

Owner's manual

**DIAVEL**

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**DIAVEL**  
**CARBON**



Owner's manual

ENGLISH

**DIABEL**

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**CARBON**

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.

This manual must be preserved with care. If it is lost or becomes damaged, contact a Ducati Dealer or authorised Service Centre without delay to obtain a new copy of the manual.

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.

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Enjoy your ride!

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Routine maintenance record 248

# Introduction

## Safety guidelines

We would like to welcome you among Ducati enthusiasts, and congratulate you on your excellent choice of motorcycle. We think you will ride your Ducati motorcycle for long journeys as well as short daily trips. Ducati Motor Holding S.p.A. wishes you smooth and enjoyable riding.

Your motorcycle is the result of Ducati Motor Holding S.p.A.'s on-going research and development efforts. It is important that you preserve its quality standard by strictly observing the maintenance plan and using genuine spare parts. This manual provides instructions on minor maintenance operations. Major maintenance operations are described in the Workshop Manual available to Ducati Authorised Service Centres.

In your own interest, for your safety and in order to guarantee product reliability, you are strongly advised to refer to our authorised Dealers and Service Centres

for any operations listed in the scheduled maintenance chart, see page 227.

Our highly skilled staff have access to special implements and appropriate equipment required to perform any servicing job at best, and use Ducati original spare parts only as the best guarantee for full interchangeability, smooth running and long life.

All Ducati motorcycles come with a Warranty Card. The warranty does not apply to motorcycles used in racing competitions.

Tampering with or altering any components, even partially, will make the warranty null and void effective immediately. Improper or poor maintenance, using other than original spare parts or parts not expressly approved by Ducati may invalidate your warranty rights and lead to damage or loss of performance.

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 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.



### Warning

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.

## Intended use

This motorcycle must be ridden on asphalt or on flat and even surfaces, only. This motorcycle may not be used for riding on dirt trails or for off-road riding.

### Warning

Off-road riding may lead to loss of control and result in vehicle damage, personal injuries or even death.

### Warning

This motorcycle may not be used to tow any trailers or with a side-car attached; this can lead to loss of control and result in an accident.

This motorcycle carries the rider and can carry a passenger.

### Warning

The total weight of the motorcycle in running order including rider, passenger, luggage and additional accessories should not exceed 400kg/882lb.

### Important

Using the motorcycle under extreme conditions, such as very damp and muddy roads or dusty and dry environment, could cause above-average wear of components like the drive system, the brakes or the air filter. If the air filter is dirty, the engine could get damaged. Therefore, this might translate in required service or replacement of the wear parts earlier than specified in the scheduled maintenance chart.

## Rider's obligations

All riders must hold a valid licence.

### Warning

Riding without a licence is illegal and is prosecuted by law. Always make sure you have your licence with you when riding. Do not let inexperienced riders or persons without a valid licence use your motorcycle.

Do not ride under the influence of alcohol and/or drugs.

### Warning

Riding under the influence of alcohol and/or drugs is illegal and is prosecuted by law.

Do not take prescription or other drugs before riding unless you have consulted your doctor about their side effects.

### Warning

Some medications and drugs may cause drowsiness or other effects that slow down reaction time and the rider's ability to control the motorcycle, possibly leading to an accident.

Some states require vehicle insurance.

### Warning

Check your state laws. Obtain insurance coverage and keep your insurance document secure with the other motorcycle documents.

To protect rider and passenger safety, some states mandate the use of a certified helmet.

### Warning

Check your state laws. Riding without a helmet may be punishable by law.

### Warning

Riders without helmets are more likely to suffer severe bodily injury or die if they are in an accident.

## Warning

Check that your helmet complies with safety specifications, permits good vision, is the right size for your head, and carries a certification label indicating that it conforms to the standards in force in your state. Road traffic laws differ from state to state. Learn about traffic laws in your state before riding and always obey them.

## Rider's training

Accidents are frequently due to inexperience. Riding, manoeuvres and braking must be performed in a different way than on the other vehicles.

## Warning

Untrained riders or a wrong use of the vehicle may lead to loss of control, serious injuries or even death.

## Apparel

Riding gear is very important for safety. Unlike cars, a motorcycle offers no impact protection in an accident.

Proper riding gear includes helmet, eye protection, gloves, boots, long sleeve jacket and long trousers.

- The helmet must meet the requirements listed at page 10; if your helmet does not have a visor, use suitable eye wear;
- Use five-finger gloves made from leather or abrasion-resistant material;
- Riding boots or shoes must have non-slip soles and offer ankle protection;
- Jacket, trousers or riding suit must be made from leather or abrasion-resistant material and have high-visibility colours and inserts.

### Important

Never wear loose clothing, items or accessories that may become tangled in motorcycle parts.

### Important

For your safety, always wear suitable protective gear, regardless of season and weather.

### Important

Have your passenger wear proper protective clothing.

## Safety "Best Practices"

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.

### Important

Closely follow the indications provided at chapter "Riding the motorcycle" during the running-in period.

Failure to follow these instructions releases Ducati Motor Holding S.p.A. from any liability whatsoever for any engine damage or shorter engine life.

### Warning

Before riding your motorcycle, become familiar with the controls you will need to use when riding.

Perform the checks recommended in this manual before each ride (see page 179).

### Warning

Failure to carry out these checks before riding may lead to motorcycle damage and injury to rider and/or passenger.

### Warning

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 and ensure your passenger does the same.

### Important

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

### Important

Both rider and passenger should keep their feet on the footpegs when the motorcycle is in motion.

### Important

The passenger should always hold on to the grab handle located inside the tail guard.

Refer to paragraph "Grab Handle" on page 171.

## **Important**

Be very careful when tackling road junctions, or when riding in areas near exits from private grounds, car parks or on slip roads to access motorways.

## **Important**

Be sure you are clearly visible and do not ride within the blind spot of vehicles ahead.

## **Important**

ALWAYS signal your intention to turn or pull to the next lane in good time using the suitable turn indicators.

## **Important**

Park your motorcycle where no one is likely to knock against it, and use the side stand. Never park on uneven or soft ground, or your motorcycle may fall over.

## **Important**

Visually inspect the tyres at regular intervals for detecting cracks and cuts, especially on the side walls, bulges or large spots that are indicative of internal damage. Replace them if badly damaged. Remove any stones or other foreign bodies caught in the tread.

## **Warning**

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.).

## Refuelling

Refuel outdoors with engine off.

Do not smoke or use open flames while refuelling.

Be careful not to spill fuel on engine or exhaust pipe.

Never completely fill the tank when refuelling. Fuel should never be touching the rim of filler recess.

When refuelling, avoid breathing the fuel vapours and prevent fuel from reaching your eyes, skin or clothes.

## Warning

Fuel is highly flammable, in case of accidental spillage of fuel on your clothes it is necessary to change into clean clothes.

## Warning

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.

## Warning

In case of indisposition caused by breathing fuel vapours for a long time, stay in the open air and contact your doctor. In case of contact with eyes, thoroughly flush with water; in case of contact with skin, immediately clean with water and soap.

## Carrying the maximum load allowed

Your motorcycle is designed for long-distance riding, carrying the maximum load allowed in full safety. Even weight distribution is critical to preserving these safety features and avoiding trouble when performing sudden manoeuvres or riding on bumpy roads.

### Warning

Do not exceed the total permitted weight for the motorcycle and pay attention to information provided below regarding load capacity.

## Information about carrying capacity

### Important

Arrange your luggage or heavy accessories in the lowest possible position and close to motorcycle centre.

### Important

Never fix bulky or heavy objects to the handlebar or to the front mudguard as this would affect stability and cause danger.

### Important

Be sure to secure the luggage to the supports provided on the motorcycle as firmly as possible. Improperly secured luggage may affect stability.

### Important

Do not insert any objects you may need to carry into the gaps of the frame as these may foul moving parts.

### Warning

Make sure the tyres are inflated to the proper pressure and that they are in good condition.

Refer to paragraph "Tyres" on page 218.

## Dangerous products - warnings

### Used engine oil

## Warning

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

## Warning

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.

## Warning

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.

## Warning

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.

The cooling fan operates automatically: keep hands well clear and make sure your clothing does not snag on the fan.

## Battery

## Warning

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.

## Vehicle identification number



### Note

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

It is recommended to record the frame number of your motorcycle in the space below.

---

Frame number

---

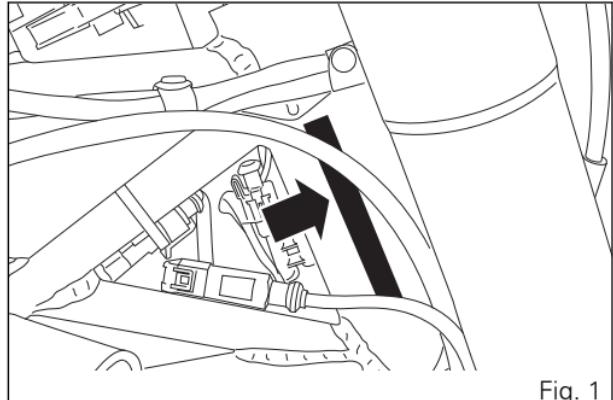


Fig. 1

## Engine identification number



### Note

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

It is recommended to record the number of your motorcycle's engine in the space below.

---

Engine number

---

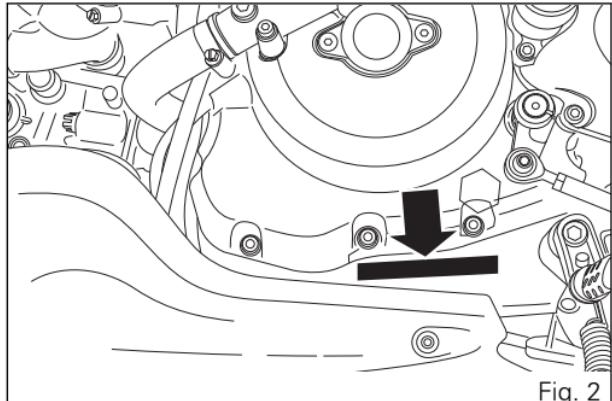


Fig. 2

# Instrument panel (Dashboard)

## Instrument panel

## Instrument panel on handlebar

The instrument panel on handlebar consists of a LCD display (1) where main indications are shown (speed, engine rpm, engine coolant temperature and clock).

1) LCD display.

2) NEUTRAL LIGHT N (GREEN).

Comes on when in neutral position.

3) HIGH BEAM LIGHT  (BLUE).

Comes on when high beams are on.

4) ENGINE OIL PRESSURE LIGHT  (RED).

Comes on when engine oil pressure is too low. It must turn on at "Key-On", but must turn OFF a few seconds after the engine has started. It may shortly come on when the engine is hot, however, it should go out as the engine revs up.

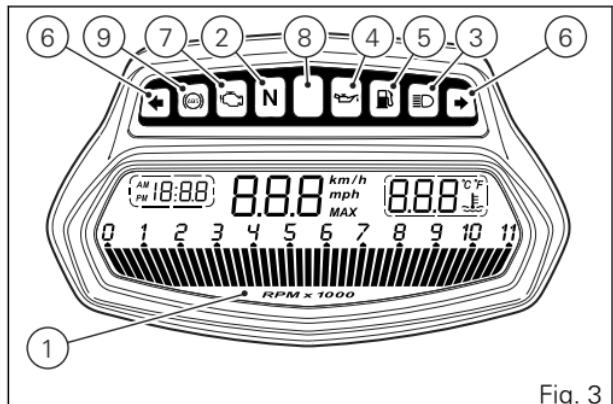
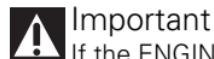


Fig. 3



### Important

If the ENGINE OIL light stays ON, stop the engine or it may suffer severe damage.

- 5) FUEL WARNING LIGHT  (AMBER YELLOW). Comes on when fuel is low and there are about 4 litres of fuel left in the tank.
- 6) TURN INDICATOR LIGHTS  (GREEN). The light of the turn indicator in operation illuminates and flashes.
- 7) "ENGINE/VEHICLE DIAGNOSIS - EOBD" LIGHT  (AMBER YELLOW). It turns on in the case of "engine" and/or "vehicle" errors and in some cases will lock the engine.
- 8) "OVER REV" LIMITER / "DTC" TRACTION CONTROL LIGHT (RED).

	<b>DTC intervention light</b>
No intervention	Off
Spark advance cut	On - STEADY
Injection cut	On - STEADY

 **Note** Should both lights for Over rev Function activation and DTC intervention come on, instrument panel will give priority to Over rev Function.

	<b>Over rev light</b>
No rev limitation	Off
1st threshold - no. RPM before the limiter threshold (*)	On - STEADY
Limiter (Overrev) kicks in (*)	On - Flashing

(\*) each calibration of the engine control unit, depending on model, may have a different setting for the thresholds before the rev limiter kicks in and the rev limiter threshold.

9) ABS LIGHT (AMBER) (AMBER YELLOW) (Fig. 3).

<b>Engine OFF / speed below 5 Km/h</b>		
<b>Light OFF</b>	<b>Light flashing</b>	<b>Light steady on</b>
-	ABS disabled with the menu function (**)	ABS enabled, but not functioning yet
<b>Engine on / speed below 5 Km/h</b>		
<b>Light OFF</b>	<b>Light flashing</b>	<b>Light steady on</b>
-	ABS disabled with the menu function	ABS enabled, but not functioning yet
<b>Engine on / speed above 5 km/h</b>		
<b>Light OFF</b>	<b>Light flashing</b>	<b>Light steady on</b>
ABS enabled and functioning	ABS disabled with the menu function	ABS disabled and not functioning due to a problem

(\*\*) the ABS can be considered as really disabled only when light continues flashing even after engine starting.

## Instrument panel on tank

Instrument panel on tank consists of a colour TFT display housed inside tank fairing and displays trip information (set riding mode, odometer, fuel consumption, average speed, etc.) as well as the "setting" menus to be used to enable and adjust the different functions.

10) GENERIC ERROR WARNING LIGHT (AMBER YELLOW).

It turns on when there are any "vehicle" errors, i.e. active errors triggered by any control unit other than the engine control unit.

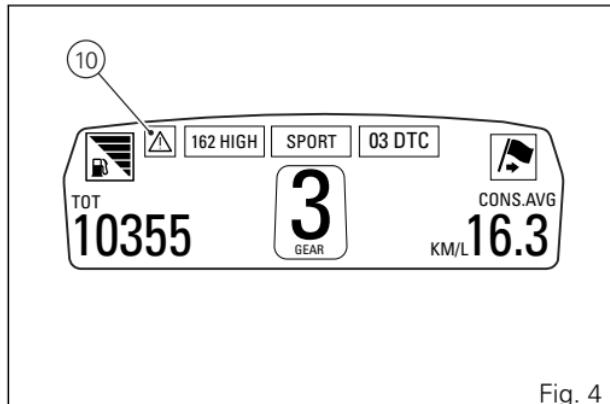


Fig. 4

## Information statement on UE directive

### 2014/53/UE

Your vehicle is equipped with a range of radio equipment. The manufacturers of this radio equipment declare that this 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](http://certifications.ducati.com)

### Manufacturers' addresses

All relevant components pursuant to 2014/53/EU must bear the manufacturer's address. 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 here:

<b>Radio equipment installed in the vehicle</b>	<b>Manufacturers' addresses</b>
<b>Bluetooth</b>	<b>COBO S.p.a.</b> Via Tito Speri, 10 25024 - Leno (BS) Italy
<b>Hands free</b>	<b>ZADI S.p.a.</b> Via Carl Marx, 138 41012 - Carpi (MO) Italy
<b>D-Air</b>	<b>Dainese S.p.a.</b> Via dell'Artigianato, 35 36060 - Molvena (VI) Italy
<b>E-Lock</b>	<b>ZADI S.p.a.</b> Via Carl Marx, 138 41012 - Carpi (MO) Italy
<b>GPS</b>	<b>PROSA S.r.l.</b> Via dell'Elettricità, 3/d 30175 - Venezia Marghera (VE) Italy

	<b>Frequency band</b>
<b>Bluetooth</b>	2,402 MHz ÷ 2,480 MHz

<b>Hands free unit</b>	134.5 KHz 868.35 MHz
<b>Hands free key</b>	868.35 MHz
<b>D-Air</b>	868 MHz 2.4 GHz
<b>E-lock</b>	134.5 KHz
<b>GPS</b>	1575.4 MHz

## Function buttons

Function buttons for the menus of the instrument panel on tank.

1) CONTROL BUTTON.

Button used to display and set instrument panel parameters with the position "▲".

2) CONTROL BUTTON

Button used to display and set instrument panel parameters with the position "▼".

3) HIGH-BEAM FLASH BUTTON (FLASH)

The high-beam flash button may also be used for LAP functions.

4) DISABLE (RESET) BUTTON

The turn indicators disable button may also be used for the RESET/CONFIRM function of the instrument panel and for enabling the "Riding Mode".

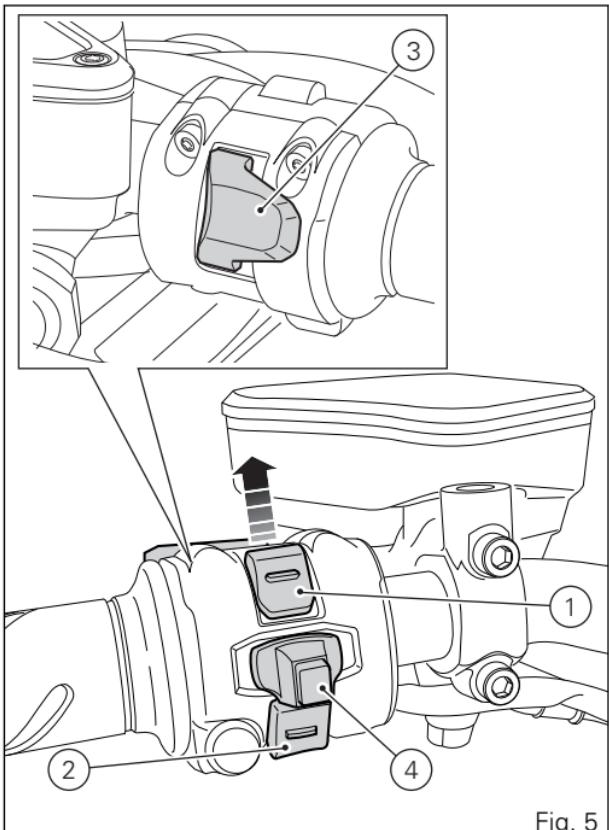


Fig. 5

## Parameter setting/displaying

### Warning

Operate on instrument panel only when the motorcycle is stopped. Do not operate on instrument panel while you are riding the motorcycle under no circumstances.

Once check routine is over, instrument panel on tank will always display the Odometer (TOT) on the left-hand side and the Average Consumption on the right-hand side as "main" indication (unless Menu 2 has been disabled).

"Main" displaying includes the following information:

- Set Riding Mode;
- Gear indication (GEAR);
- Menu 1: Odometer (TOT);
- Menu 2: Average Fuel Consumption (CONS. AVG).

By pressing button (1, Fig. 6) it is possible to toggle to the following functions of menu 1:

- TRIP1: Trip meter 1;
- TRIP2: Trip meter 2;

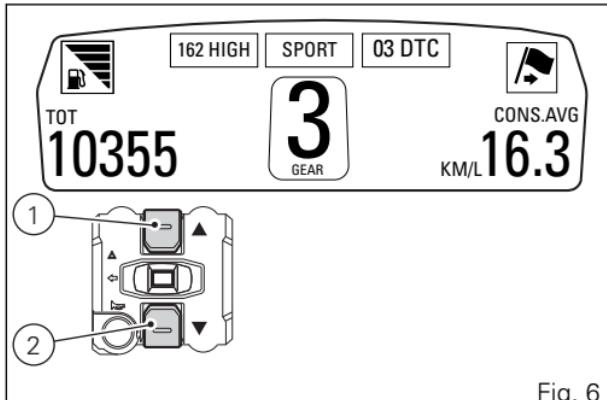


Fig. 6

- RANGE - Indication of estimated distance that can be run.

By pressing button (2, Fig. 6) it is possible to toggle to the following functions of menu 2:

- CONS. - Instantaneous fuel consumption;
- SPEED AVG - Average speed;
- TRIP TIME - Trip time;
- AIR - Air temperature.



## Note

Menu 2 displaying can be disabled through the "Set MENU 2" Function of the Setting menu.

Instrument panel on tank displays trip information (set riding mode, odometer, fuel consumption, average speed, etc.) as well as the "setting" menus to be used to enable and adjust the different functions.

- 1) Menu 1 (TOT, TRIP1, TRIP2, RANGE).
- 2) Menu 2 (CONS.AVG., CONS., SPEED AVG, TRIP TIME and AIR) if active.
- 3) Gear / Neutral indication.
- 4) Icon indicating fuel level.
- 5) Engine setting indication for the currently set riding mode.
- 6) Currently set Riding Mode.
- 7) DTC (Traction Control) level indication for the currently set riding mode.
- 8) Icon referring to the function indicated under Menu 2.
- 9) Side stand open indication.

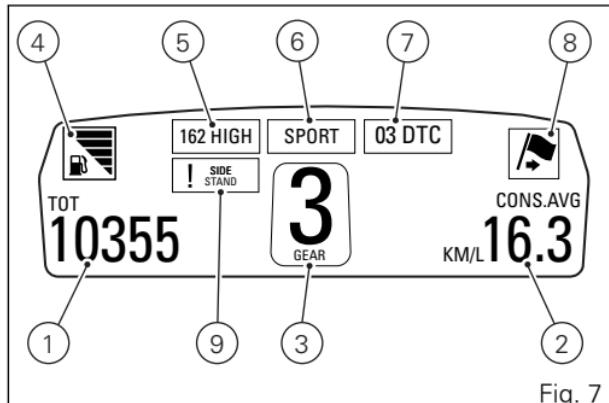


Fig. 7

## Main functions

The functions displayed in LCD instrument panel on handlebar are:

### 1) SPEEDOMETER.

It indicates riding speed.

### 2) REV COUNTER.

It indicates engine rpm value.

### 3) CLOCK.

### 4) WATER TEMPERATURE INDICATOR.

It indicates engine coolant temperature.

## **! Important**

Do not ride the motorcycle if temperature reaches the max. value as engine could suffer severe damage.

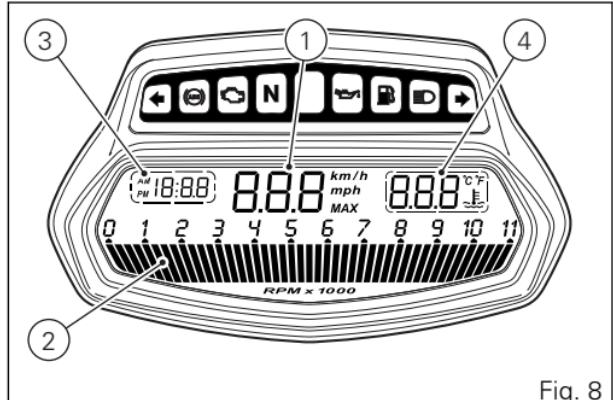


Fig. 8

## Motorcycle speed

This function is used to display vehicle speed (Km/h or mph, depending on the selected unit of measurement).

The instrument panel receives information about the actual motorcycle speed (calculated in km/h) and displays the value increased by 5%.

The max. displayed speed is 299 km/h (186 mph).

When speed exceeds 299 km/h (186 mph) a string of dashes "---" (not flashing) will be displayed.



### Note

If instrument panel does not receive any data, a string of dashes "---" (not flashing) will be displayed.

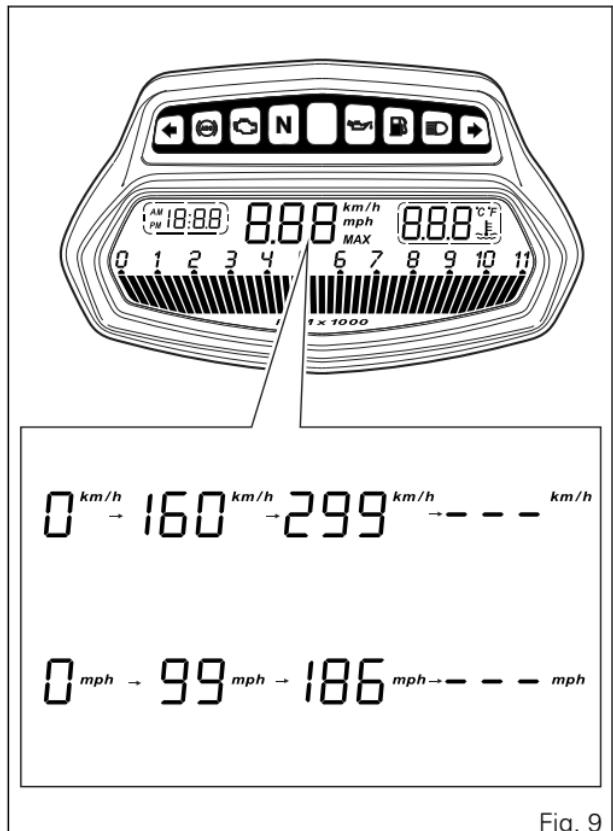


Fig. 9

## Engine rpm indication (RPM)

This function allows displaying engine rpm.

Instrument panel receives rpm value and displays it.  
Value is progressively displayed from left to right  
identifying rpm value.

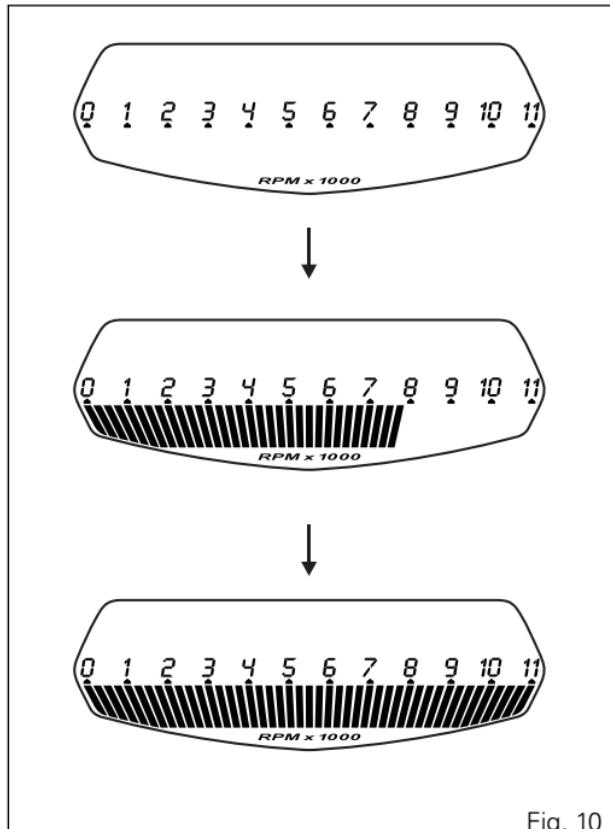


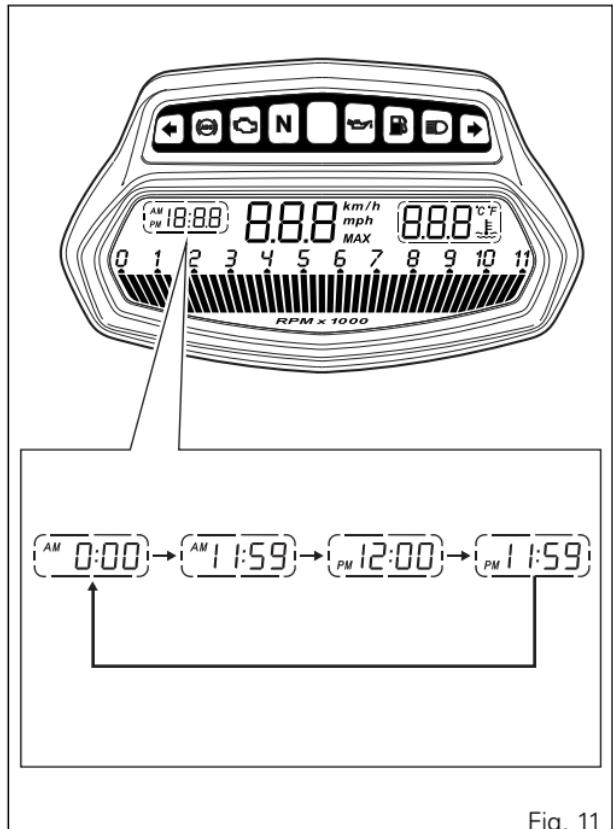
Fig. 10

## Clock

This function allows displaying time indication.  
Time is always displayed according to the following sequence:

- AM 00:00 to 11:59;
- PM 12:00 to 11:59.

In case of battery off (Batt-OFF), when the voltage is restored and upon next Key-On, clock will be reset and will automatically start counting from "0:00".



## Engine Coolant temperature

This function describes the operation of engine coolant indicator.

Temperature unit of measurement can be selected (°C or °F).

Value is indicated as follows:

- if value ranges between -39°C and +39°C (-38°F and +102°F) "LO" will be displayed steady on instrument panel;
- if value ranges between +40°C and +120°C (+104°F and +248°F) value will be displayed steady on instrument panel;
- if value is equal to or higher than +121°C (+250°F) "HI" will be displayed flashing on instrument panel.



### Note

If the sensor is in fault, the three flashing dashes ("---") will be displayed and, at the same time, the "Engine/Vehicle Diagnosis - EOBD" light will come on.

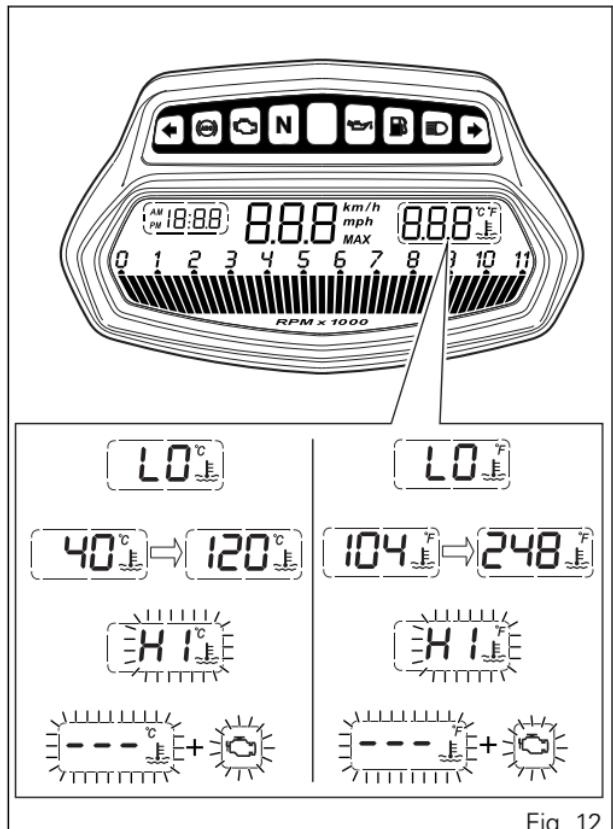


Fig. 12

## Menu functions

Menu functions are:

- Menu 1
  - Odometer (TOT)
  - Trip meter 1 (TRIP1)
  - Trip meter 2 (TRIP2)
  - Indication of estimated distance that can be run (RANGE)
- Menu 2 (if active)
  - Average Fuel Consumption (CONS.AVG.)
  - Instantaneous fuel consumption (CONS.)
  - Average speed (SPEED AVG)
  - Trip time (TRIP TIME)
  - Air temperature (AIR)

## Odometer (TOT)

This function allows displaying the indication of the total distance travelled (Km or miles according to the specific application).

Upon Key-On, system will automatically access this function.

The value is saved permanently and cannot be reset.

If the value exceeds 199999 km (or 199999 miles)

"199999" will be displayed permanently.

The reading is not lost in case of a power OFF (Battery OFF).

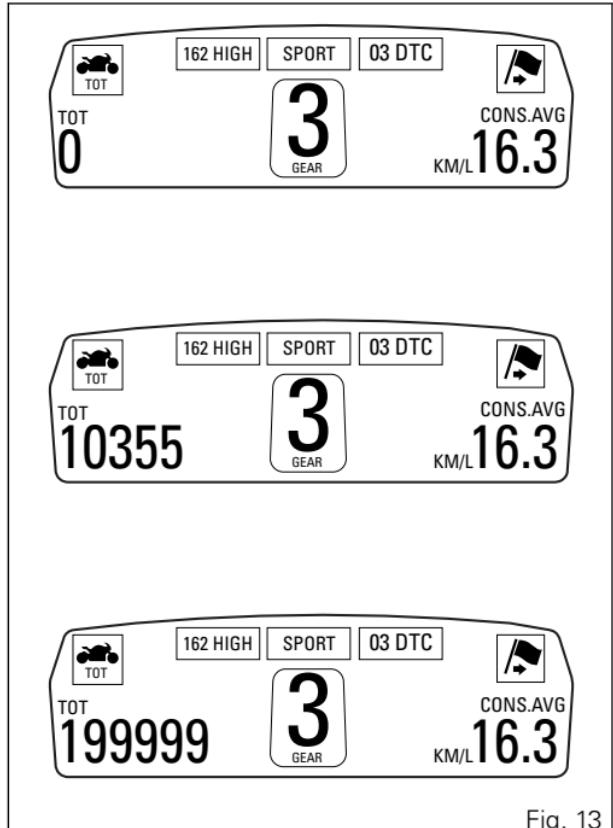


Fig. 13

## Trip meter 1 (TRIP 1)

This function allows displaying the indication of the partial distance travelled (Km or miles according to the specific application). When this function is accessed and button (1) is kept pressed for 3 seconds, trip meter will be reset. When the reading exceeds 9999.9, distance travelled is reset and the meter automatically starts again.



### Note

When this reading is reset, also "Average Consumption", "Average Speed" and "Trip Time" functions are reset.



### Note

Whenever the system unit of measurement is changed from the "SET UNITS" function of the Setting menu or in case of power off (Battery Off), the distance travelled is reset and the meter starts counting from zero again (considering the new set units of measurement).

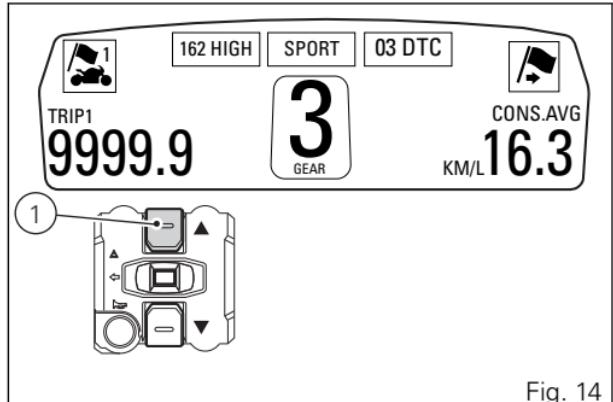


Fig. 14

## Trip meter 2 (TRIP 2)

This function allows displaying the indication of the partial distance travelled (Km or miles according to the specific application). When this function is accessed and button (1) is kept pressed for 3 seconds, trip meter will be reset. When the reading exceeds 9999.9, distance travelled is reset and the meter automatically starts again.



### Note

Whenever the system unit of measurement is changed from the "SET UNITS" function of the Setting menu or in case of power off (Battery Off), the distance travelled is reset and the meter starts counting from zero again (considering the new set units of measurement).

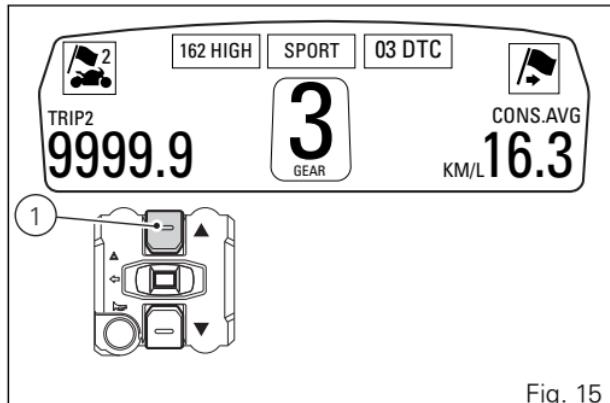


Fig. 15

## Residual range (RANGE)

This function estimates the distance that can be run depending on the quantity of fuel measured by the probe in the tank and on the average consumption measured in the last period.

This indication can be a value between 0 km and 340 km (approximate value) for the EU versions, or between 0 km and 320 km (approximate value) for the US versions.

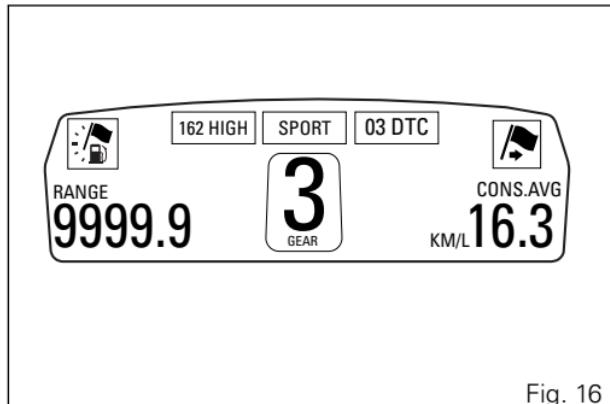


Fig. 16

## Average fuel consumption

This function indicates vehicle average fuel consumption.

The calculation is made considering the quantity of fuel used and the distance travelled since Trip 1 was last reset. When Trip 1 is reset, the value is reset and the first value available is displayed 10 seconds after the reset. During the first 10 seconds, when the value is not yet available, the display will show a string of dashes "- - -".

Value is indicated in "L / 100" (litres / 100 Km).

The active calculation phase occurs when the engine is running and the motorcycle is stopped (moments when the motorcycle is not moving and the engine is OFF are not considered).



### Note

It is possible to change the units of measurement for "Consumption" (both average and instantaneous together) from L/100 to km/L through the Setting menu, using the "SET UNITS" function.

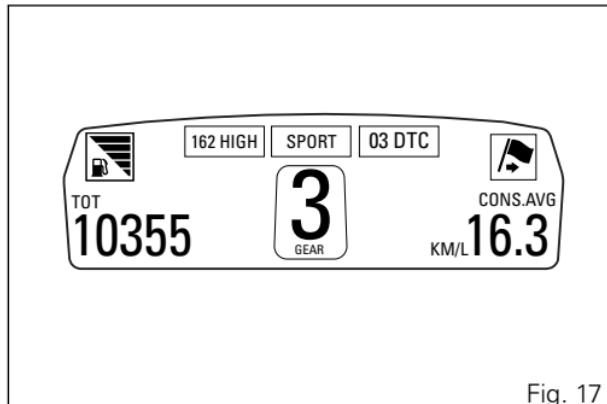


Fig. 17

## Instantaneous fuel consumption

This function indicates vehicle instant fuel consumption.

The calculation is made considering the quantity of fuel used and the distance travelled during the last second. Value is indicated in "L / 100" (litres / 100 Km). The active calculation phase only occurs when the engine is running and the motorcycle is moving (moments when the motorcycle is not moving when speed is equal to 0 and/or when the engine is OFF are not considered).

When the calculation is not made, a string of dashes is displayed "- - -".



### Note

It is possible to change the units of measurement for "Consumption" (both average and instantaneous together) from L/100 to km/L through the Setting menu, using the "SET UNITS" function.

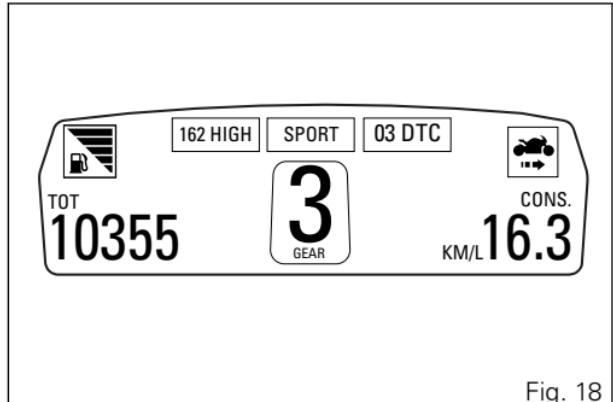


Fig. 18

## Average speed

This function indicates vehicle average speed. The calculation considers the distance and time since Trip 1 was last reset. When Trip 1 is reset, the value is reset and the first value available is displayed 10 seconds after the reset. During the first 10 seconds, when the value is not yet available, the display will show a string of dashes "---".

The active calculation phase occurs when the engine is running even if the motorcycle is stopped (moments when the motorcycle is not moving and the engine is OFF are not considered). The calculated value is then displayed increased by 5% to be aligned with vehicle speed indication.



### Note

It is possible to change the units of measurement of "speed" (and "distance" travelled) from Km/h (and Km) to mph (and miles) through the Setting menu, using the "SET UNITS" Function.

