

aprilia

PEGASO 650 STRADA - TRAIL



aprilia part# 8104936

use+maintenancebook



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SAFETY WARNINGS

The following precautionary warnings are used throughout this manual in order to convey the following messages:

 **Safety warning. When you find this symbol on the vehicle or in the manual, be careful to the potential risk of personal injury. Non-compliance with the indications given in the messages preceded by this symbol may result in grave risks for your and other people's safety and for the vehicle!**

WARNING

Indicates a potential hazard which may result in serious injury or even death.

CAUTION

Indicates a potential hazard which may result in minor personal injury or damage to the vehicle.

NOTE The word "NOTE" in this manual precedes important information or instructions.

TECHNICAL INFORMATION

★ The operations preceded by this symbol must be repeated also on the opposite side of the vehicle.

If not expressly indicated otherwise, for the reassembly of the units repeat the disassembly operations in reverse order.

The terms "right" and "left" are referred to the rider seated on the vehicle in the normal riding position.

WARNINGS - PRECAUTIONS - GENERAL ADVICE

Before starting the engine, carefully read this manual and in particular the section "SAFE DRIVE".

Your and other people's safety depends not only on your quickness of reflexes and on your agility, but also on what you know about the vehicle, on its efficiency and on your knowledge of the basic information for "SAFE DRIVE". Therefore, get a thorough knowledge of the vehicle, in such a way as to be able to ride in the traffic safely.

NOTE Keep a stock of one bulb per type with the vehicle (see technical data).

NOTE This manual must be considered as an integral part of the vehicle and must always accompany it, even in case of resale.

april has carried out this manual with the maximum attention, in order to supply the user with correct and updated information. However, since **april** constantly improves the design of its products, there may be slight discrepancies between the characteristics of your vehicle and those described in this manual. For any clarification concerning the information contained in this manual, do not hesitate to contact an **april** Authorised Dealer.

For inspections and repair operations not expressly described in this publication, for the purchase of **april** genuine spare parts, accessories and other products, as well as for specific advice, contact exclusively **april** Authorised Dealers and Service Centres, which guarantee prompt and accurate assistance.

Thank you for choosing **april**. We wish you a nice ride.

All rights as to electronic storage, reproduction and total or partial adaptation, with any means, are reserved for all Countries.

NOTE In some countries the antipollution and noise regulations in force require periodical inspections.

The user of the vehicle in these countries must:

- contact an **april** Authorised Dealer to have the non-homologated components replaced with others homologated for use in the country in question;
- carry out the required periodical inspections.

NOTE Soon after purchasing the vehicle, write down the identification data indicated on the SPARE PARTS IDENTIFICATION LABEL in the table here below. This label is positioned on the left side of the seat support; to read it, it is necessary to remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT).

april									
SPARE PARTS IDENTIFICATION				YEAR	Y	1	2	3	4
				I.M.	A	B	C	D	E
I	UK	A	P	SF	B	D	F	E	GR
NL	CH	DK	J	SGP	SLO	IL	ROK	MAL	RCH
HR	AUS	USA	BR	RSA	NZ	CDN			

These data indicate:

- YEAR = year of manufacture (Y, 1, 2, ...);
- I.M. = modification code (A, B, C, ...);
- COUNTRY CODES = homologation country (I, UK, A, ...).

and are to be supplied to the **april** Authorised Dealer as reference data for the purchase of spare parts or specific accessories of the model you have acquired.

In this manual the various versions are indicated by the following symbols:

OPT optional

VERSION:

I Italy	SGP Singapore
UK United Kingdom	SLO Slovenia
A Austria	IL Israel
P Portugal	ROK South Korea
SF Finland	MAL Malaysia
B Belgium	RCH Chile
D Germany	HR Croatia
F France	AUS Australia
E Spain	USA United States of America
GR Greece	BR Brazil
NL Holland	RSA South Africa
CH Switzerland	NZ New Zealand
DK Denmark	CDN Canada
J Japan	

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safe drive



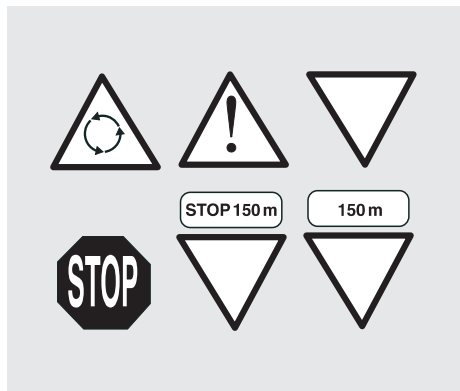
SAFE DRIVE BASIC SAFETY RULES

To ride the vehicle it is necessary to be in possession of all the requirements prescribed by law (driving licence, minimum age, psychophysical ability, insurance, state taxes, vehicle registration, number plate, etc.).

Gradually get to know the vehicle by driving it first in areas with low traffic and/or private areas.

The use of medicines, alcohol and drugs or psychotropic substances notably increases the risk of accidents.

Be sure that you are in good psychophysical conditions and fit for riding and pay particular attention to physical weariness and drowsiness.



Most road accidents are caused by the rider's lack of experience.

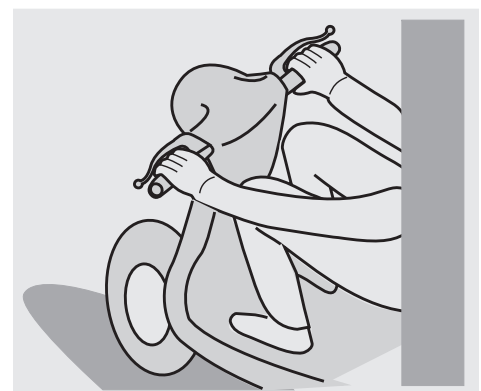
NEVER lend the vehicle to beginners and, in any case, make sure that the rider has all the requirements for driving.

Rigourously observe all road signs and national and local road regulations.

Avoid abrupt movements that can be dangerous for yourself and other people (for example: wheeling, speeding, etc.); and give due consideration to the road surface, visibility and other driving conditions.

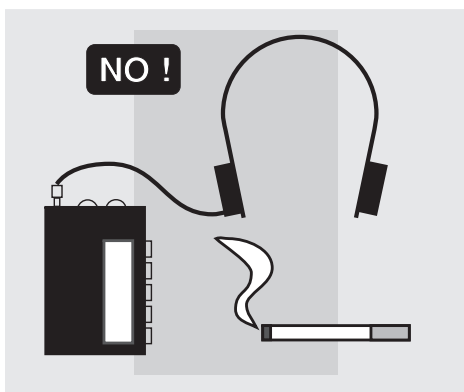
Avoid obstacles that could damage the vehicle or make you lose control.

Avoid riding in the slipstream created by preceding vehicles in order to increase your speed.



⚠ WARNING

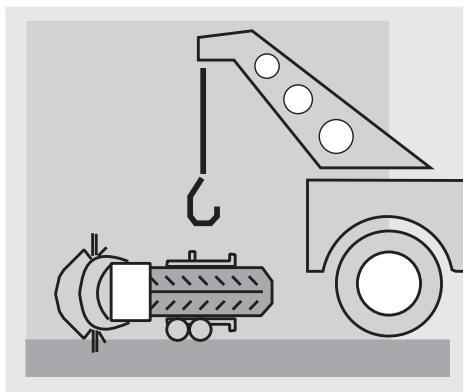
Always ride with both hands on the handlebars and both feet on the footrests (or on the rider's footboards), in the correct driving posture. Avoid standing up or stretching your limbs while driving.



The rider should pay attention and avoid distractions caused by people, things and movements (never smoke, eat, drink, read, etc.) while driving.

Use only the vehicle's specific fuels and lubricants indicated in the "LUBRICANT CHART"; check all oil, fuel and coolant levels regularly.

If the vehicle has been involved in an accident, make sure that no damage has occurred to the control levers, pipes, wires, braking system and vital parts.



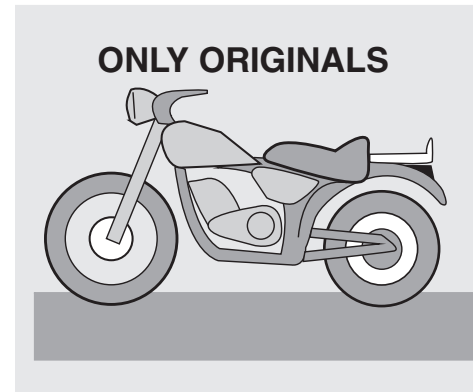
If necessary, have the vehicle inspected by an **aprilia Authorised Dealer** who should carefully check the frame, handlebars, suspensions, safety parts and all the devices that you cannot check by yourself.

Always remember to report any malfunction to the technicians to help them in their work.

Never use the vehicle when the amount of damage it has suffered endangers your safety.

Never change the position, inclination or colour of: number plate, direction indicators, lights and horns.

Any modification of the vehicle will result in the invalidity of the guarantee.

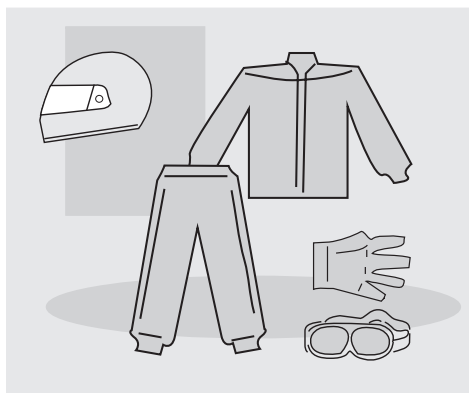


Any modification of the vehicle and/or the removal of original components can compromise vehicle performance levels and safety or even make it illegal to ride.

We recommend respecting all regulations and national and local provisions regarding the equipment of the vehicle.

In particular, avoid all modifications that increase the vehicle's performance levels or alter its original characteristics.

Never race with other vehicles.

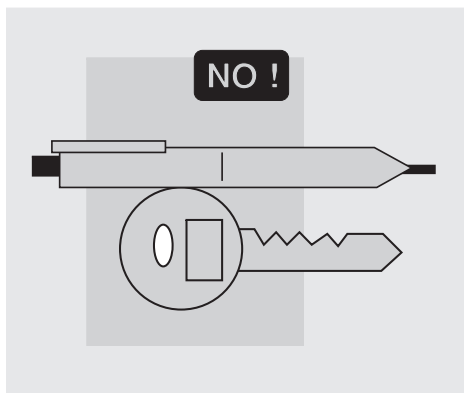


CLOTHING

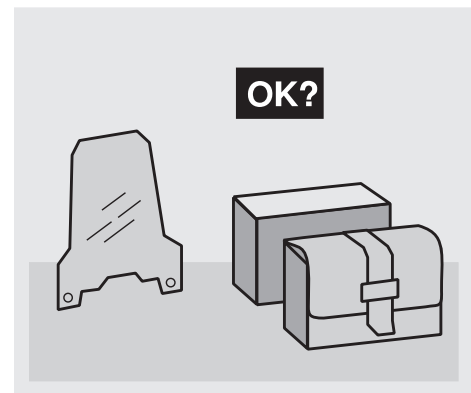
Before starting, always wear a correctly fastened crash helmet. Make sure that it is homologated, in good condition, of the right size and that the visor is clean.

Wear protective clothing, preferably in light and/or reflecting colours. In this way you will make yourself more visible to the other riders, thus notably reducing the risk of being knocked down, and you will be more protected in case of fall.

This clothing should be very tight-fitting and fastened at the wrists and ankles; strings, belts and ties should not be hanging loose; prevent these and other objects from interfering with driving by getting entangled with moving parts or driving mechanisms.



Do not keep objects that can be dangerous in case of fall, for example pointed objects like keys, pens, glass vials etc. in your pockets (the same recommendations also apply to a possible passenger).



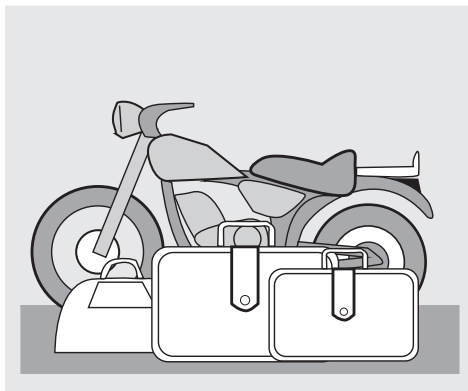
ACCESSORIES

The owner of the vehicle is responsible for the choice, installation and use of any accessory.

Avoid installing accessories that cover horns or lights or that could impair their functions, limit the suspension stroke and the steering angle, hamper the operation of the controls and reduce the ground clearance and the angle of inclination in turns.

Avoid using accessories that hamper access to the controls, since this can prolong reaction times during an emergency.

Big fairings and windshields installed on the vehicle may produce aerodynamic forces that affect the stability of the vehicle, especially when riding at high speed.



Make sure that the equipment is well fastened to the vehicle and not dangerous during driving.

Do not install electrical devices and do not modify those already existing to avoid electrical overloads, because the vehicle could suddenly stop or there could be a dangerous current shortage in the horn and in the lights.

aprilia recommends the use of genuine accessories (**aprilia** genuine accessories).

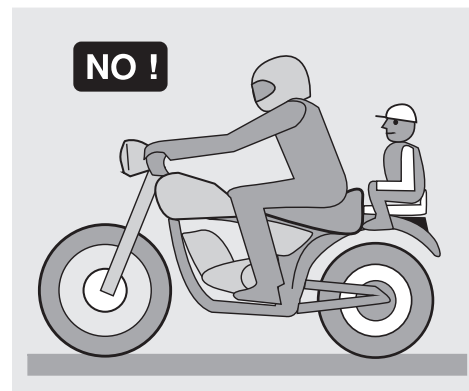
LOAD

Be careful and moderate when loading your luggage. Keep any luggage loaded as close as possible to the centre of gravity of the vehicle and evenly distribute the load on both sides, in order to reduce unbalance to the minimum. Furthermore, make sure that the load is firmly secured to the vehicle, especially during long trips.



Avoid hanging bulky, heavy and/or dangerous objects on the handlebars, mudguards and forks, because the vehicle might respond more slowly in turns and its manoeuvrability could be unavoidably impaired.

Do not place bags that are too bulky on the vehicle sides and do not ride with the crash helmet hanging on one side, because they could hit people or obstacles, making you lose control of the vehicle.



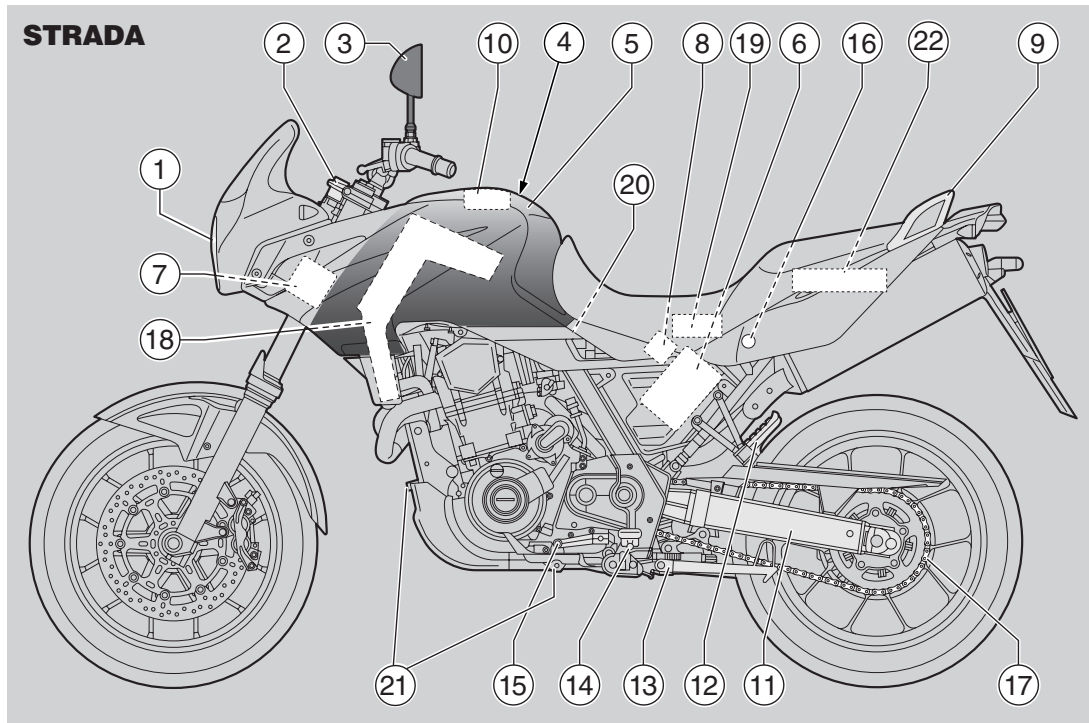
Do not carry any bag if it is not tightly secured to the vehicle.

Do not carry bags which protrude too much from the luggage-rack or which cover the lights, horn or indicators.

Do not carry animals or children on the glove compartment or on the luggage rack. Do not exceed the maximum load allowed for each bag.

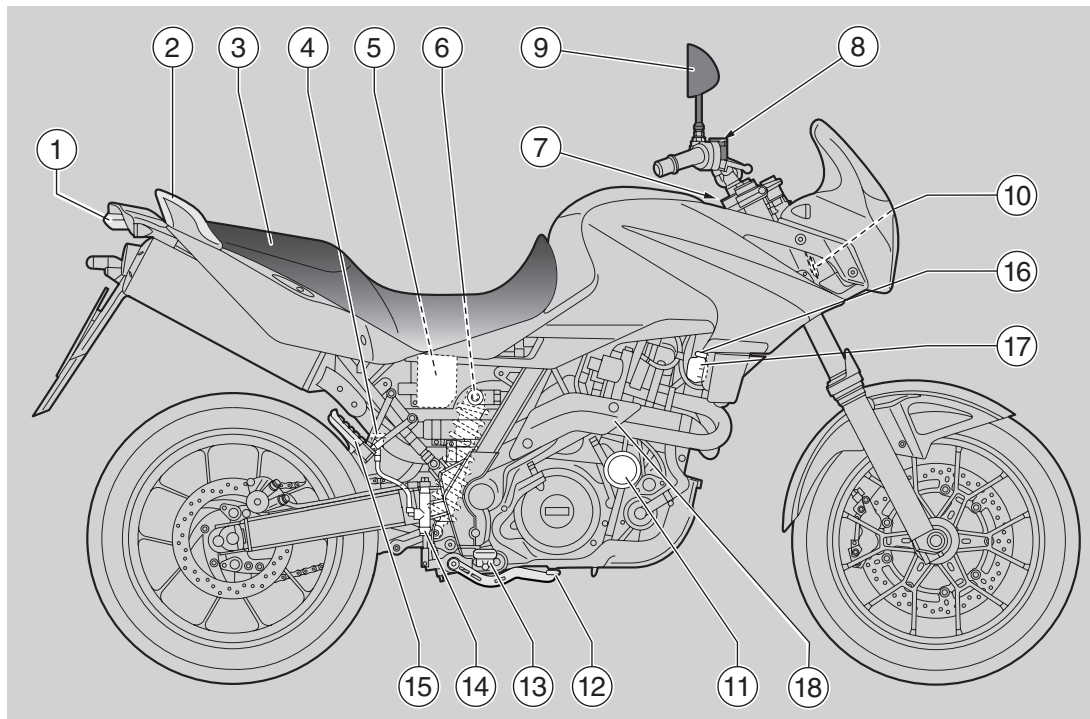
When the vehicle is overloaded, its stability and its manoeuvrability can be compromised.

ARRANGEMENT OF THE MAIN ELEMENTS



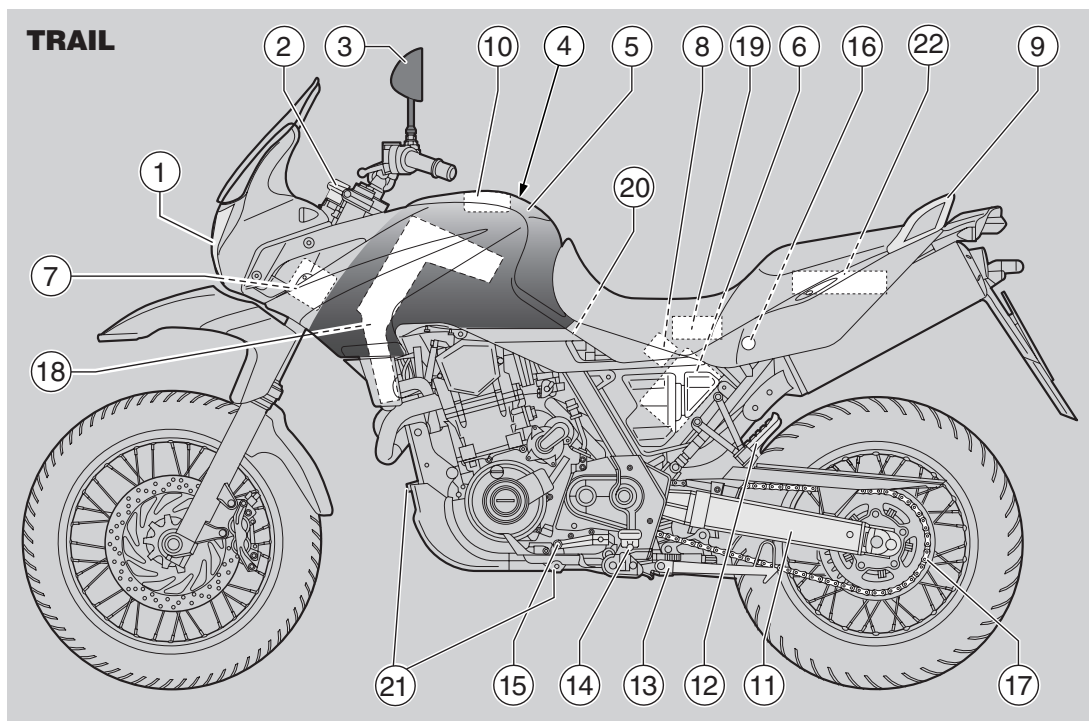
KEY

- | | | | |
|----------------------------------|----------------------------|---|---------------------------|
| 1) Headlight | 6) Battery | 12) Passenger left footrest (snapping, closed/open) | 17) Drive chain |
| 2) Ignition switch/steering lock | 7) Electronic control unit | 13) Side stand | 18) Engine oil tank |
| 3) Left rear-view mirror | 8) Fuse carrier | 14) Rider left footrest | 19) Tool kit |
| 4) Fuel tank filler cap | 9) Passenger grab rail | 15) Gear shift lever | 20) Idle speed adjuster |
| 5) Fuel tank | 10) Glove compartment | 16) Seat lock | 21) Oil drain plugs |
| | 11) Swinging arm | | 22) Underseat compartment |



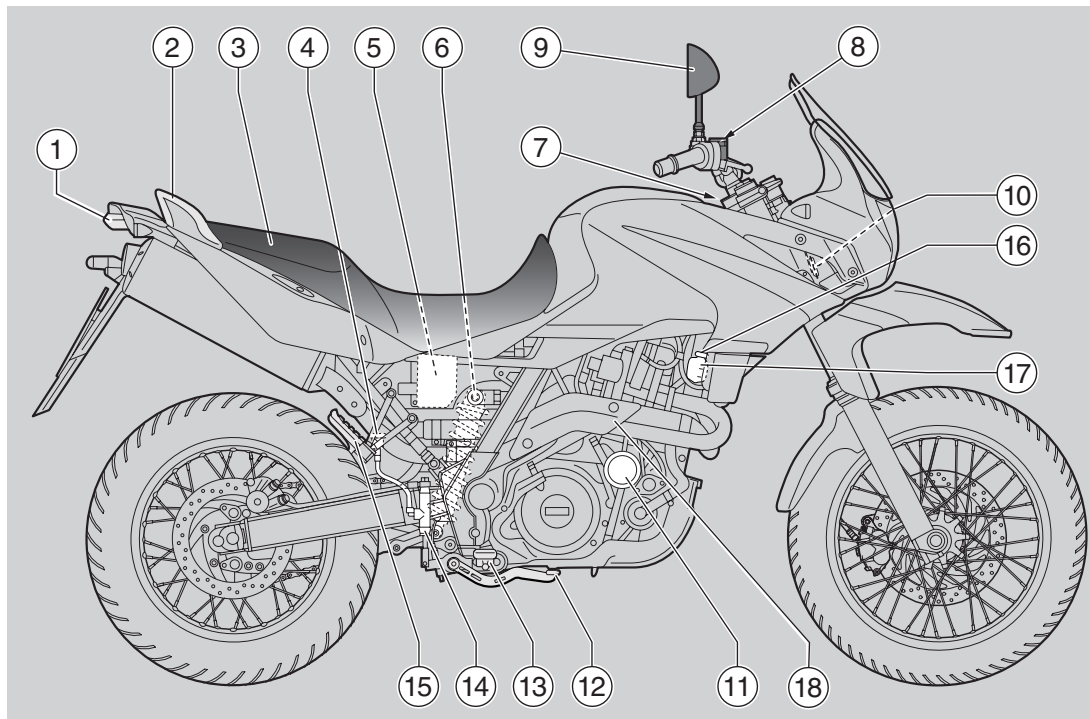
KEY

- | | | | |
|--------------------------|-----------------------------------|--|----------------------------|
| 1) Tail light | 7) Engine oil level plug-dipstick | 11) Engine oil filter | 17) Coolant expansion tank |
| 2) Passenger grab rail | 8) Front brake fluid tank | 12) Rear brake control lever | 18) CO sensor plug |
| 3) Seat | 9) Right rear-view mirror | 13) Rider right footrest | |
| 4) Rear brake fluid tank | 10) Horn | 14) Rear brake master cylinder | |
| 5) Air filter | | 15) Passenger right footrest (snapping, closed/open) | |
| 6) Rear shock absorber | | 16) Coolant expansion tank cap | |



KEY

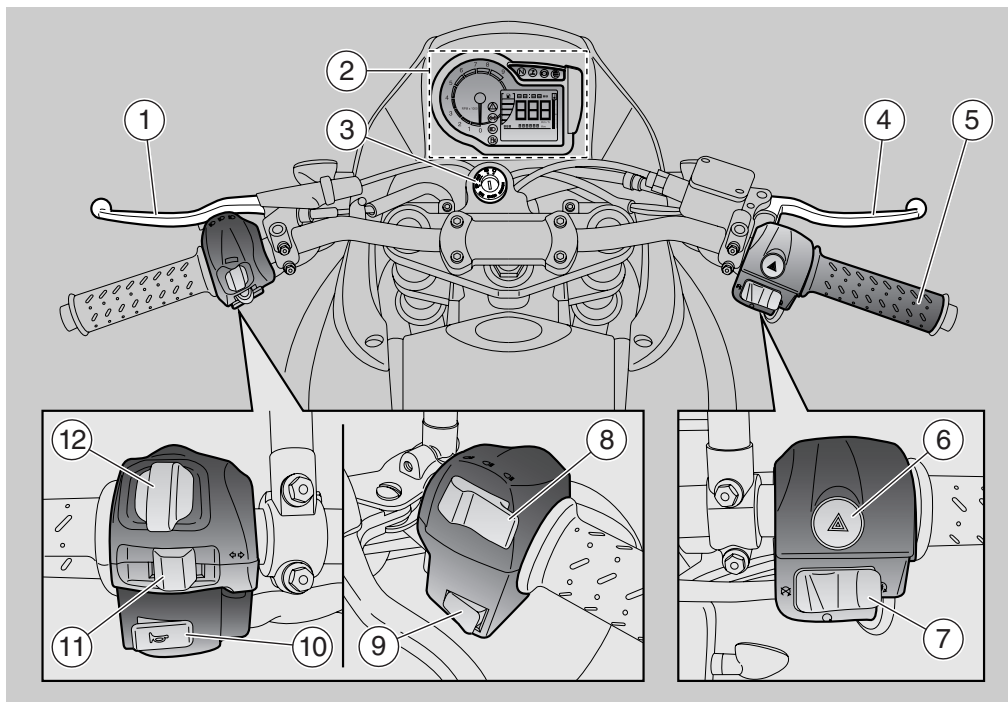
- | | | | |
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| 6) Rear shock absorber | | 16) Coolant expansion tank cap | |

