aprilia

RSV mille USA - RSV mille R USA

aprilia part# 8104560

use+maintenancebook

First edition: august 2002

Reprint:

Produced and printed by:
DECA s.n.c.
Via Risorgimento, 23/1 - Lugo (RA) - Italia
Tel. +39 - 0545 35235
Fax +39 - 0545 32844
E-mail: deca@decaweb.it
www.decaweb.it

On behalf of:
aprilia s.p.a.
via G. Galilei, 1 - 30033 Noale (VE) - Italia
Tel. +39 - 041 58 29 111
Fax +39 - 041 44 10 54
www.aprilia.com

FOREWORD

NOTE This manual is an important and integral part of your vehicle. Keep it with your vehicle at all times, even if your vehicle is resold.

aprilia has prepared this manual to supply you, the user, with correct and current information. However, since **aprilia** constantly improves the design of its vehicles, there may be slight discrepancies between your vehicle and the material given in this manual. If you have any questions about your vehicle, contact your Local **aprilia** Dealer, as he will have the very latest technical information available from the factory.

For tests and repairs not expressly described in this manual, to purchase **aprilia** genuine spare parts, accessories, and other products, and for help with specific problems, please contact your Local **aprilia** Dealer or service center. These professionals will be able to promptly and accurately help.

Thank you for choosing **aprilia**. Have a great ride!

INTRODUCTION

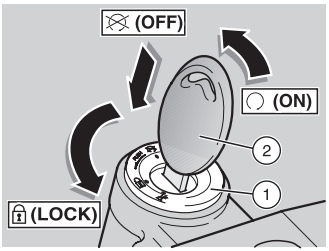
This manual is divided into sections, chapters and paragraphs, by subject. The procedures described are laid out in single operation, and each operation is indicated by a ◆.

The numbered parts shown in the figures are identified in the text with the number in parentheses or with the symbol representing them.

Example (the following text is generic and does not refer to this specific vehicle):

section →

MAIN INDEPENDENT CONTROLS



chapter →

STEERING LOCK

safety warning →

⚠WARNING

Never attempt to place the ignition switch in the locked "🔒" (LOCK) position while the vehicle is moving.

paragraph →

OPERATION

operation →

To lock the steering:

u Turn the handlebar completely to the left or to the right.

position (2) →

u Turn the key (2) to position "⊗".

symbol "🔒" →

u Press the key and turn it to position "🔒".

u Remove the key.

SAFETY WARNINGS

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

⚠ Safety Warning: When you see this symbol on the vehicle or in the manual, pay particular attention to the potential risk of personal injury or death. Non-compliance with the instructions given in the warning messages preceded by this symbol may result in grave risk 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 personal injury or damage to the vehicle or other property.

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

GENERAL SAFETY RULES

CARBON MONOXIDE

If it is necessary to run the engine in order to carry out maintenance operation, make sure that the area in which you are operating is properly ventilated. Never run the engine in enclosed spaces.
If it is necessary to work indoors, use an exhaust evacuation system.

⚠ WARNING

The exhaust fumes contain carbon monoxide, a poisonous gas that can cause loss of consciousness and even death.

⚠ WARNING

Carbon monoxide is both colorless and odorless, and cannot be detected by smell, vision, or any other sense. Avoid breathing exhaust fumes under any circumstances.

GASOLINE

Keep gasoline away from children. Gasoline is also poisonous. Never attempt to siphon gasoline using your mouth. Never allow gasoline to contact your skin. If you should accidentally spill gasoline on yourself, change your clothes immediately and wash the area upon which the gasoline was splashed thoroughly with hot water and soap. Should you accidentally swallow gasoline, do not induce vomiting. Drink large quantities of clear water or milk and immediately seek professional medical assistance. Should you accidentally get gasoline get your eyes, flush with large quantities of cool, clear water and immediately seek professional medical assistance.

⚠ WARNING

Gasoline is extremely flammable and becomes explosive under certain conditions.

KEEP GASOLINE AWAY FROM CHILDREN.

HOT COMPONENTS

⚠ WARNING

The engine and all parts of the exhaust system, as well as the braking system, become very hot and remain hot for some time after the vehicle and the engine are stopped. Before handling any component of your vehicle after riding, insure that it has cooled sufficiently to be safe to handle.

USED ENGINE OIL

⚠ WARNING

Use latex gloves for the maintenance operations that require contact with used oil. Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is advisable to thoroughly wash your hands with soap and water after handling used oil.

KEEP OIL AWAY FROM CHILDREN.

BRAKE FLUID

⚠ CAUTION

Brake fluid is extremely poisonous. Do not ever allow brake fluid to be ingested or swallowed. Should brake fluid accidentally be swallowed, drink large quantities of milk or clear water and immediately seek professional medical assistance. Brake fluid is highly destructive of skin and eye tissue. Should you accidentally spill brake fluid on yourself, remove the contaminated clothing, wash your body with soap and warm water immediately and immediately seek professional medical assistance. Should you accidentally splash brake fluid into your eyes, flush with a large quantity of cool, clear water and immediately seek professional medical assistance.

KEEP BRAKE FLUID AWAY FROM CHILDREN.

CLUTCH FLUID

⚠ CAUTION

Clutch fluid is extremely poisonous. Do not ever allow clutch fluid to be ingested or swallowed. Should clutch fluid accidentally be swallowed, drink large quantities of milk or clear water and immediately seek professional medical assistance. clutch fluid is highly destructive of skin and eye tissue. Should you accidentally spill clutch fluid on yourself, remove the contaminated clothing, wash your body with soap and warm water immediately and immediately seek professional medical assistance. Should you accidentally splash clutch fluid into your eyes, flush with a large quantity of cool, clear water and immediately seek professional medical assistance.

KEEP CLUTCH FLUID AWAY FROM CHILDREN.

COOLANT

In certain conditions, the ethylene glycol contained in the engine coolant is flammable: its flame is invisible, but you can be burned anyway.

⚠ WARNING

Avoid spilling the engine coolant on the exhaust system or on the engine components. They may be hot enough to cause the coolant to ignite and burn without a visible flame. The coolant (ethylene glycol) can cause skin irritation and is poisonous if swallowed.
Coolant and coolant/water mixtures are sweet to the taste and brightly colored, therefore are highly attractive to pets and children. Take extra precautions to keep new and used coolant out of reach of children and animals.

KEEP COOLANT AWAY FROM CHILDREN.

Risk of burns.
Do not remove the radiator cap when the engine is hot. Wait until the engine has completely cooled down. The coolant is under pressure and may splash out and cause burns.

BATTERY HYDROGEN GAS AND ELECTROLYTE

⚠ WARNING

The battery gives off noxious and explosive gases; keep cigarettes, flames and sparks away from the battery. Provide adequate ventilation when operating or recharging the battery.

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

The battery contains sulphuric acid (electrolyte). Contact with the skin or eyes may cause serious burns. Always wear protective clothing, rubber gloves, and tight fitting goggles or a face shield when working around the battery, especially when filling the battery with either water or electrolyte.

In case of contact with the skin, flush immediately with plenty of water. In case of contact with the eyes, flush with plenty of water for at least 15 minutes. Immediately consult a health professional.

The electrolyte is poisonous.
If the electrolyte is accidentally swallowed, drink large quantities of water or milk and then milk of magnesia or vegetable oil. Immediately consult a health professional.

KEEP BATTERIES AND ELECTROLYTE AWAY FROM CHILDREN.

WARNINGS - PRECAUTIONS - GENERAL ADVICE

Before starting the engine, carefully read this manual and in particular the chapters "WARNINGS - PRECAUTIONS - GENERAL ADVICE" and "SAFE DRIVE" see p. 17.

Your safety and that of those around you depends not only on your skill as a rider, but also your knowledge about your vehicle and about riding safely. Therefore it is essential that you not operate your vehicle on public streets or highways until you have received instructions from a qualified safety organization such as the Motorcycle Safety Foundation, and are properly trained and licensed.

REPORTING OF DEFECTS THAT AFFECT SAFETY

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the **National Highway Traffic Safety Administration** (NHTSA) in addition to notifying **aprilia**. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or **aprilia**. To contact NHTSA, you may either call the **Auto Safety Hotline** toll free at 1-800-424-9393 (or 366-0123 in the Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590.

You can also obtain other information about motor vehicle safety from the Hotline.

ROAD REGULATIONS AND USE OF THE VEHICLE

Rules of the road vary from country to country. It is essential that you understand in advance the rules of the road of the country in which your vehicle will be used.

⚠ WARNING

This vehicle has been designed and produced for use only on paved roads. It is not designed to be used on even smooth graded dirt roads, or trails. It is not designed for off road competition, or for cross country riding. Do not use this vehicle on rough or unimproved surfaces, or in other off road areas. Failure to heed this warning could lead to an upset with subsequent injury and even death.

NOISE EMISSION WARRANTY

aprilia s.p.a. warrants that this exhaust system, at the time of sale, meets all applicable U.S. **EPA** Federal noise standards. This warranty extends to the first person who buys this exhaust system for purposes other than resale, and to all subsequent buyers.

Warranty claims should be directed to:

aprilia USA Inc.
110 Londonderry Court, Suite 130
Woodstock, GA 30188
USA
Tel 770 592 2261
Fax 770 592 4878

INFORMATION ON THE NOISE AND EXHAUST GAS EMISSION CONTROL SYSTEM

ORIGIN OF THE EMISSIONS

The combustion process produces carbon monoxide and hydrocarbons. The control of hydrocarbons is very important, because under certain conditions they react to exposure to sunlight and produce photochemical smog.
Carbon monoxide does not react in the same way, but it is toxic and poisonous. **aprilia** utilizes "lean" carburetor settings and other systems to reduce the production of carbon monoxide and hydrocarbons.

TAMPERING WARNING

Tampering with the noise control system is prohibited. Federal law prohibits the following acts or causing thereof:

a) 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, or
b) The use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

a) Removal of, or puncturing the muffler, baffles, header pipes or any other component which conducts exhaust gases.
b) Removal or puncturing of any part of the intake system.
c) Lack of proper maintenance.
d) Replacing any moving part of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.

⚠ CAUTION

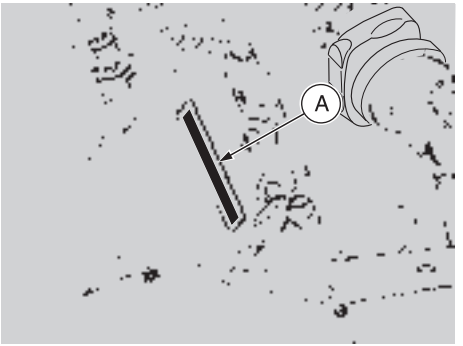
This product should be checked for repair or replacement if the vehicle noise has increased significantly through use. Otherwise, the owner may become subject to penalties under state and local ordinances.

PROBLEMS THAT MAY AFFECT THE VEHICLE EMISSIONS

If any of the following symptoms are observed, immediately have your vehicle inspected and repaired by your Local **aprilia** Dealer.

Symptoms:

– Difficult starting or stalling after starting.
– Irregular idle.
– Misfiring or backfiring during acceleration.
– After-burning (backfiring).
– Poor engine performance, degraded handling, or poor fuel economy.



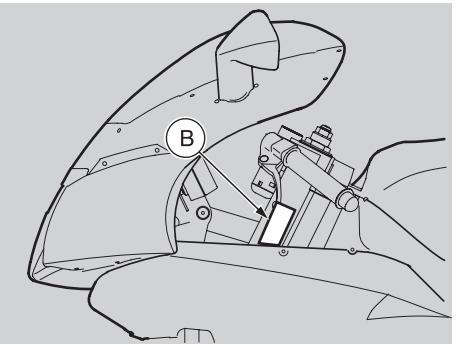
VEHICLE IDENTIFICATION NUMBER (V.I.N.) (FRAME NUMBER)

Every vehicle produced by **aprilia** receives a vehicle identification number (V.I.N.) stamped:

– on the steering head of the frame (A), as shown above;

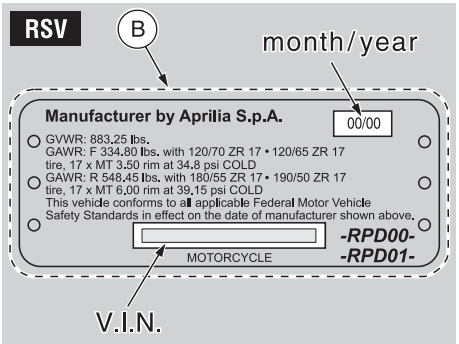
and also:

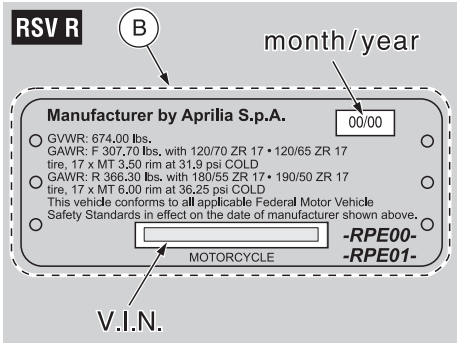
– on the identification plate (B) which is located on the front portion near the steering head of the frame.



INFORMATION CONTAINED IN THE VEHICLE IDENTIFICATION NUMBER

Description of the vehicle identification number (V.I.N.), stamped on the steering head of the frame (A) and on the identification plate (B).





DIGIT MEANING

1) Manufacturer's identification alphanumeric code.
2) Vehicle type.
3) Model.
4) Country for which the vehicle is intended.
5) #= Check digit number.
6) Model year.
7) Assembling factory designation
   (N = NOALE-VE- ,
   S = SCORZÉ -VE- ,
   0 = NOT SPECIFIED).
8) Sequential serial number.

RSV

☆ZD4RPD00#Y0000000☆

1 2 3 4 5 6 7 8

FOR STATE OF CALIFORNIA ONLY:

☆ZD4RPD01#Y0000000☆

1 2 3 4 5 6 7 8

RSV R

☆ZD4RPE00#Y0000000☆

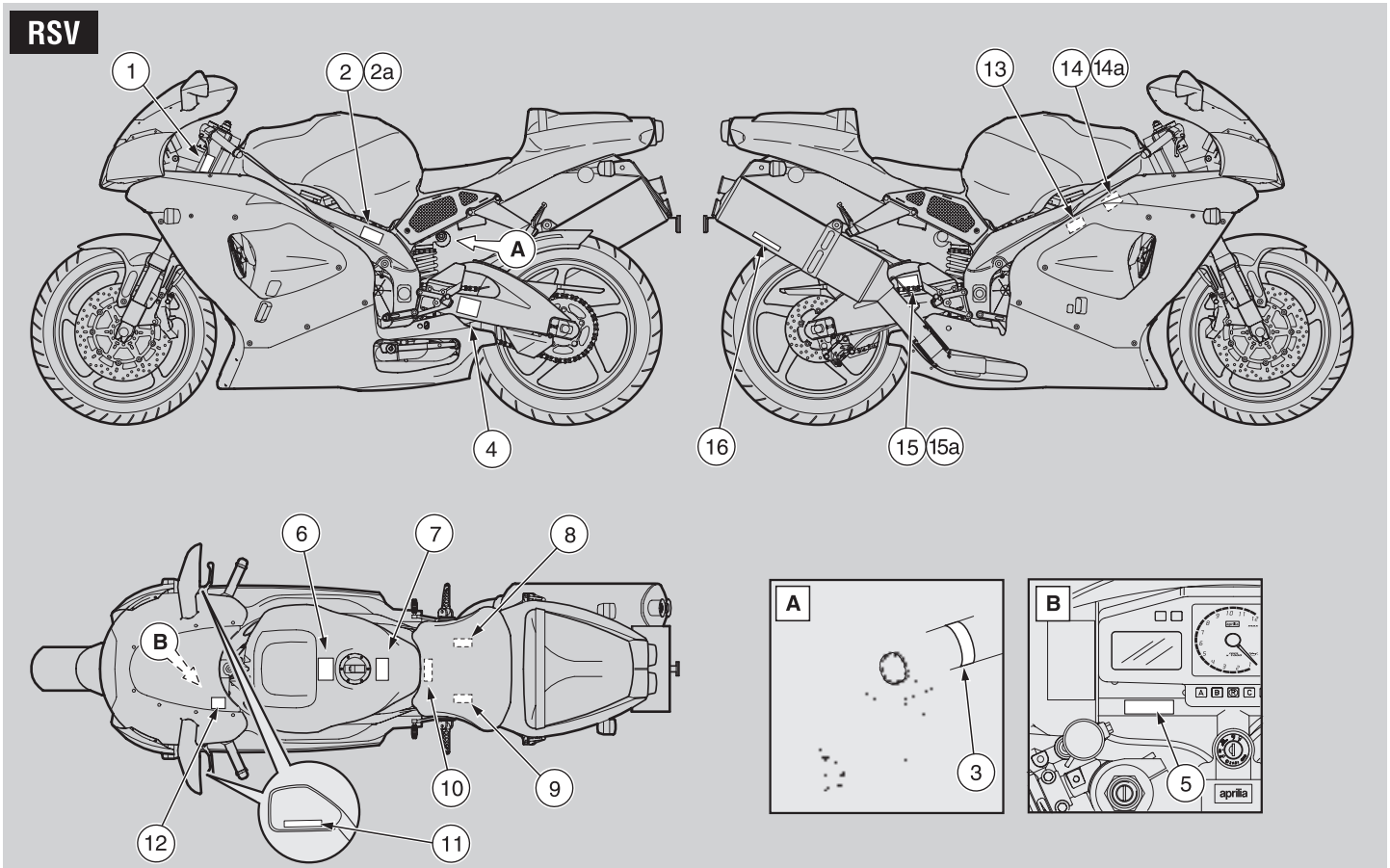
1 2 3 4 5 6 7 8

FOR STATE OF CALIFORNIA ONLY:

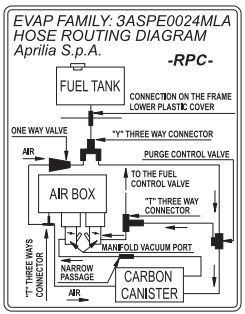
☆ZD4RPE01#Y0000000☆

1 2 3 4 5 6 7 8

POSITION OF THE WARNING ADHESIVE LABELS RSV



WARNING ADHESIVE LABELS CHART RSV

Ref.	Description
1	**Manufacturer by Aprilia S.p.A.** ○ GVWR: 884 lb GAWR: F 335 lb with 120/70 ZR 17 • 120/65 ZR 17 tire, 17 x MT 3.50 rim at 34.8 psi COLD ○ GAWR: R 549 lb with 180/55 ZR 17 • 190/50 ZR 17 tire, 17 x MT 6.00 rim at 39.15 psi COLD This vehicle conforms to all applicable Federal Motor Vehicle Safety Standards in effect on the date of manufacturer shown above. MOTORCYCLE *-RPU-* *-RPC-*
2	**NOT PROVIDED FOR 49 STATES.**
2a	**FOR STATE OF CALIFORNIA ONLY.** 
3	⚠ *WARNING!* ● CONTAINS HIGH PRESSURE NITROGEN GAS. ● SEE WORKSHOP MANUAL FOR DISPOSAL AND ADJUSTING UNIT. ● *DO NOT OPEN. DO NOT INCINERATE.* INCINERATION, PUNCTURE OR DISASSEMBLY MAY CAUSE THIS UNIT TO EXPLODE.

Ref.	Description
4	⚠ *WARNING!* *Do not use any tire other than those recommended and approved by Aprilia. Maintain proper tire inflation. Do not use any tire with less than 1/8" (3mm) tread remaining. Do not repair any tire, nor use a repaired tire. Do not ride your motorcycle overloaded or with an unbalanced load. Failure to follow these warnings can lead to an accident and serious injuries or death. Always ensure that the chain is correctly adjusted. See owner's manual.* *-RPU-* *-RPC-* aprilia CHAIN TENSION WITH NO LOAD 25 mm Tires pressure bar - (psi) Front tire / Rear tire 2.2 (31.9) / 2.5 (36.25) 2.4 (34.8) / 2.7 (39.15) 2.4 (34.8) / 2.7 (39.15) Tires size Front tire Pirelli - Metzeler / Dunlop: 120/70 ZR 17" / 120/65 ZR 17" Rear tire Pirelli - Metzeler / Dunlop: 180/55 ZR 17" / 190/50 ZR 17"
5	⚠ *WARNING!* DO NOT ALLOW KEY CHAIN AND ANY OTHER ITEM TO FALL BETWEEN THE STEERING HEAD AND THE BODY OF MOTORCYCLE. THIS CAN CAUSE LOSS OF CONTROL.
6	⚠ *WARNING!* • *Wear a helmet, eye protection, and bright protective clothing.* • *Don' t ride after consuming alcohol or other drugs.* • *Slow down on slippery surface, unfamiliar terrain or when visibility is reduced.* • *Read owner's manual carefully* • *Failure to follow these warnings can lead to an accident and serious injuries or death.* • *USE UNLEADED FUEL MINIMUM OCTANE RATING (R + M) / 2 METHOD 90.* • *See owner's manual for the correct running in and maintenance of the vehicle.*
7	⚠ *WARNING!* *Never install accessories or replacement parts not approved by Aprilia as original equipment. This can degrade the handling and safety of your motorcycle, and can cause an upset with subsequent accident and serious injury or even death. The stability and safety of any motorcycle is adversely affected by the addition of any load carrying accessory. See owner's manual.*

Follow ►

Follow ►

Ref.	Description
8	aprilia BATTERY SERVICE **WARNING!** + – MAX min Maintain electrolyte level between the two level marks. Use only distilled water. Always keep the battery charged. **Never disconnect the battery or regulator with the engine running. This will destroy the entire electrical system.**
9	aprilia 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
10	**WARNING!** *Contain sulfuric acid which can cause severe injuries. Avoid contact with skin, eyes or clothing. Antidote: EXTERNAL - Flush with water. INTERNAL - Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or veg. oil. Call physician immediately. Eyes: Flush with water for 15 minutes and get prompt medical attention.* *KEEP OUT OF REACH OF CHILDREN.* *Batteries produce explosive gases. Keep sparks, flames, cigarettes away. Charge only in well-ventilated space. Always wear protective goggles when working around batteries. Always connect the battery vent tube. Failure to heed this warning will cause corrosion of the electrical system.*
11	OBJECTS IN MIRROR ARE CLOSER THAN THEY APPEAR.

Ref.	Description
12	**WARNING!** • *Keep windshield clean at all times.* • *Clean only with a soft cloth and warm water with a mild detergent.* • *Replace windshield if becomes scratched or discoloured so as to interfere with view.* • *Do not allow any alcaline or strong acid cleaner, gasoline, brake fluid or any other solvent to contact the windshield.* • *When replacing windshield, use only Aprilia original replacement windshield.*
13	**WARNING!** *DO NOT REMOVE THE CAP UNTIL THE ENGINE IS ENTIRELY COOL. COOLANT IS HOT AND UNDER PRESSURE. FAILURE TO OBSERVE THIS WARNING MAY LEAD TO SERIOUS BURNS. USE ONLY FLUID FOR SEALED CIRCUITS. USE ONLY ANTIFREEZE AND ANTICORROSIVE WITHOUT NITRATE, ENSURING PROTECTION -35°C AT LEAST.*
14	*MOTORCYCLE NOISE EMISSION CONTROL INFORMATION* *THIS 2003 ASP42B0998 MOTORCYCLE, 8119582* *MEETS EPA NOISE EMISSION REQUIREMENTS OF 80 dBA* *AT 5088 closing r.p.m. BY FEDERAL TEST PROCEDURE.* *MODIFICATIONS WHICH CAUSE THIS MOTORCYCLE TO EXCEED FEDERAL NOISE STANDARDS ARE PROHIBITED BY FEDERAL LAW.* *SEE OWNER'S MANUAL.* **RPU - RPC** aprilia
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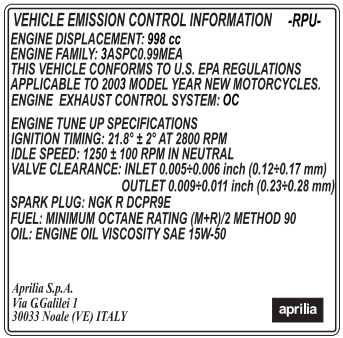
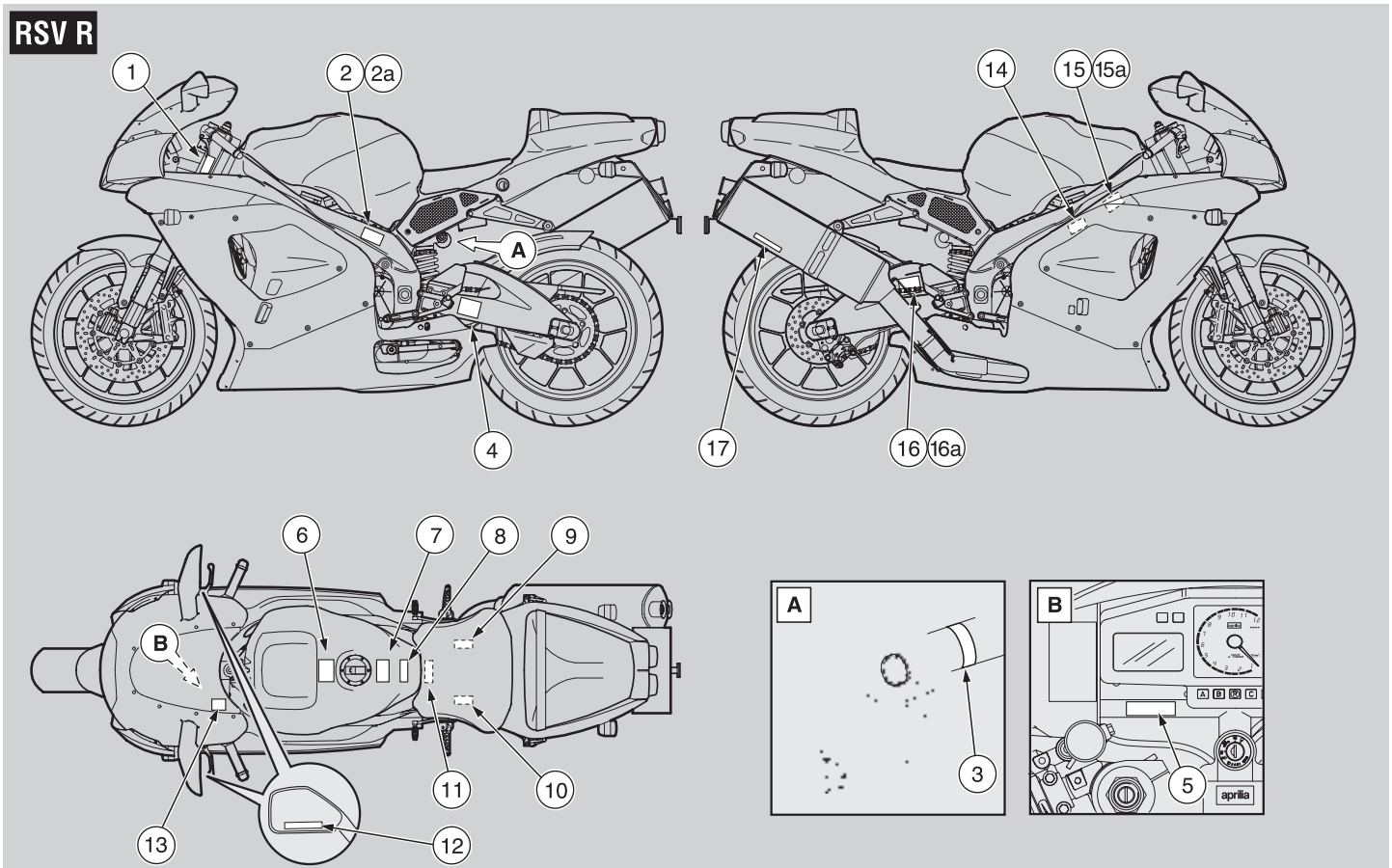
15	
15a	**FOR STATE OF CALIFORNIA ONLY.** 
16	Muffler stamping.

POSITION OF THE WARNING ADHESIVE LABELS RSV R



WARNING ADHESIVE LABELS CHART RSV R

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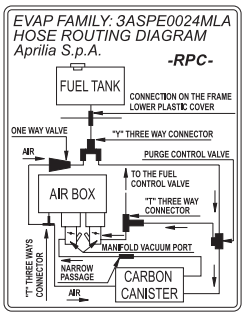
1	**Manufacturer by Aprilia S.p.A.** ○ GVWR: 674 lb GAWR: F 308 lb with 120/70 ZR 17 • 120/65 ZR 17 tire, 17 x MT 3.50 rim at 31.9 psi COLD ○ GAWR: R 366 lb with 180/55 ZR 17 • 190/50 ZR 17 tire, 17 x MT 6.00 rim at 36.25 psi COLD This vehicle conforms to all applicable Federal Motor Vehicle Safety Standards in effect on the date of manufacturer shown above. ○ ○ ○ ○ MOTORCYCLE ***-RPU03-*** ***-RPC03-***
2	**NOT PROVIDED FOR 49 STATES.**
2a	**FOR STATE OF CALIFORNIA ONLY.** 
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Follow ►

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Ref.	Description
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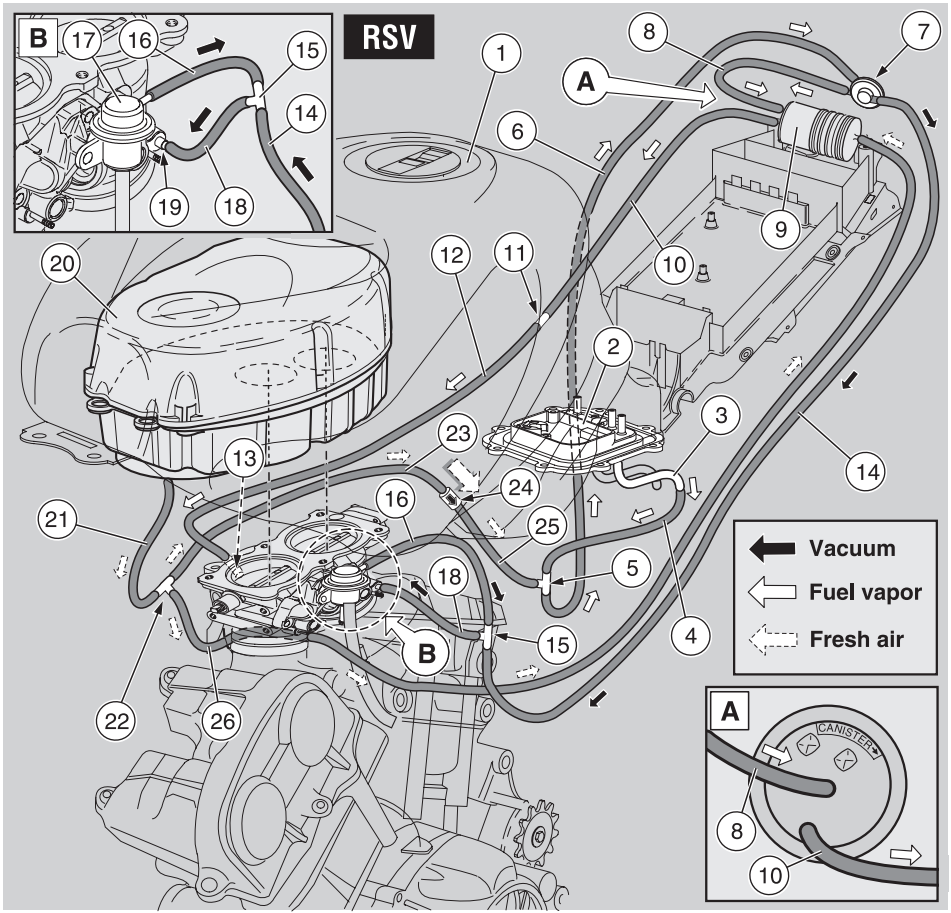
Ref.	Description
16	VEHICLE EMISSION CONTROL INFORMATION -RPU- ENGINE DISPLACEMENT: 998 cc ENGINE FAMILY: 3ASPC0.99MEA THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO 2003 MODEL YEAR NEW MOTORCYCLES. ENGINE EXHAUST CONTROL SYSTEM: OC ENGINE TUNE UP SPECIFICATIONS IGNITION TIMING: 21.8° ± 2° AT 2800 RPM IDLE SPEED: 1250 ± 100 RPM IN NEUTRAL VALVE CLEARANCE: INLET 0.005÷0.006 inch (0.12÷0.17 mm) OUTLET 0.009÷0.011 inch (0.23÷0.28 mm) SPARK PLUG: NGK R DCPR9E FUEL: MINIMUM OCTANE RATING (M+R)/2 METHOD 90 OIL: ENGINE OIL VISCOSITY SAE 15W-50 Aprilia S.p.A. Via G.Galilei 1 30033 Noale (VE) ITALY aprilia
16a	**FOR STATE OF CALIFORNIA ONLY.** VEHICLE EMISSION CONTROL INFORMATION -RPC- ENGINE DISPLACEMENT: 998 cc ENGINE FAMILY: 3ASPC0.99MEA THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 2003 MODEL YEAR NEW MOTORCYCLES AND IS CERTIFIED TO 1.4 HC G/KM ENGINE FAMILY EXHAUST EMISSION STANDARD IN CALIFORNIA. ENGINE EXHAUST CONTROL SYSTEM:OC ENGINE TUNE UP SPECIFICATIONS IGNITION TIMING: 21.8° ± 2° AT 2800 RPM IDLE SPEED: 1250 ± 100 RPM IN NEUTRAL VALVE CLEARANCE: INLET 0.005÷0.006 inch (0.12÷0.17 mm) OUTLET 0.009÷0.011 inch (0.23÷0.28 mm) SPARK PLUG: NGK R DCPR9E FUEL: MINIMUM OCTANE RATING (M+R)/2 METHOD 90 OIL: ENGINE OIL VISCOSITY SAE 15W-50 Aprilia S.p.A. Via G.Galilei 1 30033 Noale (VE) ITALY aprilia
17	Muffler stamping.

CALIFORNIA EVAPORATIVE EMISSION SYSTEM RSV

FOR STATE OF CALIFORNIA ONLY.

The system consists of:

1) Fuel tank
2) Fuel pump flange
3) Fuel tank breather line
4) Breather line (to tee)
5) Tee
6) Breather line (to purge valve)
7) Purge valve
8) Breather line (to carbon canister)
9) Carbon canister
10) Drain line (to narrow passage)
11) Restrictor Ø 0.06 in (Ø 1.5 mm)
12) Drain line (to manifold vacuum port)
13) Manifold vacuum port (right front part of throttle body)
14) Vacuum line (from purge valve)
15) Tee
16) Sensor line
17) Fuel pressure regulator
18) Vacuum line (to ported vacuum port)
19) Ported vacuum port (left rear part of throttle body)
20) Air box
21) Warm air inlet (from air box)
22) Tee
23) Warm air inlet (to one way valve)
24) One way valve
25) Warm air inlet (from one way valve)
26) Warm air inlet (to carbon canister)



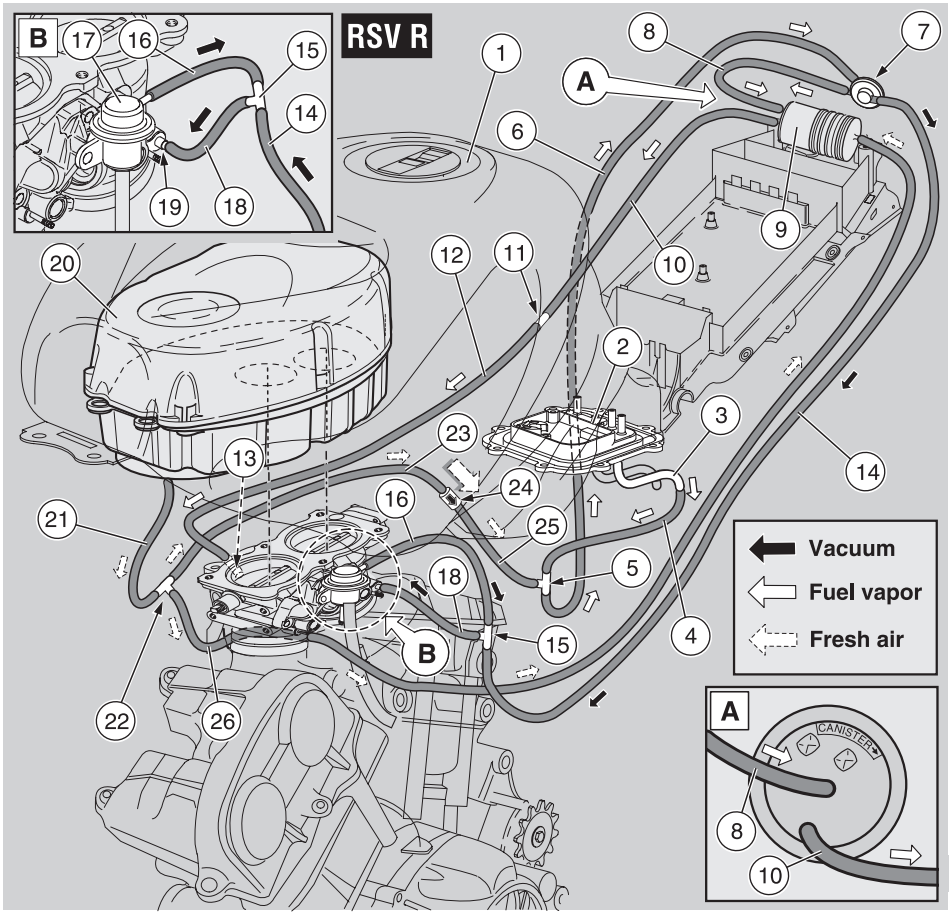
NOTE In case of malfunction of the fuel system, contact your Local **aprilia** Dealer.