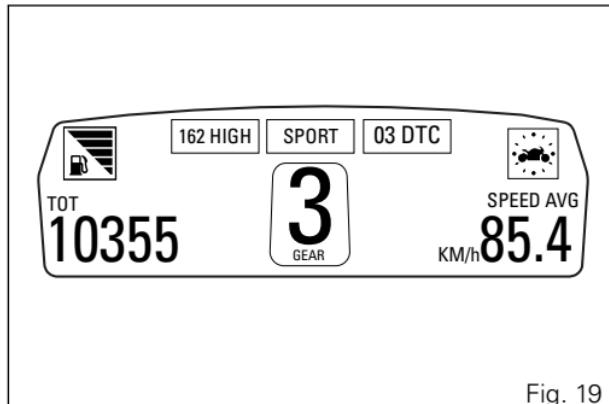


Fig. 19

## Trip time (TRIP TIME)

This function indicates vehicle trip time. The calculation considers the time since Trip 1 was last reset. When Trip 1 is reset, this value is reset as well. The calculation active phase occurs when the engine is running even if the motorcycle is stopped (the time is automatically stopped when the motorcycle is not moving and the engine is OFF and restarts when the counting active phase starts again).

When the reading exceeds 511:00 (511 hours and 00 minutes), the meter is reset and automatically starts counting from 0 again.

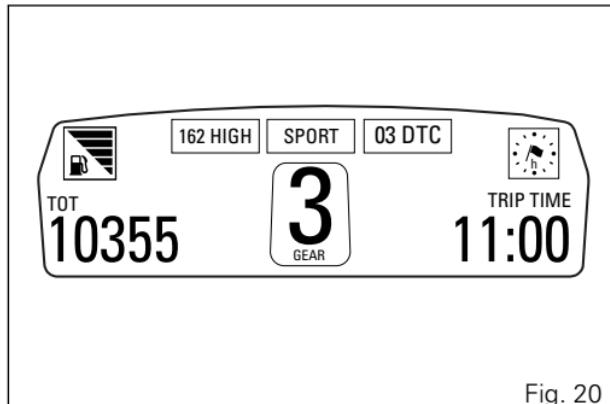


Fig. 20



If you change the unit of measurement for an item connected to "speed" (and distance) or "consumption" using the "SET UNITS" function of the Setting menu, the trip time value will be automatically reset.

## Ambient air temperature

This function allows displaying ambient temperature.

Displaying range: -39 °C ÷ +124 °C.

In case of sensor FAULT (-40°C, +125°C or disconnected) a string of steady dashes "---" will be displayed and the "Engine/Vehicle Diagnosis - EOBD" light will come on.



When the motorcycle is stopped, the engine heat could influence the displayed temperature.

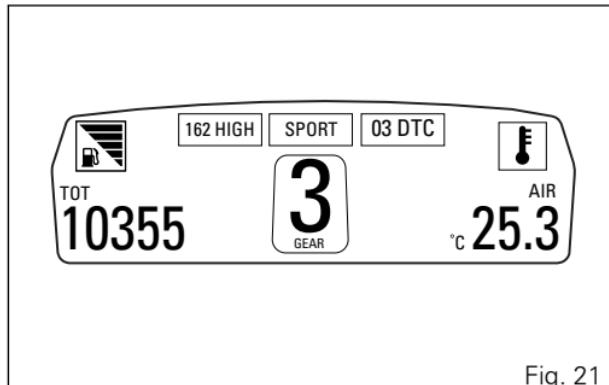


Fig. 21

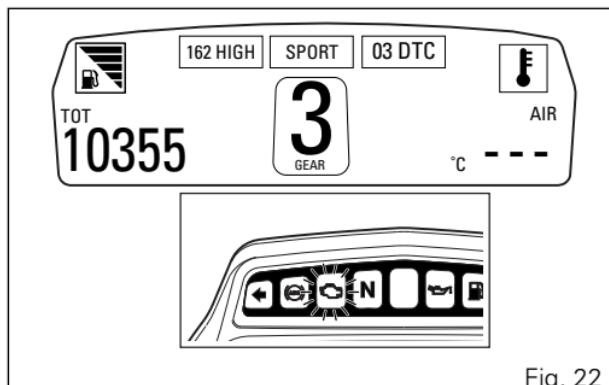


Fig. 22

When temperature reading drops until reaching 4°C (39°F), the ice warning will be enabled. This indication will be disabled as soon as temperature rises up to 6°C (43°F).

### Warning

This warning does not eliminate the possibility of icy road areas even with temperatures above 4°C (39°F); when ambient temperature is "low", ride responsibly, especially on road areas not exposed to sunlight and/or on bridges.

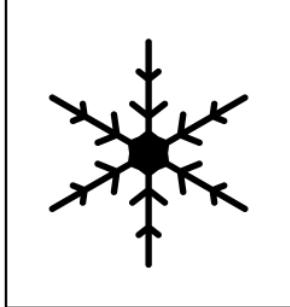


Fig. 23

## Gear

This function allows displaying gears (A).  
Instrument panel receives the information and indicates the engaged gear or "N" for neutral.

### Note

In case of gear sensor "error", a dash "-" (not flashing) will be displayed.

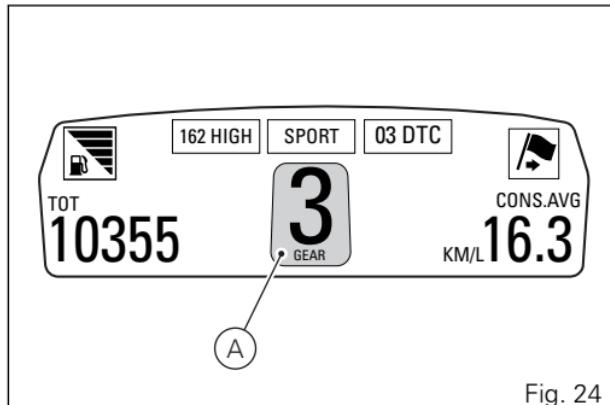


Fig. 24

## Riding Mode (RIDING MODE)

This function indicates the "Riding mode" set on vehicle.

THREE different "Riding modes" are available: SPORT, TOURING and URBAN.

Each riding mode can be changed through the "RIDING MODE" function.

The "background" indicating the riding mode (SPORT, TOURING or URBAN) (A) is blue if the parameters connected to the currently-set riding mode are the default ones (set by Ducati) or yellow if one or more parameters have been changed (customised) through the Setting menu, using "RIDING MODE" function.

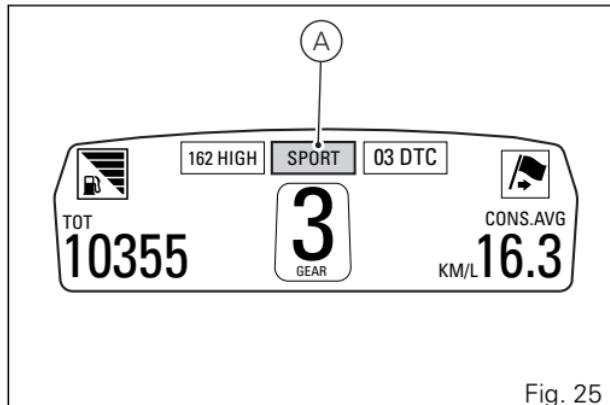


Fig. 25

## Selecting the Riding Mode

This function allows changing vehicle riding mode. A different traction control (DTC - Ducati Traction Control) intervention level and a different engine power delivery (Engine) are associated to each riding mode.

To change motorcycle riding mode, simply press reset button (4) once and the "RIDING MODE" menu will be displayed.

Press the same reset button (4) several times to select the desired riding mode. To confirm the selected riding mode, keep the same button pressed for 3 seconds.

If throttle twistgrip is closed (vehicle stopped) the riding mode is immediately changed; while if throttle twistgrip is open (vehicle moving) the "CLOSE THROTTLE TO ACTIVATE" message will be displayed, asking you to close the throttle. This message stays on for 5 seconds, during which you will have to close the throttle to enable the new riding mode.

Once the 5 seconds have elapsed, if throttle twistgrip is not closed, the procedure will be aborted (riding mode will not be changed).

If the "RIDING MODE" menu is enabled and the reset button (4) is not pressed for 10 consecutive seconds,

instrument panel will automatically quit the page, and no change will be made.

### Warning

Ducati recommends changing the Riding mode when the motorcycle is stopped. If the riding mode is changed while riding, be very careful (it is recommended to change the Riding mode at a low speed).

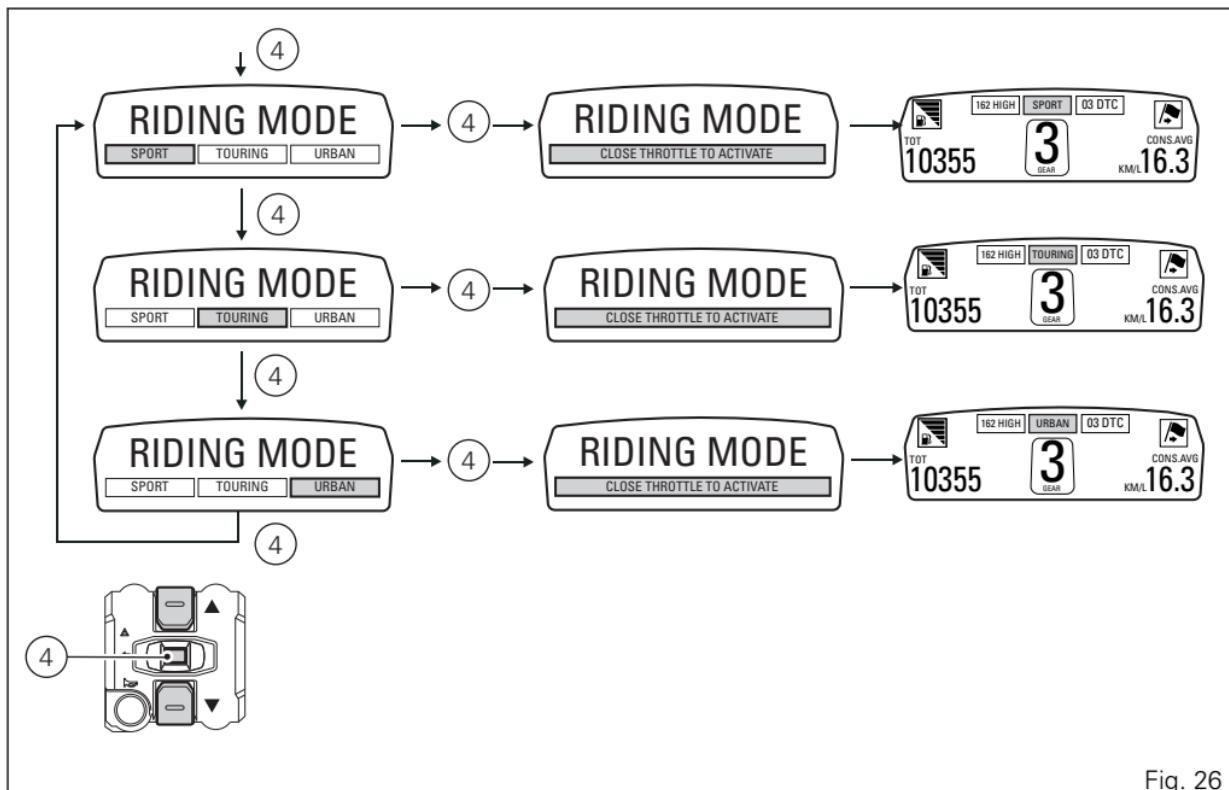


Fig. 26

## LAP TIME

This function indicates if the "LAP" (Lap time) function is enabled: (A) when menu 2 is active, or (B) when menu 2 is not active.

When "LAP" is off, function is disabled.

"LAP" Function can be enabled through the "LAP" Function of the Setting menu.

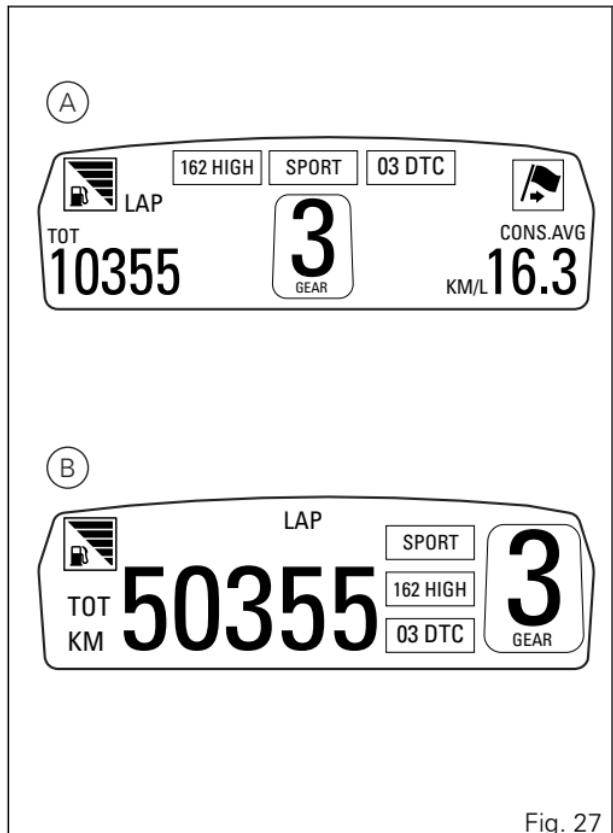


Fig. 27

## LAP recording

This function describes the "LAP" time recording procedure.

If this function has been enabled (see "LAP" page 100), lap time can be recorded as follows:

- the first time rider presses the flash (3) button, the "timer" of the first lap starts and "LAP START" will be displayed flashing on the instrument panel for 4 seconds, then the "previous" screen will appear again;
- from this moment onwards, every time the flash button (3) is pressed, the display automatically shows for 10 seconds the number and time of the lap, then goes back to the "previous" screen.

30 laps max. can be recorded. If memory is full, whenever the flash button (3) is pressed, the instrument panel does not record any lap time and "LAP FULL" will be displayed flashing for 4 seconds until lap times are reset.

When the "LAP" function is disabled, the current "lap" is not recorded. If the LAP function is enabled and vehicle is suddenly stopped (Key-Off), function will be automatically disabled (even if timer was active, the current "lap" will not be recorded). If the time is never

"stopped", it will roll over upon reaching 9 minutes, 59 seconds and 99 hundredths; the lap timer starts counting from 0 (zero) and will keep running until the recording function is disabled. If, on the contrary, the LAP function is enabled and "memory" was not reset, but recorded laps are less than 30 (example: 18 recorded laps) the Instrument Panel records any left lap until memory is full (in this case 12 further laps can be recorded). In this function only the lap times being recorded are displayed; other data are anyway recorded (MAX speed and MAX rpm), which can be later displayed in the "LAP DATA" (recorded LAP displaying) function.

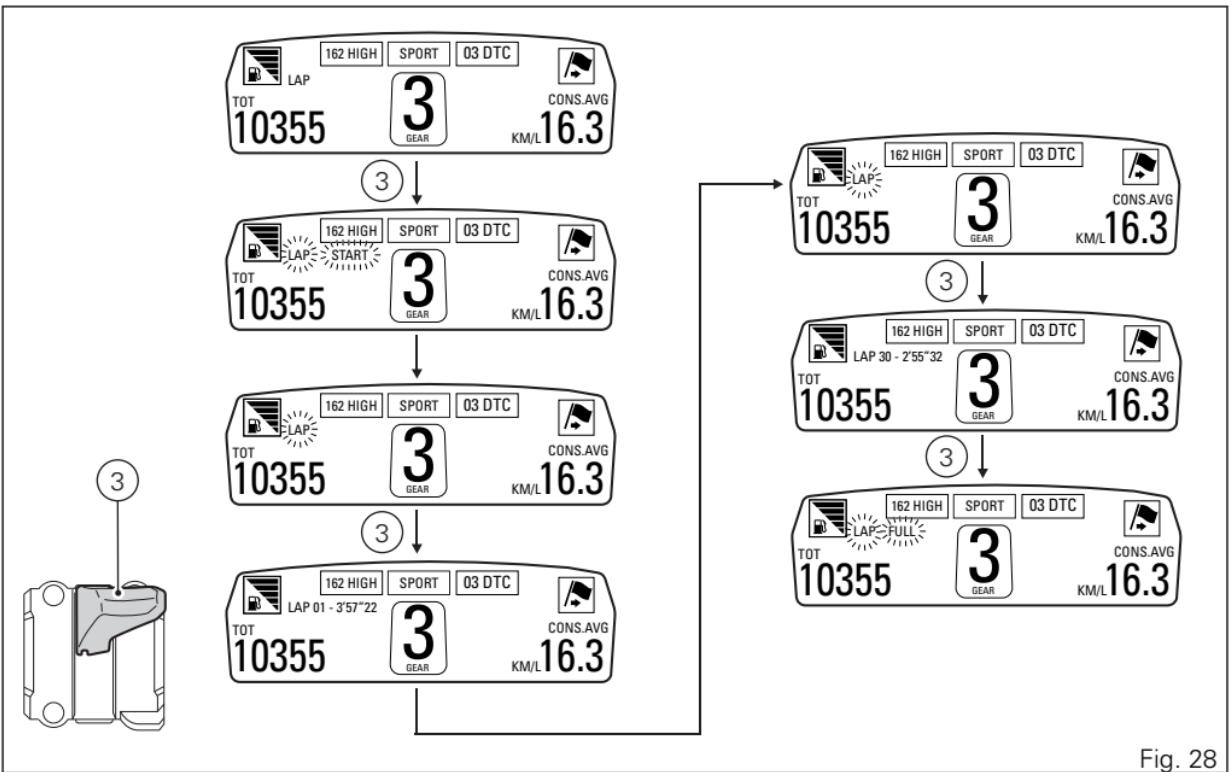


Fig. 28

## Fuel level

Suitable icons inform the rider of the quantity of fuel in the tank.

This indication is only present if MENU 2 is active.

With MENU 2 active, if a level sensor error is triggered, no matter the fuel level output or calculated, as well as in case of CAN no frame or BUS-Off, the display will still show the level icon in the fixed status "off" (and sensor error warning will be displayed as well).

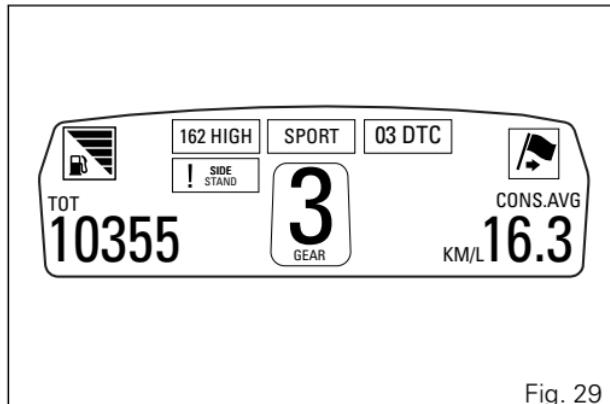


Fig. 29

Icon	Icon background colour	Level	Fuel quantity- EU version	Fuel quantity- US version
	Green	Level 5	$\geq 13.6 \text{ L}$	$\geq 12.5 \text{ L}$
	Green	Level 4	$\geq 10.1 \text{ L}$	$\geq 9.4 \text{ L}$
	Green	Level 3	$\geq 6.6 \text{ L}$	$\geq 6.3 \text{ L}$
	Green	Level 2	$\geq 3.1 \text{ L}$	$\geq 3.1 \text{ L}$
	Yellow	Level 1 (reserve)	$\geq 1.1 \text{ L}$	$\geq 1.1 \text{ L}$
 / 	Yellow / White	"Refuelling necessary" Night mode (blink)	$< 1.1 \text{ L}$	$< 1.1 \text{ L}$

 / 	Yellow / Black	"Refuelling necessary" Day mode (blink)	< 1.1 L	< 1.1 L
	Black	Fuel level sensor error – Day mode		
	White	Fuel level sensor error – Night mode		

## Viewing side stand status

This indication warns the rider that the side stand is open.

If side stand Sensor error is present on the CAN line, the display shows a stand down/open warning "SIDE STAND", turns on the EOBD light and displays the corresponding error "Side stand sensor".

If instrument panel does not receive side stand status (no frame), the indication will flash to indicate an undefined status.

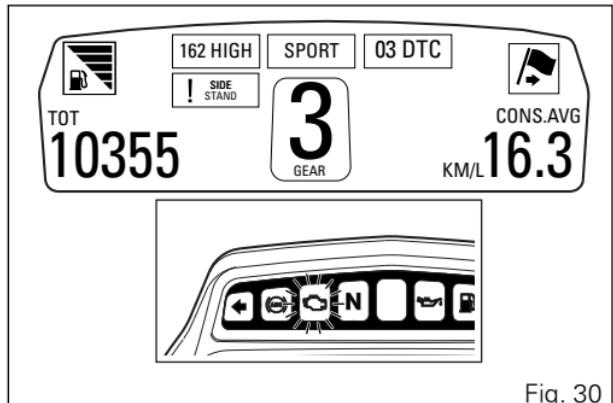


Fig. 30

## Display background colour (Self-Adjustment)

Instrument panel automatically adjusts background colour based on ambient light

When sensor detects a "low ambient light" (night) it shifts to black background mode; while when a "significant" ambient light (day) is detected, it shifts to white background mode.

This function can nevertheless be customised through the "setting" menu using the "BACK LIGHT - DASHBOARD 1" function to page 95, by permanently setting one of the two modes - NIGHT or DAY - (or going back to the AUTO mode).

## Service indication (SERVICE)

This function indicates that vehicle is about to reach or has reached a mileage requiring the motorcycle to be taken to a Ducati Authorised Service Centre for preventive general maintenance or for Oil change.

### Scheduled maintenance chart

Message	Km covered	Miles cov- ered	count down -1000 Desmo service	count down -1000 Oil Serv- ice	Desmo serv- ice	Oil service
1	1000	621				●
2	11000	6835		●		
	12000	7456				●
3	23000	14291	●			
	24000	14912			●	
4	35000	21748		●		
	36000	22369				●
5	47000	29204	●			
	48000	29826			●	
6	59000	36661		●		
	60000	37282				●

Message	Km covered	Miles cov- ered	count down -1000 Desmo service	count down -1000 Oil Serv- ice	Desmo serv- ice	Oil service
7	71000	44117	●			
	72000	44739			●	
8	83000	51574		●		
	84000	52195				●
9	95000	59030	●			
	96000	59651			●	

## OIL SERVICE zero warning

The first indication is enabled when the odometer counter reaches the first 1000 km (600 miles).

The (red) indication is enabled upon each Key-On for 10 seconds in the "large" size (A), and then continues being displayed in the small size (B) until "reset".

### Warning

Indication can be reset only by the Ducati Dealer or Authorised Service Centre carrying out the maintenance operations.

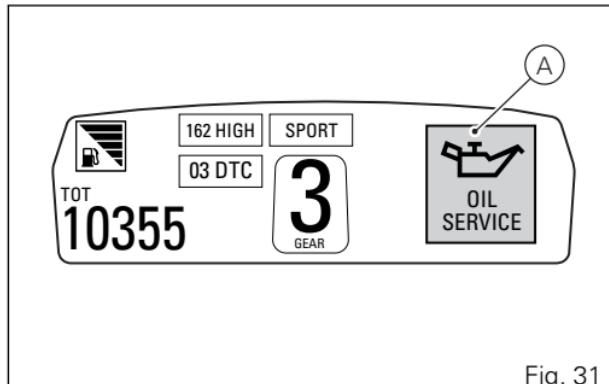


Fig. 31

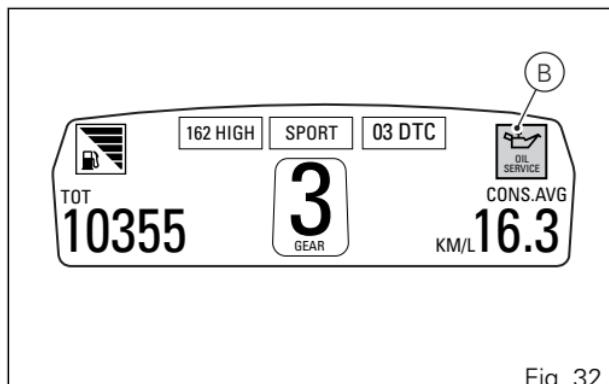


Fig. 32

## The message "OIL SERVICE" or "DESMO SERVICE" countdown

After having reset the "first" OIL SERVICE indication (1000 km), upon each Key-On, system will display the indication relating to the next service (OIL SERVICE "A" and "B" or DESMO SERVICE "C" and "D") and the distance left.

The (A) and (C) (green) indication is enabled upon each Key-On for 2 seconds; while when 1000 km are left before threshold is reached, (B) and (D) (amber yellow) indication is enabled upon each Key-On for 5 seconds.



### Warning

Indication can be reset only by the Ducati Dealer or Authorised Service Centre carrying out the maintenance operations.

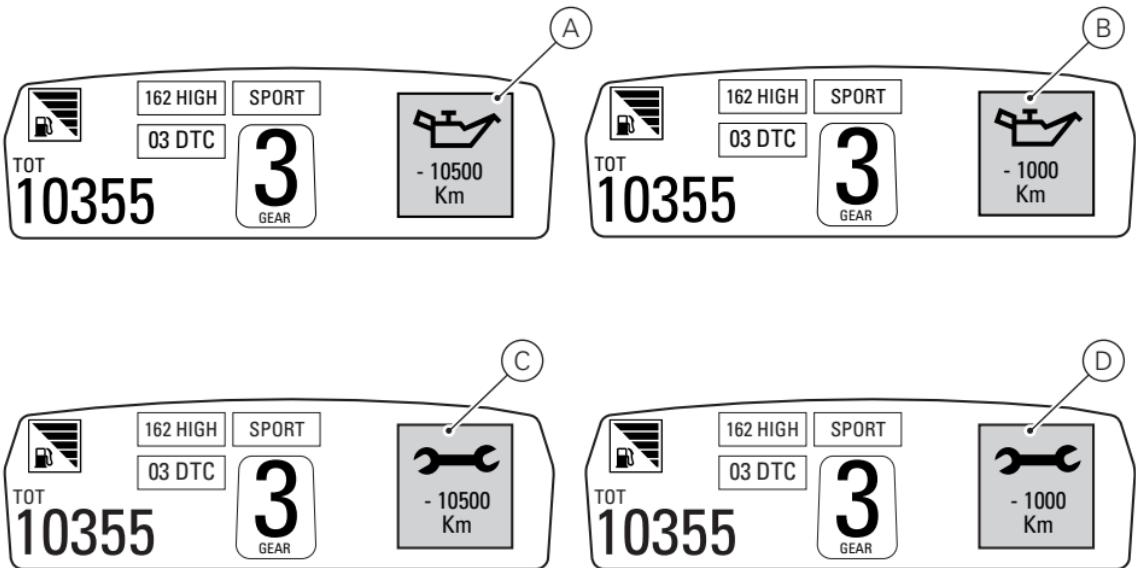


Fig. 33

## "OIL SERVICE" or "DESMO SERVICE"

### warning

When the distance threshold requiring a service is reached, upon every Key-On system displays the indication relating to the service required (OIL SERVICE "A" and "B" or DESMO SERVICE "C" and "D").

The (red) indication is enabled upon each Key-On for 10 seconds in the "large" size (A) and (C), and then continues being displayed in the small size (B) and (D) until "reset".

After reset, system will display the next service indication and the residual distance (as described in previous paragraph).



### Warning

Indication can be reset only by the Ducati Dealer or Authorised Service Centre carrying out the maintenance operations.

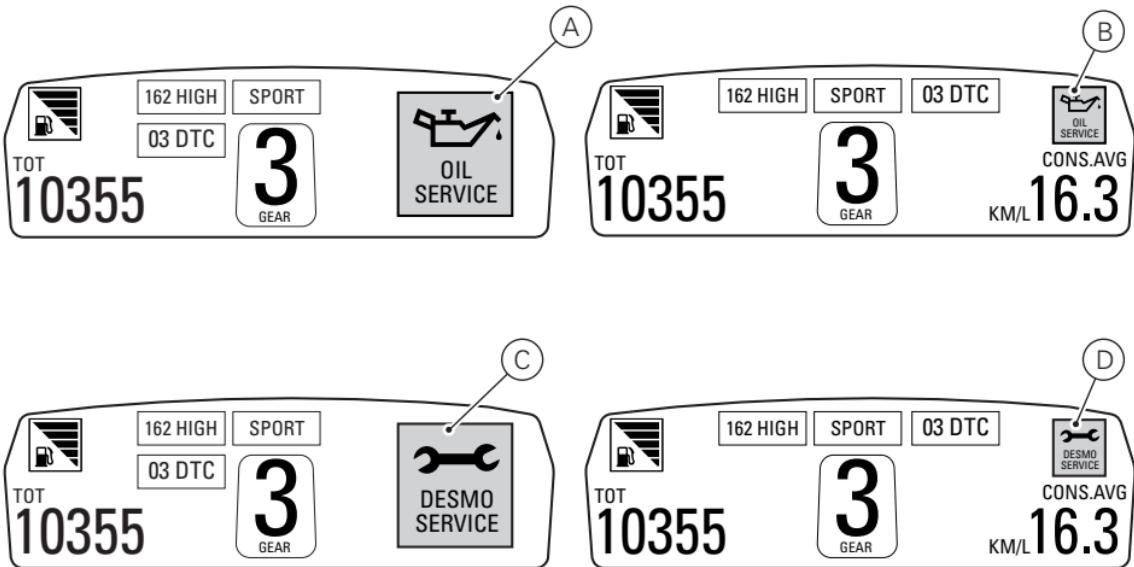


Fig. 34

## Warnings/Alarms (WARNING)

Instrument panel activates, in real time, some warnings / malfunctions which do not nevertheless affect motorcycle correct and safe operation. Upon Key-On (once check routine is completed) one or more "warnings" are displayed, if active. As soon as one "warning" is activated, the (yellow amber) indication is clearly displayed (A) for 10 seconds, and it is then minimised (B).

If several warnings are present, they are displayed in "rolling" mode every 3 seconds.



### Note

When one or more "warnings" are activated, no warning light will come on.

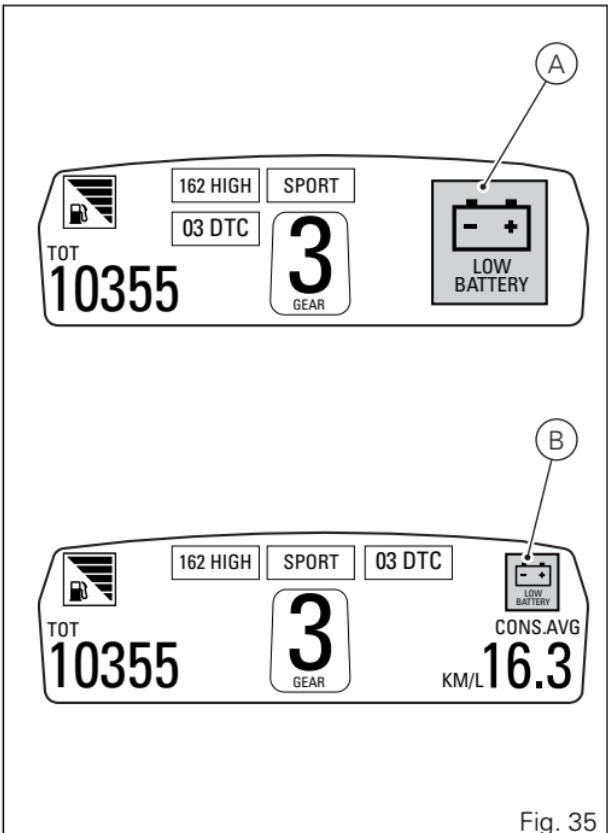


Fig. 35

The following "warnings" could be displayed:

- "Low" battery level (LOW BATTERY);
- "Disabled" Traction Control (DTC OFF);
- Hands Free (HF) Key "not acknowledged";
- "Low" battery level of Hands Free (HF) key;
- "High" Engine coolant temperature (HIGH TEMP);
- Steering unlock error.

## "Low" Battery Level

The activation of this "warning" (amber yellow) indicates that motorcycle battery level is low. Warning is activated when battery voltage is lower than/equal to 11.0 Volt.



Note  
In this case, Ducati recommends charging battery in the shortest delay using the special instrument as engine could not be started.

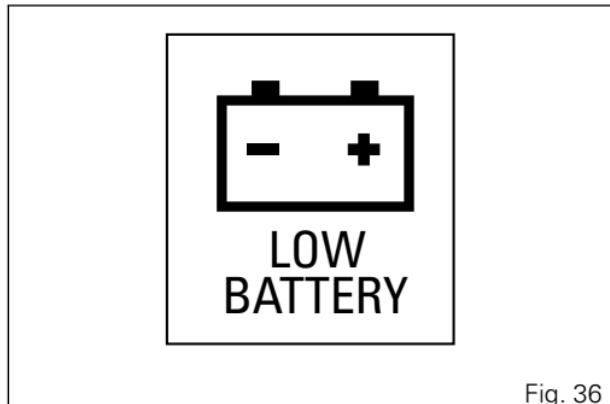


Fig. 36

## Disabled Traction Control (DTC)

The activation of this "warning" (amber yellow) indicates that DTC (Ducati Traction Control) is disabled.



### Note

In this case, Ducati recommends paying special attention while riding as vehicle behaves differently from when the Traction Control is active.

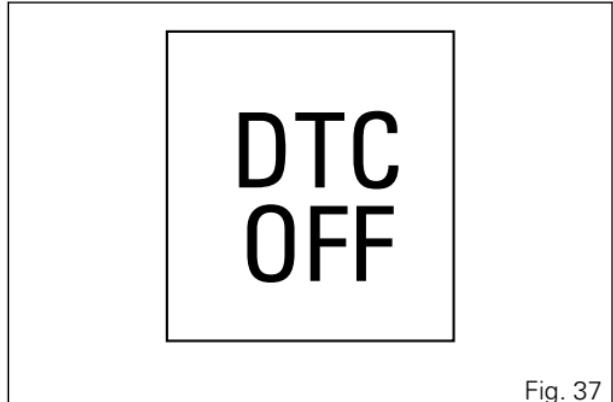


Fig. 37

## Hands Free (HF) Key not acknowledged

The activation of this "warning" (amber yellow) indicates that the Hands Free system cannot detect any active key close to vehicle.



**Note**  
In this case, Ducati recommends making sure that the active key is nearby (and that it was not lost) or that it works properly.



Fig. 38

## "Low" battery level of Hands Free (HF) key

The activation of this "warning" (amber yellow) indicates that the Hands Free System detects that the battery allowing active key to communicate with and turn on vehicle is running flat.



In this case, Ducati recommends changing battery in the shortest delay.

To change battery, refer to paragraph "Replacing the battery in the active key" page 119.



Fig. 39

## "High" engine coolant temperature

The activation of this "warning" (red) indicates that engine coolant temperature is high.  
Warning is activated when temperature reaches 121°C (250°F).



Note  
In this case, Ducati recommends stopping riding and turning engine immediately off; making sure that fans are working.



Fig. 40

## Steering unlock error - Steering still locked

The activation of this "warning" (amber yellow) indicates that the Hands Free System could not remove the steering lock.



### Warning

In this case, Ducati recommends switching vehicle off and on again (Key-Off / Key-On), keeping handlebar fully turned. If warning is still present (and steering does not "unlock"), contact a Ducati Authorised Service Centre.

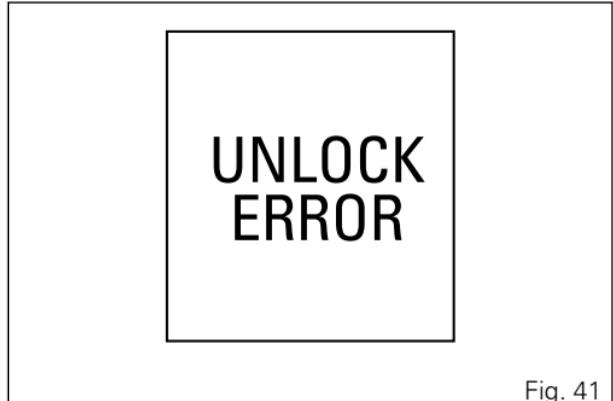


Fig. 41

## Error warnings

This function allows detecting any vehicle abnormal behaviour. Instrument panel activates, in real time, any vehicle abnormal behaviour (ERRORS).

Upon Key-On (once check routine is completed) one or more "ERRORS" are displayed in red (if active, only). As soon as one "error" is activated, the (red) indication is clearly displayed (A) for 10 seconds, and it is then minimised (B).

If several errors are present, they will be displayed in "rolling" mode every 3 seconds; when one or more errors referred to the engine control unit are activated, the "Engine/Vehicle Diagnosis - EOBD" warning light (C) will come on as well on handlebar instrument panel. For any other types of errors, the Generic Error warning light (D) on the instrument panel on tank is also on.

Hereinafter is the table of the possible displayed errors.

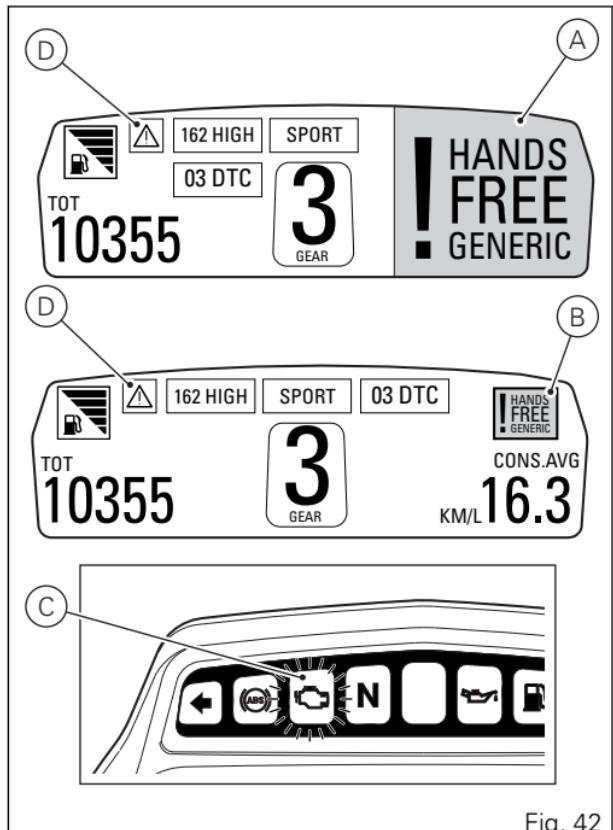


Fig. 42

## Warning

When one or more errors are displayed, always contact a Ducati Dealer or authorised Service Centre.

<b>WARNING LIGHT</b>	<b>ERROR MESSAGE</b>	<b>ERROR</b>
	BBS/DTC	Black Box / Traction Control Control Unit
	GEAR SENSOR	Gear sensor
	FUEL SENSOR	Fuel level sensor
	SPEED SENSOR	Speed sensor
	UNKNOWN DEVICE	Unknown control unit

<b>WARNING LIGHT</b>	<b>ERROR MESSAGE</b>	<b>ERROR</b>
 SIDE STAND	SIDE STAND	Side stand switch error
 DSB SLAVE	DEVICE DSB SLAVE	Handlebar instrument panel not working
 DDA	DEVICE DDA	DDA error
 DSB MASTER	DEVICE DBS MASTER	Tank instrument panel not working
 FAN	FAN	Fan relay
 CAN LINE	CAN LINE	CAN communication line

<b>WARNING LIGHT</b>	<b>ERROR MESSAGE</b>	<b>ERROR</b>
 ! BATTERY	BATTERY	Battery voltage (HIGH or LOW)
 ! ABS	DEVICE ABS	ABS control unit not working
 ! STOP LIGHT	STOP LIGHT	Rear stop light
 ! ECU	DEVICE ECU	ECU control unit not working
 ! ECU	ACCELER POSITION	Wrong accelerator position
 ! ECU	ETV	Faulty motor relay or throttle motor

<b>WARNING LIGHT</b>	<b>ERROR MESSAGE</b>	<b>ERROR</b>
! ECU	PRESSURE SENSOR	Barometric pressure sensor
! ECU	ENGINE TEMP.	Engine temperature sensor
! ECU	T-AIR SENSOR	Air temperature sensor
! ECU	FUEL INJECT.	Injection Relay
! ECU	COIL	Coil
! ECU	INJECTOR	Injector

<b>WARNING LIGHT</b>	<b>ERROR MESSAGE</b>	<b>ERROR</b>
! ECU	PICK UP	Timing/rpm sensor
! ECU	LAMBDA	Lambda Sensor
! ECU	ECU GENERIC	ECU error
! ECU	KEY	HF communication problem
! ECU	HANDS FREE GENERIC	Hands Free Control Unit error

## Setting menu

This menu allows enabling, disabling and setting some motorcycle functions.

To access the "setting menu", keep button (2) pressed for 3 seconds.

No other function can be displayed when this menu is accessed.

- SET UNITS
- ABS
- EXIT

To quit the setting menu, highlight "EXIT" with button (1) or button (2) and press the reset button (4).

### Important

For safety reasons, the setting menu can be accessed only when vehicle speed is below or equal to 20 Km/h; if this menu is accessed and vehicle speed is above 20 Km/h, instrument panel will automatically quit it and shift back to "main" screen.