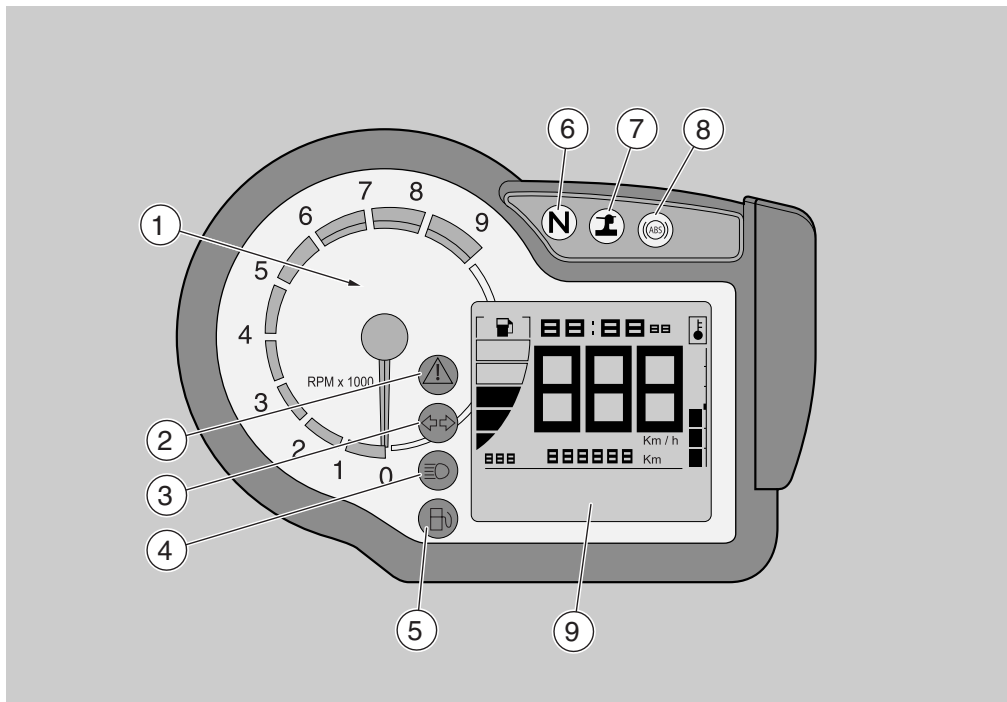
ARRANGEMENT OF THE INSTRUMENTS/CONTROLS



KEY

- | | |
|--|---|
| 1) Clutch lever | 8) Dimmer switch (☰-☷) |
| 2) Instruments and indicators | 9) Fuel filler cap cover release switch |
| 3) Ignition switch/steering lock (☉-☒-☑) | 10) Horn push button (🔊) |
| 4) Front brake lever | 11) Direction indicator switch (↔-↔) |
| 5) Throttle grip | 12) MODE switch |
| 6) Emergency flasher button (⚠) | |
| 7) Engine start-stop switch (☒-☉-☑) | |

INSTRUMENTS AND INDICATORS





KEY











- 1) Revolution counter
- 2) Red alarm light: vehicle maintenance (⚠)
- 3) Green direction indicator warning light (↔)
- 4) Blue high beam warning light (⚡)
- 5) Orange low fuel warning light (⛽)
- 6) Green neutral indicator warning light (N)
- 7) Yellow side stand light (🛞)

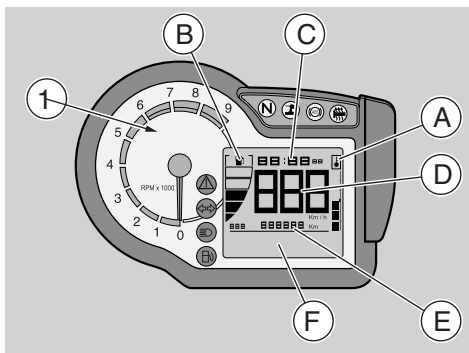
- 8) Orange ABS light (ABS) (only for vehicles equipped with ABS)
- 9) Multifunction digital display.

INSTRUMENTS AND INDICATORS TABLE

When the ignition key is turned to "O" with the engine stopped, all warning lights, except "Heated handgrips" light, come on for a LED check-up and go out after three seconds. If one or more warning lights do not come on at this stage, contact a **aprilia** Authorised Dealer.

Description		Function
Multifunction digital display	Speedometer (km/h - MPH)	Displays current, average or maximum riding speed (in kilometres or miles) depending on presetting, see page 18 (MULTIFUNCTION COMPUTER).
	Odometer (KM - Mi)	Displays partial or total Km/miles run, see page 18 (MULTIFUNCTION COMPUTER).
	Coolant temperature (°C/°F)	Displays engine coolant temperature, see page 18 (MULTIFUNCTION COMPUTER). ⚠ CAUTION Do not leave the ignition switch on "⌘", since the cooling fans would stop regardless of the coolant temperature and in this case the temperature would increase even further. If the pointer gets near the danger area, stop the engine, turn the key to "O" and wait until the cooling fan is disconnected. Now turn the key to "⌘" and check coolant level, see page 38 (COOLANT). Contact an aprilia Authorised Dealer. ⚠ CAUTION If the maximum allowed temperature is exceeded (118 °C - 244 °F), the engine may be seriously damaged.
	Fuel level (STRADA version only)	Displays fuel quantity in the tank, see page 18 (MULTIFUNCTION COMPUTER).
	Clock	Displays time (hour and minutes) as preset, see page 18 (MULTIFUNCTION COMPUTER).
	Battery voltage V BATT	Displays the battery voltage in Volts, see page 18 (MULTIFUNCTION COMPUTER).
	Lap timer	Displays the different lap times, as preset, see page 18 (MULTIFUNCTION COMPUTER).
	Diagnosis	In case a serious failure is detected, one that might jeopardise the vehicle or the rider's safety, the panel will show an icon indicating the failure cause (such as: oil pressure  , maintenance intervals ). ⚠ CAUTION If the wording "⚠ SERVICE" appears during normal engine operation, it means that the ECU or the instrument panel have detected a failure. In many cases the engine keeps running with limited performance; contact an aprilia Authorised Dealer immediately.
Revolution counter rpm		Indicates the number of revolutions of the engine per minute. ⚠ CAUTION Never exceed the engine max. speed rate, see page 53 (RUNNING-IN).

Description	Function
Error warning light 	<p>It comes on to signal a fault in case of: oil pressure alarm, overtemperature alarm, problems with the injection system or when maximum rpm are exceeded.</p> <p>It flashes when engine is off to indicate that the antitheft system is active.</p> <p>It comes on flashing if the maximum rpm are exceeded.</p> <p>CAUTION If the light  remains on after the engine start or comes on during the normal operation of the engine, together with one of the two symbols on the display: “<i>EFI</i>”, “”, this means that a fault of the injection system was detected (<i>EFI</i>), or low engine oil pressure () was detected. In this case, stop the engine immediately and contact an aprilia Authorised Dealer.</p>
Direction indicator warning light 	Blinks when the direction indicators are on.
High beam warning light 	Comes on when the high beam bulbs are on or when the headlight signaller is operated.
Low fuel warning light 	<p>It comes on when the quantity of fuel left in the tank is approx. 3 $\frac{1}{4}$.</p> <p>In this case, top up as soon as possible, see page 31 (FUEL).</p> <p>Refuel with ignition key in stop position in order to get a correct indication of the light.</p>
Neutral indicator warning light 	Comes on when the gear is in neutral.
Side stand down light 	Turns on when the side stand is down.
ABS light (if ABS is fitted) (only for vehicles equipped with ABS) 	It comes on in case of ABS failure.



During the initial check-up, all instruments will briefly show the current values of the corresponding parameters.

The display shows the following standard settings:

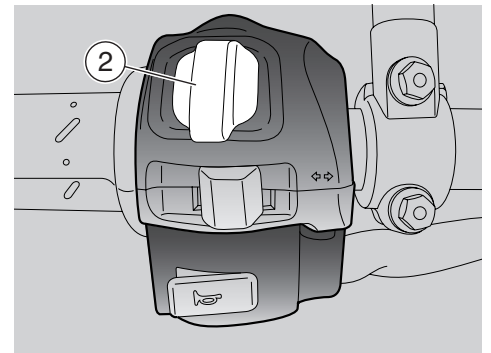
- A) coolant temperature;
- B) fuel quantity (STRADA version only);
- C) clock;
- D) speedometer;
- E) odometer;
- F) on-board computer and accessories functions.

MULTIFUNCTION COMPUTER



When you turn the ignition key to "O", the following instrument panel lights will turn on for 2 seconds:

- The "PEGASO 650 STRADA-TRAIL" logo
- All lights, except "Heated handgrips light"
- Backlighting

Rev counter index (1) moves to maximum value, as set by the user.



MODE selector (2) features three positions: a left one to decrease values and scroll the drop-down menus, a right one to increase values and scroll the drop-down menus in the other direction, and a centre one to confirm values by pressing the button.

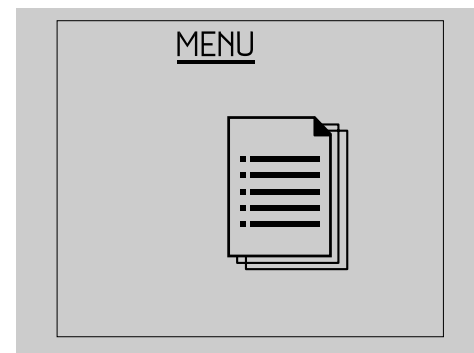
TRIP METER 1	TRIP 1 326.5 Km / h
TRIP TIME 1	TIME 1 32:45
TRIP METER 2	TRIP 2 326.5 Km / h
TRIP TIME 2	TIME 2 32:45
MAXIMUM SPEED	MAX 45 Km / h
LAP TIMER	CHRONO 1 13:49:20
BATTERY VOLTAGE	 12.4
KM COVERED W/FUEL RESERVE	TRIP  16.5 Km

Turn selector (2) to display on the LCD the pages indicating in zone (F) the following quantities:

- A) TRIP METER 1
- B) TRIP TIME 1
- C) TRIP METER 2
- D) TRIP TIME 2
- E) MAXIMUM SPEED
- F) LAP TIMER
- G) BATTERY VOLTAGE
- H) KM COVERED W/FUEL RESERVE (distance covered on fuel reserve for trips longer than 2 km).

Trip meter 1 and 2 can be reset: press selector (2) for a certain time in the centre position to reset all quantities concerning the active trip meter.

After the distance covered on fuel reserve (KM COVERED W/FUEL RESERVE), the display shows the MENU page, but only if vehicle is not moving.



MENU

If vehicle is stopped, it is possible to gain access to the configuration menu from the MENU page by pressing the MODE selector in the centre position; while if vehicle is moving, go back to the TRIP METER 1 page.

Configuration menu options are:

- EXIT
- SETTINGS
- LAP TIMER
- DIAGNOSTICS
- LANGUAGE

Settings

When the SETTINGS function is selected the following options are displayed:

EXIT

TIME SETTINGS

GEAR SHIFT INDICATOR

BACK LIGHTING

CHANGE THE CODE

CODE RECOVERY

UNLOCK SAFETY LOCKS

Once the operation is over, the instrument panel goes back to main menu.

TIME SETTINGS

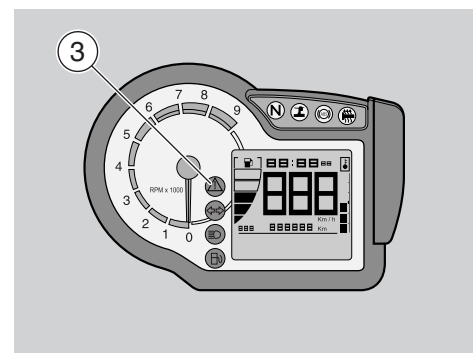
This mode allows you to set the clock. The main page with "CLOCK SETTING" is displayed.

As soon as you enter this mode, indication of minutes disappears and only hours are displayed. Hour value is increased every time the MODE selector is pressed to the right, once the value reaches 12 it goes back to 0. In the same way, hour value decreases every time the MODE selector is pressed to the left, once the value reaches zero, it goes to 12 when the MODE selector is again pressed to the left..

A Confirmation signal stores the set value and lets you go on to minutes setting.

As soon as you enter this mode, indication of hours disappears and only minutes are displayed. Minute value increases every time the MODE selector is pressed to the right, once the value reaches 59, it goes back when the MODE selector is again pressed to the right. In the same way, value decreases every time the MODE selector is pressed to the left, once the value reaches zero, it goes to 59 when the MODE selector is again pressed to the left.

A Confirmation signal stores the set value and lets you quit clock setting mode.



GEAR SHIFT THRESHOLD

This function allows you to set the value for the Gear shift indicator threshold. The main page with "GEAR SHIFT THRESHOLD" message is displayed.

Threshold value is increased by 100 RPM every time the MODE selector is pressed to the right, vice versa, threshold value is decreased by 100 RPM every time the MODE selector is pressed to the left.

If the upper or lower limit is reached and you further press the selector, nothing will happen.

Press the MODE selector to the centre position to end the operation and store the set value, the index goes back to zero and the instrument panel goes back to configuration menu page.

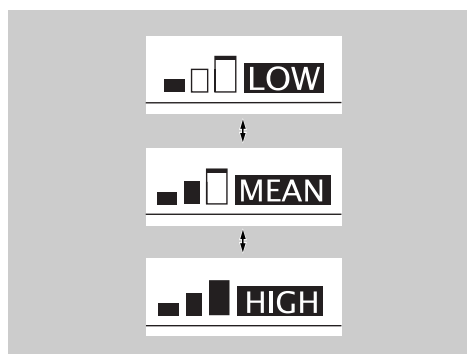
When battery is connected for the first time, the instrument panel sets to running-in rpm value, the next time battery is connected it sets to last set value.

RUNNING-IN RPM: 5000

MINIMUM RPM: 4000

MAXIMUM RPM: 8000

When the set threshold is exceeded, the alarm light (3) on the instrument panel flashes until the value goes below the threshold.



BACK LIGHTING

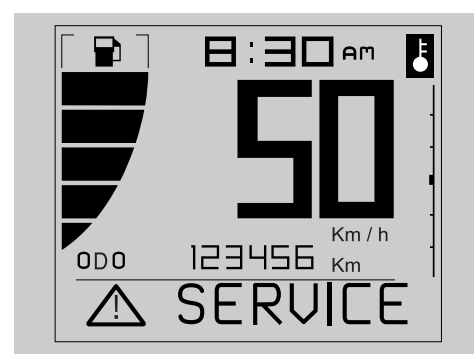
This function allows you to set backlighting: three levels are available. Every time the MODE selector is pressed to the right or to the left, the following icons are displayed:

LOW

MEAN

HIGH

Press the MODE selector to the centre position to set the instrument panel back to SETTINGS MENU.



CHANGE THE CODE

This function is used when the old code is available and is to be changed.

Within this function, the following message is displayed:

"INSERT THE OLD CODE"

As soon as the old code is acknowledged, the new code is requested; the following message is displayed:

"INSERT THE NEW CODE"

Once the operation is over, the display goes back to DIAGNOSIS menu. If you entered with the code, this operation will not be allowed.

Once the operation is over, the instrument panel goes back to SETTINGS menu.

CODE RECOVERY

This function is used when the old code is not available and you need to change it. In this case it is necessary to insert at least two keys in the ignition switch. The first key is already inserted, a second key is requested with the message:

"INSERT THE 2nd KEY"

The instrument panel remains on in-between these two keys; if the second key is not inserted within 20 seconds the operation is aborted. When the second key is acknowledged, the new code is requested with the message:

"INSERT THE NEW CODE"

Once the operation is over, the display goes back to DIAGNOSIS menu. If you entered with the code, this operation will not be allowed.

Once the operation is over, the instrument panel goes back to SETTINGS menu.

UNLOCK SAFETY LOCKS

In case of failure to the stand sensor, the neutral and clutch switch, use function "UNLOCK SAFETY LOCKS" to disable the safety logic to be able to start the engine.

The display will show "SERVICE".

The safety logic is re-enabled when turning the key off.

WARNING

This function should be used only in an emergency.

CHRONO	
40	00'00"00
39	59'59"98
38	21'37"00
37	22'03"19
36	19'08"39

Lap timer

When the LAP TIMER function is selected the following options are displayed:

EXIT

VIEW TIMES

DELETE TIMES

VIEW TIMES

This function also displays the acquired lap times. Briefly press the MODE selector to the right and to the left to scroll the time pages, press it for a certain time to set the display back to the LAP TIMER menu. If the battery is disconnected, stored times are lost.

DELETE TIMES

This function deletes the acquired lap times. Deletion should be confirmed. Once the operation is over, the display goes back to LAP TIMER menu.



Lap time operation

To use the lap timer, set the display to the main page indicating CHRONO, and then wait to start the lap timer.

Briefly press the MODE selector to the centre position, the lap timer starts recording. Press again the MODE selector to the centre position before 10 seconds have elapsed from timer start, time measurement is cancelled and a new one is started. Press again the MODE selector to the centre position after 10 seconds have elapsed from timer start, time measurement is interrupted and a new one is started. Press the MODE selector for a certain time to the centre position to interrupt lap time set.

Once 40 lap times have been recorded, acquisition ends and "FULL" is displayed: stop the vehicle to read recorded lap times, see page 54 (STOPPING), enter VIEW TIMES option in the LAP TIMER menu.

A new timer session can be started only if all previously recorded lap times are deleted: enter the DELETE TIMES function in the LAP TIMER menu.

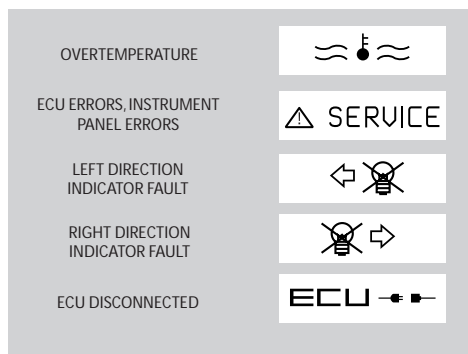
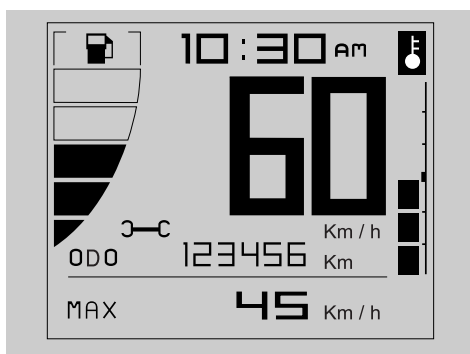
Diagnosis

This menu interfaces with the systems fitted to the motorcycle to carry out diagnosis. To enable the menu, a password is needed that is available only to aprilia service centres.

Language

This menu allows you to choose the user's interface language.

ITALIANO
ENGLISH
FRANCAIS
DEUTSCH
ESPAGNOL



SERVICE INTERVAL

When the scheduled service intervals are reached, an icon is displayed (symbol of a spanner).

ALARM DISPLAY

In case a serious failure is detected, one that might jeopardise the vehicle or the rider's safety, the display will show an icon indicating the failure cause, in the area where the odometer usually is.

Alarms are divided in two groups depending on their priority:

- ◆ High priority: overtemperature, ECU errors, Instrument panel errors;
- ◆ Low priority: Direction indicators.

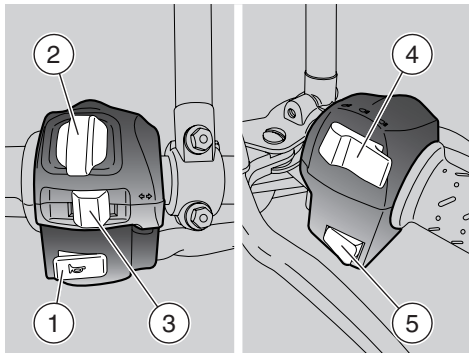
Direction indicators fault is indicated only when all indicator leds are faulty.

Should there be many alarms with same priority level, the relevant icons are displayed alternatively.

High priority alarms do not allow you to display low priority ones.

If the alarm light and the SERVICE icon briefly come on it does not mean that there is a failure.

MAIN INDEPENDENT CONTROLS



CONTROLS ON LEFT HANDLEBAR

NOTE The electrical parts work only when the ignition switch is in position "O".

1) HORN BUTTON (🔊)

The horn is activated when the push button is pressed.

2) DIRECTION INDICATOR SWITCH (↔)

Move the switch to the left to indicate the turn to the left; move the switch to the right to indicate the turn to the right. Press the switch to turn off the direction indicator.

3) MODE BUTTON

Move the MODE joystick to the left/right or press it to scroll UP/DOWN and select the multifunction display pages.

4) DIMMER SWITCH (🔦 - 🔦)

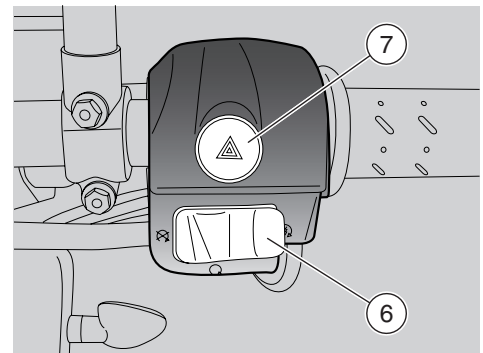
When it is in position "🔦" the parking lights, the instrument panel light and the low beam are always on.

When it is in left position "🔦", the high beam comes on.

When it is in right position "🔦", the passing is activated, to be used in case of danger or emergency.

5) FUEL TANK CAP COVER RELEASE BUTTON

Press it to open the cover on fuel tank to gain access to the fuel filler.



CONTROLS ON THE RIGHT PART OF THE HANDLEBAR

NOTE The electrical parts work only when the ignition switch is in position "O".

6) ENGINE START / STOP SWITCH (○ - 🔥 - Ⓜ)

(○ - 🔥 - Ⓜ)

Set the switch to ○ and press it in position Ⓜ to start the engine: the starter motor cranks the engine. For the starting procedure, see page 48 (STARTING).


When set to 🔥 the engine stops.

⚠ WARNING

Do not set the switch to 🔥 while riding.

⚠ CAUTION

With the engine stopped and the switch in position "O", the battery may run flat.

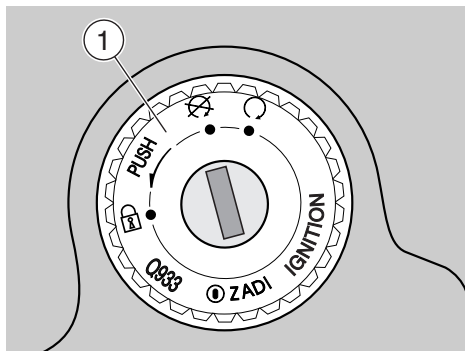
When the vehicle has come to rest, after stopping the engine, leave the switch to position .

7) EMERGENCY FLASHER BUTTON



Press the button to activate all direction indicators.

Can be enabled or disabled only with ignition switch to "O". When activated, the direction indicators stay active even when removing the key. To disable it, set ignition switch back to "O".



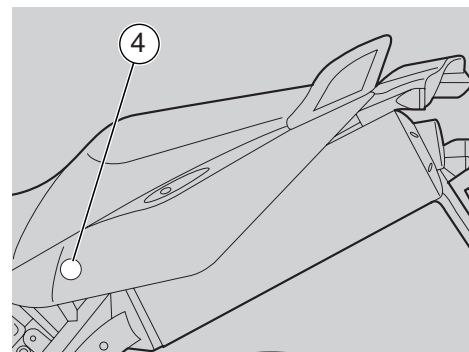
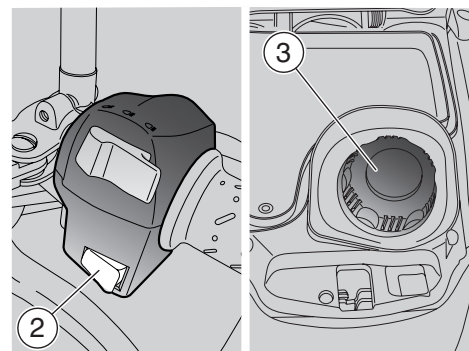
IGNITION SWITCH




The ignition switch (1) is positioned on the upper plate of the steering column.

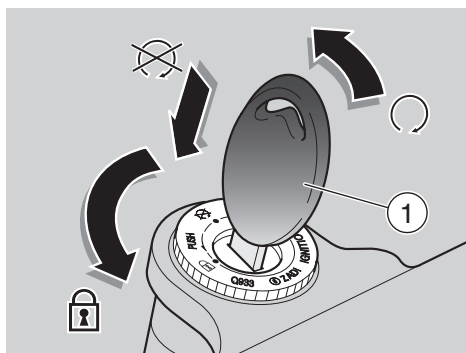
NOTE The key operates the ignition switch/steering lock, the fuel filler cap cover (3) release button (2) and the seat lock (4).

Two keys are supplied together with the vehicle (one spare key).

NOTE Do not keep the spare key on the vehicle.




Position	Function	Key removal
 Steering lock	The steering is locked. It is not possible to start the engine.	It is possible to remove the key.
	The engine cannot be started.	It is possible to remove the key.
	The engine can be started.	It is not possible to remove the key.





STEERING LOCK

⚠ WARNING

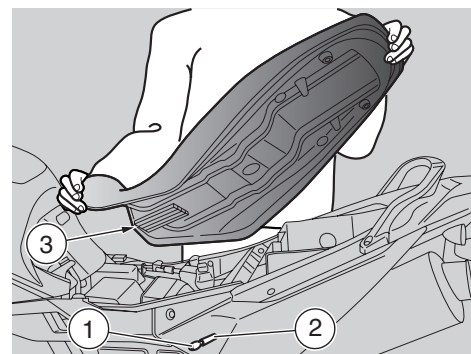
Never turn the key to position “” in running conditions, in order to avoid losing control of the vehicle.

OPERATION

To lock the steering:

- ◆ Completely turn the handlebar to the right or to the left.
- ◆ Turn the key (1) to position “”.
- ◆ Press the key (1) and rotate it to position “”.
- ◆ Withdraw the key (1).

AUXILIARY EQUIPMENT



UNLOCKING/LOCKING THE SEAT

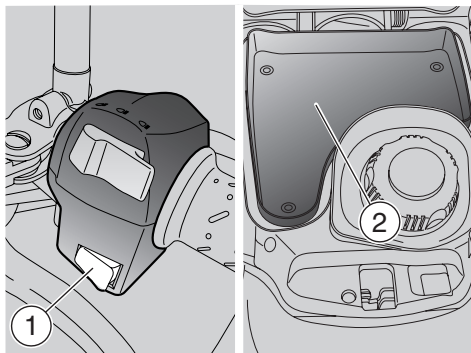
- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Insert the key (1) in the seat lock (2).
- ◆ Turn the key (1) clockwise and raise and remove the seat.

To lock the seat:

- ◆ Position the flaps (3) in the seat, lower and press the seat, making the lock snap.