CALIFORNIA EVAPORATIVE EMISSION SYSTEM RSV R

FOR STATE OF CALIFORNIA ONLY.

The system consists of:

1) Fuel tank
2) Fuel pump flange
3) Fuel tank breather line
4) Breather line (to tee)
5) Tee
6) Breather line (to purge valve)
7) Purge valve
8) Breather line (to carbon canister)
9) Carbon canister
10) Drain line (to narrow passage)
11) Restrictor Ø 0.06 in (Ø 1.5 mm)
12) Drain line (to manifold vacuum port)
13) Manifold vacuum port (right front part of throttle body)
14) Vacuum line (from purge valve)
15) Tee
16) Sensor line
17) Fuel pressure regulator
18) Vacuum line (to ported vacuum port)
19) Ported vacuum port (left rear part of throttle body)
20) Air box
21) Warm air inlet (from air box)
22) Tee
23) Warm air inlet (to one way valve)
24) One way valve
25) Warm air inlet (from one way valve)
26) Warm air inlet (to carbon canister)



NOTE In case of malfunction of the fuel system, contact your Local **aprilia** Dealer.

aprilia s.p.a. - EMISSION CONTROL SYSTEM WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and **aprilia s.p.a.** (hereinafter "**aprilia**") are pleased to explain the emission control system warranty on your 1999 and later motorcycle. In California new motor vehicles must be designed, built and equipped to meet the State's stringent anti-smog standards. **aprilia** must warrant the emission control system on your motorcycle for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your motorcycle.

Your emission control system may include parts such as the carburetor or fuel injection system, the ignition system, catalytic converter and engine computer. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, **aprilia** will repair your motorcycle at no cost to you, including diagnosis, parts and labor.

MANUFACTURER'S EMISSIONS SYSTEM WARRANTY COVERAGE

Class I motorcycles (50 – 169 cm^3): for a period of use of five (5) years or 12,000 kilometers (7,456 miles), whichever first occurs.

Class II motorcycles (170 – 279 cm^3): for a period of use of five (5) years or 18,000 kilometers (11,185 miles), whichever first occurs.

Class III motorcycles (280 cm^3 and larger): for a period of use of five (5) years or 30,000 kilometers (18,641 miles), whichever first occurs.

If an emission-related part on your motorcycle is defective, the part will be repaired or replaced by **aprilia**. This is your emission control system DEFECTS WARRANTY.

OWNER'S WARRANTY RESPONSIBILITIES

– As the motorcycle owner, you are responsible for the performance of the required maintenance listed in your owner's manual. **aprilia** recommends that you retain all receipts covering maintenance on your motorcycle, but **aprilia** cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

– You are responsible for presenting your motorcycle to an **aprilia** dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

– As the motorcycle owner, you should be aware that **aprilia** may deny your warranty coverage if your motorcycle or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

If you have any questions regarding your warranty rights and responsibilities, you should contact **aprilia USA, Inc.**, 10933 Crabapple Road, Suite 100, Roswell, GA 3007, or the **California Air Resources Board** at P.O. Box 8001, 9528 Telstar Avenue, El Monte, CA 91734-8001.

aprilia s.p.a. - LIMITED WARRANTY ON EMISSION CONTROL SYSTEM

aprilia s.p.a., Via G. Galilei, 1, 30033 Noale (VE) Italy (hereinafter "**aprilia**") warrants that each new 1999 and after **aprilia** motorcycle, that includes as standard equipment a headlight, taillight and stoplight, and is street legal:

A. is designed, built and equipped so as to conform at the time of initial retail purchase with all applicable regulations of the United States Environmental Protection Agency, and the California Air Resources Board; and

B. is free from defects in material and workmanship which cause such motorcycle to fail to conform with applicable regulations of the United States Environmental Protection Agency or the California Air Resources Board for a period of use, depending on the engine displacement, of 12,000 kilometers (7,456 miles), if the motorcycle's engine displacement is less than 170 cubic centimeters; of 18,000 kilometers (11,185 miles), if the motorcycle's engine displacement is equal to or greater than 170 cubic centimeters but less than 280 cubic centimeters; or of 30,000 kilometers (18,641 miles), if the motorcycle's engine displacement is 280 cubic centimeters or greater; or 5 (five) years from the date of initial retail delivery, whichever first occurs.

I. COVERAGE. Warranty defects shall be remedied during customary business hours at any authorized **aprilia** motorcycle dealer located within the United States of America in compliance with the Clean Air Act and applicable regulations of the United States Environmental Protection Agency and the California Air Resources Board. Any part or parts replaced under this warranty shall become the property of **aprilia**.

In the State of California only, emission related warranted parts are specifically defined by the state's Emission Warranty Parts List. These warranted parts are: carburetor and internal parts; intake manifold; fuel tank; fuel injection system; spark advance mechanism; crankcase breather; air cutoff valves; fuel tank cap for evaporative emission controlled vehicles; oil filler cap; pressure control valve; fuel/vapor separator; canister; igniters; breaker governors; ignition coils; ignition wires; ignition points; condensers, and spark plugs if failure occurs prior to the first scheduled replacement; and hoses, clamps, fittings and tubing used directly in these parts. Since emission related parts may vary from model to model, certain models may not contain all of these parts and certain models may contain functionally equivalent parts.

In the State of California only, Emission Control System emergency repairs, as provided for in the California Administrative Code, may be performed by other than an authorized **aprilia** dealer. An emergency situation occurs when an authorized **aprilia** dealer is not reasonably available, a part is not available within 30 days, or a repair is not complete within 30 days. Any replacement part can be used in an emergency repair. **aprilia** will reimburse the owner for the expenses, including diagnosis, not to exceed **aprilia**'s suggested retail price for all warranted parts replaced and labor charges based on **aprilia**'s recommended time allowance for the warranty repair and the geographically appropriate hourly labor rate. The owner may be required to keep receipts and failed parts in order to receive compensation.

II. LIMITATIONS. This Emission Control System warranty shall not cover any of the following:

A. Repair or replacement required as a result of
(1) accident,
(2) misuse,
(3) repairs improperly performed or replacements improperly installed,
(4) use of replacement parts or accessories not conforming to **aprilia** specifications which adversely affect performance and/or
(5) use in competitive racing or related events.

B. Inspections, replacement of parts and other services and adjustments required for required maintenance.

C. Any motorcycle on which the odometer mileage has been changed so that actual mileage cannot be readily determined.

III. LIMITED LIABILITY

A. The liability of **aprilia** under this Emission Control System Warranty is limited solely to the remedying of defects in material or workmanship by an authorized **aprilia** motorcycle dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the motorcycle or transportation of the motorcycle to or from the **aprilia** dealer. **aprilia** SHALL NOT BE LIABLE FOR ANY OTHER EXPENSES, LOSS OR DAMAGE, WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY ARISING IN CONNECTION WITH THE SALE OR USE OF OR INABILITY TO USE THE **aprilia** MOTORCYCLE FOR ANY PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

B. NO EXPRESS EMISSION CONTROL SYSTEM WARRANTY IS GIVEN BY **aprilia** EXCEPT AS SPECIFICALLY SET FORTH HEREIN. ANY EMISSION CONTROL SYSTEM WARRANTY IMPLIED BY LAW, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE EXPRESS EMISSION CONTROL SYSTEM WARRANTY TERMS STATED IN THIS WARRANTY. THE FOREGOING STATEMENTS OF WARRANTY ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REMEDIES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

C. No dealer is authorized to modify this **aprilia** Limited Emission Control System Warranty.

IV. LEGAL RIGHTS. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

V. THIS WARRANTY IS IN ADDITION TO THE **aprilia** LIMITED MOTORCYCLE WARRANTY.

VI. ADDITIONAL INFORMATION. Any replacement part that is equivalent in performance and durability may be used in the performance of any maintenance or repairs. However, **aprilia** is not liable for these parts. The owner is responsible for the performance of all required maintenance. Such maintenance may be performed at a service establishment or by any individual. The warranty period begins on the date the motorcycle is delivered to an ultimate purchases.

aprilia s.p.a.
Via G. Galilei, 1
30033 Noale (VE) Italy

aprilia USA, Inc.
110 Londonderry Ct., Suite 130
Woodstock, GA 30188

GENERAL INSTRUCTIONS

★ 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.

⚠ WARNING

The competition adjustment must be used in organized racing or circular course competitive event, under the auspices of a recognized sanctioning body or by permit issued by the local governmental authority having jurisdiction.

It is strictly forbidden to use the competition adjustment while riding the vehicle on public streets, roads, or highways.

⚠ WARNING

Both the RSV and the RSV R models are high performance motorcycles. The RSV R is intended primarily for racing, and is not intended for use carrying passengers, luggage or parcels. It is strictly forbidden to carry anything other than the rider on the RSV R model.

Any mention in this manual of passenger, luggage or parcels referres only to the RSV model.

Never carry any parcels on the glove/tool kit comparment cover RSV OPT; small parcels may be carried only on the passenger saddle, see p. 52 (LUGGAGE RACK FASTENINGS RSV).

Failure to heed these warnings may lead to a serious accident with consequent risk of serious injury or even death.

In the text and/or shows the symbol (e.i. OPT) preceded by the symbol of the model (e.i. RSV) refer exclusively to the model indicated.

Example: RSV OPT in a text and/or shown is to be intended as optional only to the RSV model.

NOTE Soon after purchasing the vehicle, write down the identification data provided in the SPARE PARTS IDENTIFICATION LABEL in the table below. This label is positioned on the left part of the frame; to be able to read it, remove the rider saddle, see p. p. 116 (REMOVING THE RIDER SADDLE).

aprilia	YEAR	Y	1	2	3	4
SPARE PARTS IDENTIFICATION	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 CODE = country of homologation (I, UK, A, …).

and are to be supplied to the Local **aprilia** 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:

RSV RSV mille model

RSV R RSV mille R model

catalytic version

OPT optional

VERSION:

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

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aprilia

safe drive

BASIC SAFETY RULES

The instructions given below cover normal operation of your vehicle and must be carefully observed. By following these rules you will enhance your own safety and the safety of those around you. You will also maximize the life and utility of your vehicle.

Two wheeled vehicles obviously do not provide some of the protection provided by automobiles, therefore it is essential that you wear appropriate protective clothing. Especially, never operate your vehicle without wearing your helmet, gloves, eye protection, a heavy jacket, sturdy footwear, and sturdy full length pants.

However, do not assume that even the best clothing and helmet will protect you in the event of an upset or a crash with another vehicle. At best, this gear provides some protection from scrapes and scratches, but very little, if any, impact protection.

Be sure that you meet all the requirements prescribed by local law, including driver's license, minimum age, training, insurance, taxes, vehicle registration, license plate, etc.

When you first receive your vehicle, practice by riding in areas where there is little traffic. Do not attempt to ride in heavy traffic until you are thoroughly experienced and riding your vehicle has become second nature to you.

Although this vehicle is legal for operation on freeways and expressways, it is advisable to not ride on these high speed highways until you are thoroughly familiar with your vehicle, and have attained a high degree of skill in its operation.

A new vehicle must be carefully broken in, see p. 80 (RUNNING-IN).

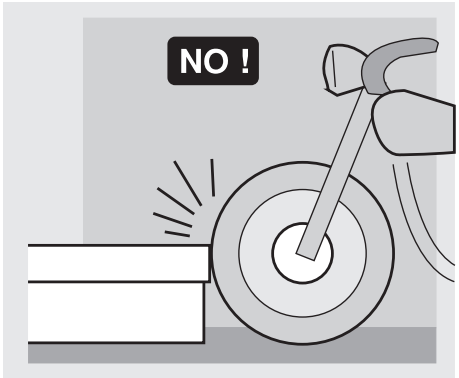
Before starting the engine, make sure that the brakes, clutch, transmission and throttle controls function properly and that the fuel and oil supply is adequate.

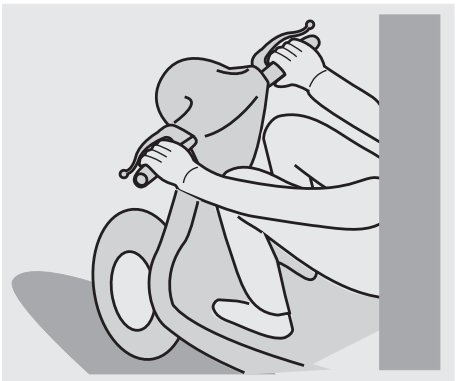
The exhaust system, brakes, and some other parts of the vehicle become very hot during operation. Do not touch any of these parts.

Some medicines or drugs, illegal or prescription, and alcohol significantly increase the risk of accidents. Do not ride while you are under the influence of alcohol or drugs, be they illicit or prescription. Make sure you are in good physical condition and not ill before riding your vehicle. Do not ride your vehicle when you are particularly tired or fatigued. Alcohol, drugs and fatigue are leading causes of vehicle accidents.

Many accidents are caused by the rider's inexperience and lack of training. Do not ride your vehicle until you have received training from a recognized training organization such as the Motorcycle Safety Foundation. Remember that riding a two wheeled vehicle, though easy and fun, is quite different from driving a car. Do not assume that you can operate your vehicle safely just because you are a competent automobile driver.

Never lend your vehicle to others unless you are sure that they are competent and properly licensed vehicle operators.





Observe all rules of the road. Particularly pay attention to all warning, regulatory and informational signs.

Avoid showing off (i.e., popping wheelies). Especially observe speed limits, remember that road conditions change with the weather and wet and icy pavements are particularly dangerous for vehicles, especially if you are riding too fast. Remember that automobile drivers have a hard time seeing two wheeled vehicles, so always give the automobile the right of way, even if it is legally yours.

Before changing lanes, look over your shoulder to make sure that the way is clear. Do not rely exclusively on the rear-view mirror: you may miscalculate the distance and speed of a vehicle, or you may even not see it at all.

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

Do not tailgate, do not attempt to increase your gas mileage by following in the slip stream of cars or trucks in front of you.

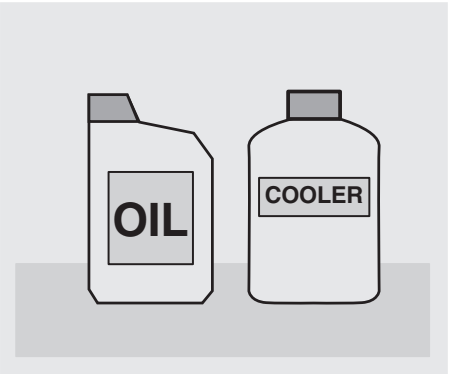
In case of accident motorcycles, scooters and mopeds do not provide the same degree of protection ensured by automobiles. The legs, in particular, are exposed the risk of being injured. However, the additional installation of leg guards may actually increase the risk of injuries and their seriousness in case of accident.

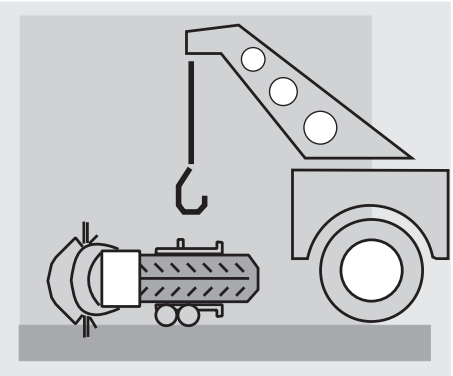
Do not install leg guards available on the market of spare parts and accessories. Non-compliance with these instructions may result in serious injuries or even death.

Always ride with both hands on the handlebars and feet on the footrests.

Never shift gear without using the clutch, if the vehicle is so equipped. Do not operate the shift lever or the other controls suddenly or abruptly. Such misuse can damage the internal components of the vehicle and consequently cause seizure, loss of control, accidents and serious injuries or even death.

Remain in the seat when you are riding. Do not stand up or attempt to stretch while you are riding your vehicle. If you need to rest, pull over to the side of the road when it can be safely done.





It is very important to your safety that you give full attention to the riding task. Watch what you are doing, do not allow yourself to be distracted by other cars, people or things on the roadside, etc. Never smoke, eat, drink, read, etc. while riding your vehicle. If you must consult a map, pull over when it can be done safely.

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

If the throttle sticks open, it may cause a collision with another vehicle, or an upset.

If the throttle sticks, kill the engine with the engine stop switch located on the right handlebar.

Do not attempt to restart the engine until the throttle has been repaired and works perfectly. Failure to obey this warning can lead to a runaway with seriously injuries or even death.

Your vehicle is equipped with a double cable throttle. One cable opens the throttle when you rotate the throttle grip toward you; the other closes the throttle when you rotate the grip away from you. It is essential, when you release the throttle grip, that it automatically return to the idle position.

This double cable arrangement enhances safety by providing for positive closing of the throttle.

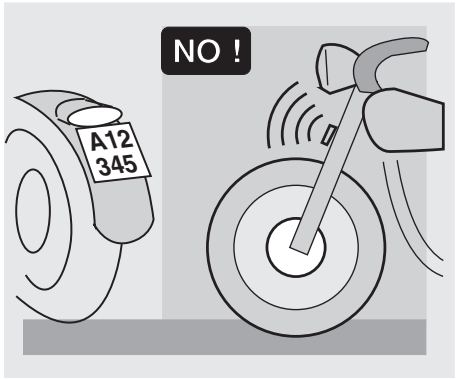
⚠ WARNING

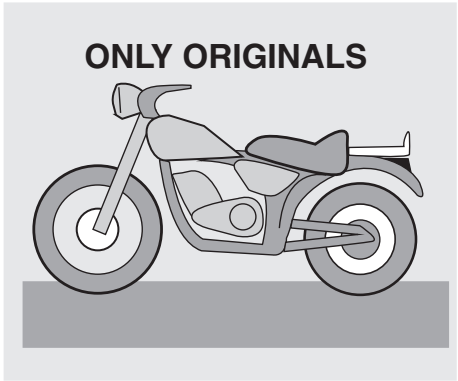
In the event of a throttle sticking emergency, always kill the engine using the engine stop switch located near the throttle grip on the right handlebar. Never use your vehicle if the throttle does not automatically fully return to the idle position when the throttle grip is released. Contact your Local aprilia Dealer for repairs. Failure to heed this warning can lead to a serious accident and subsequent injury or even death.

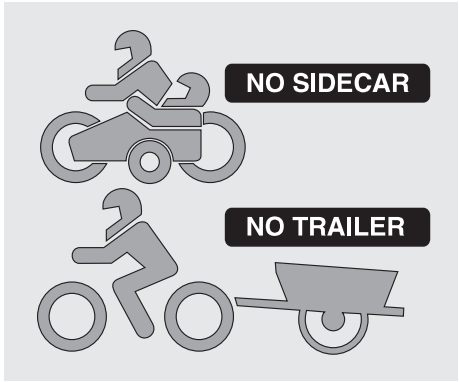
If you and your vehicle are involved in an accident, insure that there has been no damage to the control levers, tubes, wires, braking system and other vital parts. If your vehicle is involved in an accident, take it immediately to your Local **aprilia** Dealer who has the equipment and knowledge to check for accidental damage which may compromise your safety.

Your **aprilia** dealer is ready and able to help you with any safety problems that you might have, but of course it is necessary for you to report any malfunctions to your mechanic in order for him to help you.

Do not use your vehicle if it is damaged. A damaged vehicle may become unstable or







present other problems which can increase the risk of accident, and therefore of serious injury or even death.

Do not attempt to modify the position, angle or color of your license plate. Do not cover it with even a clear plastic covering. Do not modify any of the safety equipment of your vehicle, especially such safety related items as directional indicators, rear view mirrors, lights or horns.

Any modification to your vehicle will invalidate the warranty.

Do not modify your engine in an attempt to increase the horsepower. This can result in irreparable damage to the engine, as well as degradation of the performance and handling of the vehicle which could lead to an upset, and serious injury or even death.

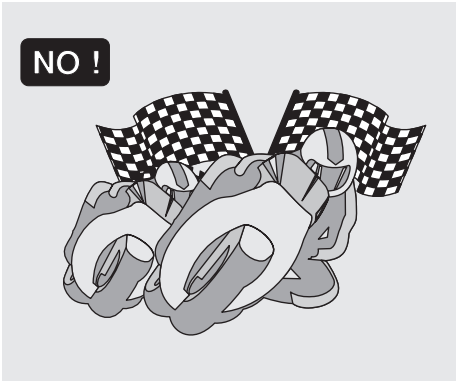
Have your vehicle repaired only with original parts, and use only original **aprilia** or **aprilia** approved accessories. The use of aftermarket accessories and parts can seriously compromise the safety of your vehicle as well as its performance and serviceability. Any modification which affects performance or safety voids your warranty completely.

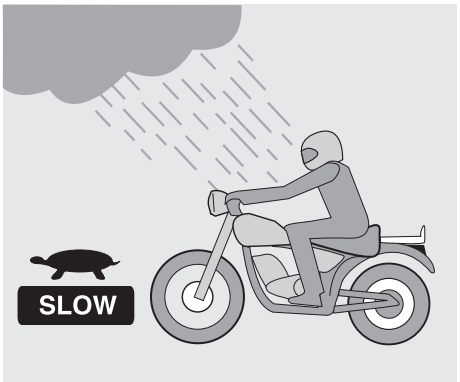
Tampering with the emissions or noise control systems on your vehicle is against the law, and can be punished by large fines.

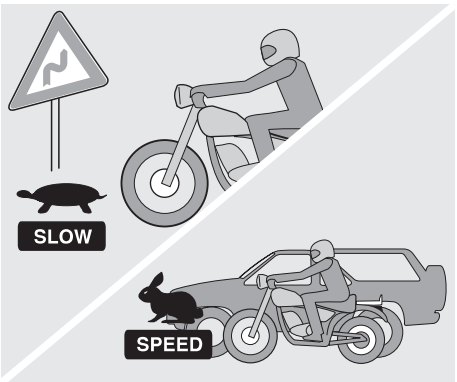
In some jurisdictions, it can even lead to the confiscation of your vehicle.

This vehicle was not designed to be equipped with a sidecar or to be used to tow trailers or other vehicles.

aprilia does not manufacture sidecars or trailers and therefore cannot predict the effects of such accessories on the manoeuvrability or stability of the vehicle: it can only warn that such effects may be negative and that any damage to the vehicle components caused by the use of such accessories will not be covered by the warranty.







Never race other vehicles with your vehicle.

Brake with both the front and rear brakes. The use of one brake only for sudden braking may cause the vehicle to skid or make the rider lose control of the vehicle itself.

When riding down a steep hill, use the engine as a brake by selecting the same gear, or a lower gear, than you would use to climb the hill. Use front and rear brakes sparingly.

Always ride at the appropriate speed and avoid unnecessary hard acceleration. This not only is safer, but also reduces fuel consumption and increases the life of the vehicle.

If you must ride your vehicle in rainy weather, or on loose surfaces, remember that traction is greatly reduced. Under these conditions, all handling of the vehicle must be done gradually and smoothly. Sudden acceleration, braking or turning may make you lose control of your vehicle. When traction is reduced, accelerate and slow using your vehicle's engine braking insofar as possible. Avoid rapid, harsh application of the brakes.

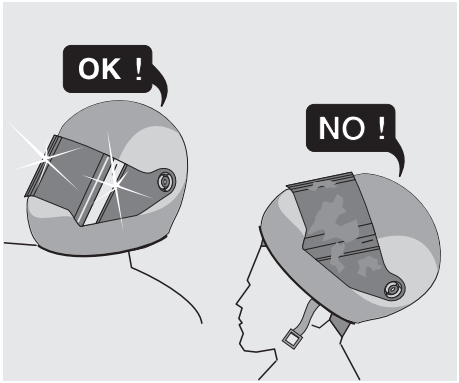
Gradually open and close the throttle, to avoid spinning or skidding the rear wheel.

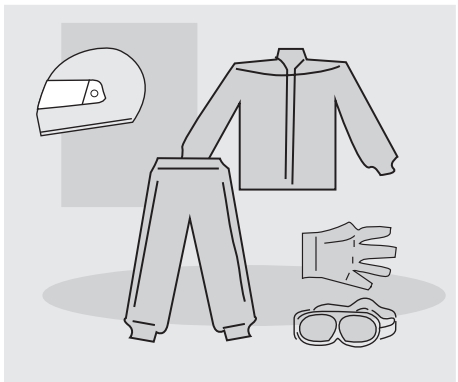
On rough road surfaces, slow down and ride with particular care.

Try to avoid wide open throttle accelerations, unless they are necessary for such things as passing.

Don't allow your engine to "lug," that is, run at too low an rpm. Shift down to a lower gear. Also, don't over-rev the engine. Observe the redline on the tachometer.

Remember that excessively aggressive cornering can cause your vehicle's tires to lose sideways traction, which can result in an upset and serious injury or even death.





Always observe posted and statutory speed limits, but do not assume that you can ride as fast as the speed limit under all road conditions. Slowing down a little can greatly increase your safety under all road conditions.

Do not ride your vehicle off road.

Do not tamper with the muffler system or the emissions control system of your vehicle. This is not only bad for the environment, it can subject you to serious penalties.

CLOTHING

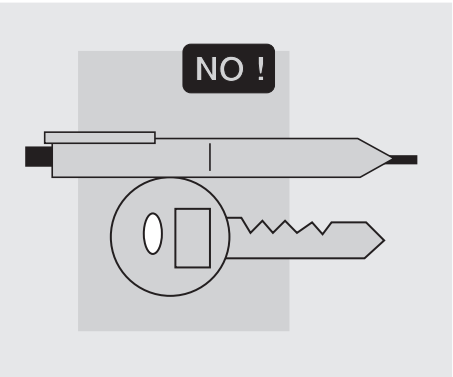
Before riding your vehicle, ensure that your riding gear is in good condition. To be effective, your helmet must fit properly, and the visor or other eye protection must be clean.

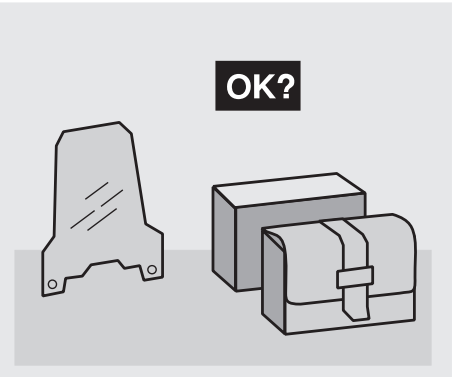
Both research and experience have shown that drivers of other vehicles often do not see vehicles or riders. In order to make yourself more conspicuous to these drivers, wear bright reflective clothing, such as a reflective vest, or clothing with reflective sections sewn into the jacket, pants and gloves. Be particular aware of approaching automobiles and trucks that might be trying to turn left in front of you. Many vehicle accidents are caused by an opposing automobile driver making a left turn without warning in front of the vehicle. Inevitably, the driver will look right at you, and yet swear that they did not see you before they turned directly into your path. Ride alert!

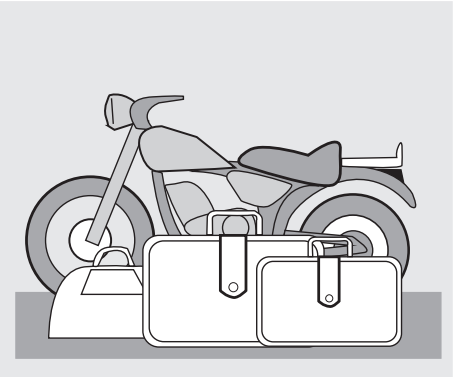
Wear protective clothing, preferably in light and/or reflecting colours. In this way you will make yourself more visible to the other drivers, thus notably reducing the risk of being knocked down, and you will be more protected in case of fall.

Always wear your crash helmet. Many accidents are fatal because of injuries to the head.

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 carry sharp objects in your pockets that could be dangerous in case of an upset, for example, pens or mechanical pencils, etc. Also, make sure that your passengers follow this recommendation.

ACCESSORIES

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

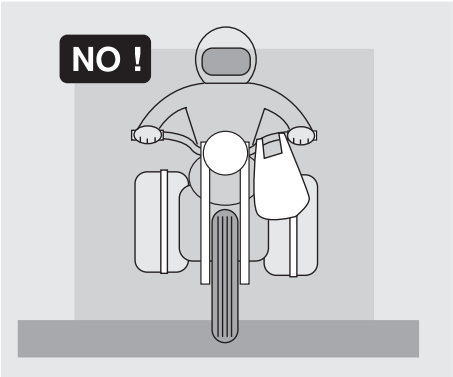
The installation of inappropriate accessories or the overloading of the vehicle may result in the instability of the vehicle itself and cause accidents with consequent risk of serious injuries or even death. Windshields could be particularly dangerous, as they can break and injure or cut the rider in case of accident. In case of doubts with regard to any accessory you would like to install or any load you would like to carry, previously consult your Local **aprilia** Dealer.

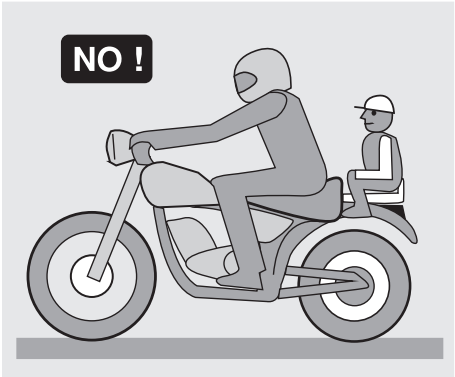
Avoid installing accessories that cover horns or lights or that could impair their functions, limit the suspension stroke and the steering angle, hamper the operation of the controls and reduce the distance from the ground and the angle of inclination in turns. Avoid using accessories that hamper access to the controls, since this can prolong reaction times during an emergency.
Fairings and windshields installed on the vehicle may produce aerodynamic forces that will affect the stability of the vehicle during use, especially at high speeds.

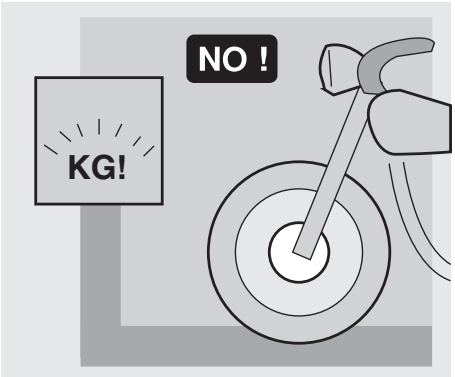
Make sure that anything you carry on your vehicle is securely attached, and cannot come lose and jam the wheels, forks, etc. Do not install any electrical accessories, and do not modify the electrical system of your vehicle. Anything that could cause an electrical overload or other fault could cause the vehicle to suddenly stop, the lights to dim or quit, or the horn and other safety accessories not to work. Use only **aprilia** genuine accessories.

LOAD

Do not overload your vehicle. Attach luggage or packages as close as possible to the center of your vehicle and distribute the load from side to side as evenly as possible, to keep imbalance to a minimum. Remember that loads tend to loosen with riding, so frequently check the security of your load.







Do not hang anything from your vehicle handlebars, fenders, or forks, because this will upset the handling of your vehicle, and could prevent you from avoiding an accident. Failure to heed this warning can lead to an upset with subsequent serious injury or even death.

Do not ride with your crash helmet hung from the strap because it could easily foul the wheels, fenders, or forks, causing an upset and subsequent serious injury or even death.

Carry a passenger only if your vehicle is equipped with passenger footrests, handgrips for the passenger to hold on to, and a passenger saddle.

When carrying a passenger, remember that your vehicle's handling is degraded, that the brakes are less efficient, and the center of gravity is higher and further to the rear.

This makes it more likely that the front wheel will come up off the ground, especially on acceleration. Therefore, you should avoid hard acceleration and hard braking. Many accidents are caused by inexperienced riders carrying passengers. Remember that allowance must be made for the extra weight of the passenger for all driving maneuvers.

Avoid abrupt and excessive acceleration. Always slow down in time and calculate longer stopping and manoeuvring distances. Non-compliance with these instructions may lead to the overturning of the vehicle or to other accidents with consequent serious injuries or even death.

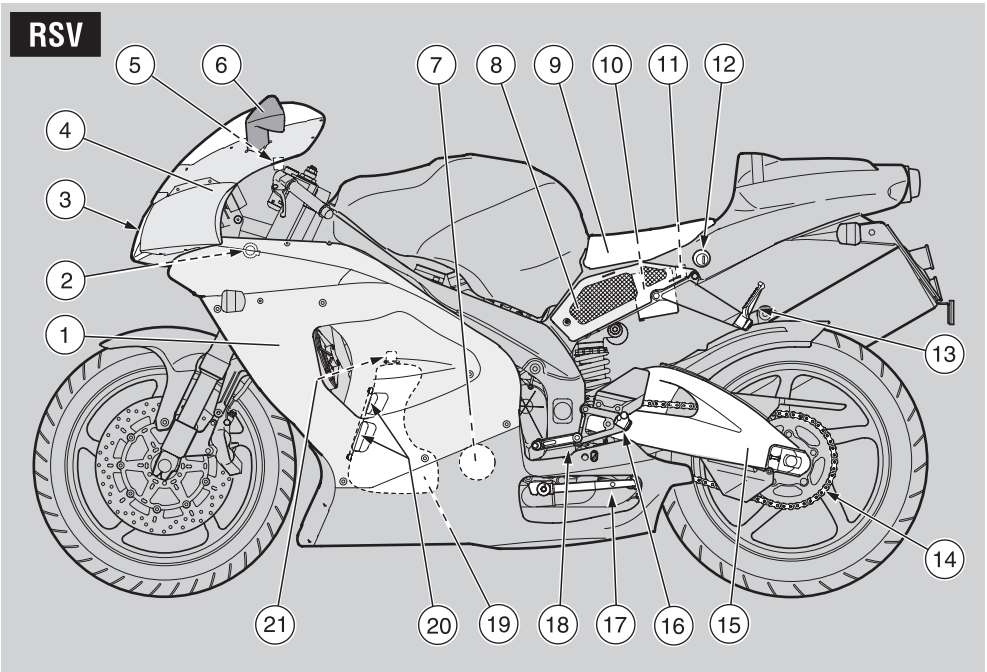
Never carry loosely packaged items, make sure that everything that you carry on your vehicle is carefully secured.

Do not carry packages which protrude from the luggage rack or which cover any of the signal lights, the headlight, or the horn.

Never carry animals or children on the glove compartment or on the luggage rack.