Setting menu "items" are the following:

- RIDING MODE
- MENU 2
- BACK LIGHT
- RPM
- PIN CODE
- LAP
- BATTERY
- CLOCK

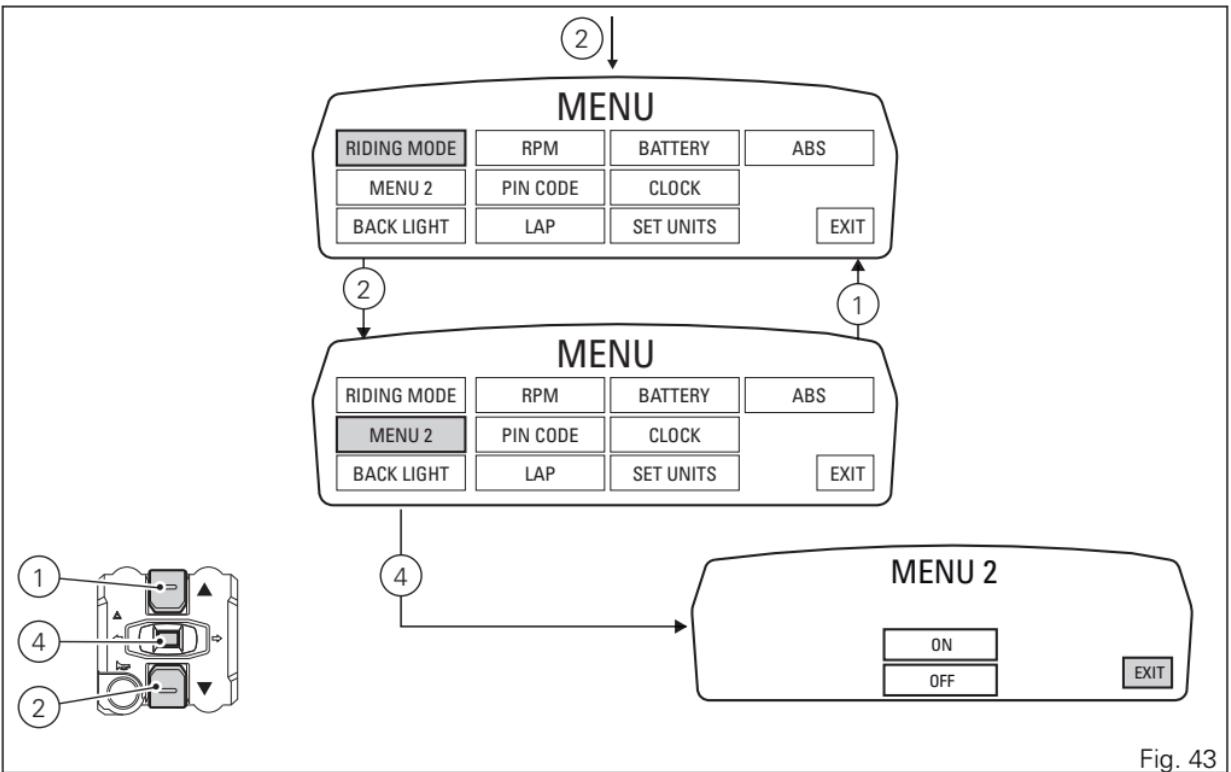


Fig. 43

## Customising the RIDING MODE

This function allows customising each single riding mode.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "RIDING MODE" function and press the reset button (4) to shift to next page.

Once function is accessed, the three riding modes are displayed; to customise parameters, use buttons (1) or (2) to select the riding mode you want to change and press the reset button (4) to confirm.

Customisable parameters are "DTC" (Ducati Traction Control) and "ENGINE".

Any parameter change made is saved and remains in the memory also after a Battery-Off.

To change DTC parameters, refer to "DTC (Ducati Traction Control)" page 85 paragraph.

To change Engine parameters, refer to "ENGINE (Engine power control)" page 90 paragraph.

The riding parameters set by Ducati can be restored for each single riding mode through the "DEFAULT" Function.

To restore the parameters set by Ducati, see "DEFAULT (Restoring Ducati default parameters)" page 92 paragraph.



### Note

If one or more parameters have been customised, when quitting the Setting menu, in the "main" screen, the "background" of the riding mode indication (SPORT, TOURING or URBAN) becomes yellow.

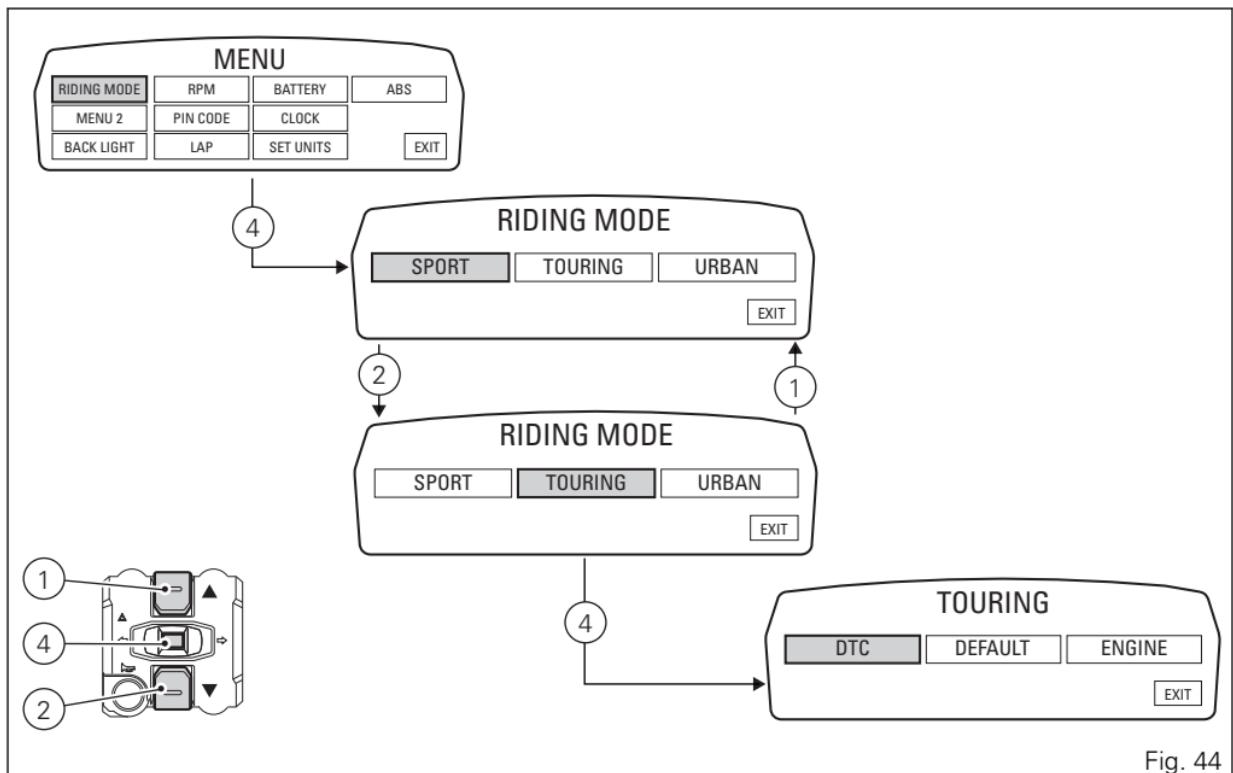


Fig. 44



### Note

If parameters were not changed (customised) or if parameters are restored through the "DEFAULT" function, once Setting menu is quitted, the "background" indicating riding mode (SPORT, TOURING or URBAN) of "main" screen will turn blue.



### Warning

Changes should only be made to the parameters by people who are experts in motorcycle set-up; if the parameters are changed accidentally, use the "DEFAULT" function to restore factory settings.

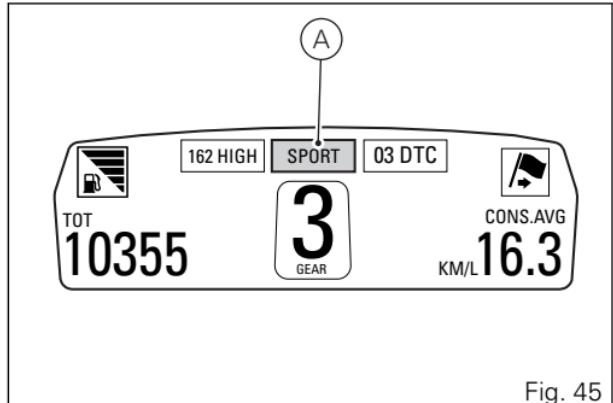


Fig. 45

## Customizing the Riding Mode: setting the DTC level

This function allows customising DTC (Ducati Traction Control) intervention level and, if necessary, disabling it for each single riding mode.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "RIDING MODE" function and press the reset button (4) to shift to next page.

Use buttons (1) or (2) to select the riding mode you wish to change and press the reset button (4).

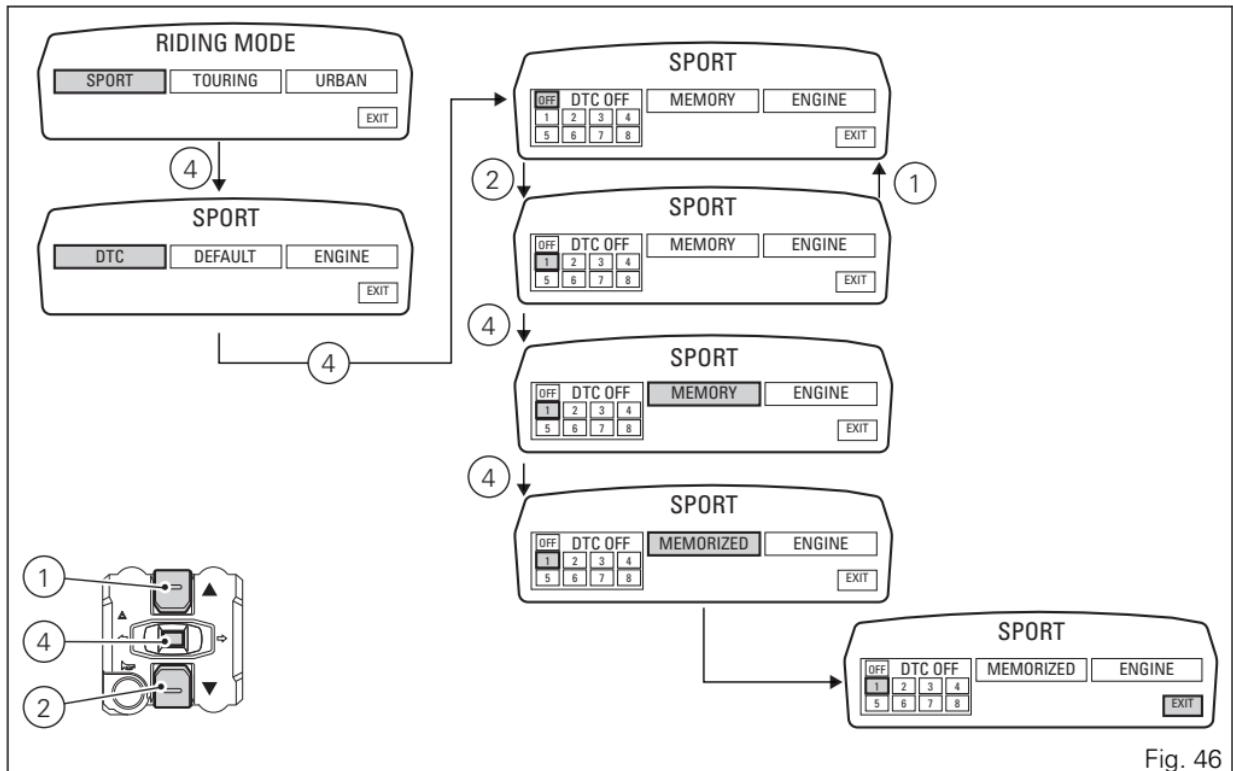
To access next page, select "DTC" using button (1) or (2) and press again the reset button (4) to confirm selection.

Once function is accessed, the currently set DTC level is displayed on the left side inside a rectangle (ex: DTC 1).

Use buttons (1) or (2) to select the new level (1 to 8) or the OFF indication to disable Traction Control System; once the new setup is selected, press the reset button (4) to highlight "MEMORY".

Now store the new setting by keeping the reset button (4) pressed for 3 seconds with the "MEMORY" highlighted.

If setting has been stored successfully, "MEMORIZED" will appear in green for 2 seconds, and "EXIT" will be automatically highlighted. To quit the setting function, press the reset button (4) with "EXIT" highlighted.



DTC intervention increases from level 1 to level 8. The following table indicates the most suitable level of DTC intervention for the different riding modes as well as the default settings in the "RIDING MODES" that can be selected by the rider:

<b>DTC LEVEL</b>	<b>RIDING MODE</b>	<b>USE</b>	<b>DEFAULT?</b>
1	Sport	Sport style on the road for experienced riders or on the track.	It is the default level for the SPORT RIDING MODE
2	Sport-Touring	Road style for experienced riders	/
3	Touring	Standard style on the road	It is the default level for the TOURING RIDING MODE
4	Touring 2	Standard style on the road for less experienced riders	/
5	Urban	City style	It is the default level for the URBAN RIDING MODE
6	Urban 2	City style for less experienced riders	/
7	Wet	Style on wet asphalt	/
8	Rain	Style under rain	/

## Tips on how to select the intervention level



### Warning

The 8 levels of the DTC system your motorcycle is equipped with were calibrated with original equipment tyres (make, model and size). The use of tyres of different size to the original tyres may alter the operating characteristics of the system.

Motorcycle original equipment: (front 120/70-17 - rear 240/45-17).

In the case of minor differences, such as for example, tyres of a different make and/or model than the OE ones, but with the same size (rear = 240/45-17; front = 120/70-17), it may be sufficient to simply select the suitable level setting from those available in order to restore optimal system operation. If tyres of a different size class are used or if the tyre dimensions differ significantly from the original tyres, it may be that the system operation is affected to the point where none of the 8 available level settings will give satisfactory results. In this case it is advisable to deactivate the traction control system. If level 8 is selected, the DTC control unit will kick in at the slightest hint that the rear wheel is starting to spin.

Between level 8 and level 1 there are other 6 intermediate levels. DTC intervention decreases regularly from level 8 to level 1.

Levels 1 and 2 were specifically designed for OFF-ROAD use and do not ensure a correct control of traction loss on asphalt.

With levels 3 and 4, DTC control unit allows both rear tyre spinning and sliding sideways when exiting a turn; we recommend using these levels only on track and to very experienced riders.

The choice of the correct level depends on 3 main variables:

- 1) The grip (type of tyre, amount of tyre wear, the road/track surface, weather conditions, etc.);
- 2) The characteristics of the path/circuit (bends all taken at similar speeds or at very different speeds);
- 3) The riding style (whether the rider has a "smooth" or a "rough" style).

Level depends on grip conditions:

The choice of level setting depends greatly on the grip conditions of the track/path (see below, tips for use on the track and on the road).

Level depends on type of track/path:

If the track/path features bends all taken at similar speeds, it will be easier to find a level suitable for all bends; while a track/path with a hairpin turn to be taken at very low speed compared to the other bends will require a DTC level setting that is the best compromise for all bends (on hairpin turn, DTC intervention will always be greater compared to the other bends).

#### Level depends on riding style:

The DTC will tend to kick in more with a "smooth" riding style, where the motorcycle is leaned over further, rather than with a "rough" style, where the motorcycle is straightened up as quickly as possible when exiting a turn.

#### Tips for use on the track

We recommend that level 8 is used for a couple of full laps (to allow the tyres to warm up) in order to get used to the system. Then try levels 7, 6, etc., in succession until you identify the DTC sensitivity level that suits you best (always try each level for at least two laps to allow the tyres to warm up).

Once you have found a satisfactory setting for all the corners except one or two slow ones, where the system tends to kick in and control too much, you can

try to modify your riding style slightly to a more "rough" approach to cornering i.e. straighten up more rapidly on exiting the corner, instead of immediately trying a different level setting.

#### Tips for use on the road

Activate the DTC, select level 8 and ride the motorcycle in your usual style; if the level of DTC sensitivity seems excessive, try levels 7, 6, etc., until you find the one that suits you best.

If changes occur in the grip conditions and/or circuit characteristics and/or your riding style, and the level setting is no longer suitable, switch to the next level up or down and proceed to determine the best setting (e.g. if with level 7 the DTC intervention seems excessive, switch to level 6; alternatively, if on level 7 you cannot perceive any DTC intervention, switch to level 8).

## Customizing the Riding Mode: engine adjustment

This function allows customising ENGINE power and delivery.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "RIDING MODE" function and press the reset button (4) to shift to next page.

Select the riding mode you wish to change using button (1) or (2) and press the reset button (4) to shift to next page; now use buttons (1) or (2) to select the "ENGINE" indication and press the reset button (4) again to confirm selection.

Once function is accessed, engine setting (ENGINE 162 HIGH, 162 LOW or 100 HP) will be displayed on the right side inside a rectangle.

### Note

In France, China and Japan versions, display will show settings (ENGINE HIGH, MIDDLE or LOW).

Use buttons (1) or (2) to select one of the three engine settings; once the new setting has been selected, press the reset button (4) to highlight "MEMORY".

Now store the new setting by keeping the reset button (4) pressed for 3 seconds with "MEMORY" highlighted.

If setting has been stored successfully, "MEMORIZED" will appear in green for 2 seconds, and "EXIT" will be automatically highlighted.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

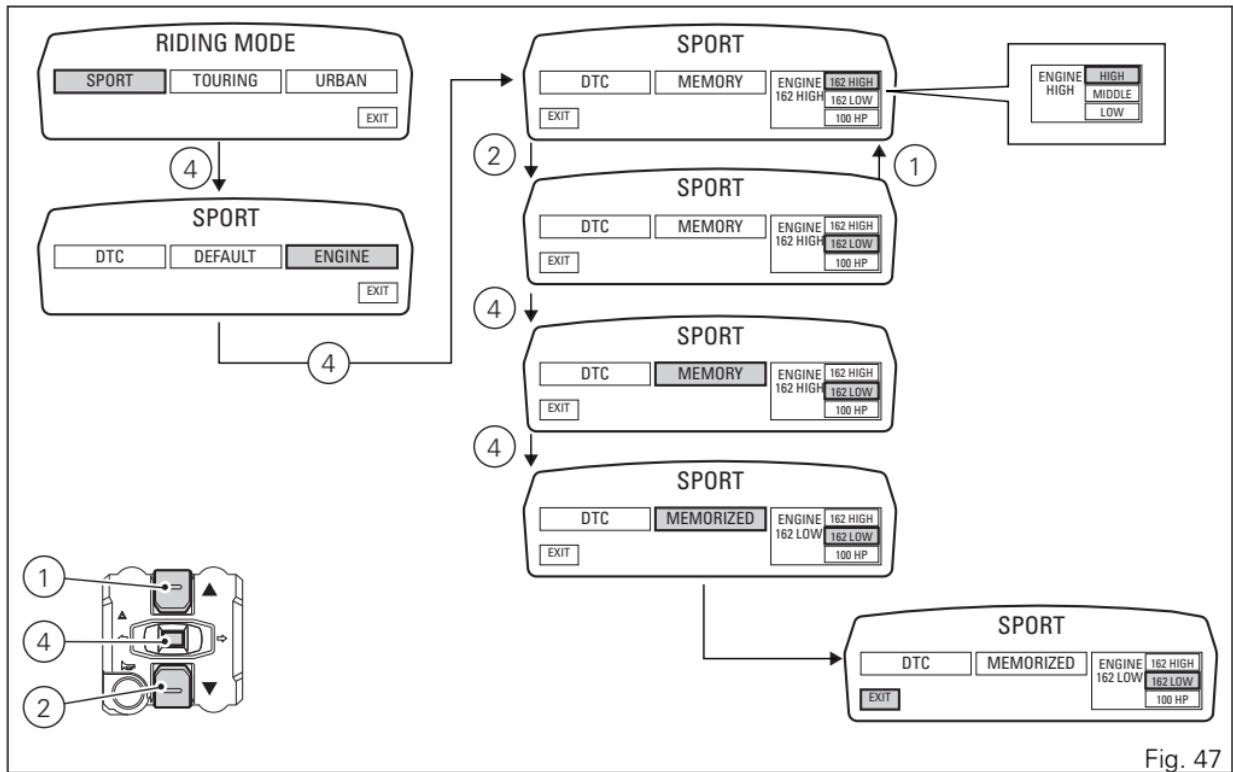


Fig. 47

## Customising Riding Mode: restore default settings (DEFAULT)

This function allows restoring the parameters set by Ducati for each single riding mode. To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "RIDING MODE" function and press the reset button (4) to shift to next page. Use button (1) or (2) to select the riding mode for which you want to restore the default parameters, and press button (4) to shift to next page; now use buttons (1) or (2) to select the "DEFAULT" indication. Now, to restore default parameters, keep the reset button (4) pressed for 3 seconds. It will take 3 seconds to restore parameters, during which "PLEASE WAIT ..." will appear on the display; once procedure is completed, "DEFAULT OK" will appear to confirm that default parameters have been restored.

### **!** Important

This procedure restores the parameters of all riding modes.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

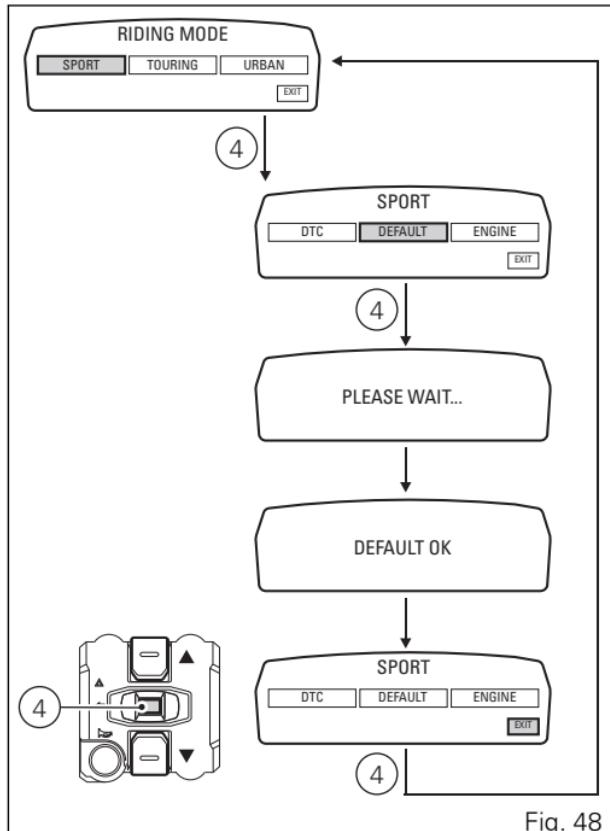


Fig. 48

## Set Menu 2

This function allows disabling "OFF" Menu 2 (B) / re-enabling "ON" Menu 2 (A).

When Menu 2 is disabled, the average consumption (CONS.AVG), the instant consumption (CONS.), the average speed (SPEED AVG), the trip time (TRIP TIME) and the air temperature (AIR) functions will no longer be displayed on "main screen".

Meters will nevertheless continue calculating all these functions so that, once Menu 2 is activated again, all data will be updated and consistent.

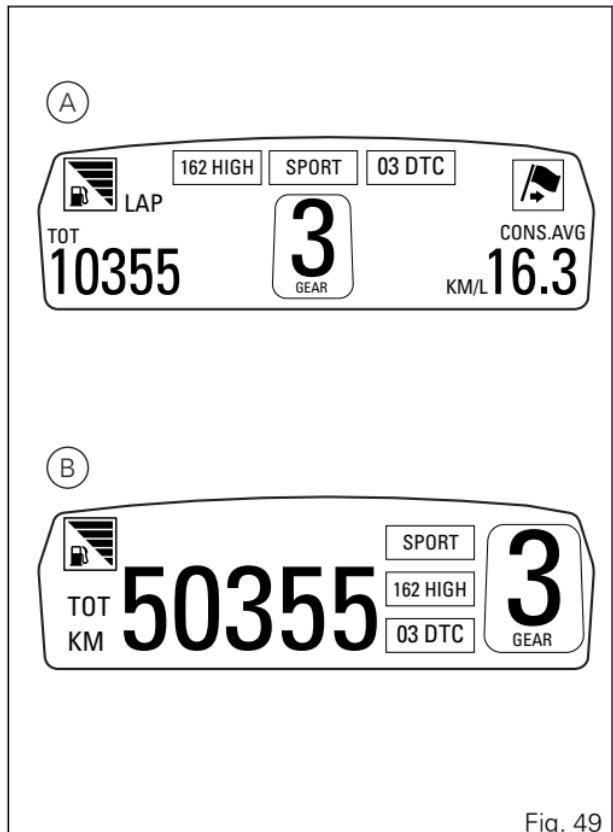


Fig. 49

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "MENU 2" function and press the reset button (4) to shift to next page.

Function status is highlighted on the display (green if ON or yellow if OFF).

Use buttons (1) or (2) to move left arrow on the new setting, and press the reset button (4) to confirm it. To quit the setting function, press the reset button (4) with "EXIT" highlighted.

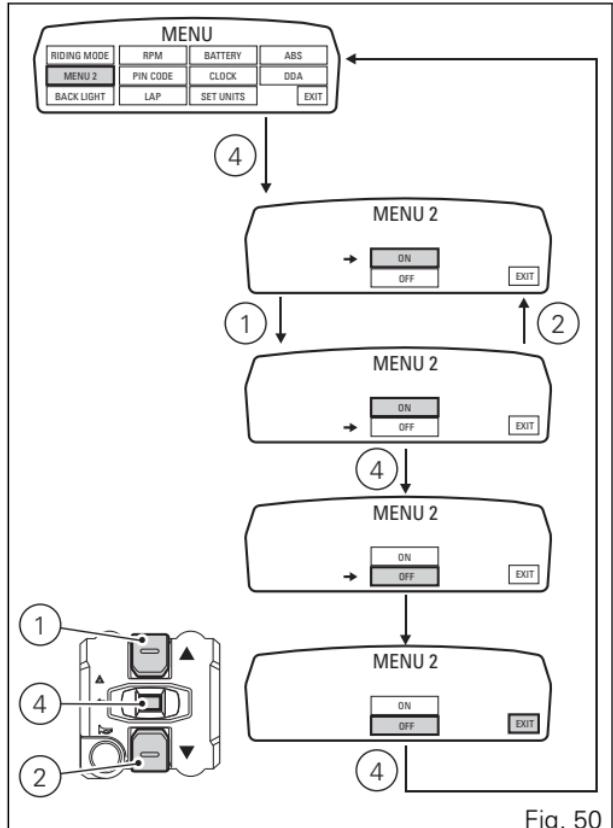


Fig. 50

## Display backlighting setting

### Tank instrument panel background setting - DASHBOARD 1

This function allows adjusting tank instrument panel background.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "BACK LIGHT" function and press the reset button (4) to shift to next page.

Use buttons (1) or (2) to select "DASHBOARD 1" function, and press the reset button (4) to confirm it. Once "DASHBOARD 1" function is accessed, the current setting will be displayed (DAY, NIGHT or AUTO in green); use buttons (1) or (2) to move the left arrow on the new setting, and press the reset button (4) to confirm.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

"DAY" setting: instrument panel background will permanently become "white" for better visibility - it is recommended in case of high ambient light.

"NIGHT" setting: instrument panel background will permanently become "black" for dimmed visibility - it

is recommended in case of low ambient light and/or at night.

"AUTO" setting: instrument panel background is automatically adjusted based on ambient light (detected by a sensor); it will be "black" for a dimmed visibility with low ambient light and "white" for better visibility with high ambient light.



#### Note

In case of battery off, when the voltage is restored and upon next Key-On, back lighting will always be set on "AUTO" mode.

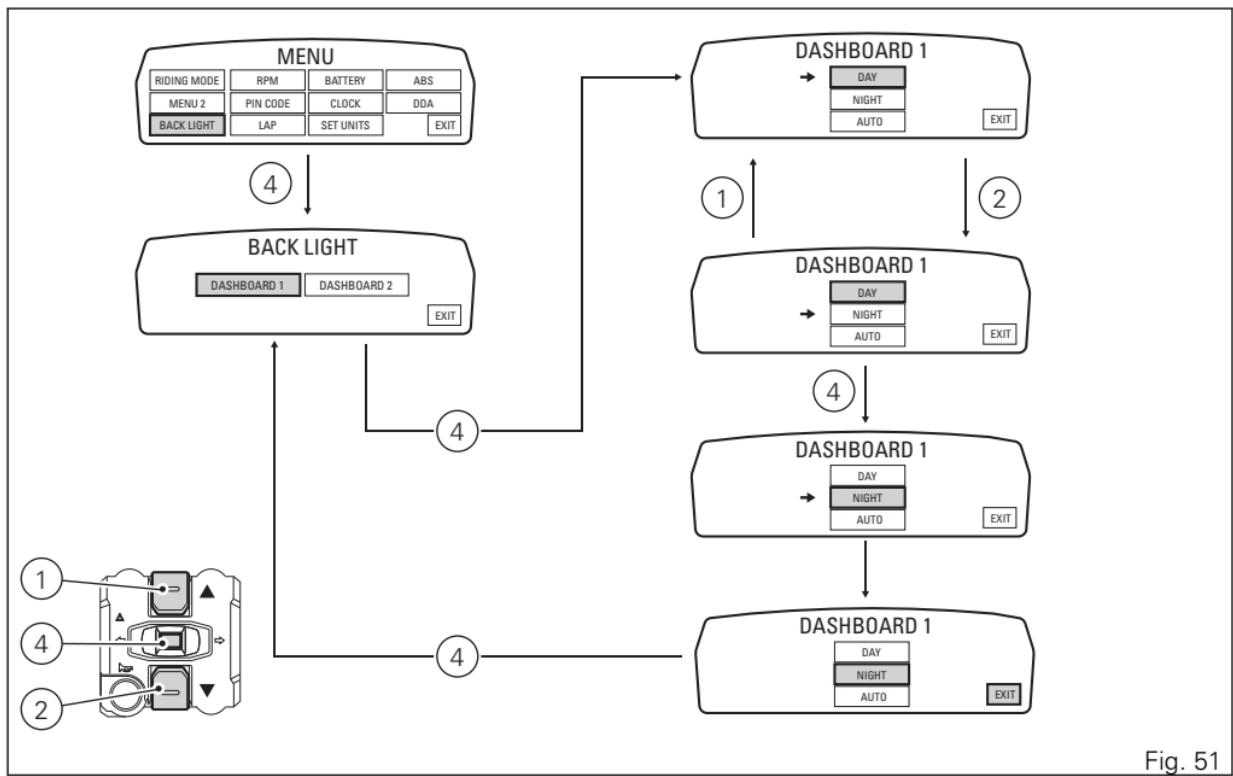


Fig. 51

## Handlebar instrument panel background setting - DASHBOARD 2

This function allows setting handlebar instrument panel "back lighting" intensity.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "BACK LIGHT" function and press the reset button (4) to shift to next page.

Use buttons (1) or (2) to select "DASHBOARD 2" function, and press the reset button (4) to confirm it.

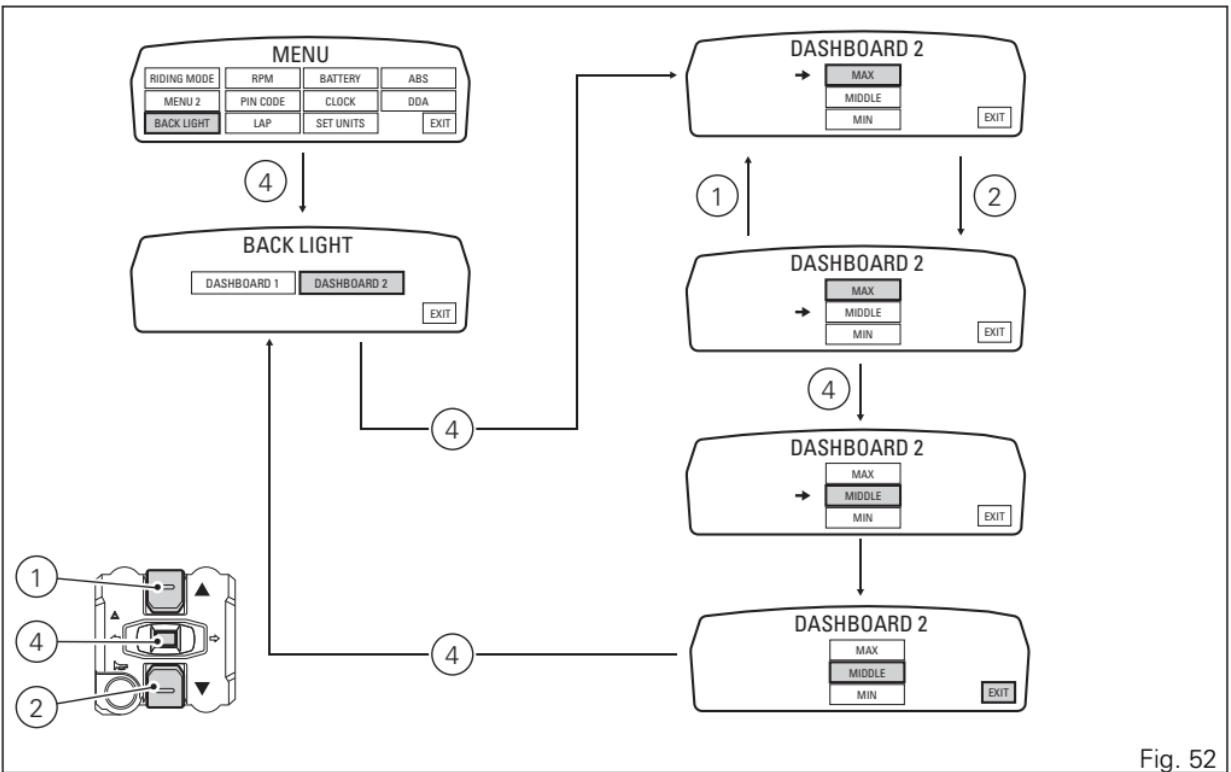
Once "DASHBOARD 2" function is accessed, the current setting will be displayed (MAX, MIDDLE or MIN in green); use buttons (1) or (2) to move the left arrow on the new setting, and press the reset button (4) to confirm.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

If "MAX" setting is selected, handlebar instrument panel background will be permanently set to max. level for better visibility - recommended in case of high ambient light.

If "MIDDLE" setting is selected, handlebar instrument panel back light will be permanently set at a level 30% lower than max. setting for dimmed visibility - recommended in case of poor ambient light.

If "MIN" setting is selected, handlebar instrument panel back light will be permanently set at a level 50% lower than max. setting for dimmed visibility - recommended in case of poor ambient light and/or at night.



## Digital engine rpm indication

This function displays the number of RPM to improve accuracy when setting idle rpm.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "RPM" function and press the reset button (4) to confirm.

The rpm value is displayed in number format with a 50 rpm accuracy.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

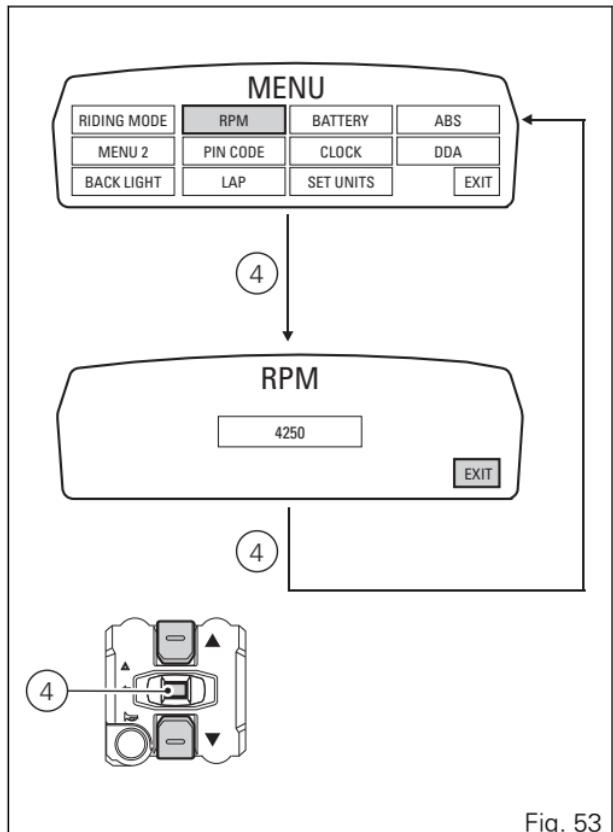


Fig. 53

## LAP

### LAP activation/deactivation function

This function allows enabling/disabling LAP (lap time) function.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "LAP" function and press the reset button (4) to shift to next page.

Function status is highlighted on the display (green if ON or yellow if OFF); use buttons (1) or (2) to move the left arrow on the new setting, and press the reset button (4) to confirm.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

If "OFF" is saved, LAP function will be disabled. If "ON" is saved, LAP function will be enabled (see "LAP Recording" page 51 paragraph).



#### Note

When "LAP" function is active, flash button (3) takes on the dual function of high beam "FLASH" and LAP timer Start / Stop.

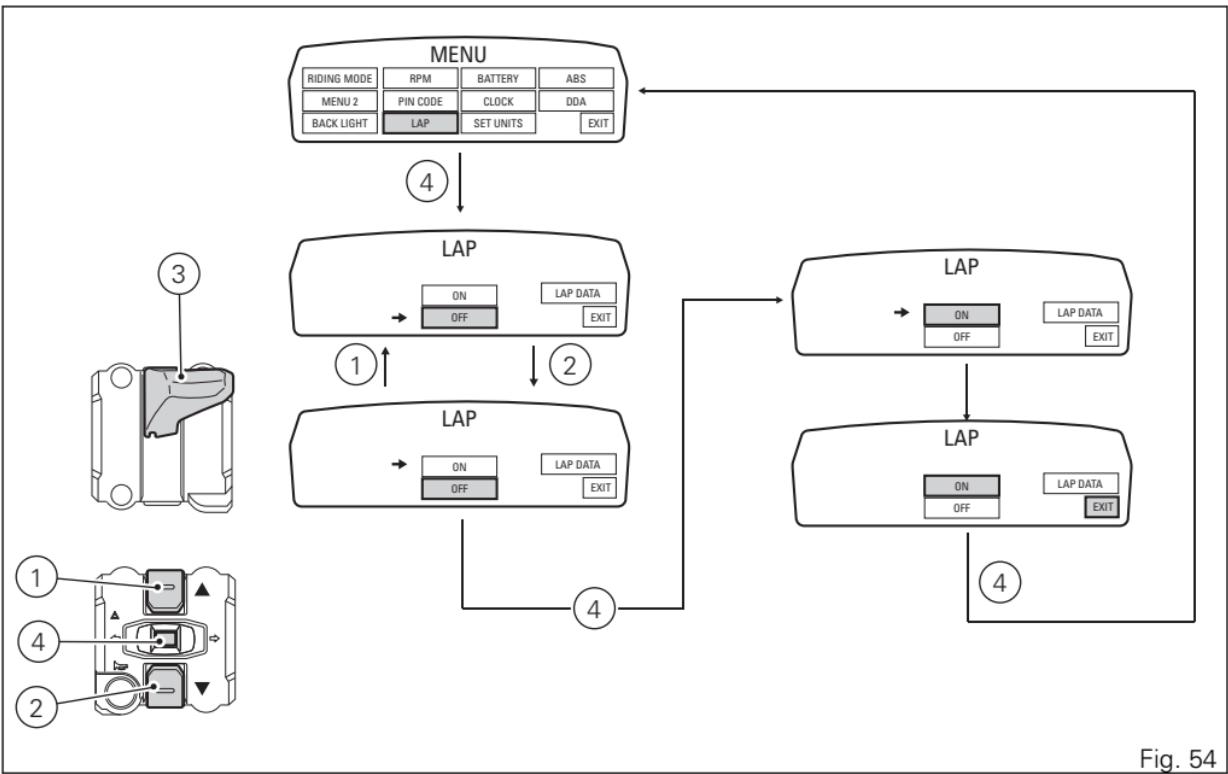


Fig. 54

## Recorded LAPs displaying function

This function allows displaying recorded LAPs. To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "LAP" function and press the reset button (4) to shift to next page.

Use buttons (1) or (2) to select "LAP DATA" and press the reset button (4) again to access the page displaying the previously recorded times.

The information will be displayed as follows:

- number of the lap being displayed on the top left (ex: LAP N.01);
- on the bottom left a rectangle containing lap time (TIME), the max. speed reached in the concerned lap (SPEED MAX) the max. rpm value reached in the concerned lap (RPM MAX);
- on the right side, you can use buttons (1) or (2) to highlight "NEXT" (each time the reset button (4) is pressed, next lap is displayed) and "PREV" (each time the reset button (4) is pressed, previous lap is displayed);

To quit, select "EXIT" and press the reset button (4).



### Note

The MAX stored speed is the one shown on the display (increased by 5%).

If no data are present inside memory, "NO LAP", with timer indicating "----", the MAX rpm value = "----" and MAX speed = "----" will be displayed.



### Note

If the stored times are deleted while the LAP function is active, it will be automatically deactivated.