⚠ WARNING

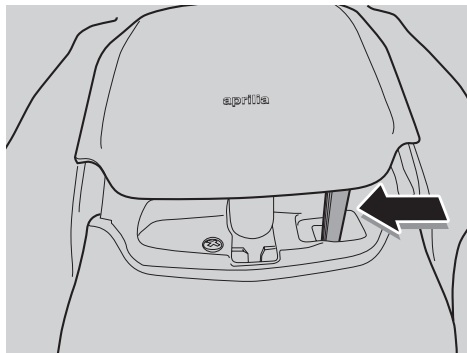
Before leaving, make sure that the seat is properly locked.



GLOVE COMPARTMENT

To gain access to the glove compartment (2):

- ◆ Set the ignition switch to "O" and press the fuel filler cap cover release button (1).



- ◆ Move the red safety hook to the left to release it.

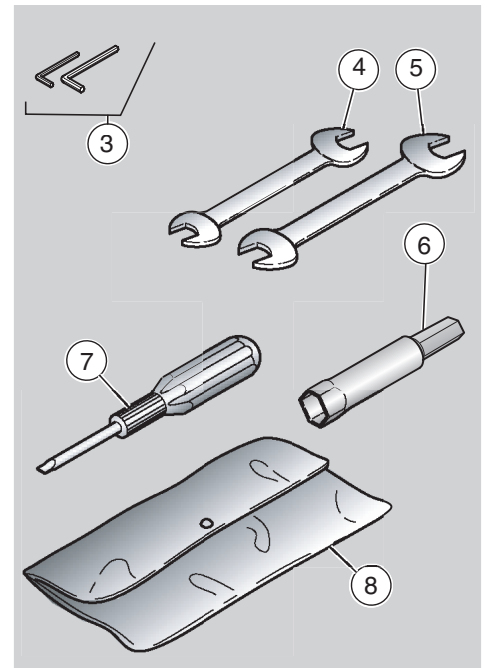
TOOL KIT COMPARTMENT

To gain access to the tool kit compartment:

- ◆ Remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT)

The tool kit includes:

- 3, 4 mm bent hexagon spanners (3);
- 8 – 10 mm double fork spanner (4);
- 11 – 13 mm double fork spanner (5);
- 16 mm socket spanner for spark plug (6);
- double-ended, cross-/cut-headed screwdriver (7);
- tool case (8);
- 13 mm combined wrench.



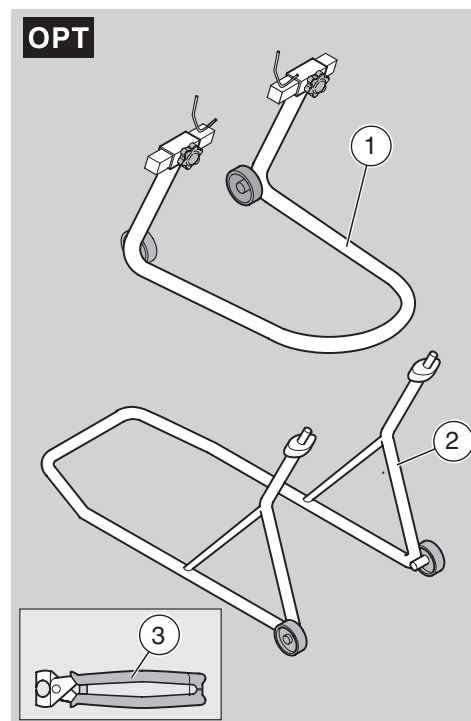
Maximum allowed weight: 1.5 kg.

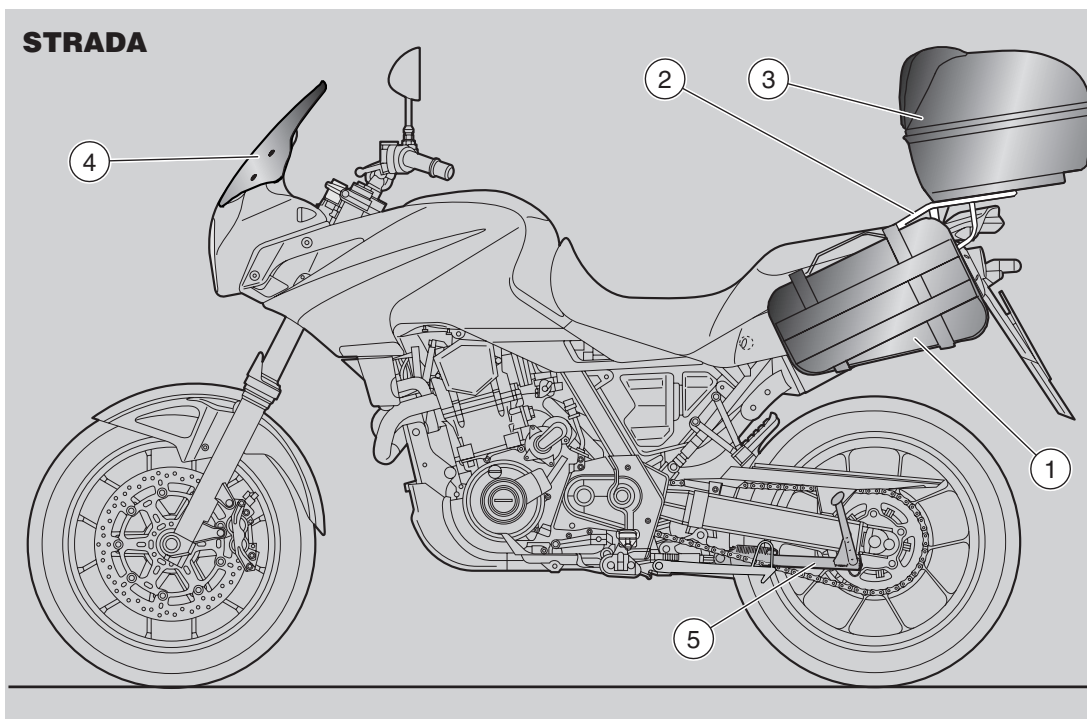


Tool	Operations
Rear support stand (1), see page 67 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND OPT).	Rear wheel disassembly. Drive chain adjustment.
Front support stand (2), see page 67 (POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND OPT).	Front wheel disassembly.
Click clamp (3) installation pliers, see page 60 (CLICK CLAMPS).	Click clamp installation.

SPECIAL TOOLS **OPT**

To perform some specific operations, it is advisable to use the following special tools (to be requested to an **aprilia** Authorised Dealer):





ACCESSORIES OPT

The vehicle may be equipped with the following accessories that also fit **TRAIL** model (to be requested to the **aprilia Authorised Dealer**):

- Set of semirigid cases and fasteners (1)
- Dedicated luggage rack (2)
- 28 lt. Top case (3)
- 45 lt. Top case (3)
- Windshield adjustable in two positions using screws (4)
- Centre stand kit (5).
- Tank cover
- Tank bag (is secured to the vehicle and fastens to tank cover)
- Raised seat
- Adjustable front brake lever

MAIN COMPONENTS

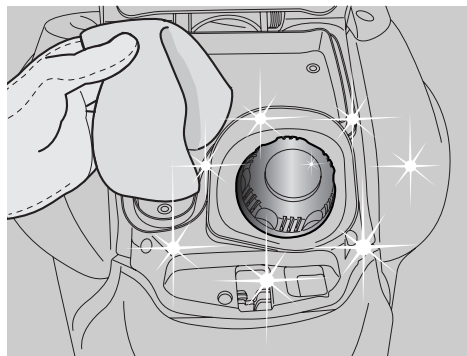


FUEL

WARNING

The fuel used for internal combustion engines is extremely inflammable and in particular conditions it can become explosive.

It is important to carry out the refuelling and the maintenance operations in a well-ventilated area, with the engine off. Do not smoke while refuelling or near fuel vapours, in any case avoid any contact with naked flames, sparks and any other heat source to prevent the fuel from catching fire or from exploding.



WARNING

Further, prevent fuel from flowing out of the fuel filler, as it could catch fire when getting in contact with the red-hot surfaces of the engine.

In case some fuel has accidentally been spilt, make sure that the area has completely dried and before starting the vehicle verify that there is no fuel inside the fuel filler neck.

Since fuel expands under the heat of the sun and due to the effects of sun radiation, never fill the tank to the brim.



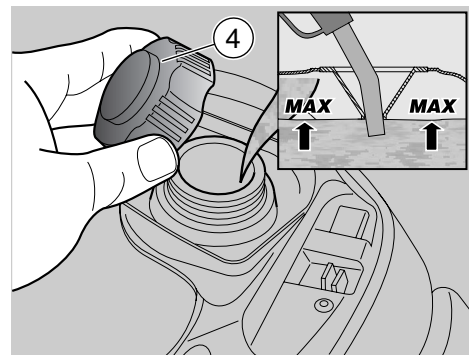
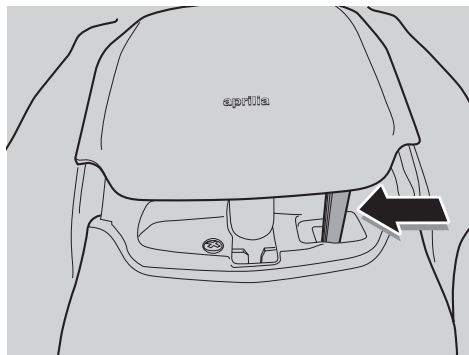
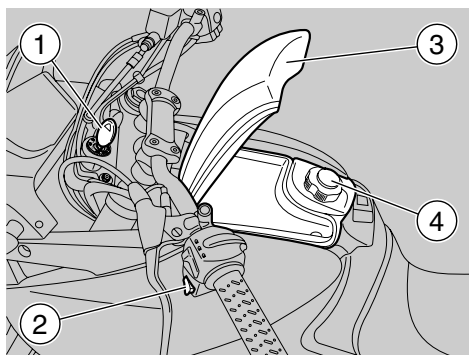
WARNING

Screw the plug up carefully after refuelling. Avoid any contact of the fuel with the skin and the inhalation of vapours; do not swallow fuel or pour it from a receptacle into another by means of a tube.

DO NOT DISPOSE OF FUEL IN THE ENVIRONMENT.

KEEP AWAY FROM CHILDREN.

Use only unleaded fuel, in conformity with the DIN 51 607 standard, min. O.N. 95 (RON) and 85 (MON)



To refuel, proceed as follows:

- ◆ Insert the key (1) in the ignition switch and set it to "O".
- ◆ Press the fuel filler cap cover release button (2).
- ◆ Move the red safety hook to the left to release it.
- ◆ Lift the cover (3).
- ◆ Unscrew the filler plug (4).

FUEL TANK CAPACITY (reserve included): 15 ±0.5 ℓ

TANK RESERVE: approx. 3 ℓ

⚠ CAUTION

Slight overpressure of the fuel tank. When opening the fuel filler cap, you might feel it breathes. Securely hold the cap until pressure is completely bled.

⚠ CAUTION

Do not put additives or other substances into the fuel.

If you use a funnel or other similar items, make sure that they are perfectly clean.

⚠ WARNING

Do not fill the tank completely; the maximum fuel level must remain below the lower edge of the filler neck (see figure).

⚠ CAUTION

During the refilling operations, be careful to avoid damaging the inner parts of the tank with the fuel pump.

- ◆ Refuel.

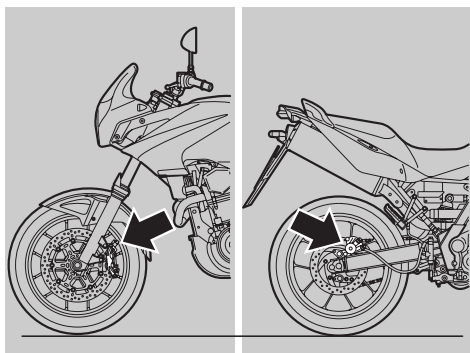
After refuelling:

- ◆ Screw the filler plug (4).

⚠ WARNING

Make sure that the cap is properly closed.

- ◆ Close the cover (3).
- ◆ Remove the key from ignition switch.



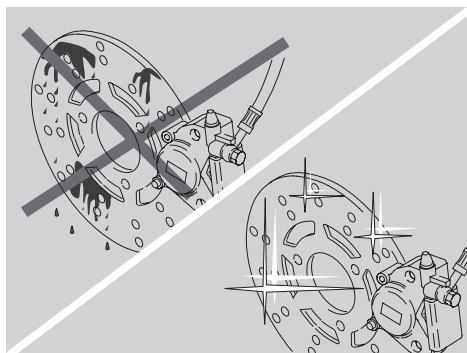
BRAKE FLUID - recommendations

NOTE This vehicle is provided with front and rear disc brakes, with separate hydraulic circuits.

The following information refers to a single braking system, but is valid for both.

⚠ WARNING

Sudden changes in brake lever play or a spongy feel of the lever may indicate problems with the hydraulic system. If in doubt about the braking efficiency of your bike or if you are not able to perform routine checks, contact your **aprilia** Authorised Dealer.



⚠ WARNING

Make sure that the brake discs are neither oily nor greasy, especially after maintenance or checking operations.

Check that the brake lines are neither twisted nor worn out.

Prevent water or dust from accidentally getting into the circuit.

In case maintenance operations are to be performed on the hydraulic circuit, it is advisable to use latex gloves.

If the brake fluid gets in contact with the skin or the eyes, it can cause serious irritations.



⚠ WARNING

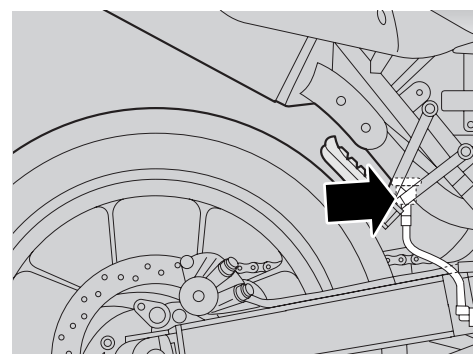
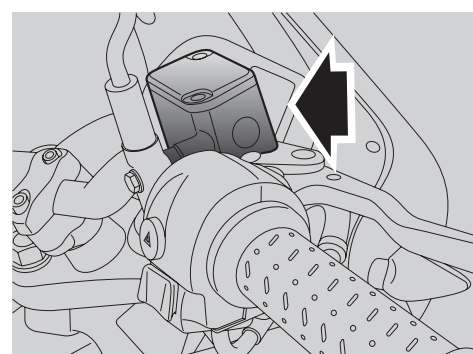
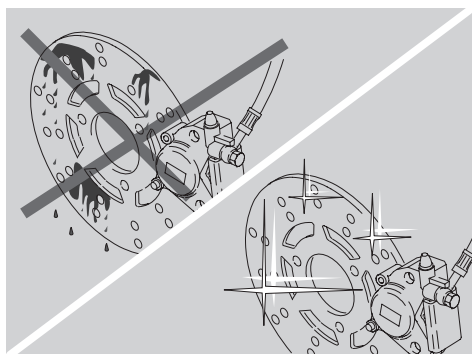
Carefully wash the parts of your body that get in contact with the fluid. Consult a doctor or an oculist if the fluid gets in contact with your eyes.

DO NOT DISPOSE OF THE FLUID IN THE ENVIRONMENT.

KEEP AWAY FROM CHILDREN.

⚠ CAUTION

When using the brake fluid, take care not to spill it on the plastic or painted parts, since it can damage them.



DISC BRAKES

⚠ WARNING

The brakes are the parts that most ensure your safety and for this reason they must always be perfectly working; check them before every trip.

A dirty disc soils the pads, with consequent reduction of the braking efficiency.

Dirty pads must be replaced, while dirty discs must be cleaned with a high-quality degreaser.

The brake fluid must be changed every two years by an **aprilia** Authorised Dealer.

Use brake fluid of the type specified in the lubricant chart, see page 93 (LUBRICANT CHART).

NOTE This vehicle is provided with disc brakes with two -front and rear- braking systems having separate hydraulic circuits. The front braking system is with single disc (left side).

The rear brake uses a single disc (fitted to the right side of the wheel).

The following information refers to a single braking system, but is valid for both.

When the disc pads wear out, the level of the fluid decreases to automatically compensate for their wear.

The front brake fluid tank is positioned on the right handlebar, near the front brake lever coupling.

The rear brake reservoir is positioned on the right side of the vehicle, near the rear brake control lever.

NOTE Carry out the maintenance operations halving the intervals indicated, if the vehicle is used in rainy or dusty areas or on uneven surfaces.

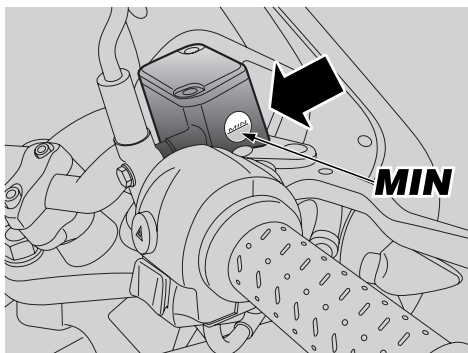
Have the brake discs checked by an **aprilia** Authorised Dealer after the first 1000 km (625 mi) and successively every 10000 km (6250 mi).

Before departure, check the brake fluid level in the reservoirs, see page 72 (CHECKING THE BRAKE PAD WEAR), page 35 (FRONT BRAKE), and the wear of the pads, see page 37 (REAR BRAKE).

Have the brake fluid changed every two years by an **aprilia** Authorised Dealer.

⚠ WARNING

Do not use the vehicle if the braking system leaks fluid.



FRONT BRAKE

CHECK

- ◆ Keep the vehicle in vertical position and turn the handlebar, so that the fluid contained in the tank is parallel to the brake fluid tank cover.
- ◆ Make sure that the fluid level exceeds the "MIN" mark.

MIN= minimum level

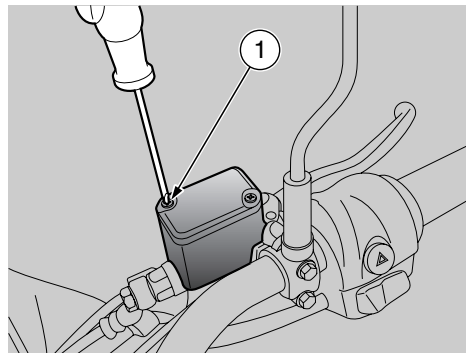
If the fluid does not reach at least the "MIN" mark:

⚠ CAUTION

When the disc pads wear out, the level of the fluid decreases progressively to compensate for their wear.

- ◆ Check the brake pad wear, see page 72 (CHECKING THE BRAKE PAD WEAR) and the disc wear.

If the pads and/or the disc do not need replacing, provide for topping up.



TOPPING UP

Carefully read page 33 (BRAKE FLUID - recommendations).

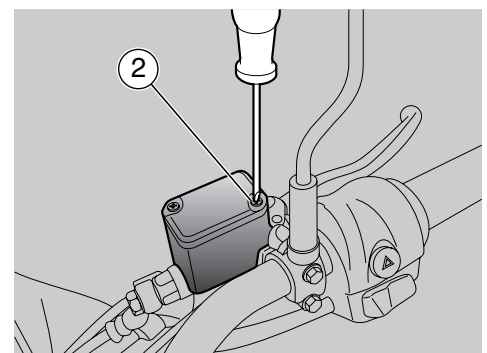
⚠ CAUTION

The brake fluid may flow out of the tank. Do not operate the front brake lever if the screws (1) and (2) are loose or, most important, if the brake fluid tank cover has been removed.

⚠ CAUTION

Position a cloth under the brake reservoir, in case some fluid should be spilled.

- ◆ Keep the vehicle in vertical position and turn the handlebar, so that the fluid contained in the tank is parallel to the brake fluid tank cover.
- ◆ Unscrew the screw (1), using a short, Phillips screwdriver.



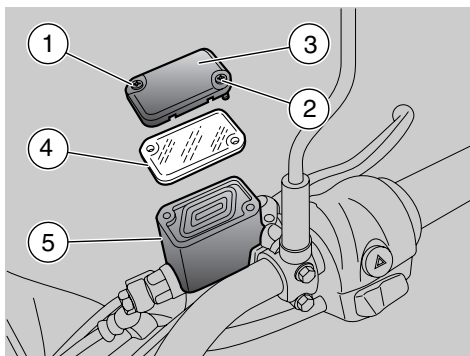
- ◆ Unscrew the screw (2).

⚠ WARNING

Avoid any prolonged exposure of the brake fluid to the air.

The brake fluid is hygroscopic and when in contact with the air it absorbs its humidity.

Leave the brake fluid tank open ONLY for the time necessary for topping up.



- ◆ Lift and remove the cover (3) with screws (1) and (2) and protection (4).
- ◆ Remove the gasket (5).

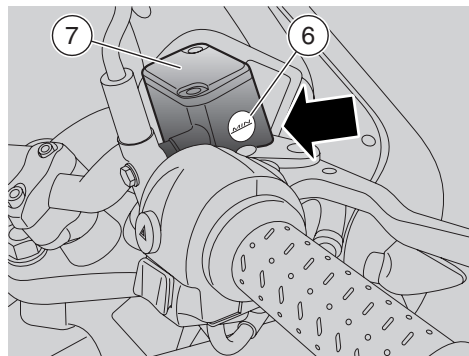
⚠ CAUTION

In order not to spill the brake fluid while topping up, do not shake the vehicle.

Do not put additives or other substances into the fluid.

If you use a funnel or other similar items, make sure that they are perfectly clean.

NOTE In order to reach the “MAX” level, top up until covering the glass (6) completely, with the brake fluid reservoir rim parallel to the ground.



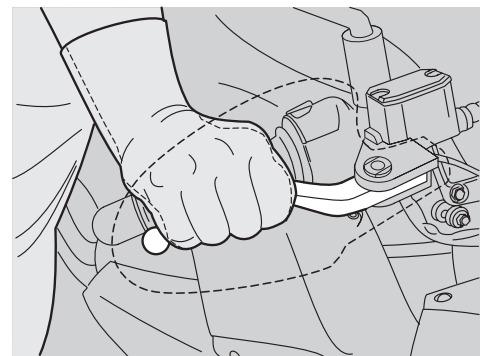
- ◆ Top up the reservoir (7) by adding brake fluid, see page 93 (LUBRICANT CHART), until reaching the correct level.

⚠ CAUTION

Do not exceed the “MAX” level while topping up.

It is advisable to top up until reaching the “MAX” level only with new pads.

Do not reach the “MAX” level with worn out pads, since this will cause a fluid outflow when the pads are changed.



- ◆ Put back the gasket (5) in its seat correctly.
- ◆ Reposition protection (4) with cover (3).
- ◆ Screw and tighten the screw (2).
- ◆ Screw and tighten the screw (1).

⚠ WARNING

Check the braking efficiency.

In case of excessive stroke of the brake lever or reduced efficiency of the braking system, contact an **aprilia** Authorised Dealer, since it may be necessary to bleed the system.



REAR BRAKE

CHECK

- ◆ Keep the vehicle in vertical position.
- ◆ Make sure that the fluid level exceeds the "MIN" mark.

MIN= minimum level

MAX= maximum level

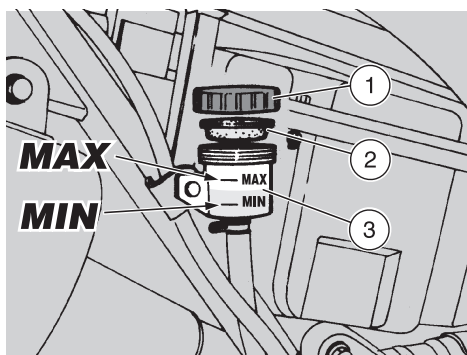
If the fluid does not reach at least the "MIN" mark:

⚠ CAUTION

When the disc pads wear out, the level of the fluid decreases progressively to compensate for their wear.

- ◆ Check the brake pad wear, see page 72 (CHECKING THE BRAKE PAD WEAR) and the disc wear.

If the pads and/or the disc do not need replacing, provide for topping up.



TOPPING UP

Carefully read page 33 (BRAKE FLUID - recommendations).

⚠ CAUTION

The brake fluid may flow out of the tank. Do not pull the rear brake lever if the brake fluid tank cover has been removed.

⚠ WARNING

Avoid any prolonged exposure of the brake fluid to the air.

The brake fluid is hygroscopic and when in contact with the air it absorbs its humidity.

Leave the brake fluid tank open ONLY for the time necessary for topping up.

- ◆ Unscrew and remove the plug (1).
- ◆ Remove the gasket (2).

⚠ CAUTION

In order not to spill the brake fluid while topping up, keep the fluid in the tank parallel to the tank rim (in horizontal position).

Do not put additives or other substances into the fluid.

If you use a funnel or other similar items, make sure that they are perfectly clean.

- ◆ Fill the tank (3) with brake fluid, see page 93 (LUBRICANT CHART), until reaching the correct level between the "MIN" and "MAX" marks.

⚠ CAUTION

It is advisable to top up until reaching the "MAX" level only with new pads.

Do not reach the "MAX" level with worn out pads, since this will cause a fluid outflow when the pads are changed.

Check the braking efficiency.

In case of excessive stroke of the brake lever or reduced efficiency of the braking system, contact an **aprilia** Authorised Dealer, since it may be necessary to bleed the system.

COOLANT

⚠ CAUTION

Do not use the vehicle if the coolant is below the minimum prescribed level "MIN".

NOTE Carry out the maintenance operations halving the intervals indicated, if the vehicle is used in rainy or dusty areas or on uneven surfaces.

Before departure, check the coolant level, see page 39 (CHECKING AND TOPPING UP); have the coolant changed every two years: for this operation, contact an **aprilia** Authorised Dealer.

⚠ WARNING

Coolant is toxic when ingested. Contact with eyes or skin may cause irritation.

In the event of contact with eyes or skin, rinse repeatedly with abundant water and seek medical advice. In the event of ingestion, induce vomiting, rinse mouth and throat with abundant water and seek medical advice immediately.

KEEP AWAY FROM CHILDREN.

DO NOT DISPOSE OF THE FLUID IN THE ENVIRONMENT.

⚠ WARNING

Be careful not to spill the coolant on the red-hot parts of the engine: it may catch fire and send out invisible flames.

In case any maintenance operation should be required, it is advisable to use latex gloves.

⚠ CAUTION

Have the pads changed by your **aprilia** Authorised Dealer.

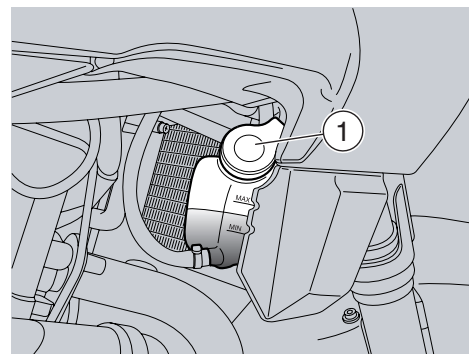
The coolant is composed of 50% water and 50% antifreeze.

This mixture is ideal for most operating temperatures and ensures good protection against corrosion.

It is advisable to keep the same mixture also in the hot season, since in this way losses due to evaporation are reduced and it is not necessary to top up very frequently.

The mineral salt deposits left in the radiator by evaporated water are thus reduced and the efficiency of the cooling system remains unchanged.

If the outdoor temperature is below 0 °C, check the cooling circuit frequently and if necessary increase the antifreeze concentration (up to maximum 60%).

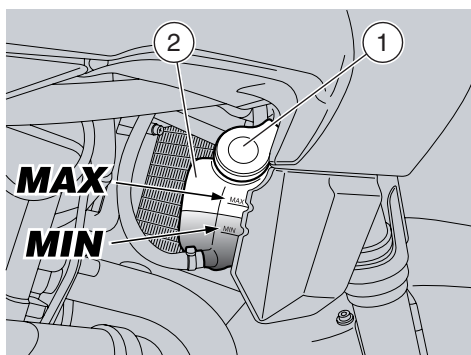


For the cooling solution use distilled water, in order not to damage the engine.

