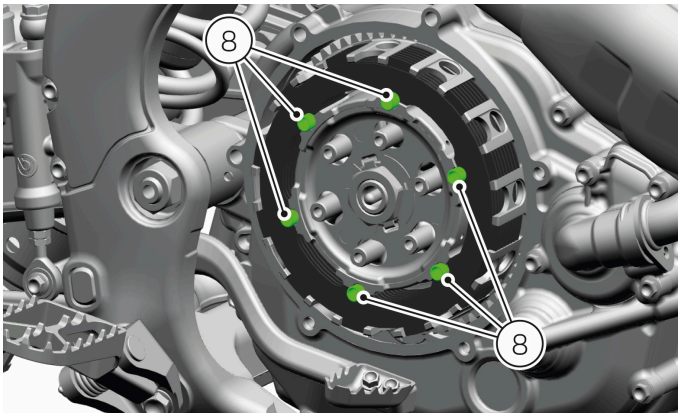



Fig 320

Remove the driven and driving clutch plates.

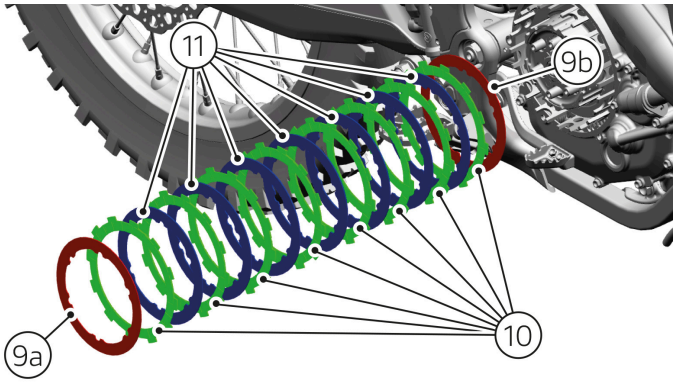



Fig 321

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

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

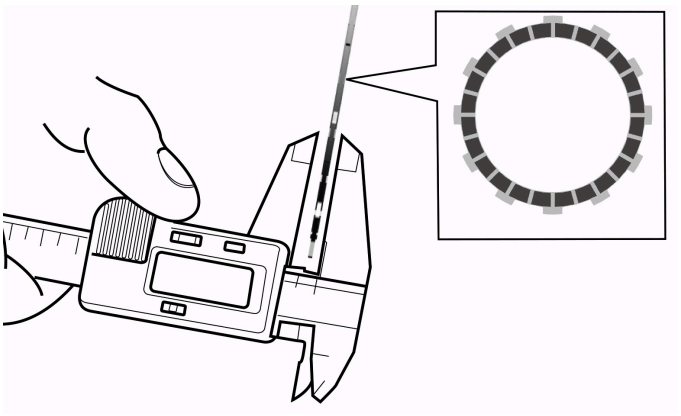


Fig 322

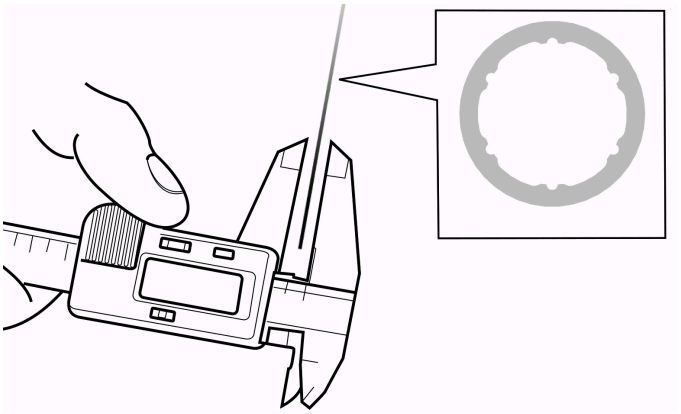


Fig 323

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.

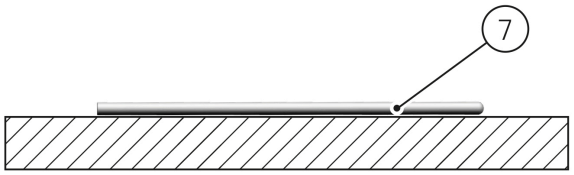



Fig 324

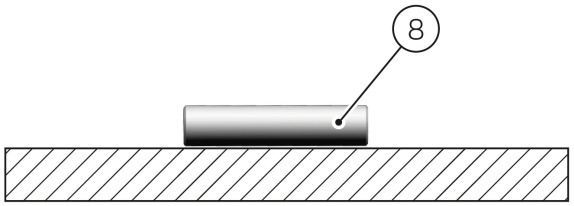



Fig 325

## Refitting the clutch plates

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

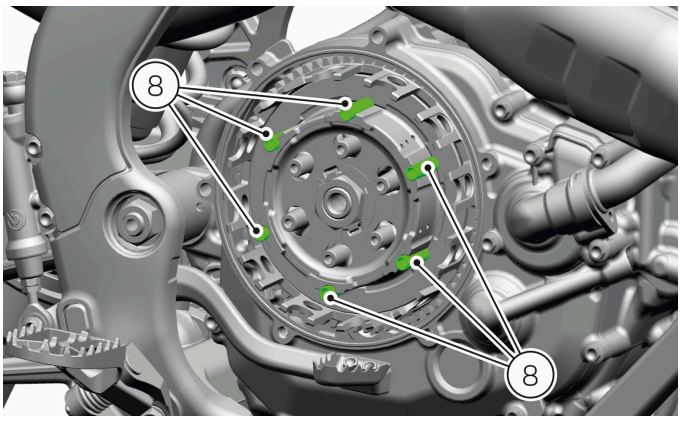



Fig 326

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

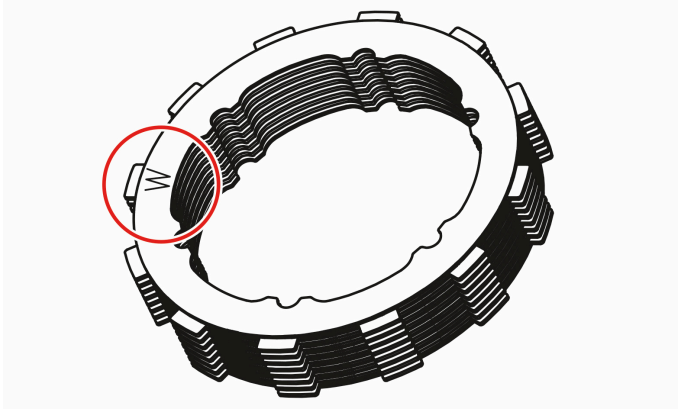



Fig 327

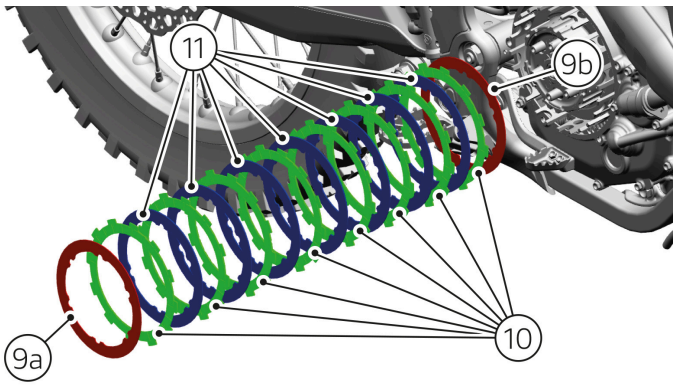



Fig 328

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

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

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

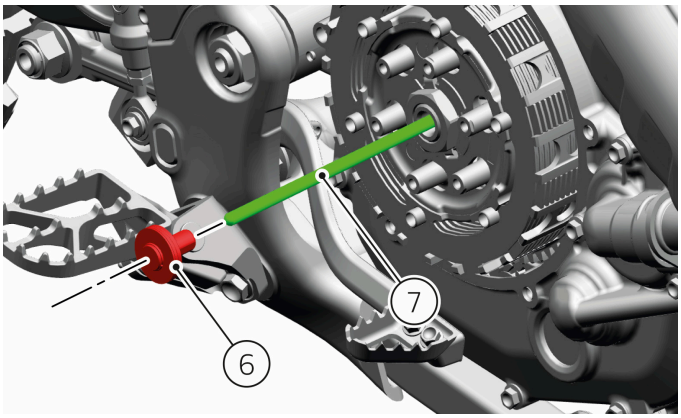



Fig 329

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.