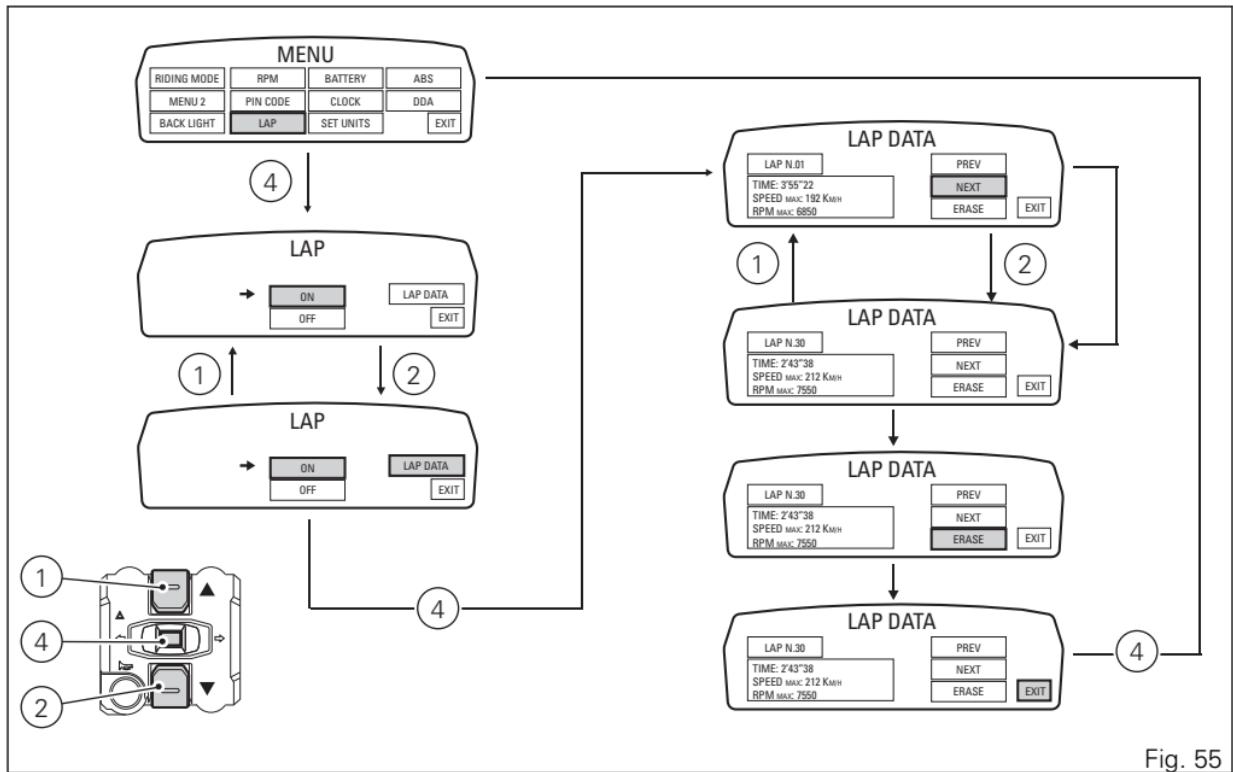


Fig. 55

## Stored LAPs erasing function

This function allows erasing stored LAPs. To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "LAP" function and press the reset button (4) to shift to next page.

Use buttons (1) or (2) to select "LAP DATA" and press the reset button (4) again to access the page displaying the previously recorded times.

Highlight "ERASE" and use button (1) or (2) to scroll the stored LAPs to be erased, then keep the reset button (4) pressed for 3 seconds.

Now "PLEASE WAIT" will appear on display left side and then "ERASE OK" will be shown for 2 seconds to confirm that data have been correctly erased. Stored data will no longer be present and "NO LAP" will be displayed.

To quit, select "EXIT" and press the reset button (4).

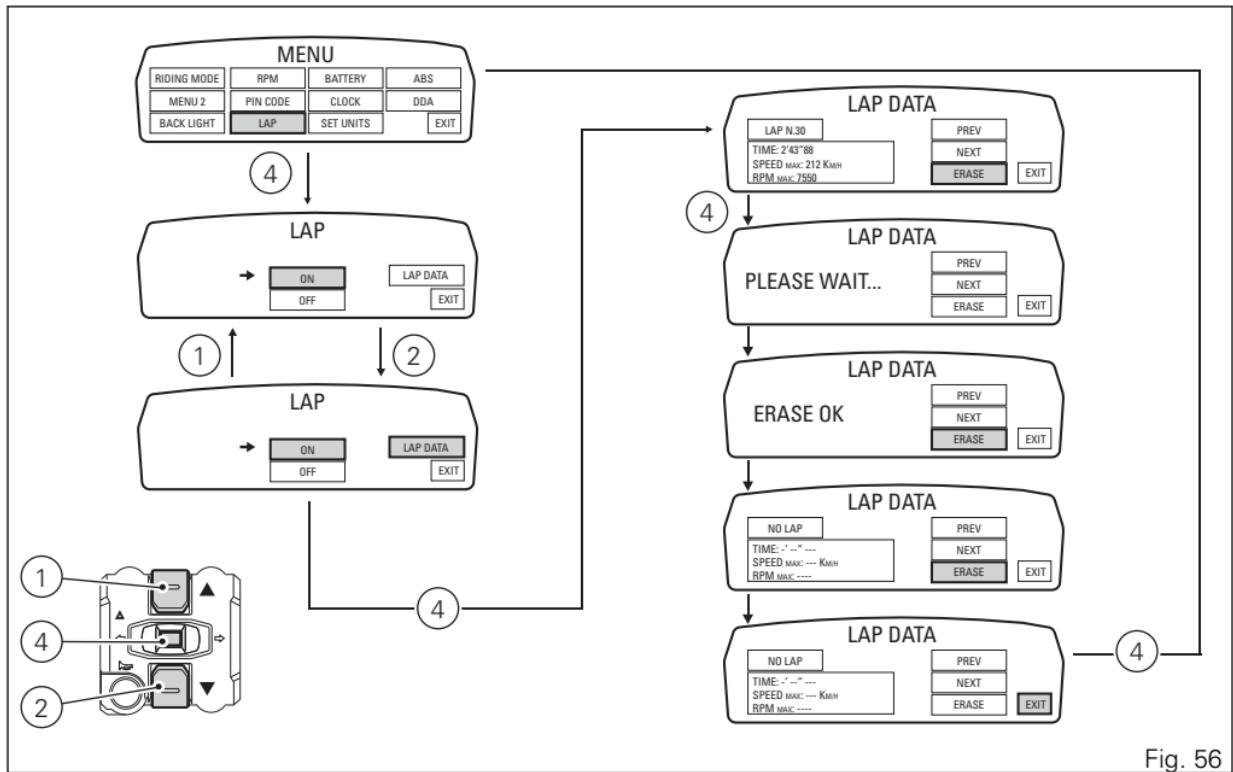


Fig. 56

## Battery voltage

This function describes battery voltage indicator operation.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "BATTERY" function and press the reset button (4) to confirm.

The information will be displayed as follows:

- if battery voltage is between 11.8 V and 14.9 V the reading will be displayed steady;
- if battery voltage is between 11.0 V and 11.7 V the reading will be displayed flashing;
- if battery voltage is between 15.0 V and 16.0 V the reading will be displayed flashing;

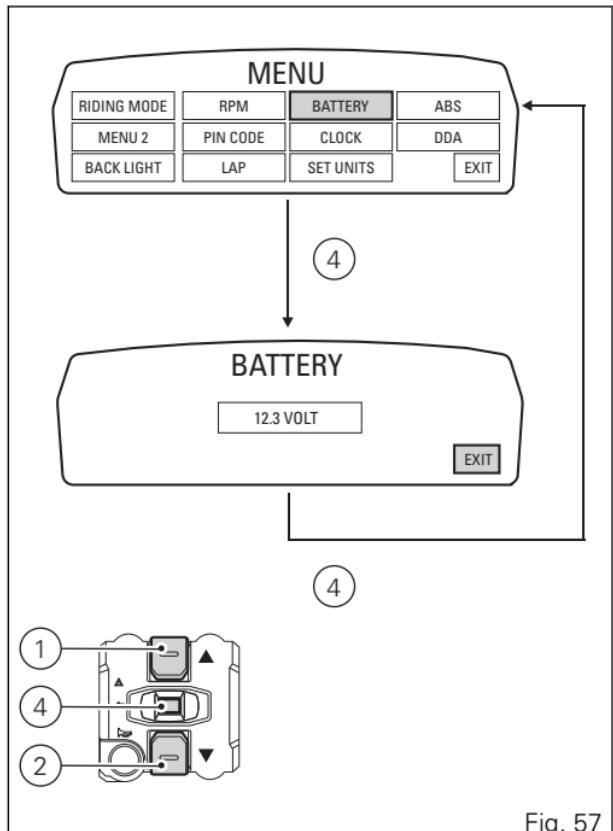


Fig. 57

- if battery voltage is equal to or lower than 10.9 Volt, "LOW" will be displayed flashing and the "Vehicle/engine diagnosis - EOBD" light will come on;
- if battery voltage is equal to or higher than 16.1 Volt, "HIGH" will be displayed flashing and the "Vehicle/engine diagnosis - EOBD" light will come on.



### Note

If the value is not available, a string of dashes " - - " will be displayed.

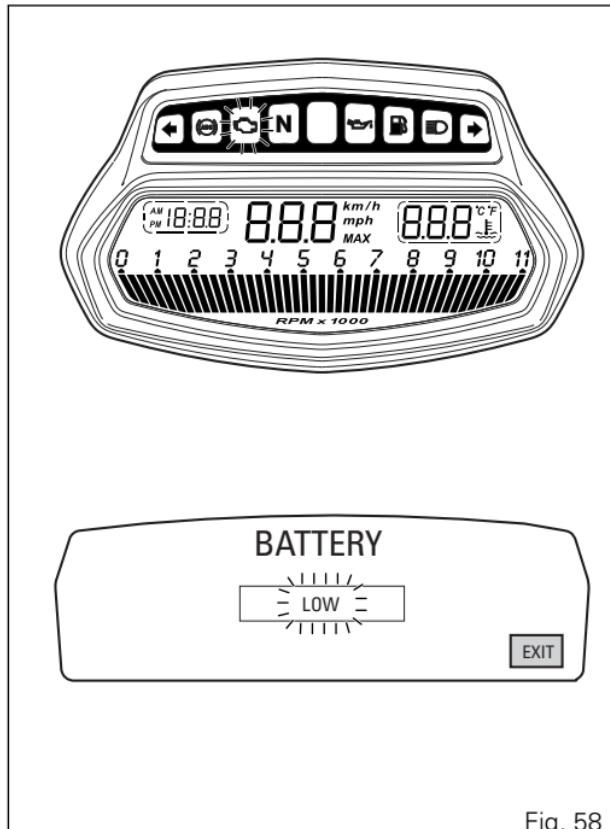


Fig. 58

## Clock setting

This function allows adjusting clock. To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "CLOCK" function and press the reset button (4) to confirm.

In the following screen "SETTING" will be highlighted in green (A); now, to edit the time displayed on handlebar instrument panel, keep the reset button (4) pressed for 3 seconds and "SETTING" will turn grey (B).

### Clock Setting

On entering this mode, the message "AM" will flash; press button (2) to make "PM" flash; press button (2) to go back to previous step (if time is 00:00 when shifting from AM to PM, 12:00 will be displayed); press button (1) to shift to hour setting, hours will start flashing; each time button (2) is pressed, counter will increase in steps of 1 hour; keep button (2) pressed to make counter increase in steps of 1 hour per second (hours will not flash while button is pressed).

Pressing button (1) gives access to the minute setting mode; minutes start to flash. Each time you press the button (2), the digit will increase by 1 minute. If you hold the button (2) down, the count increases cyclically in steps of 1 minute every second.

If button (2) is kept pressed for more than 5 seconds, steps increase in steps of 1 every 100 m (seconds will not flash while button (2) is pressed).

Press button (1) to complete setting, "SETTING" will be highlighted in green (C) again on tank instrument panel.

To quit, select "EXIT" and press the reset button (4).



### Note

In case of battery off, when the Voltage is restored and upon next Key-On, clock will have to be set again (it will automatically start counting from 00:00).

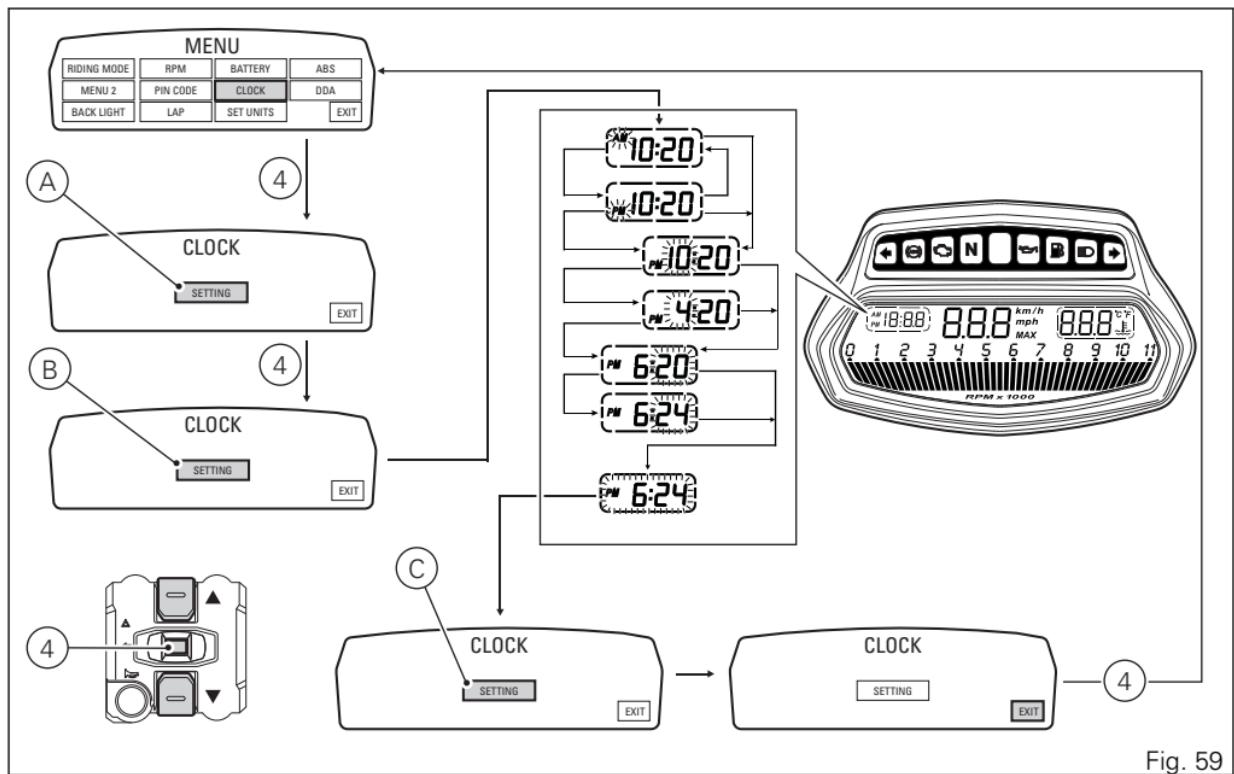


Fig. 59

## Setting the units of measurement

This function allows changing the units of measurement of the displayed values.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "SET UNITS" function and press the reset button (4) to shift to next page.

Use buttons (1) or (2) to select the value for which you wish to change the unit of measurement and press the reset button (4) again.

Instrument panel displays the values that can be changed; use buttons (1) or (2) to select the value you wish to change, and press the reset button (4) again.

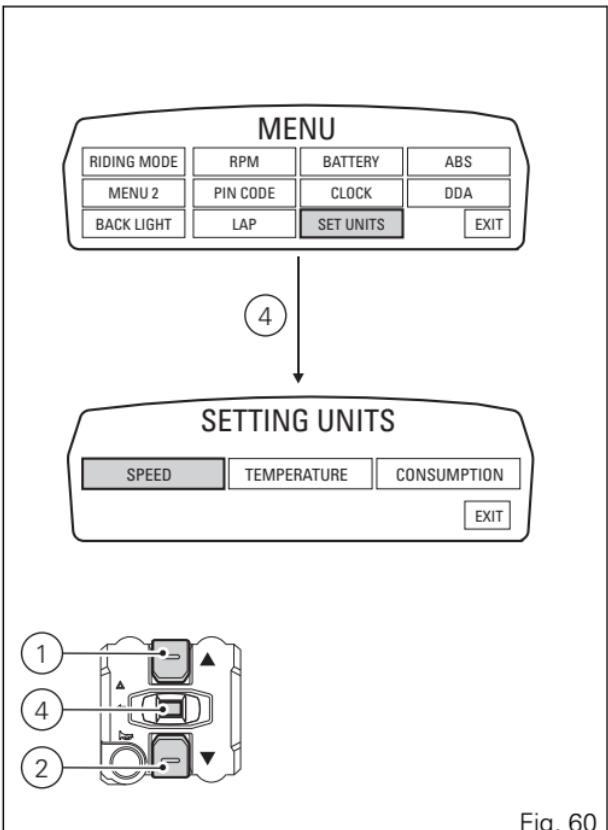


Fig. 60

## "SPEED" setting

This function allows to change the units of measurement of speed (and hence even the ones of distance travelled).

The currently set unit of measurement is highlighted in green on the display; use buttons (1) or (2) to move the left arrow on the new setting, and press the reset button (4) to confirm.

If setting is stored, when main screen is displayed again, the new units of measurement (if any) will be shown.

1) Km/h: if this unit is set, the following values will have the same units of measurement:

- TOT, TRIP1, TRIP2, TRIP FUEL: Km
- Vehicle Speed and AVERAGE Speed (SPEED AVG): Km/h

2) mph: if this unit is set, the following values will have the same units of measurement:

- TOT, TRIP1, TRIP2, TRIP FUEL: miles
- Vehicle Speed and AVERAGE Speed (SPEED AVG): mph.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

## "TEMP" setting

This function allows you to change the units of measurement of the temperature.

The currently set unit of measurement is highlighted in green on the display; use buttons (1) or (2) to move the left arrow on the new setting, and press the reset button (4) to confirm.

If setting is stored, when main screen is displayed again, the new units of measurement (if any) will be shown.

3) °C: if this unit is set, the following values will have the same units of measurement:

- Engine coolant temperature and T\_AIR: °C

4) °F: if this unit is set, the following values will have the same units of measurement:

- Engine coolant temperature and T\_AIR: °F

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

## "CONS." setting

This function allows changing the units of measurement of the Average and Instant Fuel Consumption.

The currently set unit of measurement is highlighted in green on the display; use buttons (1) or (2) to move the left arrow on the new setting, and press the reset button (4) to confirm.

If setting is stored, when main screen is displayed again, the new units of measurement (if any) will be shown.

5) Km/L: if this unit is set, the following values will have the same units of measurement:

- CONS. and CONS. AVG.: Km/l

6) L/100: if this unit is set, the following values will have the same units of measurement:

- CONS. and CONS. AVG: l/100

7) mpgal UK: if this unit is set, the following values will have the same units of measurement:

- CONS. and CONS. AVG: mpgal UK

8) mpgal USA: if this unit is set, the following values will have the same units of measurement:

- CONS. and CONS. AVG: mpgal USA

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

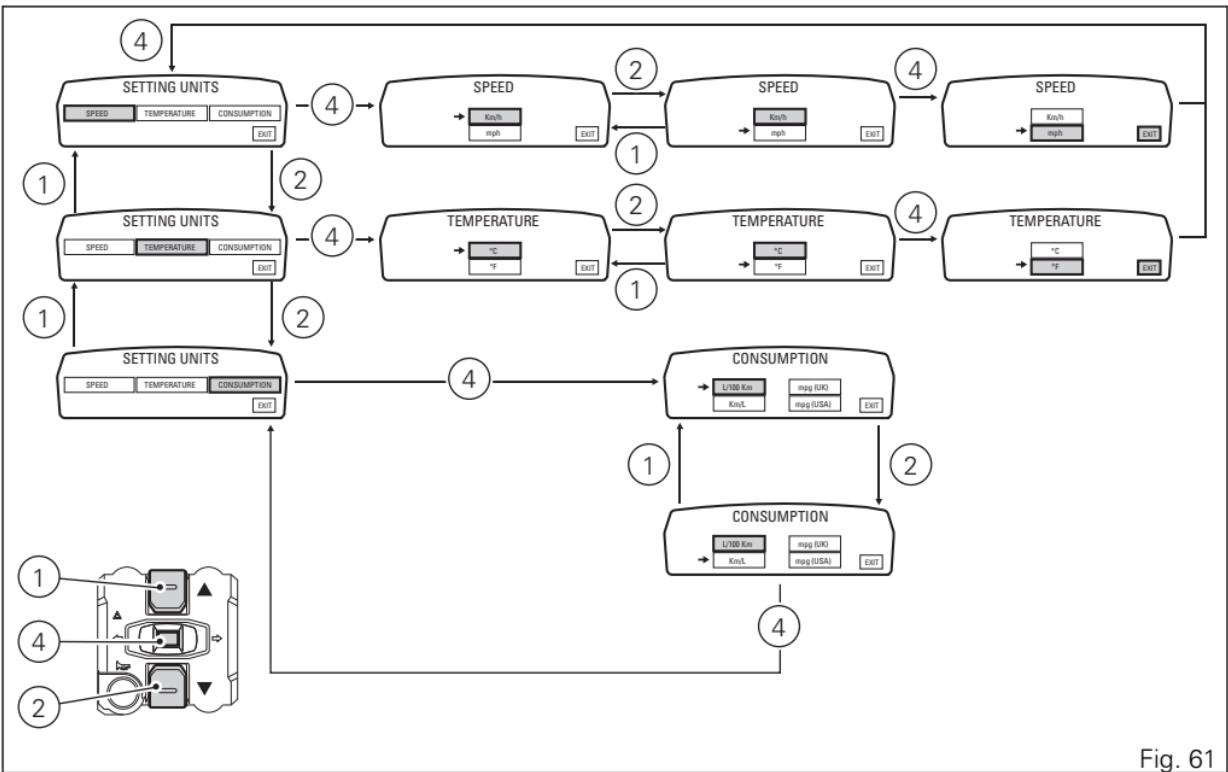


Fig. 61

## ABS setting function

This function allows disabling and enabling the ABS system.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "ABS" function and press the reset button (4) to shift to next page.

Function status is highlighted on the display (green if ON or yellow if OFF); use buttons (1) or (2) to move the left arrow on the new setting, and keep the reset button (4) pressed for 3 seconds to confirm.

Once these 3 seconds have elapsed, system will check that the request was completed successfully; during this check time "PLEASE WAIT..." will appear. Once check time has elapsed, the new setting will be displayed.



### Note

If the disabling request was not completed successfully, repeat the procedure. If the problem persists, contact a Ducati Dealer or Authorised Service Centre.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

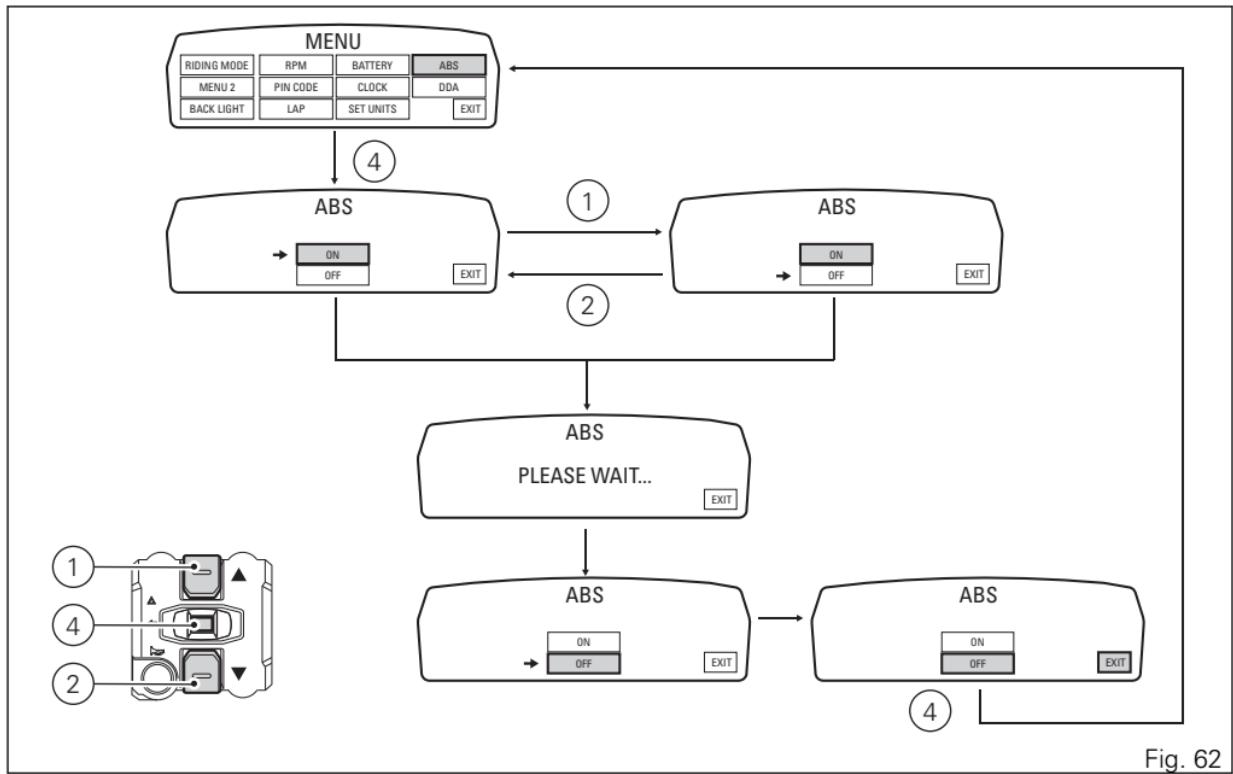


Fig. 62

## **Immobilizer system**

To further improve the anti-theft protection, the motorcycle is equipped with an engine electronic block system (IMMOBILIZER) that is automatically activated every time the instrument panel is switched off.

An electronic device used to modulate the signal issued upon key-on by a special antenna positioned under the seat is housed inside key cover.

The modulated signal is the "password", different upon every Key-On, used by the control unit to acknowledge the key. Engine can be started only after key acknowledgement.

## Keys

The Owner receives a set of keys comprising:

- 1 active key (1);
- 1 passive key (2).

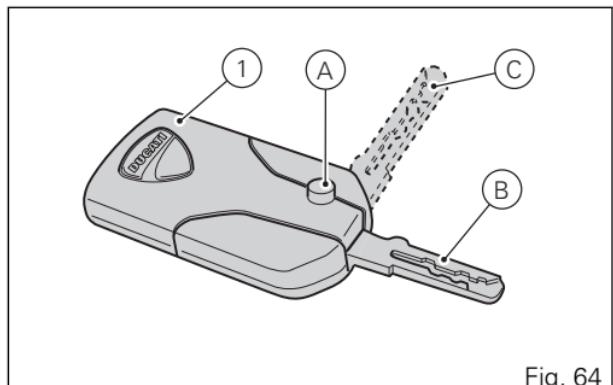
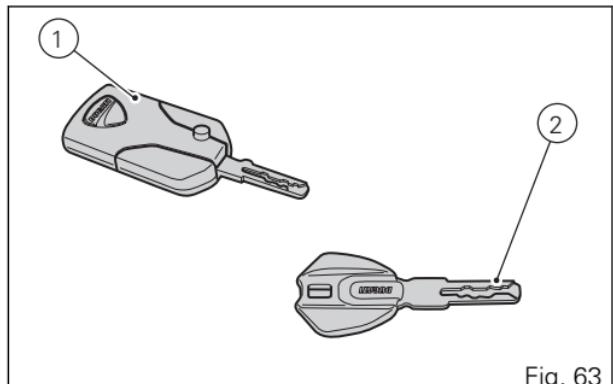
They contain the code used by the "Hands free" system for the Key-On, in different modes.

The active key (1) is the one that is normally used.

Press button (A) to fully open the metal part, position (B).

By keeping button (A) pressed, it is possible to move the metal part to the intermediate position (C). Once this position is obtained, release the button to lock.

The metal part returns inside the grip by pushing it in.



The active key contains a battery that must be replaced if the low key battery warning is displayed when the instrument panel is turned on.

### Note

In this case, replace the battery as soon as possible.

When the charge level goes below a certain limit, the key can only work in passive mode, like the passive key: in this case, the instrument panel will not display any message.



Fig. 65

### Warning

Do not ride with the (active or passive) key inserted in the lock of the tank cap or in the seat lock as it could come out and represent a potential danger. Furthermore, if bumped, the key mechanism and the integrated circuit could be damaged.

Also riding in poor weather conditions with the key inserted could cause damage to its integrated circuit.

Do not leave the key on the motorcycle when washing it as it could be damaged, not being watertight.

Replacing the battery in the active key  
Only use 3 Volt CR 2032 lithium ion batteries.

 Note

The keys do not need to be reprogrammed after replacing the battery.

Remove the metal part of the battery.

Use a large sized coin (2 Euro coin) to pry open the shells of the plastic grip as shown in the figure.

 Important

Insert the coil only in the indicated point. Do not other use other objects inserted in points that are different than what is shown, as it could damage the integrated circuit and/or the protective gasket.

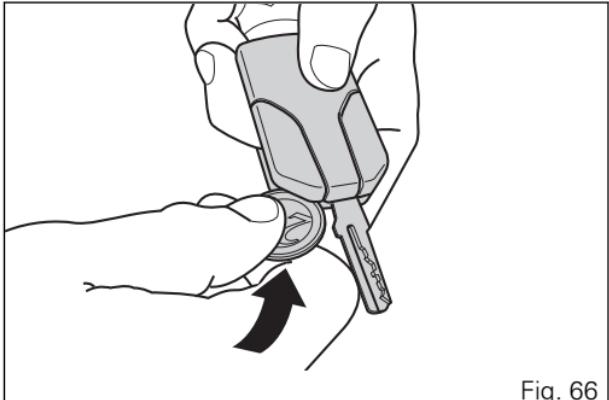


Fig. 66

Once the plastic shells have been separated, remove the printed circuit board (1), prying it up GENTLY with a small flat screwdriver, as shown in the figure.

**! Important**

Insert the point of the flat screwdriver just under the printed circuit board, being very careful not to damage it. Do not apply force on the battery or battery holder.

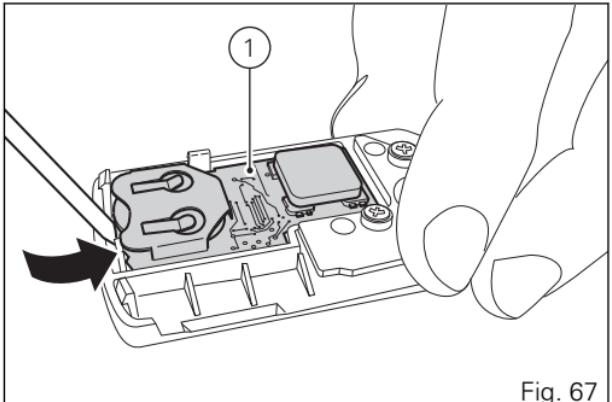


Fig. 67

Remove the battery (2), from the printed circuit board (1), and replace it with a new one.

Pay attention to polarity: the positive pole (+) must face upwards.

**Important**

Only use the required type of battery.

Reinsert the printed circuit board (1) from the side with the battery (2), into the plastic shell.

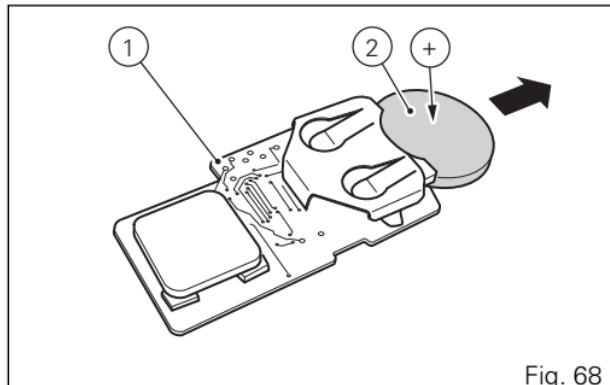


Fig. 68

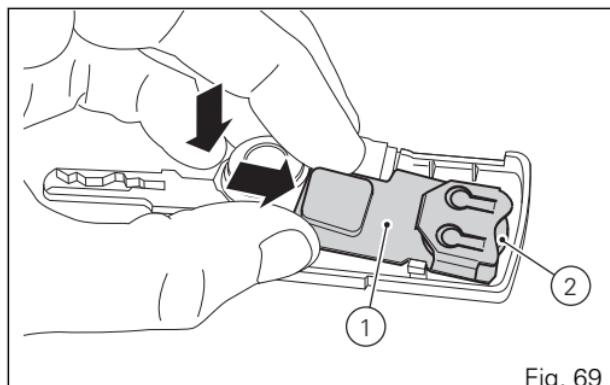


Fig. 69

Apply slight pressure on the antenna (3) of the printed circuit board until you hear a click.

Align the two shells of the grip and press on the area indicated by the arrows to reclose them.

Make sure that you hear a "click" upon closing and that the key is well closed.

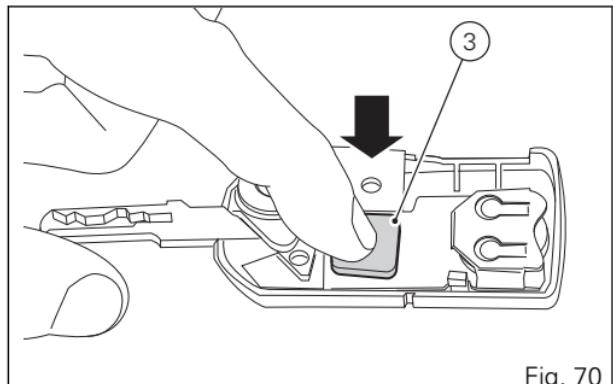


Fig. 70

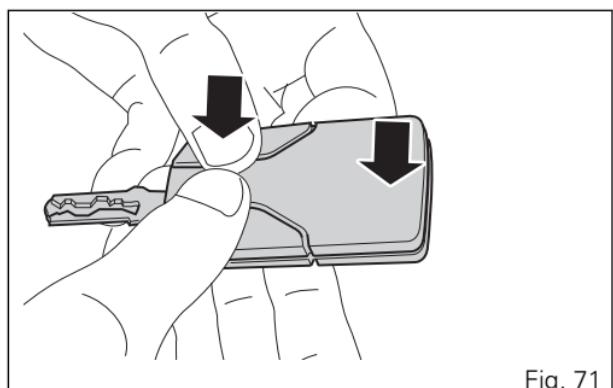


Fig. 71

## **Key duplication**

When a customer needs spare keys, he/she shall contact a Ducati authorised service centre and bring all keys he/she still has.

The Ducati authorised service centre will program all new and old keys.

The Ducati authorised service centre may ask to the customer to prove to be the motorcycle owner.

The codes of the keys missing during the programming procedure will be erased to ensure that any lost key can not start the engine.

## Immobilizer unlock procedure

This procedure makes it possible to "temporarily" turn on the motorcycle if the HF (Hands Free) System is not working.



### Note

The PIN CODE function must be activated by the user by entering your 4-digit PIN in the instrument panel, otherwise the motorcycle cannot be started temporarily in the case of a malfunction.



### Warning

The motorcycle owner must activate (store) the PIN code; if there is already a stored PIN, contact an Authorised Ducati Dealer to have the function "reset". To perform this procedure, the Authorised Ducati Dealer may ask you to demonstrate that you are the owner of the motorcycle.

## PIN CODE activation function

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "PIN CODE" function and press the reset button (4) to shift to next page.



### Note

If "MODIFY PIN CODE" appears when accessing this function, this means that there is already a stored PIN and therefore the function is already active.

If, when accessing this function, the round display shows "INSERT NEW PIN CODE" and four dashes " - - - " highlighted in green, a PIN CODE is not already set; so a 4-digit code must be entered.

Entering the code:

press the reset button (4).

Each time button (2) is pressed, the highlighted number increases from "0" to "9" and then goes back to "0"; to confirm the desired number press the reset button (4). Repeat the procedure until entering the fourth digit.

Press the reset button (4) again to highlight "MEMORY" option.

To memorise the entered PIN code, keep the reset button (4) pressed for 3 seconds, with "MEMORY" highlighted in green. "MEMORIZED" will be displayed for approx. 2 seconds to confirm that the PIN was correctly memorised. "EXIT" will then be automatically highlighted.

From this moment, "MODIFY PIN CODE" will be displayed when accessing the "PIN CODE" function and the PIN can be changed again as many times as necessary.

To quit the setting function, press the reset button (4) with "EXIT" highlighted.

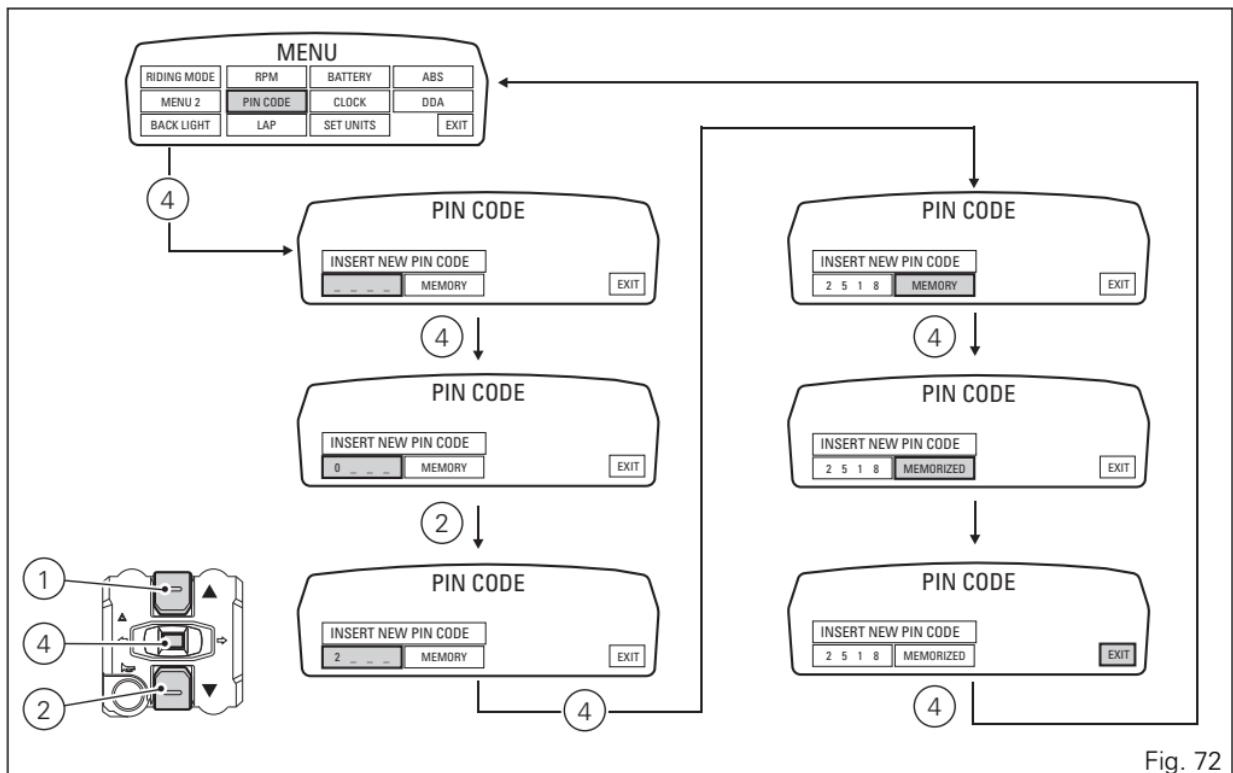


Fig. 72

## PIN CODE changing procedure

This function allows changing your own 4-digit PIN CODE.

To gain access to this function display the "setting" menu page 80, use buttons (1) or (2) to select the "PIN CODE" function and press the reset button (4) to shift to next page.



### Note

If, when accessing this function, "INSERT NEW PIN" and a string of dashes "---" are displayed, function is not active as PIN CODE has never been entered. Enter your PIN code with the "PIN enabling" function.

If, when accessing this function, the round display shows "MODIFY PIN CODE" and "OLD PIN" and four dashes "----" highlighted in green, a PIN CODE is already set; so the 4-digit code must be entered.