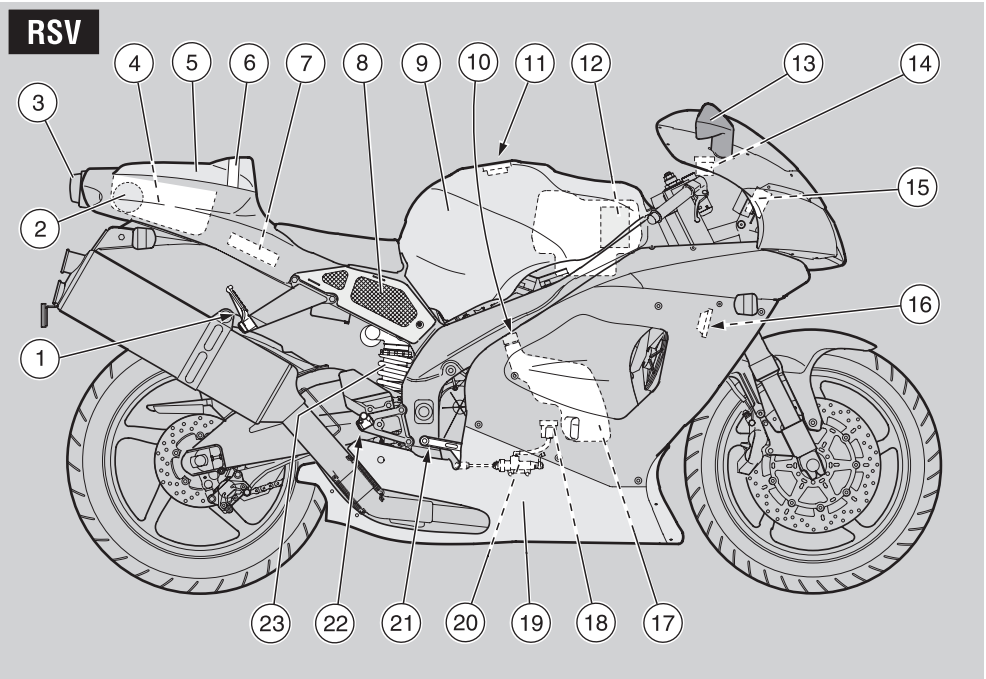
Never exceed the labeled maximum load for each saddlebag.

Overloading your vehicle seriously reduces its stability and maneuverability and can lead to an upset with subsequent serious injury or death.



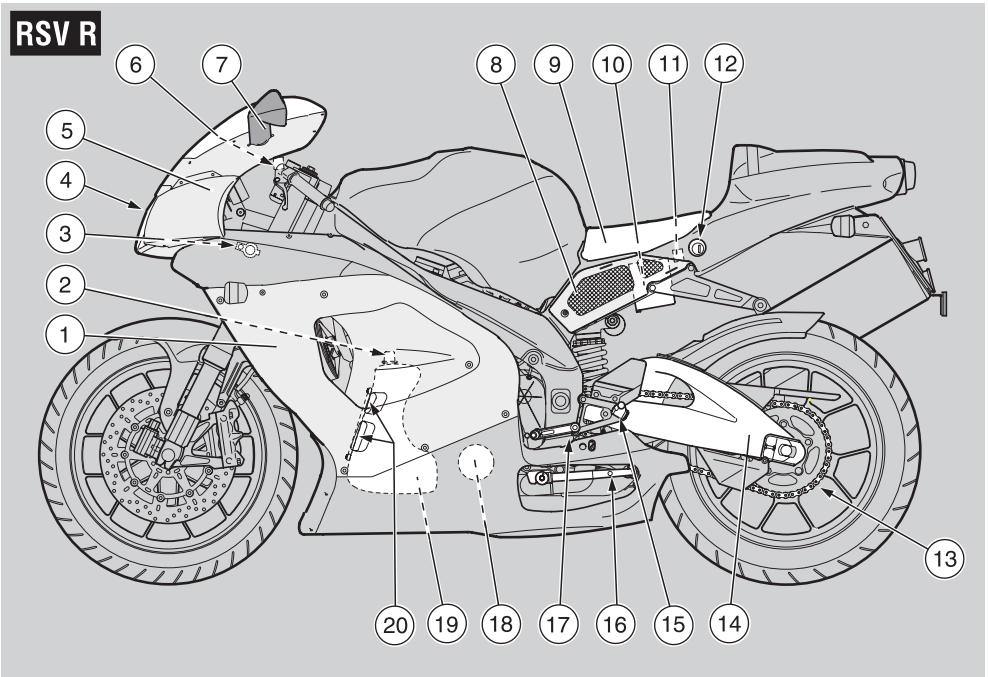
KEY

1) Left fairing
2) Non-adjustable steering damper (or adjustable steering damper RSV OPT)
3) Headlight
4) Front part of the fairing
5) Clutch fluid reservoir
6) Left rear-view mirror
7) Engine oil filter
8) Left side cover
9) Rider saddle
10) Battery
11) Main fuse carrier (30 A)
12) Glove/tool kit compartment lock
13) Passenger left footrest (retractable)
14) Drive chain
15) Rear fork
16) Rider left footrest (spring equipped, always extended)
17) Side stand
18) Shift lever
19) Engine oil tank
20) Engine oil level
21) Engine oil tank cap



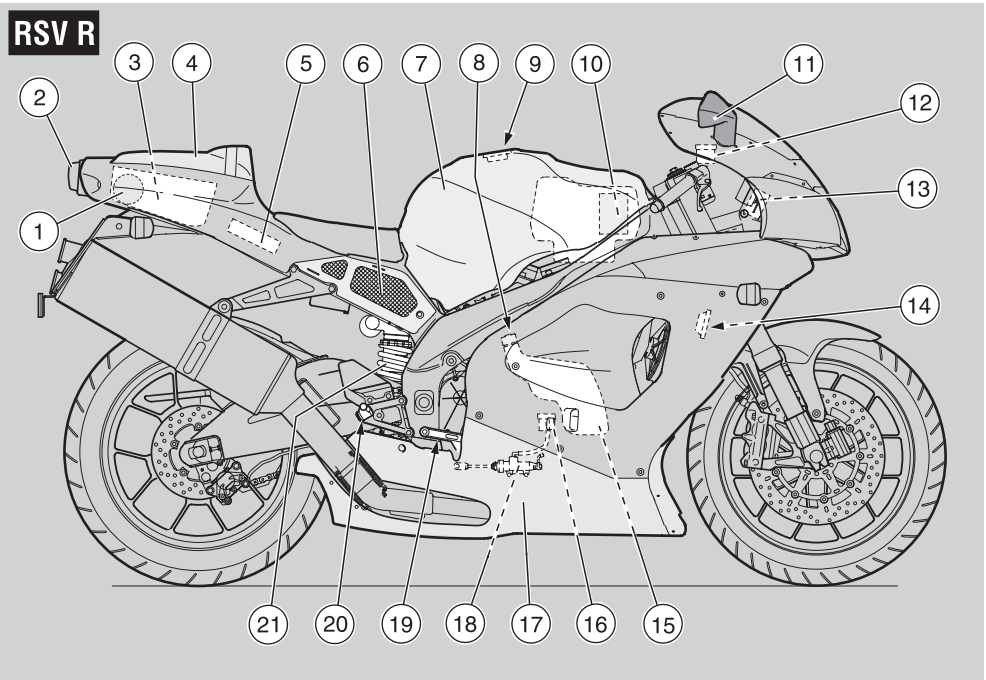
KEY

1) Passenger right footrest (retractable)
2) Carbon canister (for state of California only)
3) Rear light
4) Glove/tool kit compartment
5) Passenger saddle (or glove/tool kit compartment cover)
6) Passenger grab strap
7) Electronic unit
8) Right side cover
9) Fuel tank
10) Coolant filler cap
11) Fuel filler cap
12) Air cleaner
13) Right rear-view mirror
14) Front brake reservoir
15) Secondary fuse carrier (15 A)
16) Horn
17) Expansion tank
18) Rear brake reservoir
19) Lower fairing
20) Rear brake master cylinder
21) Rear brake pedal
22) Rider right footrest (spring equipped, always extended)
23) Rear shock absorber



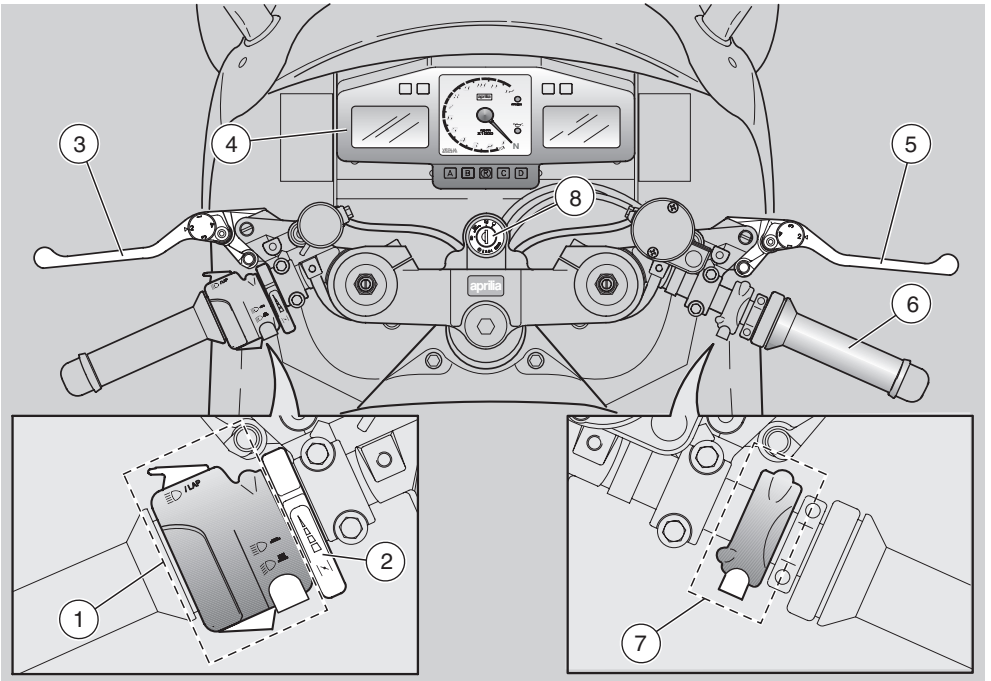
KEY

1) Left fairing
2) Engine oil tank cap
3) Adjustable steering damper
4) Headlight
5) Front part of the fairing
6) Clutch fluid reservoir
7) Left rear-view mirror
8) Left side cover
9) Rider saddle
10) Battery
11) Main fuse carrier (30 A)
12) Glove/tool kit compartment lock
13) Drive chain
14) Rear fork
15) Rider left footrest (spring equipped, always extended)
16) Side stand
17) Shift lever
18) Engine oil filter
19) Engine oil tank
20) Engine oil level



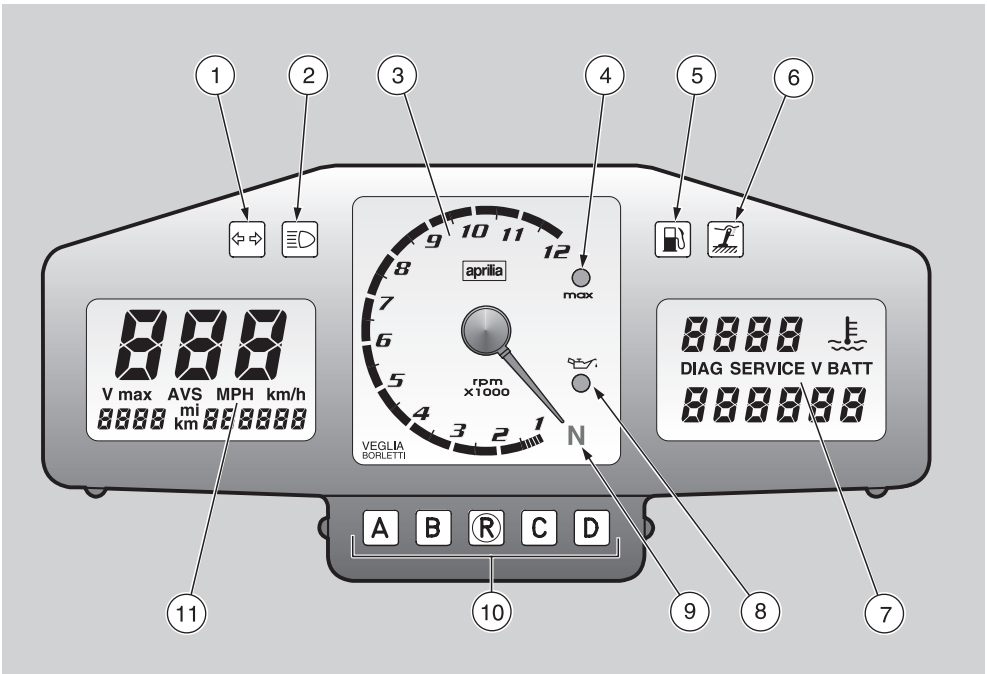
KEY

1) Carbon canister (for state of California only)
2) Rear light
3) Glove/tool kit compartment
4) Glove/tool kit compartment cover
5) Electronic unit
6) Right side cover
7) Fuel tank
8) Coolant filler cap
9) Fuel filler cap
10) Air cleaner
11) Right rear-view mirror
12) Front brake reservoir
13) Secondary fuse carrier (15 A)
14) Horn
15) Expansion tank
16) Rear brake reservoir
17) Lower fairing
18) Rear brake master cylinder
19) Rear brake pedal
20) Rider right footrest (spring equipped, always extended)
21) Rear shock absorber



KEY

1) Electrical controls on the left side of the handlebar, see p. 46 (CONTROLS AT THE LEFT HAND GRIP)
2) Cold start lever (⛽)
3) Clutch lever
4) Instruments and indicators
5) Front brake lever
6) Throttle grip
7) Electrical controls on the right side of the handlebar, see p. 47 (CONTROLS AT THE RIGHT HAND GRIP)
8) Ignition switch/steering lock/parking lights (○ – ⚿ – 🔒 – ≡D)



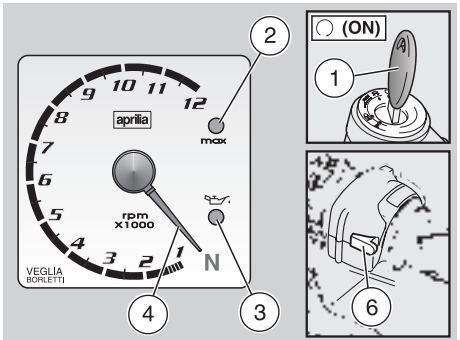
KEY

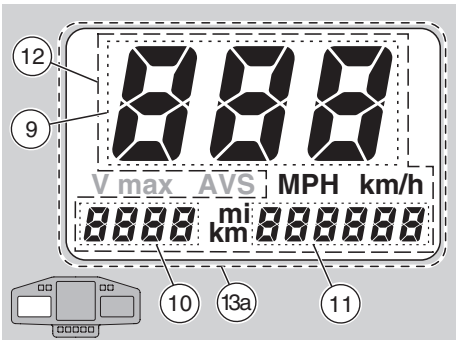
1) Green direction indicator warning light (⇦ ⇨)
2) Blue high beam warning light ( )
3) Tachometer
4) Programmable red line warning light LED (***max***)
5) Amber low fuel warning light ( )
6) Amber “side stand down” warning light (\ )
7) Right multifunction digital display (coolant temperature - clock - battery voltage - chronometer - diagnostic)
8) Red engine oil pressure warning light LED ( )
9) Green neutral indicator warning light (N)
10) Multifunction computer programming push buttons
11) Left multifunction digital display (speedometer - odometer)

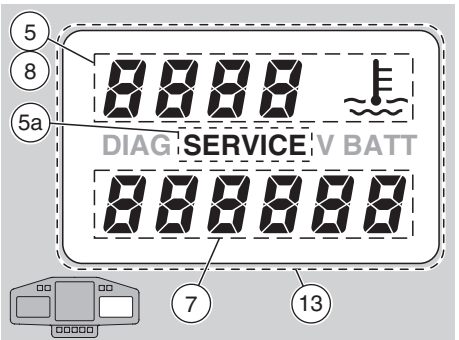
INSTRUMENTS AND INDICATORS TABLE

Description		Function	
Directional indicator ⇦⇨		Flashes when the right (or the left) direction indicator is on.	
High beam indicator ≡D		Comes on when the headlight is in “high beam” position or when the high beam signalling is operated.	
Tachometer ***rpm***		It indicates the number of revolutions of the engine per minute. **⚠ CAUTION** **Never exceed the maximum engine speed, see p. 80 (RUNNING-IN).**	
Programmable red line warning light LED ***max***		It flashes when the max. rpm set by the user is reached, see p. 42 [SETTING THE RED LINE THRESHOLD (WITH ENGINE OFF ONLY)]. It comes on when the engine max. rpm threshold setting is confirmed, see p. 42 [SETTING THE RED LINE THRESHOLD (WITH ENGINE OFF ONLY)] and whenever the ignition key is rotated to position “○” (ON), for about three seconds, see p. 40 (MULTIFUNCTION COMPUTER).	
Low fuel warning light ⛽		It comes on when the quantity of fuel left in the tank is about 1.19 ± 0.26 US gal (4.5 ± 1 ℓ). In this case, top up as soon as possible, see p. 54 (FUEL).	
Side stand down warning light \		Comes on when the side stand is extended.	
Engine oil pressure warning light LED		It comes on whenever the ignition switch is turned to position “○” (ON) and the engine is not running, thus testing the correct operation of the light LED. If during this phase the light LED does not turn on, contact your Local **aprilia** Dealer. The engine oil pressure warning light LED “” must go off when the engine is running. **⚠ CAUTION** **If the engine oil pressure warning light LED “” remains on after the engine has started, or if it comes on while you are riding your vehicle, this means that the oil system is not developing sufficient pressure. In this case, immediately stop the engine and contact your Local aprilia Dealer. Failure to heed this warning can lead to engine seizure, upset, and serious injury or even death.**	
Neutral indicator warning light N		It comes on when the transmission is in neutral.	
Multifunction digital display (left side)	**Speedometer (MPH – km/h)**	Indicates the instantaneous, average or maximum road speed [in miles (or kilometers)] according to the presetting, see p. 40 (MULTIFUNCTION COMPUTER).	To alternate the data displayed, see p. 40 (MULTIFUNCTION COMPUTER).
	Odometer (mi – km)	Indicates the total number of miles (or kilometer) that the vehicle has traveled since new.	

Description		Function	
Multifunction digital display (right side)	**Coolant temperature in °C (Celsius degree) or in °F (Fahrenheit degree)**	Indicates the approximate temperature of the coolant in the engine, in °C (Celsius degree) or in °F (Fahrenheit degree) according to the presetting, see p. 40 (MULTIFUNCTION COMPUTER). **NOTE** The cooling fans function only when the ignition key is in the "○" (ON) position. **⚠ CAUTION** **Do not leave the ignition key in the "⊗" (OFF) position since the cooling fans will not run regardless of the coolant temperature. This will cause the coolant temperature to continue to rise.** If, before shutting off the engine, you hear the cooling fans functioning, stop the engine but leave the ignition key to "○" (ON) position. This will allow the cooling fans to draw air through the radiators, and lower the temperature. Turn the ignition key to "⊗" (OFF) position only when the cooling fans have stopped. If, while riding, temperature of 115 – 120 °C (239 – 248 °F) is indicated, stop riding the vehicle, stop the engine, turn the ignition key to "○" (ON) position and wait until the cooling fans have stopped, then turn the ignition key to position "⊗" (OFF) and check the coolant level, see p. 66 (COOLANT). If the symbol "LLL" is displayed, stop riding the vehicle and let the engine run at 3,000 rpm for approximately two minutes, thus allowing the coolant to circulate normally in the cooling system. Then move the engine stop switch to "⊗" (OFF) position and check the coolant level, see p. 66 (COOLANT). If the symbol "LLL" is still displayed after the coolant level has been checked, contact your Local **aprilia** Dealer. **⚠ CAUTION** **Do not operate the vehicle if the maximum temperature [120 °C (248 °F)] is exceeded. Serious engine damage or even seizure may result which can cause an upset and serious injury or even death.**	To alternate the data displayed, see p. 40 (MULTIFUNCTION COMPUTER).
	Clock	Indicates the hour and minutes according to the computer setting, see p. 40 (MULTIFUNCTION COMPUTER).	
	Battery voltage (V BATT)	Indicates the battery voltage, see p. 40 (MULTIFUNCTION COMPUTER).	
	Chronometer	Indicates elapsed time, according to the computer setting, see p. 40 (MULTIFUNCTION COMPUTER).	
	Diagnostics	Whenever the ignition key is turned to "○" (ON) position, the symbol "EFI" is displayed for about three seconds. **⚠ CAUTION** **If the symbol "EFI" is displayed during the normal running of the engine, this means that the electronic unit has detected an anomaly. In many cases, the engine keeps running with reduced performance; immediately contact your Local aprilia Dealer.**	







MULTIFUNCTION COMPUTER

When the ignition key (1) is rotated to position "○" (ON), the following warning lights come on on the dashboard:
– red line warning light LED "***max***" (2).
– red engine oil pressure warning light LED (🛢) (3), which remains on until the engine starts.

The tachometer pointer (4) moves to the maximum rpm, set by the user.

After about three seconds have passed, the red line warning light LED "***max***" (2) goes off; and the tachometer pointer (4) returns to zero.

On the right side of the multifunction display, the symbol "***EFI***" (5) is displayed for about three seconds.

This sequence of displays indicates that the multifunction computer is operating properly.

⚠ CAUTION

After the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km), the word "SERVICE" (5a) appears on the right display. When this occurs contact your Local aprilia Dealer, who will carry out the operations indicated in the regular service intervals chart, see p. 86 (REGULAR SERVICE INTERVALS CHART).

To make the word "SERVICE" disappear, press the "LAP" push button (6), and simultaneously press the push button R and keeping them depressed for about 5 seconds.

With the ignition key (1) in position "○" (ON) the standard settings on the dashboard are the following:

Right display: Clock (7), coolant temperature in °C (8).

Left display: Instantaneous speed in MPH (9), trip 1 (trip odometer) (10), total miles odometer (11).

Upon installation of the battery or of the 30A main fuses:
– the tachometer pointer (4) makes 12 clockwise clicks, thus checking the operation of the tachometer itself;
– the instantaneous, maximum and average speed function is set in "**MPH**";
– the coolant temperature is set in °C;
– the digital clock is set to zero;
– the red line is set at 6000 rpm, indicated by the illumination of the red line warning light LED "***max***" (red) (2).

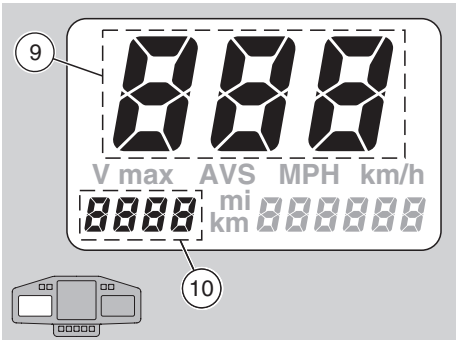
NOTE If necessary, carry out the appropriate adjustments.

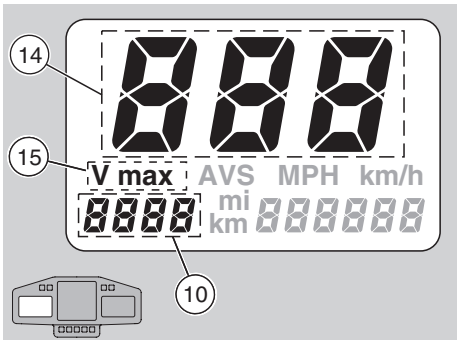
SEGMENT OPERATION CHECK

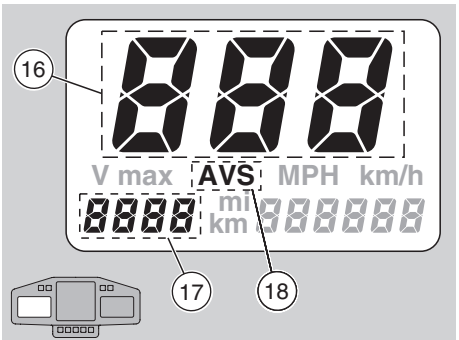
◆ Press the push buttons **A** and **B** simultaneously.
◆ Rotate the ignition key (1) from position "🔑" (OFF) to position "○" (ON).

All the segments (13) (13a) will remain on until the push buttons **A** and **B** are released.

SWITCHING FROM mi TO km (from MPH to km/h) AND VICEVERSA (LEFT DISPLAY)







- Press the push button **A** until, after about 5 seconds, all the symbols (12) on the left display start flashing.
- Release the push button **A**.
- Press the push button **B** to change the unit of measurement from "**mi**" to "**km**" (from "**MPH**" to "**km/h**") and viceversa.
- To confirm the setting, press the push button **A** for about 5 seconds.

SETTING THE INSTANTANEOUS, MAXIMUM AND AVERAGE SPEED (LEFT DISPLAY)

NOTE Two seconds after the vehicle has started moving, the instantaneous speed is automatically shown on the display, even if a different function is set.

When the ignition key is rotated to position "○" (ON), the instantaneous speed (9) and the partial number of miles/kilometers covered (trip 1) (10) appear on the left display.

Resetting "trip 1" (10): with the odometer set on the instantaneous speed function, press the push button **R** for about 2 seconds.

- To display the maximum speed (14) and the distance "trip 1" (10), press the push button **B** for about 1 second.
  The symbol "**V max**" (15), the maximum speed (14) and the distance "trip 1" (10) are displayed.

To reset the maximum speed (14) with the display set on the "**V max**" function, press the push button **R** for about 2 seconds.

NOTE The maximum speed displayed is the maximum speed achieved since the maximum speed was set to zero. The distance "trip 1" (10) displayed indicates the number of miles/kilometers covered since the "trip 1" was set to zero.

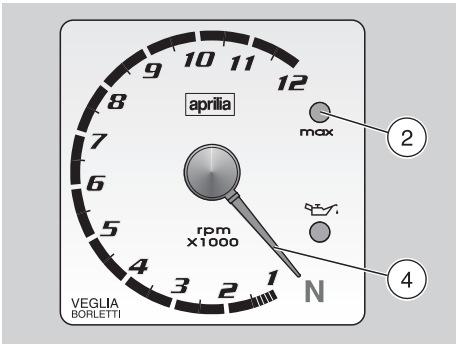
- To display the average speed (16) and the second odometer "trip 2" (17), press the push button **B** again for about 1 second.

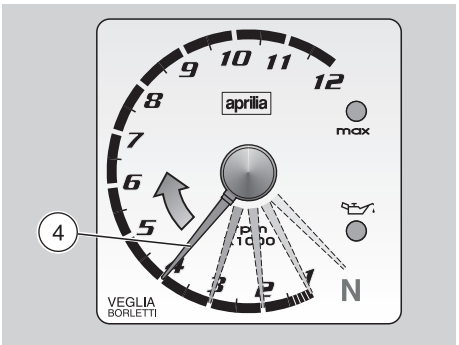
The symbol "**AVS**" (18), the average speed (16) and the distance "trip 2" (17) are displayed.

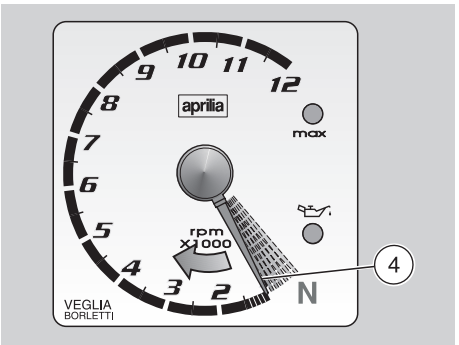
To reset the average speed (16) and the distance "trip 2" (17): with the odometer set on the "**AVS**" function, press the push button **R** for about 1 second.

NOTE The average speed displayed is the average speed since the "trip 2" odometer was set to zero.
The distance "trip 2" (17) displayed indicates the number of miles/kilometers covered since the "trip 1" was set to zero.
If more than 600 mi (1,000 km) are covered without setting "trip 2" to zero, the value of the average speed will be wrong.

- To display the instantaneous speed (13) and the distance "trip 1" (10), press the push button **B** again.







SETTING THE RED LINE THRESHOLD (WITH ENGINE OFF ONLY)

When the maximum rpm set is exceeded, the red line warning light LED "*max*" (2) positioned on the dashboard starts flashing.

If the push button **C** is pressed for less than one second, the tachometer pointer (4) shifts to the red line value set for 3 seconds, after which it returns to its initial position.

To set:

- Press the push button **C**, release it and press it again within 3 seconds.
  The tachometer pointer (4) moves increasing the value by 1,000 rpm at each click, as long as **C** is kept pressed; when it has reached the maximum value, it starts again from the beginning.
- Press the push button **C** until the desired rpm value has been set.
- If the push button **C** is released and then pressed again within 3 seconds, intermittently, the tachometer pointer (4) moves increasing the value by 100 rpm at each click; when it has reached the maximum value, it starts again from the beginning.

NOTE It is not possible to set the red line at values lower than 2,000 rpm or higher than 12,000 rpm.

⚠ CAUTION

Never exceed the recommended rpm, see p. 80 (RUNNING-IN).

- To confirm, release the push button **C**. After 3 seconds, the red line threshold setting is stored.

NOTE The rpm setting is confirmed when the red warning light LED "***max***" (2) illuminates.

MULTIFUNCTION (RIGHT DISPLAY)

The right display (multifunction) includes the coolant temperature in °C (Celsius degree) (8) and the digital clock (7) as standard settings.

NOTE When the engine is cold, the word "cold" flashes.

By pressing the push button **D**, the following functions can be obtained in sequence:

Standard setting: temperature in °C (Celsius degree) and digital clock

↓ **D**

Battery voltage (V BATT)

↓ **D**

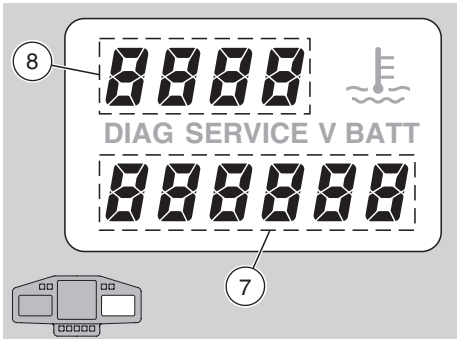
Hour setting

↓ **D**

Minute setting

↓ **D**

°C (Celsius degree) or °F (Fahrenheit degree) setting



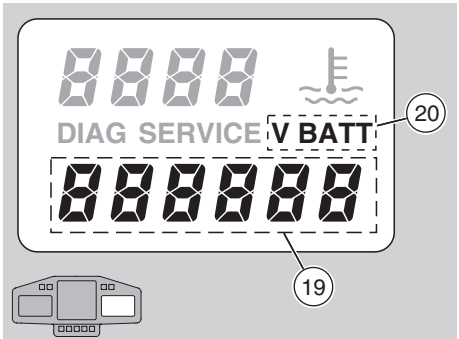
STANDARD SETTING: COOLANT TEMPERATURE AND DIGITAL CLOCK

The coolant temperature value (8) is shown in the upper part of the right display. It is possible to switch from °C (Celsius degree) to °F (Fahrenheit degree) and vice-versa, see p. 44 (SETTING °C (Celsius degree) OR °F (Fahrenheit degree)).

– When the temperature is below 35°C (95°F), the word "cold" (8) flashes on the right display.
– When the temperature is over 115°C (239°F), the value (8) flashes on the right display, even if a function different from the standard setting has been set.
– When the temperature is over 130°C (266°F), the symbol "LLL" (8) appears on the right display.

⚠ CAUTION

If the symbol "LLL" is displayed with a temperature below 130°C (266°F), there may be a failure of the electric circuit. In this case, contact your Local aprilia Dealer.



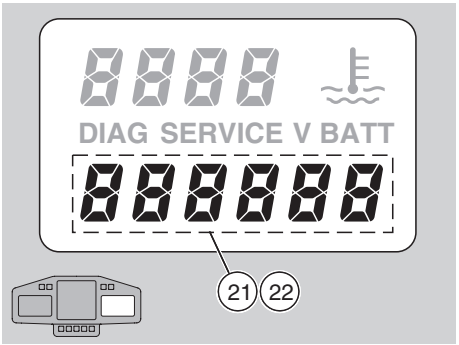
Thermometer range on the display: 35 – 130°C (95 – 266 °F).

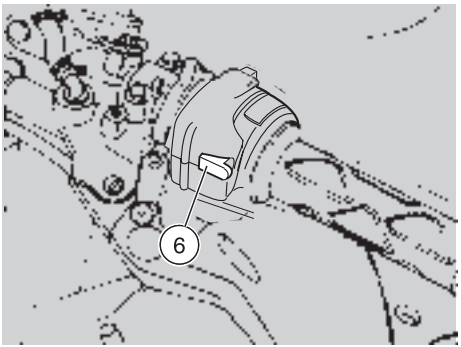
The digital clock (7) appears in the lower part of the right display.

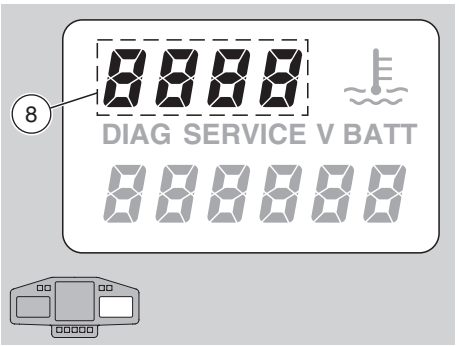
To set or modify hour and minutes, see p. 44 (SETTING THE HOUR) and p. 44 (SETTING THE MINUTES).

BATTERY VOLTAGE - V BATT

◆ If the push button **D** is pressed once, the battery voltage expressed in volts (19) appears in the lower part of the right display, while the coolant temperature (8) is displayed in the upper part.
The word "**V BATT**" (20) is displayed.
The charging circuit is functioning correctly if at 4,000 rpm the battery voltage with low beam "≡D" on is included between 13 and 15 V.







SETTING THE HOUR

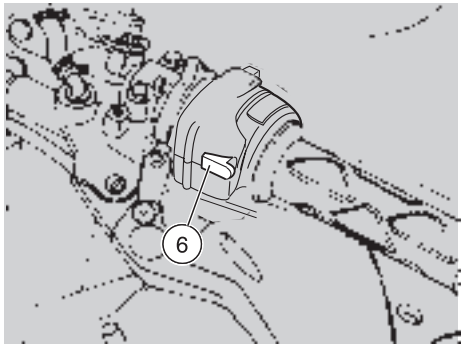
- When the push button **D** is pressed for the second time, the hour segments (21) start flashing in the lower part of the right display (digital clock).
- To change the hour setting, press the “LAP” push button (6) on the left part of the handlebar.
- To confirm the hour setting, press the push button **D**.

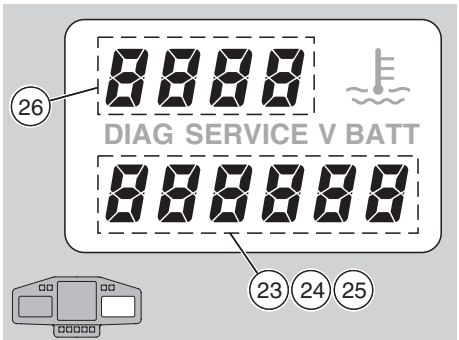
SETTING THE MINUTES

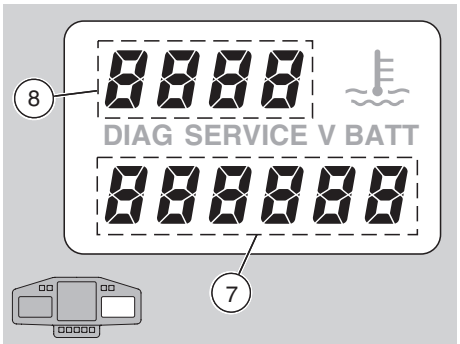
- When the push button **D** is pressed for the third time, the minute segments (22) start flashing in the lower part of the right display (digital clock).
- To change the minute setting, press the “LAP” push button (6) on the left part of the handlebar.
- To confirm the minute setting, press the push button **D**.

SETTING °C (Celsius degree) OR °F (Fahrenheit degree)

- When the push button **D** is pressed for the fourth time, the segments of the coolant temperature in °C or °F (8) start flashing in the upper part of the display.
- To change from °C to °F setting, or vice versa, press the “LAP” push button (6) on the left part of the handlebar.
- To confirm the setting, press the push button **D**.







CHRONOMETER (RIGHT DISPLAY)

The chronometer makes it possible to measure the time per lap with the vehicle on a racetrack and to store the data, in such a way as to be able to consult them thereafter.