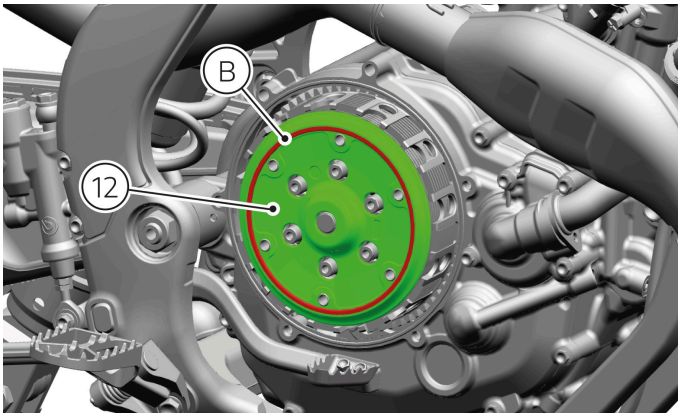



Fig 330

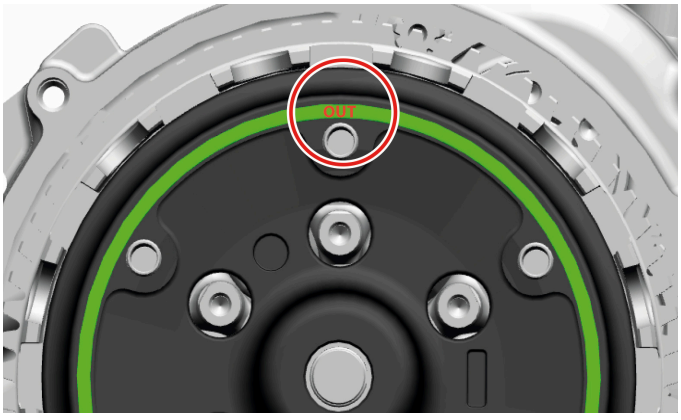



Fig 331

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

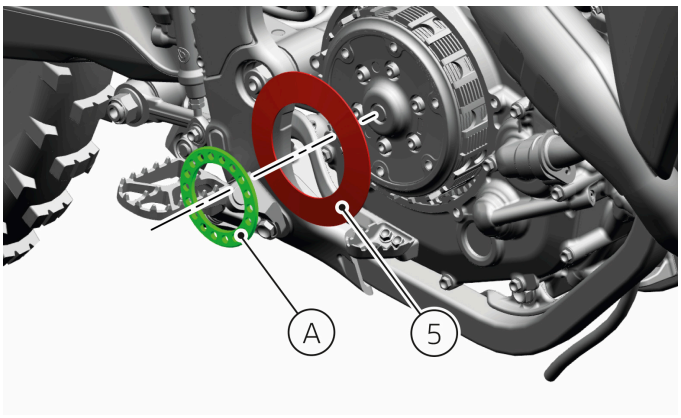



Fig 332

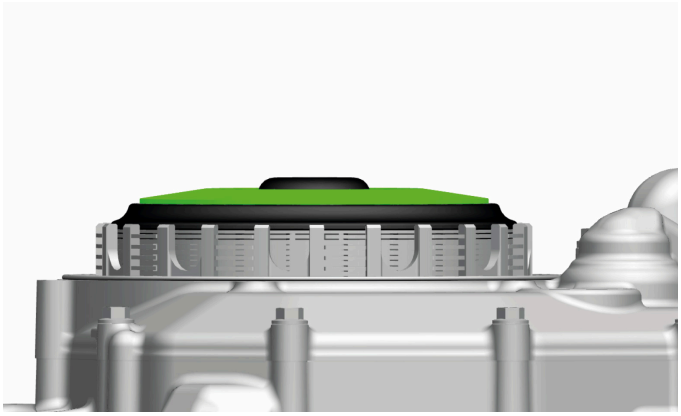


Fig 333

Start the screws (4), centring 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) following a cross pattern.

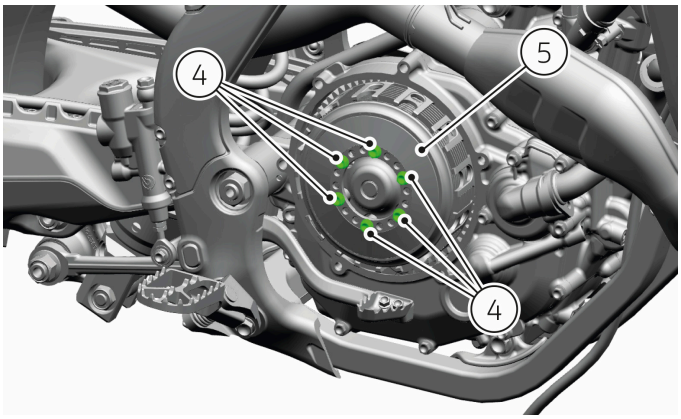



Fig 334

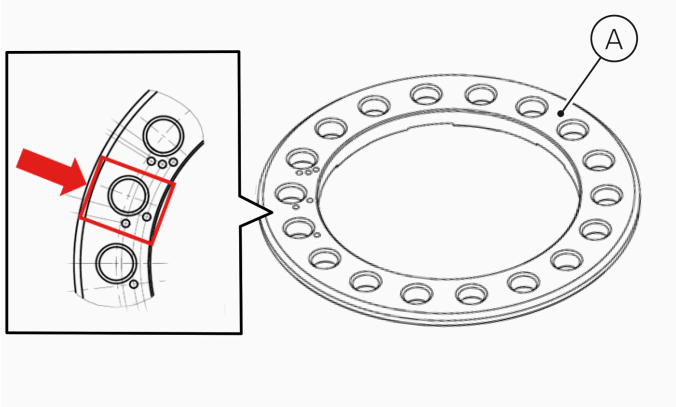



Fig 335

**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.

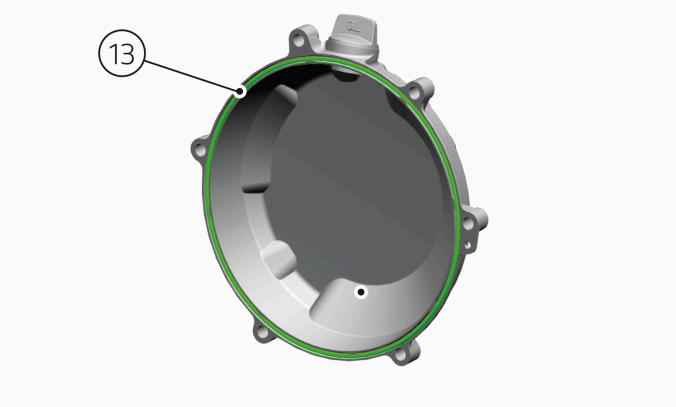



Fig 336

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.

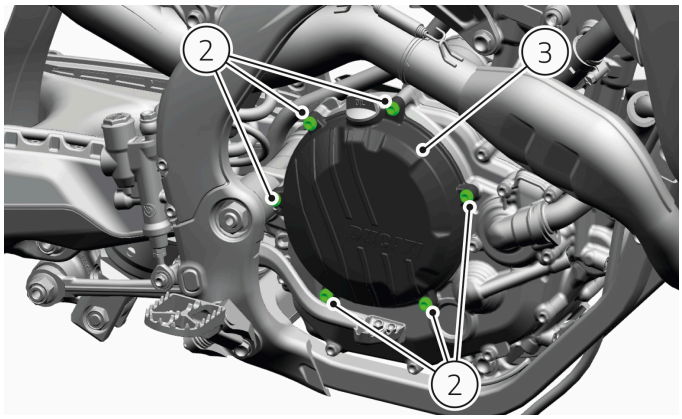



Fig 337

Refit the brake control spring (1).

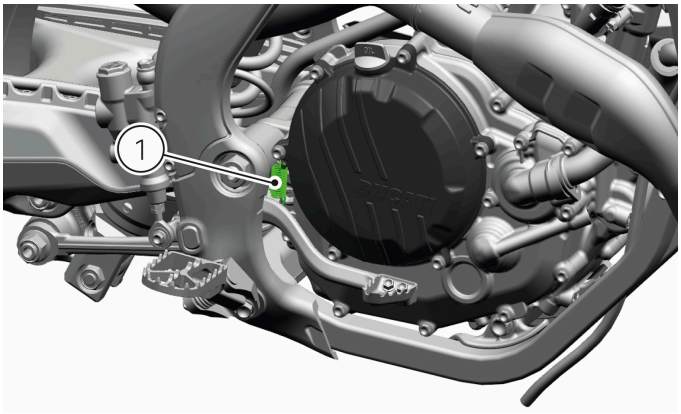



Fig 338

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).