### Note

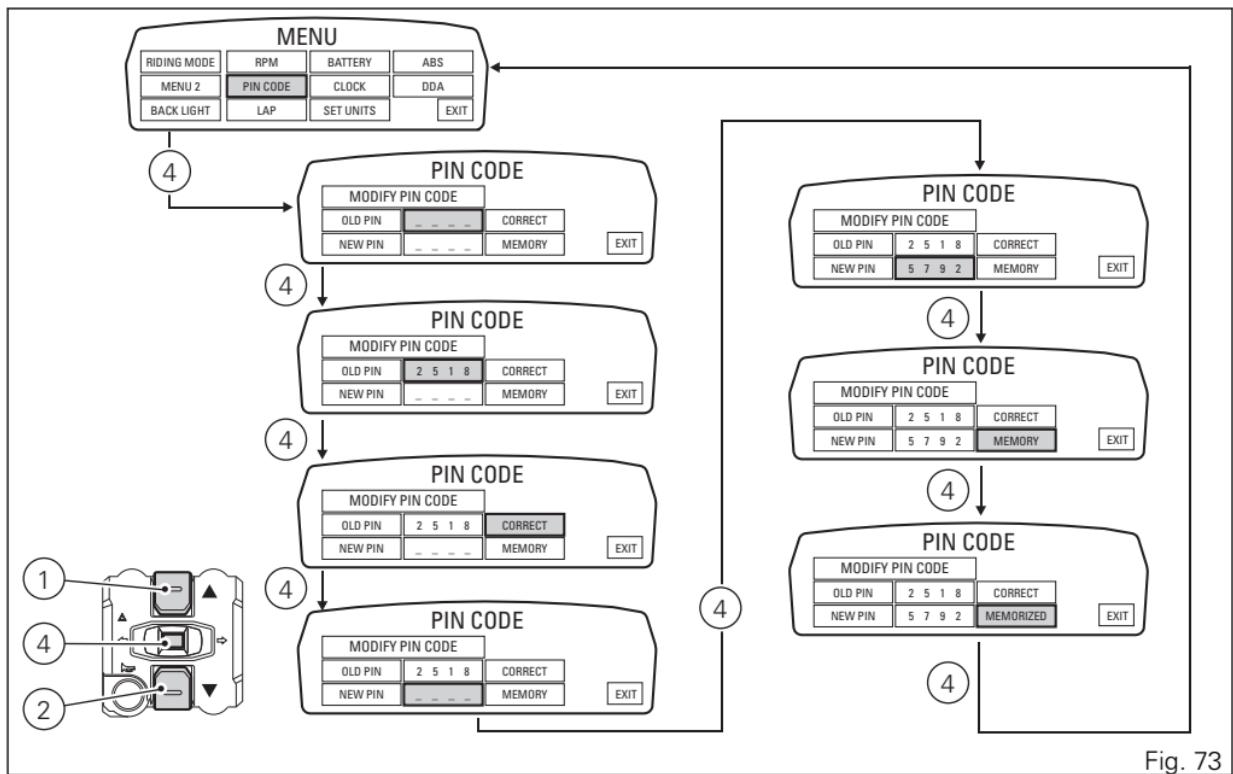
To change the PIN code, you must remember the already stored PIN.

Now you will have to enter the "old" PIN (OLD PIN). Press the reset button (4); each time button (2) is pressed, the highlighted number increases from "0" to "9" and then goes back to "0"; to confirm the desired number press the reset button (4).

Repeat the procedure until entering the four digits; press the reset button (4) again to confirm. If the entered code is not correct, the instrument panel will show again the four dashes "----" to allow user to repeat the code entering procedure. While if the entered code is correct, "CORRECT" will be automatically highlighted in green for approx. 2 seconds and then the four dashes "----" will be automatically highlighted close to "NEW PIN"; now you can enter the "new" 4-digit code.

Press the reset button (4); each time button (2) is pressed, the highlighted number increases from "0" to "9" and then goes back to "0"; to confirm the desired number press the reset button (4).

Repeat the procedure until entering the four digits; press the reset button (4) again to confirm. "MEMORY" is automatically highlighted.



To memorise the new entered PIN code, keep the reset button (4) pressed for 3 seconds, with "MEMORY" highlighted in green.  
"MEMORIZED" will be displayed for approx. 2 seconds to confirm that the new PIN was correctly memorised. "EXIT" will then be automatically highlighted.  
To quit the setting function, press the reset button (4) with "EXIT" highlighted.



### Note

You can change your PIN CODE for an unlimited number of times.

## Light control

### Headlight control

This function allows you to reduce current consumption from the battery, by automatically managing headlight switching-off.

Upon Key-On, low and high beams are Off. Upon engine starting, the low beam will automatically turn on; from this time onwards, "standard" operation will be enabled: you can switch from low to high beams (using button (3)) or make a "FLASH" (using button (3)). If engine is not started upon Key-On, lights can nevertheless be enabled by pressing the button on high / low beam left-hand switch (button (3)); if pressed once, low beams will be enabled; from this time onwards, this button can be used to enable (and disable) high beams (if engine is not started within 60 seconds, the active low or high beam will be disabled).

If the headlight was turned on before starting the engine with the procedure described above, the headlight will turn off automatically when starting the vehicle and will turn ON again when the engine has been completely started.

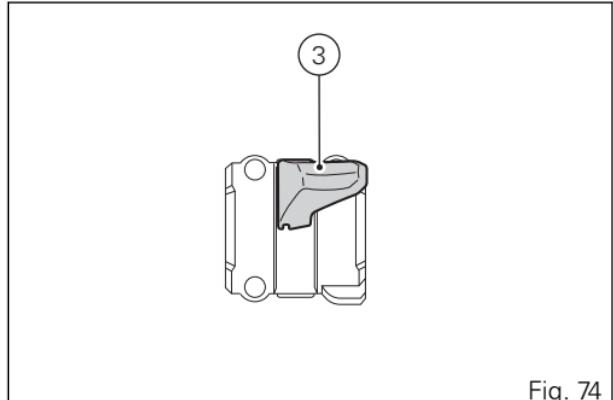


Fig. 74

## Turn indicators (Automatic Reset)

Turn indicators are automatically reset by the instrument panel.

After activating one of the two turn indicators, user can reset them using the reset button (4). If turn indicator is not manually "reset", instrument panel will automatically disable the turn indicator after having travelled 500 m (0.3 miles) since it was activated. The counter for the distance travelled for automatic deactivation is activated at speeds below 80 Km/h (50 mph).

If the calculation of the distance for automatic deactivation is activated and then the motorcycle exceeds a speed of 80 km/h (50 mph), the calculation will be interrupted and will restart when the speed returns below the indicated threshold.

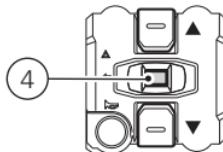


Fig. 75

## "Parking" function

This function allows enabling the "PARKING" mode. The "PARKING" function activates the front and rear parking lights when the motorcycle is turned off, so it is visible when parked. The function is activated by pressing the button (2) for 3 seconds during the first 60 seconds after the motorcycle was turned off. Once this function has been enabled, the indication will be shown on the round display for 5 seconds, and lights will stay on for 2 hours. After this time, they will automatically turn off.

To interrupt this function, a Key-On / Key-Off is required.



**Note**  
If there is a sudden interruption in the battery while the function is active, the instrument panel will disable the function when the voltage is restored.



**Important**  
The frequent use of this function can considerably reduce the battery charge; it is recommended to use this function only when really necessary.



Fig. 76

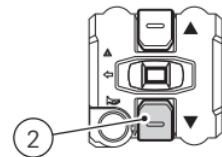


Fig. 77

Ducati recommends you use this function only when  
really necessary.

Warning reading "Keep pressed to lock"

This indicates that it is necessary to keep the button pressed to engage the steering lock.  
The indication is activated if button (8) is pressed for 1 second.

KEEP  
PRESSED  
TO  
LOCK

Fig. 78

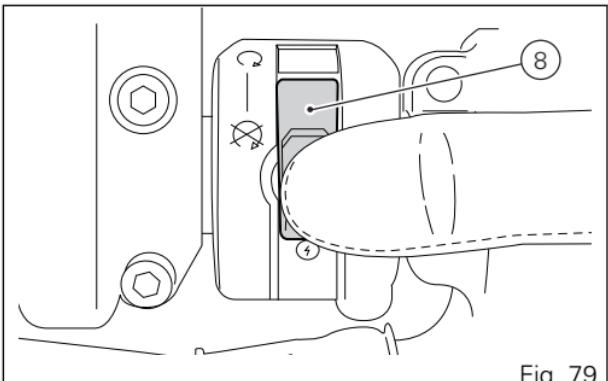


Fig. 79

## "Steering locked" on indication

This function informs that the steering lock was activated.

The steering lock can be turned on during the first 60 seconds after turning off the vehicle by pressing down the "RUN" button.

If the steering lock was activated correctly, the instrument panel will show the indication on the display for 5 seconds.



### Note

The steering lock can only be activated when the steering is in position.

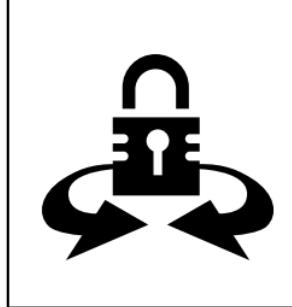


Fig. 80

Indication of incorrect position of the red starter button

This message warns the user that the button should be returned to the "upper" position in order to ensure that there is not an excessive current absorption by the system.

**Important**

This could lead to battery discharge in a short time.

Any incorrect position is detected within the first 60 seconds after vehicle switch-off (Key-Off).

If you press switch (8) for over 1 second to turn system off (Key-Off), the system will activate "RED SWITCH NOT RELEASED" warning flashing on display.

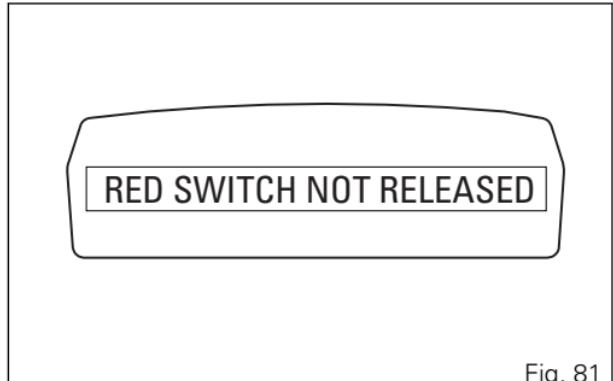


Fig. 81

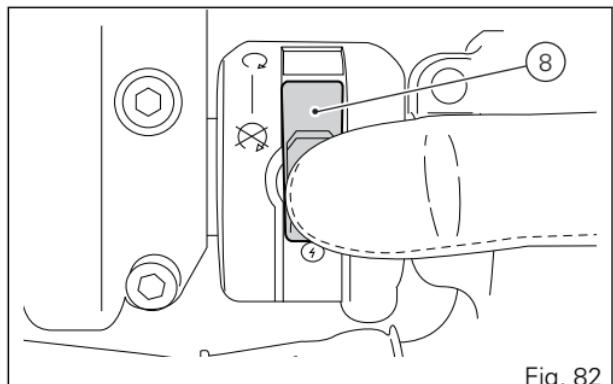


Fig. 82

If the warning stays on after the switch (8) is released, you must set switch (8) back to its top position. In this case, report the fault to Dealer or Authorised Service Centre.

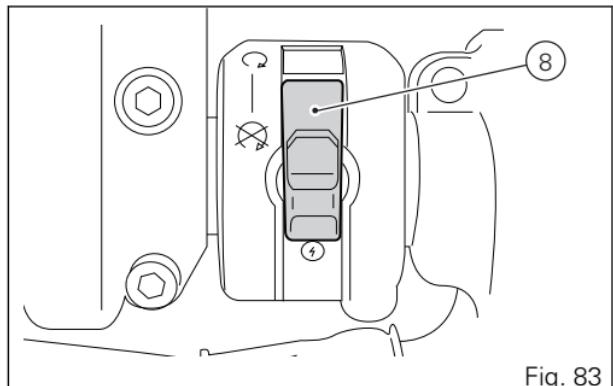


Fig. 83

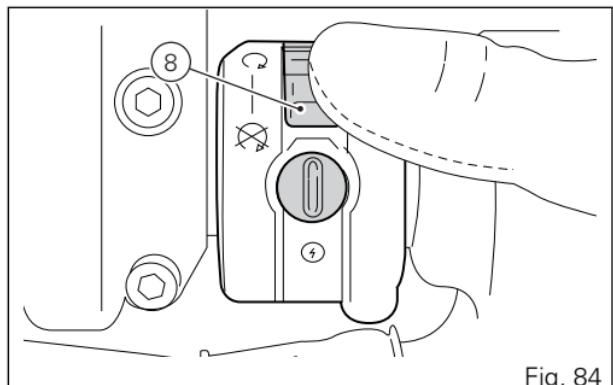


Fig. 84

## Other functions

### Heated handgrips (not available in this version)

This function allows enabling and adjusting the heated handgrips: this function is active only if the heated handgrips are installed.

The heated handgrips kit can be purchased separately at a Ducati Dealer or Authorised Service Centre.

To enable the "H.GRIPS" control menu for the heated handgrips, press the Start button (5) on the RH switch.



#### Note

The Start button (12) controls the heated handgrips only when the engine is running.

The display layout could be of two types:

- with Menu 2 enabled (Fig. 85);
- with Menu 2 disabled (Fig. 86);

Once the menu is activated, press the same button several times to select the desired indication ("OFF", "LOW", "MEDIUM" or "HIGH") which becomes bigger.

If "OFF" is selected and bigger, the heated handgrips are switched off.

If "LOW" is selected and bigger, the heated handgrips are activated in their lowest setting.

If "MEDIUM" is selected and bigger, the heated handgrips are activated in their intermediate setting.

If "HIGH" is selected and bigger, the heated handgrips are activated in their highest setting.

Select the desired setting then leave button (5) undisturbed; after 3 seconds with no controls, the instrument panel automatically quits the indication and maintains the last stored condition.

When quitting the handgrips setting menu, the instrument panel warns the user if heated grips have been activated by turning the specific icon yellow (at the top RH side if Menu 2 is enabled or at the top LH side if Menu 2 is disabled), and showing the setting ("LOW", "MEDIUM" or "HIGH").

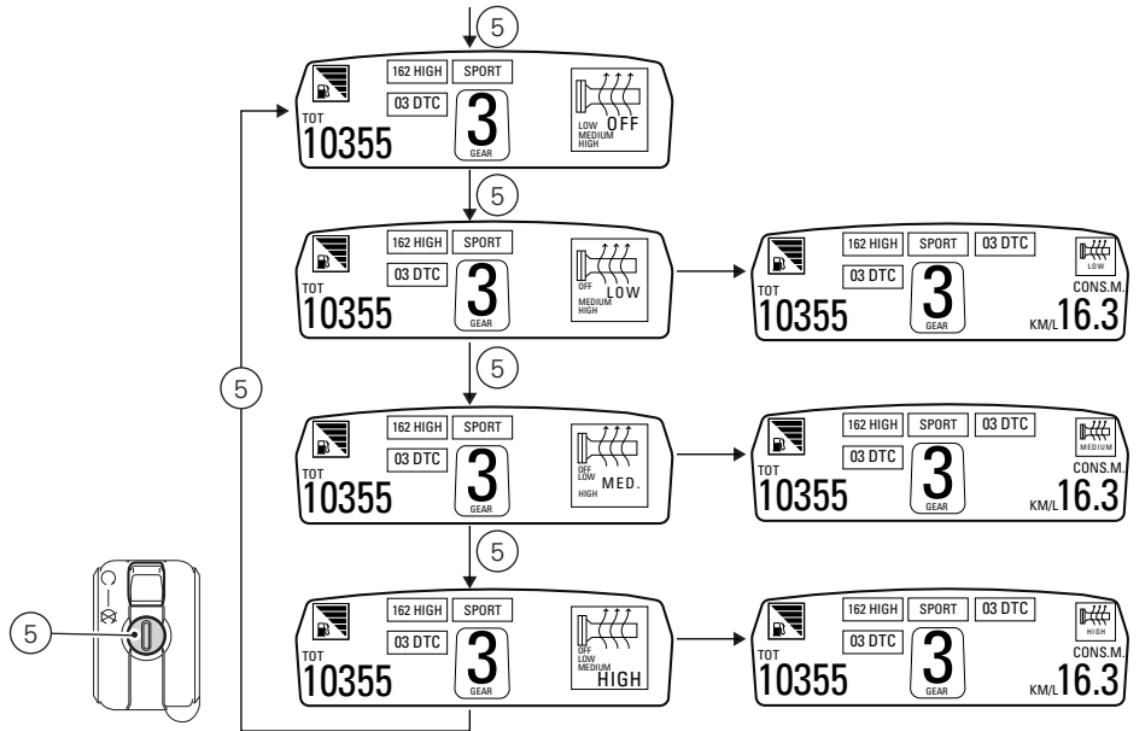


Fig. 85

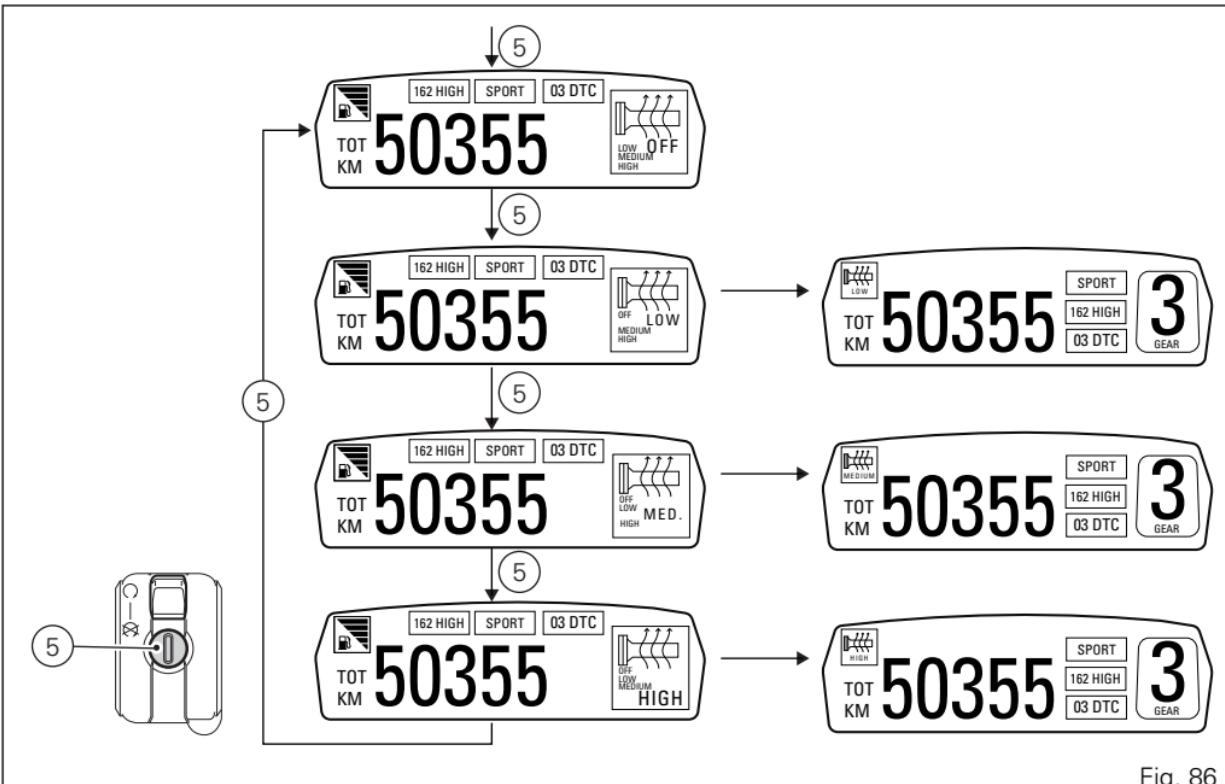


Fig. 86



### Note

The heated handgrips actually activate and warm up only with engine running.



### Note

This means that if heated handgrips are enabled and engine stops, the heating is "temporarily" disabled but the ON indication is still active. Heating will automatically turn on when engine is started again.



### Warning

Ducati recommends NOT to use the heated handgrips when ambient temperature is above 15° ÷ 20°C since they might get damaged.



### Note

Handgrip heating requires a high current draw which, at low engine rpm, might result in the battery getting soon flat. If the battery is not fully charged (voltage below 11.9 V) handgrip heating is disabled to ensure engine start-up ability; it will automatically activate again when battery voltage is above the specified value.

# Controls

## Position of motorcycle controls

### **Warning**

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.

- 1) Instrument panel on handlebar.
- 2) "Hands free" system.
- 3) Instrument panel on tank.
- 4) Left-hand switch.
- 5) Clutch lever.
- 6) Rear brake pedal.
- 7) Right-hand switch.
- 8) Throttle twistgrip.
- 9) Front brake lever.
- 10) Gear change pedal.

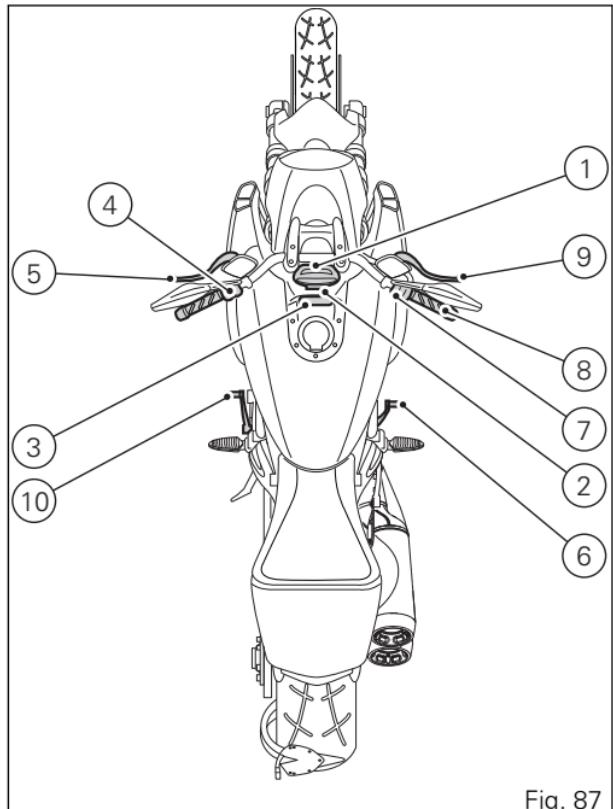


Fig. 87

## "Hands free" system

The Hands free system consists of:

- 1) Hands free lock;
- 2) Antenna;
- 3) Active key;
- 4) Passive key;
- 5) Tank filler plug.

The "Hands free" button (7, Fig. 92) is located on the tank front end.

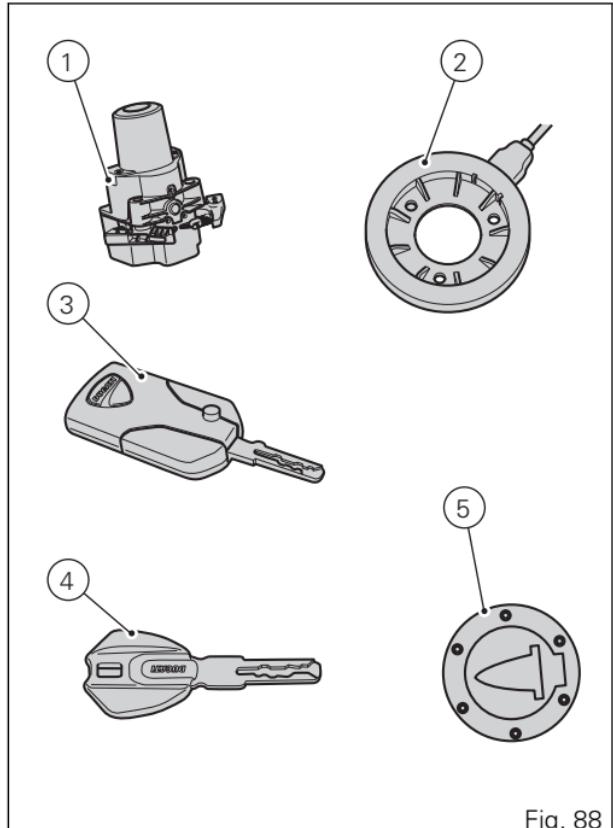
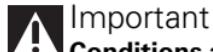


Fig. 88



## Important Conditions affecting the correct operation of the Hands Free system.

The wireless control operation could be impaired in the following situations.

- Near a TV tower, radio station, electric power plant, airport, gas station or other facility that generates strong radio waves.
- When carrying a portable radio, cellular phone or another wireless communication device.
- When multiple wireless keys are nearby.
- When a wireless key comes into contact with or is covered by a metallic object.
- When a wireless key (that emits radio waves) is being used nearby.
- When a wireless key is left near an electrical appliance such as a Personal Computer.

(Fig. 89) indicates the position of the Hands Free block (7) and (Fig. 90) indicates the position of the antenna (2).

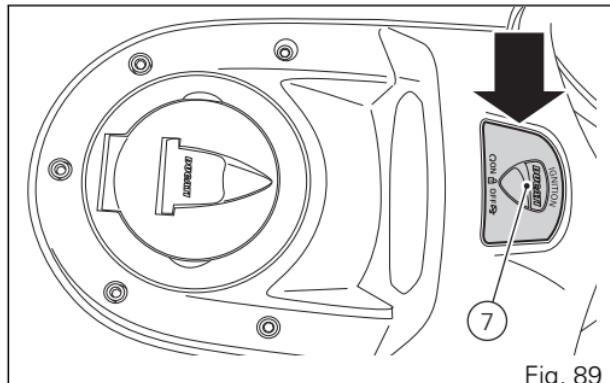


Fig. 89

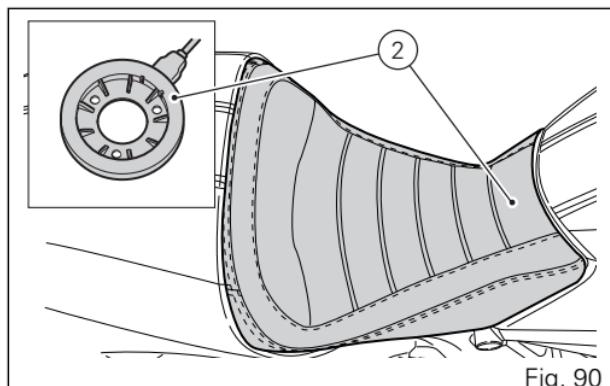


Fig. 90

## Hands free system "Key-On" and "Key-Off"

Key-On consists in turning on the hands free system and all electronic devices. Key-Off consists in turning off the hands free system and all electronic devices, and ensures engine is turned off. Key-On is done using button (6) on the right switch on the handlebar or using the emergency button (7) on the Hands free lock. Key-Off is done using button (6) on the right switch on the handlebar or using button (7) on the Hands free lock.



### Note

Using one of the two buttons (6) or (7) does not exclude using the other one, namely if one is pressed for switching on, the other one can be used for switching off, and vice versa

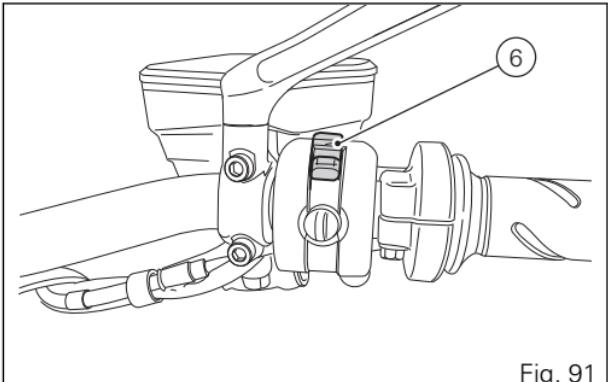


Fig. 91

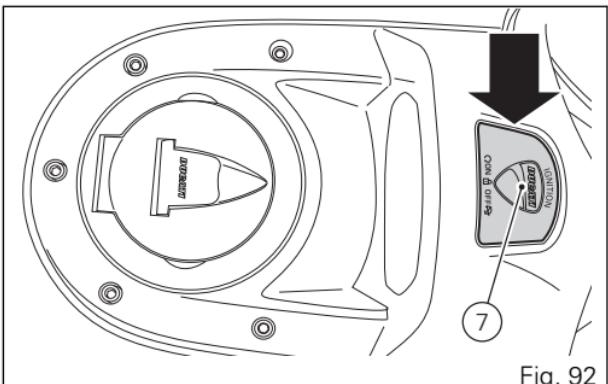


Fig. 92

Key-On can only occur in the presence of one of the two keys (3) or (4) or using the pin code. Key-Off can also occur without any key (3) or (4). Key-Off occurs when the speed of the motorcycle is equal to zero, by pressing button (6) on the handlebar or by pressing the Hands free button (7). When speed is not equal to zero, perform key-off by pressing the Hands free button (7).

The mechanical part (A) of the key (3) is used to open the fuel filler cap, the seat latch and bag locks. The metal part (A) of the key (3) remains hidden inside its housing, you can take it out by pressing button (B).

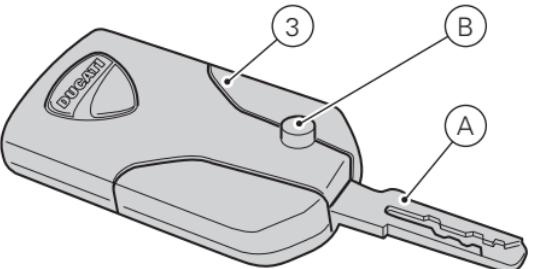


Fig. 93

### Note

With the vehicle in "Key-On" and "engine off" condition, if the presence of the active key (3) is not detected for thirty consecutive seconds, the motorcycle will turn off automatically without any action by the rider.

Key-On/Key-Off using the red button on the handlebar with the active key

A Key-On can be performed by pressing the red button (6) on the handlebar in the HANDS FREE ON/OFF position and in the presence of the active key (3, Fig. 88).

 Note

The active key (3) has a range of approx. 1.5 m (59.06 in), therefore it must be located within this range to be detected by the system.

Key-Off can be performed by pressing the red button (6) on the handlebar in the HANDS FREE ON/OFF position. It can also be performed without the key (3, Fig. 88) only if motorcycle speed is equal to zero.

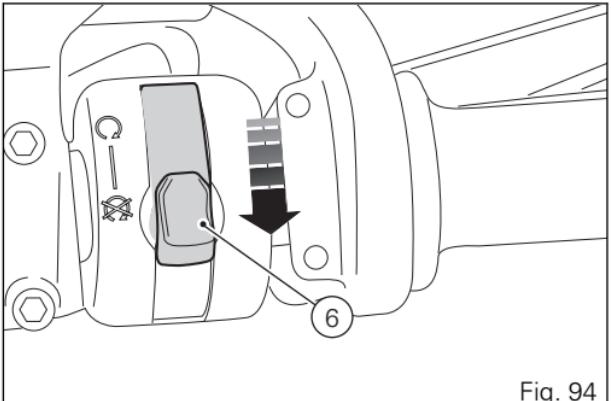


Fig. 94

## Key-On/Key-Off using the button on the Hands free lock

with active key. Key-On can be performed by pressing button (7) on the Hands free lock (1, Fig. 88) and with the presence of the active key (3, Fig. 88).

### Note

The active key (3) has a range of approx. 1.5 m (59.06 in), therefore it must be located within this range to be detected by the system.

Key-Off can be performed by pressing button (7) on the Hands free lock (1, Fig. 88), also without the key (3, Fig. 88).

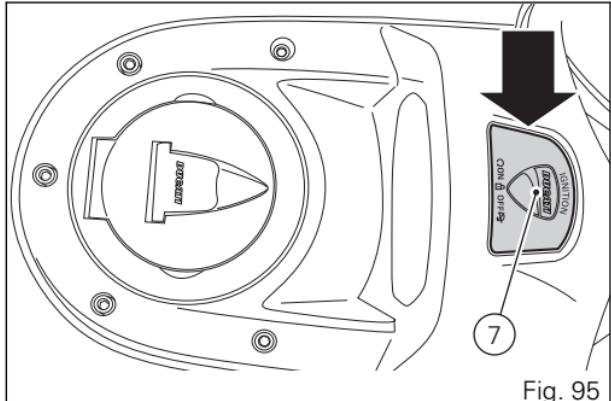


Fig. 95

Key-On/Key-Off using the red button on the handlebar with the passive key

A Key-On can be performed by pressing the red button (6) on the handlebar in the HANDS FREE ON/OFF position and in the presence of the passive key (4, Fig. 88).



The passive key has a range of a few cm (inch), therefore the key must be positioned near the antenna. Remove the seat to reach the antenna.

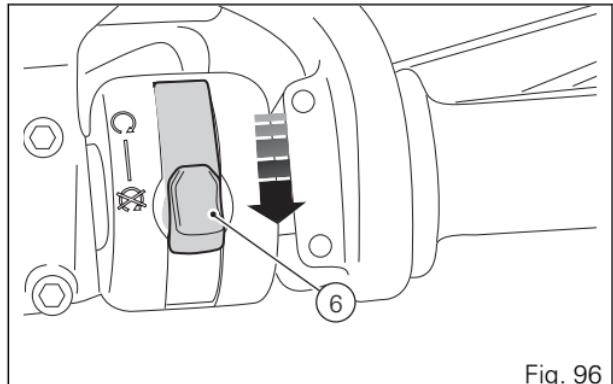


Fig. 96

Key-Off can be performed by pressing the red button (6) on the handlebar in the HANDS FREE ON/OFF position. It can also be performed without the key (4, Fig. 88) only if motorcycle speed is equal to zero.

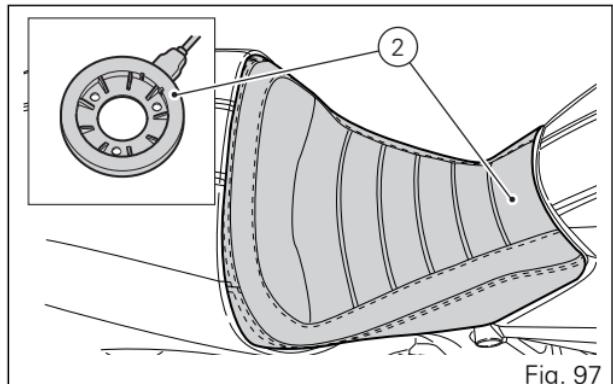


Fig. 97

## Key-On/Key-Off using the button on the Hands free lock with the passive key

Key-On can be performed by pressing button (7) on the Hands free lock and with the presence of the passive key (4, Fig. 88).



The passive key has a range of a few cm (inch), therefore the key must be positioned near the antenna. Remove the seat to reach the antenna.

Key-Off can be performed by pressing button (7) on the Hands free lock (1, Fig. 88), also without the key (4, Fig. 88).

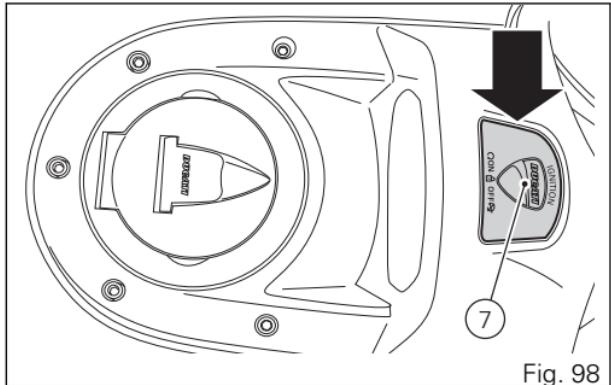


Fig. 98

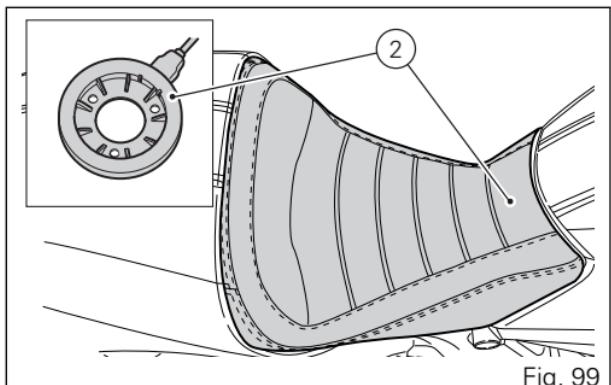


Fig. 99

## Key-On/Key-Off using the pin code (immobilizer override)

Key-On can be performed by pressing button (7) on the hands free lock (1, Fig. 88) without the presence of the keys (3, Fig. 88) and (4, Fig. 88) and entering the pin code on the instrument panel.

Key-Off can be performed by pressing button (6) on the handlebar / Hands Free button (7) / engine off, no key in the range.

After each Key-Off, if the key is not present upon next Key-On, the pin code must be entered. The pin code is set by the customer upon delivery of the motorcycle. The function is not enabled unless a pin code has been set. When the Hands Free button (7) is pressed, the instrument panel activates the backlighting and the round display to allow the rider to enter the four digit pin code. Entering the correct pin turns on the instrument panel and enables engine starting.

The pin must be entered within 120 sec, after which a Key-Off occurs automatically.

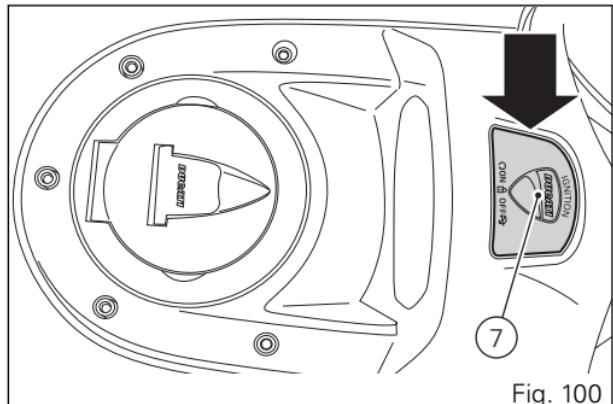


Fig. 100

## Entering PIN CODE function for overriding purposes

This function allows the rider to "temporarily" turn on the motorcycle in case of HF (Hands Free) system "malfunction".

If the motorcycle cannot be turned on using the normal starter button, press the "emergency" Hands Free button (7) to activate the function.

After pressing the button, the instrument panel activates the "INSERT PIN CODE" indication on the display with four dashes "----" in the bottom line, highlighted in green, for you to enter the 4 digit PIN code.

Entering the code:

Press the reset button (4).

Each time you press button (2), the displayed number increases from "0" to "9" and then returns to "0".

Press the reset button (4) to confirm each number.

Repeat the procedure until entering the fourth digit.

Press the reset button (4) again to confirm.

If the code is incorrect, the instrument panel will return to the four dashes "----" indication to allow you to enter the code again.



### Note

There is no limit to the number of times the code can be re-entered; the instrument panel will turn off automatically 120 seconds after any attempt to enter the code.

If the entered code is correct, the message "CORRECT" will flash on the display for 3 seconds. After 3 seconds, the instrument panel will return to the "normal" view (with all indications active). From this moment, the vehicle can be started using the start button (Key-On).



### Note

The vehicle can be started until a Key-Off is performed. If the problem still persists upon the next starting attempt, repeat the procedure from the beginning in order to start the motorcycle "temporarily" again.



### Important

If this procedure is necessary in order to start the motorcycle, contact an Authorised Ducati Service Centre as soon as possible to fix the problem.

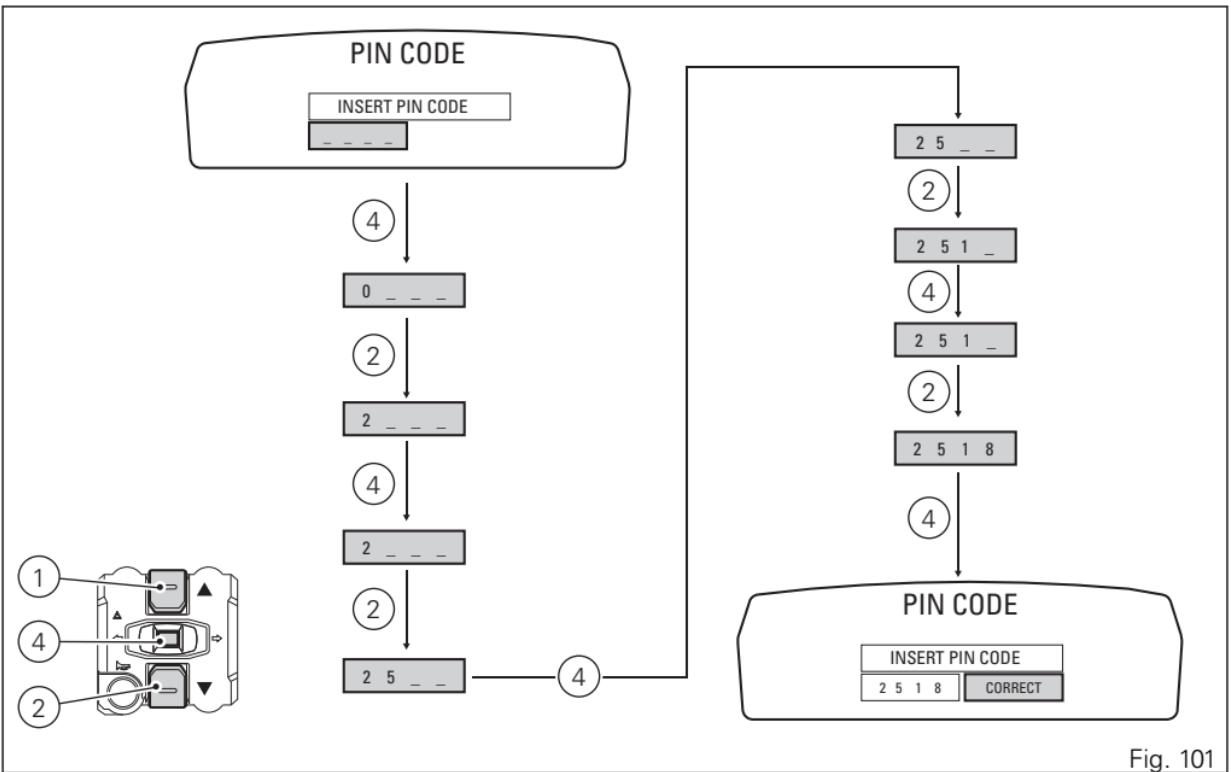


Fig. 101

## Left-hand switch

- 1) Dip switch, two-position light selector switch:  
(A) every time it is pressed down the light switches from low beam ON  to low beam and high beam ON ;  
(B) pushed to the side  high beam flasher (FLASH), "Start-Stop lap" function.
- 2) 3-position turn indicator switch  :  
centre position = OFF;  
position  = left turn;  
position  = right turn.
- 3) Turn indicator OFF, "Riding Mode" activation and menu navigation button.
- 4) Button  = warning horn.
- 5) Navigation menu, display scroll, and TRIP1 and TRIP2 reset button.
- 6) Navigation menu, display scroll button.