⚠ WARNING

Do not remove the expansion tank plug (1) when the engine is hot, since the coolant might be hot.

If it gets in contact with the skin or with clothes it may cause severe burns and/or damage.



CHECKING AND TOPPING UP

WARNING

Check the coolant level and top up the expansion tank with cold engine.

- ◆ Stop the engine and wait until it has cooled down.
- ◆ Keep the vehicle in vertical position, with the two wheels resting on the ground.
- ◆ Make sure that the level of the fluid contained in the expansion tank (2) is included between the “**MAX COLD LEVEL**” and “**MIN**”.

MAX COLD LEVEL= maximum level

MIN= minimum level

If not, proceed as follows:

- ◆ Unscrew and remove the filling cap (1).



WARNING

Coolant is toxic when ingested. Contact with eyes or skin may cause irritation. Do not use your fingers or any other object to check if there is enough coolant.

CAUTION

Do not put additives or other substances into the fluid.

If you use a funnel or other similar items, make sure that they are perfectly clean.

- ◆ Top up the expansion tank by adding coolant, see page 93 (LUBRICANT CHART), until this almost reaches the “**MAX**” level. Do not exceed this level, otherwise the fluid will flow out while the engine is running.
- ◆ Put back the filling cap (1).

CAUTION

In case of excessive consumption of coolant and in case the tank remains empty, make sure that there are no leaks in the circuit. Have it repaired by an **aprilia Authorised Dealer.**

TYRES

STRADA model is equipped with tubeless tires; **TRAIL** model is provided with tires with tube.

NOTE Carry out the maintenance operations halving the intervals indicated, if the vehicle is used in rainy or dusty areas or on uneven surfaces.

⚠ WARNING

Check the inflation pressure at room temperature every two weeks.

Check the conditions of the tyres and the inflation pressure at room temperature every 1000 km (625 mi), see page 90 (TECHNICAL DATA).

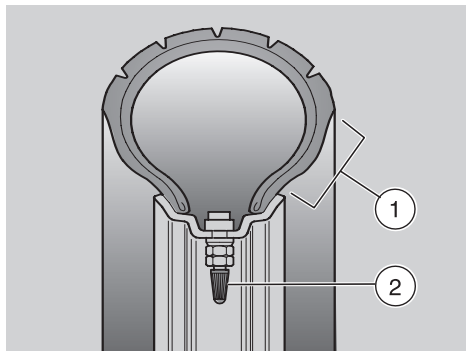
⚠ WARNING

Periodically check the tyre inflation pressure at room temperature, see page 90 (TECHNICAL DATA).

If the tyres are hot, the measurement is not correct.

Carry out the measurement especially before and after long rides.

If the inflation pressure is too high, the ground unevenness cannot be dampened and is therefore transmitted to the handlebar, thus compromising the driving comfort and reducing the road holding during turns.



If, on the contrary, the inflation pressure is too low, the tyre sides (1) are under greater stress and the tyre itself may slip on the rim or it may become loose, with consequent loss of control of the vehicle.

In case of sudden braking the tyres could even come off the rims.

Further, the vehicle could skid while turning.

⚠ WARNING

Check the surface and the wear of the tyres, since tyres in bad conditions can impair both the grip and the vehicle handling.

Some types of tyres homologated for this vehicle are provided with wear indicators.

There are several kinds of wear indicators. For more information on how to check the wear, contact your Dealer.

Visually check if the tyres are worn and in this case have them changed.

Change the tyre when it is worn out or in case of puncture on the tread side, if the puncture is larger than 5 mm.

After repairing a tyre, have the wheels balanced.

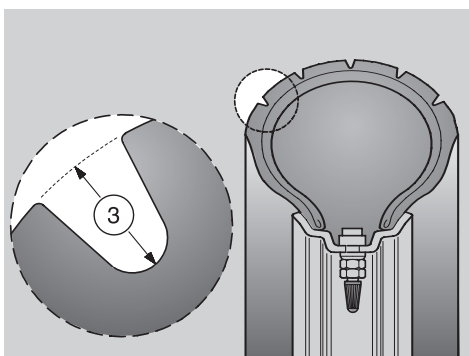
⚠ WARNING

The tyres must be replaced with other tyres of the type and model recommended by the manufacturer, see page 90 (TECHNICAL DATA); the use of tyres different from those prescribed may adversely affect the manoeuvrability of the vehicle.

Do not install tyres with air tube on rims for tubeless tyres and vice versa.

Make sure that the inflation valves (2) always have their sealing caps on, to prevent the tyres from suddenly going flat.

Change, repair, maintenance and balancing operations are very important and therefore they must be performed by qualified technicians with appropriate tools.



⚠ WARNING

For this reason, it is advisable to have the above mentioned operations carried out by an **aprilia** Authorised Dealer or by a qualified tyre repairer.

If the tyres are new, they may still be covered with a slippery film: ride carefully for the first miles. Do not oil the tyres with unsuitable fluids. If the tyres are old, even if not completely worn out, they may become hard and may not ensure good road holding. In this case, replace them.

MINIMUM TREAD DEPTH LIMIT (3):

front and rear 2 mm and in any case not less than prescribed by the regulations in force in the country where the vehicle is used.

ENGINE OIL

⚠ WARNING

Engine oil may cause serious damage to the skin if handled daily and for long periods.

Wash your hands carefully after use.

KEEP AWAY FROM CHILDREN.

DO NOT DISPOSE OF THE OIL IN THE ENVIRONMENT.

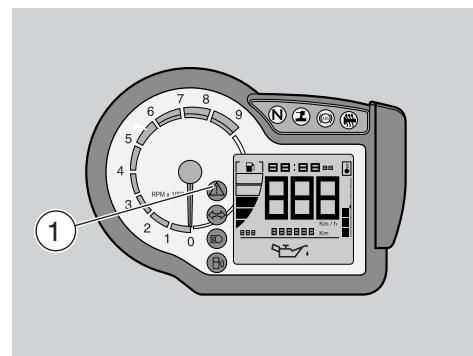
Put it in a sealed container and take it to the filling station where you usually buy it or to an oil salvage centre.

In case any maintenance operation should be required, it is advisable to use latex gloves.

⚠ CAUTION

If the alarm light (1) on the instrument panel and the engine oil pressure icon on the display come on during engine normal operation, it means that the engine oil pressure in the circuit is low.

In this case, check the engine oil level, see page 61 (CHECKING THE ENGINE OIL LEVEL AND TOPPING UP); if the level is not correct, stop the engine immediately and contact an **aprilia** Authorised Dealer.



⚠ CAUTION

Proceed with care.

Do not spill the oil!

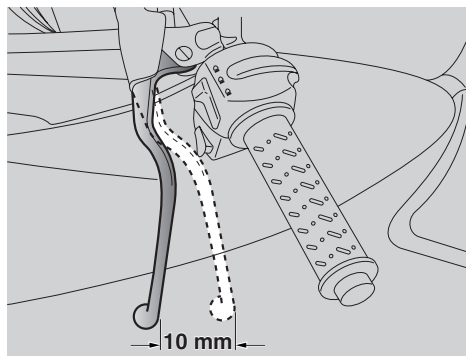
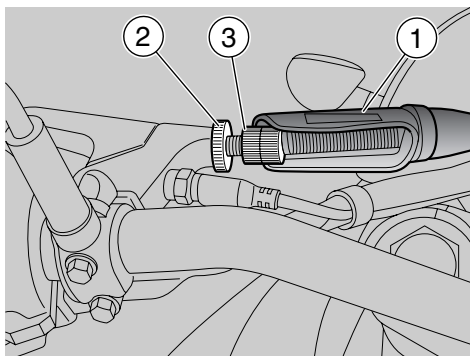
Take care not to smear any component, the area in which you are working and the surrounding area. Carefully remove any trace of oil.

In case of leakage or malfunctions, contact an **aprilia** Authorised Dealer.

Periodically check the engine oil level, see page 61 (CHECKING THE ENGINE OIL LEVEL AND TOPPING UP).

For the engine oil change, see page 58 (REGULAR SERVICE INTERVALS CHART).

NOTE Use high-quality 15W – 50 oil, see page 93 (LUBRICANT CHART).



CLUTCH

ADJUSTING THE CLUTCH

Adjust the clutch after the first 1000 km (625 mi) and successively every 10000 km (6250 mi) and when the engine stops or the vehicle (with pulled clutch lever and gears on) tends to move forward, or if the clutch slips, causing a delay in the acceleration with respect to the engine rpm.

For the adjustment, proceed as follows:

- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Withdraw the protection element (1).
- ◆ Loosen the lock nut (2).
- ◆ Rotate the adjuster (3), until the idle stroke of the clutch lever is about **10 mm**.
- ◆ Tighten the lock nut (2) and check the adjustment again.
- ◆ Start the engine, see page 48 (STARTING).
- ◆ Pull the clutch control lever completely and engage the 1st gear.

Make sure that the engine does not stop, that the vehicle does not tend to move forward, or that the clutch does not slip during the acceleration phase or while the vehicle is running.

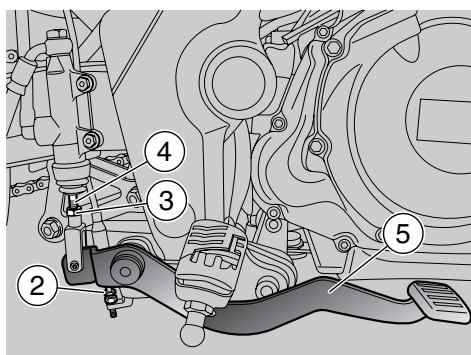


⚠ WARNING

If it is not possible to obtain a correct adjustment or if the clutch does not operate properly, contact your **aprilia** Authorised Dealer.

⚠ CAUTION

Make sure that the clutch control cable is intact: the inner cable and outer sheath must not be worn or flattened at any point.



ADJUSTING THE REAR BRAKE CONTROL LEVER CLEARANCE

The brake control lever is positioned ergonomically during the assembly of the vehicle.

If necessary, it is possible to adjust the brake control lever clearance:

- ◆ Screw the brake adjuster (2) completely.
- ◆ Screw the lock nut (3) completely on the master cylinder control rod (4).
- ◆ Screw the master cylinder control rod (4) completely, then unscrew it by giving 3 – 4 turns.
- ◆ Unscrew the brake adjuster (2) until the brake lever reaches the desired height.
- ◆ Unscrew the master cylinder control rod (4) and bring it in contact with the master cylinder piston.
- ◆ Screw the rod in order to ensure a minimum clearance of **0.5 – 1 mm** between the master cylinder control rod (4) and the master cylinder piston.

⚠ CAUTION

Make sure that there is a certain idle stroke in the movement of the lever (5), to prevent the brake from remaining applied and the consequent untimely wear of the braking elements.

Lever (5) idle stroke: 4 mm (measured at the lever end).

- ◆ Lock the master cylinder control rod (4) by means of the lock nut (3).

⚠ CAUTION

After the adjustment, make sure that the wheel rotates freely with released brake.

Check the braking efficiency.

If necessary, contact your **aprilia** Authorised Dealer.

EXHAUST SILENCERS

NOTE The following information refers to a single exhaust silencer, but is valid for both.

⚠ WARNING

Avoid parking the vehicle catalytic version near dry brush wood or in places easily accessible to children, as the catalytic silencer becomes extremely hot during use; be very careful and avoid any kind of contact until it has completely cooled down.

The catalytic vehicle is fitted with a silencer with metal catalytic converter of the "platinum-rhodium" two-way type.

This device provides for the oxidation of the CO (carbon monoxide) and of the HC (unburned hydrocarbons) contained in the exhaust gases, changing them into carbon dioxide and steam, respectively.

⚠ CAUTION

Do not use leaded fuel, since it seriously damages the catalytic converter.

EXHAUST SILENCERS

⚠ WARNING

Tampering with the noise control system is prohibited.

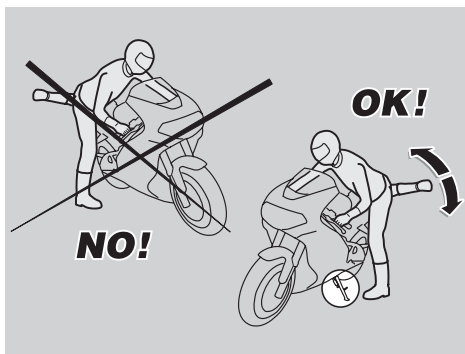
Owners are warned that the law may prohibit:

- the removal or rendering inoperative by any person, other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle – for the purpose of noise control – prior to its sale or delivery to the ultimate purchaser or while it is in use;
- the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Check the exhaust silencer and the silencer pipes, making sure that there are neither signs of rust, nor holes and that the exhaust system works effectively.

If the noise produced by the exhaust system increases, immediately contact your **aprilia Authorised Dealer**.

INSTRUCTIONS FOR USE



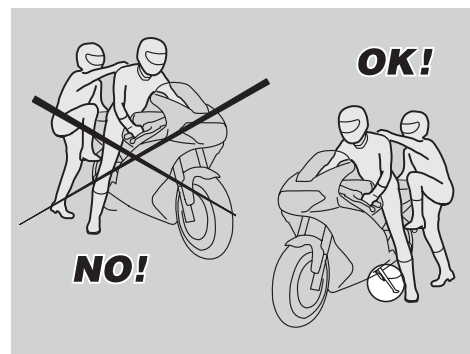
GETTING ON AND OFF THE VEHICLE

The instructions below must be followed with the maximum care in order to avoid any injury to persons and damage to property and to the vehicle, caused by the falling of the rider or the passenger from the vehicle and/or the falling or overturning of the vehicle itself.

⚠ WARNING

Risk of falling and overturning. Proceed with care.

When getting on and off the vehicle, make sure nothing can impair your movements. Also, your hands should be free (replace any objects, such as your helmet, gloves or dangling glasses before mounting or dismounting).



The vehicle is provided with two stands: centre stand and side stand.

⚠ CAUTION

Do not start the engine with the vehicle positioned on the centre stand. Engaging the gears may make you lose control of the vehicle.

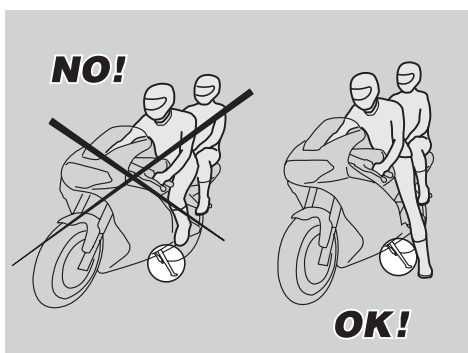
Do not get on or let the passenger get on the vehicle if this is positioned on the centre stand.

It is forbidden to position the vehicle on the centre stand while seated astride the vehicle in riding position.

Get on and off the vehicle only from the left side and always with extended side stand.

⚠ CAUTION

Do not apply the load of your weight or of the passenger's weight onto the side stand.



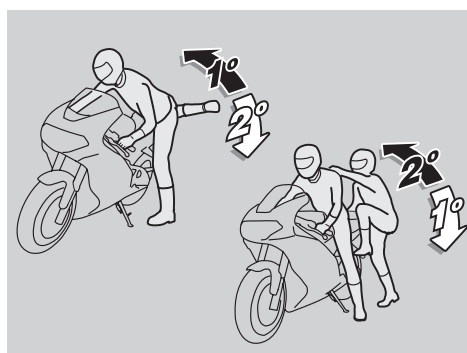
The stand has been designed to support the weight of the vehicle and a minimum load, without the rider and the passenger.

The purpose of placing the vehicle on the side stand before mounting is to keep the vehicle from falling or overturning. This does not mean that the side stand should be used to support the weight of rider and passenger.

While getting on and off, the weight of the vehicle may make you lose balance, and the vehicle may fall or overturn.

NOTE The rider must always be the first person to get on the vehicle and the last to get off and it is the rider who controls the balance and stability of the vehicle when the passenger gets on and off.

When getting on and off the vehicle, the passenger must make careful movements, in order to maintain the balance of the vehicle and the rider.



NOTE The rider is responsible for instructing the passenger on how to safely get on and off the vehicle.

The vehicle is equipped with special passenger footrests to make it easier to get on and off the vehicle. The passenger must always use the left footrest to get on and off the vehicle.

Neither get off, nor try to get off the vehicle by jumping or stretching your leg down to the ground. In both cases this would compromise the stability and balance of the vehicle.

NOTE Bags or objects strapped to the rear of the vehicle can represent an obstacle while getting on and off.

In any case, perform a controlled movement with your right leg, which must avoid striking and safely pass the rear part of the fairing or the luggage without creating unbalance.

GETTING ON THE VEHICLE

- ◆ Grasp the handlebar correctly and get on the vehicle without loading your weight onto the side stand.

NOTE If it is impossible for you to place both feet on the ground, place the right foot on the ground (in case of unbalance, the left side of the vehicle is prevented from falling over by the side stand) and keep the left foot ready to rest on the ground.

- ◆ Place both feet on the ground and straighten the vehicle into riding position while keeping it in balance.

NOTE The rider must not extract or attempt to extract the passenger footrest while seated astride the vehicle, because this might compromise the stability and balance of the vehicle.

- ◆ Have the passenger extract the two passenger footrests.
- ◆ Instruct the passenger on how to safely get on the vehicle.
- ◆ Kick the side stand completely back using your left foot.



GETTING OFF THE VEHICLE

- ◆ Choose a suitable parking area, see page 54 (PARKING).
- ◆ Stop the vehicle, see page 54 (STOPPING).

⚠ WARNING

Make sure that the parking surface is free from obstacles, firm and flat.

- ◆ With the left shoe heel, extend the side stand completely by acting on the appropriate lever.

NOTE If it is impossible for you to place both feet on the ground, place the right foot on the ground (in case of unbalance, the left side of the vehicle is prevented from falling over by the side stand) and keep the left foot ready to rest on the ground.

- ◆ Place both feet on the ground, keeping the vehicle in balance in riding position.
- ◆ Instruct the passenger how to safely get off the vehicle.

⚠ CAUTION

Risk of falling and overturning.

**Make sure that the passenger has got off the vehicle.
Do not load your weight onto the side stand.**

- ◆ Incline the vehicle until the stand rests on the ground.
- ◆ Grasp the handlebar correctly and get off the vehicle.
- ◆ Rotate the handlebar completely leftwards.
- ◆ Lift the passenger footrests.

⚠ CAUTION

Make sure that the vehicle is stable.

PRELIMINARY CHECKING OPERATIONS

⚠ WARNING

Before departure, always carry out a preliminary checking of the vehicle to make sure that it functions correctly and safely, see the table (PRELIMINARY CHECKING OPERATIONS).

Failure to comply with these checking operations can cause severe personal injuries or damages to the vehicle.

Do not hesitate to consult your **aprilia Authorised Dealer** in case there is something you do not understand about the operation of some controls or in case you suspect or discover some failures.

It does not take long to carry out a check-up and this operation ensures you much more safety.

PRELIMINARY CHECKING OPERATIONS

Component	Check	Page
Front and rear disc brakes	Check the operation, the idle stroke of the control levers, the fluid level and make sure there are no leaks. Check the wear of the pads. If necessary, top up the fluid tank.	33 (BRAKE FLUID - recommendations), 34 (DISC BRAKES), 35 (FRONT BRAKE), 37 (REAR BRAKE), 72 (CHECKING THE BRAKE PAD WEAR)
Throttle	Make sure that it works smoothly and that it is possible to open and close it completely, in all steering positions. If necessary, adjust and/or lubricate it.	74 (ADJUSTING THE ACCELERATOR CONTROL)
Engine oil	Check and/or top up if necessary.	41 (ENGINE OIL), 61 (CHECKING THE ENGINE OIL LEVEL AND TOPPING UP)
Wheel/tyres	Check the tyre surface, the inflation pressure, wear and tear and any damage. Remove any foreign matter that may be stuck in the tread grooves.	40 (TYRES)
Brake levers	Make sure that they work smoothly. Lubricate the articulations and adjust the stroke if necessary.	43 (ADJUSTING THE REAR BRAKE CONTROL LEVER CLEARANCE)
Clutch	The idle stroke at the end of the clutch lever must be approximately 10 mm; the clutch must work without jerking and/or slipping.	42 (CLUTCH)
Steering	Make sure that the steering rotates smoothly, without any clearance or looseness.	–
Side stand and centre stand OPT (supplied as standard equipment in the countries where required)	Make sure that it operates correctly. Make sure that when the stand is let up or down there is no friction and that the spring tension brings it back to its normal position. If necessary, lubricate joints and articulations. Make sure that the safety switch operates correctly.	81 (CHECKING THE SWITCHES)
Fastening elements	Make sure that the fastening elements are not loose. If necessary, adjust or tighten them.	–
Drive chain	Check the slack.	68 (DRIVE CHAIN)
Fuel tank	Check the fuel level and top up, if necessary. Check the circuit for leaks. Make sure that the fuel cap is correctly closed.	31 (FUEL)
Coolant	The coolant level in the expansion tank must be included between “ MAX COLD LEVEL ” and “ MIN ” marks.	38 (COOLANT), 39 (CHECKING AND TOPPING UP)
Engine start stop switch (○ - ✕ - ③)	Make sure that it operates correctly.	25 [ENGINE START / STOP SWITCH (○ - ✕ - ③)]
Lights, warning lights LED, horn, rear brake light switch and electric devices	Check horn and indicators for proper operation. Change bulbs or fix a failure, if necessary.	77 (BATTERY) – 86 (CHANGING THE NUMBER PLATE BULB)



STARTING

⚠ WARNING

Do not position any object inside the front fairing (between the handlebar and the instrument panel), in order not to hinder the rotation of the handlebar and visibility toward the instrument panel.

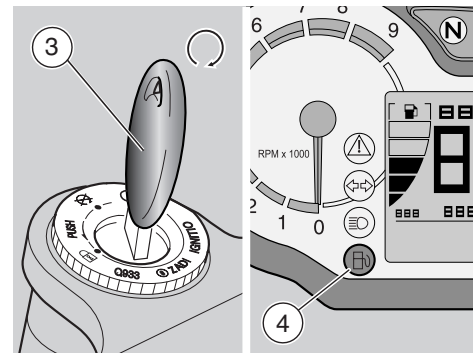
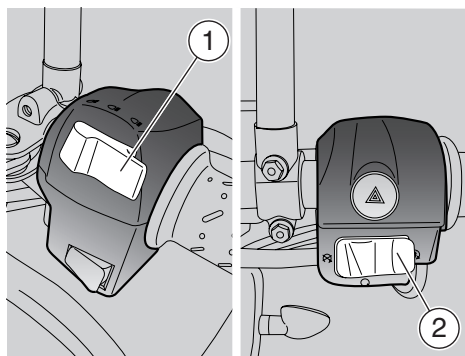
NOTE Before starting the engine, carefully read chapter "safe drive", see page 5 (SAFE DRIVE).

⚠ WARNING

Exhaust emissions contain carbon oxide, which is a poisonous gas and extremely harmful if inhaled.

Avoid starting the engine in closed or badly-ventilated rooms.

Failure to heed this warning may cause loss of consciousness or even lead to death by asphyxia.



NOTE With the side stand down, the engine can be started only if the gearbox is in neutral; in this case, if you try to engage the gears, the engine stops.

With the side stand up, it is possible to start the engine either in neutral gear or with engaged gears and pulled in clutch lever.

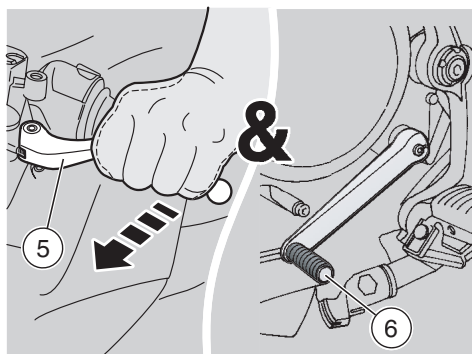
- ◆ Get on the vehicle in riding position, see page 44 (GETTING ON AND OFF THE VEHICLE).
- ◆ Make sure that the stand is completely up.
- ◆ Make sure that the dimmer switch (1) is in position "☺".
- ◆ Move the engine start-stop switch (2) to position "○".
- ◆ Turn the key (3) and move the ignition switch to position "○".

Now all lights on the instrument panel turn on and immediately off.

The fuel pump will pressurise the fuel supply circuit, sending out a hum for about three seconds.

⚠ CAUTION

If the low fuel warning light "⛽" (4) on the instrument panel comes on, provide for topping up as soon as possible, see page 31 (FUEL).

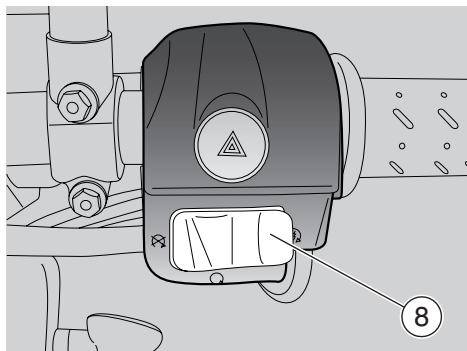


- ◆ Operate the front brake lever completely.
- ◆ Pull the clutch lever (5) completely and shift the gearbox lever (6) into neutral [green warning light "N" (7) on].

⚠ CAUTION

To avoid excessive drainage of the battery, do not keep the start-stop push button pressed to "Ⓢ" for more than fifteen seconds.

If the engine does not start in this lapse of time, wait ten seconds and press the start-stop push button again to "Ⓢ".



- ◆ Press the start-stop push button (8) to "Ⓢ" without accelerating and release it as soon as the engine starts.

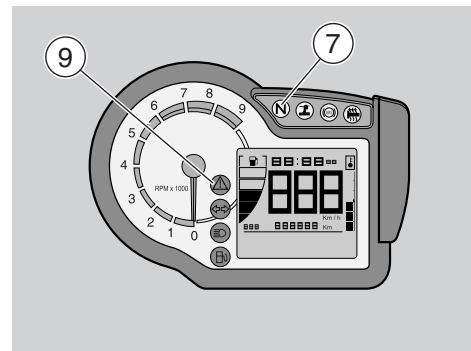
⚠ CAUTION

Avoid pressing the start-stop push button (8) to "Ⓢ" when the engine is running, since you may damage the starter.

If the engine oil pressure light ⚠ (9) stays on after the engine is running or comes on during normal engine operation, and at the same time even the symbol on the display is on, it means that engine oil pressure in the circuit is low.

In this case, stop the engine immediately and contact an **aprilia** Authorised Dealer.

- ◆ Keep at least one brake lever pulled and do not accelerate until you start.



⚠ CAUTION

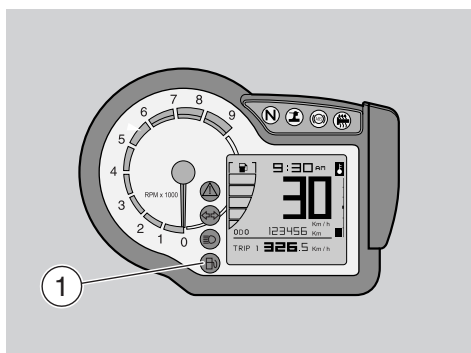
Never leave abruptly with cold engine.

To reduce the emission of polluting substances and the consumption of fuel, warm the engine up by proceeding at low speed for the first miles.

⚠ CAUTION

If the light ⚠ (9) stays on or comes on during normal engine operation, and at the same time even the symbol "EFI" on the display is on, it means that the control unit has detected a failure.

In many cases the engine keeps running with limited performance; immediately contact an **aprilia** Authorised Dealer.