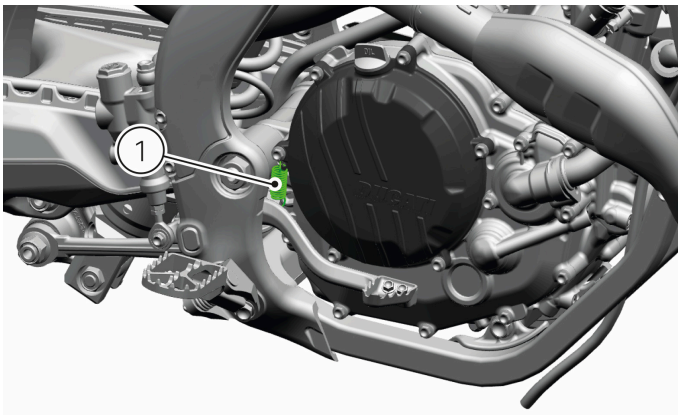



Fig 339

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

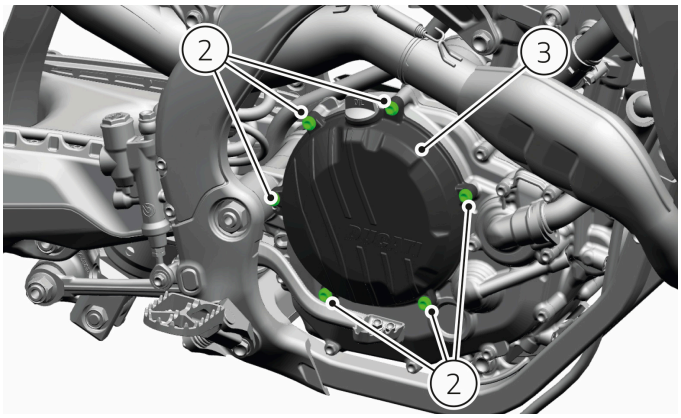



Fig 340

### 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).

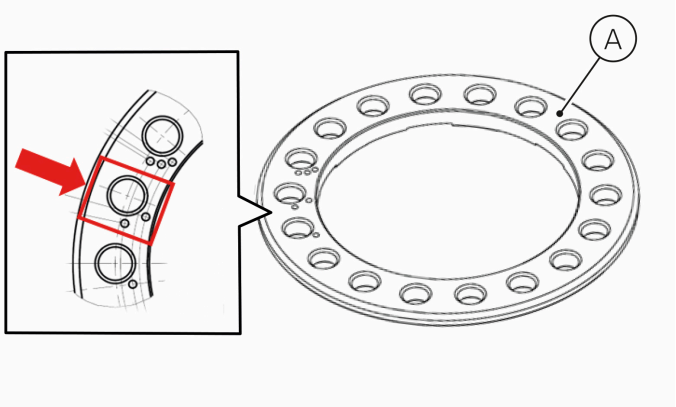



Fig 341

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÷0.1 mm (0÷0.004 in), 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 | 27.4 ± 0.25 mm (1,079 ± 0,009 in) |
| The total thickness of clutch plate pack must not be less than (maximum wear) | 26.35 mm (1,037 in) |

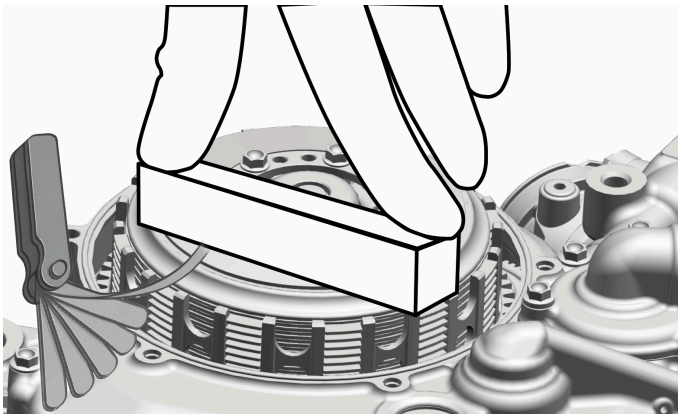


Fig 342

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

- loosen the screws (4) that retain the Belleville washer (5);
- remove the pre-load 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.

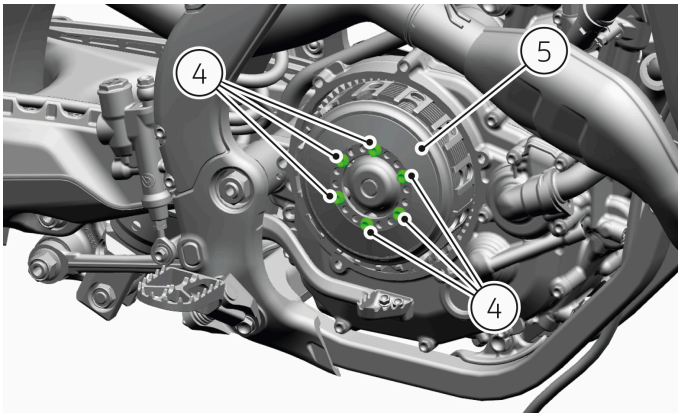



Fig 343

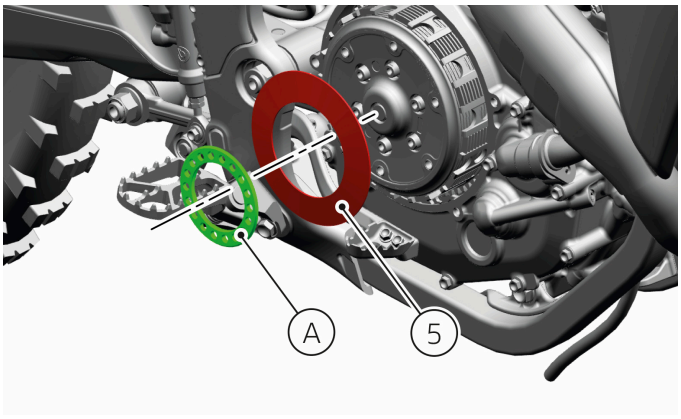



Fig 344

**Refitting**

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

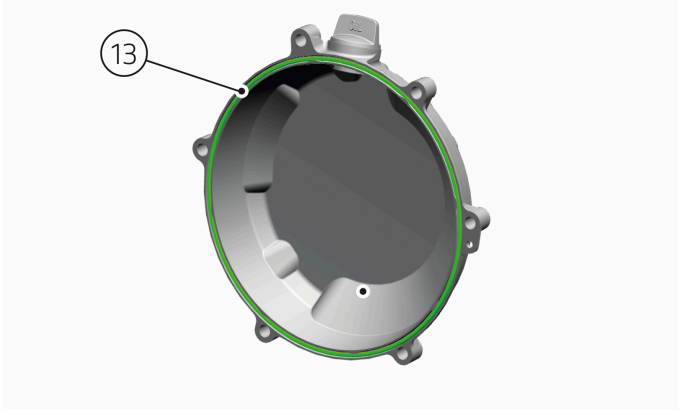



Fig 345

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.

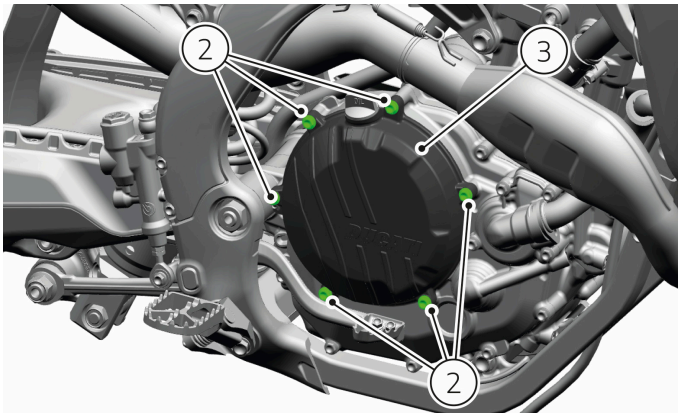



Fig 346

Refit the brake control spring (1).

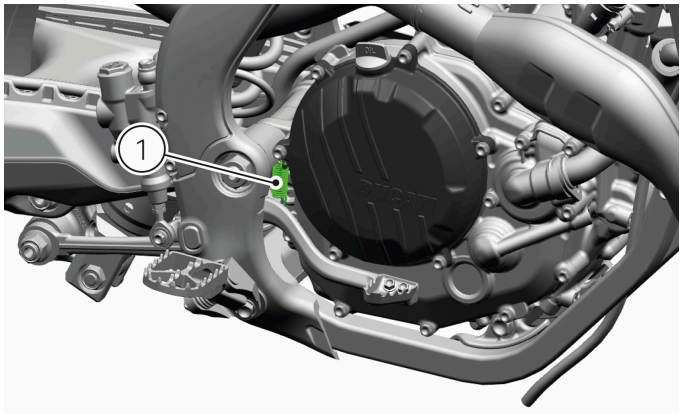



Fig 347

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).