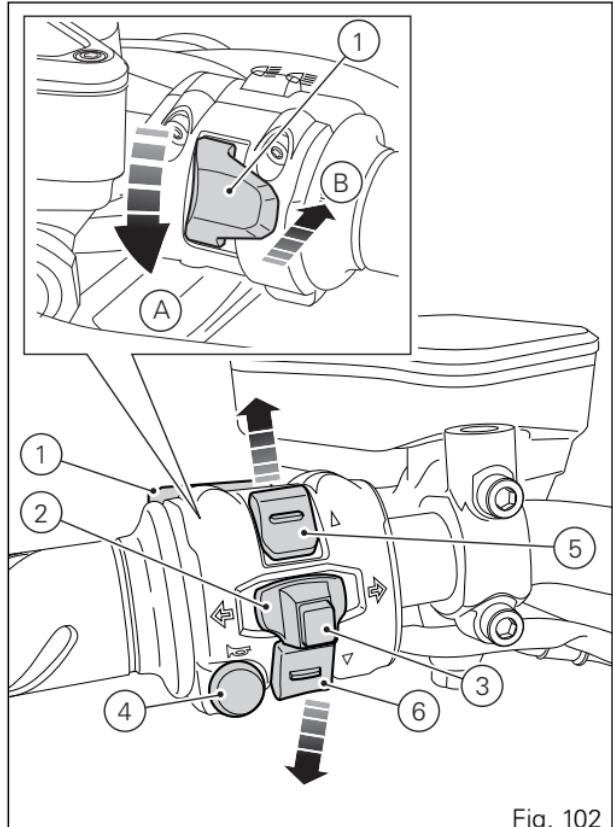


Fig. 102

## Clutch lever

Lever (1) disengages the clutch. It features a dial adjuster (2) for lever distance from the twistgrip on handlebar. The lever distance can be adjusted through 10 clicks of the dial (2). Turn clockwise to increase lever distance from the handgrip. Turn the adjuster counter clockwise to decrease lever distance. When the clutch lever (1) is operated, drive from the engine to the gearbox and the drive wheel is disengaged. Using the clutch properly is essential to smooth riding, especially when moving OFF.

### **!** Warning

Set clutch lever when motorcycle is stopped.

### **!** Important

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

### **!** Note

The engine can be started with the side stand down and the gearbox in neutral. If starting with a gear engaged, pull in the clutch lever (in this case the side stand must be up).

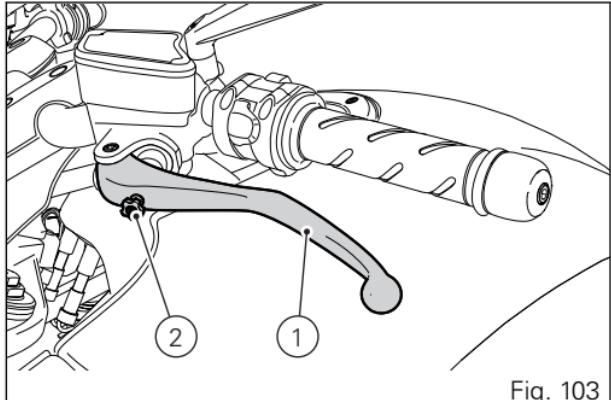


Fig. 103

## Right-hand switch

- 1) Red ON/OFF switch.
- 2) Black ENGINE START button.

The switch (1) has three positions:

- A) centre: RUN OFF. In this position, the engine cannot be started and all electronic devices are OFF.
- B) pushed down: ON/OFF. In this position, the system can be turned ON (Key-ON) and OFF (Key-OFF).
- C) pushed up: RUN ON. The engine can only be started in this position, pushing the black button (2).

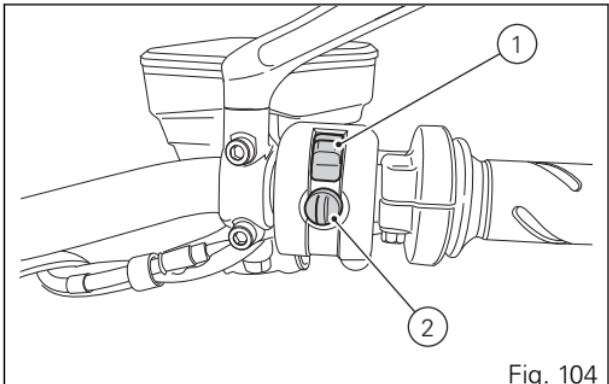


Fig. 104

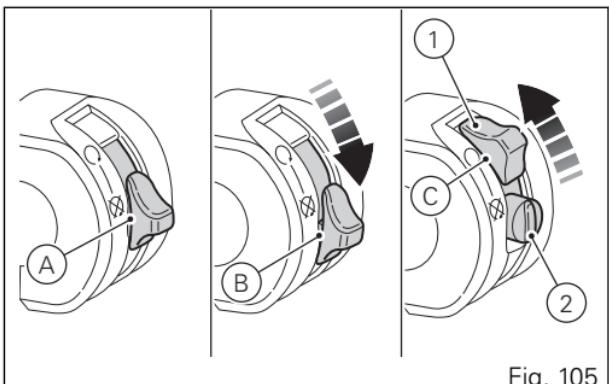


Fig. 105

## Throttle twistgrip

The twistgrip (1) on the right handlebar opens the throttles.

When released, it will spring back to the initial position (idling speed).

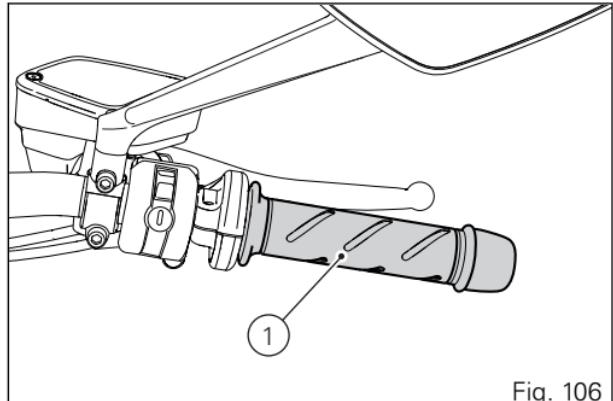


Fig. 106

## 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 dial (2) for adjusting the distance between lever and twistgrip on the handlebar.

The lever distance can be adjusted through 10 clicks of the dial (2).

Turn clockwise to increase lever distance from the twistgrip. Turn the adjuster counter clockwise to decrease lever distance.

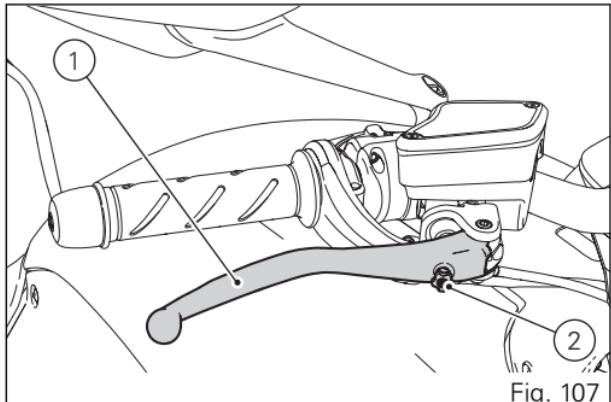


Fig. 107

## Rear brake pedal

Press pedal (1) down with your foot to operate the rear brake.

The control system is of the hydraulic type.

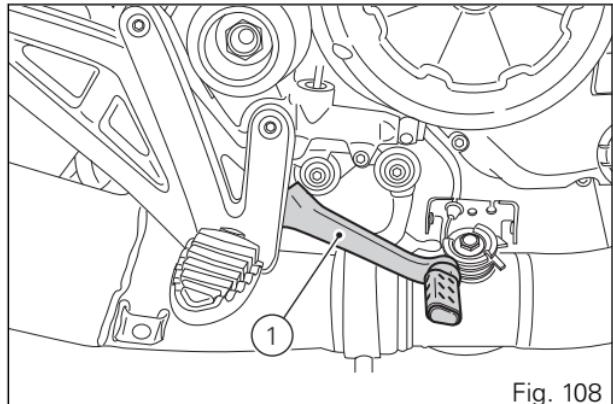


Fig. 108

## Gear change pedal

When released, the gear change pedal (1) automatically returns to rest position N in the centre. This is indicated by the instrument panel N light (2, Fig. 3) coming on.

The pedal can be moved:

- down = press down the pedal to engage the 1<sup>st</sup> gear and to shift down. The N light on the instrument panel will go out;
- upwards= lift the pedal to engage 2<sup>nd</sup> gear and then 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> gears.

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

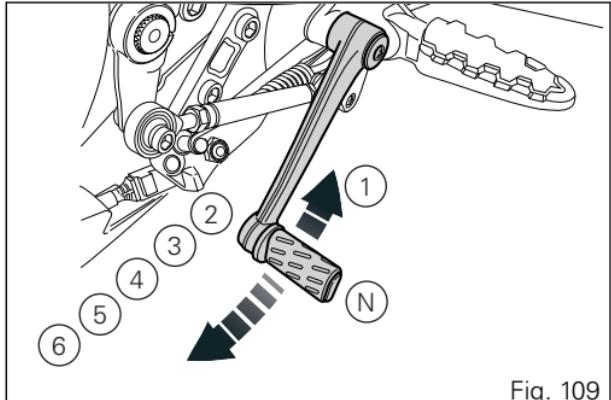


Fig. 109

## Adjusting the position of the gearchange pedal and rear brake pedal

The position of the gearchange and rear brake pedals in relation to the footrests can be adjusted to suit the requirements of the rider.

Adjust the pedals as follows:

### Gear change pedal

Hold the linkage (1) and slacken the lock nuts (2) and (3).



#### Note

Nut (2) has a left-hand thread.

Fit an open-end wrench to hexagonal element of linkage (1) and rotate until setting pedal in the desired position.

Tighten both lock nuts onto linkage.

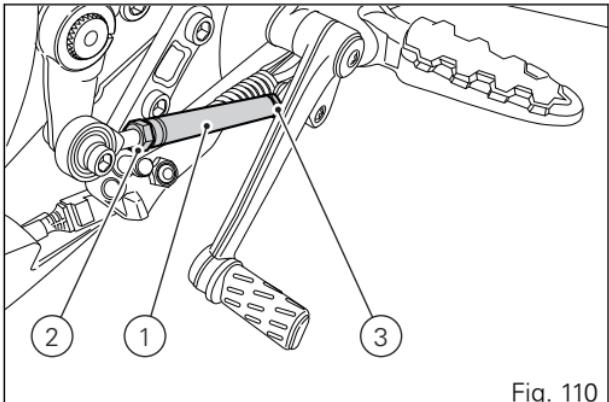


Fig. 110

## Rear brake pedal

Loosen lock nut (7).

Turn pedal stroke adjusting screw (6) until pedal is in the desired position.

Tighten the lock nut (7).

Operate the pedal by hand to check that there is 3 ÷ 6 mm (0.12 ÷ 0.24 in) of free play before the brake bites.

If not, adjust the length of the master cylinder control rod as follows:

Loosen lock nut (10) on master cylinder rod.

Screw the rod (8) into the fork (9) to increase the free play, or screw it out to reduce it.

Tighten lock nut (10) and check play again.

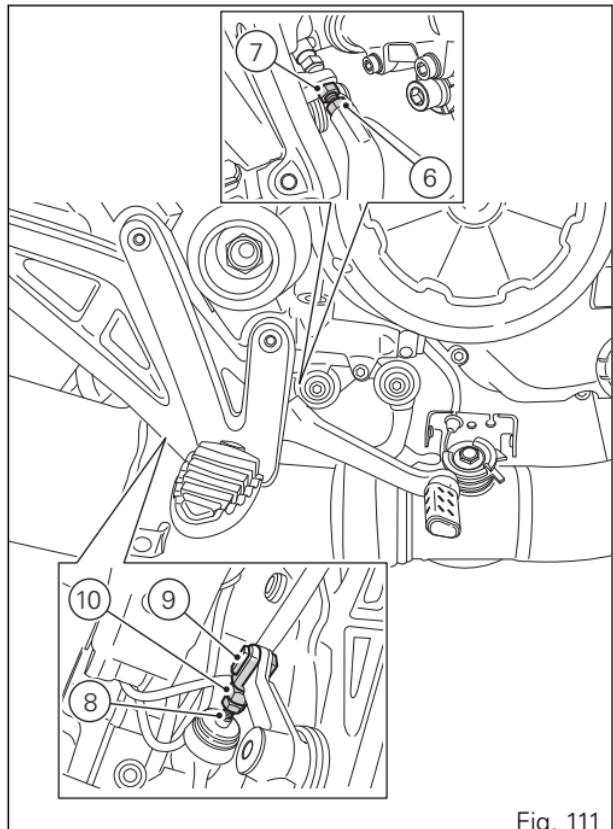


Fig. 111

# Main components and devices

## Position on the vehicle

- 1) Tank filler plug.
- 2) Seat lock.
- 3) Side stand.
- 4) Rear-view mirrors.
- 5) Front fork adjusters.
- 6) Rear shock absorber adjusters.
- 7) Catalytic converter.
- 8) Exhaust silencer.

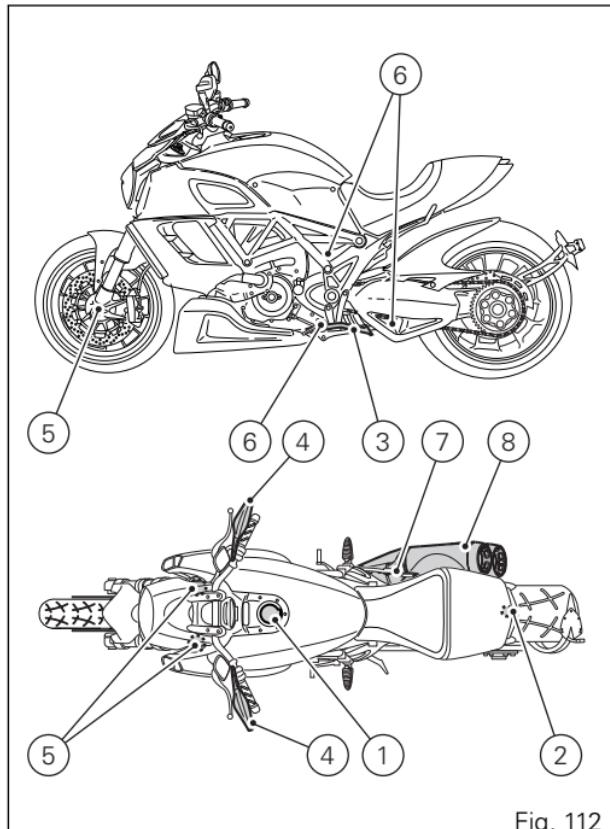


Fig. 112

## Tank filler plug



### Note

To open or close tank cap using the active key, set the metal part in the intermediate position.

### Opening

Lift flap (1) and insert the active or passive key in the lock.

Turn the key clockwise by 1/4 of a turn to release the lock.

Lift the plug (2).

### Closing

Close the plug (2) with the key inserted and push it down into its seat.

Remove the key and close flap (1) protecting the lock.



### Note

Plug can only be closed when key is inserted.

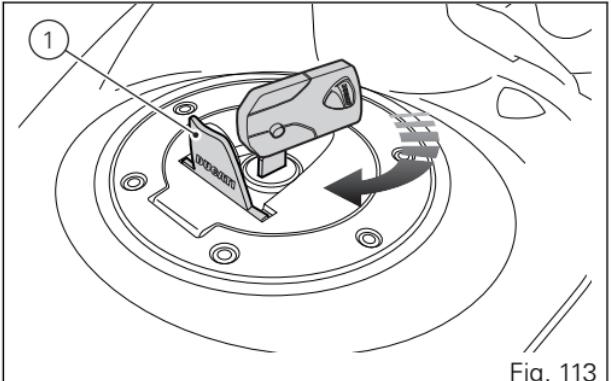


Fig. 113

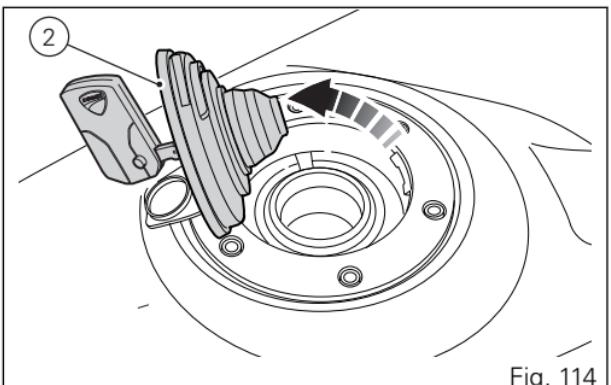


Fig. 114



## Warning

After refuelling, always make sure that the plug is perfectly in place and closed.

## Seat lock

Work latch (1) to remove the seat and access the underseat compartment and reach any other device under it.

## Removing the seat

Insert the active or passive key in the lock (1), turn it clockwise and simultaneously press down in the area of the catch to help release the pin.

Pull the seat back to release it from the front catches.

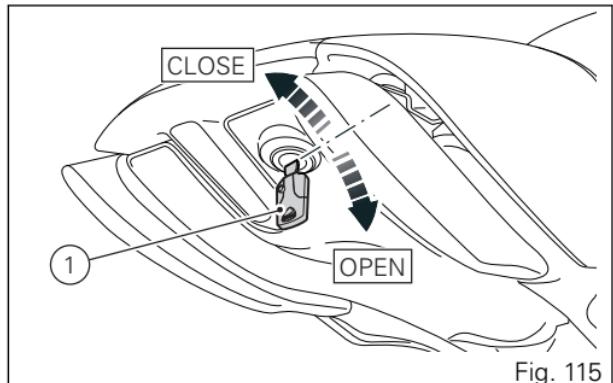


Fig. 115

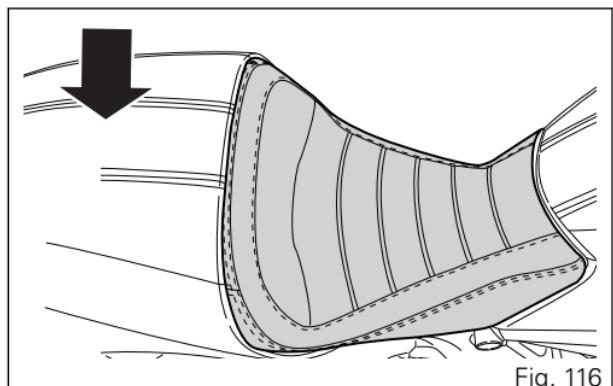


Fig. 116

## Helmet cable



### Note

Helmet cable can be found inside the tool kit.

Route cable through helmet and engage cable end into pin (3). Leave the helmet hanging and refit the seat to hold it in place.



### Warning

This device protects the helmet against theft when the motorcycle is parked. Do not leave the helmet attached when riding the motorcycle; it could interfere with your movements and cause loss of control of the motorcycle.

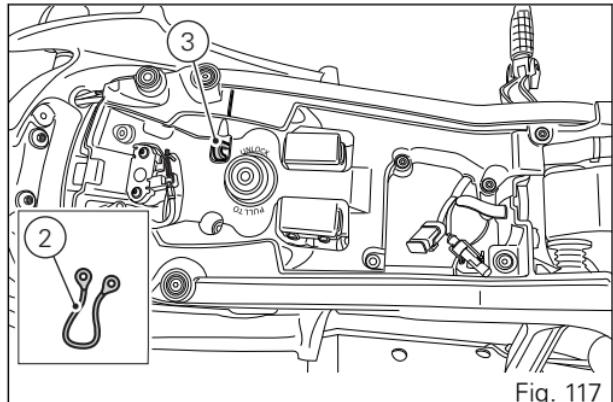


Fig. 117

## Refitting the seat

Make sure all parts are correctly laid out and secured in the underseat compartment. Insert the mounts (4) of the seat base in the projecting parts (5) of the frame, then push the rear end of the seat until you hear the bolt in the lock click into place. Make sure the seat is safely secured to the frame and remove the key from the lock.

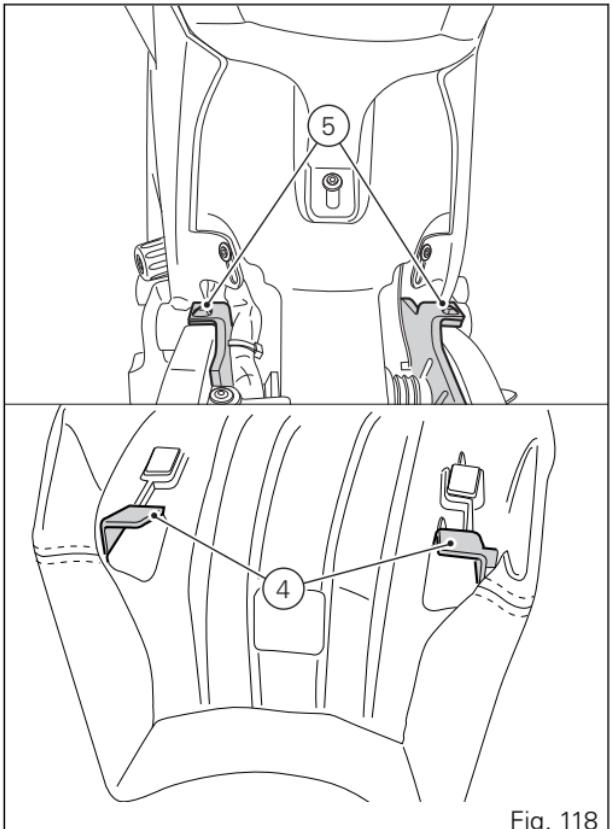


Fig. 118

## 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 melt by the sun heat and similar or the motorcycle may fall over. When parking in downhill road tracts, always park the motorcycle with its rear wheel facing downhill.

To pull down the side stand, hold the motorcycle handlebar with both hands and push down on the side stand (1) with your foot until it is fully extended. Tilt the motorcycle until the side stand is resting on the ground.

To move the side stand to its rest position (horizontal position), lean the motorcycle to the right while lifting the thrust arm (1) with your foot.

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.

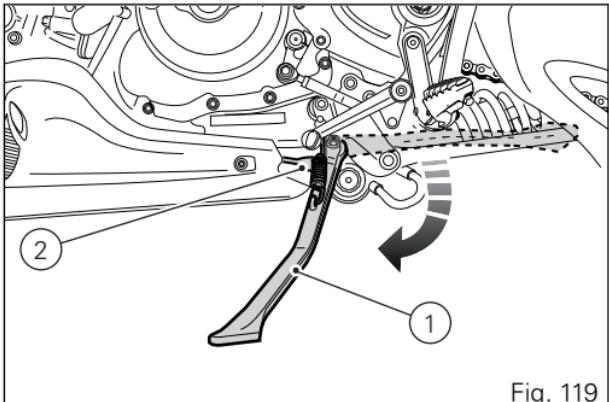


Fig. 119

### **!** Warning

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

### **!** Note

Check for proper operation of the stand mechanism (two springs, one into the other) and the safety sensor (2) at regular intervals.



## Note

The engine can be started with the side stand down and the gearbox in neutral. If starting with a gear engaged, pull in the clutch lever (in this case the side stand must be up).

## Passenger grab handle

Passenger grab handle (1, Fig. 120) is located inside the tail guard; to take it out, remove the seat (see "Removing the seat" on page page 166), pull knob (2, Fig. 120) while taking out the grab handle (1, Fig. 120) from its housing until it is fully extended.

### Warning

Before use, pull grab handle back and forth to ensure that it is locked in the correct position.

To put it back, pull knob (2, Fig. 120), push grab handle (1, Fig. 120) in its housing until it is completely flush with the tail guard (1, Fig. 121) and refit the seat (see "Refitting the seat" on page page 166).

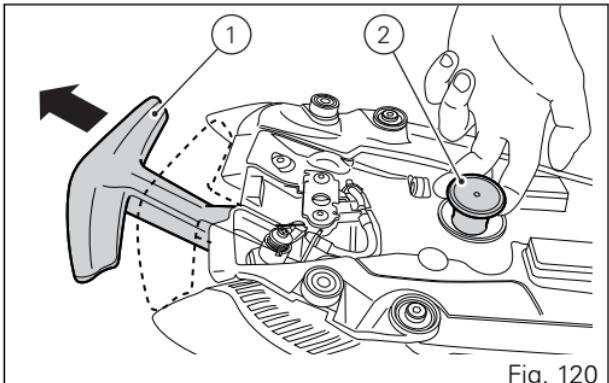


Fig. 120

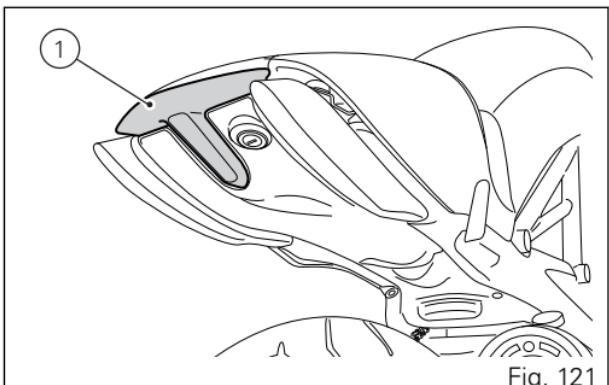


Fig. 121

## Front fork adjusters

The front fork used on this motorcycle has rebound (return), compression and spring preload adjustment. Adjustment is done by external screw adjusters:

- 1) for rebound damping (Fig. 122);
- 2) for inner spring preload (Fig. 122);
- 3) for compression damping (Fig. 123).

Put the motorcycle on the side stand and make sure it is stable. Turn knob (1) at the top of each fork leg to adjust rebound damping. Turn adjuster (3) at the bottom of each fork leg with a flat-blade screwdriver to adjust compression damping. Turn knob (1) and the adjusting screws (3) to adjust damping. The stiffest damping setting is obtained with the adjuster turned fully clockwise to the "0" position. Starting from this position, turning counter clockwise, you can count the turns.

To change preload of the spring inside each fork leg, turn the hex. adjuster (2, Fig. 122) with a 22 mm (0.87 in) hexagon wrench, starting from the fully open (clockwise) position.

From reference (A, Fig. 122), every full turn clockwise corresponds to 1 mm (0.04 in) of preload of the

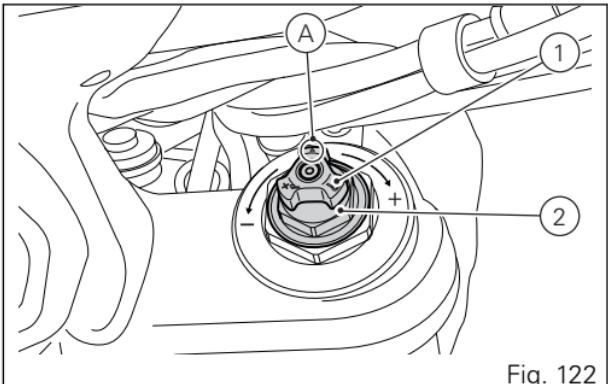


Fig. 122

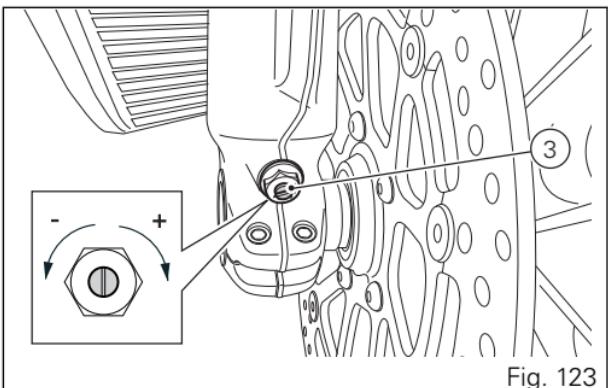


Fig. 123

spring, up to a maximum of 15 mm (0.59 in), corresponding to 15 full turns.

STANDARD settings from completely closed are as follows:

- compression: 1 and a half turns;
- rebound: 1 and a half turns;
- spring preload: FULLY OPEN.



### Warning

Adjust both fork legs to same settings.

## Rear shock absorber adjusters

The rear shock absorber has external controls that enable you to adjust the setting in order to suit the load on the motorcycle.

The adjuster (1, Fig. 124), located on the lower mount which fastens the shock absorber to the swinging arm, adjusts the damping during the rebound phase (return).

The knob (2, Fig. 125) located on the left side of the motorcycle, adjusts the preload of the shock absorber external spring.

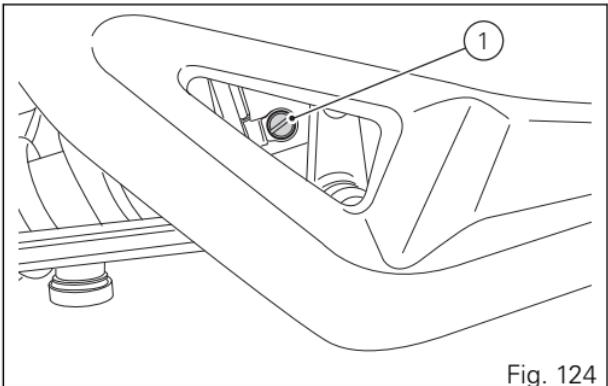


Fig. 124

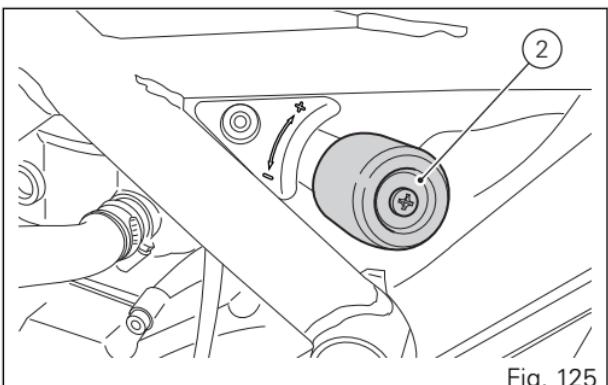


Fig. 125

The knob (3, Fig. 126), located on the expansion reservoir of the shock absorber, adjusts the damping during the compression phase. Turn the adjusters (1) with a screwdriver or the knobs (2) and (3) clockwise to obtain a harder setting or increase preload. Turn them counter-clockwise to obtain the opposite setting.

STANDARD setting: from the fully closed position (clockwise), loosen as follows:

- rebound: open adjuster (1) by 12 clicks from fully closed position;
- preload: knob (2) FULLY OPEN;
- compression: open knob (3) by 25 clicks from fully closed position.

When carrying full load, set the rear shock absorber spring to maximum preload to improve motorcycle handling and keep safe clearance from the ground.

### Note

When carrying full load, set the rear shock absorber spring to maximum preload to improve motorcycle handling and keep safe clearance from the ground.

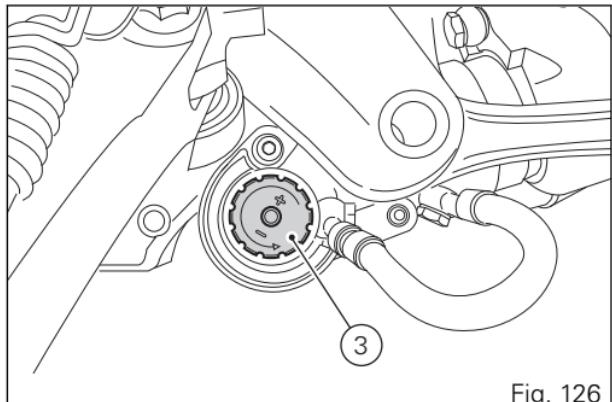
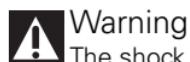


Fig. 126



### Warning

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

## SETTING THE SUSPENSIONS

The values in the table are indicative. They have been calculated considering a dressed rider weighing 80–90 (176.4–198.4 lb) kg and a dressed passenger weighing 70–80 kg (154.3–176.4 lb).

Front fork					
	Range	Standard	Sport use	Comfort use	Rider + Passenger
Compression	0 ÷ 3 turns	1.5 turns	1 turn	2 turns	1.5 turns
Rebound	0 ÷ 3 turns	1.5 turns	1 turn	2 turns	1.5 turns
Preload	0 ÷ 15 turns	0 turns	7 turns	0 turns	10 turns

Rear shock absorber					
	Range	Standard	Sport use	Comfort use	Rider + Passenger
Compression	0 ÷ 40 clicks	25 clicks	6 clicks	35 clicks	20 clicks
Rebound	0 ÷ 24 clicks	12 clicks	2 clicks	12 clicks	12 clicks
Preload	0 ÷ 54 clicks	0 clicks	25 clicks	0 clicks	40 clicks

# Riding the motorcycle

## Running-in recommendations

### Maximum rotation speed

Rotation speed for running-in period and during standard use (rpm):

- 1) Up to 1,000 km (600 miles);
- 2) From 1000 km (600 miles) to 2500 km (1553 miles).

### Up to 1,000 km (600 miles)

During the first 1000 km (600 miles), keep an eye on the rev counter. It should never exceed:  $5,500 \div 6000$  rpm.

During the first hours of riding, it is advisable to run the engine at varying load and rpm, though still within recommended limit.

To this end, roads with plenty of bends and even slightly hilly areas are ideal for a most efficient running-in of engine, brakes and suspensions.

For the first 100 km use the brakes gently. Avoid sudden or prolonged braking. This will allow the friction material on the brake pads to bed in against

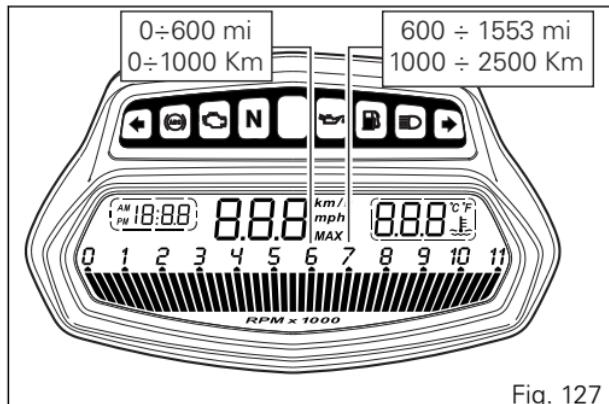


Fig. 127

the brake discs. For all mechanical parts of the motorcycle to adapt to one another and above all not to adversely affect the life of basic engine parts, it is advisable to avoid harsh accelerations and not to run the engine at high rpm for too long, especially uphill. Furthermore, the drive chain should be inspected frequently. Lubricate as required.

From 1000 km (600 miles) to 2500 km (1553 miles)

At this point, you can squeeze some more power out of your engine. However never exceed 7000 rpm.

## Important

During the whole running-in period, the maintenance and service rules recommended in the Warranty Card should be observed carefully. Failure to follow these instructions releases Ducati Motor Holding S.p.A. from any liability whatsoever for any engine damage or shorter engine life.

Strict observance of running-in recommendations will ensure longer engine life and reduce the likelihood of overhauls and tune-ups.

## Pre-ride checks

### Warning

Failure to carry out these checks before riding, may lead to motorcycle damage and injury to rider and passenger.

Before riding, perform a thorough check-up on your motorcycle as follows:

- FUEL LEVEL IN THE TANK

Check the fuel level in the tank. Fill tank if needed (page 192).

- ENGINE OIL LEVEL

Check oil level in the sump through the sight glass. Top up if needed (page 220).

- BRAKE AND CLUTCH FLUID

Check fluid level in the relevant reservoirs (page 196).

- COOLANT

Check coolant level in the expansion reservoir. Top up if needed (page 195).

- TYRE CONDITION

Check tyre pressure and condition (page 218).

- CONTROLS

Work the brake, clutch, throttle and gear change controls (levers, pedals and twistgrip) and check for proper operation.

- LIGHTS AND INDICATORS

Make sure lights, indicators and horn work properly. In case of light malfunction, contact a Ducati Dealer or Authorised Service Centre.

- KEY LOCKS

Ensure that tank filler plug (page 164) and seat (page 166) are properly locked.

- STAND

Make sure side stand operates smoothly and is in the correct position (page 169).

## ABS light

After Key-ON, the ABS light (9) stays ON. When the motorcycle speed exceeds 5 km/h, the warning light switches OFF to indicate the correct operation of the ABS system.



## Warning

In case of malfunction, do not ride the motorcycle and contact a Ducati Dealer or authorised Service Centre.

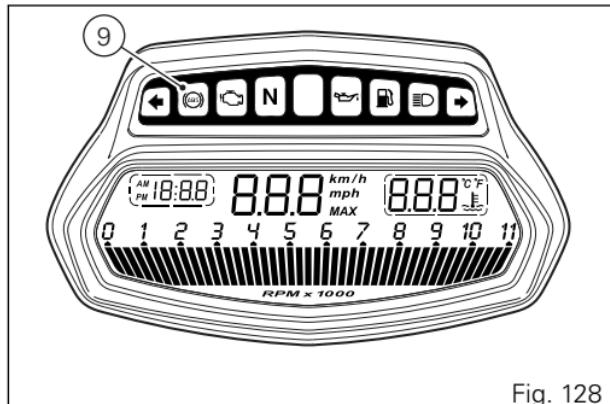


Fig. 128

## ABS device

Check that the front (1) and rear (2) phonic wheels are clean.

### Warning

Clogged reading slots would compromise system proper operation. It is recommended to disable ABS system in case of muddy road surface because under this condition the system might be subject to sudden failure.

### Warning

Prolonged wheelies could deactivate the ABS system.

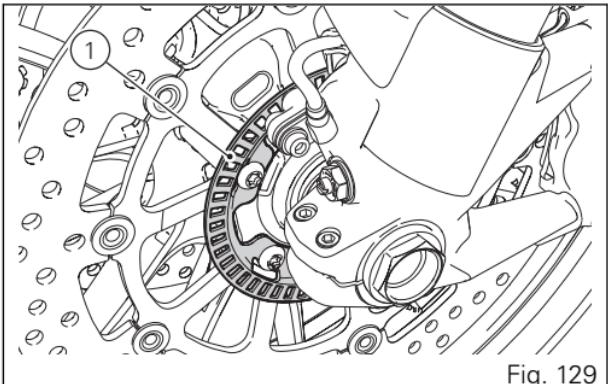


Fig. 129

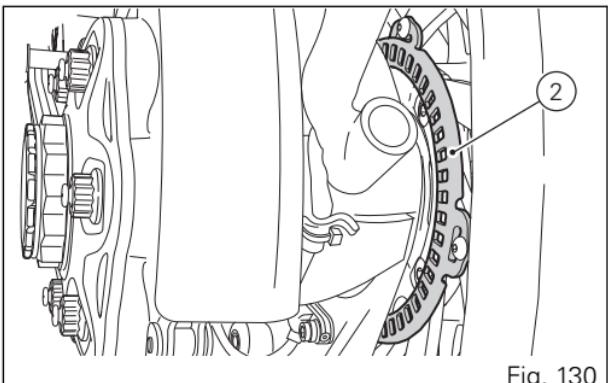


Fig. 130

## Engine start/stop

### **!** Warning

Before starting the engine, become familiar with the controls you will need to use when riding.

### **!** Warning

Never start or run the engine indoors. Exhaust gases are poisonous and may lead to loss of consciousness or even death within a short time.

In the presence of the active or passive key, perform a Key-On (turning on the "Hands free" system and all on-board electronic devices) by pushing the red switch (1), on the right side of the handlebar, downward.

The instrument panel on handlebar will perform the initialisation and will control the on-board systems, turning on all lights in sequence, from the outside to the inside, for a few seconds. After this control, only the green light N (2) and the red light (3) must remain on.