MOVING OFF AND RIDING

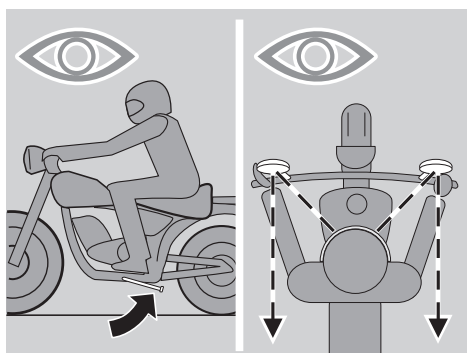
⚠ WARNING

Do not position any object inside the front fairing (between the handlebar and the instrument panel), in order not to hinder the rotation of the handlebar and visibility toward the instrument panel.

NOTE Before moving off, carefully read the "safe drive" chapter, see page 5 (SAFE DRIVE).

⚠ CAUTION

If the low fuel warning light "⚡" (1) positioned on the instrument panel comes on while the vehicle is running, this means that 5 l of fuel are still available in the tank. Provide for topping up as soon as possible, see page 31 (FUEL).



⚠ WARNING

If you ride without passenger, make sure that the passenger footrests are folded.

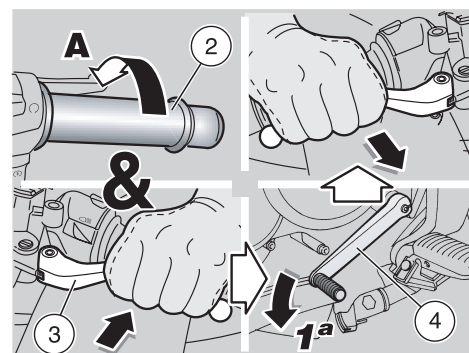
While riding, keep your hands on the grips and your feet on the footrests.

NEVER RIDE IN ANY POSITION OTHER THAN THOSE INDICATED.

⚠ WARNING

If you ride with a passenger, instruct him/her so that he/she does not create problems during manoeuvres.

Before leaving, make sure that the stand is completely up.



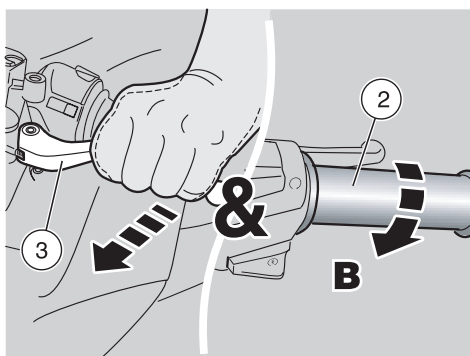
To leave:

- ◆ Start the engine, see page 48 (STARTING).
- ◆ Adjust the inclination of the rear-view mirrors correctly.

⚠ CAUTION

With the vehicle at rest, try to get acquainted with the use of the rear-view mirrors. The reflecting surface is convex, therefore the objects seem to be farther away than they actually are. These mirrors offer a "wide-angle" view. It may take some time to learn to accurately judge the distance of traffic behind.

- ◆ With released throttle grip (2) (Pos.A) and engine idling, pull the clutch lever (3) completely.
- ◆ Engage the first gear, by pushing the gear lever (4) downwards.
- ◆ Release the brake lever (pulled on the starting).



⚠ WARNING

On departure, the abrupt release of the clutch lever may cause the engine to stall or the vehicle to jerk forward.

Never accelerate abruptly or excessively when releasing the clutch lever, in order to prevent the clutch from “slipping” (slow release) or the front wheel from raising “rearing up” (quick release).

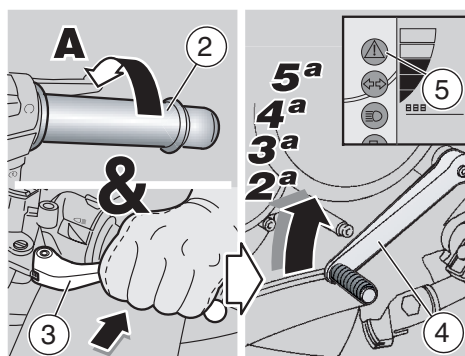
- ◆ Slowly release the clutch lever (3) and at the same time accelerate by slightly turning the throttle grip (2) (**Pos.B**).

The vehicle will start moving.

- ◆ Ride at reduced speed for the first miles, in order to warm the engine up.

⚠ CAUTION

Never exceed the recommended rpm, see page 53 (RUNNING-IN).



- ◆ Increase the speed by gradually rotating the throttle grip (2) (**Pos.B**), without exceeding the recommended rpm, see page 53 (RUNNING-IN).

To engage the second gear:

⚠ CAUTION

Proceed quickly.

Never ride the vehicle at too low rpm.

- ◆ Release the throttle grip (2) (**Pos.A**), pull the clutch lever (3) and lift the gear shift lever (4). Release the clutch lever (3) and accelerate.
- ◆ Repeat the last two operations and shift up.

⚠ CAUTION

If the light ⚠ (5) stays on or comes on during normal engine operation, and at the same time even the symbol on the display is on, it means that engine oil pressure in the circuit is low.

In this case, stop the engine immediately and contact an **aprilia** Authorised Dealer.

The downshifting should be carried out in the following situations:

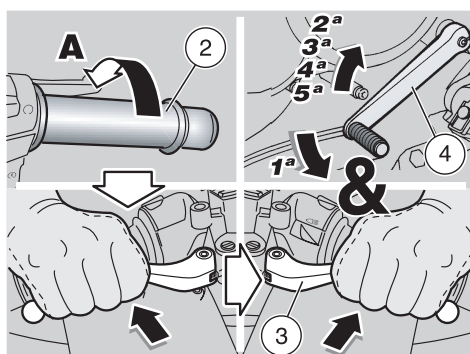
- ◆ When riding downhill or when braking, in order to increase the braking action by using the compression of the engine.
- ◆ When riding uphill, if the gear engaged is not suitable to the speed (high gear, moderate speed) and the engine rpm decreases.

⚠ CAUTION

Shift the gears one by one; the simultaneous downshifting of more than one gear may make you exceed the maximum rpm (redline).

Before and during the downshifting, release the throttle grip and decelerate, in order to avoid the “redline”.

Maximum set rpm are indicated by a light ⚠ (5) that flashes.



To shift down, proceed as follows:

- ◆ Release the throttle grip (2) (**Pos.A**).
- ◆ If necessary, pull the brake levers moderately and decrease the speed of the vehicle.
- ◆ Pull the clutch lever (3) and lower the gear shift lever (4) to shift down.
- ◆ If the brake levers are pulled, release them.
- ◆ Release the clutch lever and accelerate moderately.

CAUTION

If the display shows error message "⚠", it means that coolant temperature is over 118 °C: stop the vehicle and let the engine idle for approximately two minutes, thus permitting the regular circulation of the coolant in the system; at this point, position the engine start-stop switch on "⊗" and check the coolant level,

see page 38 (COOLANT).

If the situation on the instrument panel remains the same after the coolant level has been checked, do not start the vehicle and contact an **aprilia** Authorised Dealer.

Do not position the ignition key on "⊗", since the cooling fan would stop independently of the coolant temperature and in this case the temperature would increase even further.

If the error message "⚠ SERVICE" appears on the display during normal engine operation, it means that the ECU has detected a failure.

In many cases the engine keeps running with limited performance; immediately contact an **aprilia** Authorised Dealer.

To avoid the overheating of the clutch, keep the engine running with vehicle at rest, engaged gears and pulled clutch lever for the shortest time possible.

WARNING

Avoid opening and closing the throttle repeatedly and continuously, so that you do not accidentally lose control of the vehicle. If you have to brake, close the throttle and put on both brakes in order to obtain uniform deceleration, properly exerting pressure on the braking parts.

Using one brake only reduces braking force significantly and may lock a wheel resulting in loss of grip.

If you stop uphill, decelerate completely and use the brakes only to keep the vehicle steady.

The use of the engine to keep the vehicle steady may cause the overheating of the clutch.

When approaching a bend, slow down or brake in good time. Take the bend at moderate, steady speed or accelerate slightly. Late braking may put the vehicle into a skid.

If the brakes are operated continuously on downhill stretches, the friction surfaces may overheat, thus reducing the braking efficiency. Exploit the engine compression and shift down by putting on both brakes intermittently.

Never ride downhill with the engine off!

When visibility is insufficient, switch on the low beam even during the day, in order to make your vehicle more visible. In case of wet ground or scarce wheel grip (snow, ice, mud, etc.), ride slowly, avoiding sudden braking or manoeuvres that could make you lose grip and fall down.

⚠ WARNING

Pay the utmost attention to any obstacle or variation of the ground.

Uneven road surfaces, rails, inspection covers, painted signals, construction site metal covers become slippery in rainy weather and must be negotiated carefully, smoothly and keeping the vehicle upright.

Always signal your intention to change lanes or direction in good time using the direction indicators. Avoid sudden manoeuvres.

Switch off the direction indicators immediately after changing direction.

Be very careful when overtaking or being overtaken.

When it rains, large vehicles lift surface water, which affects visibility. In addition, the slip stream may make you lose control of the vehicle.

RUNNING-IN

The running-in of the engine is essential to ensure its life and correct operation.

If possible, ride on hilly roads and/or roads with many bends, so that the engine, the suspensions and the brakes undergo a more effective running-in.

During running-in, change speed.

In this way the components are first "loaded" and then "relieved" and the engine parts can thus cool down.

Even if it is important to stress the engine components during running-in, take care not to exceed.

NOTE Only after the first 2000 km (1250 mi) of running-in you can expect the best performance levels from the vehicle.

Keep to the following indications:

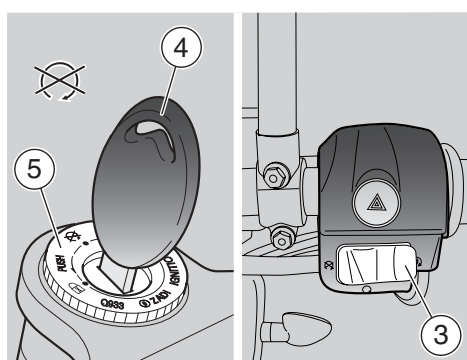
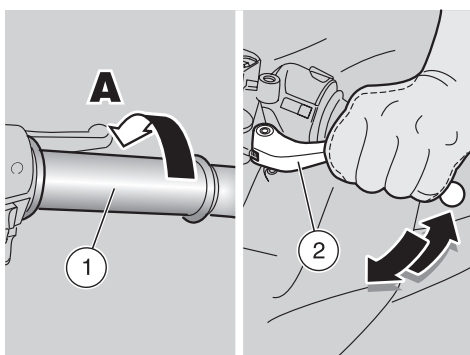
- ◆ Do not open the throttle completely if the speed is low, both during and after running-in.
- ◆ During the first 500 km (312 mi) put on the brakes with caution, avoiding sharp and prolonged braking. This ensures a correct bedding-in of the pads on the brake disc.
- ◆ During the first 500 km (312 mi) never exceed 4000 rpm.
- ◆ When the total number of km covered by the vehicle is included between 500 km (312 mi) and 1000 km (625 mi), never exceed 5000 rpm.

⚠ WARNING

After the first 1000 km (625 mi), have an aprilia Authorised Dealer carry out the checks indicated in the column "After running-in" of the regular service intervals chart, see page 58 (REGULAR SERVICE INTERVALS CHART), in order to avoid hurting yourself or other people and/or damaging the vehicle.

- ◆ Between the first 1000 (625 mi) and 2000 km (1250 mi) ride more briskly, change speed and use the maximum acceleration only for a few seconds, in order to ensure better coupling of the components); never exceed 5500 rpm (see table).
- ◆ After the first 2000 km (1250 mi) you can gradually expect better performance from the engine.

Engine maximum rpm recommended	
Mileage km (mi)	rpm
0 – 500 (0 – 312)	4000
500 – 1000 (312 – 625)	5000
1000 – 2000 (625 – 1250)	5500



STOPPING

⚠ WARNING

If possible, avoid stopping abruptly, slowing down suddenly and limit braking.

- ◆ Release the throttle grip (1) (Pos.A), gradually put on the brakes and at the same time shift down in order to decrease the speed, see page 50 (MOVING OFF AND RIDING).

Once the speed has decreased, before stopping the vehicle:

- ◆ Pull the clutch lever (2) in order to prevent the engine from stalling.

When the vehicle has come to rest:

- ◆ Shift the gear lever to neutral (green warning light "N" on).
- ◆ Release the clutch lever (2).
- ◆ In case of a brief stop, keep at least one brake on.

PARKING

It is very important to choose a suitable parking area, respecting the road signs and the indications given below.

⚠ WARNING

Park the vehicle on firm and flat ground, to prevent it from falling down.

Neither lean the vehicle against walls, nor lay it on the ground.

Make sure that the vehicle and especially its red-hot parts do not represent a danger for persons and children. Do not leave the vehicle unattended when the engine is on or the key is inserted into the ignition switch.

Stay away from the cooling fans even when they are not operating. They might switch on unexpectedly and your clothing or hair might be caught in the fans.

⚠ WARNING

The fall or excessive inclination of the vehicle may cause the fuel to flow out of the tank.

The fuel used for internal combustion engines is extremely inflammable and in particular conditions it can become explosive.

⚠ CAUTION

Do not apply the load of your weight or of the passenger's weight onto the side stand.

To park the vehicle:

- ◆ Choose a suitable parking area.
- ◆ Stop the vehicle, see page 54 (STOPPING).
- ◆ Move the engine start-stop switch (3) to position .
- ◆ Rotate the key (4) and move the ignition switch (5) to position "OFF".

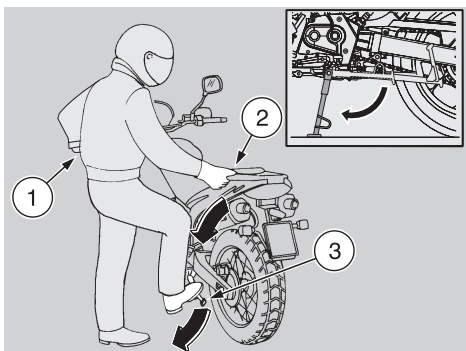
⚠ WARNING

When getting on or off the vehicle, keep to the instructions given, see page 44 (GETTING ON AND OFF THE VEHICLE).

- ◆ Following the indications, wait until the passenger has got off the vehicle before dismounting.
- ◆ Lock the steering, see page 27 (STEERING LOCK) and extract the key.

⚠ WARNING

Make sure that the vehicle is stable.



POSITIONING THE VEHICLE ON THE STAND

SIDE STAND

To place the vehicle on the side stand while seated astride the vehicle, see page 44 (GETTING ON AND OFF THE VEHICLE).

If any manoeuvre (for example, moving the vehicle) required the lifting of the stand, to place the vehicle on the stand again, proceed as follows:

⚠ WARNING

Make sure that the parking surface is free from obstacles, firm and flat.

- ◆ Choose a suitable parking area, see page 54 (PARKING).
- ◆ Grasp the left grip (1) and the handle (2).
- ◆ Press the side stand with your right foot and extend it completely (3).
- ◆ Incline the vehicle until the stand rests on the ground.
- ◆ Steer the handlebar completely leftwards.

⚠ WARNING

Make sure that the vehicle is stable.

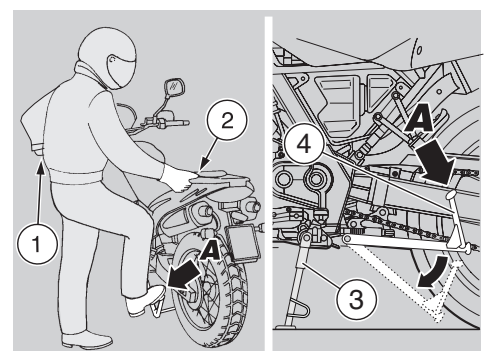
CENTRE STAND OPT (supplied as standard equipment in the countries where required).

⚠ WARNING

It is forbidden to position the vehicle on the centre stand while seated astride the vehicle in riding position.

⚠ WARNING

Make sure that the parking surface is free from obstacles, firm and flat.



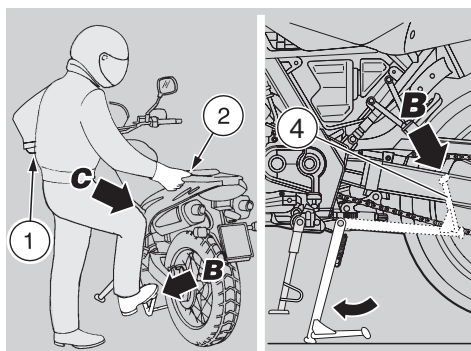
- ◆ Choose a suitable parking area, see page 54 (PARKING).
- ◆ Grasp the left grip (1) and the handle (2).

⚠ CAUTION

The lowering of the side stand is suggested, for safety reasons, in order to prevent the vehicle from falling down or overturning in case of unbalance.

NOTE Do not let the side stand touch the ground. Keep the vehicle in vertical position.

- ◆ Press the side stand with your right foot and extend it completely (3).
- ◆ Push down the lever (4) (**Pos.A**) of the centre stand and make it rest on the ground.



CAUTION

Proceed with care.

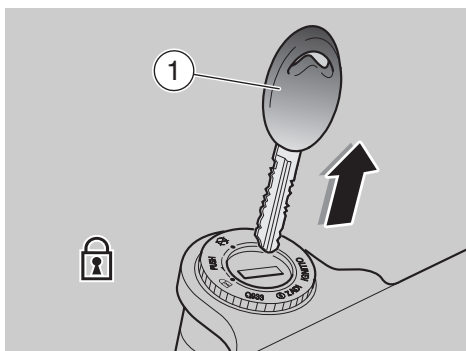
The positioning of the vehicle on the centre stand may be difficult, since the vehicle is very heavy. Release the grip (1) and the handle (2) only after positioning the vehicle on the stand.

- ◆ Load your weight on the lever (4) (Pos.B) of the centre stand and at the same time move your centre of gravity towards the rear part of the vehicle (Pos.C).

WARNING

Make sure that the vehicle is stable.

- ◆ Let the side stand up.



SUGGESTIONS TO PREVENT THEFT

CAUTION

Do not use any "brake lock" devices. Failure to heed this warning can seriously damage the braking system and lead to an accident thus provoking serious injuries or death.

NEVER leave the ignition key (1) inserted and always use the steering lock "a".

Park the vehicle in a safe place, possibly in a garage or a protected place.

When possible, use an additional antitheft device.

Make sure that all documents are in order and the road tax has been paid.



Write down your personal data and telephone number in this page, to facilitate the identification of the owner in case of finding after theft.

SURNAME:.....

NAME:.....

ADDRESS:.....

TELEPHONE NO.:.....

NOTE Very often stolen vehicles are identified thanks to the data written in the use/maintenance manual.

MAINTENANCE



Carefully read page 2 (SAFETY WARNINGS), (TECHNICAL INFORMATION) and (WARNINGS - PRECAUTIONS - GENERAL ADVICE).

⚠ WARNING

Risk of fire.

Keep fuel and other flammable substances away from the electrical components.

Before beginning any maintenance operation or any inspection of the vehicle, stop the engine, extract the key from the ignition switch, wait until the engine and the exhaust system have cooled down and if possible lift the vehicle by means of the proper equipment, on firm and flat ground.



⚠ WARNING

Before proceeding, make sure that the room in which you are working is properly ventilated.

Keep away from the red-hot parts of the engine and of the exhaust system, in order to avoid burns.

Do not hold any mechanical piece or other parts of the vehicle with your mouth: the components are not edible and some of them are harmful or even toxic.

⚠ CAUTION

If not expressly indicated otherwise, for the reassembly of the units repeat the disassembly operations in reverse order.

In case any maintenance operation should be required, it is advisable to use latex gloves.

Routine maintenance operations can usually be carried out by the user, but sometimes specific tools and specific technical skills may be required.

In case periodic maintenance operations, assistance or technical advice are needed, contact an **aprilia Authorised Dealer**, who will ensure you prompt and accurate servicing.

Ask your **aprilia Authorised Dealer** to test the vehicle on the road after a repair or periodic maintenance operation.

In any case, personally carry out the "Preliminary checking operations" after any maintenance operation, see page 47 (PRELIMINARY CHECKING OPERATIONS).

REGULAR SERVICE INTERVALS CHART

OPERATIONS TO BE CARRIED OUT BY THE **aprilia** Authorised Dealer (WHICH CAN BE CARRIED OUT EVEN BY THE USER).

Key

① = check and clean, adjust, lubricate or change, if necessary;

② = clean;

③ = change;

④ = adjust.

NOTE Carry out the maintenance operations halving the intervals indicated, if the vehicle is used in rainy or dusty areas or on uneven surfaces.

(*) = Check every two weeks or according to the intervals indicated.

(**) = **OPT** provided as standard equipment in the countries where required).

CO = carbon monoxide.

Component	After running-in [1000 km (625 mi)]	Every 10000 km (6250 mi) or 12 months	Every 20000 km (12500 mi) or 24 months
Battery - Clamp tightening	①	①	—
Spark plug	—	①	③
Fork	①	—	①
Light operation/direction	—	①	—
Light system	①	①	—
Safety switches			
Brake fluid	①	①	—
Coolant	—	—	①
Side panniers coupling pins (**)	—	①	—
Tyres	every 1000 km (625 mi): ①		
Tyre pressure (*)	every 1000 km (625 mi): ④		
Engine idling rpm and CO	④	④	—
Securing locks for the side panniers and the top case (**)	—	①	—
Warning light	at every start: ①		
Cush drive dampers and sliding roll	upon each final transmission change : ③		
Drive chain tension and lubrication	every 500 km (375 mi): ①		
Brake pad wear	①	before every trip and every 2000 km (1250 mi): ①	
Flexible coupling wear and flexible coupling unit slack	—	—	①

Have the final drive checked (rear, front sprockets and chain) every 5000 km (3125 mi) by a **aprilia Authorised Dealer.**

OPERATIONS TO BE CARRIED OUT BY THE *aprilia* Authorised Dealer

Key

① = check and clean, adjust, lubricate or change, if necessary;

② = clean;

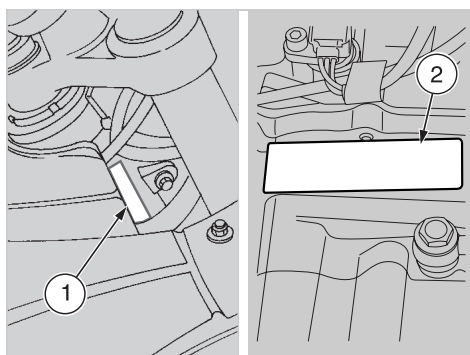
③ = change;

④ = adjust.

NOTE Carry out the maintenance operations halving the intervals indicated, if the vehicle is used in rainy or dusty areas or on uneven surfaces.

CO = carbon monoxide.

Component	After running-in [1000 km (625 mi)]	Every 10000 km (6250 mi) or 12 months	Every 20000 km (12500 mi) or 24 months
Rear shock absorber	—	—	①
Battery - Clamp tightening	①	—	—
Carburation, CO adjustment	①	①	—
Timing chain	—	①	—
Transmission cables and controls	①	①	—
Wheel centring	—	①	—
Rear suspension linkage bearings	—	—	①
Steering bearings and steering clearance	①	①	—
Wheel bearings	—	①	—
Brake discs	①	①	—
Fuel pump filter	—	—	①
Air filter	—	①	③
Engine oil filter	③	③	—
Engine oil filter (on oil tank)	②	—	②
General running of the vehicle	①	①	—
Clutch clearance	④	④	—
Adjusting the valve clearance	④	—	④
Braking systems	①	①	—
Cooling system	—	①	—
Brake fluid	every 2 years: ③		
Coolant			
Fork oil	—	—	③
Engine oil	③	③ (*)	—
Fork oil seals	after the first 30000 km (18750 mi) and successively every 20000 km (12500 mi): ③		
Brake pads	if worn: ③		
Wheel/Tyres	①	①	—
Nut, bolt, screw tightening	①	—	①
Suspensions and track alignment	①	—	①
Spoke tension	①	①	—
Final transmission (chain, rear sprocket and front sprocket)	every 5000 km (3125 mi): ①		
Fuel pipes	—	①	every 4 years: ③
Clutch wear	—	①	—



JOINTS WITH CLICK CLAMPS AND WITH SCREW CLAMPS

⚠ CAUTION

Remove **ONLY** the clamps indicated in the maintenance procedures.

This text is not to be intended as an authorisation to arbitrarily remove the clamps present on the vehicle.

⚠ WARNING

Before removing a clamp, make sure that the removal does not involve any fluid leakage; if so, provide for preventing such leakage and protect the components positioned near the joint.

CLICK CLAMPS

For the removal it is sufficient to use simple pliers, while for the installation it is necessary to use a special tool (see below).

Before removing a clamp, prepare the material necessary for the correct reassembly.

NOTE Have the appropriate special tool **OPT** at hand:

- clamp installation pliers, see page 29 (SPECIAL TOOLS **OPT**).

⚠ CAUTION

Upon installation, replace the click clamp that has been removed with a new one having the same dimensions, to be requested to an **aprilia** Authorised Dealer.

Do not attempt to reinstall the removed click clamp.

Do not replace the removed click clamp with a screw clamp or with other types of clamp.

⚠ CAUTION

Proceed with care, in order not to damage the joint components.

- ◆ Work with the pliers on the head of the click clamp, forcing until you release it.

SCREW CLAMPS

For the removal and installation it is sufficient to use a simple screwdriver.

⚠ CAUTION

Check the conditions of the clamp and if necessary replace it with a new one of the same type and dimensions, to be requested to an **aprilia** Authorised Dealer.

When fastening the clamp, make sure that the joint is sufficiently stable.

IDENTIFICATION DATA

It is a good rule to write down the frame and engine numbers in the space provided in this manual.

The frame number can be used for the purchase of spare parts.

NOTE Do not alter the identification numbers if you do not want to incur in severe penal and administrative sanctions. In particular, the alteration of the frame number results in the immediate invalidity of the warranty.

FRAME NUMBER

The frame number (1) is stamped on the right side of the steering column.

Frame no. _____

ENGINE NUMBER

The engine number (2) is stamped on the rear part, near the front sprocket.

Engine no. _____



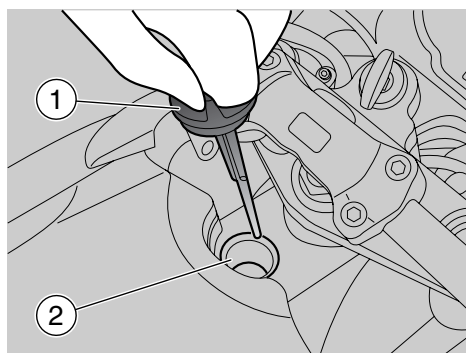
CHECKING THE ENGINE OIL LEVEL AND TOPPING UP

Carefully read page 57 (MAINTENANCE) and page 41 (ENGINE OIL).

Periodically check the engine oil level, change the oil after the first 1000 km (625 mi) and successively every 10000 km (6250 mi) or 12 months. Have the oil changed by your **aprilia** Authorised Dealer.

For the check, proceed as follows:

NOTE To warm the engine and have the engine oil reach the operating temperature, do not let the engine idle with the vehicle at rest. According to the correct procedure, it is advisable to carry out the check after a trip or after covering approximately 15 km (10 mi) on a road outside town (this is sufficient for the engine oil to reach the operating temperature).



- ◆ Stop the engine, see page 54 (STOPPING).
- ◆ Keep the vehicle in vertical position, with the two wheels resting on the ground.
- ◆ Insert the plug-dipstick (1) completely in the filler (2), **without screwing it**.
- ◆ Extract the plug-dipstick (1) again and read the oil level on the dipstick:

MAX = maximum level

MIN = minimum level.