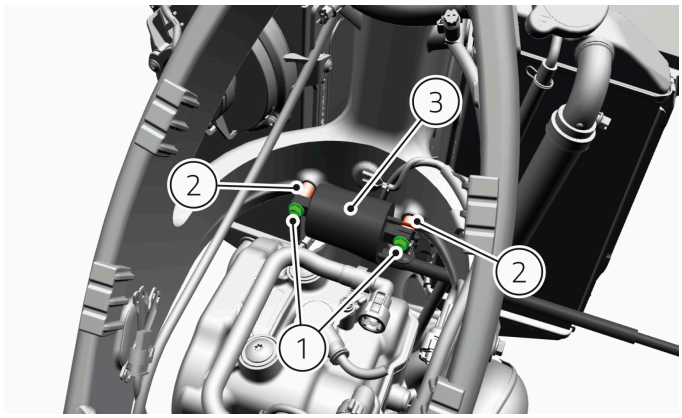



Fig 348

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

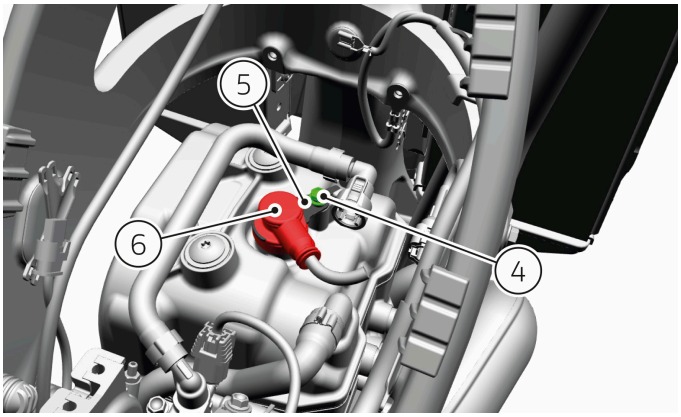



Fig 349

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

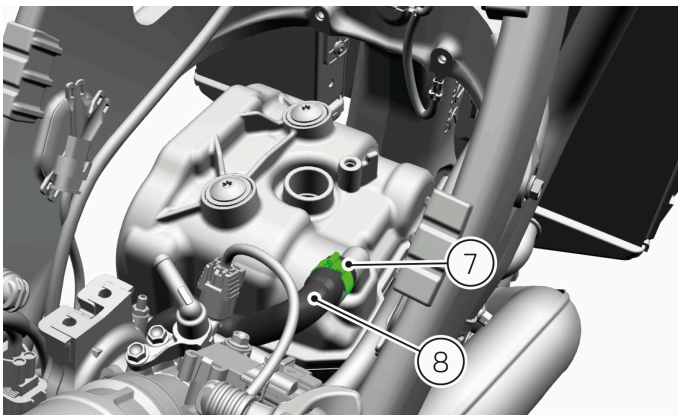



Fig 350

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

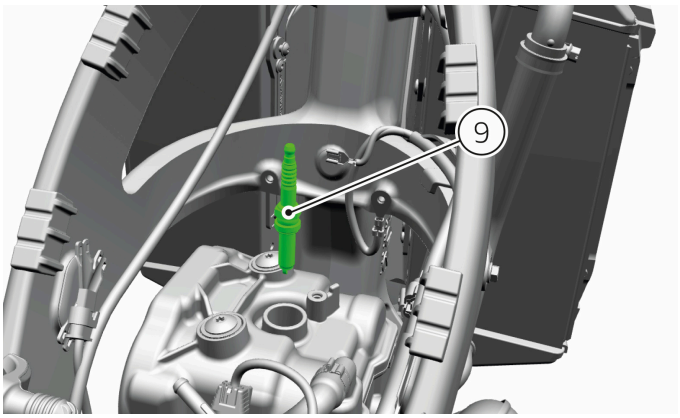



Fig 351

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

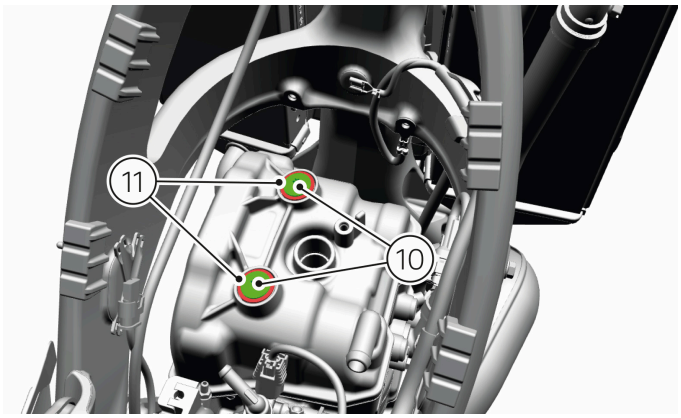



Fig 352

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

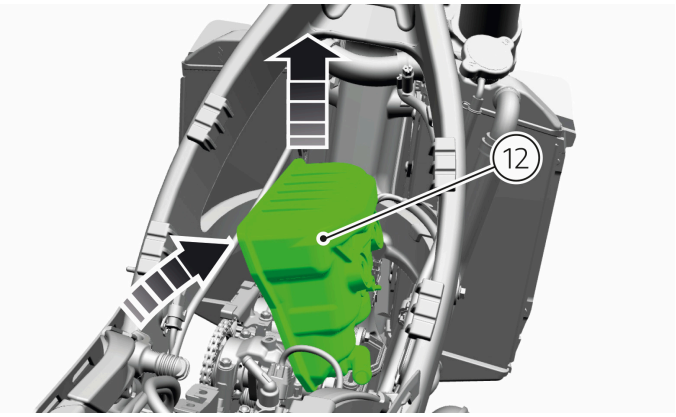



Fig 353

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

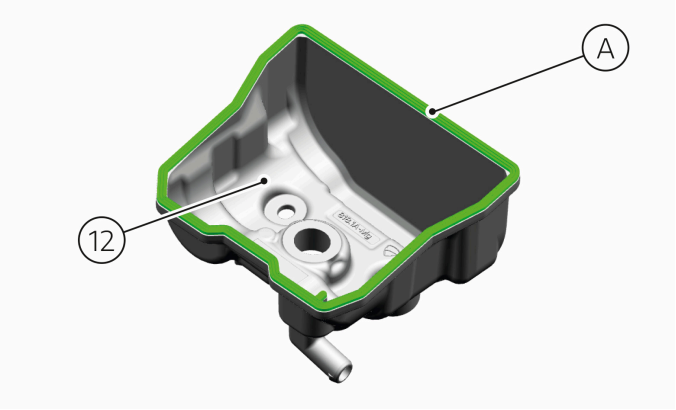



Fig 354

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

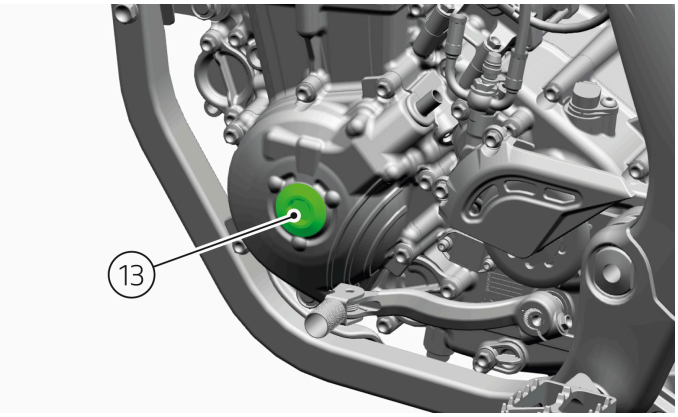



Fig 355

Each valve has:

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

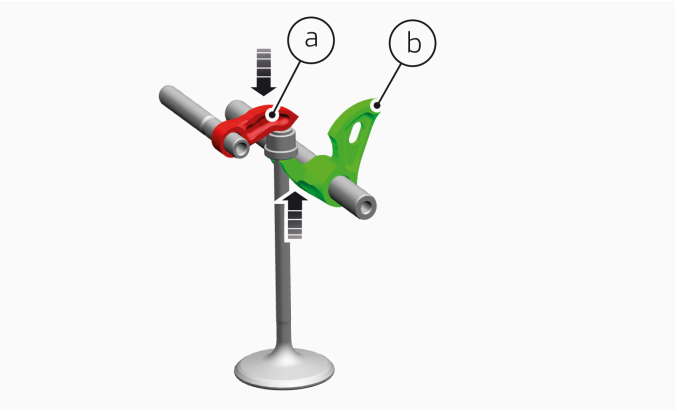



Fig 356

To check the valve clearance, insert a feeler gauge 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).