When the "CHRONOMETER" function has been selected, it is not possible to recall the following functions:

– maximum speed "**V max**";
– average speed "**AVS**";
– distance "trip 2".

◆ To operate the chronometer, press the "LAP" push button (6) and, within 7 seconds, the push button **D**.

◆ To start timing, press the "LAP" push button (6) and release it immediately.

◆ To store the time acquired, press the "LAP" push button (6).

The "LAP" push button (6) is not enabled for 10 seconds and the last time stored (23) is shown on the display.

After which, the chronometer with the current timing (24) is displayed, starting from 10 seconds.

◆ To display the first time stored (25), press the push button **B**.

◆ To be able to see the stored times in sequence, press the "LAP" push button (6). The symbols *L1*, *L2*, *L3*, *L4*, etc. (26) are displayed.

◆ To start timing again, press the push button **B**.

NOTE Up to 40 lap times can be stored. After this, pushing the "LAP" push button (6) has no effect.

◆ To set the memory to zero, press the push button **A** and the "LAP" push button (6) at the same time for 2 seconds.

◆ To leave the chronometer function, press the "LAP" push button (6) and the push button **D**.

The coolant temperature (8) and the digital clock (7) appear on the right display (multifunction).

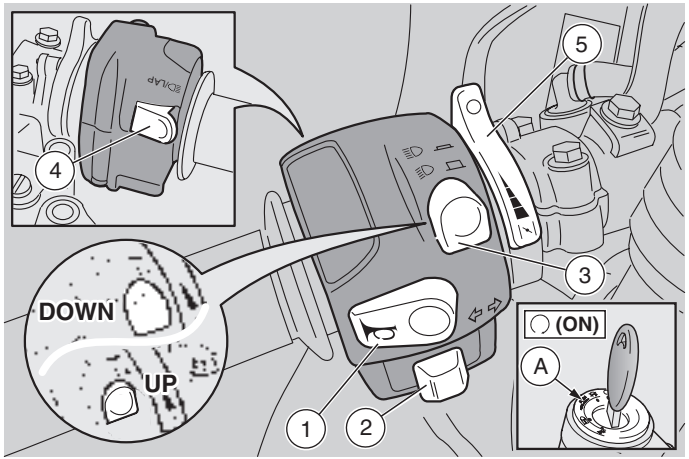
NOTE When the engine is cold, the word "*cold*" is displayed.

DIAGNOSTICS (RIGHT DISPLAY)

Whenever the ignition switch is turned to position "○" (ON), the symbol "*EFI*" (5) is displayed for about three seconds.

⚠ CAUTION

If the symbol "*EFI*" (5) is displayed during the normal operation of the engine, this means that the electronic unit has detected an anomaly. In many cases, the engine keeps running with reduced performance levels; immediately contact your Local aprilia Dealer.



CONTROLS

NOTE The electrical components function only when the ignition switch (A) is in the "○" (ON) position.
The parking lights are illuminated as well when the ignition switch (A) is in the "≡D" (PARKING) position.

CONTROLS AT THE LEFT HAND GRIP

1) HORN PUSH BUTTON ( )
The horn sounds when the button is pressed.

2) DIRECTION INDICATOR SWITCH ( )
To activate the left turn indicator, move the switch to the left. To activate the right turn indicator, move the switch to the right. To cancel the turn indicator flashing, press the switch.

3) DIMMER SWITCH (–)
The dimmer switch has two positions:
– push DOWN, low beam " " position;
– push UP, high beam " " position.

When the button is in the DOWN position indicated by the " ", the parking lights, dashboard light and low beam are illuminated.

When the button is in the UP position " " and released, the high beam is illuminated, the dashboard and parking lights remain on.

Push and release the button DOWN to return to the low beam " ".

4) HIGH BEAM SIGNALING PUSH BUTTON ( )/LAP (multifunction)
Press the button momentarily to flash the high beam for signaling when passing, etc. or in the event you need someone's attention in an emergency.

This push button, in addition to being the LAP push button, has the following functions:
– hour and minutes, see p. 44 (SETTING THE HOUR) and (SETTING THE MINUTES);
– coolant temperature (°C or °F), see p. 44 [SETTING °C (Celsius degree) OR °F (Fahrenheit degree)];
– chronometer, see p. 45 [CHRONOMETER (RIGHT DISPLAY)].

5) COLD START LEVER ( )
Operate the cold start (choke) by rotating the lever downwards.
To disengage the cold start, return the lever upwards to its initial position.

CONTROLS AT THE RIGHT HAND GRIP

1) ENGINE STOP SWITCH (■○ – ▬⊗)

Use the engine stop switch to stop the engine only in case of emergency. It is essential that you be very familiar with this control so that you will automatically stop the engine in the event of a stuck throttle or other engine runaway.

⚠ WARNING

If the throttle sticks open, it may cause a collision with another vehicle, or an upset.

If the throttle sticks, kill the engine with the engine stop switch located on the right handlebar.
Do not attempt to restart the engine until the throttle has been repaired and works perfectly. Failure to obey this warning can lead to a runaway with seriously injuries or even death.

Your vehicle is equipped with a double cable throttle. One cable opens the throttle when you rotate the throttle grip toward you; the other closes the throttle when you rotate the grip away from you. It is essential, when you release the throttle grip, that it automatically return to the idle position.

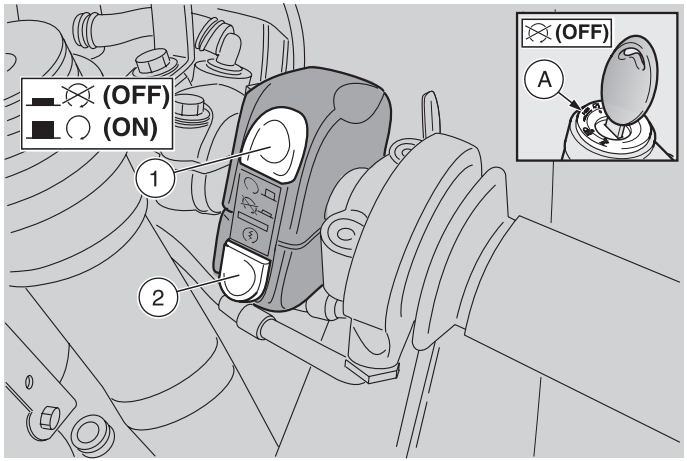
This double cable arrangement enhances safety by providing for positive closing of the throttle.

⚠ WARNING

In the event of a throttle sticking emergency, always kill the engine using the engine stop switch located near the throttle grip on the right handlebar. Never use your vehicle if the throttle does not automatically fully return to the idle position when the throttle grip is released. Contact your Local aprilia Dealer for repairs. Failure to heed this warning can lead to a serious accident and subsequent injury or even death.

⚠ WARNING

Do not use the engine stop switch to stop the engine while the vehicle is moving.



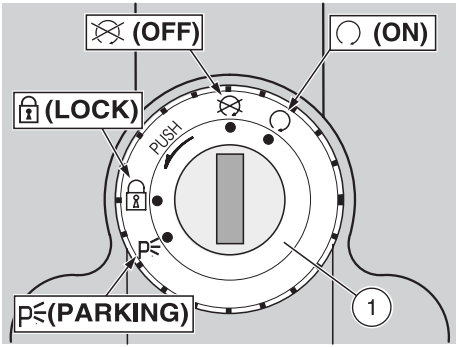
With the switch (1) in the "■○" (ON) position it is possible to start the engine. The engine can be stopped by moving the switch (1) to the "▬⊗" (OFF) position.

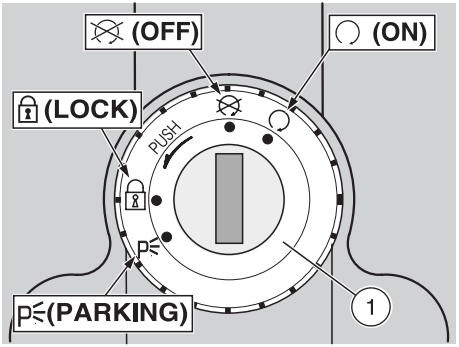
⚠ CAUTION

To stop the vehicle, exclusively use the ignition switch (A).
Leave the engine stop switch (1) in position "○" (ON) and use it only in case of emergency.
Do not leave the ignition on if you have stopped for emergency the engine by moving the engine stop switch to the "▬⊗" (OFF) position as this will discharge the battery.
When, for emergency, the vehicle has come to rest after stopping the engine with the engine stop switch, turn the ignition switch (A) to the "▬⊗" (OFF) position.

2) STARTER SWITCH (⊛)

When the starter switch is pressed, the starter engages and the engine will start. For starting, see p. 74 (STARTING).





IGNITION SWITCH

The ignition switch (1) is located on the upper plate of the steering head.

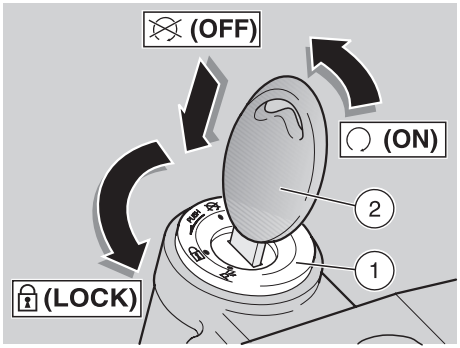
NOTE The key (2) operates:

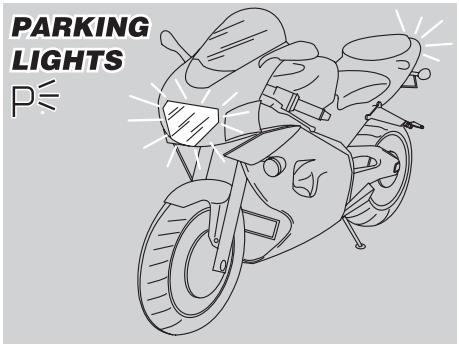
– the ignition switch/steering lock (1);
– the fuel tank lock (3);
– the glove/tool kit compartment lock (4).

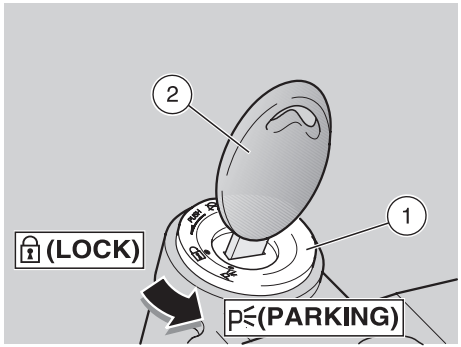
Two keys are supplied with the vehicle (one spare key).

NOTE Do not keep the spare key on the vehicle.

Position	Function	Key removal
(LOCK) Steering lock	The steering is locked. It is neither possible to start the engine, nor to switch on the lights.	It is possible to remove the key.
(OFF)	Neither the engine, nor the lights can be switched on.	It is possible to remove the key.
(ON)	The engine and the lights can be switched on.	It is not possible to remove the key.
(PARKING)	The parking lights are illuminated.	It is possible to remove the key.







STEERING LOCK

⚠ WARNING

Never attempt to place the ignition switch in the locked "🔒" (LOCK) position while the vehicle is moving. This will cause loss of control of the vehicle with possible subsequent accident, serious injury or even death.

OPERATION

To lock the steering:

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Turn the handlebar completely counterclockwise (leftwards).
- Turn the key (2) to position "⊗" (OFF).
- Release the key (2)

NOTE Turn the key (2) and steer the handlebar at the same time.

- Press the key (2) and turn it counterclockwise (leftwards), steer the handlebar slowly until the key (2) reaches position "🔒" (LOCK).
- Remove the key (2).

PARKING LIGHTS

When you have to park your vehicle in a dark or badly lighted area (parking lot or street), it is sometimes useful to leave the parking lights on so that your vehicle will be easily visible.

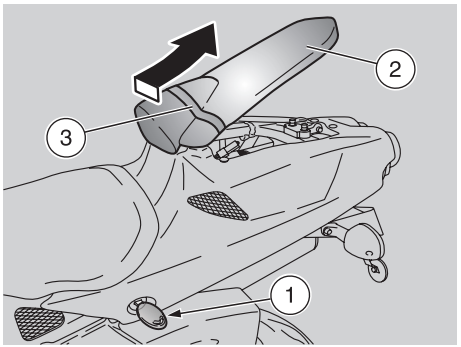
OPERATION

To leave the parking lights on:

- Lock the steering, see beside () without extracting the key (2).
- Turn the key (2) to position "≡D" (PARKING); the parking lights automatically illuminate.
- Remove the key (2).

⚠ CAUTION

Do not leave the ignition switch (1) in the "≡D" (PARKING) position for extended periods of time, as this will cause the battery to become completely run down.



UNLOCKING/LOCKING THE PASSENGER SADDLE

- Position the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Introduce the key (1) in the saddle lock.
- Rotate the key (1) anticlockwise, lift and withdraw the saddle (2) from behind.

NOTE Before lowering and locking the saddle (2), make sure that you have not left the key in the glove/tool kit compartment.

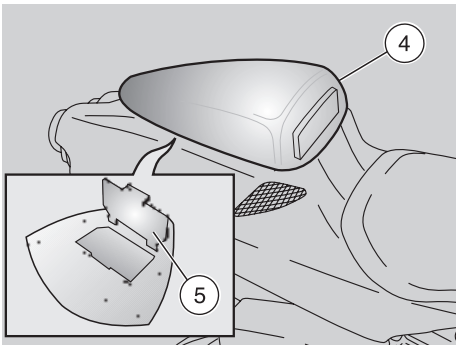
To lock the saddle (2), proceed as follows:

- Introduce its front part under the passenger grab strap (3).
- Position the saddle and press it, making the lock snap.

⚠ WARNING

Before leaving, make sure that the saddle (2) is properly locked.

NOTE For the USA market, the RSV R version can be used only in single-seater configuration. Therefore, vehicle outfit does not include the passenger seat.

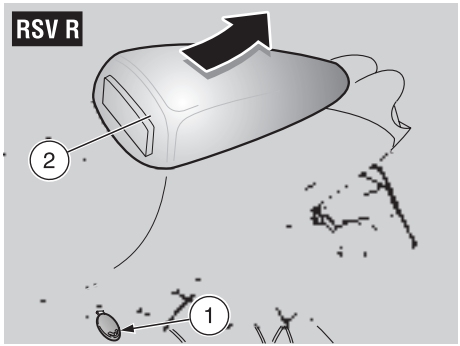


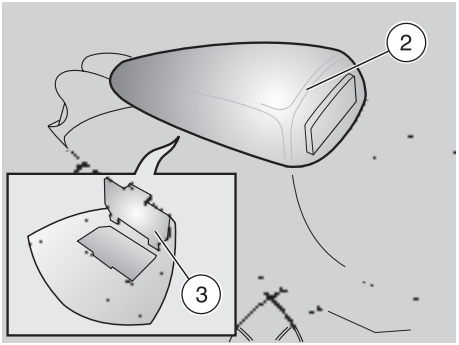
NOTE Glove/tool kit compartment cover (4) can be used as an alternative to the passenger saddle (2).

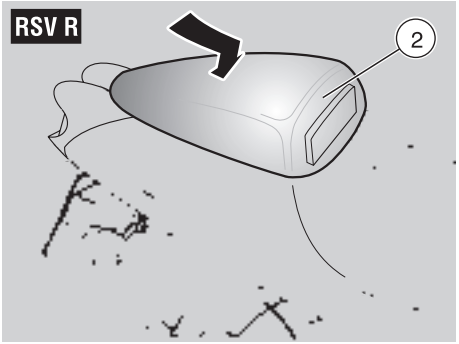
To use the vehicle with the glove/tool kit compartment cover it is necessary to remove the passenger saddle as previously described.

See page 51 (UNLOCKING/LOCKING THE GLOVE/TOOL KIT COMPARTMENT COVER) for assembly instructions.

A useful compartment is available under the glove/tool kit compartment cover; to reach it, it is sufficient to release and remove the flap (5).







UNLOCKING/LOCKING THE GLOVE/TOOL KIT COMPARTMENT COVER

- Position the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Introduce the key (1) in the lock.
- Turn the key (1) anticlockwise, raise and withdraw the glove/tool kit compartment cover (2) from behind.

A useful compartment is available under the glove/tool kit compartment cover; to reach it, it is sufficient to release and remove the flap (3).

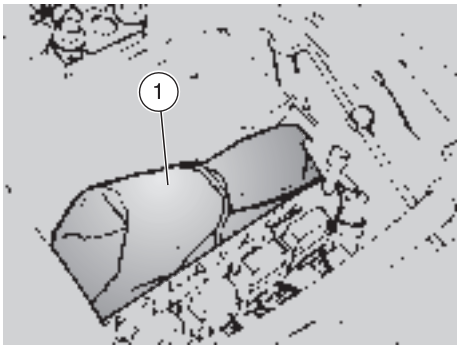
NOTE Before lowering and locking the glove/tool kit compartment cover (2), make sure that you have not left the key in the glove/tool kit compartment.

To lock the glove/tool kit compartment cover (2):

- Introduce the lower front projections in the relevant recesses on the rear part of the fairing.
- Position the glove/tool kit compartment cover in its saddle and press it, so that the lock snaps.

⚠ WARNING

Before leaving, make sure that the glove/tool kit compartment cover (2) is correctly locked.



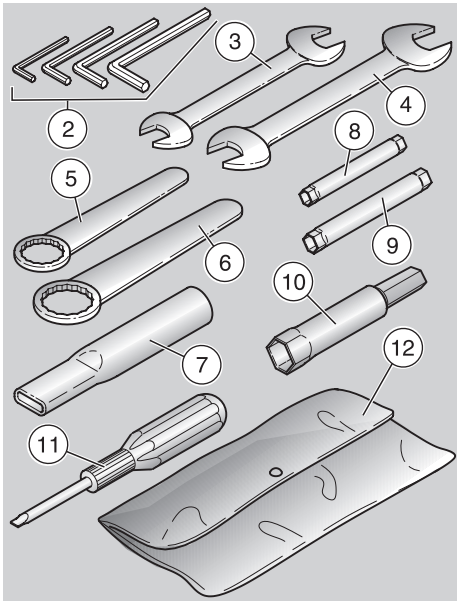
GLOVE/TOOL KIT COMPARTMENT

To reach the glove/tool kit compartment, proceed as follows:

◆ Remove the passenger seat -see p. 50 (UNLOCKING/LOCKING THE PASSENGER SADDLE) - or the glove/tool kit compartment cover -see p. 51 (UNLOCKING/LOCKING THE GLOVE/TOOL KIT COMPARTMENT COVER).

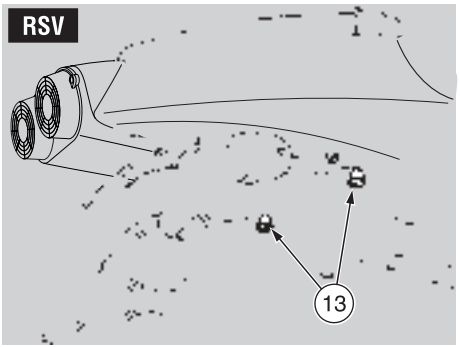
The tool kit (1) includes:

– 3 mm, 4 mm, 5 mm, and 6 mm Allen wrenches (2);
– an 8 and 10 mm open end wrench (3);
– an 11 and 13 mm open end wrench (4);
– a 22 mm box wrench (5);
– a 32 mm box wrench (6);
– extension for box wrench (7);
– a 6 mm and 7 mm double socket wrench (8);
– an 8 and 10 mm double socket wrench (9);
– a 16 mm spark plug socket wrench (10);



– a double ended slot/Phillips screwdriver (11);
– tool pouch (12).

NOTE The maximum allowable weight for the glove/tool kit compartment is: 3.31 lb (1.5 kg).



LUGGAGE RACK FASTENINGS RSV

⚠ WARNING

Never carry passengers, luggage or parcels with RSV R model.

Any mention in this manual of passenger, luggage or parcels referres only to the RSV model.

Never carry any parcels on the glove/tool kit comparment cover RSV OPT; small parcels may be carried only on the passenger saddle, see p. 52 (LUGGAGE RACK FASTENINGS RSV).

Failure to heed these warnings may lead to a serious accident with consequent risk of serious injury or even death.

Small parcels can be carried only on the passenger saddle, using elastic bands. The elastic bands are hooked to the two fastening studs (13).

Maximum allowable weight: 20 lb (9 kg).

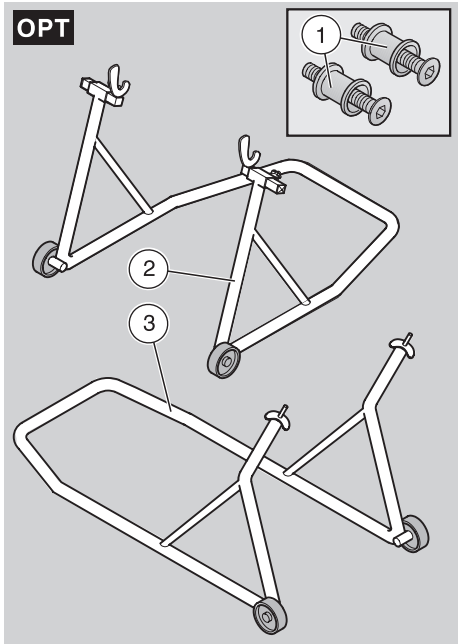
⚠ CAUTION

The package carried on the passenger saddle must be of small size, and carefully and securely held in place.

SPECIAL TOOLS OPT

Special tools are needed to perform some specific operations on your vehicle. These tools are available from your Local **aprilia** Dealer.

Tool	Operations	Page
Pins (1) for the rear support stand.	To place the vehicle on the rear support stand.	106
Rear support stand (2).	Rear wheel disassembly/reassembly.	110
	Drive chain adjustment.	114
	Removal of the lower fairing.	119
	Long periods of inactivity.	144
Front support stand (3).	Front wheel disassembly/reassembly.	107
	Long periods of inactivity.	144



ACCESSORIES

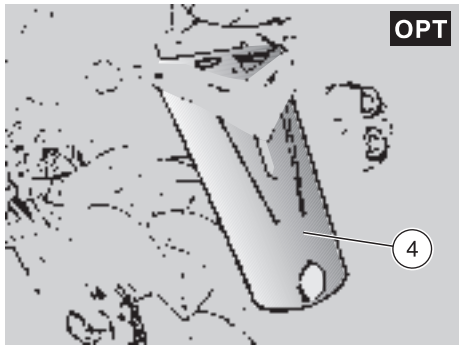
The following accessories:

– “R” front fork;

– “R” rear shock absorber;

– steering damper adjustable;

which are supplied as standard equipment on the RSV R model , can be installed, optional OPT, also on RSV model (ask your Local **aprilia** Dealer).



LICENSE PLATE HOLDER EXTENSION OPT

The license plate holder extension (4) may be used when the road surface is wet. It will reduce the amount of spray coming from your rear wheel.

NOTE The license plate holder extension (4) is supplied as standard equipment only in those countries where it is required. It is available as an option in all other countries.

FUEL

⚠ WARNING

Gasoline is extremely flammable and in some conditions can become explosive.
Therefore, it is necessary to refuel and carry out maintenance operations involving the fuel system in a well-ventilated area with the engine off.
Do not refuel or do any maintenance on the fuel system with the engine running.
Do not smoke while refueling or near fuel vapors.
Never allow any portion of the fuel system to come in contact with open flames, sparks or other heat sources. Be careful to avoid spilling fuel when you are refueling. Spilled fuel could ignite when it contacts hot engine or exhaust system surfaces. If you accidentally spill some fuel, make sure that it is wiped up or completely evaporated before starting the vehicle.
Since gasoline expands in the fuel tank when the vehicle is sitting in the open sun, never fill the tank completely to the brim. Leave at least one inch of expansion space.
Avoid any contact of the fuel with your skin, and avoid inhalation of fuel vapors. Do not ever attempt to siphon fuel from one container to another using your mouth as suction for a siphon hose.

⚠ WARNING

Gasoline is poisonous and carcinogenic and contains chemical substances that cause birth defects and other reproductive problems. If gasoline should be accidentally spilled on the skin or clothes, immediately wash it off with soap and water and change clothes.

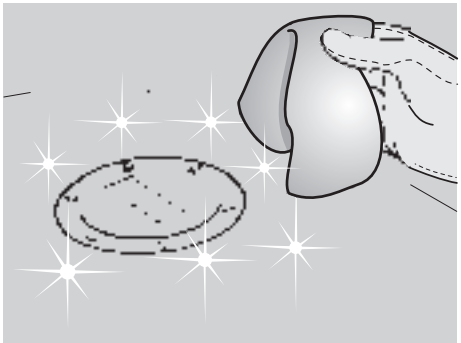
Should you accidentally spill gasoline in your eyes, flush with a large quantity of water and immediately contact a health professional. Should you accidentally get gasoline into your mouth, do not induce vomiting. Drink a large quantity of milk or clear water and immediately contact a health professional.

Never try to siphon gasoline by sucking it with your mouth. Use a manual pump or a similar system.

If your vehicle overturns, it will leak gasoline which is extremely flammable. Flames or sparks may ignite this which will not only destroy the vehicle but also could do serious property damage to surrounding property and cause serious injuries or even death.

ALWAYS KEEP GASOLINE AWAY FROM CHILDREN.

DISPOSE OF UNWANTED GASOLINE PROPERLY, DO NOT DUMP IT INTO STORM SEWERS OR INTO A SINK OR TOILET.



Use only unleaded petrol minimum octane rating (M+R)/2 method 90.

FUEL TANK CAPACITY
(reserve included): 4.75 US gal (18 ℓ).

TANK RESERVE: 1.19 ± 0.26 US gal (4.5 ± 1 ℓ).

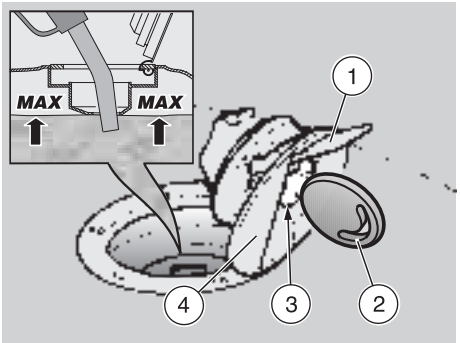
REFUEL

To refuel, proceed as follows:

◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).

⚠ CAUTION

If dirt has accumulated on or around the fuel filler cap, wipe the cap and the area around the cap with a clean cloth. Prevent any foreign material from getting into the fuel tank, this could lead to serious engine damage.



- Lift the little cover (1).
- Insert the key (2) in the cap lock (3).
- Turn the key (2) clockwise, pull it and open the fuel filler cap (4).

⚠ CAUTION

If you use any container or funnel for refueling, make sure that it is perfectly clean.
Any foreign matter getting into the fuel tank may lead to severe damage.

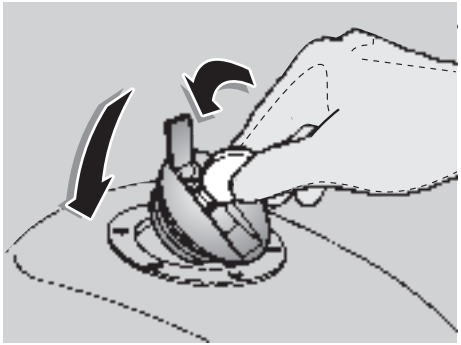
⚠ WARNING

Do not add any additives or other substances to the gasoline.

⚠ WARNING

Do not fill the tank completely. The fuel should never be higher than the bottom of the rim of the filler neck.

- Refuel.



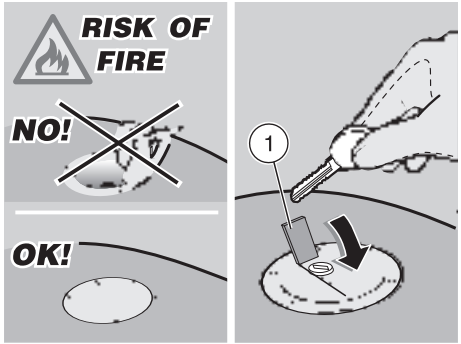
When you finish the refueling operation:

⚠ WARNING

After refueling, replace the fuel filler cap (4) in the correct position.

NOTE It is impossible closed the fuel filler cap without the key.

- With the key (2) inserted in the lock (3) close the fuel filler cap (4) rotate counterclockwise the key and push it.
- Release the key (2), at this point the fuel filler cap (4) is closed.



⚠ WARNING

Make sure that the fuel filler cap (4) is properly closed.

- Extract the key (2).
- Close the little cover (1).

LUBRICANTS

⚠ WARNING

Proper vehicle lubrication is critical to safe operation. Failure to maintain proper lubricant levels or to use the proper type of clean, new lubricant, can lead to an engine or transmission seizure with subsequent accident, serious injury or death.

⚠ WARNING

Use latex gloves for the maintenance operations that require contact with used oil. Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is advisable to thoroughly wash your hands with soap and water after handling used oil.

KEEP OIL AWAY FROM CHILDREN.

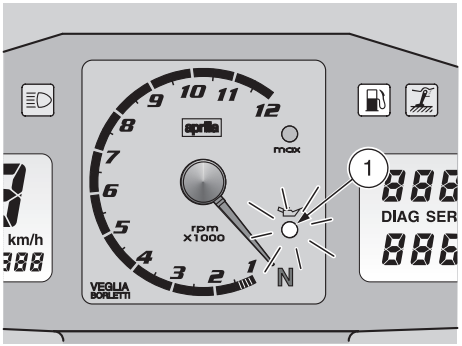
DISPOSE OF OIL PROPERLY.

⚠ CAUTION

Be very careful when putting oil in your vehicle not to spill oil. Clean up any oil spilled immediately because oil can damage the finish of your vehicle. Also, oil on the tires creates an extremely slippery and therefore dangerous situation.

⚠ CAUTION

In case of oil leakage do not ride your vehicle. Before using the vehicle, have it repaired by your Local aprilia Dealer.



ENGINE OIL

⚠ WARNING

If the engine oil pressure warning light LED "" (1) remains on after the engine has started, or if it comes on while you are riding your vehicle, this means that the oil system is not developing sufficient pressure. In this case, immediately stop the engine and contact your Local aprilia Dealer. Failure to heed this warning can lead to engine seizure, upset, and serious injury or even death.

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Check the engine oil level every 300 mi (500 km), see p. 94 (CHECKING THE ENGINE OIL LEVEL AND TOPPING UP).

⚠ CAUTION

Have your Local aprilia Dealer change the engine oil after the first 600 mi (1,000 km), and thereafter every 4,650 mi (7,500 km) or every 2,300 mi (3,750 km) if you use your vehicle for competition.

NOTE Use high-quality 15W – 50 oil, see p. 153 (LUBRICANT CHART).

BRAKES

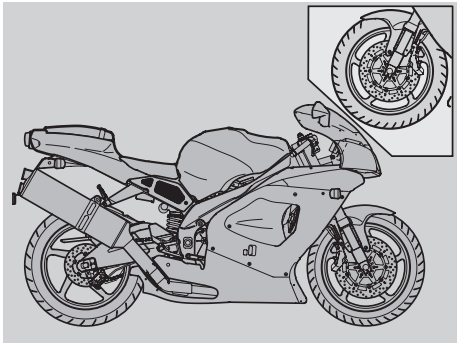
⚠ WARNING

Do not ride your vehicle with worn or malfunctioning brakes! The brakes are the most important safety system of your vehicle, and using the bike with brakes that are anything less than perfect is very likely to lead to a collision or upset, with consequent risk of serious injury or death.

Check the brake pad wear, as shown on p. 104 (CHECKING THE BRAKE PAD WEAR). Have your brakes serviced by your Local aprilia Dealer.

⚠ WARNING

Wet conditions seriously degrade the performance of your brakes. When the road is wet from rain, you should plan to use double the normal stopping distances since both the brakes themselves and the traction of the tires on the road are reduced by the presence of water.
Water on the brakes from washing your vehicle, or splashed up from wet roads, or crossing puddles or ditches, can wet the brakes sufficiently to greatly reduce their effectiveness. Failure to heed these warnings may lead to a serious accident with consequent risk of serious injury or even death.



NOTE Your vehicle is equipped with disc brakes and two separate brake systems.
The front brake system is equipped with two discs, one on the right and one on the left side of the front wheel.
The rear brake system is equipped with a single disc on the right side of the rear wheel.

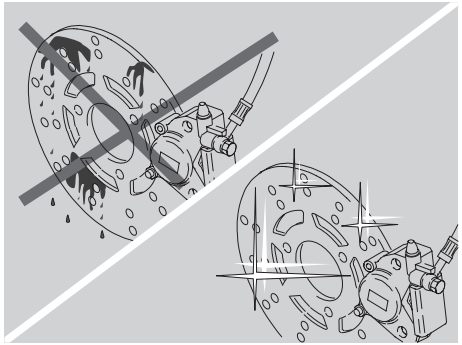
The following information may refer to a single braking system, but is applicable for both braking systems.

⚠ WARNING

The brakes are extremely important for your safety. Do not use the vehicle if the brakes do not work perfectly. Always check the brake efficiency before riding.

⚠ WARNING

If the "feel" or position of the brake lever changes, this may be due to some problem in the hydraulic brake system.



If you have any doubt regarding the perfect functioning of your brake system, or if the normal pre-ride checks indicate any discrepancy, contact your Local aprilia Dealer before riding.

⚠ WARNING

Pay special attention to the brake disc and friction material, making sure that they are neither dirty nor oily, especially after maintenance operations or inspections.

Check the brake line, make sure that it is not twisted or kinked, nor leaking.

KEEP BRAKE FLUID AWAY FROM CHILDREN.

DISPOSE OF USED BRAKE FLUID PROPERLY. SEE THE GENERAL WARNINGS AT p. 4 (BRAKE FLUID).

DISC BRAKES

⚠ WARNING

As mentioned above, the brakes are the most important safety system on your vehicle. For your safety, they must be in perfect repair, so they should be checked every time you ride your vehicle.

Oil or other fluid on a disc will contaminate the brake pads. Dirty pads must be discarded and replaced, a dirty or oily disc must be cleaned with a high quality degreaser.

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Have your Local aprilia Dealer check the levels of the brake fluid in the reservoirs after the first 600 mi (1,000 km).

Arrange with your Local aprilia Dealer to flush the systems and change all of the brake fluid once every two years.

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

When the pads wear out the brake fluid level in the reservoir decreases to automatically compensate for their wear.

The front brake fluid reservoir (1) is located on the right end of the handlebar near the front brake lever.

The rear brake fluid reservoir (2) is under the upper part of the fairing on the right side of the vehicle.

Check the levels of the brake fluid in the reservoirs every 4,650 mi (7,500 km), see below (FRONT BRAKE), p. 60 (REAR BRAKE).

Check the wear of the pads every 1,250 mi (2,000 km), see p. 104 (CHECKING THE BRAKE PAD WEAR).

⚠ WARNING

Never use your vehicle if any portion of either brake system is leaking.

FRONT BRAKE

CHECKING THE SYSTEM

NOTE Carry out these checks only on a firm, flat surface such as a concrete garage floor.

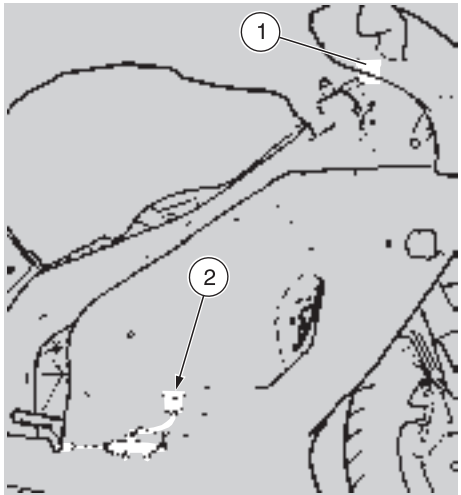
◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).

MIN = minimum level.

MAX = maximum level.

NOTE To check the level correctly, the handlebar must be rotated completely clockwise (rightwards), if not, level lines in the reservoir will give an inaccurate indication.

◆ Rotate the handlebar completely clockwise (rightwards), so that the fluid contained in the brake reservoir (1) is parallel to the "**MIN**" mark stamped on it.



◆ Ensure that the fluid contained in the reservoir exceeds the "**MIN**" mark stamped on the brake reservoir (1).