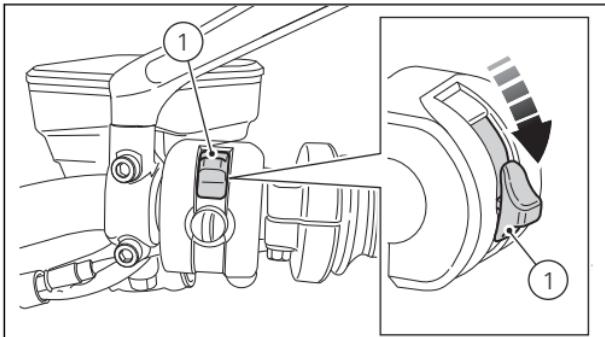


Fig. 131

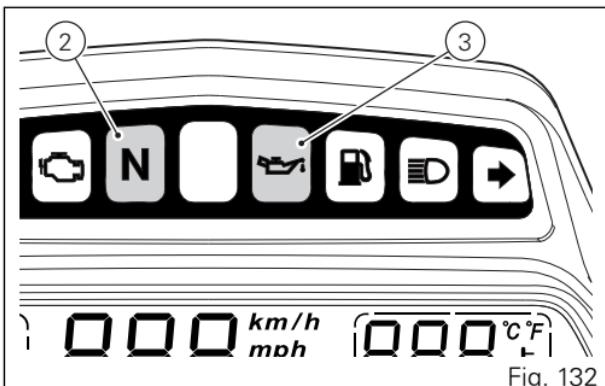


Fig. 132

## **!** Warning

The side stand must be fully up (in a horizontal position) as its safety sensor prevents engine starting when down.

After Key-On, but with the engine not yet started, the system will perform a Key-Off automatically if the presence of the active key is not detected within 10 seconds.

## **!** Note

It is possible to start the engine with side stand down and the gearbox in neutral. When starting the motorcycle with a gear engaged, pull the clutch lever (in this case the side stand must be up).

Move the red switch (1) up to uncover the black button (4).

Push the button (4) to start the engine.

## **!** Important

Do not rev up the engine when it is cold. Allow some time for oil to be heated and reach all points that need lubricating.

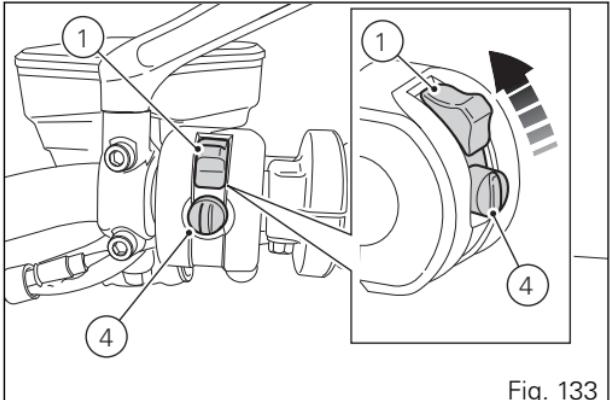


Fig. 133

The red oil pressure warning light should go out a few seconds after the engine has started.

The engine will shut off by turning the red button (1) on the handlebar to RUN OFF.

## **!** Note

To turn on the "Hands free" system and all electronic onboard systems, refer to "Hands Free System".



## Important Conditions affecting the correct operation of the Hands Free system.

The wireless control operation could be impaired in the following situations.

- Near a TV tower, radio station, electric power plant, airport, gas station or other facility that generates strong radio waves.
- When carrying a portable radio, cellular phone or another wireless communication device.
- When multiple wireless keys are nearby.
- When a wireless key comes into contact with or is covered by a metallic object.
- When a wireless key (that emits radio waves) is being used nearby.
- When a wireless key is left near an electrical appliance such as a Personal Computer.

(Fig. 134) indicates the position of the Hands Free block (5) and (Fig. 135) indicates the position of the antenna (6).

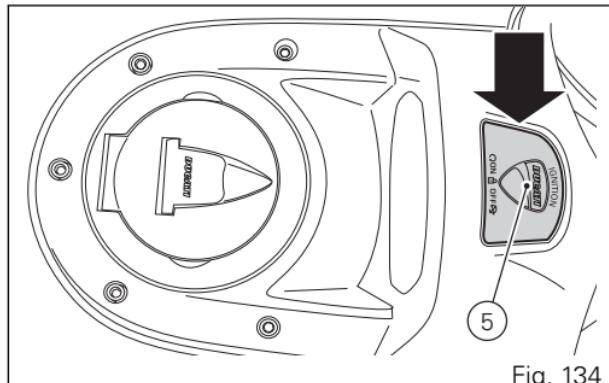


Fig. 134

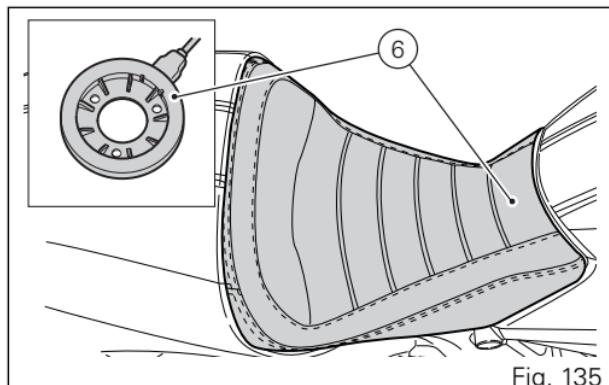


Fig. 135

## Moving off

- 1) Squeeze the control lever to disengage the clutch.
- 2) Push down on gear change lever sharply with the tip of your foot to engage the first gear.
- 3) Speed up the engine by turning the throttle twistgrip while gradually releasing the clutch lever; the motorcycle will start moving off.
- 4) Let go of clutch lever and speed up.
- 5) To shift up, close the throttle to slow down engine, disengage the clutch, lift the gear change lever and let go of clutch lever. To shift down, proceed as follows: release the twistgrip, pull the clutch lever, shortly speed up to help gears synchronise, shift down (engage next lower gear) and release the clutch.

The controls should be used correctly and timely: when riding uphill do not hesitate to shift down as soon as the motorcycle tends to slow down, so you will avoid stressing the engine and the motorcycle abnormally.

### Warning

Avoid harsh acceleration, as this may lead to misfiring and transmission snatching. The clutch lever should not be held in longer than necessary after a gear is engaged, otherwise friction parts may overheat and wear out.

### Warning

Prolonged wheelies could deactivate the ABS system.

## **Braking**

Slow down in time, shift down to use engine brake and then brake by operating both front and rear brakes. Pull the clutch before the motorcycle stops to avoid engine from suddenly stalling.

## Anti-Lock Braking System (ABS)

Using the brakes correctly under adverse conditions is the hardest – and yet the most critical - skill to master for a rider.

Braking is one of the most difficult and dangerous moments when riding a two wheeled motorcycle: the possibility of falling or having an accident during this difficult moment is statistically higher than any other moment. A locked front wheel leads to loss of traction and stability, resulting in loss of control. The Anti-Lock Brake System (ABS) has been developed to enable riders to use the motorcycle braking force to the fullest possible amount in emergency braking or under poor pavement or adverse weather conditions. ABS uses hydraulics and electronics to limit pressure in the brake circuit when a special sensor mounted to the wheel informs the electronic control unit that the wheel is about to lock up. This avoids wheel lockup and preserves traction. Pressure is raised back up immediately and the control unit keeps controlling the brake until the risk of a lockup disappears.

Normally, the rider will perceive ABS operation as a harder feel or a pulsation of the brake lever and pedal. The front and rear brakes use separate control systems, meaning that they operate independently. Likewise, the ABS is not an integral braking system

and does not control both the front and rear brake at the same time. If desired, the system can be deactivated from the instrument panel, using the "ABS setting function" page 114.

### Warning

Using the two brake controls separately reduces the motorcycle braking power. Never use the brake controls harshly or suddenly as you may lock the wheels and lose control of the motorcycle. When riding in the rain or on slippery surfaces, braking will become less effective. Always use the brakes very gently and carefully when riding under these conditions. Any sudden manoeuvres may lead to loss of control. When tackling long, high-gradient downhill road tracts, shift down gears to use engine braking. Apply one brake at a time and use brakes sparingly. Keeping the brakes applied all the time would cause the friction material to overheat and reduce braking power dangerously. Underinflated and overinflated tyres reduce braking efficiency, handling accuracy and stability in a bend.

## Stopping the motorcycle

Reduce speed, shift down and release the throttle twistgrip.

Shift down to engage first gear and then neutral.

Apply the brakes and bring the motorcycle to a complete stop.

Stop the engine by pushing the red switch (1) down.

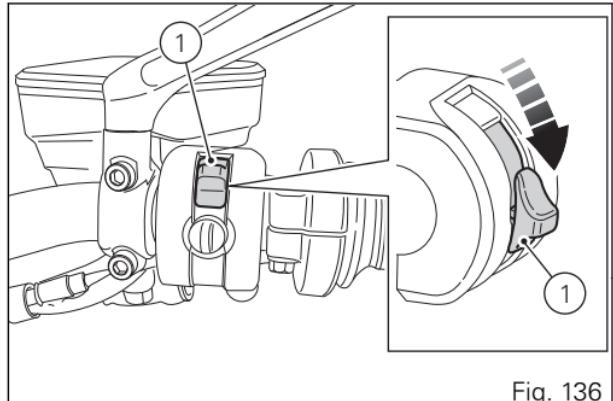


Fig. 136

## Parking

Stop the motorcycle, then put it on the side stand. Fully steer handlebar to the left or to the right. If this operation is performed within 60 seconds from engine stop it will be possible to engage the steering lock.

If you wish to engage the steering lock, during this interval press red button (1) down again and hold it depressed for 3 seconds with steering turned completely to the left or to the right.

After a second, the message "KEEP PRESSED FOR LOCK" will be displayed on instrument panel and will stay on for 2 seconds; steering lock will be engaged after this time. If steering lock is properly engaged, the message "STEERING LOCKED" will be displayed on instrument panel.

If you could not engage the steering lock, after 5 seconds the instrument panel will show "RED SWITCH NOT RELEASED".

Now release the switch and try again to lock the steering within 60 seconds from Key-off.

In case of failed engagement of steering lock, contact a Ducati Authorised Service Centre.

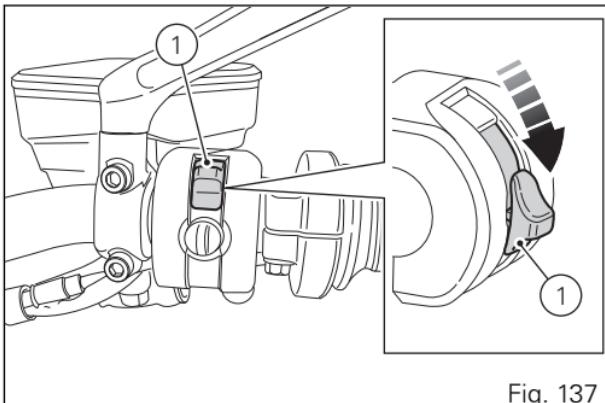


Fig. 137

Press switch (2, Fig. 138) for at least 3 seconds: the round display of instrument panel will indicate that function is active(Fig. 139) for 5 seconds and lights will stay on for 2 hours. After this time, they will turn off automatically.

#### Note

In case of unexpected battery power off while the "Parking" function is on, when power is restored the instrument panel will disable that function.

#### Important

The frequent use of this function can considerably reduce the battery charge; it is recommended to use this function only when really necessary.

#### Warning

The exhaust system might be hot, even after engine is switched OFF; pay particular attention not to touch the exhaust system with any body part and do not park the motorcycle next to inflammable material (wood, leaves etc.).

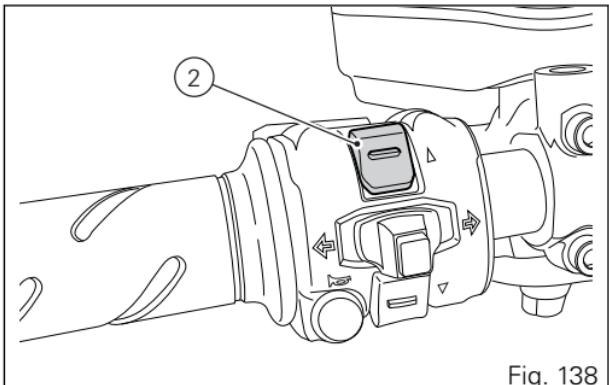


Fig. 138



Fig. 139

## Warning

Using padlocks or other locks designed to prevent motorcycle motion, such as brake disc locks, rear sprocket locks, and so on is dangerous and may impair motorcycle operation and affect the safety of rider and passenger.

## Refuelling

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

Use fuel with low lead content and a minimum octane number of RON 95. No fuel must remain in the filler recess.

### **!** Warning

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.

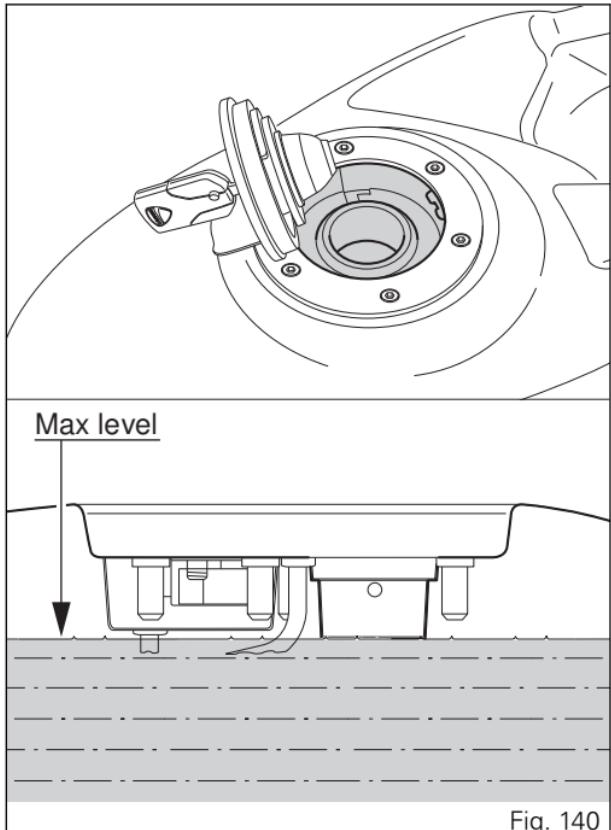


Fig. 140

## Tool kit and accessories

The tool kit (2) is housed under the seat (1), and the owner's manual is in the underseat compartment.

The tool box includes:

- fuse pliers;
- two helmet anti-theft system cables;
- screwdriver;
- screwdriver handgrip;
- box wrench, 14/16 mm;
- double-ended wrench, 8/10 mm;
- 6 mm rod;
- 3 mm Allen wrench;
- 4 mm Allen wrench;
- 5 mm Allen wrench.
- 6 mm Allen wrench.

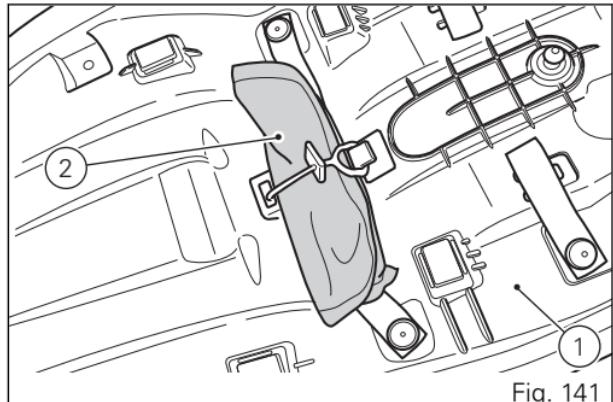


Fig. 141

To access the compartment, remove the seat (see "Removing the seat" on page 166).

## Main use and maintenance operations

### Changing the air filter



#### Important

Have the air filter maintenance performed at a Ducati Dealer or Authorised Service Centre.

## Checking coolant level and topping up, if necessary

Check coolant level in the expansion tank on the right side of the motorcycle. Steer completely to the left and check that the level is between the MIN and MAX marks on the side of the expansion reservoir. Top up if the level is below the MIN mark. Unscrew the filler plug (1) and add ENI Agip Permanent Spezial antifreeze (do not dilute, use pure), until reaching the MAX level.

Screw plug (1) into seat.

This type of mixture ensures the best operating conditions (the coolant starts to freeze at -20 °C/-4 °F).

Cooling circuit capacity: 2.5 cu. dm (litres) - 0.66 gallons.



### Warning

Place the motorcycle upright on a flat surface and make sure the engine is cold before proceeding.

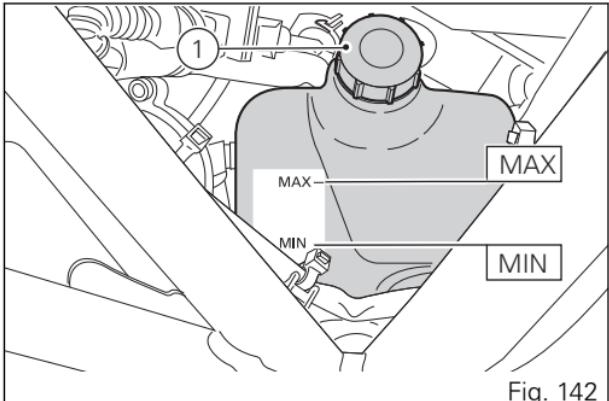


Fig. 142

## Check clutch and brake fluid level

The levels should not fall below the MIN marks on the respective reservoirs.

If level drops below the limit, air might get into the circuit and affect the operation of the system involved.

Fluid must be topped up and changed at the intervals specified in the scheduled maintenance table reported in the Warranty Booklet; please contact a Ducati Dealer or authorised Service Centre.

## Brake system

If you find exceeding clearance on brake lever or 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.



### Warning

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.

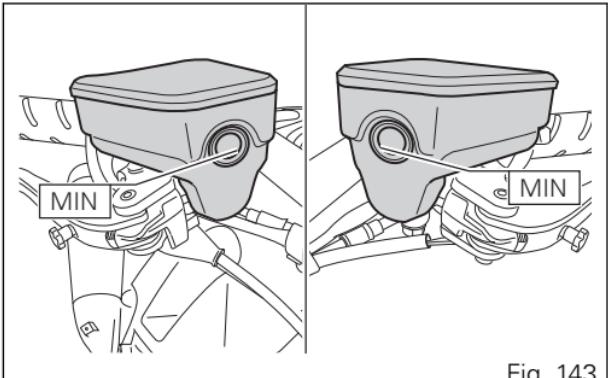


Fig. 143

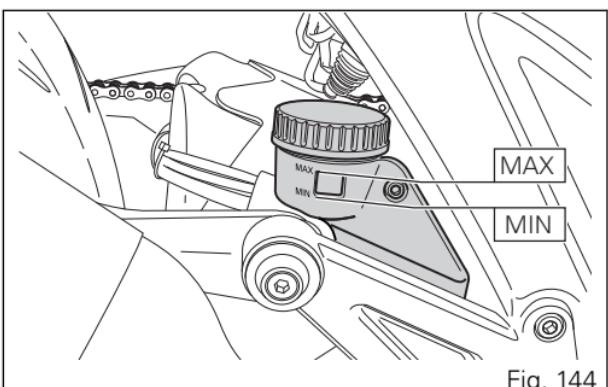


Fig. 144

## Warning

Hydraulic fluid is corrosive; it may cause damage and lead to severe injuries. Never mix fluids of different qualities. Check seals for proper sealing.

### Clutch system

If the control lever has exceeding clearance and the transmission snatches or jams as you try to engage a gear, it means that there might be air in the circuit. Contact your Ducati Dealer or authorised Service Centre to have the system inspected and air drained out.

## Warning

Clutch fluid level will increase as clutch plate friction material wears down. Do not exceed the specified level (3 mm - 0.12 in above the minimum level).

## Checking brake pads for wear

Check brake pads wear through the inspection hole in the callipers.

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

### **!** Warning

Friction material wear beyond this limit would lead to metal support contact with the brake disc thus compromising braking efficiency, disc integrity and rider safety.

### **!** Important

Have the brake pads replaced at a Ducati Dealer or authorised Service Centre.

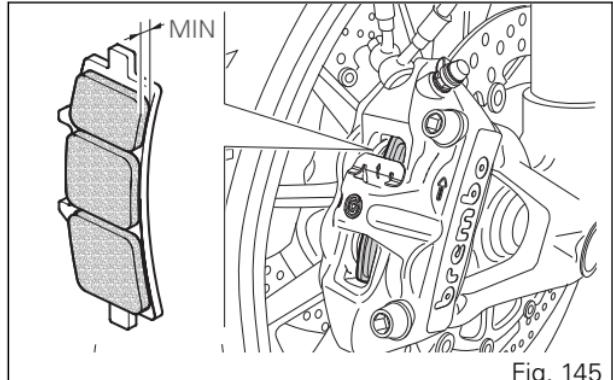


Fig. 145

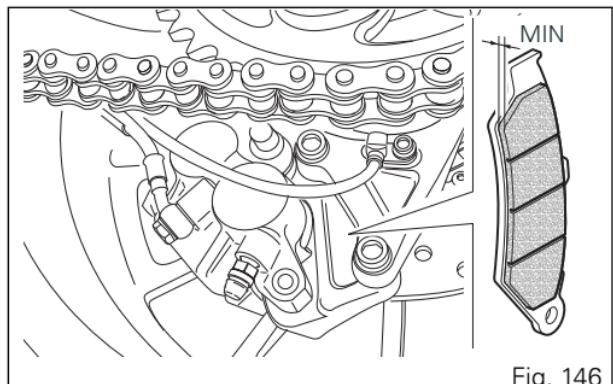


Fig. 146

## Lubricating cables and joints

Check the outer sheath of the throttle control cables for damage at regular intervals. Their external plastic sheath should be free of cracking or flattening.

Work the controls to make sure the cables slide smoothly inside the sheath: if you feel any friction or catching, have the cable replaced by a Ducati Dealer or Authorised Service Centre.

To avoid inconvenience, as far as the throttle cable is concerned, it is recommended to undo the two screws (1) and open the control, then grease the cable end and the pulley (2) using SHELL Advance Grease or Retinax LX2 grease.

### **!** Warning

Carefully close the control after engaging the cable in the pulley.

Refit the cover and tighten the screws (1) to a torque of 10 Nm.

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.

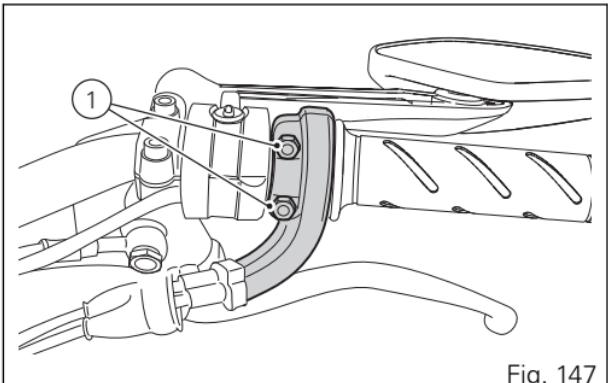


Fig. 147

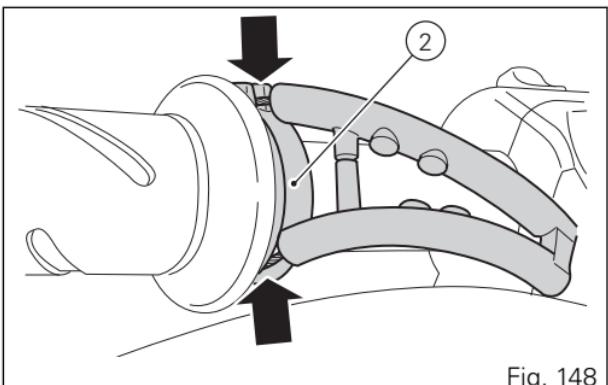


Fig. 148

## Adjusting throttle control free play

The throttle grip in all steering positions must have 1.5 to 2.0 mm (0.06÷0.08 in) of free play, measured at the outer edge of the twistgrip housing.

If necessary, adjust using the relevant adjusters (1 and 2) located on the steering tube on the right side of the motorcycle.

Adjuster (1) is for throttle opening, while adjuster (2) is for throttle closing.

Slip the rubber gaiters off the adjusters and loosen the check nuts (3).

Adjust both adjusters by the same amount: turn clockwise to increase free play and counter clockwise to reduce free play.

When finished, tighten the lock nuts (3) and refit the protection gaiters to the adjusters.

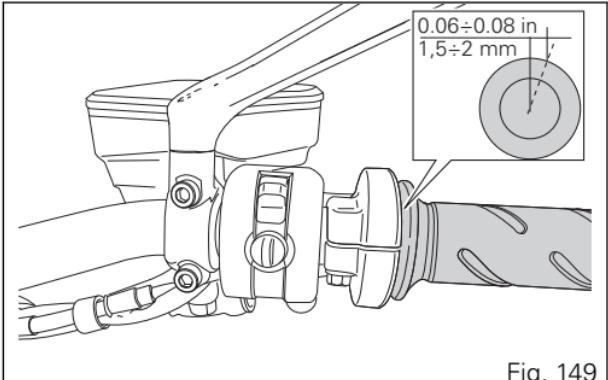


Fig. 149

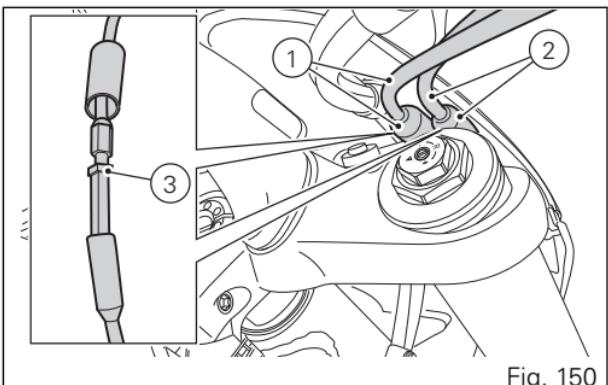


Fig. 150

## Charging the battery

Before charging the battery, it is best to remove it from the motorcycle.

### **!** Important

The battery is located under the cowling; to remove it, **ALWAYS** contact a Ducati Dealer or authorised Service Centre.

Remove the left cowling (1) by loosening:

- the side screw (2) securing it to the electrical components compartment;
- the top screw (3) securing it to the electrical components compartment;
- the screw (4) for lower securing to the central cowling;

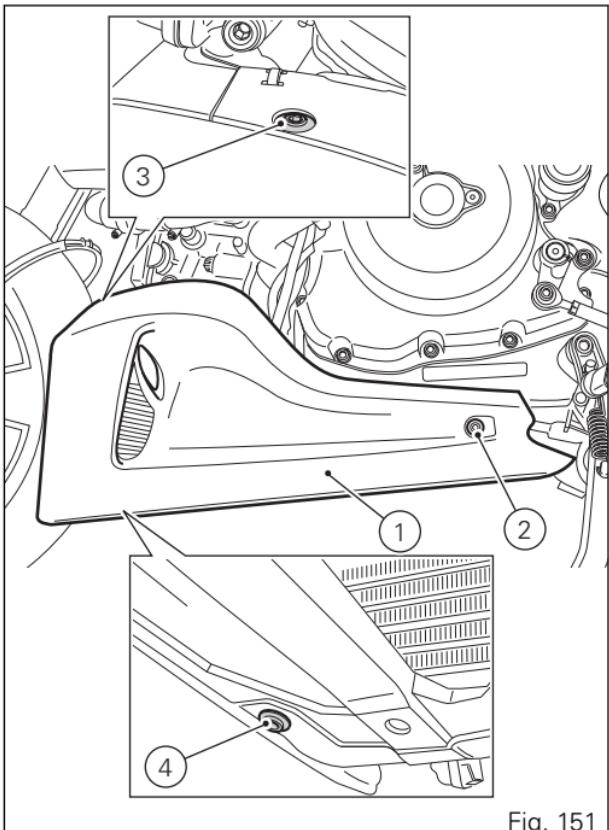


Fig. 151

- the screw (5) securing central cowling to left cowling;
- the screws (6) and remove the battery mounting cover (7).

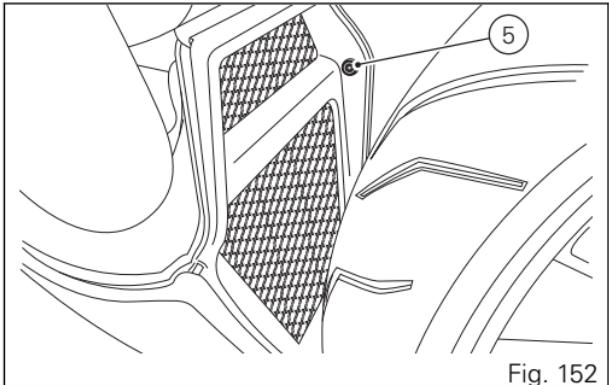


Fig. 152

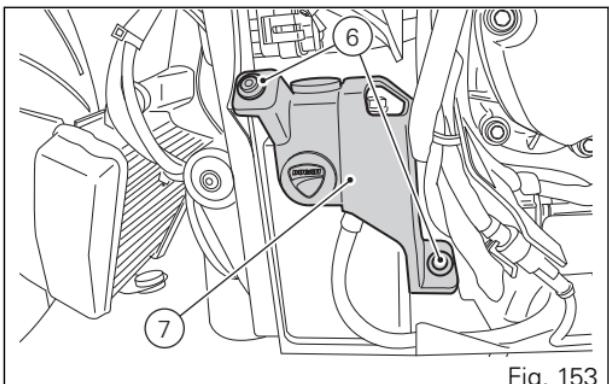


Fig. 153

Slide out the battery (8) from its housing and, always starting from the negative terminal (-), loosen the screws (9).

Remove the positive cable (10), the ABS positive cable (11) from the positive terminal and the negative cable (12) from the negative terminal.

### **Warning**

The battery produces explosive gases: keep it away from heat sources

### **Warning**

Keep the battery out of the reach of children.

Charge the battery at 0.9 A for 5÷10 hours.

Charge the battery in a ventilated room. Connect the battery charger leads to the battery terminals: the red one to the positive terminal (+), the black one to the negative terminal (-).

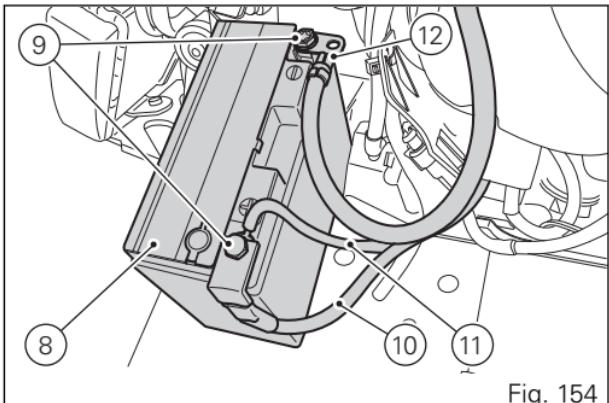


Fig. 154

### **Important**

Make sure the charger is OFF when you connect the battery to it, or you might get sparks at the battery terminals that could ignite the gases inside the cells. Always connect the red positive (+) terminal first.

Lay down the ABS positive cable (11), onto positive cable (10) and start screw (9) on these cables.

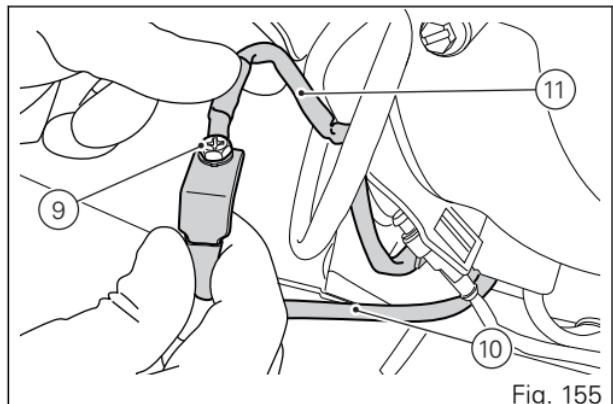


Fig. 155

Connect the positive cable (10), previously assembled to ABS cable (11), to battery positive terminal, and negative cable (12) to battery negative terminal, by starting the other screw (9).

Tighten the terminal screws (9) to a torque of 5 Nm  $\pm 10\%$  and apply grease onto the battery terminals to prevent oxidation.

Reinstall the battery (8) in the support, positioning the cables (10) and (11) as shown in (Fig. 157).

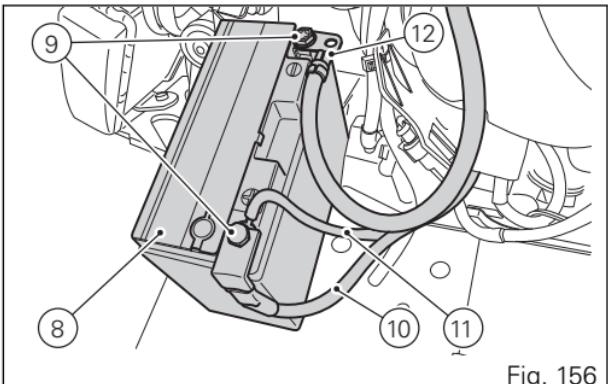


Fig. 156

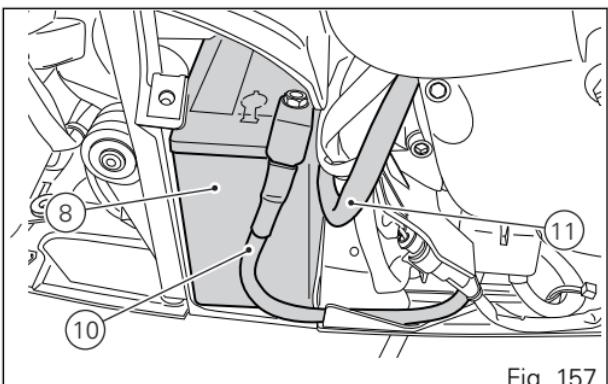


Fig. 157

Refit battery mounting cover (7) and fasten tightening the screws (6) to a torque of 10 Nm  $\pm 10\%$ .

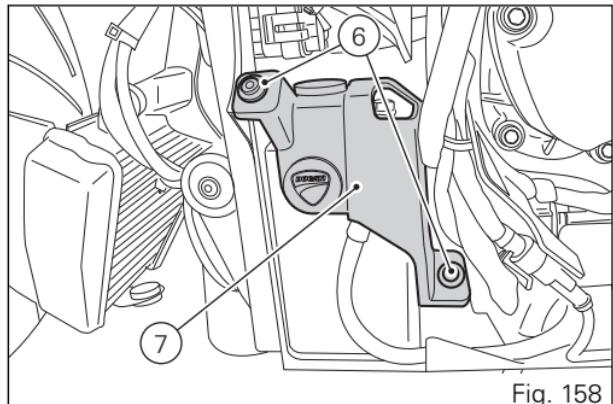


Fig. 158

Refit the left cowling (1) as follows:

- start the side screw (2) securing it to the electrical components compartment;
- start the top screw (3) securing it to the electrical components compartment;
- start the screw (4) for lower securing to the central cowling;

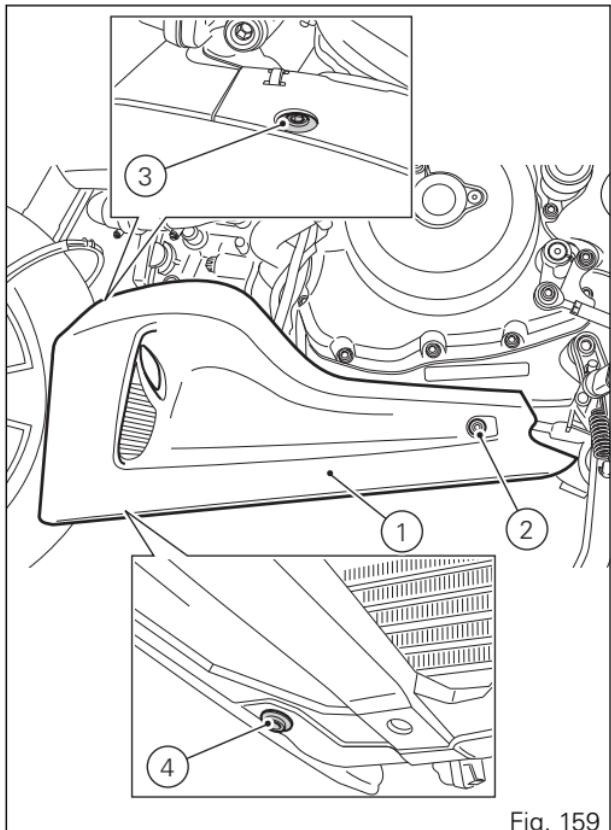
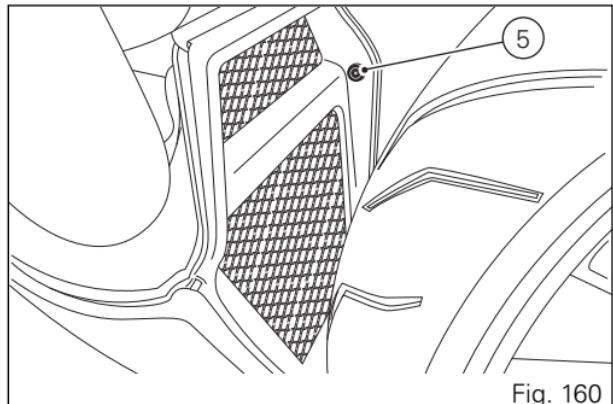


Fig. 159

- start screw (5) securing central cowling to left cowling.

Tighten screws (2, Fig. 159) (3, Fig. 159) (4, Fig. 159) and (5, Fig. 160) to a torque of 10 Nm  $\pm$ 10%.



## Charging and maintenance of the battery during winter storage

Your motorcycle is equipped with a connector (1) to which you can connect a special battery charger (2) (Battery maintainer kit part no. 69924601A - various countries; Battery maintainer kit part no. 69924601AX - for Japan, China and Australia only) available from our sales network.



**Note** The electric system of this model 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.



## Important

If battery is not kept at a minimum charge level by a suitable battery charge maintainer, sulphation may occur and this is an irreversible phenomenon causing decreasing battery performance.

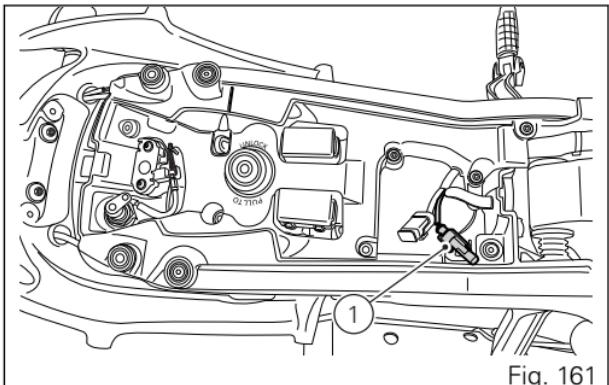


Fig. 161

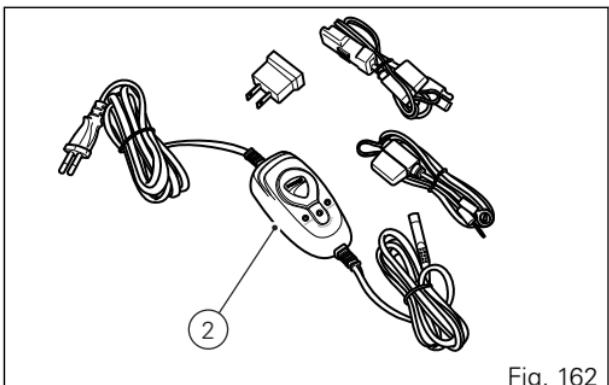


Fig. 162



## Note

When the motorcycle is left unused (approximately for more than 30 days). We recommend owners to use the Ducati battery charge maintainer (Battery maintainer kit part no. 69924601A - various countries; Battery maintainer kit part no. 69924601AX - for Japan, China and Australia only) since its electronics monitors the battery voltage and features a maximum charge current of 1.5 Ah. Connect the maintainer to the diagnostics socket located in the rear side of the motorcycle.



## Note

Using charge maintainers not approved by Ducati could damage the electric system; motorcycle warranty does not cover the battery if damaged due to failure to comply with the above indications, since it is considered as wrong maintenance.

## Checking drive chain tension

### **!** Important

Have chain tension adjusted by a Ducati Dealer or authorised Service Centre.

Make the rear wheel turn until you find the position where chain is tightest.

Set the motorcycle on the side stand. Push belt down to the measurement point and then release it.

Measure the distance between the "aperture" upper profile and the pin centre.

Such distance must be:  $9 \div 11$  mm ( $0.35 \div 0.43$  in).