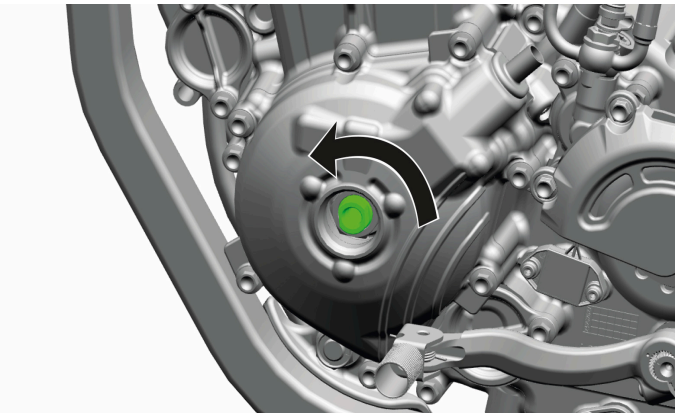


Fig 357

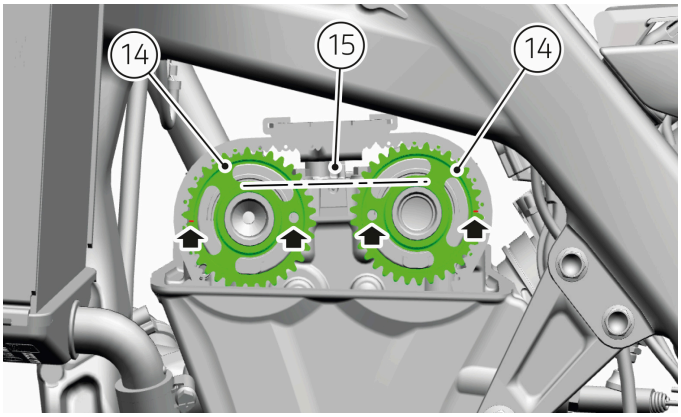



Fig 358

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 gauge, 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) |

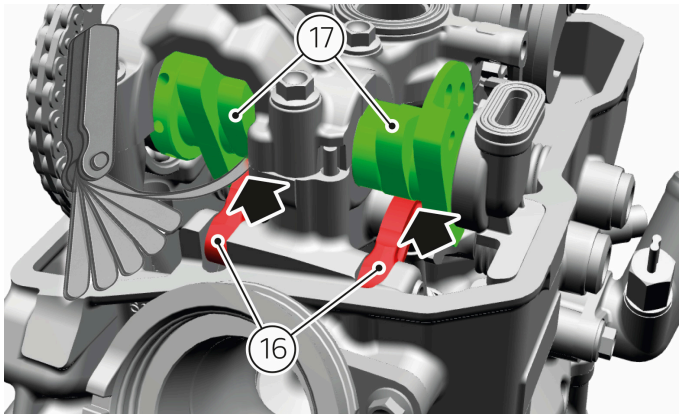



Fig 359

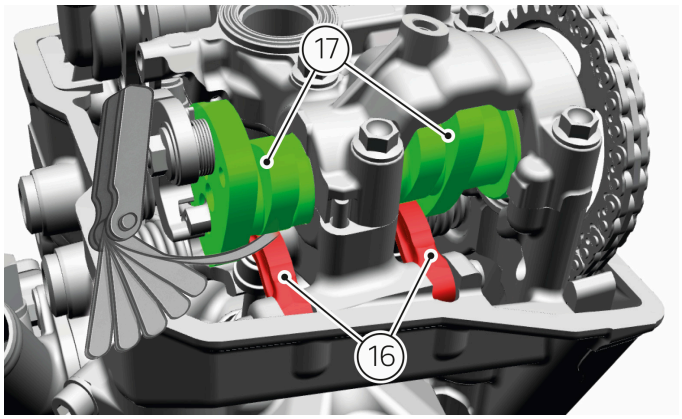



Fig 360

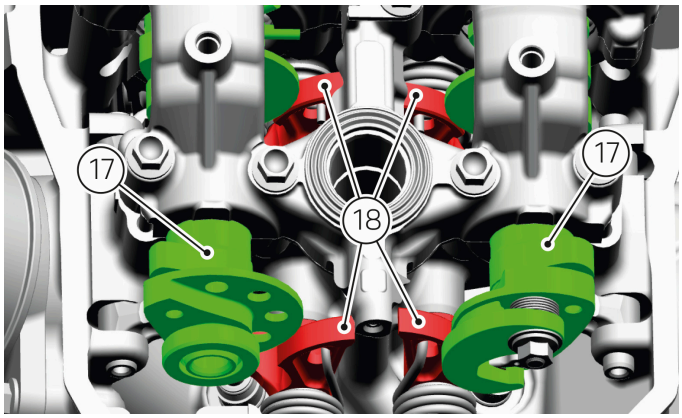



Fig 361

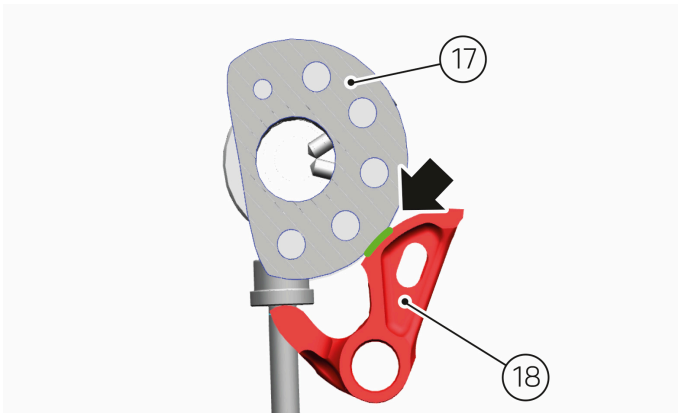



Fig 362

| 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 Authorised Service Centre 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).

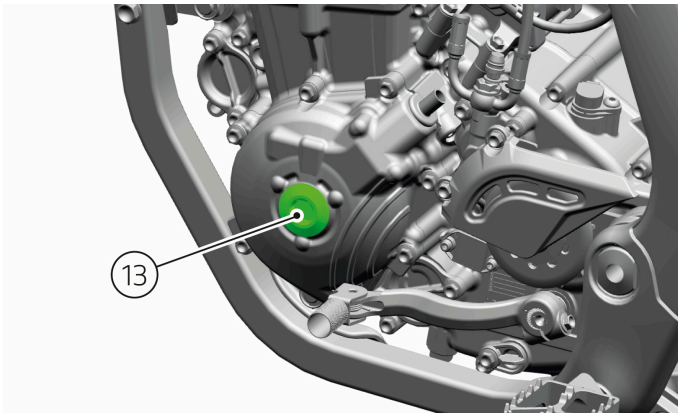



Fig 363

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, centring it on the spark plug recess.

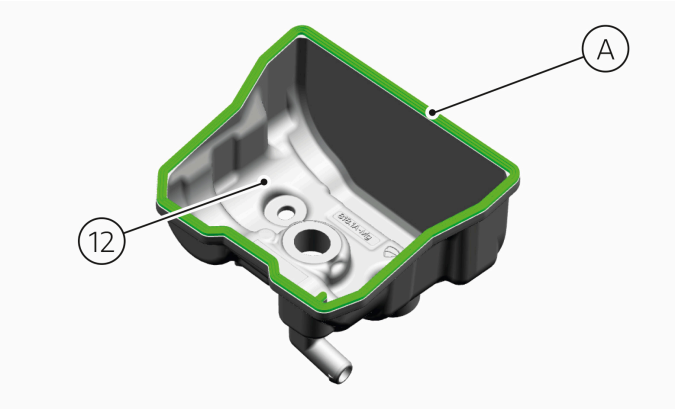



Fig 364

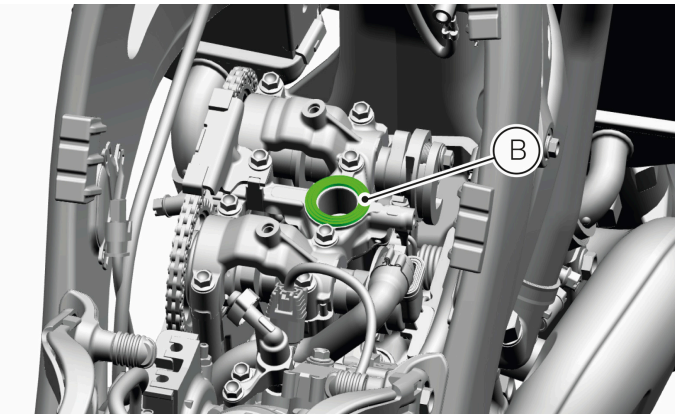



Fig 365

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

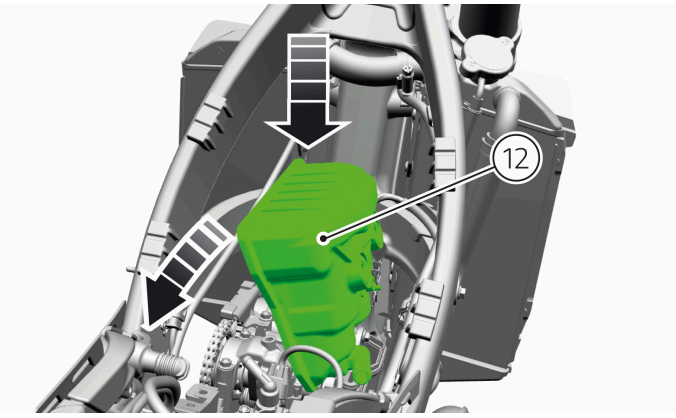



Fig 366

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).

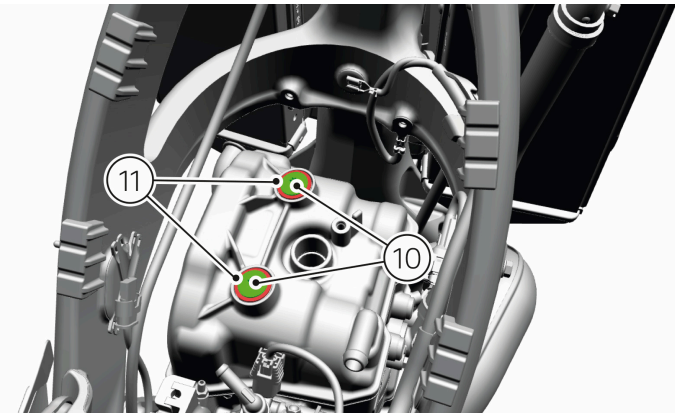



Fig 367

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).