If the fluid does not reach the "**MIN**" mark:

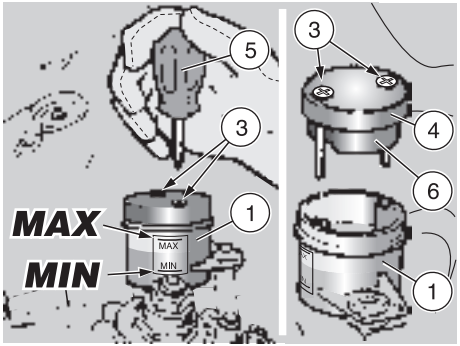
⚠ CAUTION

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

◆ Check the front brake pad wear, p. 104 (CHECKING THE BRAKE PAD WEAR) and the front disc wear.

If the pads and/or the disc do not need replacing:

◆ Top up the reservoir, see p. 59 (TOPPING UP).



TOPPING UP

Carefully read p. 57 (BRAKES) and p. 58 (DISC BRAKES).

⚠ CAUTION

To remove the two screws (3) which hold the reservoir cover (4) in place, the handlebar must be rotated completely clockwise (rightwards). If not, brake fluid will spill from the reservoir.

- Ensure that the handlebar is rotated as far as possible to the right, that is, clockwise.

⚠ CAUTION

Do not operate the front brake lever and do not rotate the handlebar from rightwards position with the screws (3) or the cover (4) removed. This will cause brake fluid to squirt out and spill.

- Using a short Phillips screwdriver (5), unscrew the two screws (3) .
- Raise and remove the cover (4) together with the screws (3) and the gasket (6).

⚠ 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 reservoir open ONLY for the time necessary for topping up.

NOTE In order not to spill the brake fluid while topping up, keep the fluid in the reservoir parallel to the reservoir rim, and do not shake the vehicle.

⚠ CAUTION

When topping up, never exceed the "MAX" level.
Top up to "MAX" only when new pads are installed.

⚠ CAUTION

Do not fill the reservoir to "MAX" with worn pads; this will cause fluid to overflow the reservoir when the pads are renewed.

⚠ WARNING

Use only DOT 5 or 4 fluid taken from a clean, sealed container. Never reuse used brake fluid.

⚠ CAUTION

If you use any container or funnel for topping up, make sure that it is perfectly clean.
Any foreign matter getting into the brake reservoir may lead to severe damage.

⚠ WARNING

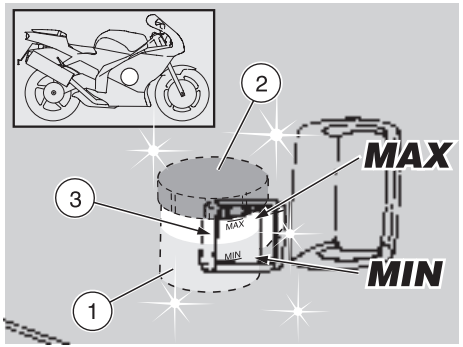
Do not add any additives or other substances to the brake fluid.

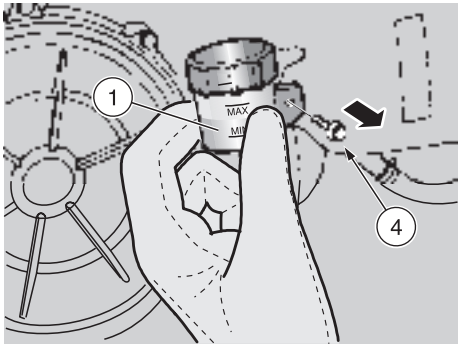
- Top up the reservoir with brake fluid, until the fluid reaches the "**MAX**" mark.
- Replace the cover (4) together with the screws (3) and the gasket (6).
- Screw and tighten the two screws (3).

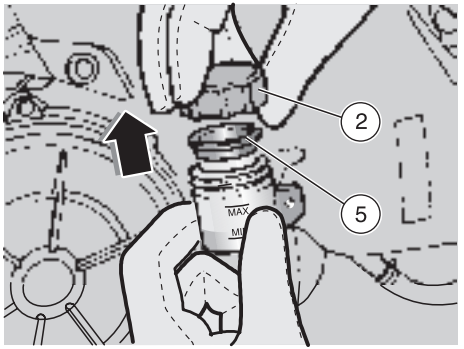
⚠ CAUTION

After servicing the brakes, always check them for function. If the stroke of the lever is excessive, or if you detect that the effectiveness of the brakes is reduced in any way, have your vehicle serviced by your Local aprilia Dealer.
It may be necessary to have your dealer bleed the system, or there may be some other problem with the brake system.

Never ride your vehicle in traffic immediately after servicing the brakes.
Always apply the brake lever several times before riding your vehicle. Then, try your vehicle in a parking lot or other safe area with little traffic to ensure that the brakes are working properly. Failure to observe this warning can lead to a serious accident with subsequent serious injury or death.







REAR BRAKE

CHECKING THE SYSTEM

NOTE Carry out these checks only on a firm, flat surface such as a concrete garage floor.

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).

NOTE If the reservoir is dirty, wipe it with a clean cloth so that you can see the "**MIN**" and "**MAX**" marks.

- Keep the vehicle vertical, so that the fluid contained in the reservoir (1) is parallel to the filler cup (2).

MIN = minimum level.

MAX = maximum level.

- By checking through the appropriate slot (3) on the right fairing, ensure that the fluid level contained in the brake reservoir (1) is above the "**MIN**" mark.

If the fluid does not reach the "**MIN**" mark:

⚠ CAUTION

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

- Check the rear brake pad wear, p. 104 (CHECKING THE BRAKE PAD WEAR) and the rear disc wear.

If the pads and/or the disc do not need replacing:

- Top up the reservoir, see below (TOPPING UP) .

TOPPING UP

Carefully read p. 57 (BRAKES) and p. 58 (DISC BRAKES).

- Remove the right fairing, see p. 118 (REMOVING THE SIDE FAIRINGS).
- Unscrew the screw (4) completely.
- Slightly move the complete reservoir (1) outwards.

⚠ CAUTION

Do not operate the rear brake pedal with the reservoir filler cap (2) removed. This will cause brake fluid to squirt out and spill.

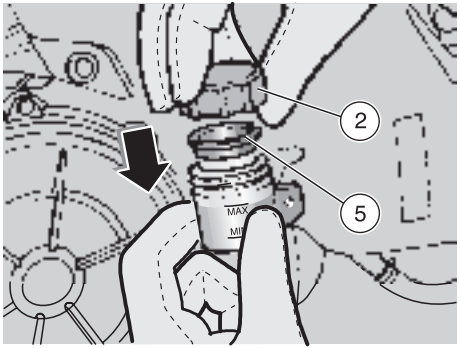
- Unscrew and remove the reservoir filler cap (2).

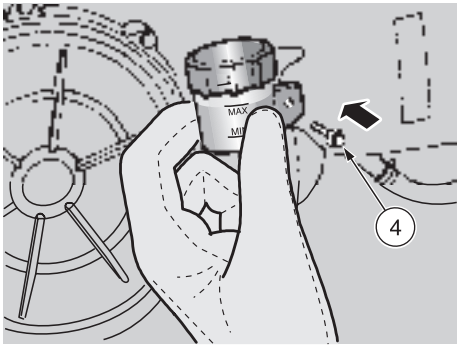
⚠ WARNING

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 reservoir open ONLY for the time necessary for topping up.

NOTE In order not to spill the brake fluid while topping up, keep the fluid in the reservoir parallel to the reservoir rim.

- Remove the gasket (5).





⚠ CAUTION

When topping up, never exceed the "MAX" level.
Top up to "MAX" only when new pads are installed.

⚠ CAUTION

Do not fill the reservoir to "MAX" with worn pads; this will cause fluid to overflow the reservoir when the pads are renewed.

NOTE In order to fill the reservoir to the "**MAX**" level, top up until the "**MAX**" mark is parallel with the brake fluid reservoir top parallel to the ground.

⚠ WARNING

Use only DOT 5 or 4 fluid taken from a clean, sealed container. Never reuse used brake fluid.

⚠ CAUTION

If you use any container or funnel for topping up, make sure that it is perfectly clean.
Any foreign matter getting into the brake reservoir may lead to severe damage.

⚠ WARNING

Do not add any additives or other substances to the brake fluid.

- Top up the reservoir with brake fluid, until the fluid reaches the "**MAX**" mark.
- Replace the gasket (5) in its seat correctly.
- Replace and tighten the reservoir filler cap (2).
- Replace the reservoir (1) in its seat correctly.
- Replace and tighten the screw (4).
- Replace the right fairing, see p. 118 (REMOVING THE SIDE FAIRINGS).

⚠ CAUTION

After servicing the brakes, always check them for function. If the stroke of the pedal is excessive, or if you detect that the effectiveness of the brakes is reduced in any way, have your vehicle serviced by your Local aprilia Dealer.
It may be necessary to have your dealer bleed the system, or there may be some other problem with the brake system.

Never ride your vehicle in traffic immediately after servicing the brakes. Always apply the brake pedal several times before riding your vehicle. Then, try your vehicle in a parking lot or other safe area with little traffic to ensure that the brakes are working properly. Failure to observe this warning can lead to a serious accident with subsequent serious injury or death.

CLUTCH

⚠ WARNING

Do not ride your vehicle with worn or malfunctioning clutch! The clutch is an important safety system of your vehicle, and using the bike with clutch that is anything less than perfect is very likely to lead to a collision or upset, with consequent risk of serious injury or death.

NOTE This vehicle is equipped with hydraulic clutch control.

⚠ WARNING

The clutch is extremely important for your safety. Do not use the vehicle if the clutch does not work perfectly. Always check the clutch efficiency before riding.

⚠ WARNING

If the "feel" or position of the clutch lever changes, this may be due to some problem in the hydraulic clutch system.

If you have any doubt regarding the perfect functioning of your clutch system, or if the normal pre-ride checks indicate any discrepancy, contact your Local aprilia Dealer before riding.

⚠ WARNING

Check the clutch line, make sure that it is not twisted or kinked, nor leaking.

KEEP CLUTCH FLUID AWAY FROM CHILDREN.

DISPOSE OF USED CLUTCH FLUID PROPERLY. SEE THE GENERAL WARNINGS AT p. 4 (CLUTCH FLUID).

⚠ WARNING

As mentioned above, the clutch is an important safety system on your vehicle. For your safety, it must be in perfect repair, so it should be checked every time you ride your vehicle.

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Have your Local aprilia Dealer check the levels of the clutch fluid in the reservoirs after the first 600 mi (1,000 km).

Arrange with your Local aprilia Dealer to flush the systems and change all of the clutch fluid once every two years.

The clutch fluid reservoir (1) is located on the left end of the handlebar near the clutch lever.

Before riding and every 3,750 mi (6,000 km), check the levels of the clutch fluid in the reservoir, see below (CHECKING THE SYSTEM).

⚠ WARNING

Never use your vehicle if the clutch hydraulic system is leaking.

⚠ WARNING

Have your Local aprilia Dealer check the clutch conditions every 4,650 mi (7,500 km).

For competition use:

⚠ WARNING

Have your Local aprilia Dealer check the clutch conditions every 2,300 mi (3,750 km).

NOTE The engine is provided with an hydraulic control clutch, aided by the PPC (Pneumatic Power Clutch) exclusive patented system, which avoids the bouncing of the rear wheel.

CHECKING THE SYSTEM

NOTE Carry out these checks only on a firm, flat surface such as a concrete garage floor.

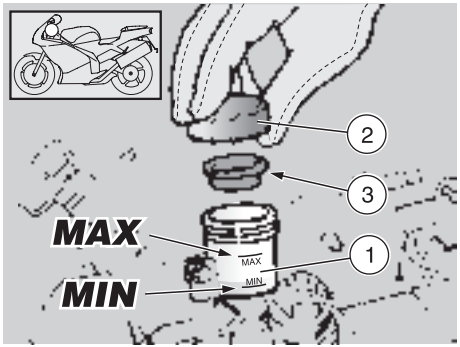
- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).

MIN = minimum level.

MAX = maximum level.

NOTE To check the level correctly, the handlebar must be rotated completely clockwise (rightwards), if not, level lines in the reservoir will give an inaccurate indication.

- Rotate the handlebar completely rightwards, so that the fluid contained in the clutch reservoir (1) is parallel to the "**MIN**" mark stamped on it.
- Ensure that the fluid contained in the reservoir exceeds the "**MIN**" mark stamped on the clutch reservoir (1).



If the fluid does not reach the "**MIN**" mark:

◆ Top up the reservoir, see below (TOPPING UP) .

TOPPING UP

⚠ CAUTION

To unscrew and remove the reservoir filler cap (2), the handlebar must be rotated completely clockwise (rightwards). If not, clutch fluid will spill from the reservoir.

◆ Ensure that the handlebar is rotated as far as possible to the right, that is, clockwise.

⚠ CAUTION

Do not operate the clutch lever and do not rotate the handlebar from rightwards position with reservoir filler cap (2) removed. This will cause clutch fluid to squirt out and spill.

◆ Unscrew and remove the reservoir filler cap (2).

⚠ WARNING

Avoid any prolonged exposure of the clutch fluid to the air.
The clutch fluid is hygroscopic and when in contact with the air it absorbs its humidity.
Leave the clutch fluid reservoir open ONLY for the time necessary for topping up.

NOTE In order not to spill the clutch fluid while topping up, keep the fluid in the reservoir parallel to the reservoir rim and do not shake the vehicle.

◆ Remove the gasket (3).

⚠ CAUTION

When topping up, never exceed the "MAX" level.

NOTE In order to fill the reservoir to the "**MAX**" level, top up until the "**MAX**" mark is parallel with the clutch fluid reservoir top parallel to the ground.

⚠ WARNING

Use only DOT 5 or 4 fluid taken from a clean, sealed container. Never reuse used clutch fluid.

⚠ CAUTION

If you use any container or funnel for topping up, make sure that it is perfectly clean. Any foreign matter getting into the clutch reservoir may lead to severe damage.

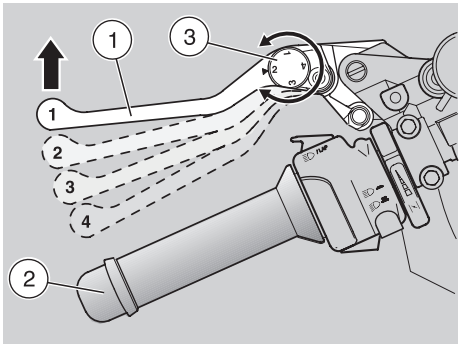
⚠ WARNING

Do not add any additives or other substances to the clutch fluid.

◆ Top up the reservoir (1) with clutch fluid, until the fluid reaches the "**MAX**" mark.
◆ Replace the gasket (3) in its seat correctly.
◆ Replace and tighten the reservoir filler cap (2).

⚠ CAUTION

After servicing the clutch, always check it for function. If the stroke of the lever is excessive, or if you detect that the effectiveness of the clutch is reduced in any way, have your vehicle serviced by your Local aprilia Dealer.
It may be necessary to have your dealer bleed the system, or there may be some other problem with the clutch system.



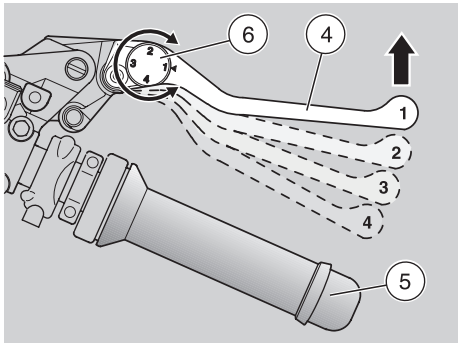
ADJUSTING THE CLUTCH LEVER

It is possible to adjust the distance between the clutch lever (1) end and the grip (2), by rotating the adjuster (3).

The positions "**1**" and "**4**" correspond to an approximate distance of 105 and 75 mm, respectively, between the lever end and the grip.

The positions "**2**" and "**3**" correspond to intermediate distances.

◆ Push the clutch lever (1) forward and rotate the adjuster (3) until the desired number is positioned in correspondence with the reference arrow.



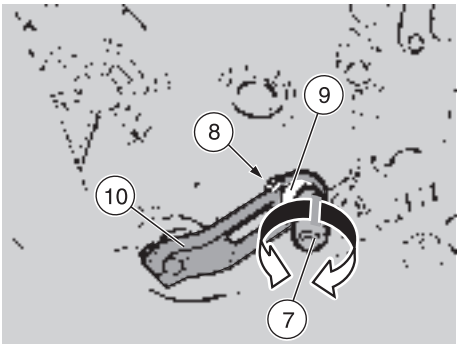
ADJUSTING THE FRONT BRAKE LEVER

It is possible to adjust the distance between the front brake lever (4) end and the throttle grip (5), by rotating the adjuster (6).

The positions "**1**" and "**4**" correspond to an approximate distance of 105 and 75 mm, respectively, between the lever end and the grip.

The positions "**2**" and "**3**" correspond to intermediate distances.

◆ Push the front brake lever (4) forward and rotate the adjuster (6) until the desired number is positioned in correspondence with the reference arrow.



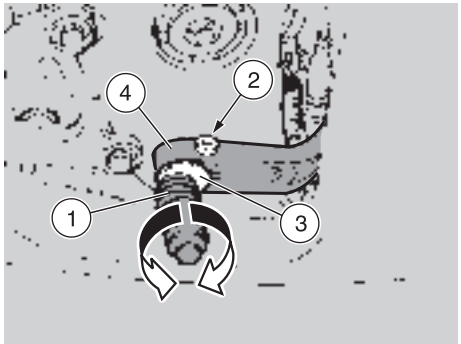
ADJUSTING THE SHIFT PEDAL

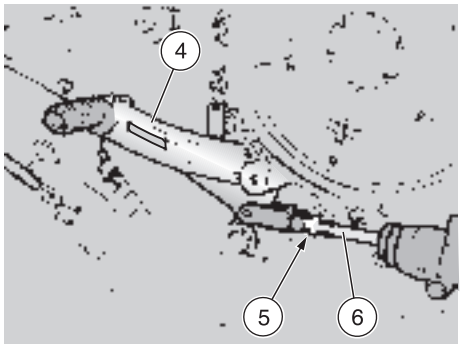
The shift lever (7) is adjusted to fit most riders during manufacture.

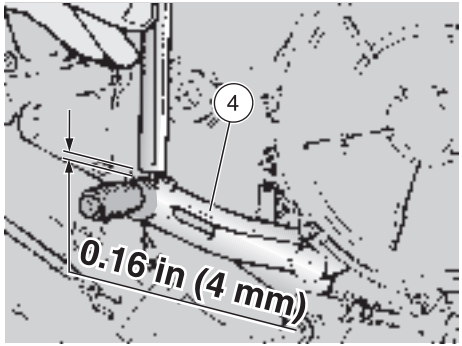
If you wish to adjust the shift lever:

◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
◆ Loosen the screw (8).
◆ Rotate the eccentric (9) to adjust position of the shift pedal (7) to your satisfaction.
◆ Tighten the screw (8) snugly, insuring that the eccentric is firmly clamped in the shift lever (10).

NOTE If it is necessary to further adjust the shift lever, contact your Local **aprilia** Dealer.







ADJUSTING THE REAR BRAKE PEDAL

The rear brake pedal (1) is adjusted to fit most riders during manufacture.

If you wish to adjust the brake pedal:

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Loosen the screw (2).
- Rotate the eccentric (3) to adjust position of the rear brake pedal (1) to your satisfaction.
- Tighten the screw (2) snugly, insuring that the eccentric is firmly clamped in the rear brake lever (4).

ADJUSTING THE CLEARANCE OF THE REAR BRAKE LEVER

The clearance of the rear brake lever (4) is adjusted to fit most riders during manufacture.

If you wish to adjust the clearance of the rear brake lever (4):

- Remove the lower fairing, see p. 119 (REMOVING THE LOWER FAIRING).
- Loosen the lock nut (5) on the master cylinder push rod (6) and run it as far towards the master cylinder as far as it will go on the threads of the push rod.
- Screw the master cylinder push rod (6) out of the clevis until it just contacts the master cylinder piston.
- Then, screw the push rod into the clevis to obtain a minimum clearance of 0.02 – 0.04 in (0.5 – 1 mm) between the master cylinder push rod and the master cylinder piston.
- Lock the push rod in position with the lock nut (5).

⚠ CAUTION

Be sure there is the specified clearance between the master cylinder push rod and the master cylinder piston. If this caution is not observed, the brake will remain slightly applied, with subsequent brake overheating and wear of pads and discs.

Clearance between the push rod and the piston 0.02 – 0.04 in (0.5 – 1 mm).

To check the specified clearance mentioned above:

- Measure the distance traveled by the rear brake lever (4) before braking action starts. The idle stroke at the end of the rear brake lever (4) must be about **0.16 in (4 mm)**.

⚠ WARNING

After making any brake adjustment apply the brakes repeatedly. Try the brakes in a parking lot or other area where there is little traffic. After you have completed the adjustment, lift the wheel free of the ground and ensure that it rotates freely when the brake is released.

COOLANT

⚠ CAUTION

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

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Check the coolant level every 600 mi (1,000 km), before riding and after long trips.

⚠ CAUTION

Have the coolant changed by your Local aprilia Dealer every 2 years.

⚠ WARNING

Coolant is poisonous! Do not ingest coolant under any circumstance. Should you get coolant in your mouth, rinse with cool water and immediately seek medical attention. Coolant is also very dangerous to your skin and eyes. Should you accidentally get coolant on your clothing or skin, change clothes immediately. Wash coolant from your skin with hot water and soap. Should you get coolant in your eyes, flush with plenty of cool water and seek professional medical help at once. Should someone swallow coolant accidentally, induce vomiting, rinse mouth with water, and immediately seek professional medical attention.

DISPOSE OF THE COOLANT PROPERLY.

BE SURE TO KEEP THE DRAINED COOLANT AWAY FROM CHILDREN AND PETS. IT IS SWEET TASTING, AS WELL AS EXTREMELY POISONOUS, AND IS VERY ATTRACTIVE TO CHILDREN AND PETS.

Use extra caution not to spill the coolant on any hot parts of the engine. It is flammable, and can emit invisible, noxious fumes.

Always wear rubber or latex gloves when servicing the cooling system.

Have the coolant changed by your Local aprilia Dealer.

The coolant is made up of 50% water and 50% antifreeze.

This mixture is ideal for most running 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%).

⚠ CAUTION

Use only distilled water when topping off the cooling system. This will reduce damage to the engine.

⚠ WARNING

Do not add any additives or other substances to the coolant.

The coolant is very hot.

Do not remove the filler cap (4) when the engine is hot since the coolant is under pressure and it will splash out violently.

If it gets in contact with the skin or with your clothing, it may cause severe burns.

CHECKING AND TOPPING UP

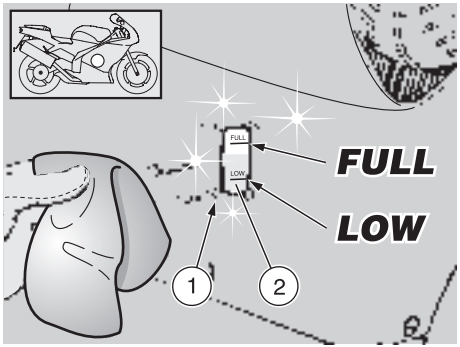
⚠ WARNING

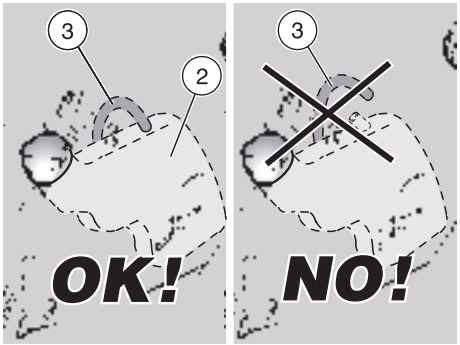
Be aware of the risk of burns from the coolant.

Check the coolant level and top up the expansion tank only after the engine has thoroughly cooled.

NOTE Place the vehicle on firm and flat ground.

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).





NOTE If the expansion tank is dirty, wipe it with a clean cloth so that you can see the "**LOW**" and "**FULL**" marks.

- By checking through the appropriate slot (1) on the right fairing ensure that the level of the fluid contained in the expansion tank (2) is included between the "**LOW**" and "**FULL**" marks.

LOW = minimum level.

FULL= maximum level.

If not, proceed as follows:

NOTE The expansion tank (2) is equipped with a breather tube (3). Do not disconnect the breather tube (3).

⚠ CAUTION

If dirt has accumulated on or around the filler cap, wipe the cap and the area around the cap with a clean cloth. Prevent any foreign material from getting into the expansion tank, this could lead to serious engine damage.

- Loosen the filler cap (4) (by giving it half counterclockwise turn), without removing it.
- Wait a few seconds in order to release any residual pressure that may be present in the circuit.
- Unscrew and remove the filler cap (4).

⚠ WARNING

Coolant is poisonous! Do not ingest coolant under any circumstance. Should you get coolant in your mouth, rinse with cool water and immediately seek medical attention. Coolant is also very dangerous to your skin and eyes. Should you accidentally get coolant on your clothing or skin, change clothes immediately. Wash coolant from your skin with hot water and soap. Should you get coolant in your eyes, flush with plenty of cool water and seek professional medical help at once. Should someone swallow coolant accidentally, induce vomiting, rinse mouth with water, and immediately seek professional medical attention.

⚠ WARNING

Never use your fingers or any other object to check the coolant level.

⚠ CAUTION

If you use any container or funnel for topping up, make sure that it is perfectly clean.
Any foreign matter getting into the expansion tank may lead to severe damage.

- Top up with coolant, see p. 153 (LUBRICANT CHART) until the coolant level reaches approximative the "**FULL**" notch. Do not exceed this level, otherwise the coolant will flow out while the engine is running.
- Replace the filler cap (4).

⚠ WARNING

Have any damage or discrepancy repaired by your Local aprilia Dealer. Do not attempt to repair the cooling system yourself.

TIRES

This vehicle is equipped with tubeless tires.

⚠ WARNING

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Check the tire inflation at room temperature at least once a week.
Check the conditions of the tire and the inflation pressure at room temperature after the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km), see p. 148 (TECHNICAL DATA).

Pressure measurement must always be carried out when the tires are cold, as when the tires are warmed up, pressure will increase, and if they are checked at this time erroneous readings will be seen.

If the tire is inflated to too high a pressure, an uncomfortably harsh ride will result, and riding comfort will be compromised. Also, road holding, especially during turns and in wet conditions, will likewise be compromised.

If the tire is underinflated (pressure is too low), the tire may slip on the rim with consequent loss of control. Again, road holding and handling characteristics will be degraded, and brake performance will be reduced.

When the tire is worn to a point where any tread is less than 0.12 in (3 mm) deep, the tire is worn out, and must be replaced. Also, if a tire suffers a puncture that is larger than 0.20 in (5 mm) in its longest dimension, the tire must not be repaired, but should be replaced.

After a tire is repaired, balance the wheels. Use only tires that are listed in the technical data, see p. 148 (TECHNICAL DATA).

Install only tires that are listed in the technical data, see p. 148 (TECHNICAL DATA), or that have been specifically approved by aprilia **for this vehicle.**

⚠ WARNING

The use of tires other than those approved by aprilia **may adversely effect the handling of the vehicle, leading to an upset and accident, with subsequent serious injury or even death.**

Ensure that valve caps are installed on all tires. This is important to prevent sudden flats.

⚠ WARNING

Do not ride the vehicle if the tire wear indicators show that the tire is worn out. Failure to heed this warning can lead to an accident with subsequent serious injury or even death.

Some of the original equipment tires 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 to see if the tires are worn out. If they are, have them replaced.

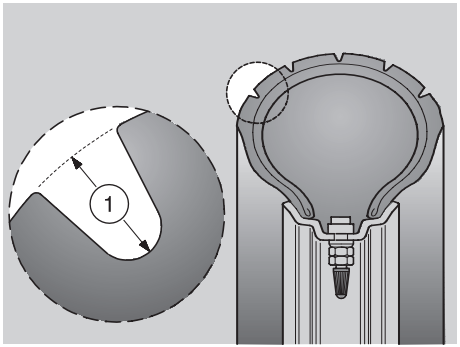
If a tire should go flat while you are riding the vehicle, do not attempt to continue riding. Avoid abrupt braking and steering inputs, and avoid shutting the throttle quickly. Slowly decrease the throttle setting, moving to the side of the road, using the engine compression to slow you to a stop. Non-compliance with these instructions may cause accidents with consequent risk of injuries or even death.

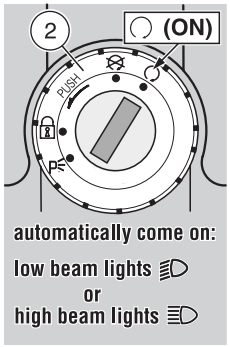
If the tires are very old, even if they are not completely worn out, they may have become so hard that road holding is compromised. In this case, replace the tires.

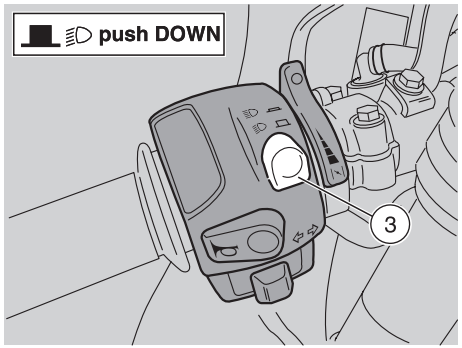
Do not install tires with inner tube on rims for tubeless tires and viceversa.

Repairing, maintenance, changing and balancing of tires are very important to your safety, and should only be performed by qualified mechanics using the appropriate tools.

For this reason, we suggest that you have your tires serviced by your Local aprilia Dealer.







⚠ WARNING

New tires are often covered with a slippery mold release compound. Scrub the tires in by riding slowly and making numerous turns for the first few miles. Do not use any kind of tire dressing or other liquid on your tires. Especially do not permit any petroleum products, such as oil, gasoline or brake fluid to come in contact with the tires. If you do, wipe it immediately, then scrub the tire with soap and water and a stiff brush.

Do not use a tire that is worn out.

Minimum tread depth is measured as shown above. The minimum tread depth (1) for both the front and the rear tires is 0.12 in (3 mm).

AUTOMATIC LIGHTS ON

Your vehicle is equipped with lights that come on automatically as soon as the ignition switch (2) is turned to position "○" (ON) (low beam lights "▬≡D" or high beam lights "▬≡D") or position "≡D" (PARKING) (only parking lights "⊐D⊏").

For this reason, there is no light switch on your vehicle.

The lights can be switched off only by turning the ignition switch (2) to position "⊗" (OFF).

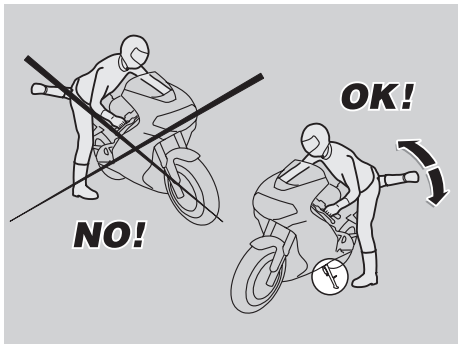
Before starting the vehicle, make sure that the dimmer switch (3) is in the (push DOWN) low beam lights "▬≡D" position.

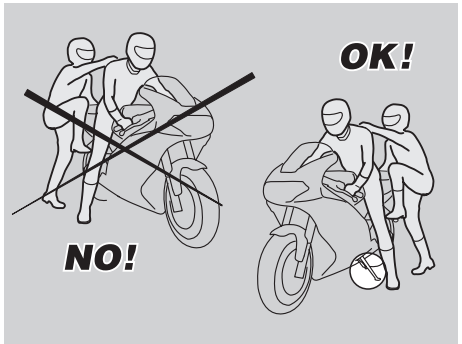
EXHAUST SILENCER

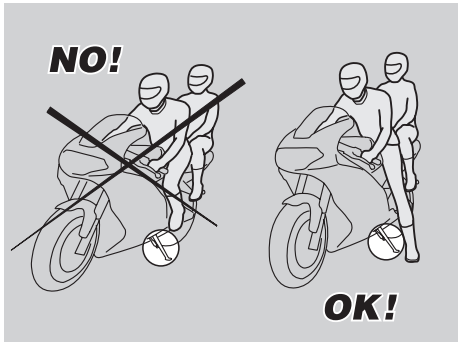
⚠ WARNING

Tampering with the exhaust system is prohibited. It is against the law for you to alter the exhaust system in a manner that increases the noise. Carefully read p. 5 (WARNINGS - PRECAUTIONS - GENERAL ADVICE).

Periodically inspect the entire exhaust system, including the exhaust pipe and silencer, to make sure that no holes have rusted through. Using a wire or small pick, make sure that the drain hole in the bottom of the muffler is open. If the noise of your vehicle has increased significantly, replace the defective exhaust system components. See your Local **aprilia** Dealer. Tampering with the exhaust system not only makes your vehicle loud, it will reduce its performance and shorten its life.







GETTING ON AND OFF THE VEHICLE

The instructions below must be followed carefully in order to avoid any injury, or damage to the vehicle, which can be caused if the rider or the passenger fall from the vehicle, or the bike itself falls over.

⚠ WARNING

Risk of falling and overturning. Proceed with caution.

Getting off and on the vehicle must be formed with complete freedom of movement and with the hands free of obstruction. Do not attempt to get on the bike while you are holding your helmet, other objects, gloves, etc.

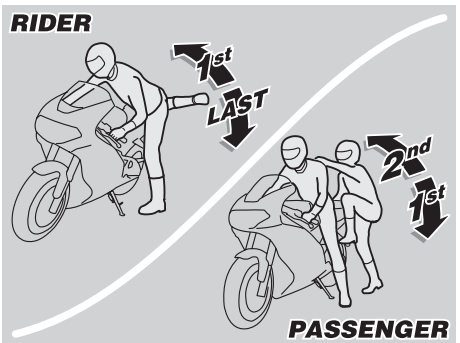
Get on and off the vehicle only from the left side and always with extended side stand.

⚠ CAUTION

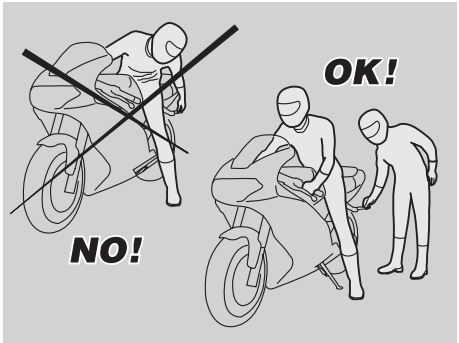
Never apply the load of the rider or passenger's weight onto the side stand.

Never allow the rider or passenger's weight to bear on the side stand. The stand is designed to support the weight of the vehicle and a minimum load only, not the weight of the rider and passenger. Never allow the rider's weight nor the passenger's weight to be supported by the side stand. Attempting to mount the vehicle with the stand extended, and without the rider's feet planted firmly on the ground to support the vehicle, can result in the vehicle overturning, since the suspension can compress and, with the side stand down, equilibrium will be upset.

NOTE The rider must always be the first to get on the vehicle and the last to get off. It is the rider's job to maintain equilibrium and stability of the vehicle while the passenger gets on and off. Passengers must be very careful getting on and off the vehicle, so as not to upset the rider's balance.



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



The vehicle is equipped with special passenger footrests for such purposes. The passenger must always use the left footrest to get on and off the vehicle.

Never get on or off the vehicle by stretching your legs down to the ground on either side, because 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 of the right leg, which must avoid striking and safely pass both the rear part of the fairing and the luggage without creating unbalance.

GETTING ON THE VEHICLE

- Grip the handlebar firmly and get on the vehicle without allowing your weight to load 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 attempt to extend the passenger footrest while seated astride the vehicle, because this might compromise the stability and balance of the vehicle.

- Have the passenger extend the two passenger footrests.
- Instruct the passenger how to safely get on the vehicle.
- Kick the side stand back into stowed position using your left foot.

GETTING OFF THE VEHICLE

- Choose a suitable parking area, see p. 82 (PARKING).
- Stop the vehicle, see p. 81 (STOPPING).

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

- With the left shoe heel, push the side stand lever and extend it completely.