### **!** Important

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

### **!** Important

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

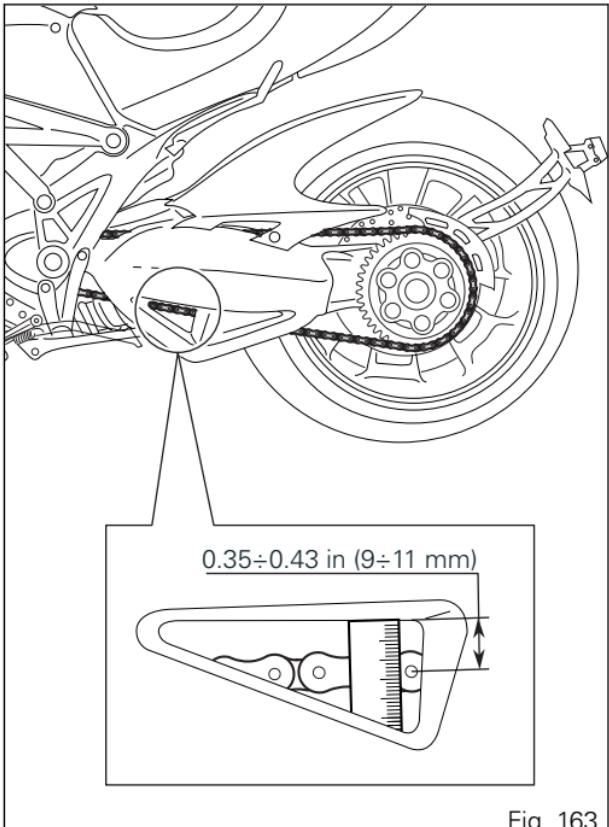


Fig. 163

## **!** Warning

Correct tightening of swinging arm screws (1) is critical to rider and passenger safety.

## **!** Important

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



Fig. 164

## Lubricating the drive chain

The chain fitted on your motorcycle has O-rings that keep dirt out of and lubricant inside the sliding parts. The seals might be irreparably damaged if the chain is cleaned using any solvent other than those specific for O-ring chains or washed using steam or water cleaners.

After cleaning, blow the chain dry with compressed air or wipe it with an absorbent material, then lubricate each link with SHELL Advance Chain or Advance Teflon Chain.



### Important

Using non-specific lubricants may cause severe damage to the chain and the front and rear sprockets.

## Replacing the high and low beam bulbs

Before replacing a burnt-out light, make sure that the new one matches the voltage and wattage specifications in paragraph "Electric System" page 242.

Always ensure that the new bulb you have installed operates properly before refitting any parts you have removed.

Figure shows the locations of the low beam (LO), high beam (HI) and parking lights (1).

### Headlight

The headlight is a full LED unit.

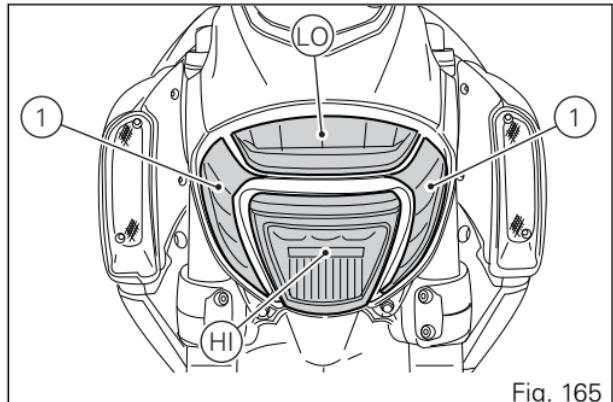


Fig. 165

### Important

Have the headlight lights replaced by a Ducati Dealer or an Authorised Service Centre.

### Warning

The headlight might fog up if the motorcycle is used under the rain or after washing. Switch headlight on for a short time to dry up any condensate.

## Aligning the headlight

Check correct headlight aiming. Position the motorcycle 10 metres (32.8 foot) from a wall or a screen, the motorcycle must be perfectly upright with the tires inflated to the correct pressure and with a rider seated, perfectly perpendicular to the longitudinal axis. On the wall or surface, draw a horizontal line at the same height from the ground as the centre of the headlight and a vertical line aligned with the longitudinal axis of the motorcycle.

If possible, perform this check in dim light.

Switch on the low beam.

The height of the upper limit between the dark area and the lit area must not be more than 9/10 of the height from the ground of the headlight centre.



This is the procedure specified by Italian regulations for checking the maximum height of the light beam. Please adapt said procedure to the provisions in force in your own country.

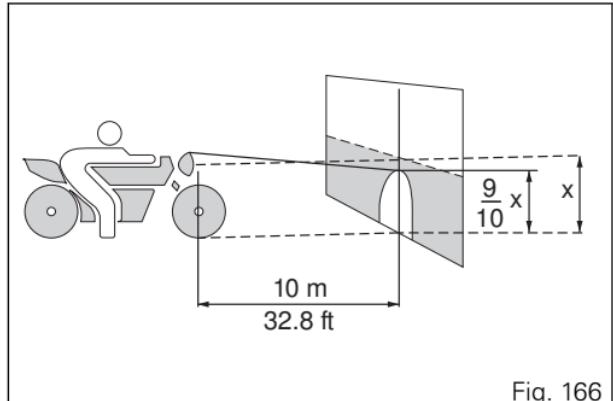


Fig. 166

To vertically align the low beam, turn the screws (1).  
To vertically align the high beam, turn the screw (2).

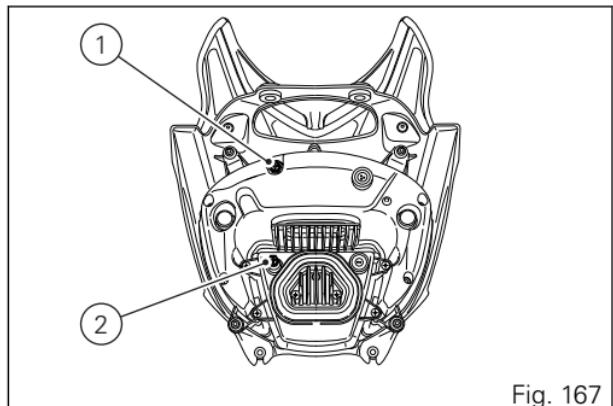


Fig. 167

## Adjusting the rear-view mirrors

Manually adjust the rear-view mirror by pushing at points (A).

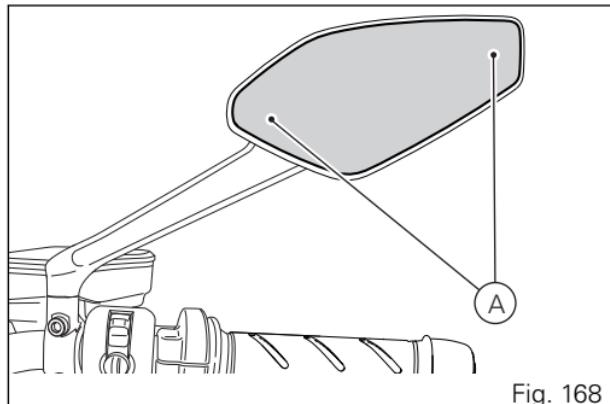


Fig. 168

## Tyres

### Front tyre pressure:

2.50 bar (36.26 PSI - 250 KPa) (rider only) - 2.6 bar (37.70 PSI - 260 KPa) (with passenger and/or panniers).

### Rear tyre pressure:

2.50 bar (36.26 PSI - 250 KPa) (rider only) - 2.9 bar (42.06 PSI - 290 KPa) (with passenger and/or panniers).

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.



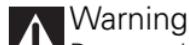
### Important

Check and set tyre pressure when tyres are cold. To avoid front wheel rim distortion, when riding on bumpy roads, increase tyre pressure by 0.2 ÷ 0.3 bar (2.9÷4.35 PSI).

### Tyre repair or change (Tubeless tyres)

In the event of a tiny puncture, tubeless tyres will take a long time to deflate, as they tend to keep air inside.

If you find low pressure on one tyre, check the tyre for punctures.



### Warning

Punctured tyres must be replaced. Replace tyres with recommended standard tyres only. Be sure to tighten the valve caps securely to avoid leaks when riding. Never use tube type tyres. Failure to heed this warning may lead to sudden tyre bursting and to serious danger to rider and passenger.

After replacing a tyre, the wheel must be balanced.



### Warning

Do not remove or shift the wheel balancing weights.



### Note

Have the tyres replaced at a Ducati Dealer or authorised Service Centre. Correct removal and installation of the wheels is essential. Some parts of the ABS (such as sensors and phonic wheels) are mounted to the wheels and require specific adjustment.

## Minimum tread depth

Measure tread depth (S, Fig. 169) at the point where tread is most worn down: it should not be less than 2 mm (0.08 in), and in any case not less than the legal limit.

### **⚠ Important**

Visually inspect the tyres at regular intervals for detecting cracks and cuts, especially on the side walls, bulges or large spots that are indicative of internal damage. Replace them if badly damaged. Remove any stones or other foreign bodies caught in the tread.

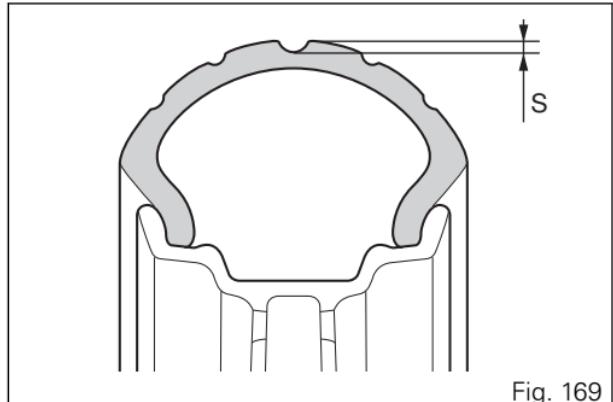


Fig. 169

## Check engine oil level

Engine oil level can be checked through the sight glass (1) located onto clutch cover.

Oil level should be between the marks on the sight glass. If the level is low, top up with engine oil.

Ducati recommends you use Shell Advance 4T Ultra 15W-50 oil (JASO: MA2 and API: SN).

Remove the oil filler cap (2) and top up until the oil reaches the required level. Refit the plug.

### **Important**

Engine oil and oil filters must be changed by a Ducati Dealer or authorised Service Centre at the intervals specified in the scheduled maintenance chart reported in the Warranty Card.

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

1) The level must be checked with warm engine, so if it is not performed after riding for at least 20/30 minutes you will need to warm up the engine.

If, on the other hand, the engine is cold, start it and let it warm up until the cooler fans start two consecutive times (the engine oil must be perfectly warm to flow along the lines and reach the engine sump).

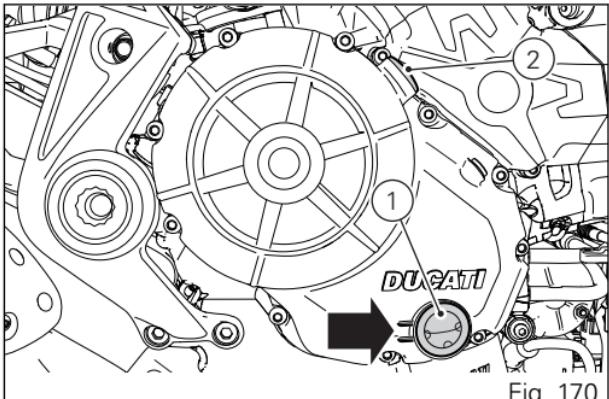


Fig. 170

During this warming up phase, the bike can be left on the side stand.

- 2) Turn off the engine and wait 10\15 minutes to allow the oil to flow completely inside the sump.
- 3) Position the bike with both wheels on a flat ground and in straight position.
- 4) Then, check the engine oil through the sight glass.
- 5) If the oil level is below the middle line between the MIN and MAX marks, add oil until reaching the maximum level indication.



## Warning

Never exceed the MAX mark.

### Recommendations concerning oil

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

- viscosity grade SAE 15W-50;
- standard API: SN;
- standard JASO: MA2.

SAE 15W-50 is an alphanumerical code identifying oil class based on viscosity: two figures with a W ("winter") in-between; the first figure indicates oil viscosity at low temperature; the second figure indicates its viscosity at high temperature. API (American standard) and JASO (Japanese standard) standards specify oil characteristics.

## Cleaning and replacing the spark plugs

Spark plugs are essential to smooth engine running and should be checked at regular intervals.

This operation allows checking the engine operating conditions.

Have the spark plug checked and replaced by a Ducati Dealer or an authorised Service Centre.

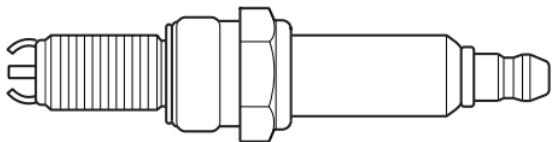


Fig. 171

## Cleaning the motorcycle



### Note

To preserve the finish of metal parts and paintwork, wash and clean your motorcycle at regular intervals, anyway according to road conditions. Use specific products only. Prefer biodegradable products. Avoid aggressive detergents or solvents. Use only water and neutral soap to clean the Plexiglas and the seat.

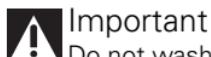
Periodically clean by hand all aluminium components. Use special detergents, suitable for aluminium parts. Do NOT use abrasive detergents or caustic soda.



### 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.



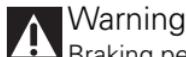
### Important

Do not wash your motorcycle right after use. When the motorcycle is still hot, water drops will evaporate faster and spot hot surfaces. Never clean the motorcycle using hot or high-pressure water jets.

Cleaning the motorcycle with a high pressure water jet may lead to seizure or serious faults in forks, wheel hubs, electric system, headlight (fogging), fork seals, air inlets or exhaust silencers, with consequent loss of compliance with the safety requirements.

Clean off stubborn dirt or exceeding grease from engine parts using a degreasing agent. Be sure to avoid contact with drive parts (chain, sprockets, etc.).

Rinse with warm water and dry all surfaces with chamois leather.



### Warning

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.

## Warning

The headlight might fog up due to washing, rain or moisture. Switch headlight on for a short time to help and dry up any condensate.

Carefully clean the phonic wheels of the ABS in order to ensure system efficiency. Do not use aggressive products in order to avoid damaging the phonic wheels and the sensors.

## Note

To clean the instrument panel do not use alcohol or its by-products.

Pay special attention when cleaning the wheel rims since they have parts in machined aluminium; clean and dry them every time you use the motorcycle.

## Warning

To clean the side panniers, sue warm water, neutral soap and a soft cloth. Soap and soft brushes are suitable to clean the zips; rinse them with clean water. Do not use aggressive detergents and too hard cleaning tools. Zips that prove hard to be moved can be loosened using a bit of talcum powder.

## Storing the motorcycle

If the motorcycle is to be left unridden over long periods, it is advisable to carry out the following operations before storing it away:

- clean the motorcycle;
- empty the fuel tank;
- pour a few drops of engine oil into the cylinders through the spark plug seats, then crank the engine by hand a few times so a protective film of oil will spread on cylinder inner walls;
- place the motorcycle on a service stand;
- disconnect and remove the battery.

Battery should be checked and charged (or replaced, as required) whenever the motorcycle has been left unridden for over a month.

Protect the motorcycle with a suitable canvas. This will protect paintwork and let condensate breathe out.

The canvas is available from Ducati Performance.

## **Important notes**

Some countries, such as France, Germany, Great Britain, Switzerland, etc. have compulsory emission and noise standards that include mandatory inspections at regular intervals.

Periodically carry out the required checks and renew parts as necessary, using Ducati original spare parts, in compliance with the regulations in the country concerned.

# Scheduled maintenance chart

Scheduled maintenance chart: operations to be carried out by the dealer

List of operations and type of intervention [set mileage (km/mi) or time interval *]	Km. x1000 mi. x1,000	1	15	30	45	60	Time (months)
		0.6	9	18	27	36	
Reading of the error memory with DDS and check of software version update on control units		●	●	●	●	●	12
Check the presence of any technical updates and recall campaigns		●	●	●	●	●	12
Change engine oil and filter		●	●	●	●	●	12
Clean the engine oil mesh filter assembly		●					-
Check and/or adjust valve clearance				●		●	-
Change timing belts				●		●	60
Change spark plugs				●		●	-
Clean air filter			●		●		-
Change air filter				●		●	-
Check brake and clutch fluid level		●	●	●	●	●	12
Change brake and clutch fluid							36
Check brake disc and pad wear. Change, if necessary		●	●	●	●	●	12

List of operations and type of intervention [set mileage (km/mi) or time interval *]	Km. x1000 mi. x1,000	1	15	30	45	60	Time (months)
		0.6	9	18	27	36	
Check the proper tightening of brake calliper bolts and brake disc flange screws		●	●	●	●	●	12
Check front and rear wheel nuts tightening		●	●	●	●	●	12
Check frame-to-engine fasteners tightening			●	●	●	●	-
Check wheel hub bearings				●		●	-
Check and lubricate the rear wheel shaft				●		●	-
Check the cush drive damper on rear sprocket				●		●	-
Check the proper tightening of final drive front and rear sprocket nuts		●	●	●	●	●	12
Check final drive (chain, front and rear sprocket) and sliding shoe wear			●	●	●	●	12
Check final drive chain tension and lubrication		●	●	●	●	●	12
Check steering bearings and lubricate, if necessary				●		●	-
Change front fork fluid				●		●	-
Visually check the front fork and rear shock absorber seals		●	●	●	●	●	12
Check the freedom of movement and tightening of the side and central stand (if any)		●	●	●	●	●	12

List of operations and type of intervention [set mileage (km/mi) or time interval *]	Km. x1000 mi. x1,000	1	15	30	45	60	Time (months)
		0.6	9	18	27	36	
Visually check the fuel lines		●	●	●	●	●	12
Check rubbing points, clearance, freedom of movement and positioning of hoses and electric wiring in view		●	●	●	●	●	12
Lubricate the levers at the handlebar and pedal controls		●	●	●	●	●	12
Change coolant					●		48
Check the coolant level and check circuit for damage		●	●	●	●	●	12
Check tyre pressure and wear		●	●	●	●	●	12
Check the battery charge level		●	●	●	●	●	12
Check the operation of the safety electrical devices (side stand sensor, front and rear brake switches, engine stop switch, gear/neutral sensor)		●	●	●	●	●	12
Check lighting, turn indicators, horn and controls		●	●	●	●	●	12
Reset the Service indication through the DDS		●	●	●	●	●	-
Final test and road test of the motorcycle, testing safety devices (ex. ABS and DTC), electric fans and idling		●	●	●	●	●	12
Softly clean the motorcycle		●	●	●	●	●	12
Fill out that the service was performed in on-board documentation (Service Booklet)		●	●	●	●	●	12

\* Service operation to be carried out in accordance with the specified distance or time intervals (km, miles or months), whichever occurs first.

## Scheduled maintenance chart: operations to be carried out by the customer

### Important

Using the motorcycle under extreme conditions, such as very damp and muddy roads or dusty and dry environment, could cause above-average wear of components like the drive system, the brakes or the air filter. If the air filter is dirty, the engine could get damaged. Therefore, this might translate in required service or replacement of the wear parts earlier than specified in the scheduled maintenance chart.

List of operations and type of intervention [set mileage (km/mi) or time interval *]	Km. x1000	1
	mi. x1,000	0.6
	Months	6
Check engine oil level		●
Check brake and clutch fluid level		●
Check tyre pressure and wear		●
Check the drive chain tension and lubrication		●
Check brake pads. If necessary, contact your dealer to replace pads		●

\* Service operation to be carried out in accordance with the specified distance or time intervals (km, miles or months), whichever occurs first.

## Technical data

### Weights

Weight in running order without fluids and battery:  
210 kg (Diavel ABS);  
205 kg (Diavel Carbon ABS).  
Carrying full load: 400 kg.



### Warning

Failure to observe weight limits could result in poor handling and impair the performance of your motorcycle, and you may lose control of the motorcycle.

## Dimensions

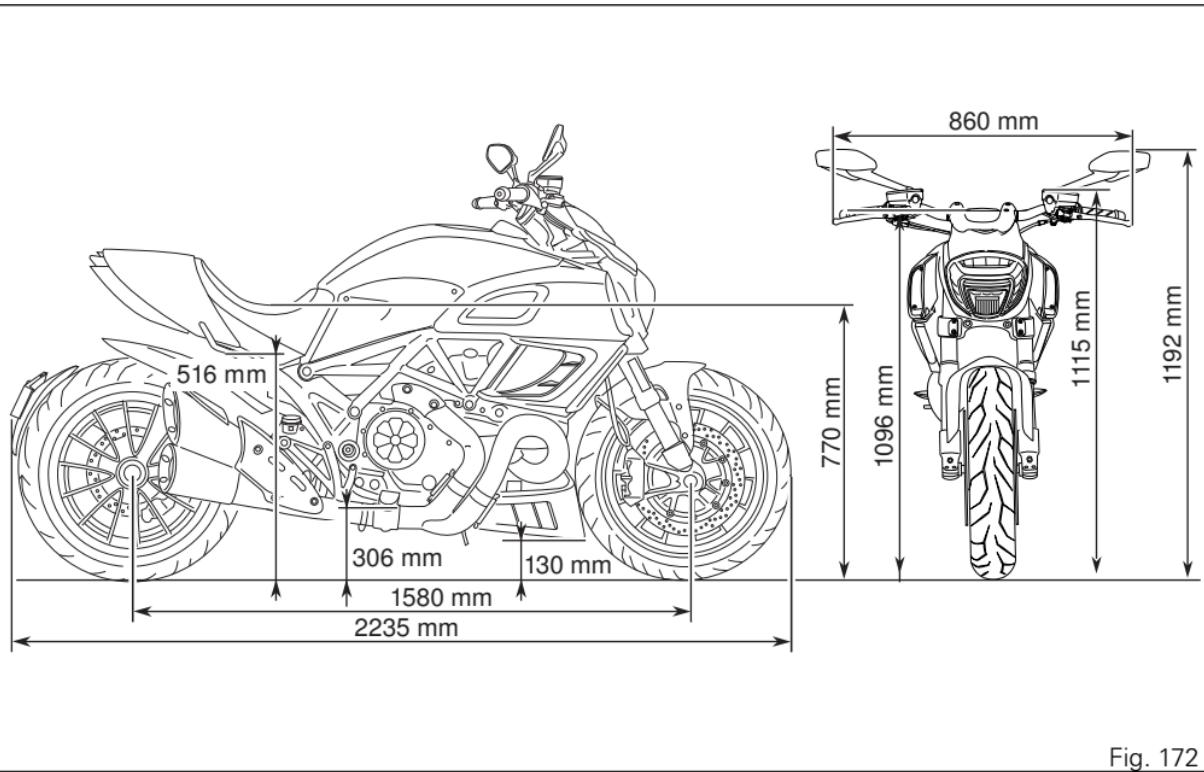


Fig. 172

## Fuel, lubricants and other fluids

FUEL, LUBRICANTS AND OTHER FLUIDS	TYPE	
Fuel tank, including a reserve of 4 cu. dm	Ducati recommends SHELL V-Power unleaded premium fuel with a minimum of octane rating of RON 95	17 cu. dm (litres)
Oil sump and filter	Ducati recommends you use SHELL Advance 4T Ultra 15W-50 oil (JASO: MA2, API: SN)	4 cu. dm (litres)
Front/rear brake and clutch circuits	DOT 4	-
Protectant for electric contacts	Protective spray for electric systems.	-
Front fork	SHELL Donax TA	720 cc (per leg)
Cooling circuit	ENI Agip Permanent Spezial antifreeze (do not dilute, use pure)	2.5 cu. dm (litres)

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



## Warning

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.

## Engine

Testastretta 11°, longitudinal 90° "L" twin cylinder, with 4 valves per cylinder, liquid-cooled with deep sump die-cast crankcase.

Bore:

106 mm (4.17 in)

Stroke:

67.9 mm (2.67 in)

Total displacement, cu. cm:

1198.4

Compression ratio:

11.5±0.5:1

Maximum power at crankshaft (EU) Regulation no. 134/2014, Annex X, kW/HP:

119 kW/162 HP at 9,500 rpm

74 kW/99 HP at 8,500 rpm (for the French market only).

Maximum torque at crankshaft (EU) Regulation no. 134/2014 Annex X:

13 kgm/128 Nm at 8,000 rpm

111 Nm at 5,750 rpm (for the French market only).

Maximum rpm:

10,800

10,500 (for the French market only).

## Important

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

## Timing system

DESMODROMIC system with four valves per cylinder controlled by eight rocker arms (four opening and four closing ones) and two overhead camshafts. This system is driven by the crankshaft through spur gears, pulleys and toothed belts.

### Desmodromic timing system

- 1) Opening (or upper) rocker arm;
- 2) Opening rocker shim;
- 3) Closing (or lower) rocker shim;
- 4) Return spring for lower rocker;
- 5) Closing (or lower) rocker;
- 6) Camshaft;
- 7) Valve.

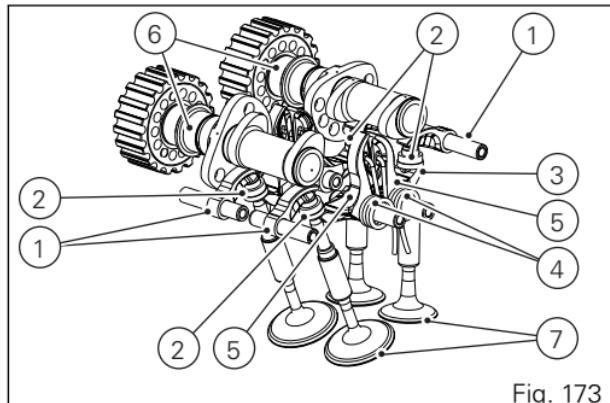


Fig. 173

## Performance data

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.

## Spark plugs

Make: NGK.

Type: MAR9A-J

## Fuel system

MITSUBISHI indirect electronic injection. Oval throttle body (corresponding diameter):

56 mm

Injectors per cylinder: 1

Firing points per injector: 12

Fuel supply: 95-98 RON.

## Warning

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.

## Brakes

Separate-action anti-lock braking system operated by hall-type sensors mounted to each wheel with phonic wheel detection:

ABS can be disabled.

## Front

Semi-floating drilled twin-disc.

Braking material: steel.

Carrier material: aluminium

Disc diameter: 320 mm.

Hydraulically operated by a control lever on handlebar right-hand side.

Brake calliper make: BREMBO.

Type: M4.34a (4-piston calliper, Ø 34)

Friction material: TT 2182 FF

Master cylinder type: PR18/19.

## Rear

With fixed drilled steel disc.

Disc diameter: 265 mm.

Hydraulically operated by a pedal on RH side.

Make: BREMBO

Type: PF 30/32a (floating 2-piston calliper, Ø 30 / Ø 32).

Friction material: Toshiba TT2182 FF.

Master cylinder type: PS 13.

## Warning

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

Wet clutch controlled by the lever on left-hand side of the handlebar.

Drive is transmitted from engine to gearbox primary shaft via spur gears.

Front chain sprocket/clutch gearwheel ratio: 33/61

6-speed gearbox with constant mesh gears, gear change pedal on left side of motorcycle.

Gearbox output sprocket/rear chain sprocket ratio:

15/43

Total gear ratios:

1<sup>st</sup> gear 15/37

2<sup>nd</sup> gear 17/30

3<sup>rd</sup> gear 20/27

4<sup>th</sup> gear 22/24

5<sup>th</sup> gear 24/23

6<sup>th</sup> gear 25/22

Drive chain from gearbox to rear wheel.

Make: DID

Type: HV2 525

Size: 5/8" x 1/16"

Links: 118

## Important

The above gear ratios are the homologated ones and under no circumstances must they be modified.

However, if you wish to tune up your motorcycle for competitions or special tracks, Ducati Motor Holding S.p.A. will be pleased to provide information about

the special ratios available. Contact a Ducati Dealer or Authorised Service Centre.

## Warning

If the rear sprocket needs replacing, contact a Ducati Dealer or authorised Service Centre. If improperly replaced, this component could seriously endanger your safety, as well as the passenger one, and cause irreparable damage to your motorcycle.

## Frame

ALS450 steel tubular trellis.

Aluminium rear subframe.

Steering head angle: 28°.

Steering angle: 34° LH side / 34° RH side.

Trail: 130 mm

## Wheels

Fourteen-spoke, light-alloy rims (Diavel ABS).

Nine-spoke, light-alloy rims (Diavel Carbon).

### Front

Size: MT 3.50x17".

### Rear

Size: MT 8.00x17".

## Tyres

### Front

Tubeless, radial tyre.

Size: 120/70-ZR17

### Rear

Tubeless, radial tyre.

Size: 240/45-ZR17

## Suspension

### Front

Hydraulic upside-down fork with external adjusters for rebound, compression, and preload of fork leg inner springs.

Stanchion diameter: 50 mm.

Wheel travel: 120 mm.

### Rear

Shock absorber features adjustable rebound and compression damping, a spring preload remote adjuster; it pivots onto frame at the top and onto a light alloy swinging arm at the bottom. The swinging

arm is connected to the pivot shaft going through the frame and the engine.

The whole system gives the motorcycle excellent stability.

Suspension travel: 59.5 mm.

Wheel travel: 120 mm.

### Exhaust system

Stainless steel silencer with aluminium endcap.

Built-in catalytic converter and two lambda sensors.

### Available colours

#### Diavel ABS

Dark Stealth

Primer 2 K Black code 873.A002 (Palinal).

Primer, Black Stealth (Black 94) code 929.R223 (Palinal).

Matt Clear Coat 2 K code 929.R223 (Palinal).

Frame, Racing Black code 43805 (Inver).

Rear subframe, Graphite Grey code 36345 (Inver).

Rims, Black.

#### Diavel ABS Carbon

Matt Clear Coat 4 Gloss code 923I2176 (Palinal).

Ducati dark chrome frame code 73471114 (AZKO).

Rear subframe, Graphite Grey code 36.345 (Inver).

Rims, Glossy Black.

## Electric system

Basic electric items are:

Headlight:

LED low beam light type:

No. 4 LEDs (13.5V - 24.3W);

LED high beam light type:

No. 5 LEDs (13.5V - 18.9W);

LED parking light type:

No. 5 LEDs (13.5V - 6.2W).

Electrical controls on handlebars.

Turn indicators: front ones:

LED (13.5V - 4.7W).

Horn.

Stop light switches.

Sealed battery, 12V-10 Ah.

GENERATOR 14V-490W - 35A.

MASTER FUSE, protected by a 30A fuse, of the Automotive type, not including ABS which has two specific ones, located on solenoid starter, behind the battery (C, Fig. 176).

Starter motor: 12V-0.7 kW.

Tail light, stop light and rear turn indicators:

parking light: (13.5V-0.3W);

stop light: LED (13.5V - 1.4W);

rear turn indicators: LED (13.5V - 2.06W).

Number plate light: LED (13.5V - 0.7W).



### Note

For bulb replacement instructions, please see the paragraph "Replacing the high and low beam bulbs".

## Fuses

There are twelve fuses that protect the electric components, located inside the front and rear fuse boxes, and one on the solenoid starter. There are three spare fuses (S) in every box.

Refer to the table below to identify the circuits protected by the various fuses and their ratings. The rear left fuse box (A, Fig. 174) and the rear right one (B, Fig. 175) are located under the seat, inside the underseat compartment.

To access the fuses, remove the seat (see "Removing the seat" on page 166).

To expose the fuses, lift the box protective cover.

Mounting position and ampere capacity are marked on box cover.

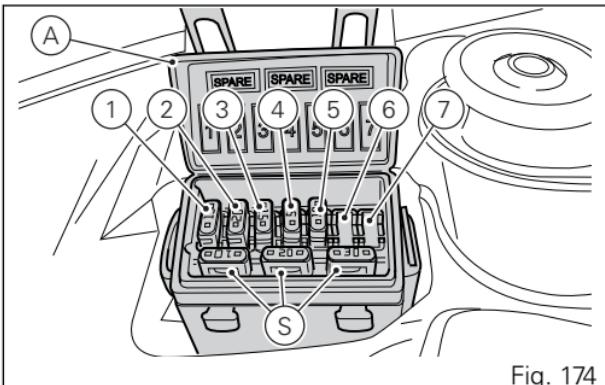


Fig. 174

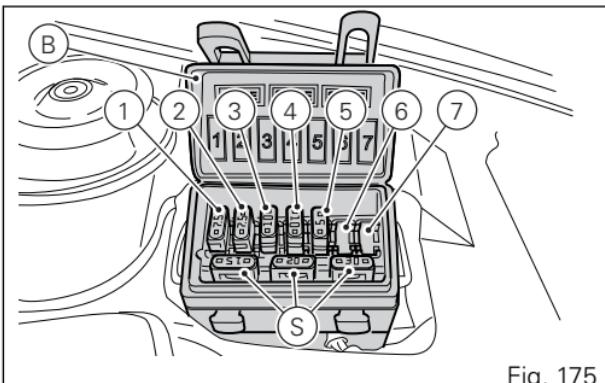


Fig. 175

**Rear left fuse box (A) key**

Pos	El. item	Rat.
1	Throttle opening relay (ETV)	15 A
2	Injection relay	20 A
3	Key-sense	15 A
4	Engine control unit	10 A
5	Instrument panel	10 A
6	-	-
7	-	-

**Rear right fuse box key (B)**

Pos	El. item	Rat.
1	Diagnosis/Recharge	7.5 A
2	Navigator/Alarm	7.5 A
3	Black Box System (BBS)	15 A
4	Black Box System (BBS) KEY	10 A
5	Heated handgrips	5 A
6	-	-
7	-	-



### Note

To access the main fuse, remove the left cowling.

The main fuse (C, Fig. 176), is located near the battery on solenoid starter (D, Fig. 176). Remove the fuse cap (E, Fig. 176)to reach it.

A blown fuse can be identified by breakage of the inner filament (F, Fig. 177).



### Important

Switch the ignition key to OFF before replacing the fuse to avoid possible short-circuits.



### Warning

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

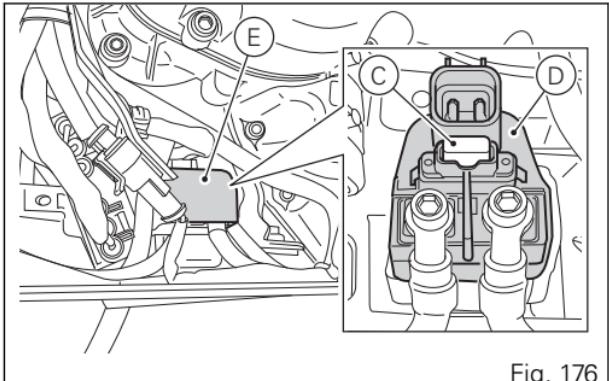


Fig. 176

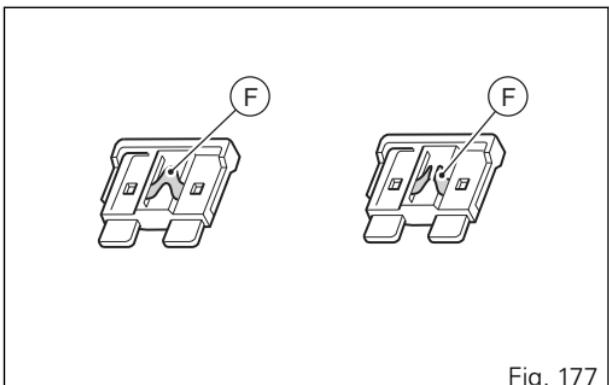


Fig. 177

## Injection/electric system diagram key

- |                                  |  |
|----------------------------------|--|
| 1) Right-hand switch             | 25) Anti-theft system alarm                      |
| 2) Immobilizer                   | 26) Exhaust valve motor                          |
| 3) Hands Free Relay              | 27) Gear sensor                                  |
| 4) Hands free                    | 28) Rear speed sensor                            |
| 5) LH fuse box                   | 29) ABS control unit                             |
| 6) RH fan                        | 30) Throttle twistgrip position sensor (APS)     |
| 7) LH fan                        | 31) Potentiometer motor / ride-by-wire (TPS/ETV) |
| 8) Fuel pump relay               | 32) Timing/rpm sensor                            |
| 9) Ride-by-wire relay (ETV)      | 33) Vertical MAP sensor                          |
| 10) Injection control unit (EMS) | 34) Horizontal MAP sensor                        |
| 11) RH fuse box                  | 35) Engine temperature                           |
| 12) Data Acquisition / Diagnosis | 36) Air temperature sensor                       |
| 13) Starter motor                | 37) Vertical lambda sensor                       |
| 14) Fused solenoid               | 38) Horizontal lambda sensor                     |
| 15) Battery                      | 39) Oil pressure switch                          |
| 16) Wiring ground                | 40) Rear stop light                              |
| 17) Rectifier                    | 41) Side stand switch                            |
| 18) Generator                    | 42) Clutch switch                                |
| 19) Fuel pump                    | 43) Front stop light                             |
| 20) Fuel level                   | 44) Main vertical injector                       |
| 21) Rear right turn indicator    | 45) Main horizontal injector                     |
| 22) Tail light                   | 46) Horizontal coil                              |
| 23) Rear left turn indicator     | 47) Vertical coil                                |
| 24) Vehicle control unit (BBS)   | 48) Secondary air actuator                       |
|                                  | 49) Left-hand switch                             |
|                                  | 50) Horn   |

- 51) Front speed sensor
- 52) Front left turn indicator
- 53) Instrument panel on handlebar
- 54) Instrument panel on tank
- 55) Front right turn indicator
- 56) Heated handgrip control unit (optional)
- 57) Low / high beam
- 58) Parking light
- 59) Heated handgrip (optional)



**Note** The electric system wiring diagram is at the end of this manual.

## Wire colour coding

B Blue

W White

V Violet

BK Black

Y Yellow

R Red

LB Light blue

GR Grey

G Green

BN Brown

O Orange

P Pink

# Routine maintenance record

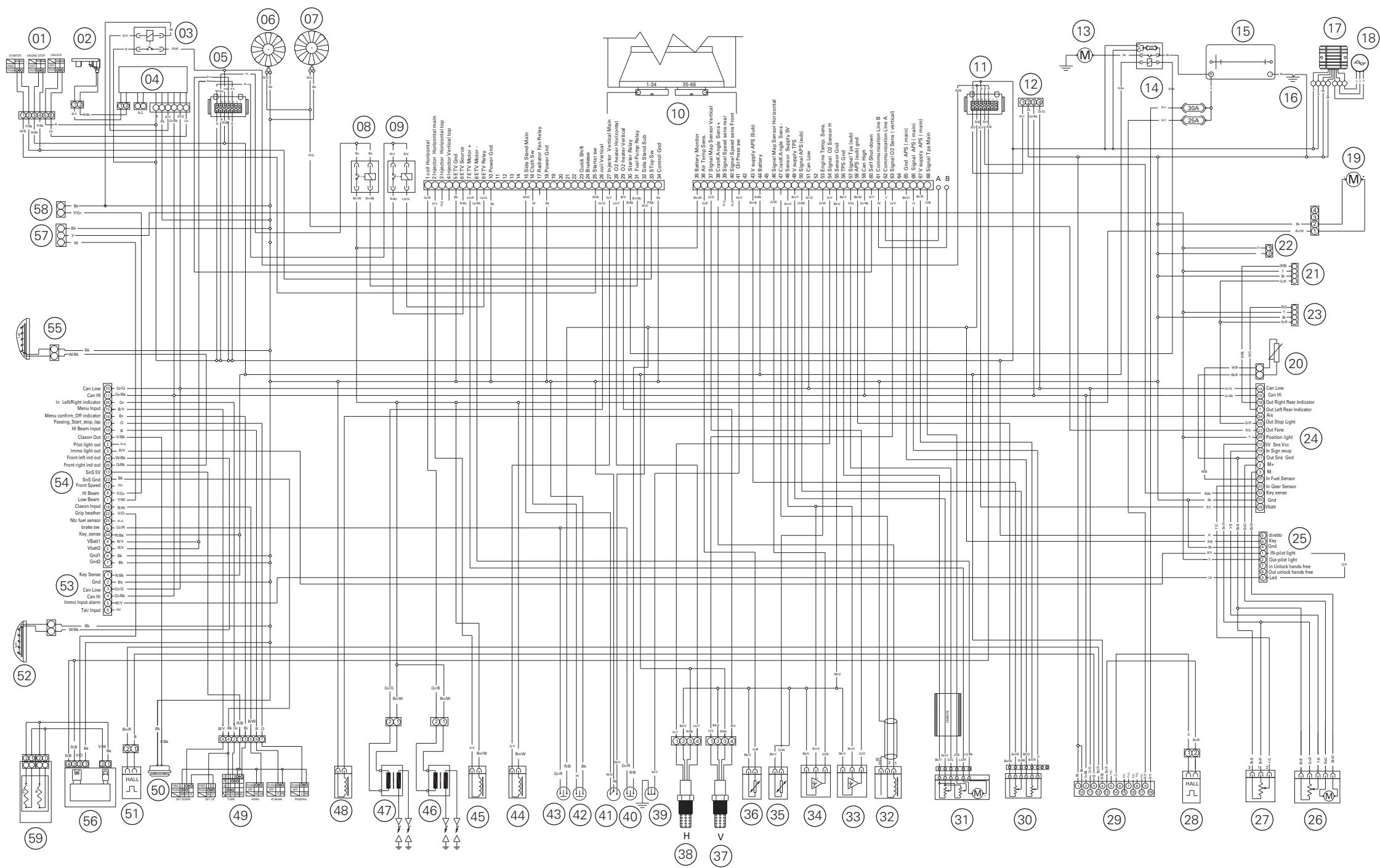
## Routine maintenance record

KM	NAME <b>DUCATI SERVICE</b>	MILEAGE	DATE
1000			
15000			
30000			
45000			
60000			



Stampato 06/2017

Cod. 913.7.353.1A Rev. 01



DIAVEL ABS / DIAVEL CARBON ABS

cod. 913.7.353.1A

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