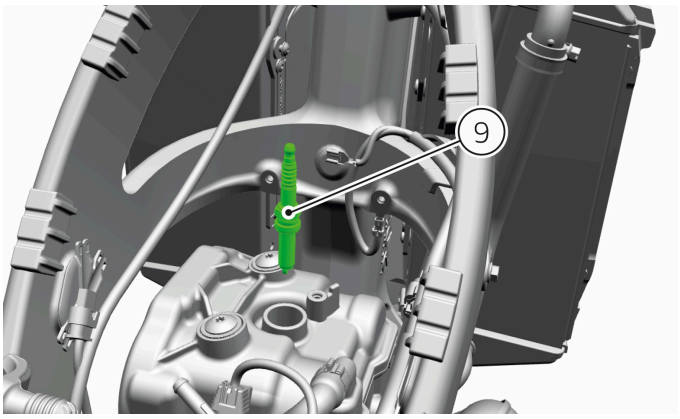



Fig 368

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

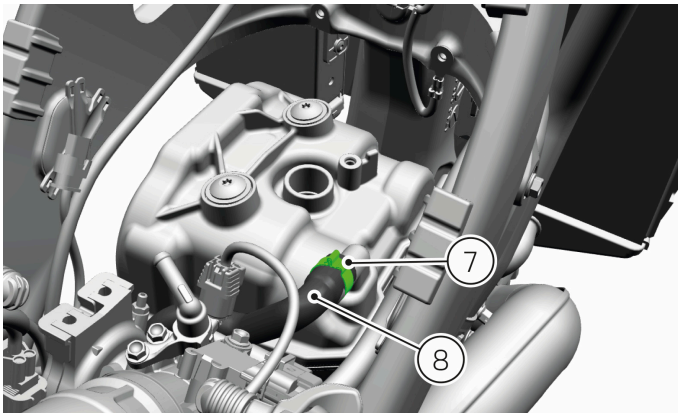



Fig 369

## Note

Apply Fluortec 9940 grease or generic grease (labelled “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).

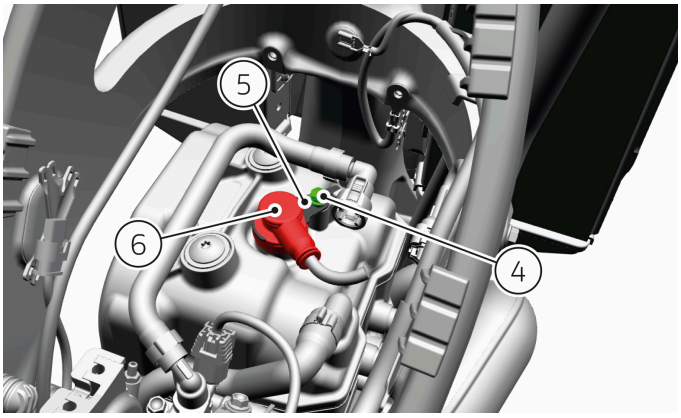



Fig 370

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%.

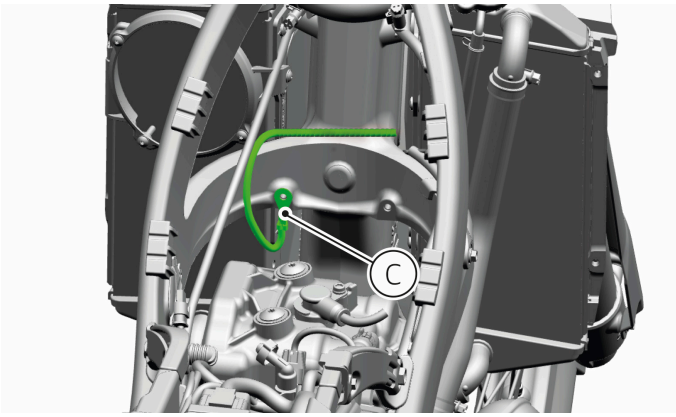



Fig 371

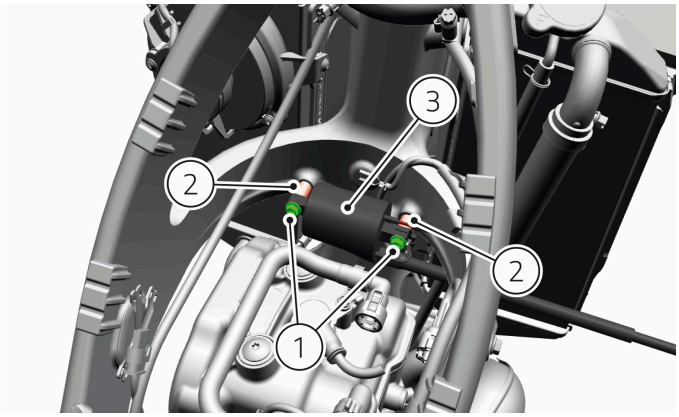



Fig 372

Refit the following components:

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

# Electric system

## Wiring diagram

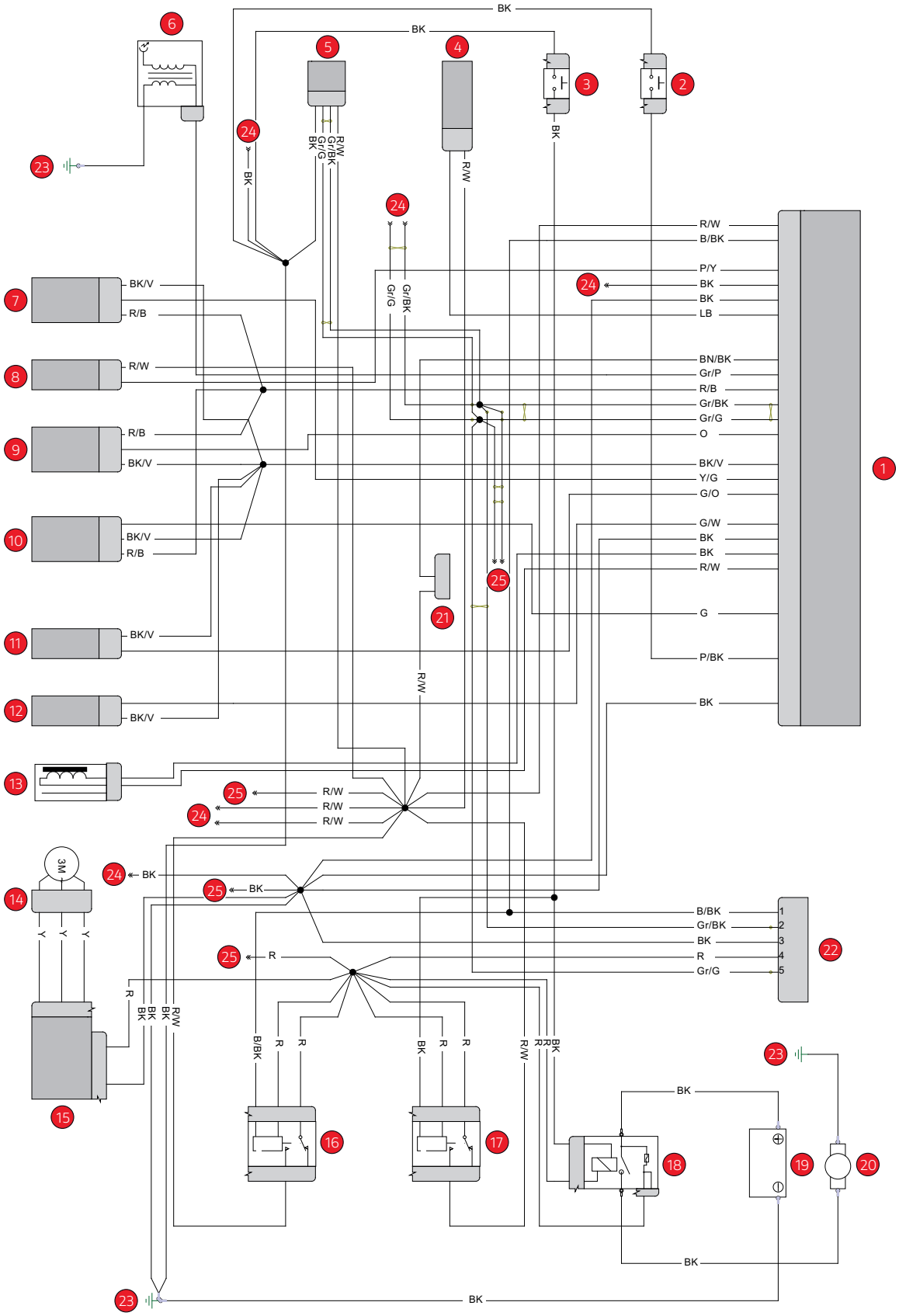



Fig 373

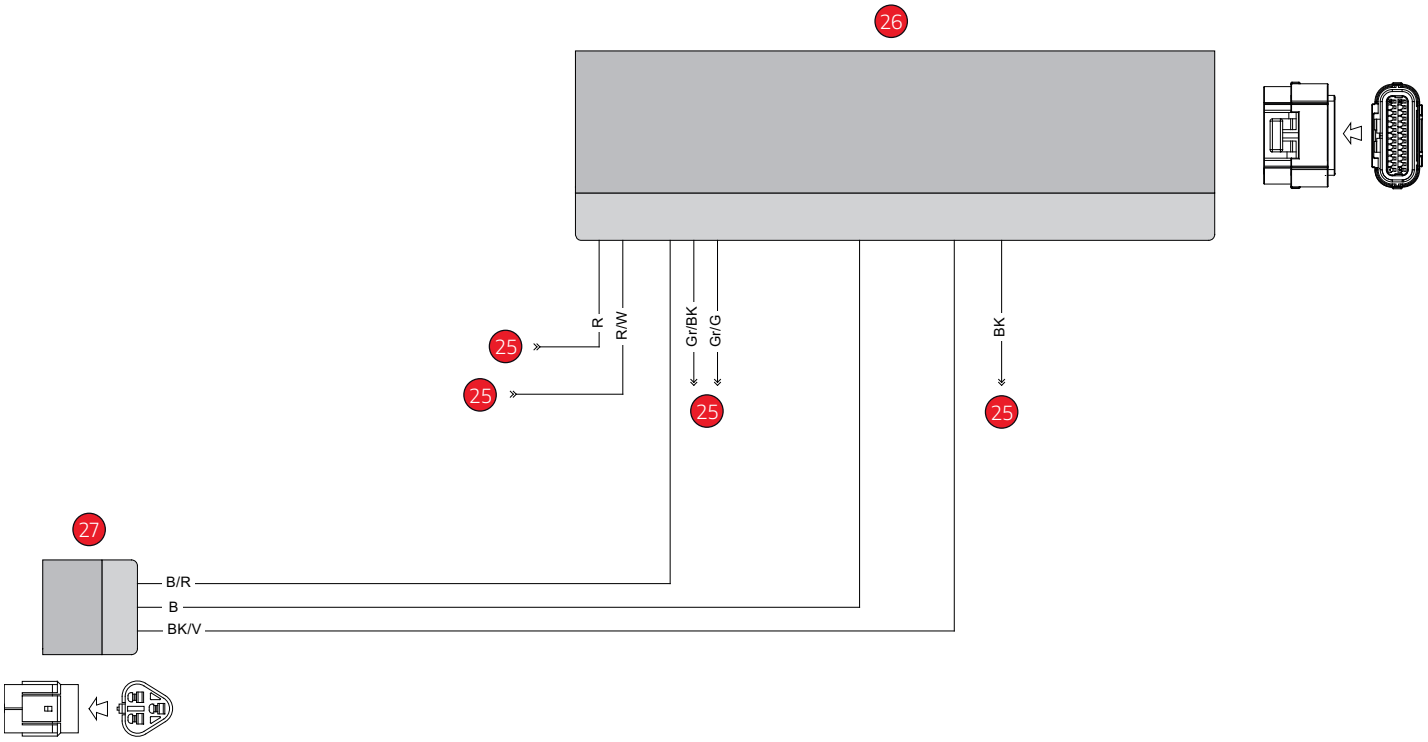



Fig 374

| Description of the wiring diagram | |
|---|---|
| Numbering | Description |
| 1 | ECU (engine control unit) |
| 2 | Start button |
| 3 | Stop button |
| 4 | EFI warning 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 | Solenoid |
| 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. | Colour |
| Y | Yellow |
| R | Red |
| Bk | Black |
| O | Orange |
| V | Purple |
| W | White |
| Bn | Brown |
| G | Green |
| Gr | Grey |
| 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 |

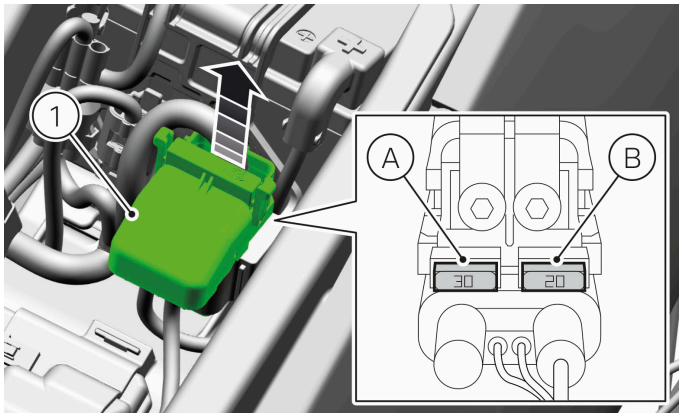



Fig 375

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

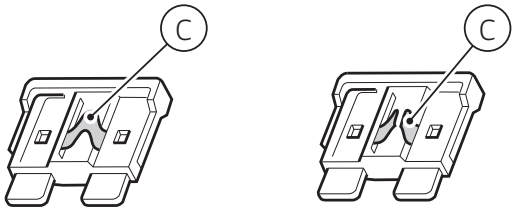



Fig 376

### 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.

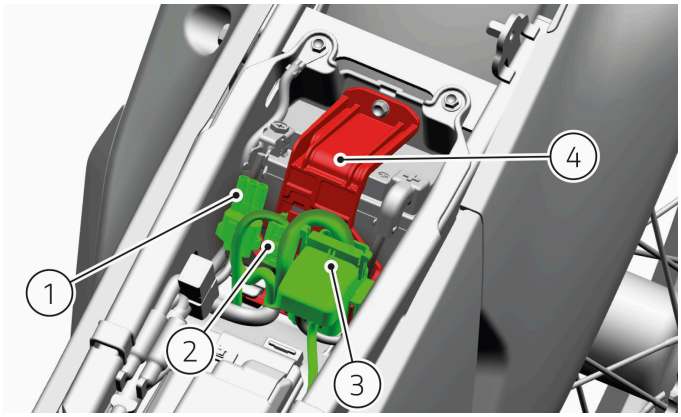



Fig 377

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).

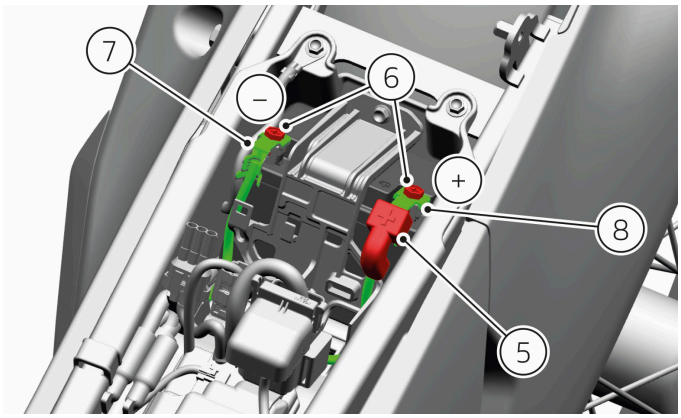



Fig 378

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

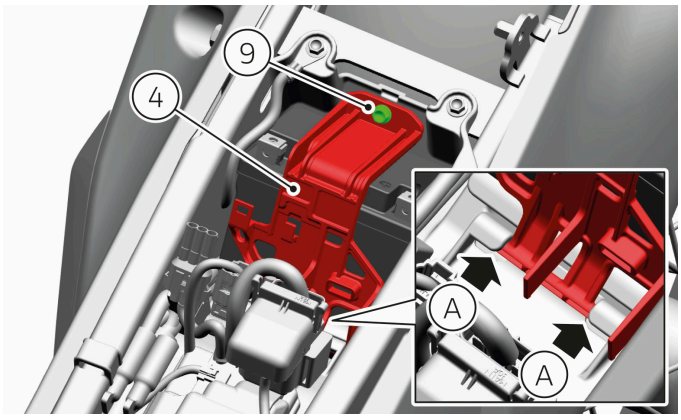



Fig 379

Remove the battery (10) from its seat.