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

Make sure the passenger has gotten completely off the vehicle before the rider attempts to get off. Never allow your weight to load the side stand.

- Incline the vehicle until the stand rests on the ground.
- Grasp the handlebar firmly and get off the vehicle.
- Rotate the handlebar completely leftwards (counterclockwise).
- Retract the passenger footrests.

⚠ CAUTION

Make sure the vehicle is stable when parked. If it falls down, it will certainly be damaged and could injure others as well.

PRELIMINARY CHECKING OPERATIONS

⚠ WARNING

Before you ride away, always do a pre-ride check to make sure that all systems are working properly and safe, see p. 73 (PRELIMINARY CHECKING OPERATIONS CHART). Failure to follow this warning can lead to engine seizure, handling instabilities or other problems which can result in an upset and subsequent serious injury or even death.

Do not hesitate to consult your Local aprilia Dealer in case there is something you do not understand about the functioning of some controls or in case you suspect or discover some irregularities.

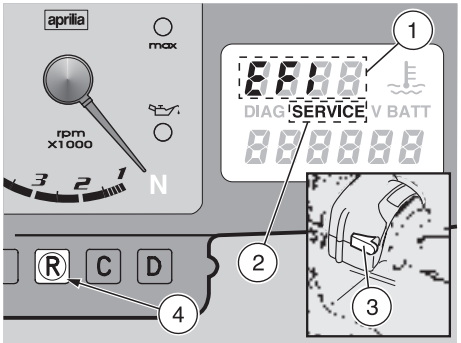
It does not take long to carry out a check-up and this operation ensures you much more safety.

This vehicle is equipped with an electronic unit which detects and stores any anomaly in several of the vehicle's important systems electronically.

On the right side of the multifunction display, whenever the ignition switch is turned to "○" (ON) position, the symbol "*EFI*" (1) is displayed for about three seconds.

⚠ CAUTION

If the symbol "*EFI*" (1) is displayed during the normal running of the engine, this means that the electronic unit has detected an anomaly. In many cases, the engine keeps running with reduced performance levels; immediately contact your Local aprilia Dealer.



⚠ CAUTION

After the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km), the word "SERVICE" (2) appears on the right display. When this occurs contact your Local aprilia Dealer, who will carry out the operations indicated in the regular service intervals chart, see p. 86 (REGULAR SERVICE INTERVALS CHART).

To make the word "SERVICE" disappear, press the "LAP" push button (3), and simultaneously press the push button R (4) and keeping them depressed for about 5 seconds.

Failure to perform the checks described above may cause accidents or make the vehicle overturn, with consequent serious injuries or even death.

⚠ WARNING

If the throttle sticks open, it may cause a collision with another vehicle, or an upset.

If the throttle sticks, kill the engine with the engine stop switch located on the right handlebar.

Do not attempt to restart the engine until the throttle has been repaired and works perfectly. Failure to obey this warning can lead to a runaway with seriously injuries or even death.

Your vehicle is equipped with a double cable throttle. One cable opens the throttle when you rotate the throttle grip toward you; the other closes the throttle when you rotate the grip away from you. It is essential, when you release the throttle grip, that it automatically return to the idle position.

This double cable arrangement enhances safety by providing for positive closing of the throttle.

⚠ WARNING

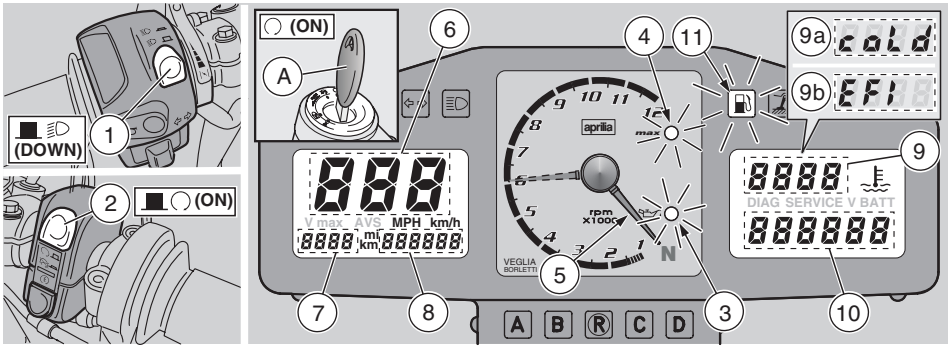
In the event of a throttle sticking emergency, always kill the engine using the engine stop switch located near the throttle grip on the right handlebar. Never use your vehicle if the throttle does not automatically fully return to the idle position when the throttle grip is released. Contact your Local aprilia Dealer for repairs. Failure to heed this warning can lead to a serious accident and subsequent injury or even death.

If any fastener is loose, the rider may lose control of the vehicle and risk an accident.

Both situations may cause serious injuries or even death.

PRELIMINARY CHECKING OPERATIONS CHART

Component	Check	Page
Front and rear disc brakes	Check brake operation, lever and pedal play, fluid levels. Check the pads for excessive wear, check the discs for condition. If the discs are unduly scored or show signs of heat discoloration, do not ride the vehicle. Check both brake systems for evidence of leaks. If there are leaks, do not ride the vehicle.	4 (BRAKE FLUID), 57 (BRAKES), 58 (DISC BRAKES), 58 (FRONT BRAKE), 60 (REAR BRAKE).
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.	126 (IDLE ADJUSTMENT), 128 (ADJUSTING THE THROTTLE CONTROL).
Engine oil	Check and/or top up if necessary.	56 (LUBRICANTS), 3 (USED ENGINE OIL), 94 (CHECKING THE ENGINE OIL LEVEL AND TOPPING UP).
Wheel/tires	Check the tire tread inflation pressure, and look for any wear and tear or damage. Remove any foreign matter that may be stuck in the tread grooves. Inspect the rims, spokes and hubs for cracks, looseness or damage. Do not ride the vehicle if there is even the slightest defect in either of the wheels.	68 (TIRES).
Brake lever and pedal	Make sure they work smoothly and are properly lubricated.	65 (ADJUSTING THE CLEARANCE OF THE REAR BRAKE LEVER).
Steering	Make sure that the fork head rotates through its entire range without fouling of any kind. Make sure that the fork stops touch the frame at full left and full right fork lock.	101 (STEERING DAMPER).
Clutch	Check the operation of the clutch lever, the fluid level and any leaks. If necessary, top up the fluid. Ensure that the clutch operates without jerking or slipping.	4 (CLUTCH FLUID), 62 (CLUTCH).
Side stand	Make sure that it works smoothly and that the spring tension brings it back to its normal position. If necessary, lubricate joints and hinges. Make sure that the safety switch on the side stand operates correctly.	96 (CHECKING THE SIDE STAND), 96 (CHECKING THE FUNCTIONING OF THE SAFETY SWITCH ON THE SIDE STAND).
Component nuts, bolts and other fasteners	Check that all fasteners are tight and properly torqued.	84 (MAINTENANCE).
Drive chain	Check the slack and the conditions of the chain at both sprockets.	114 (DRIVE CHAIN), 115 (CLEANING AND LUBRICATION).
Fuel tank	Check the fuel level and top up if necessary. Make sure that there are no fuel leaks. Make sure that the filler cap is properly closed.	3 (GASOLINE), 54 (FUEL), 116 (LIFTING THE FUEL TANK).
Coolant	With the engine cold, check the coolant level. Make sure that it is at the prescribed level.	4 (COOLANT), 66 (COOLANT).
Engine stop switch (■○ – ▬⊗)	Make sure that it functions correctly.	47 ENGINE STOP SWITCH (■○ – ▬⊗).
Lights, warning lights and electrical devices	Check the proper functioning of all the lights and the horn. Do not ride if any of these are not functioning properly.	4 (BATTERY HYDROGEN GAS AND ELECTROLYTE), 134 (BATTERY) – 143 (CHANGING THE REAR LIGHT BULBS).



STARTING

⚠ WARNING

This vehicle is extremely fast and powerful, and must be used with the greatest care. Do not ride this vehicle if you are not an experienced, trained motorcycle rider. This vehicle is capable of extremely high speeds and extremely high performance and must be used with due respect for these capabilities.

Do not place anything inside the front part of the fairing between the handlebar and the dashboard. Any object placed in this area could jam the forks, and also could restrict visibility of the dashboard.

NOTE Before starting the engine, carefully read the “safe drive” chapter, see p. 17 (SAFE DRIVE).

⚠ WARNING

Exhaust gases contain carbon monoxide, which is extremely poisonous if inhaled. Avoid starting the engine in closed or badly-ventilated rooms.
Failure to observe this warning may cause loss of consciousness or even lead to death by asphyxia.

NOTE When the side stand is extended the engine will not start unless the transmission is in neutral. Note also that if you attempt to shift into gear with extended side stand, the engine will stop.

With the side stand retracted, the engine may be started with the gear selector in neutral without pulling in the clutch lever. The engine may be started while the transmission is in gear only if the clutch lever is pulled in.

⚠ WARNING

Be careful not to drop the vehicle when you first sit on it.

- Sit astride the vehicle, see p. 70 (GETTING ON AND OFF THE VEHICLE).

⚠ WARNING

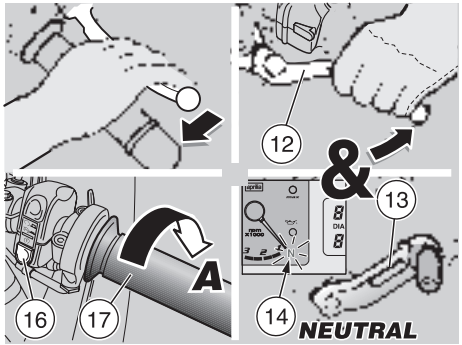
Ensure that the side stand is correctly stowed.

- Ensure that the dimmer switch (1) is in the (push DOWN) low beam “ ” position.
- Ensure that the engine stop switch (2) is in the “ ○” (ON) position.
- Turn the ignition key (A) to the “○” (ON) position.

  At this point:
  - the red engine oil pressure warning light LED “ ” (3) comes on on the dashboard and remains on until the engine starts, see p. 38 (Engine oil pressure warning light LED).
  - the red line warning light LED “***max***” (4) comes on on the dashboard for approximately three seconds and the tachometer pointer (5) shifts to the preset red line threshold;
  - the instantaneous speed (6), the trip odometer (7) and the total miles/kilometers odometer (8) appear on the left display (multifunction);
  - the coolant temperature (9) and the digital clock (10) appear on the right display (multifunction).

NOTE When the engine is cold, the word “*cold*” (9a) is displayed.

Whenever the ignition key (A) is turned to “○“ (ON) position, the symbol “*EFI*” (9b) is displayed for about three seconds.



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

⚠ CAUTION

If the low fuel warning light "⛽" (11) comes on, top up as soon possible, see p. 54 (FUEL).

NOTE It is possible to set the unit of measurement of the speedometer (mi or km) and of the coolant temperature [°C (Celsius degree) or °F (Fahrenheit degree)], the red line threshold, the clock functions and if necessary the chronometer, see p. 40 (MULTIFUNCTION COMPUTER).

⚠ CAUTION

The vehicle is sold with the red line set at 6,000 rpm. Increase the threshold gradually as you get acquainted with the vehicle.
During running-in, never exceed the recommended rpm, see p. 80 (RUNNING-IN).

- Hold the vehicle in place by applying at least one brake.
- Pull in the clutch lever (12) completely and put the shift lever (13) in neutral so that the green warning light "N" (14) is on.

NOTE If the ambient temperature is very cold [less than 0 °C (32 °F)], see p. 76 (STARTING AT VERY COLD AMBIENT TEMPERATURES).

NOTE To avoid discharging the battery, and possibly damaging the starter, do not keep the starter button "Ⓢ" (16) pressed for more than five seconds. If the engine does not start in this time, wait for ten seconds and try again.

⚠ CAUTION

Do not press the starter button "Ⓢ" (16) when the engine is running. This will damage the starter and other important engine components.

- Press the starter button "Ⓢ" (16) to start the engine. Leave the throttle (17) in the idle position (**Pos. A**). Release the starter button "Ⓢ" (16) as soon as the engine catches.

⚠ WARNING

If the throttle sticks open, it may cause a collision with another vehicle, or an upset.

If the throttle sticks, kill the engine with the engine stop switch located on the right handlebar.

Do not attempt to restart the engine until the throttle has been repaired and works perfectly. Failure to obey this warning can lead to a runaway with seriously injuries or even death.

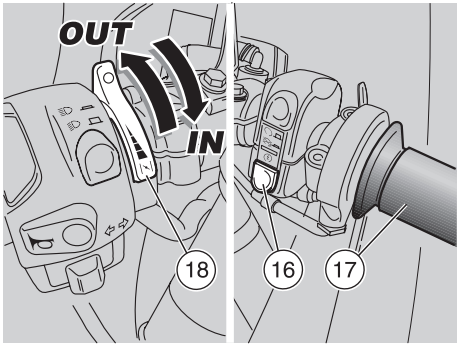
Your vehicle is equipped with a double cable throttle. One cable opens the throttle when you rotate the throttle grip toward you; the other closes the throttle when you rotate the grip away from you. It is essential, when you release the throttle grip, that it automatically return to the idle position.
This double cable arrangement enhances safety by providing for positive closing of the throttle.

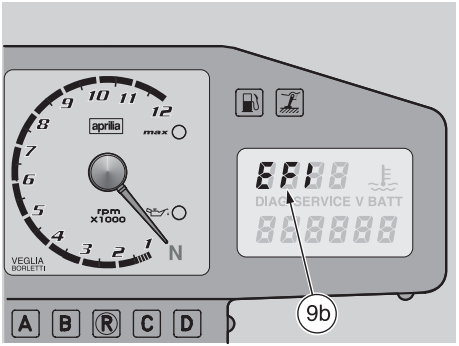
⚠ WARNING

In the event of a throttle sticking emergency, always kill the engine using the engine stop switch located near the throttle grip on the right handlebar. Never use your vehicle if the throttle does not automatically fully return to the idle position when the throttle grip is released. Contact your Local aprilia Dealer for repairs. Failure to heed this warning can lead to a serious accident and subsequent injury or even death.

⚠ WARNING

As soon as the engine has started, the engine oil pressure warning light LED "🛢" (3) must go out. If this does not occur, or if the warning light LED comes on while the engine is running, this means that the oil system is not develo-





ping sufficient pressure. In this case, stop the engine immediately and contact your Local aprilia Dealer.
Failure to heed this warning can lead to engine seizure, upset, and serious injury or even death.

⚠ CAUTION

Never ride off briskly with a cold engine. Allow the engine to warm up by riding slowly for the first few miles.

Starting a warm engine:

- Before attempting to start the motor, ensure that the cold start lever "⌇" (18) is not engaged (OUT), see beside (STARTING AT VERY COLD AMBIENT TEMPERATURES).

⚠ CAUTION

If the symbol "EFI" (9b) appears, on the left display (multifunction) during the normal running of the engine, this means that the electronic unit has detected an anomaly. In many cases, the engine keeps running with reduced performance levels; immediately contact your Local aprilia Dealer.

STARTING AT VERY COLD AMBIENT TEMPERATURES

When the ambient temperature is very cold [less than 0°C (32 °F)] it may be difficult to start the engine on the first try.

If this occurs:

- Rotate the cold start lever "⌇" (18) downwards (IN).
- Press the starter button "Ⓢ" (16), at the same time, open the throttle (17) slightly.

If the engine starts:

- Release the starter button "Ⓢ" (16) and release the throttle grip (17).
- After letting the engine run for a few seconds, rotate the cold start lever "⌇" (18) upwards (OUT).
- If idle is uneven, open the throttle (17) slightly.

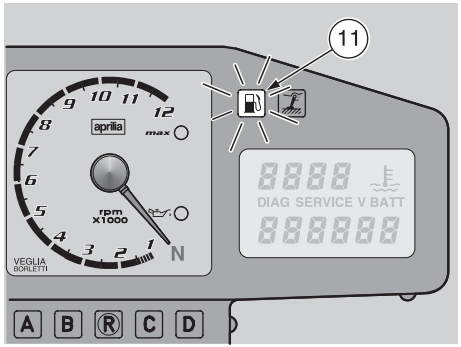
If the engine does not start:
Wait for a few seconds and repeat the above starting procedure.

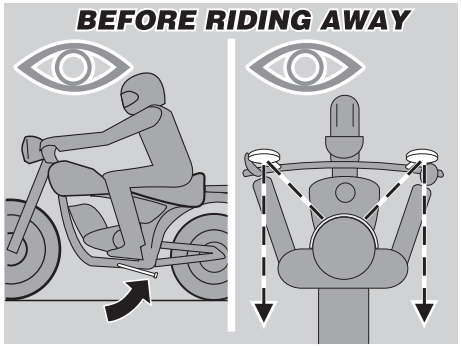
- If necessary, remove all the spark plugs, see p. 130 (SPARK PLUGS) and make sure that they are not wet.
- If the spark plugs are wet, clean and dry them.

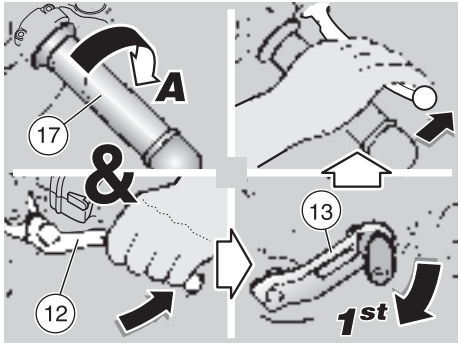
Before reinstalling them:

NOTE Put a clean cloth over the spark plug holes of both cylinders, in order to protect the bike from spraying oil.

- Press the starter button "Ⓢ" (16) and let the starter run for about five seconds without opening the throttle.







RIDING

NOTE Before riding away, carefully read the “safe drive” chapter, see p. 17 (SAFE DRIVE).

⚠ CAUTION

If the low fuel warning light “⛽” (11) positioned on the dashboard comes on while the vehicle is running, this means that there are still 1.19 ± 0.26 US gal (4.5 ± 1 ℓ) of fuel available, top up as soon as possible, see p. 54 (FUEL).

⚠ WARNING

If you are riding solo, without a passenger, make sure the passenger footrests are folded up.
Never take your hands off the hand grips nor your feet off the footrests while you are riding.

⚠ WARNING

If you carry a passenger, instruct him/her not to move around unduly, and to keep his/her body aligned with yours during turns. Failure to do this could upset the stability of the vehicle.
Before riding away, ensure that the side stand is correctly stowed.
If the throttle sticks open, it may cause a collision with another vehicle, or an upset.

NOTE Before riding away, be sure that the rear view mirrors are correctly adjusted.

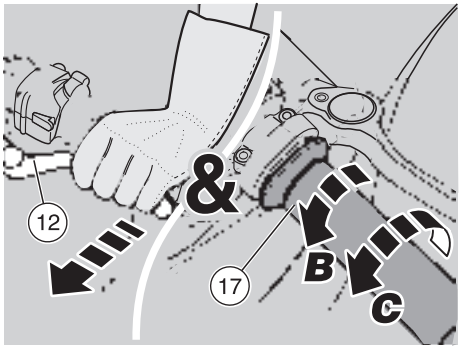
⚠ CAUTION

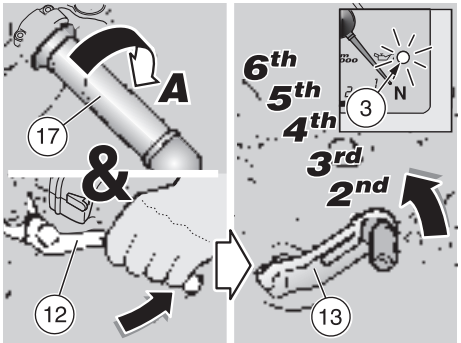
When the vehicle is new to you, practice looking in the rear view mirrors.
Reflecting surfaces are convex, therefore objects seem to be farther away than they actually are. The mirrors provide a wide angle view, and only experience will allow you to correctly determine how far behind you following vehicles are.

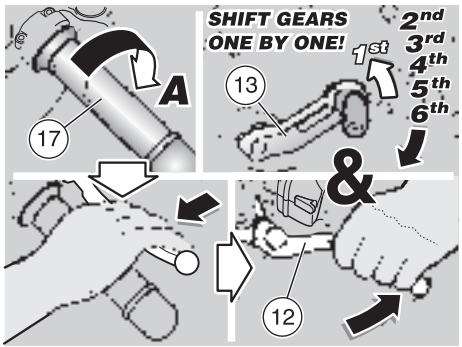
To ride away:

NOTE Ride at reduced speed for the first few miles in order to warm the engine up.

- With the throttle grip (17) in the idle position (**Pos. A**), and the engine idling, pull in the clutch lever (12) completely.
- Engage first gear by pressing downwards on the shift lever (13).
- Release the brakes.







⚠ WARNING

Do not release the clutch too abruptly, or the vehicle will rear in the air (do a wheely) or jerk forwards. Never accelerate abruptly or excessively when releasing the clutch lever in order to prevent the clutch from slipping and overheating (slow release) or the front wheel from lifting (wheely) (quick release).

Failure to observe these instructions can lead to a serious accident with subsequent injury or even death.

- Slowly but steadily release the clutch lever (12) and, at the same time, open the throttle by rotating the throttle grip (17) slightly counterclockwise (**Pos. B**). This will start the vehicle moving.
- Increase the speed by gradually rotating the throttle grip (17) (**Pos. C**). Do not exceed the recommended rpm, see p. 80 (RUNNING-IN).

To engage second gear:

⚠ CAUTION

Shift gears fairly quickly but without great force. Develop a "feel" for shifting with your left toe. Never lug the engine, that is, running it at too low an rpm which can damage the vehicle's engine, and causes rough and juddering acceleration.

- Rotate the throttle grip (17) clockwise (**Pos. A**), pull in the clutch lever (12) and lift the shift lever (13) straight up. Release the clutch lever (12) gently, and rotate the throttle counterclockwise to accelerate.
- Repeat the last two operations to shift from second, to third, to fourth, to fifth, to sixth.

⚠ WARNING

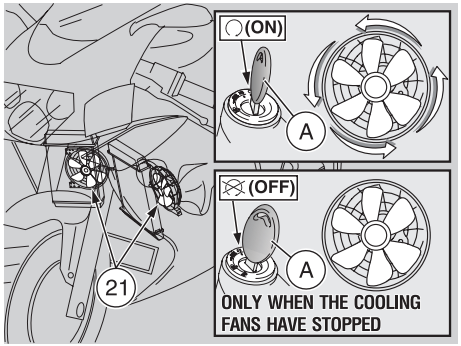
If the engine oil pressure warning light LED "🛢" (3) comes on during the normal running of the engine, this means that the oil system is not developing sufficient pressure. In this case, immediately stop the engine and contact your Local aprilia Dealer. Failure to heed this warning can lead to engine seizure, upset, and serious injury or even death.

Shifting from higher to lower gears, that is, downshifting, is accomplished as follows:

- Rotate the throttle grip (17) clockwise (**Pos. A**), slow the vehicle with the brakes, pull in the clutch lever (12), depress the shift lever (13) with your toe, release the clutch.

⚠ WARNING

Shift gears one by one. Simultaneously downshifting more than one gear may cause the engine to exceed its maximum rated rpm (red line). This can seriously damage the engine.



Before and during downshift, rotate the throttle clockwise to decelerate in order to avoid overspeeding the engine.

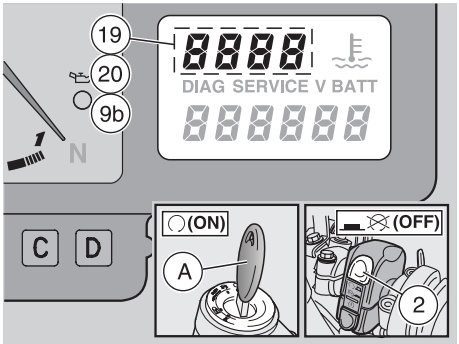
Downshifting should be carried out in the following situations:

- 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 engine lugs down (rpm decreases).

NOTE The cooling fans (21) function only when the ignition key (A) is in the "○" (ON) position.

⚠ CAUTION

Do not leave the ignition key in the "⛐" (OFF) position since the cooling fans will not run regardless of the coolant temperature. This will cause the coolant temperature to continue to rise.



If, before shutting off the engine, you hear the cooling fans functioning, stop the engine but leave the ignition key (A) to "○" (ON) position. This will allow the cooling fans to draw air through the radiators, and lower the temperature. Turn the ignition key (A) to "⛐" (OFF) position only when the cooling fans have stopped.

If, while riding, the right side of the multifunction display shows a temperature of 115 – 120 °C (239 – 248 °F) (19), stop riding the vehicle, stop the engine, turn the ignition key (A) to "○" (ON) position and wait until the cooling fans have stopped, then turn the ignition key (A) to "⛐" (OFF) position and check the coolant level, see p. 66 (COOLANT).

If the symbol "LLL" (20) is displayed, stop riding the vehicle and let the engine run at 3,000 rpm for approximately two minutes, thus allowing the coolant to circulate normally in the cooling system. Then move the engine stop switch (2) to position "▬⛐" (OFF) and check the coolant level, see p. 66 (COOLANT).

If the symbol "LLL" (20) is still displayed after the coolant level has been checked, contact your Local **aprilia** Dealer.

⚠ WARNING

Do not operate the vehicle if the maximum temperature [120 °C (248 °F)] is exceeded. Serious engine damage or even seizure may result which can cause an upset and serious injury or even death.

Whenever the ignition key (A) is turned to "○" (ON), the right side of the multifunction display will show "EFI" (9b) for about three seconds.

⚠ CAUTION

If the symbol "EFI" (9b) is displayed during the normal running of the engine, this means that the electronic unit has detected an anomaly. In many cases, the engine keeps running with reduced performance levels; immediately contact your Local aprilia Dealer.

⚠ WARNING

Avoid opening and closing the throttle repeatedly and continuously. Failure to head this warning can cause you to accidentally lose control of your vehicle.

When you have to brake, close the throttle and apply both brakes simultaneously in order to obtain the best brake performance.

⚠ WARNING

By applying only the front brake or only the rear brake, you reduce the braking performance considerably and run the risk of locking up one wheel which can cause an upset and subsequent serious injury or even death.

If you stop on an uphill, use brakes only to slow the vehicle and to keep it in place. Slipping the clutch to keep the vehicle in one place on an uphill grade will very quickly ruin the clutch and overheat the engine.

Before entering a turn, slow down, using the brakes and the engine, to a constant speed and then accelerate slightly through the turn. Avoid braking at the last moment. This can cause you to lose control of your vehicle.

If the brakes are operated continuously on downhill grades, the discs and pads will overheat, reducing the braking efficiency. Use engine compression and downshift to retard your vehicle while going downhill. Use the brakes as little as possible to maintain a safe speed.

Never coast downhill with the engine off and/or the clutch disengaged or the transmission in neutral.

On roads that are wet or covered with snow, ice or mud, ride very slowly, avoiding braking or accelerating or maneuvering quickly. Hold the handlebars firmly.

Failure to heed these warnings can cause an upset with subsequent serious injury or death.

⚠ WARNING

Pay very close attention to any obstacles or variations of the road surface. Uneven roads, rails, manhole covers, painted traffic stripes, traffic dots all become slippery when wet. Avoid particularly steel plates which are sometimes used during road maintenance. They become more slippery than ice once they are wet by rain or other water source. If you must ride on such surfaces, decrease your speed and operate the throttle, brakes and steering very gently.

Always use the turn signals any time you intend to change lanes or change direction, and avoid sudden or abrupt turning.
Switch off the direction indicators as soon as you have changed direction.

Overtake and pass only with care, especially in rainy weather when a water cloud created by larger vehicles reduces visibility and the slip stream could cause you to lose control of your vehicle.

RUNNING-IN

The internal parts of the engine and transmission must be properly run-in to ensure their long life and dependable operation.

If possible, while breaking in your vehicle, ride on hilly roads and/or roads with many curves so that the engine and transmission undergo lots of speed changes. It is also important that, during the run-in period, the suspension and brakes be treated gently to allow the mating parts to bed.

Therefore, avoid hard braking, high speeds or very bumpy roads during the break in period.

NOTE Only after the first 900 mi (1,500 km) of running-in you can expect the best performance from the vehicle.

During break in, obey the following rules:

- ◆ Do not open the throttle abruptly or fully at low engine speed. This rule applies even after break in has been completed.
- ◆ During the first 60 mi (100 km), apply the brakes with caution, avoid sudden and prolonged braking. This ensures correct bedding in of the pads on the discs.
- ◆ During the first 600 mi (1,000 km), never exceed 6,000 rpm.

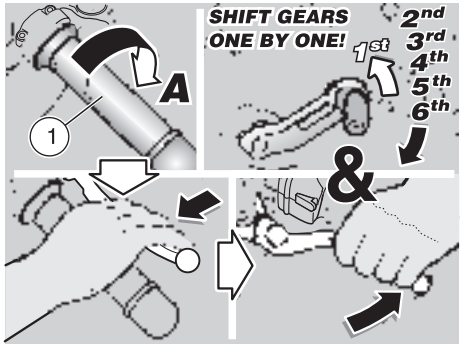
⚠ WARNING

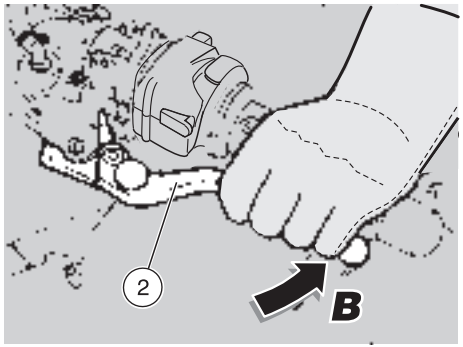
After the vehicle has been operated for 600 mi (1,000 km) perform the "checking operations" shown in column "After running-in" of the REGULAR SERVICE IN-

TERVALS CHART, see p. 86. Rectify any faults found. Failure to heed this warning could lead to damage to your vehicle or engine seizure or other malfunction which could cause an upset and lead to serious injury or even death.

- Between the first 600 mi (1,000 km) and 900 mi (1,500 km) drive more briskly, changing speed and using maximum acceleration for only a few seconds. Never exceed 7,500 rpm.
- After the first 900 mi (1,500 km) if you have followed the above break in schedule, the engine should be fully broken in, and will deliver maximum performance. However, never exceed the maximum allowed rpm (10,500 rpm).

Engine maximum rpm for the running-in	
Mileage mi (km)	**Max. rpm**
0 – 600 (0 – 1,000)	6,000
600 – 900 (1,000 – 1,500)	7,500
over 900 (1,500)	10,500





STOPPING

⚠ WARNING

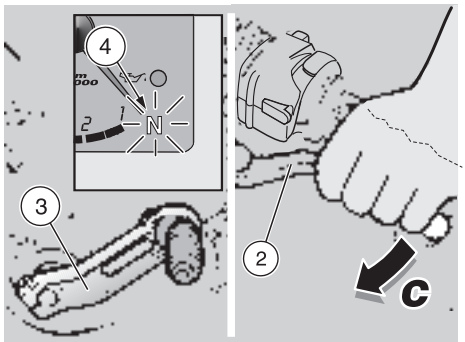
If possible, avoid stopping abruptly, slowing down suddenly and braking at the last moment.

Failure to comply with these instructions may cause an accident with consequent risk of serious injuries or even death.

- 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 p. 77 (RIDING).

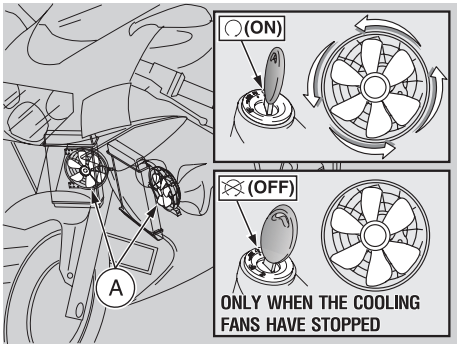
Once the speed has decreased, before stopping the vehicle:

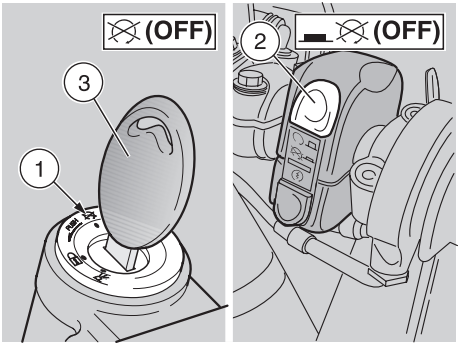
- Pull in the clutch lever (2) (**Pos. B**) in order to prevent the engine dying.



When the vehicle has come to rest:

- Position the shift lever (3) in neutral (green warning light "N" (4) on).
- Release the clutch lever (2) (**Pos. C**).
- If you are stopping just briefly and not shutting down the engine, keep one brake applied.





PARKING

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

⚠ WARNING

Park the vehicle only on firm flat ground, otherwise it could fall over.

Do not lean the vehicle against walls, do not lay it on the ground.

Park your vehicle away from children and pedestrians, so that they will not come in contact with hot parts.

Do not leave your vehicle unattended with the engine running or with the key in the ignition switch.

Do not sit on the vehicle when the side stand is extended.

Do not get too close to the cooling fans (A). Even though they are not moving, they could start automatically and suck clothing, hair, etc. into the fan.

If the vehicle falls over, it will leak gasoline which is extremely flammable. Flames or sparks could cause a fire which could destroy not only your vehicle but also buildings around it and cause injury or even death to people as well.

⚠ CAUTION

Never allow the weight of the rider or passenger to be supported directly by the side stand.

Before parking the vehicle:

◆ Choose a suitable parking area.
◆ Stop the vehicle, see p. 81 (STOPPING).

NOTE To stop the vehicle, exclusively use the ignition switch (1).
Leave the engine stop switch (2) in position "○" (ON); use it only in case of emergency.

⚠ CAUTION

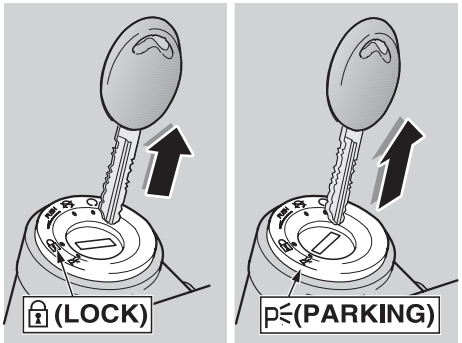
Do not leave the ignition on if you have stopped (for emergency) the engine by moving the engine stop switch to the "⊗" (OFF) position as this will discharge the battery.
When, for emergency, the vehicle has come to rest after stopping the engine with the engine stop switch, turn the ignition switch (1) to the "⊗" (OFF) position.

◆ Rotate the key (3) and move the ignition switch (1) to the "⊗" (OFF) position.

⚠ WARNING

Observe the instructions describing how to get off and on the vehicle, see p. 70 (GETTING ON AND OFF THE VEHICLE).

◆ Following the instructions, wait until the passenger has got off the vehicle before dismounting.



NOTE Never leave the key in the ignition switch.

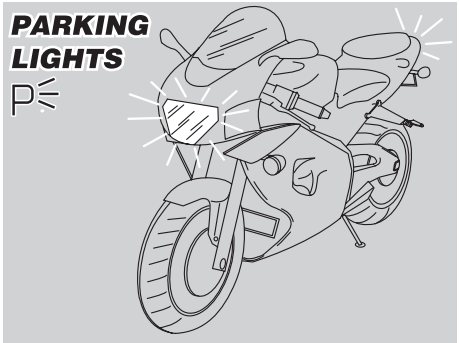
◆ Lock the steering, see p. 49 (STEERING LOCK) and extract the key.

When you have to park your vehicle in a dark or badly lighted area (parking lot or street), it is sometimes useful to leave the parking lights on so that your vehicle will be easily visible.

To leave the parking lights on: see p. 49 (PARKING LIGHTS).

⚠ WARNING

Make sure the vehicle is stable when parked. If it falls down, it will certainly be damaged and could injure others as well.



PLACING THE VEHICLE ON THE STAND

Carefully read p. 82 (PARKING).