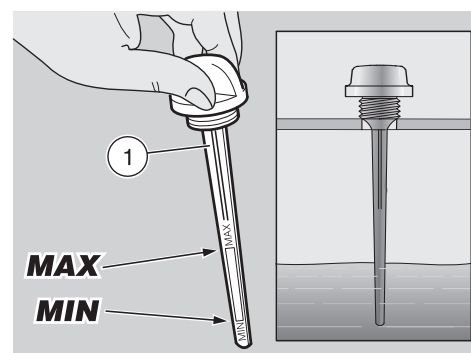
The difference between “**MAX**” and “**MIN**” amounts to approximately 300 cu. cm.

- ◆ The level is correct when the oil almost reaches the “**MAX**” mark.

⚠ CAUTION

Never exceed the “MAX” mark, nor let the oil get below the “MIN” mark, in order to avoid serious damage to the engine.

If necessary, top up the engine oil by proceeding as follows:



⚠ CAUTION

Do not put additives or other substances into the oil.

If you use a funnel or other similar items, make sure that they are perfectly clean.

NOTE Use high-quality 15W – 50 oil, see page 93 (LUBRICANT CHART).

- ◆ After extracting the plug-dipstick (1), top up the tank through the filler (2) until reaching the correct level, see page 93 (LUBRICANT CHART).

FRONT WHEEL

⚠ CAUTION

The disassembly and reassembly of the front wheel may be difficult for unskilled operators.

If necessary, contact your **aprilia** Authorised Dealer.

If you want to perform these operations personally, keep to the following instructions.

Carefully read page 57 (MAINTENANCE).

While disassembling and reassembling the wheel, be careful not to damage the brake lines, the disc and the pads.

⚠ WARNING

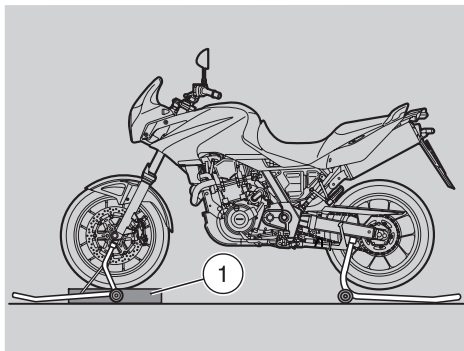
Riding with damaged rims may be dangerous for the rider, other persons and the vehicle.

Check the conditions of the wheel rim and have it changed if damaged.

⚠ CAUTION

Remove and refit the wheel only if you have a torque wrench available that could ensure correct tightening torques.

NOTE Weight without rider: 180 kg.



DISASSEMBLY

- ◆ Position the vehicle on the appropriate front support stand, see page 67 (POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND **OPT**).
- ◆ Put a support (1) under the tyre, in such a way as to keep the wheel in its position after loosening it.

⚠ CAUTION

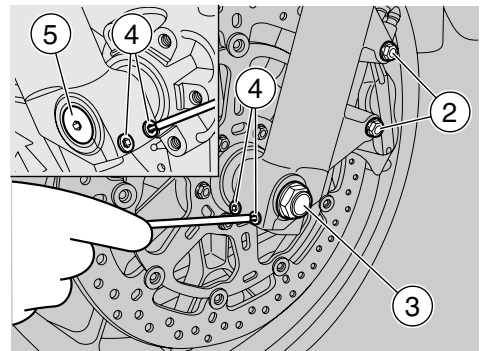
Make sure that the vehicle is stable.

- ◆ Loosen the retaining screws (2) and remove the brake calliper.

⚠ CAUTION

Do not touch the front brake calliper.

- ◆ Unscrew the wheel shaft nut (3).
- ◆ Partially loosen the clamp screws (4) on either side of the wheel shaft (5).
- ◆ Unscrew the wheel shaft (5) completely.

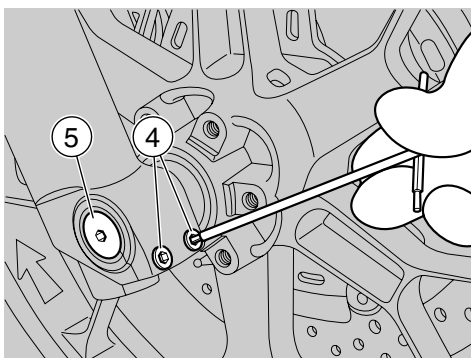


NOTE To facilitate the extraction of the wheel shaft, slightly raise the wheel.

- ◆ Support the front wheel and manually withdraw the wheel shaft (5).
- ◆ Collect the spacers on either side of the wheel.
- ◆ Remove the wheel by withdrawing it from the front.

⚠ CAUTION

Never pull the front brake lever after removing the wheel, otherwise the calliper pistons may come out of their seats, thus causing the outflow of the brake fluid. In this case consult your **aprilia** Authorised Dealer, who will carry out the proper maintenance operation.



REASSEMBLY

- ◆ Smear a layer of grease all along the wheel shaft (5), see page 93 (LUBRICANT CHART).

⚠ CAUTION

While reassembling the wheel, be careful not to damage the brake pipes, discs and pads.

- ◆ Position the wheel between the fork legs on the support (1).

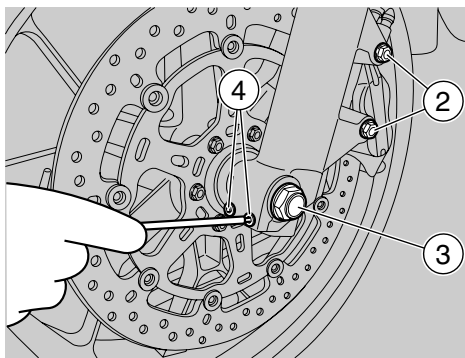
⚠ CAUTION

Proceed with care while inserting the disc in the brake calliper.

⚠ WARNING

Danger of injury. Do not insert your fingers to align the holes.

- ◆ Move the wheel until its central hole and the holes on the fork are aligned.
- ◆ Set one of the two spacers between wheel hub and fork right leg.
- ◆ Position the other spacer between the wheel hub and the fork left leg.
- ◆ Push the wheel shaft (5) fully home from the right side.



- ◆ Tighten the wheel shaft clamp bolts to the right (4).
- ◆ Tighten the wheel shaft nut (3).
- ◆ Tighten the wheel shaft clamp bolts to the left (6).
- ◆ Loosen the wheel shaft clamp bolts to the right (4).
- ◆ Press on the front end to settle the fork legs.
- ◆ Tighten the wheel shaft clamp bolts to the right (4).

Wheel nut tightening torque (3): 80 Nm (8 kgm).

Remove the support (1) that upon disassembly was put under the tyre.

Refit the brake calliper and tighten the retaining screws (2).

Brake calliper screws (2) tightening torque: 50 Nm (5 kgm).

⚠ WARNING

Due to the weight and dimensions of the vehicle, the following operation must be performed by two persons.

NOTE Weight without rider: 180 kg.

- ◆ Remove the front support stand, see page 67 (POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND **OPT**).
- ◆ Remove the rear support stand, see page 67 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND **OPT**).
- ◆ With pulled front brake lever, press the handlebar repeatedly, thrusting the fork downwards. In this way the fork legs will settle properly.
- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Tighten the wheel shaft clamp bolts (4) on either side.

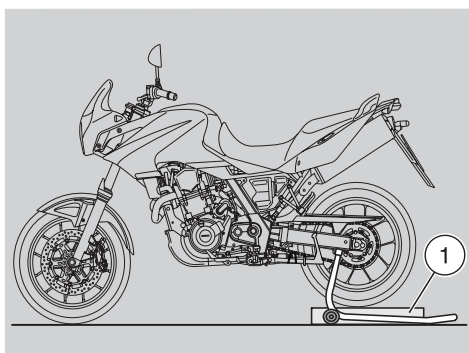
Wheel shaft clamp screws tightening torque (4): 12 Nm (1.2 kgm).

- ◆ Make sure that the following components are not dirty:
 - tyre;
 - wheel;
 - brake disc.

⚠ WARNING

After reassembly, pull the front brake lever repeatedly and check the correct functioning of the braking system.

Have the tightening torques, centring and balancing of the wheel checked by an **aprilia Authorised Dealer, in order to avoid accidents that may be harmful for you and/or other people.**



REAR WHEEL

CAUTION

The disassembly and reassembly of the rear wheel may be difficult for unskilled operators.

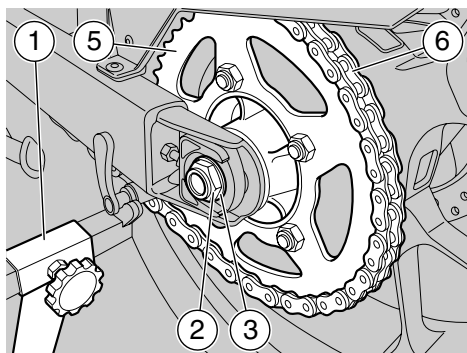
If necessary, contact your **aprilia** Authorised Dealer.

If you want to perform these operations personally, keep to the following instructions.

Carefully read page 57 (MAINTENANCE).

WARNING

Before carrying out the following operations, let the engine and the silencer cool down until they reach room temperature, in order to avoid burns.



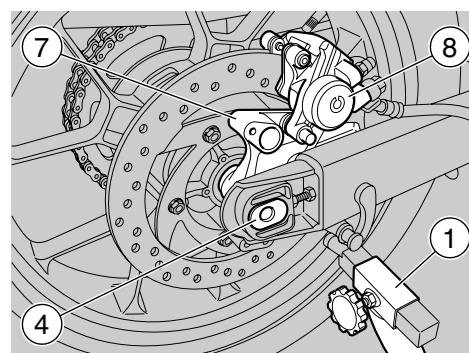
WARNING

Riding with damaged rims may be dangerous for the rider, other persons and the vehicle. Check the conditions of the wheel rim and have it changed if damaged.

DISASSEMBLY

- ◆ Position the vehicle on the appropriate rear support stand, see page 67 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND **OPT**).
- ◆ Put a support (1) under the tyre, in such a way as to keep the wheel in its position after loosening it.
- ◆ Unscrew and remove the nut (2) and retrieve the washer (3).

Wheel nut (2) tightening torque: 100 Nm (10 kgm).

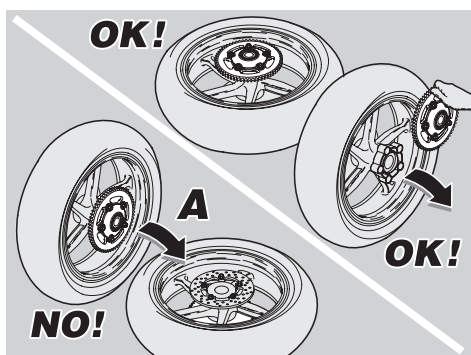


NOTE To facilitate the extraction of the wheel shaft, slightly raise the wheel.

- ◆ Withdraw the wheel shaft (4) from the right side.

NOTE Slide the drive chain (5) off the sprocket (6).

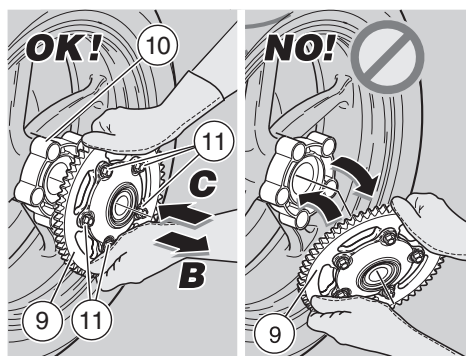
- ◆ Make the wheel advance and release the drive chain (5) from the rear sprocket (6).
- ◆ Withdraw the wheel from the swinging arm from behind, carefully withdrawing the disc from the brake calliper.
- ◆ Remove the support plate (7) together with brake calliper (8).



⚠ CAUTION

Do not operate the rear brake lever after removing the wheel, since the pistons may go out of their seats and cause brake fluid leakage. In this case consult an **aprilia Authorised Dealer, who will carry out the proper maintenance operation.**

Proceed with care. If the final drive assembly (9) is mounted to the flexible coupling holder (10), do not turn the rear wheel over or place it horizontally lying on the rear chain sprocket (A) side, or the final drive assembly will come off and the sprocket (6) might damage.



NOTE The removal of the final drive unit is not necessary if the wheel is in the normal running position (vertical) or in horizontal position with the rear sprocket facing upwards and in both cases secured against overturning.

NOTE Do not disturb the five nuts (11). The whole final drive unit must be withdrawn from the flexible coupling holder.

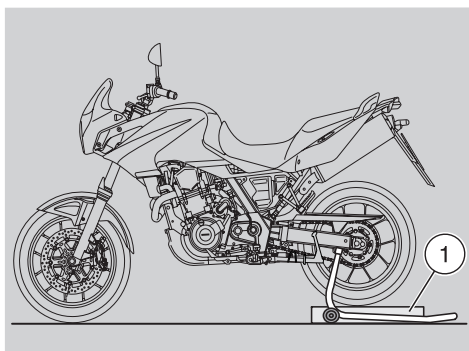
- ◆ Using both hands work (B) on sprocket (6) outer diameter and slide out the final transmission assembly (9), hold it parallel to the wheel shaft.
- ◆ Remove the five flexible couplings from the flexible coupling holder (10).

NOTE Check the conditions of the five flexible couplings; if they are damaged or excessively worn, change them, see page. 58 (REGULAR SERVICE INTERVALS CHART).

REASSEMBLY

NOTE Insert the final transmission unit, parallel to the wheel axis, introducing the drive pins in the relevant seats, between a flexible coupling and the other.

- ◆ Position the five flexible couplings in the relevant seats in the flexible coupling holder (10).
- ◆ Using both hands work (C) on sprocket (6) outer diameter and slide in the final transmission assembly (9) inside holder (10).



⚠ CAUTION

Before proceeding with the reassembly, make sure that support plate (8) of the brake calliper (9) is positioned correctly; the plate slot must be inserted in the appropriate stop pin in the inner part of the swinging arm right section.

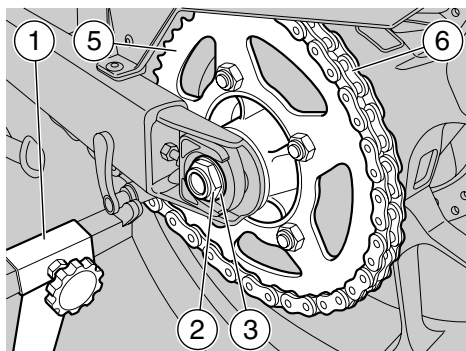
Insert the disc in the brake calliper carefully.

- ◆ Position the wheel between the swinging arm sections on the support (1).

⚠ WARNING

Do not insert your fingers between the chain and the rear sprocket.

- ◆ Make the wheel advance and position the drive chain (5) on the rear sprocket (6).
- ◆ Uniformly apply a moderate quantity of grease on the wheel shaft (4), see page 93 (LUBRICANT CHART).



⚠ WARNING

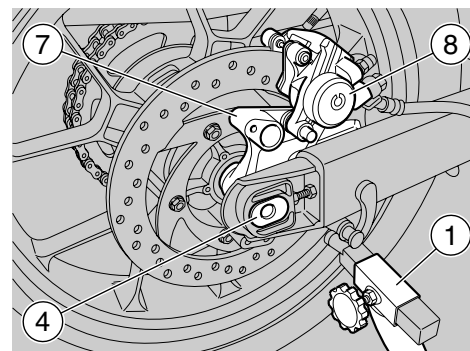
Danger of injury. Do not insert your fingers to align the holes.

- ◆ Move the wheel backwards, until its central hole and the holes on the swinging arm are aligned.
- ◆ Rotate the support plate (8), complete with brake calliper (9) and with fulcrum on the stop pin, until it is aligned with the holes.
- ◆ Introduce the wheel shaft (4) completely from the left side.

NOTE Make sure that the wheel shaft (4) is completely inserted.

- ◆ Position the washer (3) and tighten the wheel nut (2) manually.
- ◆ Lock the rotation of the wheel shaft (4) with the appropriate wrench and tighten the nut (2).

Wheel nut tightening torque (2): 100 Nm (10 kgm).



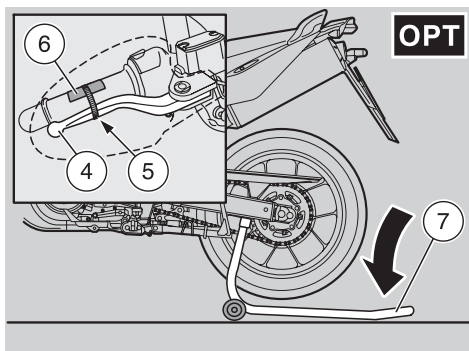
- ◆ Make sure that the following components are not dirty:

- tyre;
- wheel;
- brake disc.

⚠ CAUTION

After reassembly, pull the rear brake lever repeatedly and check the correct braking system operation.

Have the tightening torques, centring and balancing of the wheel checked by an **aprilia** Authorised Dealer, in order to avoid accidents that may be harmful for you and/or other people.



POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND **OPT**

- ◆ Pull the front brake lever (4) completely, then put a small piece of cardboard (5) on the grip and keep the front brake lever pulled by holding it against the grip by means of a plastic band (6).

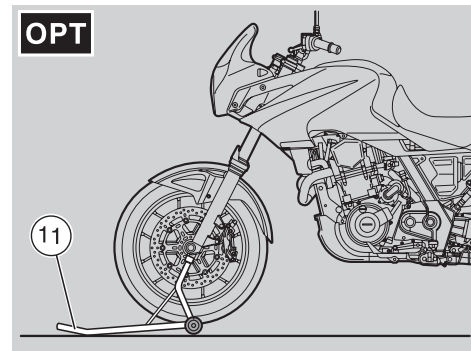
⚠ WARNING

Raise the vehicle by means of the two swinging arm sections only.

- ◆ Insert the stand from the rear side of the vehicle and position it so that the two support pins (3) hook to the swinging arm pins.

NOTE Have someone help you keep the vehicle in vertical position with the two wheels on the ground.

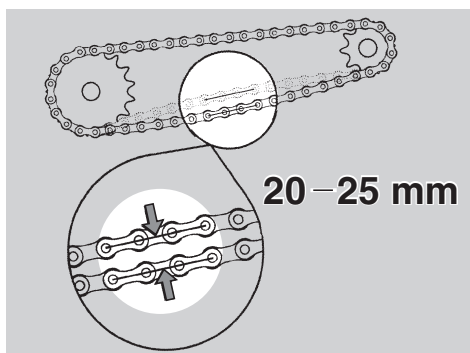
- ◆ Rest one foot on the rear part of the stand (7).
- ◆ Push the stand (7) downwards until it reaches the end of its stroke (see figure).



POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND **OPT**

NOTE To position the vehicle on the front support stand it is necessary to use the appropriate rear support stand **OPT**.

- ◆ Position the vehicle on the appropriate rear support stand **OPT**, page 67 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND **OPT**).
- ◆ Insert the two ends of the stand (9) in the two holes (10) positioned on the lower ends of the front fork.
- ◆ Rest one foot on the front part of the stand (11).
- ◆ Push the stand (11) downwards until it reaches the end of its stroke (see figure).



DRIVE CHAIN

Carefully read page 57 (MAINTENANCE).

The vehicle is equipped with an endless chain, in which a ring link joint is not used.

⚠ CAUTION

An excessive slackening of the chain may cause noise or make the chain rattle, with consequent wear of the shoe and of the chain guide plate. Periodically check the slack and adjust it if necessary, see page 68 (ADJUSTMENT).

To change the chain, contact an **aprilia** Authorised Dealer, who will ensure you prompt and accurate servicing.

Incorrect maintenance may cause the untimely wear of the chain and/or damages to the front sprocket and/or the rear sprocket.

⚠ CAUTION

Carry out the maintenance operations more frequently if you use the vehicle in difficult conditions or on dusty and/or muddy roads.

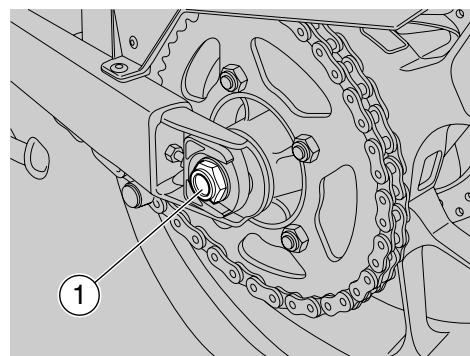
CHECKING THE SLACK

To check the slack, proceed as follows:

- ◆ Stop the engine, see page 54 (STOPPING).
- ◆ Position the vehicle on the appropriate rear support stand, see page 67 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND **OPT**).
- ◆ Position the gear shift lever in neutral.
- ◆ Make sure that the vertical oscillation, in an intermediate point between front sprocket and rear sprocket in the lower part of the chain, is included between 20–25 mm.
- ◆ Rotate the wheel manually, in such a way as to check the vertical oscillation of the chain even in other positions; the slack must be constant in all the wheel rotation phases.

⚠ CAUTION

If in some positions the slack is higher than in others, this means that there are crushed or seized links; in this case, contact an **aprilia** Authorised Dealer. To prevent the risk of seizures, lubricate the chain frequently, see page 69 (CLEANING AND LUBRICATION).

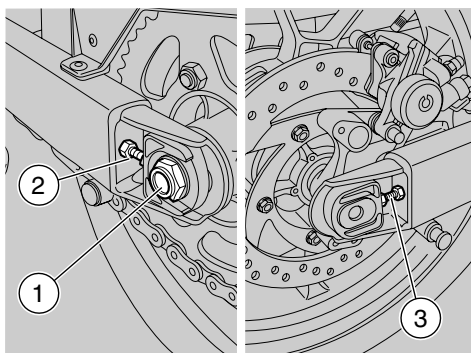


If the slack is the same in all positions, but higher than 25 mm or lower than 20 mm, adjust it, see page 68 (ADJUSTMENT).

ADJUSTMENT

If after the check it is necessary to adjust the chain tension, slacken the chain to increase the slack, tighten the chain to decrease it.

- ◆ Position the vehicle on the appropriate rear support stand, see page 67 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND **OPT**).
- ◆ Loosen the nut (1).



NOTE To centre the wheel there are reference numbers connected to the adjusters (2) and (3) located on swingarm sections.

- ◆ Act on the left (2) and right (3) adjusters and adjust the chain slack, making sure, on both sides of the vehicle, that the same reference marks can be seen.
- ◆ Tighten the nut (1).

Wheel nut tightening torque (1): 100 Nm (10 kgm).

- ◆ Check the chain slack, see page 68 (CHECKING THE SLACK).

CHECKING THE DRIVING CHAIN, THE FRONT AND REAR SPROCKET WEAR

Further, check the chain and sprockets and make sure that they do not present:

- damaged rollers;
- loose pins;
- dry, rusty, crushed or seized links;
- excessive wear;
- missing O-rings;
- sprocket or teeth excessively worn or damaged.

⚠ CAUTION

If the chain rollers are damaged, the pins are loose and/or the O-rings are damaged or missing, it is necessary to change the whole chain unit (both sprockets and chain).

⚠ CAUTION

Lubricate the chain frequently, especially if there are dry or rusty parts.

The crushed or seized links must be lubricated and made work again.

If this is not possible, contact an *aprilia* Authorised Dealer, who will provide for changing the chain.

- ◆ Check the wear of the swinging arm protection shoe.
- ◆ Check the chain slider for wear. Change it, if necessary.

CLEANING AND LUBRICATION

⚠ CAUTION

The drive chain is provided with O-rings in-between the links, in order to keep the grease inside them.

Carry out the adjustment, lubrication, cleaning and change of the chain with great care.

Never wash the chain with water jets, steam jets, high-pressure water jets and highly inflammable solvents.

- ◆ Wash the chain with naphtha or kerosene. If it tends to rust quickly, intensify the maintenance intervals.

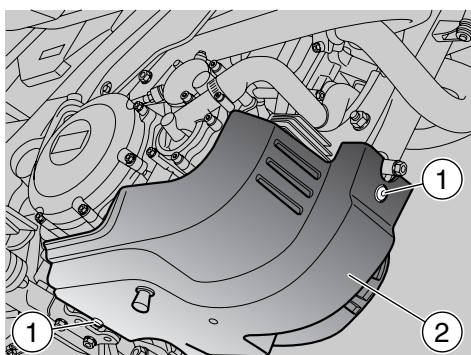
Lubricate the chain every 500 km (312 mi) or whenever necessary.

- ◆ After washing the chain and letting it dry, lubricate it with spray grease for chains provided with sealing rings, see page 93 (LUBRICANT CHART).

⚠ CAUTION

The lubricants for chains available on the market may contain substances that are dangerous for the rubber sealing rings of the chain.

NOTE Do not use the vehicle soon after lubricating the chain, since due to the centrifugal force the lubricant would be sprayed outwards and dirty the surrounding areas.



REMOVING THE OIL SUMP GUARD

Carefully read page 57 (MAINTENANCE).

⚠ WARNING

Wait until the engine and the exhaust silencer have completely cooled down.

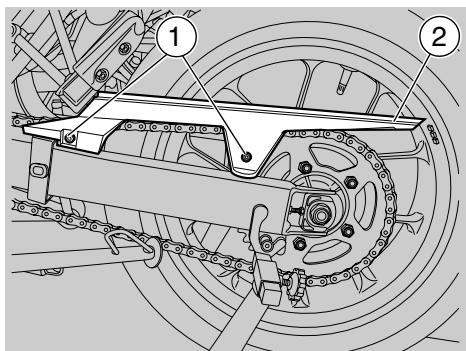
- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Unscrew and remove the two screws (1).

⚠ CAUTION

Handle the plastic and painted components with care to avoid scraping or damaging them.

- ◆ Remove the oil sump guard (2).

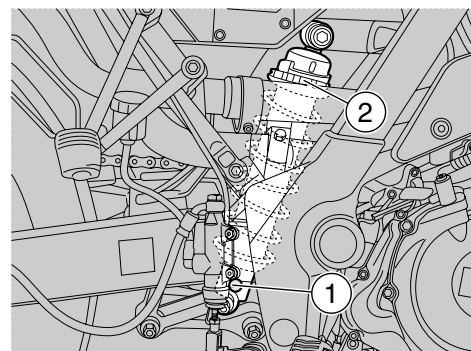
NOTE If the deadening material inside the oil sump guard (2) is deteriorated, contact an **aprilia Authorised Dealer** to have it changed.



REMOVING THE DRIVE CHAIN GUARDS

Carefully read 57 (MAINTENANCE).

- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Unscrew and remove the two screws (1).
- ◆ From the opposite side, unscrew and remove the screw (2).



REAR SUSPENSION

The rear suspension consists of a spring-shock absorber unit, fixed to the frame by means of a uni-ball and to the swinging arm by means of lever systems.

For the setting of the vehicle track alignment, the shock absorber is provided:

- with a screw adjuster (1) for the adjustment of the hydraulic rebound damping;
- with an adjuster ring nut (2) for the adjustment of the spring preload.

ADJUSTING THE REAR SHOCK ABSORBER

Check and if necessary adjust the rear shock absorber every 20000 km (12500 mi).

The standard setting of the rear shock absorber is adjusted so that it is suitable for most driving conditions.

The standard adjustment, set by the manufacturer, is suitable for a rider weighing approximately 70 kg.

If your weight and needs are different, for example in case of ride with passenger and full load, it is advisable to contact an **aprilia Authorised Dealer**.

According to the conditions of use of the vehicle, it is possible to adjust the hydraulic rebound damping by adjusting the screw (1); for the adjustment, keep to the following indications:

Uneven or irregular road surface – HARD adjustment:

- ◆ Turn the screw (1) to the right (clockwise).