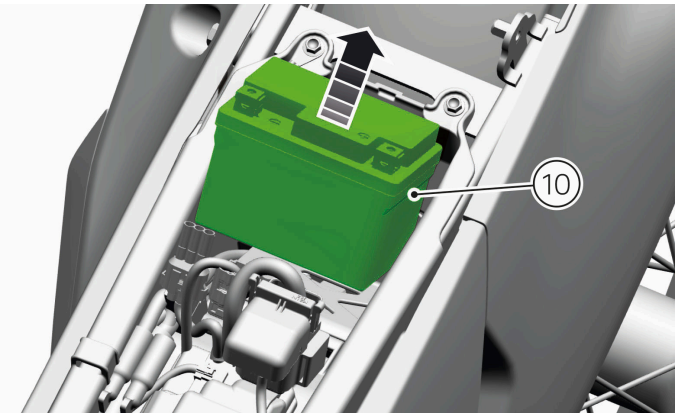



Fig 380

## 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.

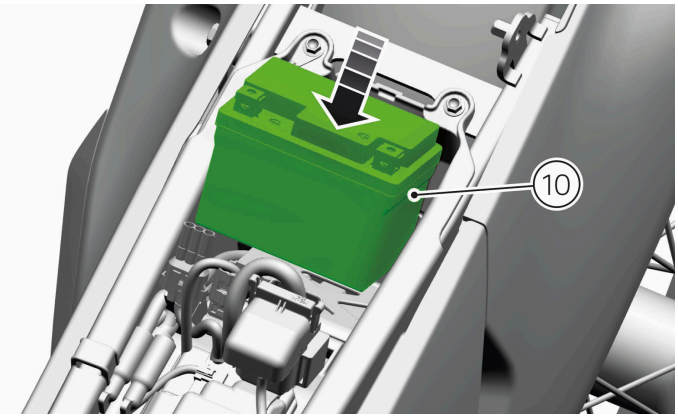



Fig 381

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%.

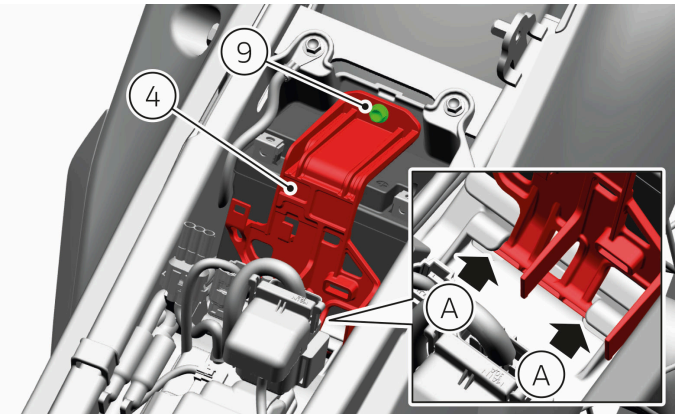



Fig 382

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%.

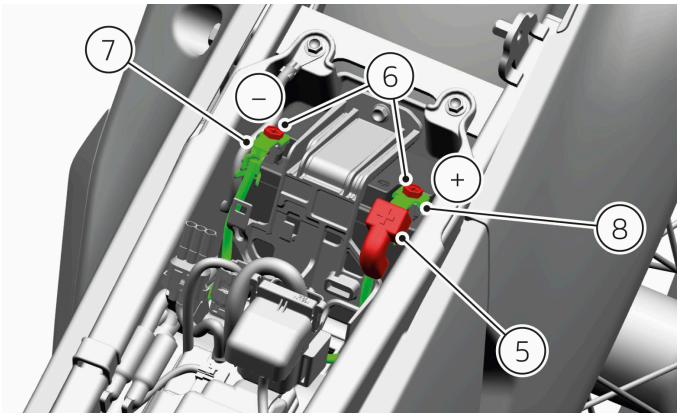



Fig 383

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”.

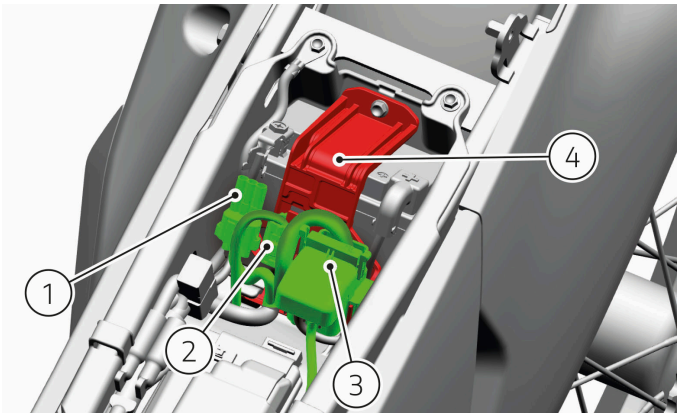



Fig 384

## 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 40°C (104 F).

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
Should it be impossible to start the vehicle due to a completely flat battery, it is not permitted to start the bike by connecting an external starter or and external battery in parallel.
The charging system, indeed, is not designed to ensure a correct supply voltage for the engine electronics (including ignition/injection system) with a completely flat battery.
This could lead to a serious functional problem.
Please, replace the battery or recharge it, and check it before using the bike.

### Attention
Do not push start the bike.

### 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.

## Maintaining the battery charge

### 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).

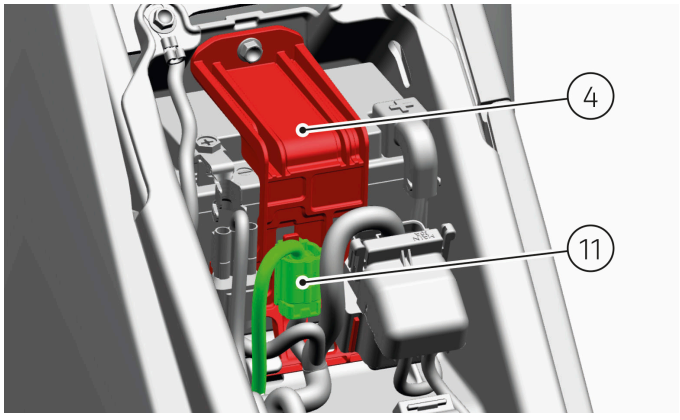



Fig 385

### Note
Using charge maintainers or battery chargers for lithium batteries not approved by Ducati could damage motorcycle electric system and/or lithium battery; motorcycle 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%**.

| Side stand assembly | | | | |
|---|---|---|---|---|
| Application | Quantity | Thread (mm) | Torque (Nm) ± 10% | Notes |
| Spring pin to side stand fastener | 1 | M6 | 10 | Apply Loctite ®243™ |
| Stand spring connecting rod to LH footpeg holder plate fastener | 1 | M5 | 5 | Apply Loctite ®243™ |
| Side stand to LH footpeg holder plate fastener | 1 | M10 | 30 | Apply Loctite ®243™ |

*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<br>(Seq. 1-2-1) |
| Steering head bearing tightening | 1 | M30 | 7* | Apply GADUS S2 V220 AD 2 grease<br>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™ |

| Front fork assembly | | | | |
|---|---|---|---|---|
| Application | Quantity | Thread (mm) | Torque (Nm) ± 10% | Notes |
| 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 | |
| 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 calliper support to fork bottom end fastening | 2 | M8 | 25 | Apply Loctite ®243™ |
| Brake hose connection to front brake calliper 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<br>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 calliper 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 fastener | 1 | M6 | 13 | (Seq.: 1-2-3-1)<br>(Apply CARBON FLUORTEC 9740 on the seals) |
| Clutch actuator to engine fastener | 2 | M6 | 13 | (Seq.: 1-2-3-1)<br>(Apply CARBON FLUORTEC 9740 on the seals) |
| Clutch master cylinder to handlebar fastener | 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* | |
| Hand guard to hand guard support fastener | 2+2 | Self-tapping | 2 | |
| Hand guard support to front brake master cylinder fastener | 1 | M5 | 5 | |
| Hand guard support to clutch master cylinder fastener | 1 | M5 | 5 | |

*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 plate 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) |
| Tyre retainer fastening | 1 | M8 | 12 | |
| Valve to front wheel rim fastening | 1 | M8 | | |
| Front wheel rim spoke nipple fastening | 36 | | 3.7 | |

*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) |
| Tyre retainer fastening | 1 | M8 | 12 | |
| Valve to rear wheel hub fastening | 1 | M8 | | |
| Rim nipple to rear wheel rim fastening | 16+16 | | 3.7 | |

*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 bracket to frame fastener | 1 | M6 | 10 | |
| Tank to tank bracket fastener | 2 | 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* | Tighten to 25 Nm until indicated |
| Subframe to frame lower fastening | 1+1 | M8 | 35* | Tighten to 25 Nm until indicated |
| 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 | |
| Pre-airbox 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 | |
| Front RH 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 fastener | 1 | M6 | 8 | |
| Rear mudguard to subframe lower fastener | 1 | M6 | 8 | |
| 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 guard to frame fastener | 2 | M6 | 3.5 | Apply Loctite ®243™ |

## 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 | |

| Crankcase assembly | | | | | | | |
|---|---|---|---|---|---|---|---|
| Application | Quantity | Thread (mm) | Length (mm) | Min. | Torque | Max. | Notes |
| 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 EDX |
| Serial number: | ZDMRFWCK********* |

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

EMC Directive 2014/30/EU

**The following harmonised 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 | 12/11/2025 | Andrea Gesi<br>(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**
Queste apparecchiature possono essere manipolata e installate solamente da una persona esperta.

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**
Queste apparecchiature possono essere manipolata e installate solamente da una persona esperta.

**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 some pieces 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 03/2026 ED.02

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