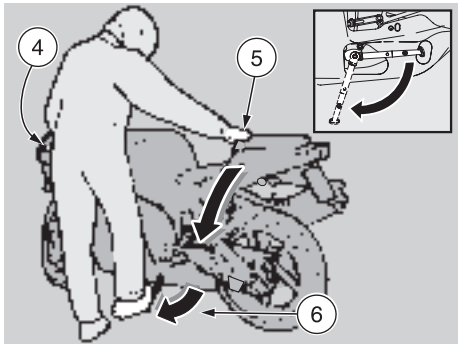
SIDE STAND

To place the vehicle on the side stand while seated astride the vehicle, see p. 70 (GETTING ON AND OFF THE VEHICLE).

If any manuevre (for example, moving the vehicle) requires the stowing of the stand, to place the vehicle on the stand again, proceed as follows:

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

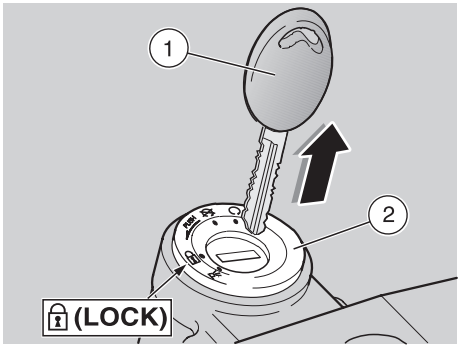
◆ Choose a suitable parking area, see p. 82 (PARKING).



◆ Grab the left handle grip (4) and rest your right hand:
  – RSV on the passenger saddle (or on the glove/tool kit compartment cover RSV OPT) (5);
  – RSV R on the glove/tool kit compartment cover (5).
◆ Put the side stand (6) down with your right foot. Make sure it is extended completely and all the way forward.
◆ Lean the vehicle to the left until the stand rests firmly on the ground.
◆ Turn the handlebars completely against the left stop.

⚠ WARNING

Make sure the vehicle is stable when parked. If it falls down, it will certainly be damaged and could injure others as well.



SUGGESTIONS TO PREVENT THEFT

NEVER leave the key (1) in the ignition switch (2), always use the steering lock "🔒" (LOCK).

Try to park your vehicle in a safe place, if at all possible, in a garage or other protected place.

Lock your vehicle up using a chain and padlock around the rear wheel. Chain the rear wheel to the swinging arm.

Make sure that all legal requirements: registration, license plates, insurance, etc. are in order.

Write down your name, address and telephone number and the vehicle identification number in the space below, to facilitate finding the owner in case your vehicle is recovered after theft.

SURNAME: .....

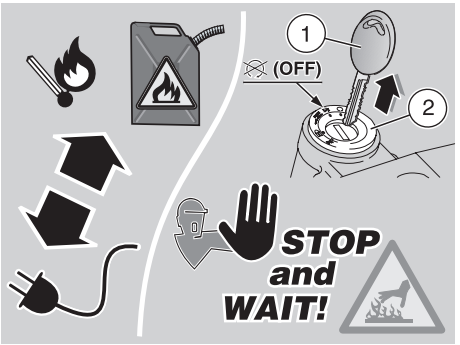
NAME: .....

ADDRESS: .....

.....

TELEPHONE NO.: .....

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



Carefully read p. 2 (FOREWORD) and (INTRODUCTION), p. 3 (SAFETY WARNINGS) and (GENERAL SAFETY RULES), p. 5 (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, remove the key (1) from the ignition switch (2), 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.

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

Be careful to avoid hot parts of the engine and exhaust system. They are hot enough to cause serious burns.

Avoid the temptation to hold any part of the vehicle in your mouth. The coatings, the platings and the components used are not edible and, in some cases, are noxious or even toxic.

⚠ CAUTION

In general, reassembly is performed in the reverse order of the disassembly instructions given here.

For some maintenance operations, especially those in which your hands are likely to come in contact with coolant, or engine oil, or gasoline, or brake fluid, it is advisable to use thin disposable gloves, such as those made of latex, rubber or nitrile.

The routine maintenance operations described in this manual can usually be performed by the user. However, in some cases, specific tools and technical expertise may be required.

Do not hesitate to contact your Local **aprilia** Dealer who has all the latest factory information and tools to properly service your vehicle.

Remember that many service operations, if done improperly, can be very hazardous. If you have any questions about your ability to carry out the operations described here, contact your Local **aprilia** Dealer.

In all cases, personally carry out the "preliminary checking operations" after any maintenance, see p. 72 (PRELIMINARY CHECKING OPERATIONS).

⚠ WARNING

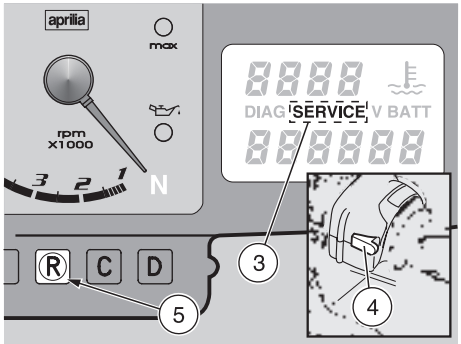
Remember that tightening torque of all fasteners on the wheels, brakes, axles, suspension are extremely important to ensure safety, and must be maintained at the prescribed values.

Check the tightening torques of the fasteners regularly, and always use a torque wrench when installing them.

Failure to adhere to this warning could cause the loosening and subsequent loss of critical fasteners, which could cause a wheel to lock or cause other handling problems with consequent overturning, and the risk of serious injury or even death.

⚠ WARNING

Fasteners must be neither overtightened or undertightened. If they are overtightened, the threads may be damaged and the fasteners will be destroyed, whereas if they are undertightened, they can vibrate and become lost. Obviously, under these circumstances, a serious accident with resultant serious injury or death could ensue.



⚠ CAUTION

After the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km), the word "SERVICE" (3) appears on the right display. When this occurs contact your Local aprilia Dealer, who will carry out the operations indicated in the regular service intervals chart, see p. 86 (REGULAR SERVICE INTERVALS CHART).

To make the word "SERVICE" disappear, press the "LAP" push button (4), and simultaneously press the push button R (5) and keeping them depressed for about 5 seconds.

REGULAR SERVICE INTERVALS CHART

THESE OPERATIONS MAY BE CARRIED OUT BY YOUR Local aprilia Dealer, OR BY THE OWNER OF THE VEHICLE.

Key

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

② = clean;

③ = change;

④ = adjust.

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

(*a) = For competition use, change every 2,300 mi (3,750 km).

(*b) = Check at least once a week and at the specified intervals.

Component	After running-in [600 mi (1,000 km)]	Every 4,650 mi (7,500 km) or 12 months	Every 9,350 mi (15,000 km) or 24 months
Tightness of the battery terminals	①	①	–
Spark plugs **(*a)**	–	①	③
Drive chain, tension and lubrication	every 600 mi (1,000 km): ①		
Air cleaner	–	①	③
Fork	①	–	①
Light operation/direction	–	①	–
Light system	①	①	–
Stoplight switches and clutch lever switch	①	①	–
Safety switch on side stand	①	①	–
Clutch fluid	①	–	①
Brake fluid	③	③ **(*a)**	–
Coolant	every 600 mi (1,000 km): ①		
Engine oil	every 300 mi (500 km): ①		
Tires	①	every 600 mi (1,000 km): ①	
Tire pressure **(*b)**	④	④	–
Engine idle rpm	④	④	–
Engine oil pressure warning light LED "🛢"	at every start: ①		
Front and rear brake pad wear	before every trip and every 1,250 mi (2,000 km): ①		
Stand	①	①	–

THESE MAINTENANCE OPERATIONS SHOULD ONLY BE PERFORMED BY YOUR Local aprilia Dealer.

Key

① = check and clean, adjust, lubricate or change, if necessary (according to workshop manual specifications);

② = clean;

③ = change;

④ = adjust.

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

(*a) = For competition use, change every 2,300 mi (3,750 km).

(*b) = With "R" fork RSV R (RSV OPT), change every 4,690 mi (7,500 km).

(*c) = (drive chain, rear sprocket, sprocket).

(*d) = For competition use, check every 2,300 mi (3,750 km).

(*e) = Only in case of:

- **intense use on racetracks;**
- **participation in competitions.**

Component	After running-in [600 mi (1,000 km)]	Every 4,650 mi (7,500 km) or 12 months	Every 9,350 mi (15,000 km) or 24 months
Rear shock absorber	–	–	①
Transmission cables and controls	①	①	–
Throttle cables (adjustment)	①	①	–
Carburation, CO setting	①	①	–
Shed system	①	①	–
Rear suspension linkage bearings	–	–	①
Steering bearings and steering play	①	①	–
Wheel bearings	–	①	–
Brake discs	①	①	–
General running of the vehicle	①	①	–
Engine oil filter **(*a)**	③	③	–
Engine oil filter (on oil tank)	②	–	②
Engine oil **(*a)**	③	③	–
Valve clearance	④	–	④
Braking systems	①	①	–
Cooling system	–	①	–
Clutch fluid	①	every 2 years: ③	
Clutch fluid bleeding	①	–	–
Brake fluid	①	every 2 years: ③	
Brake fluid bleeding	①	–	–
Brake pads	if worn: ③		
Coolant	every 2 years: ③		
Fork oil **(*b)**	after the first 4,650 mi (7,500 km): ③ and thereafter every 14,000 mi (22,500 km): ③		
Fork oil seals RSV	after the first 18,750 mi (30,000 km): ③ and thereafter every 14,000 mi (22,500 km): ③		
Fork oil seals RSV R	–	①	–
Wheels/tires	①	①	–
Nut, bolt, screw tightening	①	①	–
Cylinders synchronization	①	①	–
Suspensions and attitude	①	–	①
Final transmission **(*c)**	–	①	–
Fuel lines	–	①	every 4 years: ③
Brake lines and clutch lines	–	①	every 4 years: ③
Coolant lines	–	①	–
Clutch wear **(*d)**	–	①	–
Pistons (*e)	**every 3,100 mi (5,000 km): ①**		
Gear (*e)	**every 6,250 mi (10,000 km): ①**		

MAINTENANCE RECORD

Owner Name	
Owner Address	
Owner Telephone Number	
Vehicle Identification Number (V.I.N.) (frame number) see p. 92 (IDENTIFICATION DATA)	
Engine Number see p. 92 (IDENTIFICATION DATA)	
Local aprilia Dealer Name	
Local aprilia Dealer Address	
Local aprilia Dealer Telephone Number	
Warranty Activation Date **(from Retail Purchase Warranty Activation Form)**	

The following is to help you keep an accurate record of maintenance work.
Information recorded is not considered as proof that maintenance has been carried out.
Keep copies of work orders and/or receipts for parts you purchase.

Date	Odometer reading	Maintenance Performed	Dealer Stamp

Follow ►

Follow ►

Date	Odometer reading	Maintenance Performed	Dealer Stamp

Follow ►

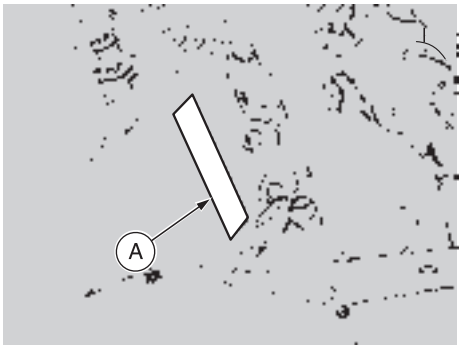
Follow ►

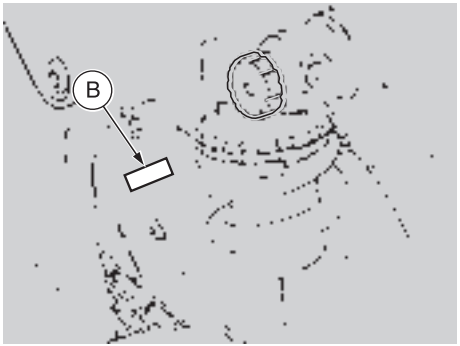
Date	Odometer reading	Maintenance Performed	Dealer Stamp

Follow ►

Follow ►

Date	Odometer reading	Maintenance Performed	Dealer Stamp





IDENTIFICATION DATA

It is a good idea to write down the frame and engine numbers in the space provided below. Use the frame number (VIN) to identify your vehicle when ordering spare parts.

⚠ WARNING

In all states and countries, it is against the law to alter the Vehicle Identification Number (VIN). You can incur severe penalties by doing this. Also, this will immediately invalidate your warranty.

FRAME NUMBER

The frame number (A) is stamped on the right side of the fork head.

Frame no. _____

ENGINE NUMBER

The engine number (B) is stamped on the rear part of the left engine crankcase.

Engine no. _____

AIR CLEANER

Carefully read p. 84 (MAINTENANCE).

⚠ WARNING

Do not use gasoline or flammable solvents to wash the air cleaner, in order to avoid fire or explosion.

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Inspect the air cleaner to ensure that it has not become clogged every 4,650 mi (7,500 km) or 12 months of use. Renew the air cleaner every 9,350 mi (15,000 km).

The air cleaner must be inspected more frequently, cleaned if necessary, and replaced more frequently if the vehicle is used on dusty or wet roads.

More frequent cleaning of the air cleaner is suggested, especially if your bike is used under very dusty conditions.

⚠ CAUTION

The air cleaner must not be used for more than 9,350 mi (15,000 km) regardless of how many times it has been cleaned in the interval. Under very dusty or dirty conditions, it is advisable to replace the air filter more often.

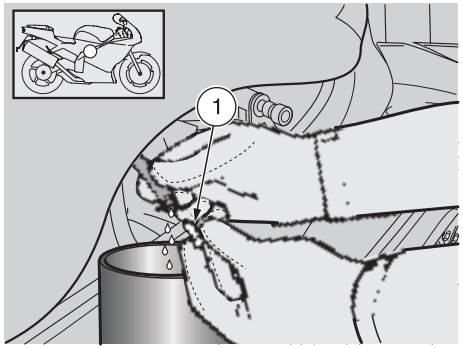
Before the cleaning operation, it is necessary to remove the air cleaner from the vehicle.

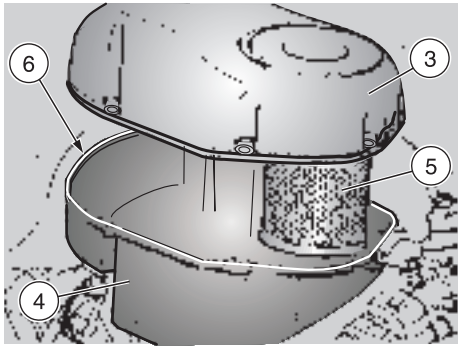
KEEP POLLUTING SUBSTANCES AND COMPONENTS AWAY FROM CHILDREN. DISPOSE OF POLLUTING SUBSTANCES AND COMPONENTS PROPERLY.

- Every 4,650 mi (7,500 km) remove the plug (1) so that any dirt that may have accumulated inside the filter case can be removed and disposed properly.

REMOVAL

- Lift the fuel tank, see p. 116 (LIFTING THE FUEL TANK).





⚠ CAUTION

Before unscrewing and removing the screws (2), clean the filter case cover (3) and the filter case (4) with a clean cloth. Prevent any foreign matter from getting into the inlet tubes. This could cause severe engine damage.

- Unscrew and remove the seven screws (2) that fasten the filter case cover (3).
- Remove the filter case cover (3).
- Extract the air cleaner (5).
- Make sure that the gasket (6) of the filter case (4) is intact; if it is damaged, replace it.

⚠ CAUTION

Plug the opening with a clean cloth to prevent any foreign matter from entering the intake tubes.

Upon reassembly, before putting back the filter case cover (3), make sure that you have not left the cloth or other objects inside the case.

Make sure that the air cleaner is positioned correctly, in such a way as to prevent non-filtered air from entering.
Premature wear of the piston rings, pistons and cylinders is caused by an improperly installed air cleaner.

CLEANING

⚠ CAUTION

Take great care not to deform the perforated metal outside screen. It is very fragile and can be easily damaged. Never use a screwdriver or other sharp hard tool to remove the air cleaner itself.

⚠ WARNING

During this operation, always wear goggles which provide your eyes with 360° protection. Be very careful using compressed air jets, they can cause serious personal injury if directed towards your body.

- Grasp the air cleaner vertically and strike it repeatedly on a clean hard horizontal surface.
- If available, clean the air cleaner with a compressed air jet, directing it from the inside of the filter towards the outside.

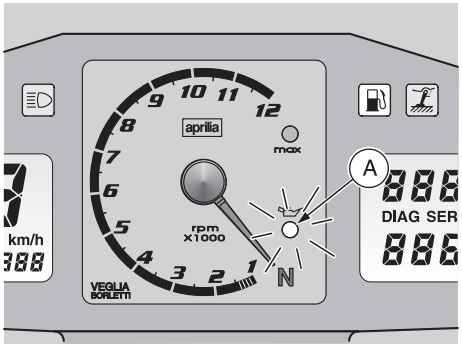
⚠ CAUTION

When cleaning the air cleaner, make sure that there are no tears. If there are, replace the air cleaner element with a new one of the same type.

- Clean the outer part of the air cleaner with a cloth.

CHANGING

- Replace the air cleaner with a new one of the same type.



CHECKING THE ENGINE OIL LEVEL AND TOPPING UP

Carefully read p. 56 (LUBRICANTS), p. 84 (MAINTENANCE) and p. 153 (LUBRICANT CHART) .

⚠ WARNING

It is critical to the safe operation of your vehicle that the proper lubricants, maintained at the proper levels, are used.
Failure to heed this warning can lead to an engine seizure with subsequent accident, serious injury or death.

CHECKING

NOTE Place the vehicle on firm and flat ground.

⚠ CAUTION

The engine oil level must be checked with warm engine.
If the check is carried out with cold engine, the oil level may temporarily lower below the "MIN" mark.

This is not a problem, provided that the engine oil pressure warning light LED "" (A) does not come on, see p. 38 (INSTRUMENTS AND INDICATORS TABLE).

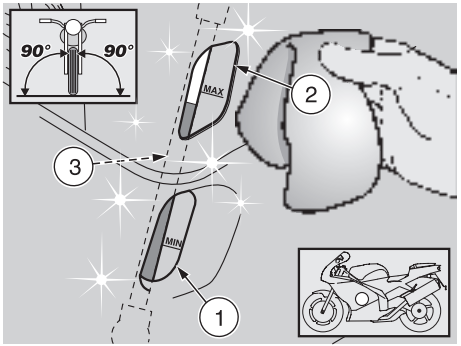
⚠ WARNING

Exhaust gases contain carbon monoxide, which is extremely poisonous if inhaled.
Do not start the engine in closed or badly-ventilated rooms.
Failure to observe this warning may cause loss of consciousness or even lead to death by asphyxia.

◆ Check the oil when the engine is warm, having been ridden for at least 10 mi (15 km).

NOTE If the engine is cold, warm it up for riding, preferably on a hilly road, for approximately 10 mi (15 km) before checking the oil.

◆ Stop the engine before checking the oil.



⚠ WARNING

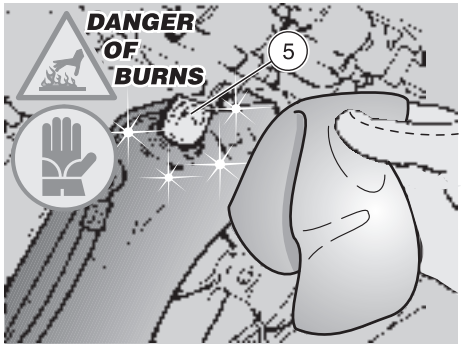
Should your vehicle overturn, it will leak gasoline, which is extremely flammable. Flames or sparks may cause a fire, which could destroy not only the vehicle, but also the building in which it is located, and cause serious injuries or even death.

◆ Keep the vehicle vertical, with the two wheels resting on the ground.

NOTE If you attempt to check the oil with the vehicle leaned in either direction from the vertical, your measurement will be inaccurate.

NOTE If the engine oil tank is dirty, wipe it with a clean cloth so that you can see the "**MIN**" and "**MAX**" marks.

◆ Look through the appropriate slots (1) (2) in the left fairing. Check the level of the oil in the sight gauge (3).



MAX = maximum level
MIN = minimum level

The difference between "**MAX**" and "**MIN**" is about 0.53 US qt (500 cm3).

◆ The level is correct if the oil reaches approx the "**MAX**" mark.

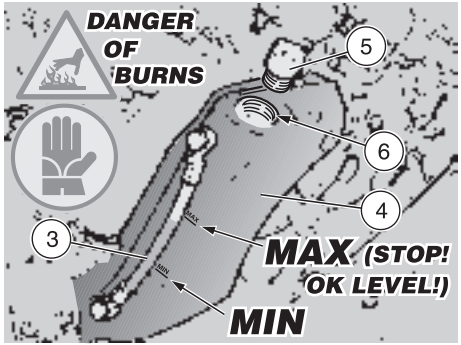
⚠ WARNING

Never exceed the "MAX" mark, nor leave the oil below the "MIN" mark, in order to avoid serious damage to the engine.

If necessary, top up the engine oil tank:

⚠ WARNING

When warmed up, the engine contains hot oil and the engine oil tank (4) is warm; therefore, while carrying out the operations described here below be particularly careful, in order to avoid burns.



⚠ CAUTION

Use thick gloves to prevent burns.

◆ Remove the left fairing, see p. 118 (REMOVING THE SIDE FAIRINGS).

⚠ CAUTION

Before unscrewing and removing the filler cap (5), clean it and the area of the tank around it with a clean cloth. Prevent any foreign matter from falling into the oil tank, this could cause serious engine damage.
Do not use any flammable solvents such as alcohol or gasoline when wiping the oil tank. The oil tank is hot enough to cause ignition of flammable solvents.
Use only a natural fiber cloth, i.e. cotton. Man made fabrics such as polyester, etc. could ignite.

◆ Unscrew and remove the filler cap (5).

⚠ CAUTION

If you use any container or funnel for topping up, make sure that it is perfectly clean.
Any foreign matter getting into the oil tank may lead to severe damage.

⚠ WARNING

Do not add any additives or other substances to the engine oil.

⚠ CAUTION

When topping up, never exceed the "MAX" level.

◆ Top up the engine oil tank (4) through the filler neck (6), with high-quality engine oil, see p. 153 (LUBRICANT CHART).
◆ Replace and tighten the filler cap (5).

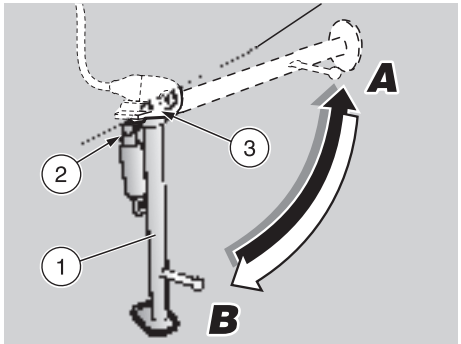
⚠ WARNING

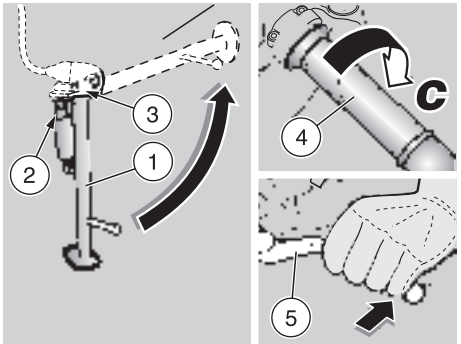
Tighten the filler cap (5) snugly to insure no oil leak.

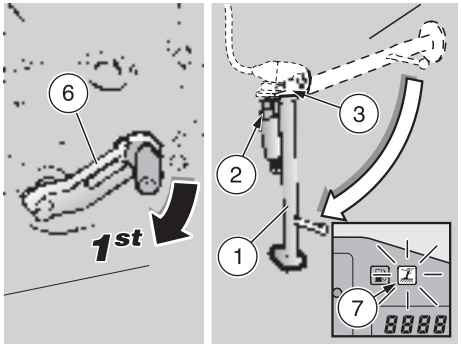
◆ Replace the left fairing, see p. 118 (REMOVING THE SIDE FAIRINGS).

⚠ WARNING

Never ride your vehicle with low engine oil, or with contaminated oil, or with unapproved oil. Any of these will greatly accelerate wear of your engine, and cause irreparable damage.







CHECKING THE SIDE STAND

Carefully read p. 84 (MAINTENANCE) and p. 97 (CHECKING THE SWITCHES).

The side stand (1) has two positions:

– normal or stowed (**Pos. A**);
– extended (**Pos. B**).

The rider must ensure that the stand is safely and completely extended, or completely stowed, as required.

The side stand (1) must rotate about its pivot smoothly and easily.

The springs (2) provide for keeping the stand in the desired position (extended or stowed).

Perform the following checks:

- Place the vehicle on the appropriate rear support stand, see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- The springs (2) must be free from damage, wear, or rust, and must fully and firmly stow the side stand when the weight of the vehicle is lifted off of it.
- Make sure that the stand presents no slack in either position (extended or stowed).
- Extend the stand, making sure that the action of the springs ensures complete extension.
- Move the stand to stow it and release it when it has reached half its stroke to make sure that the action of the springs is sufficient to stow it completely.
- The side stand (1) must rotate freely about its pivot. If necessary, lubricate the pivot, see p. 153 (LUBRICANT CHART).

CHECKING THE FUNCTIONING OF THE SAFETY SWITCH ON THE SIDE STAND

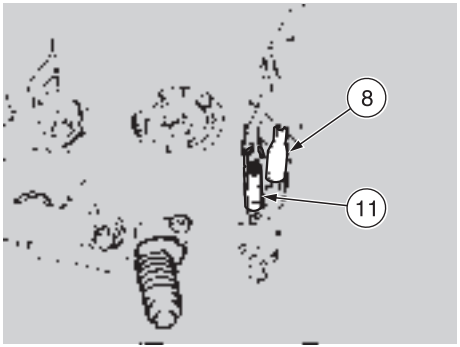
The side stand (1) is equipped with a safety system, operated by safety switch (3).
This system prevents the motor from being started while the stand is extended unless the transmission is in neutral. It also kills the engine if the stand is extended while the engine is running, unless the transmission is in neutral.

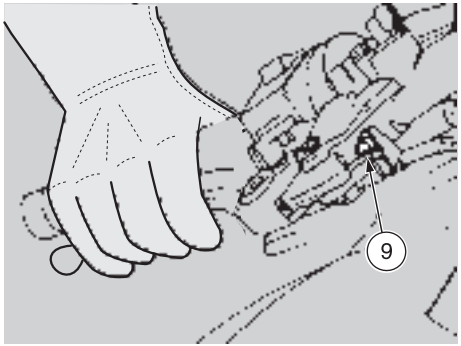
To check the proper functioning of the safety switch (3):

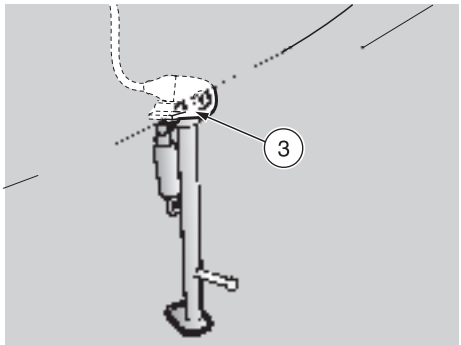
- Remove the rear support stand OPT, see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Sit on the vehicle in the normal riding position, see p. 70 (GETTING ON AND OFF THE VEHICLE).
- Stow the side stand (1) carefully and completely.

⚠ WARNING

Exhaust gases contain carbon monoxide, which is extremely poisonous if inhaled.
Do not start the engine in closed or badly-ventilated rooms.
Failure to observe this warning may cause loss of consciousness or even lead to death by asphyxia.







◆ Start the engine, see p. 74 (STARTING).
◆ Release the throttle grip (4) (**Pos. C**). With the engine idling, pull in the clutch lever (5) completely.
◆ Engage first gear, pushing the shift lever (6) downwards.
◆ Extend the side stand (1).

NOTE Extending the side stand must kill the engine and the "side stand down" warning light "\" (7) must come on. If the engine continues to run:

◆ Check the safety switch (3) on the side stand (1), see p. 97 (CHECKING THE SWITCHES). Perform the necessary cleaning or repairs.
◆ Repeat the check.

⚠ WARNING

If the engine does not stop when the side stand is extended, do not ride your vehicle. Contact your Local aprilia Dealer.

CHECKING THE SWITCHES

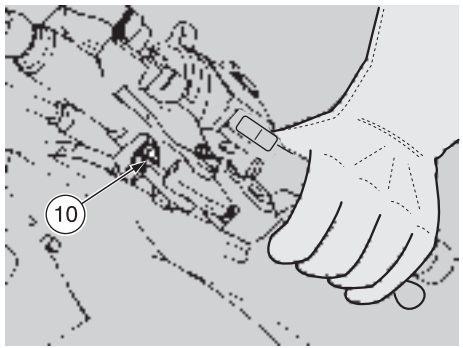
Carefully read p. 84 (MAINTENANCE).

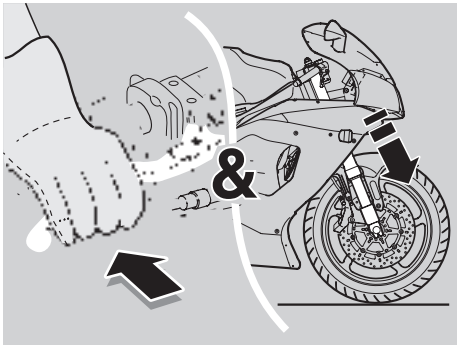
Check the switches after the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km).

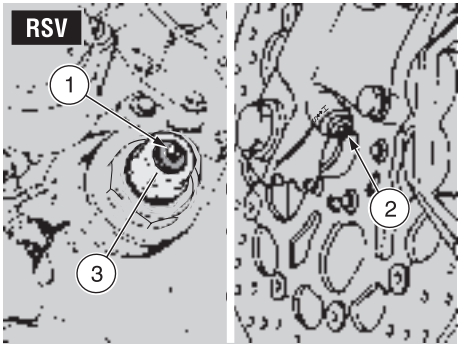
The vehicle is equipped with four switches:

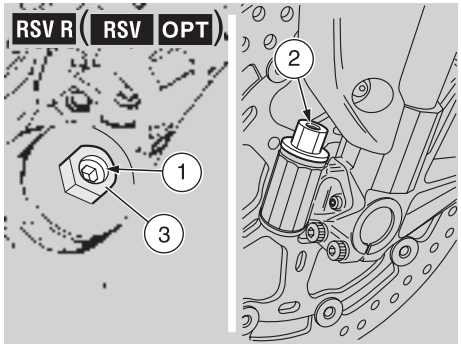
– stoplight switch on the rear brake pedal (8);
– stoplight switch on the front brake lever (9);
– safety switch on the side stand (3);
– clutch lever switch (10).

◆ Make sure that there is no dirt or mud on the switch. The switch pin must move freely and without interference, returning automatically to its unapplied position.
◆ Check the spring (11); it must not be damaged, worn or stretched.









INSPECTING THE FRONT AND REAR SUSPENSIONS

⚠ CAUTION

The front fork oil change operation should be entrusted to your Local aprilia Dealer.

Carefully read p. 84 (MAINTENANCE).

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Have the front fork oil changed after the 4,650 mi (7,500 km) and thereafter every 14,000 mi (22,500 km).

With "R" front fork RSV R (RSV OPT), have the front fork oil changed every 6,250 mi (10,000 km).

Every 600 mi (1,000 km) and thereafter every 9,350 mi (15,000 km), carry out the following checking operations:

- Apply the front brake lever and push up and down on the handlebar repeatedly, pushing the fork up and down.
  The fork must move smoothly and easily, there must be no trace of oil on the fork tubes.
- Check the torque of all the fasteners on the front fork and inspect the entire front fork to make sure that it is in good condition without leaks or damage. Repeat for the rear suspension and swinging arm.

⚠ CAUTION

Do not ride your vehicle if either suspension is damaged in any way, contact your Local aprilia Dealer.

FRONT SUSPENSION

- RSV Have your Local **aprilia** Dealer change the fork oil seals after the first 18,750 mi (30,000 km) and thereafter every 14,000 mi (22,500 km).
- RSV R Every 7500 km (4690 mi) check, clean, lubricate and have the fork oil seals changed, if necessary, by contacting a Local **aprilia** Dealer.

The main components of the front suspension are the two hydraulic fork legs, connected to the frame through the steering tube, by the triple clamp and fork head. To allow for adjustment of the vehicle attitude, each of the fork tubes is provided with an upper screw for the adjustment of the hydraulic damping on extension, a lower screw (2) for the adjustment of the hydraulic damping on compression, and an upper nut (3) for adjustment of the spring pre-load. The height of each fork tube in the triple clamp and fork head can also be adjusted.

ADJUSTING THE FRONT FORK RSV

The front fork is adjusted at the factory to suit most riding conditions for most riders. However, it is possible to adjust the fork setting to your preference, and to accommodate the full range of operating conditions that

the vehicle is intended to be used for.

⚠ CAUTION

When adjusting the front fork, always start from the most rigid setting. This is the fully clockwise position of the adjuster screws (1) and (2).

Do not force the rotation of the adjuster screws (1) and (2) beyond the end of stroke in both directions, in order to avoid any damage.

Use the notches (4) and (5) provided on the adjusters as reference marks for the adjustment of hydraulic damping on extension and hydraulic damping on compression.

Use the notches (6) provided on the adjusting nut (3) as reference marks for the adjustment of the spring preload.

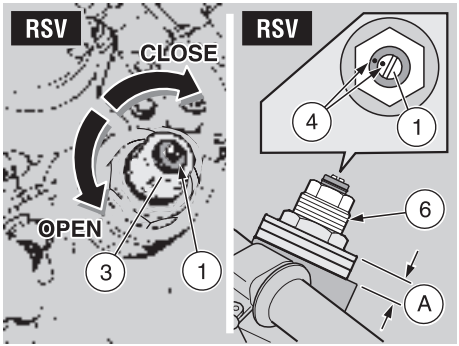
Turn the adjuster screws (1) and (2) 1/8 turn at a time and turn the adjusting nut (3) one notch at a time.

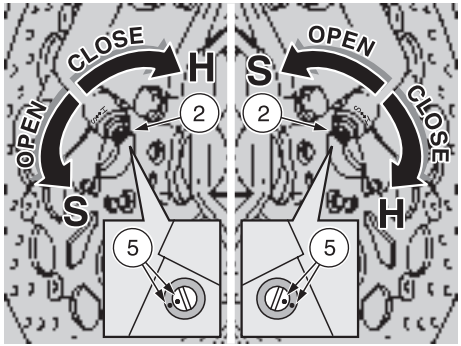
Make sure that the spring preload and hydraulic damping, both on extension and compression, is the same for both sides.

⚠ WARNING

Different damping settings, extension or compression, or spring preload settings on opposite sides of the vehicle will result in an unstable condition wich can lead to a crash and subsequent serious injury or even death.

When the spring preload is increased, it is necessary to also increase the hydraulic damping, both on extension and compression, to avoid a jerky unsteady shock action while riding.





⚠ WARNING

The competition adjustment must be used in organized racing or circular course competitive event, under the auspices of a recognized sanctioning body or by permit issued by the local governmental authority having jurisdiction.

It is strictly forbidden to use the competition adjustment while riding the vehicle on public streets, roads, or highways.

Front suspension	Standard adjustment	Adjustment for competition use
Adjustment of the hydraulic damping on extension, screw (1).	from completely closed (*a), open (*b) 1.25 turns.	from completely closed (*a), open (*b) 0.5 – 1 turn.
Adjustment of the hydraulic damping on compression, screw (2).	from completely closed (*a) (H), open (*b) (S) 1 turn.	from completely closed (*a) (H), open (*b) (S) 0.5 – 1 turn.
Spring preload, nut (3).	from completely closed (*a), open (*b) 4 – 5 reference notches.	
Height (A) of fork tubes in fork head (*c).	3 reference notches.	4 reference notches.

(*a) = Fully clockwise position. (*b) = Counterclockwise rotation.
(*c) = This type of adjustment should be carried out only by your Local **aprilia** Dealer.

ADJUSTING THE FRONT FORK RSV R (RSV OPT)

The front fork is adjusted by the factory to be suitable for most commonly encountered competition conditions. However, it is possible to adjust the fork setting to your preference, and to accommodate the full range of operating conditions that the vehicle is intended to be used for.

⚠ CAUTION

When adjusting the front fork, always start from the most rigid setting. This is the fully clockwise position of the adjuster screws (1) and (2).