Normal or regular road surface – SOFT adjustment:

- ◆ Turn the screw (1) to the left (anticlockwise).

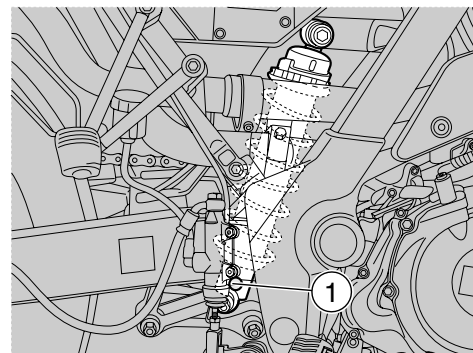
CAUTION

Adjust the spring preload and the hydraulic rebound damping according to the conditions of use of the vehicle.

When the spring preload is increased, it is necessary to increase also the hydraulic rebound damping with extended shock absorber, in order to avoid sudden jerks while riding.

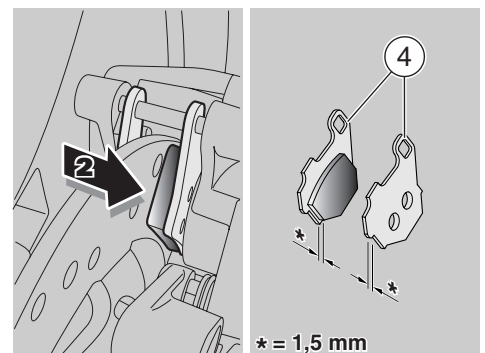
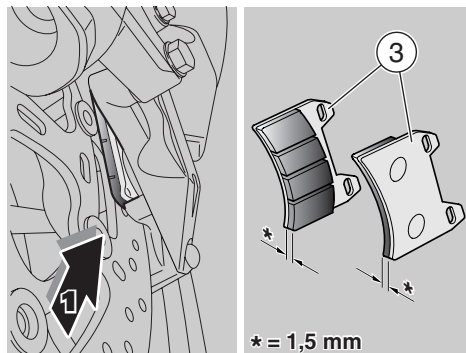
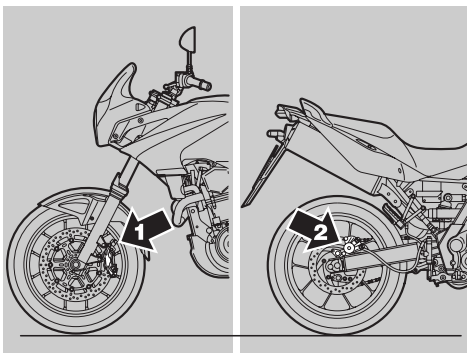
If necessary, contact an **aprilia Authorised Dealer**.

Test the vehicle repeatedly on the road, until obtaining the optimal adjustment.



REAR SHOCK ABSORBER ADJUSTMENT TABLE

Rear shock absorber	Shock absorber preload (notches from fully unloaded)	Hydraulic damping (clicks from fully closed/turns)	Front/rear tyre pressure (STRADA version)	Front/rear tyre pressure (TRAIL version)
Rider only (SOFT setting)	3	13 (1 turn)	1.8/2.0	1.9/2.1
Rider + Luggage or Rider + Passenger (MEDIUM setting)	9	5 (1/2 turn)	1.9/2.2	1.9/2.3
Rider + Passenger + Luggage (HARD setting)	9	3 (1/4 turn)	1.9/2.2	1.9/2.3



CHECKING THE BRAKE PAD WEAR

Carefully read page 33 (BRAKE FLUID - recommendations), page 34 (DISC BRAKES) and page 57 (MAINTENANCE).

NOTE The following information refer to a single braking system, but are valid for both.

Check the brake pad wear after the first 1000 km (625 mi) and successively every 2000 km (1250 mi) and before every trip.

The wear of the disc brake pads depends on the use, on the kind of ride and on the road.

⚠ WARNING

Check the wear of the brake pads, especially before every trip.

To carry out a rapid checking of the wear of the pads, proceed as follows:

- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Carry out a visual check between the disc and the pads, proceeding:
 - from below, on the front part, for the front brake calliper (1);
 - from above, on the rear part, for the rear brake callipers (2).

⚠ CAUTION

The excessive wear of the friction material would cause the contact of the pad metal support with the disc, with consequent metallic noise and production of sparks from the calliper; braking efficiency, safety and soundness of the disc would thus be negatively affected.

If the thickness of the friction material [even of one front (3) or rear pad (4) only] has reduced to about **1.5 mm** (or even if only one of the wear indicators is not visible any longer):

- for the front brake calliper have both front brake calliper pads changed.
- for the rear brake calliper, have both pads of the calliper changed.

⚠ WARNING

Have the pads changed by an **aprilia** Authorised Dealer.

IDLING ADJUSTMENT

Carefully read page 57 (MAINTENANCE).

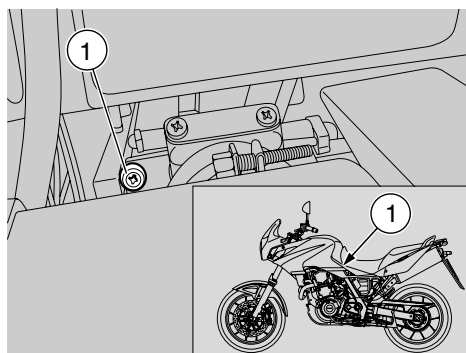
NOTE Should the normal operating temperature not be reached, there might be a failure in the engine idling speed. This is normal, since the engine idling rpm go back to regular values when the engine reaches the normal running temperature.

To check the engine idling rpm correctly, proceed as follows:

- ◆ Ride for a few miles until reaching the normal operating temperature, see page 16 (Coolant temperature indicator "E").
- ◆ Position the gear shift lever in neutral (green warning light "N" on).
- ◆ Check the engine idling rpm on the revolution counter.

The engine idling speed must be about 1500 ± 100 rpm.

If the engine idling rpm are within the values indicated, do not modify them in any way.



⚠ CAUTION

In case of erratic engine idling rpm, contact exclusively an aprilia Authorised Dealer.

An excessive increase in the engine idling rpm may cause faults in the operation of the engine and damage the engine itself and other components.

It is advisable to change the setting only when it is really necessary (if, when the throttle grip is released, the engine stalls or keeps running at higher rpm than prescribed) and it is impossible to reach an aprilia Authorised Dealer.

Only when really necessary:

⚠ CAUTION

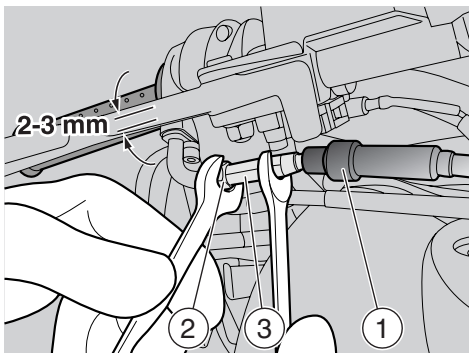
Risk of burns.

Some parts of the vehicle are extremely hot (for example, the exhaust pipe and, to a lesser extent, the exhaust pipe guard).

Wear safety gloves to protect yourself from hot parts of the vehicle.

Proceed with care and do not touch the exhaust pipe guard for any reason whatsoever.

- ◆ Remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT).
- ◆ Turn the adjusting screw (1).
 - BY SCREWING IT (clockwise), you increase the rpm;
 - BY UNSCREWING IT (anticlockwise), you decrease the rpm;
- ◆ Twist the throttle grip, accelerating and decelerating a few times to make sure that it operates correctly and to check if the idling speed is constant.



- ◆ After the adjustment, tighten the lock nut (2) and check the idle stroke again.
- ◆ Put back the protection element (1).

⚠ CAUTION

After the adjustment, make sure that the rotation of the handlebar does not modify the engine idling rpm and that the throttle grip returns smoothly and automatically to its original position after being released.

ADJUSTING THE ACCELERATOR CONTROL

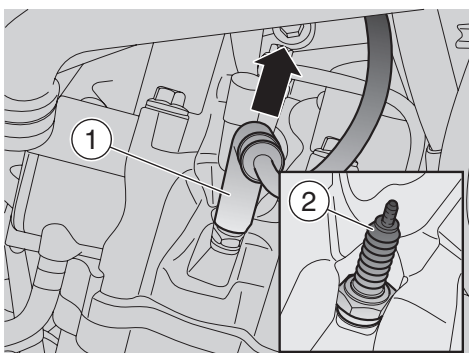
Carefully read page 57 (MAINTENANCE).

Have the accelerator control cables checked by an **aprilia Authorised Dealer** after the first 1000 km (625 mi) and successively every 10000 km (6250 mi).

The idle stroke of the throttle grip must be **2–3 mm**, measured on the edge of the grip itself.

If not, proceed as follows:

- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Withdraw the protection element (1).
- ◆ Loosen the lock nut (2).
- ◆ Rotate the adjuster (3) in such a way as to restore the prescribed value.



SPARK PLUG

Carefully read page 57 (MAINTENANCE).

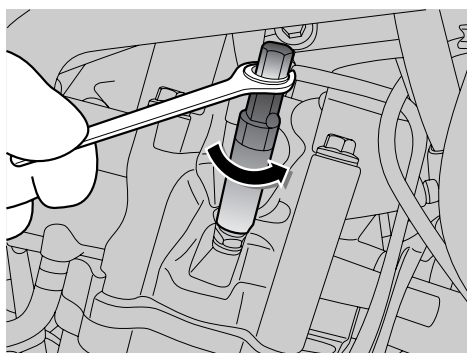
Check the spark plug every 10000 km (6250 mi), change them every 20000 km (12500 mi).

Periodically remove the spark plug and clean it carefully, removing carbon deposits; change it if necessary.

To reach the spark plug:

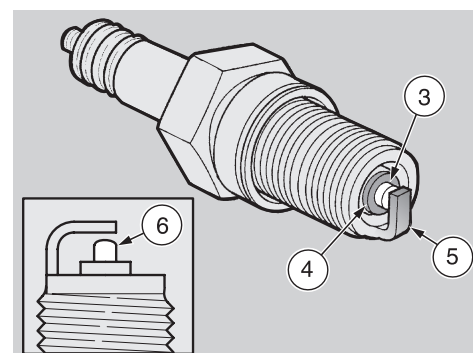
⚠ WARNING

Before carrying out the following operations, let the engine and the silencer cool down until they reach room temperature, in order to avoid burns.



For the removal, proceed as follows:

- ◆ Remove the cap (1) of the spark plug (2).
- ◆ Remove any trace of dirt from the spark plug base.
- ◆ Introduce the special spanner provided in the tool kit on the spark plug.
- ◆ Unscrew the spark plug and extract it from its seat, taking care to prevent dust or other substances from getting inside the cylinder.



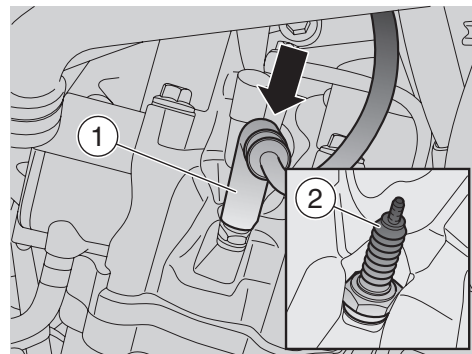
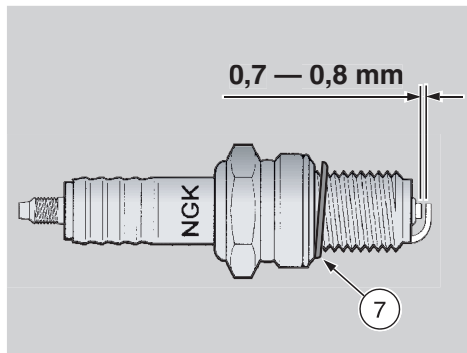
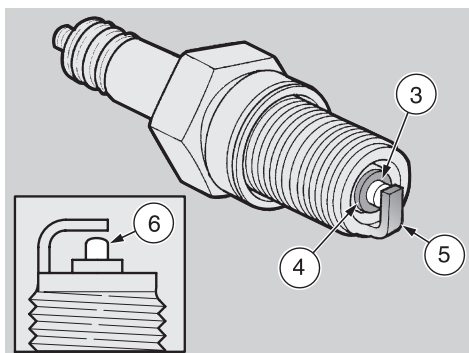
For the check and cleaning:

Key:

- centre electrode (3);
- insulating (4);
- side electrode (5).

- ◆ Make sure that there are neither carbon deposits, nor corrosion marks on the electrodes and on the insulating material; if necessary, blow with compressed air to clean them.

If the spark plug has crackings on the insulating material, corroded electrodes, excessive deposits or the tip (6) of the central electrode (3) is rounded, it must be changed.



⚠ CAUTION

When changing the spark plug, check the thread pitch and length.

If the threaded part is too short, the carbon deposits will accumulate on the thread seat, and therefore the engine may be damaged during the installation of the right spark plug.

Use the recommended type of spark plugs only, see page 90 (TECHNICAL DATA), in order not to compromise the life and performance of the engine.

- ◆ Check the spark plug gap with a thickness gauge.
The spark plug gap must be **0.7 – 0.8 mm**; if necessary, adjust it, bending the centre electrode (6) with care.
- ◆ Make sure that the washer (7) is in good conditions.

For the installation:

- ◆ With the washer on (7), screw the spark plug by hand in order not to damage the thread.
- ◆ Tighten the spark plug by means of the spanner you will find in the tool kit, giving it half a turn to compress the washer.

Spark plug tightening torque: 20 Nm (2.0 kgm).

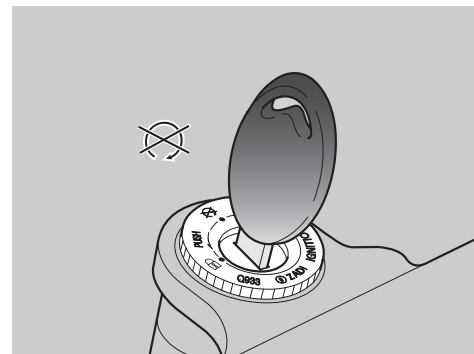
⚠ CAUTION

The spark plug must be well tightened, otherwise the engine may overheat and be seriously damaged.

⚠ CAUTION

Make sure that the cap (1) is correctly connected to the spark plug (2). Due to the vibrations of the engine, the incorrect position would cause the disconnection of the spark plug cap, with serious damage to the engine.

- ◆ Correctly insert the cap (1) in the spark plug (2), until you hear the click.



BATTERY

Carefully read page 57
(MAINTENANCE).

⚠ WARNING

Risk of fire.

Keep fuel and other flammable substances away from the electrical components.

The battery gives off explosive gases; keep it away from flames, sparks, cigarettes and any other source of heat.

During the recharging or the use, make sure that the room is properly ventilated and avoid inhaling the gases released during the recharging.

KEEP AWAY FROM CHILDREN.

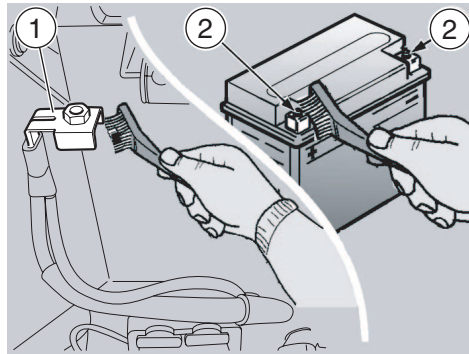
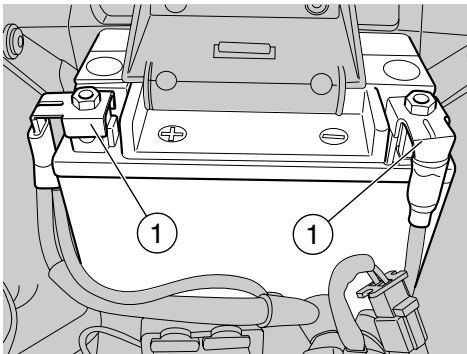
⚠ CAUTION

Never invert the connection of the battery cables.

Connect and disconnect the battery with the ignition switch in position "OFF", otherwise some components may be damaged.

Connect first the positive cable (+) and then the negative cable (-).

Disconnect following the reverse order.



CHECKING AND CLEANING THE TERMINALS

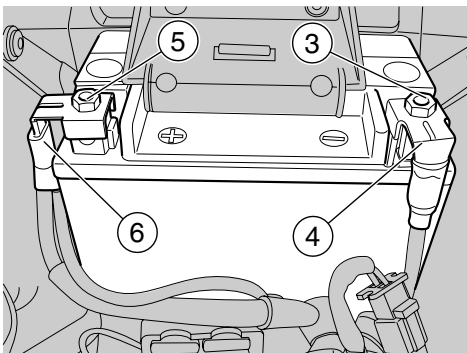
Carefully read page 77 (BATTERY).

- ◆ Make sure that the ignition switch is in position "X".
- ◆ Remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT)
- ◆ Make sure that the cable terminals (1) and the battery terminals (2) are:
 - in good conditions (and not corroded or covered with deposits);
 - covered with neutral grease or Vaseline.

If necessary, proceed as follows:

- ◆ Remove the battery, see page 79 (REMOVING THE BATTERY).
- ◆ Brush the cable terminals (1) and the battery terminals (2) with a wire brush, in order to eliminate any trace of corrosion.

- ◆ Install the battery, see page 80 (INSTALLING THE BATTERY).
- ◆ Refit the seat, see page 27 (UNLOCKING/LOCKING THE SEAT).



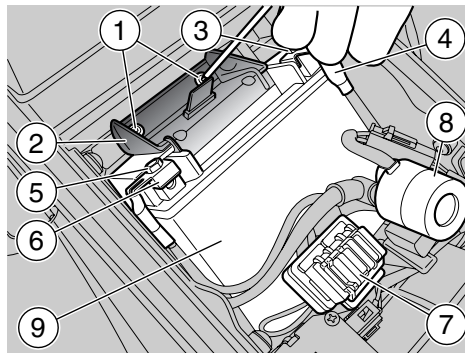
REMOVING THE BATTERY

Carefully read page 77 (BATTERY).

- ◆ Make sure that the ignition switch is in position "OFF".
- ◆ Remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT)
- ◆ Release and remove the screws (1).
- ◆ Remove the battery cover (2).
- ◆ Unscrew and remove the screw (3) on the negative terminal (-).
- ◆ Move the negative cable (4) aside.
- ◆ Unscrew and remove the screw (5) on the positive terminal (+).
- ◆ Move aside the positive cable (6).
- ◆ Slide out fuse carrier (7) and starter relay (8) from the relevant seats and move them aside.

⚠ CAUTION

Do not force the electric cables.

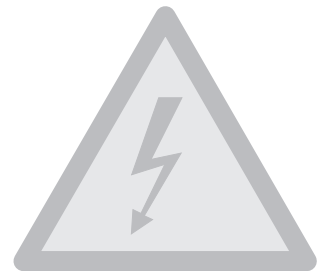


- ◆ Grasp the battery (9) firmly and remove it from its compartment, by bending it towards the outside and lifting it.

⚠ WARNING

Once it has been removed, the battery must be stored in a safe place and kept away from children.

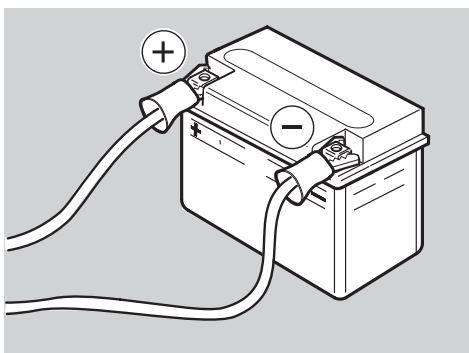
- ◆ Position the battery on a flat surface, in a cool and dry place.
- ◆ Refit the seat, see page 27 (UNLOCKING/LOCKING THE SEAT)



⚠ WARNING

Upon reassembly, connect first the positive cable (+) and then the negative cable (-).

NOTE For the installation of the battery, see page 80 (INSTALLING THE BATTERY).



CHARGING THE BATTERY

Carefully read page 77 (BATTERY).

- ◆ Remove the battery, see page 79 (REMOVING THE BATTERY).
- ◆ Prepare a suitable battery charger, specific for MF batteries.
- ◆ Set the charger for the desired type of recharge.

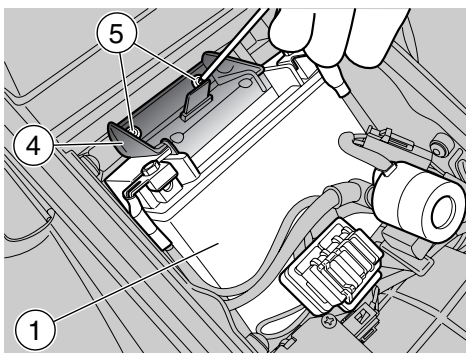
NOTE A recharge with an amperage equal to 1/10th of the battery capacity is recommended.

- ◆ Connect the battery with a battery charger.

⚠ WARNING

During the recharging or the use, make sure that the room is properly ventilated and avoid inhaling the gases released during the recharging.

- ◆ Switch on the battery charger.



⚠ WARNING

Reassemble the battery only 5/10 minutes after disconnecting the recharge apparatus, since the battery continues to produce gas for a short lapse of time.

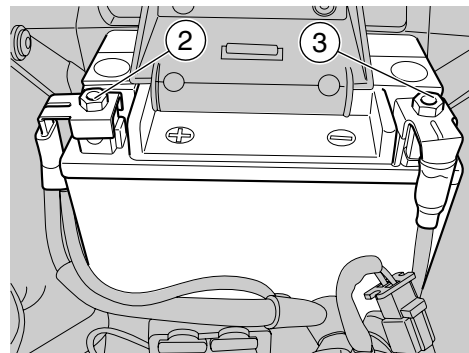
INSTALLING THE BATTERY

Carefully read page 77 (BATTERY).

- ◆ Make sure that the ignition switch is in position "O".
- ◆ Remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT)

NOTE The battery (1) must be positioned in its compartment with the terminals directed towards the outside part of the vehicle.

- ◆ Put the battery (1) in its compartment.



⚠ WARNING

Upon reassembly, connect first the positive cable (+) and then the negative cable (-).

- ◆ Connect the positive terminal (+) by means of the screw (2).
- ◆ Connect the negative terminal (-) by means of the screw (3).

⚠ CAUTION

Upon reassembly always connect the battery breather pipe, to prevent the sulphuric acid vapours from corroding the electric system, painted parts, rubber elements or gaskets when they exit the breather pipe itself.

- ◆ Put back the battery cover (4).
- ◆ Position and tighten the screws (5).
- ◆ Refit the seat, see page 27 (UNLOCKING/LOCKING THE SEAT)



LONG INACTIVITY OF THE BATTERY

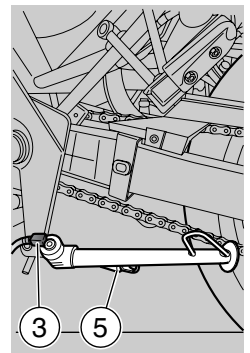
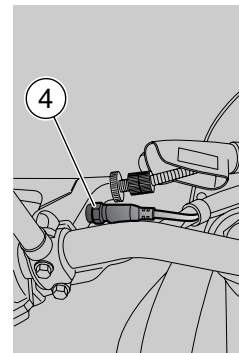
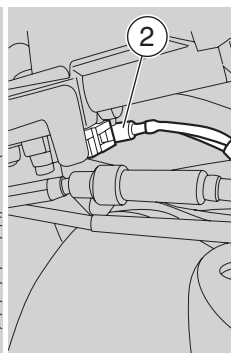
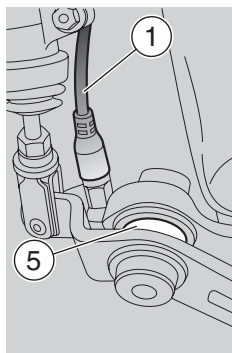
If the vehicle remains unused for more than fifteen days, it is necessary to recharge the battery, in order to prevent its sulphation, see page 80 (CHARGING THE BATTERY).

- ◆ Remove the battery, see page 79 (REMOVING THE BATTERY) and put it in a cool and dry place.

It is important to check the charge periodically (about once a month), during the winter or when the vehicle remains unused, in order to prevent the deterioration of the battery.

- ◆ Recharge it completely with a trickle charge, see p 80 (CHARGING THE BATTERY).

If the battery remains on the vehicle, disconnect the cables from the terminals.



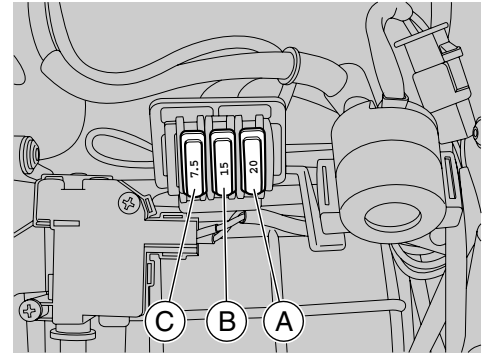
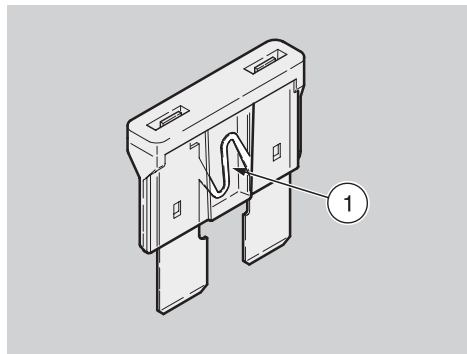
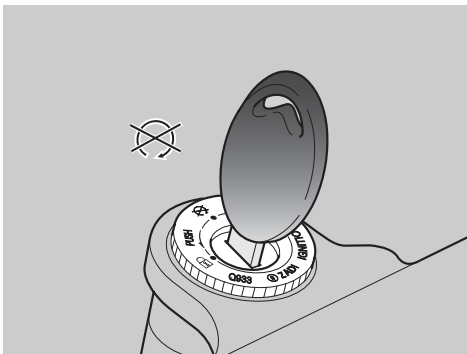
CHECKING THE SWITCHES

Carefully read page 57 (MAINTENANCE).

The vehicle is provided with four switches:

- 1) Stoplight switch on the rear brake control lever;
- 2) Stoplight switch on the front brake control lever;
- 3) Safety switch on the side stand;
- 4) Switch on the clutch control lever.

- ◆ Make sure that there are no dirt or mud deposits on the switch; the pin must be able to move without interference, returning automatically to its initial position.
- ◆ Make sure that the cables are connected correctly.
- ◆ Check the spring (5): it must not be damaged, worn or weakened.



CHANGING THE FUSES

Carefully read page 57 (MAINTENANCE).

⚠ CAUTION

Do not repair faulty fuses.

Never use fuses different from the recommended ones.

The use of unsuitable fuses may cause damages to the electric system or, in case of short circuit, even a fire.

NOTE If a fuse blows frequently, there probably is a short circuit or an overload in the electric system.

In this case it is advisable to contact an **aprilia Authorised Dealer**.

If an electric component does not work or works irregularly, or if the vehicle fails to start, it is necessary to check the fuses.

For the check, proceed as follows:

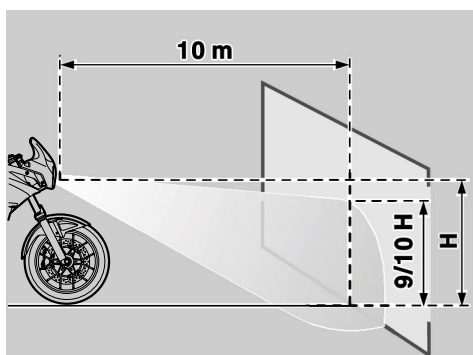
- ◆ Turn the ignition switch to position "⊗", to avoid any accidental short circuit.
- ◆ Remove the seat, see page 27 (UNLOCKING/LOCKING THE SEAT).
- ◆ Extract the fuses one by one and check if the filament (1) is broken.
- ◆ Before replacing a fuse, try to find out the cause of the trouble, if possible.
- ◆ Replace the damaged fuse with a new one having the same amperage.

NOTE If you use one of the spare fuses, put a new fuse in the proper seat.

ARRANGEMENT OF THE FUSES

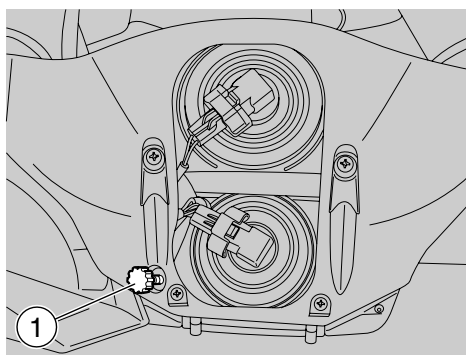
- A) Fuse 20 A (yellow) – From battery to:**
ignition switch, voltage regulator, electric cooling fan.
- B) Fuse 15 A (light blue) – From ignition switch to:**
all light loads.
- C) Fuse 7.5 A (red) – From ignition switch to:**
ignition, starting safety logic.

NOTE Three fuses are spare fuses.



ADJUSTING THE VERTICAL HEADLIGHT BEAM

NOTE To check the direction of the headlight beam, specific procedures must be adopted, in accordance with the regulations in force in the country where the vehicle is used.



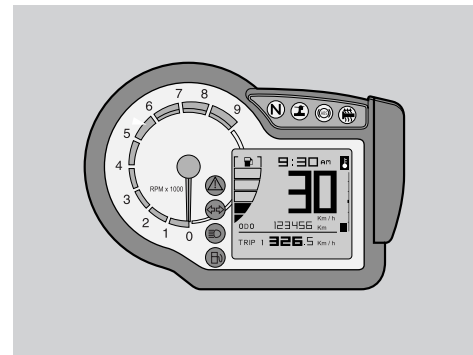
To adjust the headlight beam:

- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Working from the bottom of the headlight fairing, turn knob (1).
BY ROTATING IT CLOCKWISE, you set the beam upwards.
BY ROTATING IT ANTICLOCKWISE, you set the beam downwards.

After the adjustment:

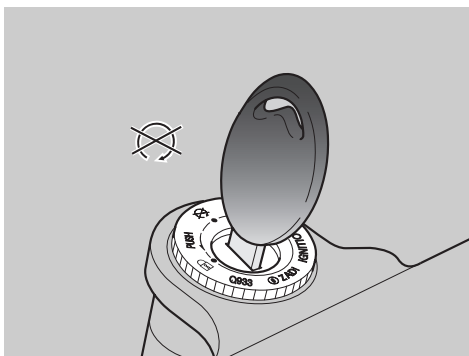
⚠ WARNING

Make sure that the vertical adjustment of the headlight beam is correct.



INSTRUMENT PANEL LIGHTING

If you need assistance or technical advice, contact an **aprilia Authorised Dealer**, who can ensure you prompt and accurate servicing.



BULBS


Carefully read page 57 (MAINTENANCE).

⚠ WARNING

Risk of fire.

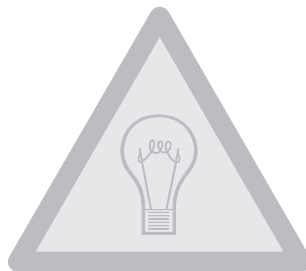
Keep fuel and other flammable substances away from the electrical components.

⚠ CAUTION

Before changing a bulb, move the ignition switch to position “” and wait a few minutes, so that the bulb cools down.

Change the bulb wearing clean gloves or using a clean and dry cloth.

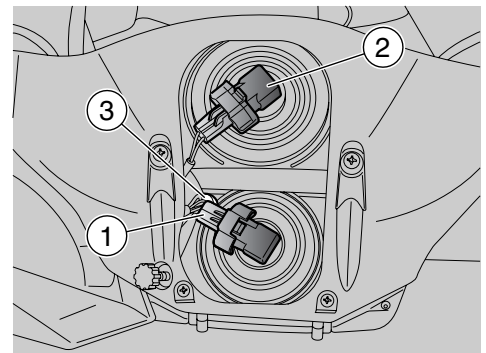
Do not leave fingerprints on the bulb, since these may cause its overheating and consequent breakage.



If you touch the bulb with bare hands, remove any fingerprint with alcohol, in order to avoid any damage.

DO NOT FORCE THE ELECTRIC CABLES.

NOTE Before changing a bulb, check the fuses, see page 82 (CHANGING THE FUSES).



CHANGING THE HEADLIGHT BULBS

Carefully read page 84 (BULBS).

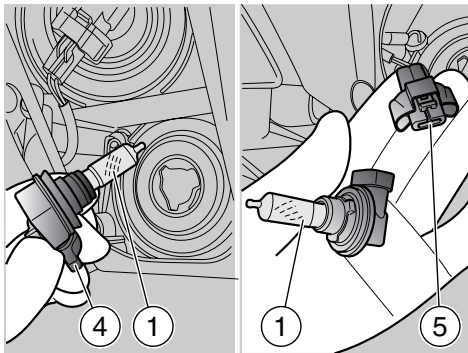
The headlight contains:

- one high beam bulb (1) (lower);
- one parking light bulb (2) (left side, centre).
- one low beam bulb (3) (upper);

To change, proceed as follows:

- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).

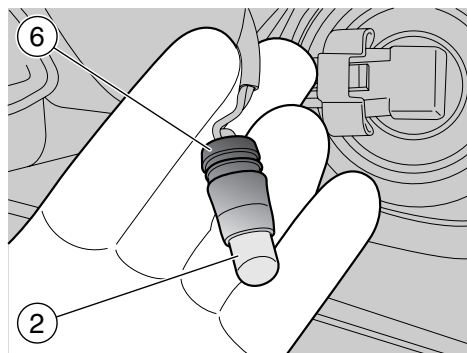
NOTE Proceed on the side of the bulb to be changed.



HIGH BEAM BULB

- ◆ Turn the high beam unit counter clockwise (4).
- ◆ Grasp the electric terminal (5), pull it and disconnect it from the bulb (1).
- ◆ Withdraw the bulb (1) and replace it with a new one of the same type.

NOTE Insert the bulb in the bulb holder, making the relevant positioning seats coincide.

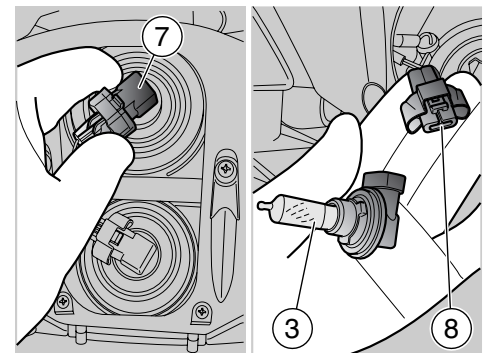


PARKING LIGHT BULB

⚠ CAUTION

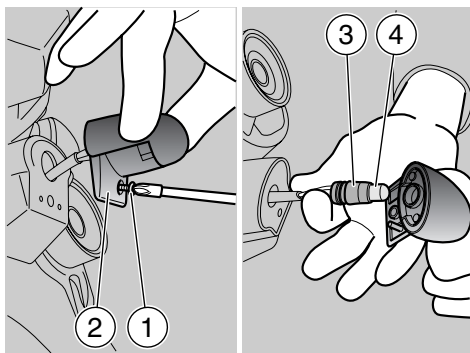
To extract the bulb holder, do not pull the electric wires.

- ◆ Grasp the parking light bulb holder (6) and pull to extract.
- ◆ Withdraw the bulb (2) and replace it with one of the same type.



LOW BEAM BULB

- ◆ Turn the low beam unit counter clockwise (7).
- ◆ Grasp the electric terminal (8), pull it and disconnect it from the bulb (3).
- ◆ Withdraw the bulb (3) and replace it with a new one of the same type.



CHANGING THE NUMBER PLATE BULB

Carefully read page 84 (BULBS).

To change, proceed as follows:

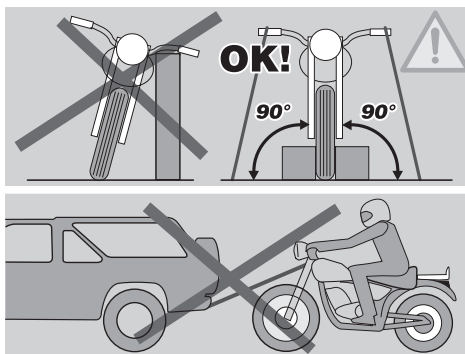
- ◆ Position the vehicle on the stand, see page 55 (POSITIONING THE VEHICLE ON THE STAND).
- ◆ Unscrew and remove the screw (1).
- ◆ Remove the light unit (2).

CAUTION

Do not pull the electric wires to extract the bulb holder.

- ◆ Grasp the bulb holder (3), pull it and remove it from its seat.
- ◆ Withdraw the bulb (4) and replace it with a new one of the same type.

TRANSPORT

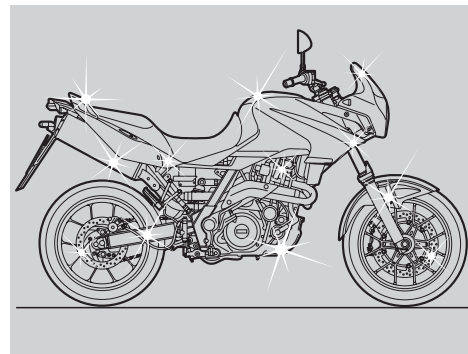


NOTE During transport, the vehicle must be kept in vertical position, it must be firmly anchored and the 1st gear must be engaged, in order to avoid any leak of fuel, oil, coolant.

CAUTION

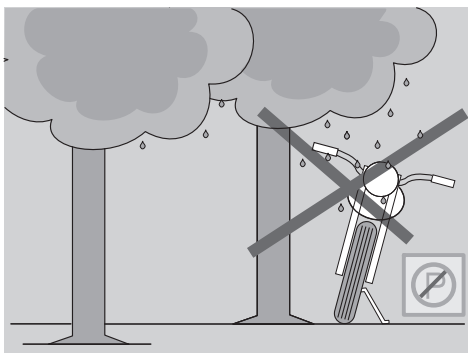
In case of failure, do not tow the vehicle, but ask for assistance.

CLEANING



Clean the vehicle frequently if it is used in particular areas or conditions, such as:

- Polluted areas (cities and industrial areas).
- Areas characterised by a high percentage of salinity and humidity (sea areas, hot and humid climates).
- Particular conditions (use of salt and anti-ice chemical products on the roads during the winter).
- Avoid leaving deposits of industrial and polluting powders, tar spots, dead insects, bird droppings, etc. on the body.
- Avoid parking the vehicle under trees, since in some seasons residues, resins, fruits or leaves fall down, which contain substances that may damage the paint.



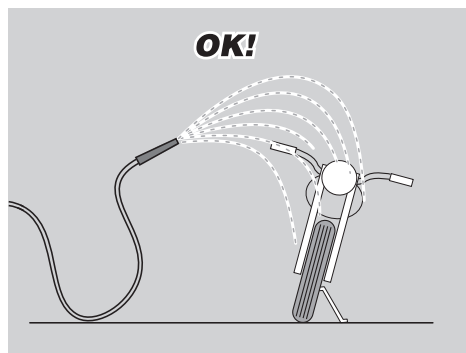
⚠ WARNING

After the vehicle has been washed, its braking functions could be temporarily impaired because of water on the braking surfaces.

Calculate long braking distances to avoid accidents.

Brake repeatedly to restore normal conditions.

Carry out the preliminary checking operations, see page 47 (PRELIMINARY CHECKING OPERATIONS).



To remove dirt and mud from the painted surfaces use a low-pressure water jet, carefully wet the dirty parts, remove mud and filth with a soft car sponge impregnated with a lot of water and shampoo (2 – 4% parts of shampoo in water).

Then rinse with plenty of water and dry with chamois leather.

To clean the outer parts of the engine use a degreaser, brushes and wipers.



⚠ CAUTION

To clean the lights, use a sponge soaked with water and a mild detergent, rubbing the surfaces delicately and rinsing frequently with plenty of water.

Polish with silicone wax only after having carefully washed the vehicle.

Do not use polishing paste on matt paints.

Do not wash the vehicle under the sun, especially during the summer, when the body is still warm, since if the shampoo dries before being rinsed away, it can damage the paint.

Do not use fluids at a temperature exceeding 40°C to clean the plastic components of the vehicle.



⚠ CAUTION

Do not aim high-pressure water or air jets or steam jets on to the following components: wheel hubs, controls on the right and left side of the handlebar, bearings, brake master cylinders, instruments and indicators, exhaust pipes, glove/tool kit compartment, ignition switch/steering lock, radiator wings, fuel cap, lights and electric connections.

Do not use alcohol, fuel or solvents to clean the rubber and plastic parts and the seat: use only water and mild soap.

⚠ WARNING

Do not apply protection waxes onto the seat, in order not to make it too slippery.



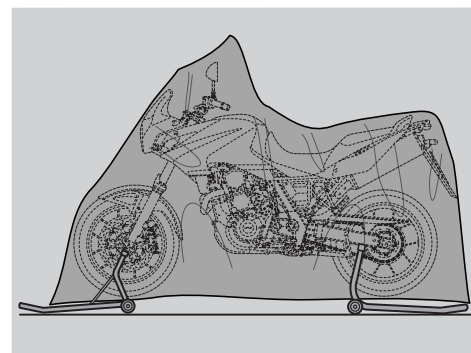
LONG PERIODS OF INACTIVITY

After a long period of inactivity of the vehicle some precautions are necessary to avoid any problem.

Further, it is important to carry out the necessary repairs and a general check up before the period of inactivity, since you could forget to carry them out later.

Proceed as follows:

- ◆ Remove the battery, see page 79 (REMOVING THE BATTERY) and page 81 (LONG INACTIVITY OF THE BATTERY).
- ◆ Wash and dry the vehicle, see page 86 (CLEANING).
- ◆ Polish the painted surfaces with wax.
- ◆ Inflate the tyres, see page 40 (TYRES).



- ◆ Place the vehicle in an unheated, not-humid room, away from sunlight, with minimum temperature variations.

NOTE Position the vehicle on the front **OPT** and rear **OPT** support stands, so that both tyre are raised from the ground.

- ◆ Set the vehicle on the relevant front support stand, see 67 (POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND **OPT**).
- ◆ Put a plastic bag on each exhaust tailpipe and bind it around it, in order to prevent moisture from getting into the tailpipe.
- ◆ Cover the vehicle avoiding the use of plastic or waterproof materials.



AFTER A PERIOD OF INACTIVITY

NOTE Withdraw the plastic bags from the exhaust tailpipes.

- ◆ Uncover and clean the vehicle, see page 86 (CLEANING).
- ◆ Check the charge of the battery, see page 80 (CHARGING THE BATTERY) and install it, see page 80 (INSTALLING THE BATTERY).
- ◆ Refill the fuel tank, see page 31 (FUEL).
- ◆ Carry out the preliminary checking operations, see page 47 (PRELIMINARY CHECKING OPERATIONS).

⚠ WARNING

Have a test ride at moderate speed in a low-traffic area.

TECHNICAL DATA

DIMENSIONS	Max. length Strada / Trail	2173 mm/2232 mm
	Max. width Strada / Trail	810 mm/820 mm
	Max. height (front fairing included).....	1150 mm/1180 mm
	Strada / Trail	
	Seat height Strada / Trail	780 mm/810 mm
	Wheelbase Strada / Trail	1490 mm/1510 mm
	Minimum ground clearance Strada / Trail	200 mm/230 mm
	Dry weight Strada / Trail	179 kg / 183 kg
ENGINE	Model	MY660
	Type	one-cylinder, 4-stroke with 4 valves, single overhead camshaft
	Number of cylinders	1
	Total displacement.....	660 cu. cm
	Bore/stroke.....	100 mm/84 mm
	Compression ratio.....	10 ± 0.5: 1
	Starting.....	electric
	Engine idling rpm	1500 ± 100 rpm
	Clutch.....	multi plate in oil bath, with control on the left side of the handlebar
	Lubrication system	dry pan with separate oil tank
TRANSMISSION	Air filter.....	with dry filter cartridge
	Cooling.....	liquid-cooled
TRANSMISSION	Type	mechanical, 5 gears with foot control on the left side of the engine
CAPACITY	Fuel (reserve included)	15±0.5 ℓ
	Fuel reserve	approx. 3 ℓ
	Engine oil	oil change 2500 cu. cm – oil and oil filter change 2700 cu. cm
	Strada fork fluid.....	105 mm of air (per leg, measured without spring and compressed rod)
	Trail fork fluid	570 cm³ per leg
	Coolant.....	1.2 ℓ (50% water + 50% antifreeze with ethylene glycol)
	Seats.....	2
	Vehicle max. load	210 kg (rider + passenger + luggage + fluids)

GEAR RATIOS	Ratio	Primary	Secondary	Final ratio	Total ratio
	1st	36/75 = 1 : 2.083	12/30 = 1 : 2.500	15/44 = 1 : 2.933	15.278
	2nd		16/26 = 1 : 1.625		9.930
	3rd		20/23 = 1 : 1.150		7.028
	4th		22/20 = 1 : 0.909		5.556
	5th		26/20 = 1 : 0.769		4.700
DRIVE CHAIN	Type	endless (with no connection link) with sealed links			
FUEL FEED SYSTEM	Type	electronic injection			
	Throttle	Ø 45.5 mm			
FUEL SUPPLY	Fuel	Unleaded fuel according to the DIN 51 607 standard, min. O.N. 95 (RON) and 85 (MON)			
FRAME	Type	with steel composite structure with seat support that can be removed			
SUSPENSIONS	Front	upside-down telescopic adjustable fork with hydraulic operation, rod Ø 45 mm			
	Stroke Strada / Trail	140 mm/170 mm			
	Rear	swinging arm and hydraulic adjustable monoshock			
	Wheel travel Strada / Trail	130 mm/170 mm			
BRAKES	Front Strada / Trail	disc brake – Ø 320 mm / 300 mm – with hydraulic transmission			
	Rear	disc brake – Ø 240 mm – with hydraulic transmission			
WHEEL RIMS	Type Strada / Trail	light alloy / spokes			
	Front Strada / Trail	3.5 x 17" / 2.15 x 19"			
	Rear Strada / Trail	4.5 x 17" / 3.00 x 17"			
TYRES	FRONT Strada	110/70 ZR 17 54 W			
	alternative Strada	110/70 R 17 54H – 120/65 ZR 17 56W – 120/65 R 17 56H			
	FRONT Trail	100/90 M/C 19 57H			
	Inflation pressure - solo rider Strada / Trail	1.8 / 1.9			
	Inflation pressure rider with passenger Strada / Trail	1.9 / 1.9			



TYRES	REAR Strada	160/60 ZR 17 69W
	alternative Strada.....	160/60 R 17 69H – 150/60 ZR 17 66W – 150/60 R 17 66H
	REAR Trail.....	130/80 M/C R 17 65H
	alternative Trail	140/80 M/C R 17 69H
	Inflation pressure - solo rider Strada / Trail	2.0 / 2.1
	Inflation pressure rider with passenger Strada / Trail	2.2 / 2.3
IGNITION	Type	DENSO - inductive ignition system
SPARK PLUGS	Standard	NGK CR7E
	Spark plug gap.....	0.7 – 0.8 mm
	Resistance	5 kΩ
ELECTRIC SYSTEM	Battery.....	12 V – 12 Ah
	Fuses	7.5 A – 15 A – 20 A
	Generator (with permanent magnet).....	12 V – 290 W
BULBS	Low beam	12 V – 55 W
	High beam	12 V – 60 W
	Front parking light	12 V – 5 W
	Direction indicators	with micro bulbs (unreplaceable)
	Rear parking lights/Stoplight	Led
	Number plate light.....	12 V – 5 W
	Revolution counter	Led
WARNING LIGHTS	Neutral	Led
	Direction indicators	Led
	Fuel reserve	Led
	High beam.....	Led
	Alarm.....	Led
	Side stand.....	Led
	ABS.....	Led
	Heated handgrips.....	Led



LUBRICANT CHART

(Recommended) Engine oil:  Agip TEC 4T SAE 15W - 50.


As an alternative to recommended oils, top brand oils meeting or exceeding CCMC G-4 A.P.I. SG specifications can be used.

(Recommended) Fork oil:  Agip 5W or  Agip 20W.

When you wish to obtain an intermediate response between those offered by  Agip 5W and  Agip 20W oils, you may mix the different products as follows:

SAE 10W =  Agip 5W 67% of volume +  Agip 20W 33% of volume.

SAE 15W =  Agip 5W 33% of volume +  Agip 20W 67% of volume.

Bearings and other lubrication points (recommended):  Agip GREASE 30.

As an alternative to recommended grease, use top brand rolling bearing grease that will resist a temperature range of -30°C +140°C, with dripping point 150°C - 230°C, high corrosion protection, good resistance to water and oxidation.

Battery lead protection: Neutral grease or Vaseline.

Spray grease for chains (recommended):  Agip CHAIN LUBE.

WARNING

Use new brake fluid only. Do not mix different makes or types of oil without having checked bases compatibility.

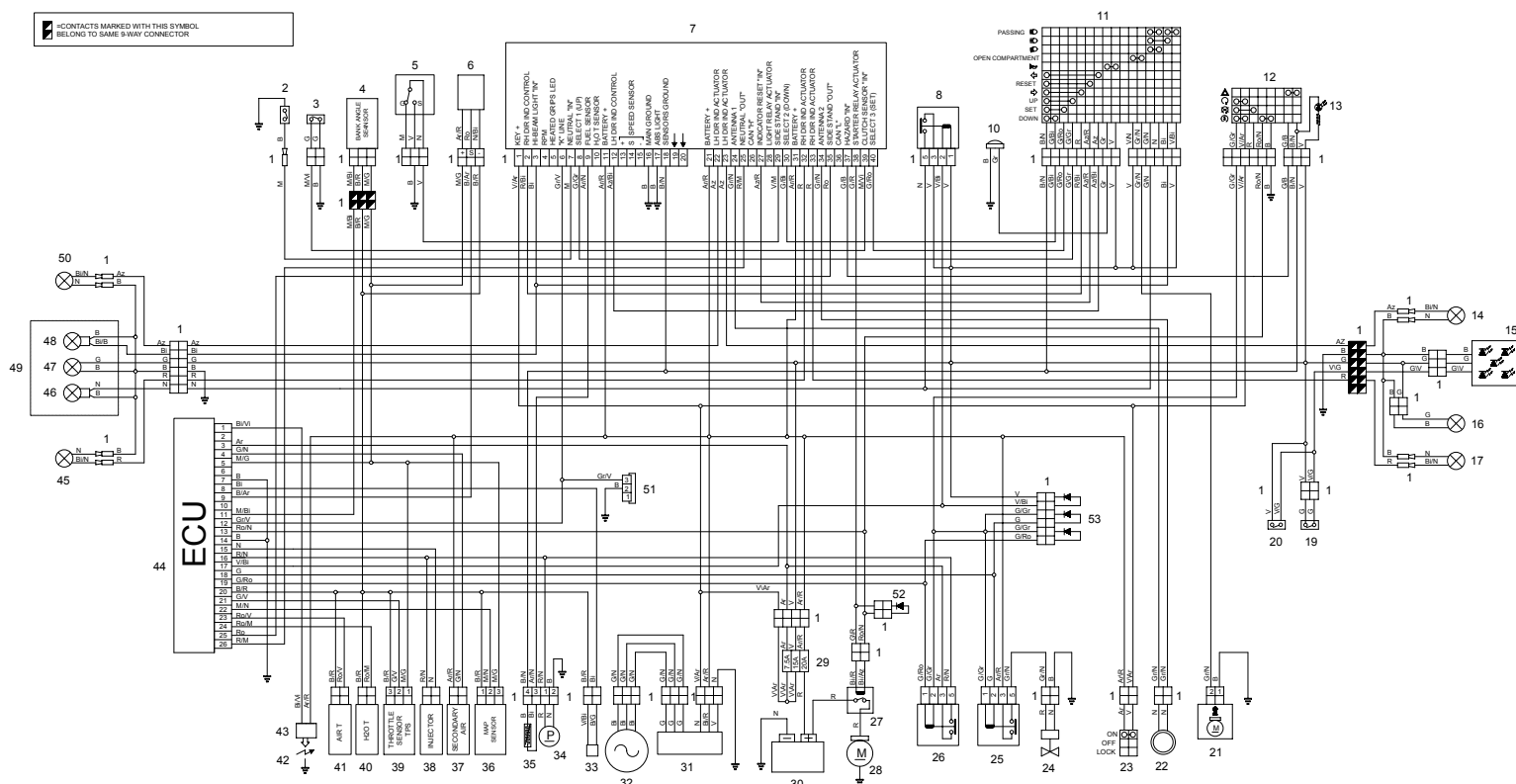
(Recommended) brake fluid:  Agip BRAKE 5.1, DOT 4 (compatible DOT 5).

WARNING

Use only nitrite-free antifreeze and anticorrosive, ensuring protection at -35°C at least.

(Recommended) Coolant:  Agip COOL.

WIRING DIAGRAM - Pegaso 650 I.E.



WIRING DIAGRAM KEY - Pegaso 650 I.E.

- | | |
|------------------------------------|-------------------------------------|
| 1) Multiple connectors | 36) Map sensor |
| 2) Neutral switch | 37) Secondary air |
| 3) Clutch switch | 38) Injector |
| 4) Bank angle sensor | 39) Throttle Position Sensor (TPS) |
| 5) Side stand switch | 40) Water temperature sensor |
| 6) Speed sensor | 41) Air temperature sensor |
| 7) Instrument panel | 42) Spark plug |
| 8) Light relay | 43) Coil |
| 9) ----- | 44) ECU |
| 10) Warning horn | 45) Front right direction indicator |
| 11) Left dimmer switch | 46) Low beam bulb |
| 12) Right dimmer switch | 47) Parking light bulb |
| 13) HAZARD button back lighting | 48) High beam bulb |
| 14) Rear left direction indicator | 49) Headlight |
| 15) Tail light | 50) Front left direction indicator |
| 16) Number plate light | 51) Self-diagnosis connector |
| 17) Rear right direction indicator | 52) Diode |
| 18) --- | 53) Diode module |
| 19) Rear stoplight switch | |
| 20) Front stoplight switch | |
| 21) Electric lock | |
| 22) Immobilizer antenna | |
| 23) Key-operated switch | |
| 24) Fan | |
| 25) Fan relay | |
| 26) Injection relay | |
| 27) Starter relay | |
| 28) Starter motor | |
| 29) Fuses | |
| 30) Battery | |
| 31) Voltage regulator | |
| 32) Generator | |
| 33) Pick up | |
| 34) Fuel pump | |
| 35) Fuel level sensor | |

CABLE COLOURS

Ar	Orange
Az	Light blue
B	Blue
Bi	White
G	Yellow
Gr	Grey
M	Brown
N	Black
R	Red
Ro	Pink
V	Green
Vi	Violet

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Piaggio & C. S.p.A. wishes to thank its customers for the purchase of this vehicle.

- Do not dispose of oil, fuel, polluting substances and components in the environment.
- Do not keep the engine running if it is not necessary.
- Avoid disturbing noises.
- Respect nature.