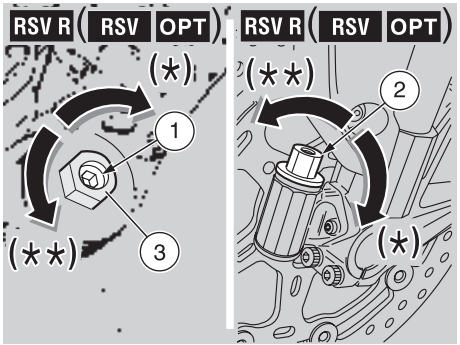
Do not force the rotation of the adjuster screws (1) and (2) beyond the end of the stroke in either direction, in order to avoid damaging the damping mechanism.

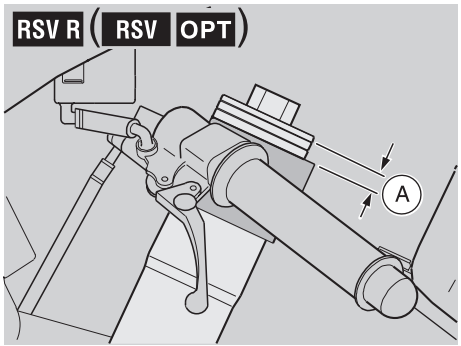
Use the number of clicks of the adjuster screws (1) and (2) as reference marks for the adjustment of hydraulic damping on extension and compression.

Turn the adjuster screws (1) and (2) one click at a time and turn the adjusting nut (3) one turn at a time.

Make sure that the spring pre-load and hydraulic damping, both on extension and compression, is the same for both sides. A different setting on each side will result in instability.

When the spring pre-load is increased, you must also increase the hydraulic damping, both on extension and compression, to avoid unsteady shock action while riding.





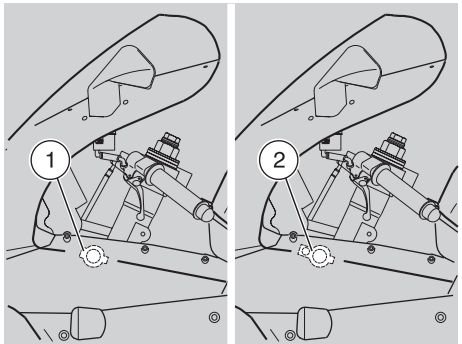
⚠ WARNING

The competition adjustment must be used in organized racing or circular course competitive event, under the auspices of a recognized sanctioning body or by permit issued by the local governmental authority having jurisdiction.

It is strictly forbidden to use the competition adjustment while riding the vehicle on public streets, roads, or highways.

Front suspension	Standard adjustment	Adjustment for competition use
Adjustment of the hydraulic damping on extension, screw (1).	from completely closed (*a), unscrew (*b) 12 clicks.	from completely closed (*a), unscrew (*b) 8 – 10 clicks.
Adjustment of the hydraulic damping on compression, screw (2).		
Spring preload, nut (3).	from completely open (*c), screw (*d) 8 turns.	from completely open (*c), screw (*d) 6 – 9 turns.
Height (A) of fork tubes in fork head (*e).	4 reference notches.	

(*a) = Fully clockwise position. (*b) = Counterclockwise rotation.
(*c) = Fully counterclockwise position. (*d) = Clockwise rotation.
(*e) = This type of adjustment should be carried out only by your Local **aprilia** Dealer.



STEERING DAMPER

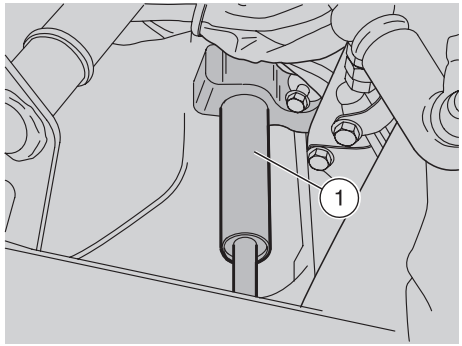
The standard RSV model is not equipped with steering damper. As optional equipment, it is possible to install the non-adjustable steering damper (1) or the adjustable steering damper (2), requesting the desired item to your Local **aprilia** Dealer.

The standard RSV R model, instead, is equipped with adjustable steering damper (2).

ADJUSTABLE STEERING DAMPER

The following information refers to the adjustable steering damper (2) as original equipment on the RSV R model, and when installed, as an option on the RSV model.

The adjustable steering damper (2) has a knob (3) for adjusting the hydraulic damping, (see table).

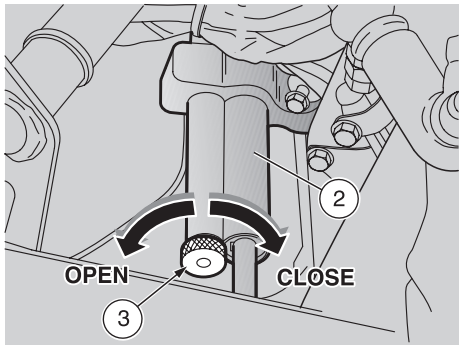


For the adjustment, proceed as follows:

◆ Rotate the handlebar completely counterclockwise (leftwards).

⚠ CAUTION

For the adjustment, always start from the most rigid setting, this is the fully counterclockwise position of the knob (3).



◆ Rotate the knob (3) to adjust the hydraulic damping (see table).

Adjustable steering damper	Standard adjustment	Adjustment for competition use	Possible adjustments
Adjustment	from completely closed (*a), open (*b) 15 clicks.		from completely closed (*a), open (*b) 2 – 17 clicks .

(*a) = Fully clockwise position. (*b) = Counterclockwise rotation.

REAR SUSPENSION

The rear suspension consists of a hydraulic shock absorber - spring unit, which is mounted to the frame with a uniball, and to the swinging arm by means of a system of levers.

The ride height of the rear of the vehicle can be set using the spring preload adjusting ring nut (1) and locking ring nut (2). The rear suspension can be tuned by adjusting the extension damping with a ring nut adjuster (3), the damping on compression can be adjusted by a knob (4).

NOTE It is possible to adjust the rear ride height in order to suit your preference.

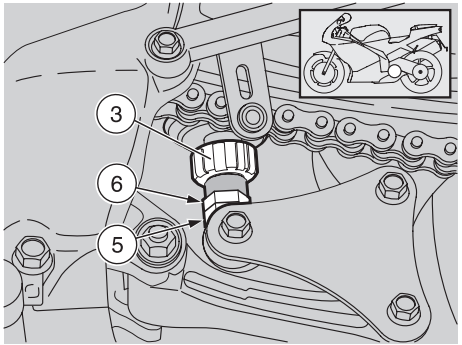
ADJUSTING THE REAR SHOCK ABSORBER

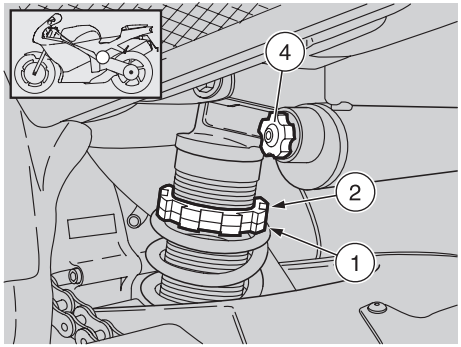
NOTE Check and, if necessary, adjust the rear shock absorber every 9,350 mi (15,000 km). If the vehicle is used in any kind of competition or on unpaved roads, carry out this check at one-half of this interval.

The rear shock absorber's factory setting are satisfactory for most race tracks. However, it is possible to tune the suspension to your preference by using the above mentioned adjustments.

⚠ CAUTION

When adjusting the rear shock absorber, always start from the stiffest position. This is the fully clockwise position of the extension damper adjusting ring nut (3) and the compression damper knob (4).





Do not rotate the extension damper adjustment ring nut (3) beyond its limit, this will damage the screw and destroy your shock absorber.

Always make sure, when adjusting ring nut (3), that it clicks in to an adjustment notch, and is not at a position intermediate between adjustment notches.

Working from the left side of the vehicle:

- Loosen the locking ring nut (2) by means of the appropriate spanner wrench.
- Adjust the ring nut (1) to adjust the spring preload (A) (see table p. 103).

After the adjustment:

- Hold the ring nut (1) from rotating with the appropriate spanner wrench and tighten the locking ring nut (2) by means of the appropriate spanner wrench.
- Adjust the ring nut (3) to adjust the hydraulic damping on extension (see table on p. 103).
- Adjust the knob (4) to adjust the hydraulic damping on compression (see table on p. 103).

To change the rear ride height, proceed as follows:

- Slightly loosen the lock nut (5).
- Turn the adjuster (6) to change the overall length of the rear suspension shock absorber (distance between center lines) (B) (see table on p. 103).

After the adjustment:

⚠ CAUTION

The lock nut (5) must be tightened to its appropriate tightening torque.

◆ Hold the adjuster (6) with the appropriate Allen wrench and tighten the lock nut (5), by means of the appropriate Allen wrench, to its appropriate tightening torque.

Lock nut (5) tightening torque: 28.93 ftlb (40 Nm).

⚠ CAUTION

Adjust the spring preload and the extension damping according to your preference, and how the vehicle is used. When the spring preload is increased, it is necessary to also increase the extension damping to avoid unsteady shock action. If necessary, contact your Local aprilia Dealer.

⚠ CAUTION

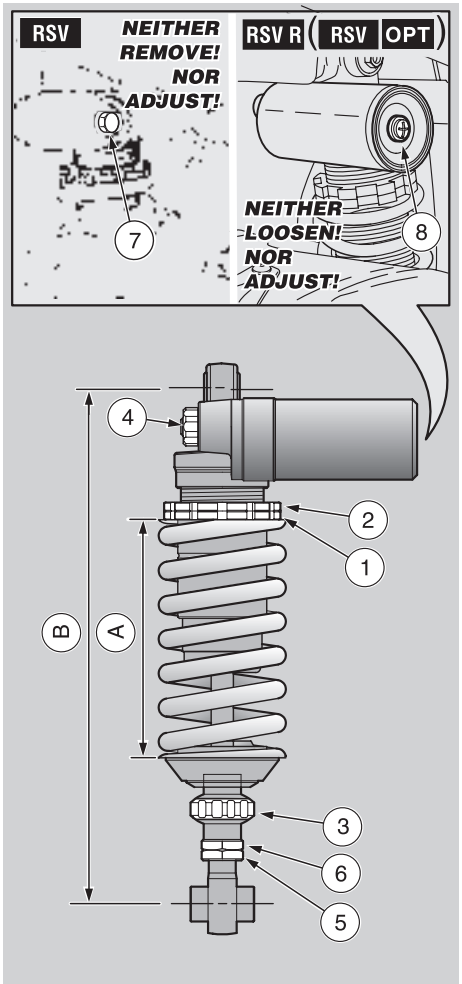
RSV Never loosen, or remove the screw (7). This may cause nitrogen to escape which will destroy the function of the shock absorber and could upset the handling of your vehicle, leading to an accident with subsequent injury or even death.

RSV R (RSV OPT) Never loosen the screw (8) or attempt to adjust the membrane covered by it. This may cause nitrogen to escape which will destroy the function of the shock absorber and could upset the handling of your vehicle, leading to an accident with subsequent injury or even death.

⚠ WARNING

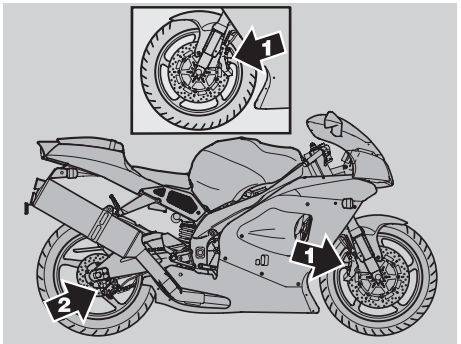
The competition adjustment must be used in organized racing or circular course competitive event, under the auspices of a recognized sanctioning body or by permit issued by the local governmental authority having jurisdiction.

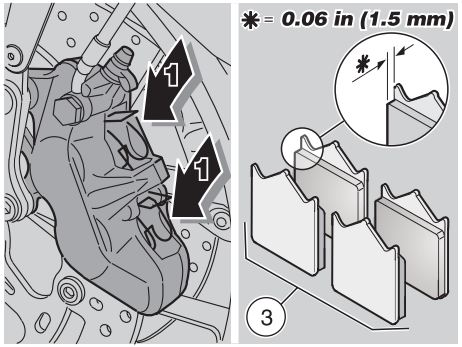
It is strictly forbidden to use the competition adjustment while riding the vehicle on public streets, roads, or highways.

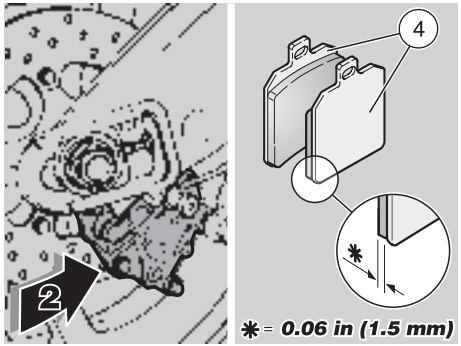


Rear suspension	Standard adjustment	Adjustment for competition use
Spring length (preloaded) (A), ring nut (1).	5.787 in (147 mm).	5.708 in (145 mm).
Adjustment of the hydraulic damping on extension, ring nut (3).	from completely closed (*a), open (*b) 20 clicks.	from completely closed (*a) open (*b): – RSV 12 – 16 clicks; – RSV R 13 – 16 clicks.
Adjustment of the hydraulic damping on compression, knob (4).	from completely closed (*a), open (*b) 12 clicks.	from completely closed (*a), open (*b) 8 – 14 clicks.
Overall shock absorber length (distance between center lines) (B), adjuster (6).	12.637 ± 0.039 in (321 ± 1.5 mm).	from 12.637 in (321 mm) to 12.716 in (323 mm).

(*a) = Fully clockwise position. (*b) = Counterclockwise rotation.







CHECKING THE BRAKE PAD WEAR

Carefully read p. 57 (BRAKES), and p. 84 (MAINTENANCE).

NOTE Your vehicle is equipped with disc brakes and two separate brake systems.
The front brake system is equipped with two discs, one on the right and one on the left side of the front wheel.
The rear brake system is equipped with a single disc on the right side of the wheel.
The following information may refer to a single braking system, but is applicable to both braking systems.

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Check the brake pad wear after the first 600 mi (1,000 km), before every trip and thereafter every 1,250 mi (2,000 km).
The amount of wear that the brake pads experience depends on how the vehicle is used, how aggressively it is driven, and the condition of the roads upon which it is operated. Wear will be faster than normal when the vehicle is driven aggressively, or on dusty or wet roads.

⚠ WARNING

Check the wear of the brake pads before every trip.

CHECKING WEAR OF THE BRAKE PADS

◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).

NOTE The front brake calipers (left and right) are equipped with four pads for each caliper.
The rear brake caliper is equipped with two pads.

◆ Perform a visual check of the friction material thickness. Use a flashlight. See the arrows (1) and (2) above.

If the friction material on one pad, front (3) or rear (4), is worn to **0.06 in (1.5 mm)** or less:

– **for the front brake calipers (left and right),** have all the pads of both front brake calipers replaced by your Local **aprilia** Dealer.
– **for the rear brake caliper,** have both pads of the rear brake caliper replaced by your Local **aprilia** Dealer.

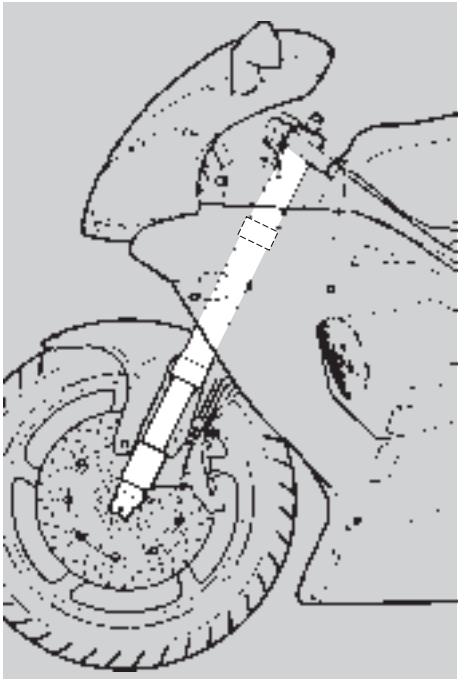
⚠ WARNING

Excessive wear of the friction material on the brake pads will cause contact of the metal pad support with the disc. This will make a characteristic metallic noise, and sparks. By this time, you have already destroyed the disc, which

must be replaced. Do not ride your vehicle in this condition, braking efficiency and safety are seriously compromised. This could lead to a crash with subsequent serious injury or death.

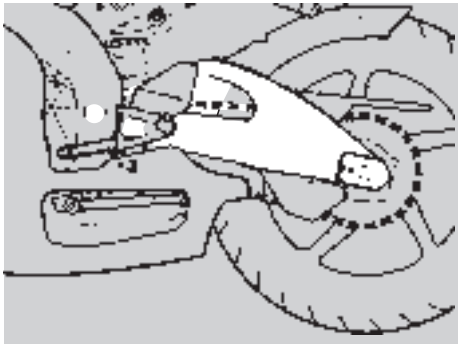
⚠ WARNING

Have the pads and the discs replaced by your Local aprilia Dealer.



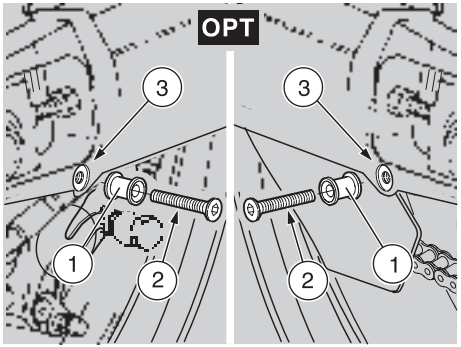
CHECKING THE STEERING

The operations necessary to this check require specific skills and therefore should be carried out by your Local **aprilia** Dealer.



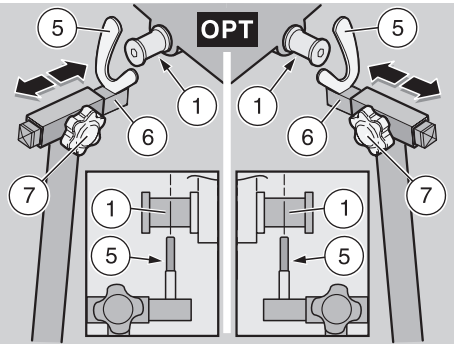
CHECKING THE SWINGING ARM PIVOT

The operations necessary to this check require specific skills and therefore should be carried out by your Local **aprilia** Dealer.



ASSEMBLING THE PINS FOR THE REAR SUPPORT STAND OPT

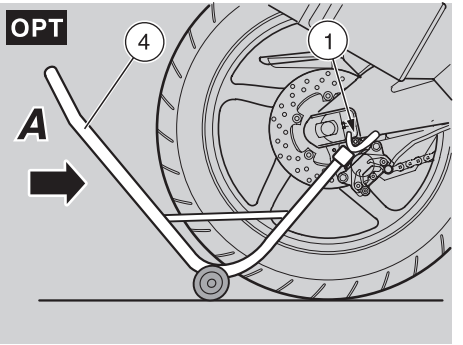
- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- ★ Place the pin (1) on the appropriate seat on the swinging arm.
- ★ Insert and tighten the screw (2) in the appropriate threaded hole (3) in the swinging arm.



PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT

- Assembly the pins for the rear support stand OPT, see above (ASSEMBLING THE PINS FOR THE REAR SUPPORT STAND OPT).

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



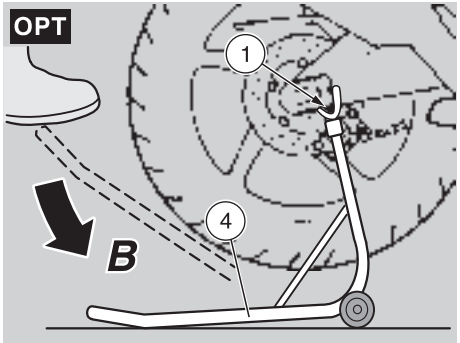
⚠ WARNING

When using the rear support stand, allow the yoke to engage only the pins (1). Do not attempt to support the rear of the vehicle in any other manner.

- Lift (**Pos. A**) the rear part of the stand (4), insert it from the back of the vehicle and place it so that the two yokes (5) of the support pins (6) hook the two pins (1) provided on the vehicle.

If the yokes (5) do not align with the two pins (1):

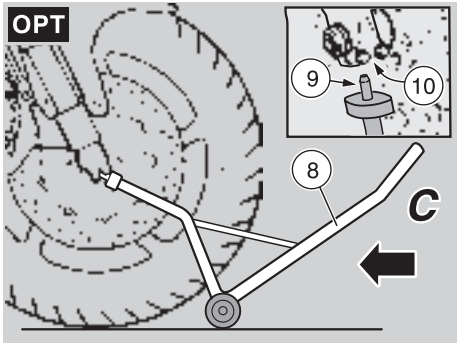
- Loosen the two knobs (7).
- Slide the two support pins (6) so that the two yokes (5) of the support pins (6) coincide with the two pins (1).
- Tighten the two knobs (7).
- Lift (**Pos. A**) the rear part of the stand (4), insert it from the back of the vehicle and place it so that the two yokes (5) of the support pins (6) hook the two pins (1) provided on the vehicle.



- Rest one foot on the rear part of the stand (4).
- Push (**Pos. B**) the stand (4) downwards until it reaches the end of its stroke (see figure).

⚠ WARNING

Make sure that the vehicle is stable.
If it falls over, it may cause damage to bystanders and other property, as well as being damaged itself.

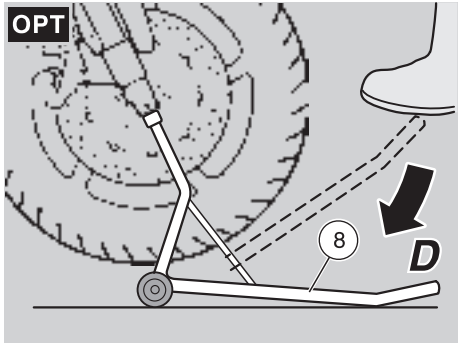


PLACING THE VEHICLE ON THE FRONT SUPPORT STAND OPT

- Place the vehicle on the appropriate rear support stand OPT, see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Lift (**Pos. C**) the front part of the stand (8) and insert each of its ends (9) into holes (10) in the bottom of the front fork.
- Rest one foot on the front part of the stand (8).
- Push (**Pos. D**) the stand (8) downwards until it reaches the end of its stroke (see figure).

⚠ WARNING

Make sure that the vehicle is stable.
If it falls over, it may cause damage to bystanders and other property, as well as being damaged itself.



FRONT WHEEL

⚠ WARNING

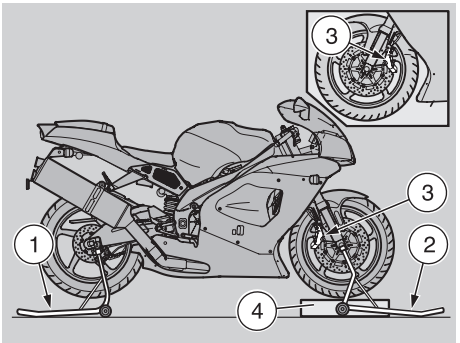
The disassembly and reassembly of the front wheel can be difficult for those unfamiliar with vehicle maintenance. You may wish to have your Local aprilia Dealer carry out these operations.

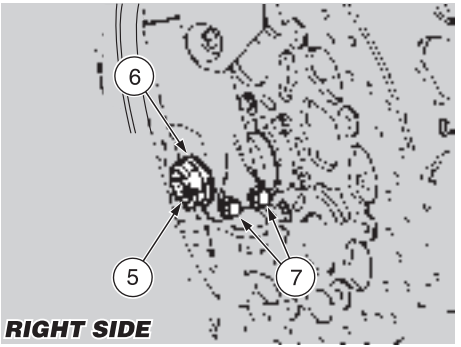
If you wish to perform these operations yourself, carefully read p. 84 (MAINTENANCE).

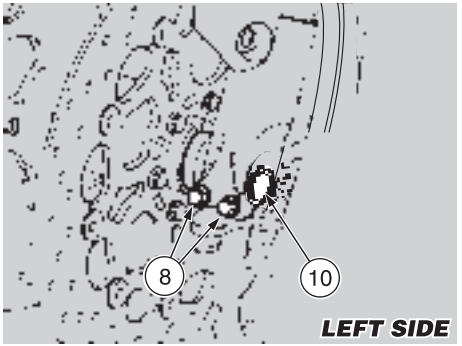
While disassembling and reassembling the wheel, pay extra care not to damage the brake lines, discs or pads.

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.

Riding with damaged rims in dangerous







for the rider, the vehicle and other people.
Check the conditions of the rim and have it replaced if it is damaged.

⚠ WARNING

Have the rim replaced by your Local aprilia Dealer.

NOTE You must use the appropriate front and rear support stands (1) (2) to remove the front wheel.

DISASSEMBLY

◆ Remove the left and right front brake caliper (3), see p. 120 (REMOVING THE FRONT BRAKE CALIPERS RSV).

⚠ CAUTION

Never touch the front brake lever after removing the brake calipers from the discs. If you do, the caliper pistons may be pushed out of their seats, and brake fluid will be spilled. Should you accidentally do this, take your vehicle to your Local aprilia Dealer who will know how to repair this damage.

◆ Place a support (4) under the front tire, in such a way as to keep the wheel in its position after loosening it.

⚠ WARNING

Make sure that the vehicle is stable.
If it falls over, it may cause damage to bystanders and other property, as well as being damaged itself.

◆ Have a helper steady the handlebar in the straight ahead position.

Wheel nut (5) tightening torque:
57.86 ftlb (80 Nm).

◆ Remove the wheel nut (5) and washer (6).

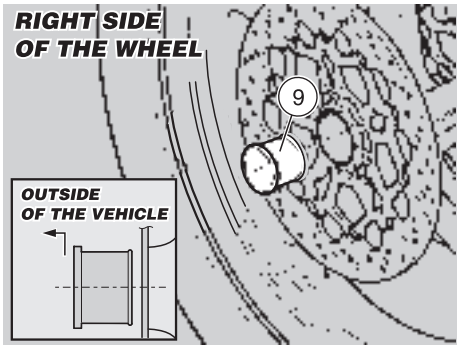
Axle clamp screw (7) (8) tightening torque:
15.91 ftlb (22 Nm).

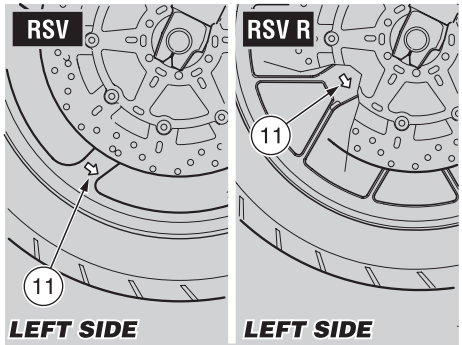
◆ Loosen the two axle clamp screws (7) (right side), using the appropriate Allen wrench.
◆ Loosen the two axle clamp screws (8) (left side), using the appropriate Allen wrench.

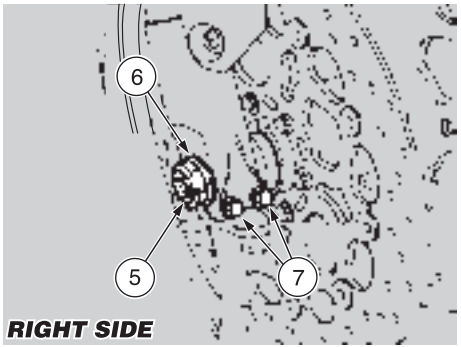
NOTE Observe the arrangement of the right spacer ring (9), in order to be able to reassemble it correctly.

NOTE To facilitate the extraction of the axle (10), slightly lift the wheel.

◆ Push the axle (10) partly out of the front fork by tapping the threaded end with a rubber hammer or wooden drift.
◆ Support the front wheel and remove the axle (10) manually by pulling it from the left side of the vehicle.
◆ Remove the wheel by pulling it forward.







NOTE The right spacer ring (9) remains located in its seat on the wheel; but if it has come out, replace it.

REASSEMBLY

◆ Apply a thin film of lubricating grease, see p. 153 (LUBRICANT CHART), to the front axle (10).

NOTE Perform the follow operation only if the right spacer ring (9) has come out of its seat on the wheel:

⚠ CAUTION

The right spacer ring (9) has shoulders of two different diameters, pay extra care to install the ring (9) correctly.

◆ Install the right spacer ring (9) in its seat on the wheel (right side) with the larger diameter towards the outside of the vehicle (see figure).

⚠ CAUTION

The arrow (11) on the wheel side indicates the rotation direction. Upon reassembly, make sure that the wheel is positioned correctly: the arrow must be visible on the left side of the vehicle.

◆ Place the wheel between the fork tubes on the support (4).

⚠ WARNING

The front wheel is heavy and can easily crush your fingers should you get them between any part of the wheel and the front fork. Do not attempt to line up the wheel and the axle clamps with your fingers. Failure to heed this warning can lead to serious personal injury.

◆ Move the wheel around until the axle hole and the axle clamps are aligned.

◆ From the left side of the vehicle, insert the axle (10) and push in completely.

NOTE Make sure that the axle (10) is completely inserted.

◆ Install the washer (6) and tighten the wheel nut (5) finger tight.

NOTE For temporary alignment of the front wheel, it is not necessary to tighten the two axle clamp screws (8) (left side) to the specified torque value.

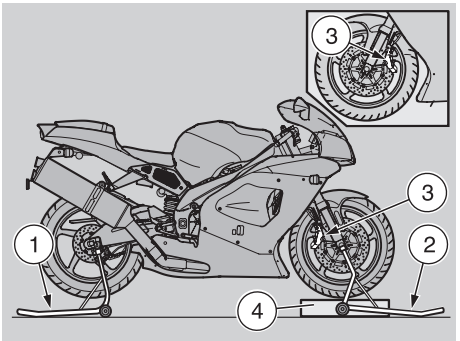
◆ Tighten the two axle clamp screws (8) (left side) just sufficiently to prevent the axle (10) from rotating.

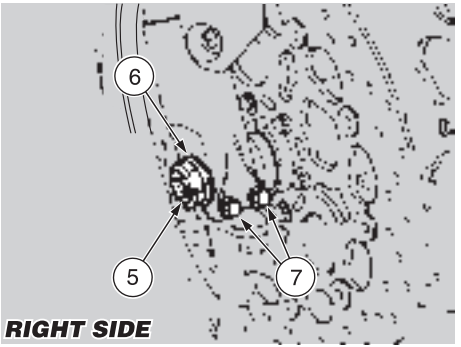
◆ Tighten the wheel nut (5) to its appropriate tightening torque.

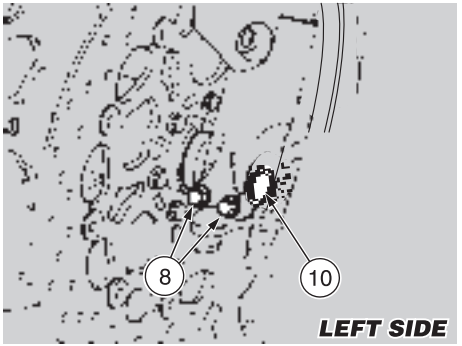
Wheel nut (5) tightening torque: 57.86 ftlb (80 Nm).

◆ Tighten the two axle clamp screws (7) (right side), using the appropriate Allen wrench.

Axle clamp screw (7) tightening torque: 15.91 ftlb (22 Nm).







- Loosen the two axle clamp screws (8) (left side), using the appropriate Allen wrench.
- Remove the support (4) from under the front tire.
- Replace the left and right front brake caliper (3), see p. 120 (REMOVING THE FRONT BRAKE CALIPERS RSV).
- Apply the front brake lever, and then push down on the handlebars, compressing the fork springs several times. This will align the fork tubes.
- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Tighten the two axle clamp screws (8) (left side), using the appropriate Allen wrench.

Axle clamp screw (8) tightening torque: 15.91 ftlb (22 Nm).

- Ensure that the following components are neither dirty nor oily:
  – tire; wheel; brake discs.

⚠ WARNING

After servicing the brakes, always check them for function. If the stroke of the lever or pedal is excessive, or if you detect that the effectiveness of the brakes is reduced in any way, have your vehicle serviced by your Local aprilia Dealer. It may be necessary to have your dealer bleed the system, or there may be some other problem with the brake system.

Never ride your vehicle in traffic immediately after servicing the brakes. Always apply the brake pedal or lever several times before riding your vehicle. Then, try your vehicle in a parking lot or other safe area with little traffic to ensure that the brakes are working properly. Failure to observe this warning can lead to a serious accident with subsequent serious injury or death.

Have the tightening torques, centering and balancing of the wheel checked by your Local aprilia Dealer. These are critical safety operations, and failure to observe this warning could lead to an upset with subsequent serious injury or death.

REAR WHEEL

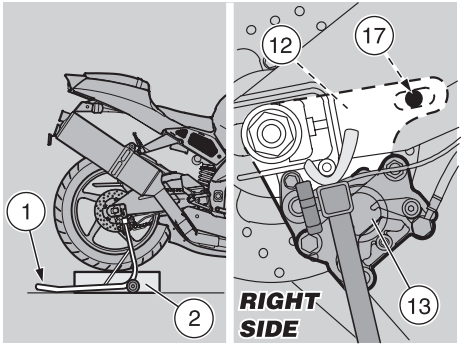
⚠ WARNING

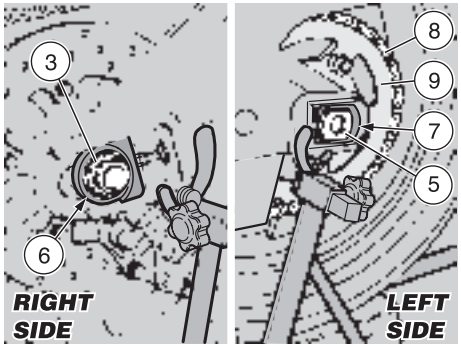
The disassembly and reassembly of the rear wheel can be difficult for those unfamiliar with vehicle maintenance. You may wish to have your Local aprilia Dealer carry out these operations.

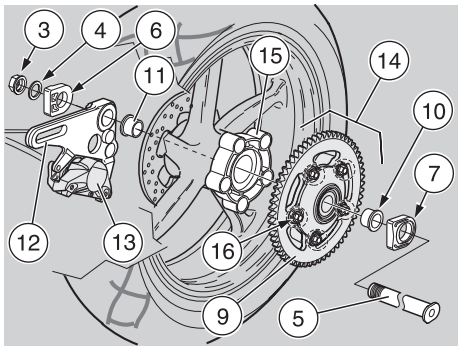
If you wish to perform these operations yourself, carefully read p. 84 (MAINTENANCE).

While disassembling and reassembling the wheel, pay extra care not to damage the brake lines, discs or pads.

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.







Riding with damaged rims in dangerous for the rider, the vehicle and other people.
Check the conditions of the rim and have it replaced if it is damaged.

⚠ WARNING

Have the rim replaced by your Local aprilia Dealer.

NOTE You must use the appropriate rear support stand (1) to remove the rear wheel.

DISASSEMBLY

- Place the vehicle on the appropriate rear support stand OPT (1), see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Place a support (2) under the tire, in such a way as to keep the wheel in its position after loosening it.

⚠ WARNING

Make sure that the vehicle is stable. If it falls over, it may cause injury to bystanders and other property, as well as being damaged itself.

Wheel nut (3) tightening torque: 86.80 ftlb (120 Nm).

- Remove the wheel nut (3) and recover the washer (4).

NOTE To facilitate the extraction of the axle (5), slightly lift the wheel.

- Remove the axle (5) from the left side of the vehicle.

NOTE Observe the arrangement of the right (6) and left (7) chain tensioners in order to be able to reassemble them correctly.

- Remove the right (6) and left (7) chain tensioners.

⚠ WARNING

Keep your fingers well away from the chain and sprocket. You could easily lose a finger if it becomes pinched between these two parts. Use heavy work gloves while installing the rear wheel. Never attempt to line the rear wheel up using your fingers. Failure to heed this warning can result in serious personal injury.

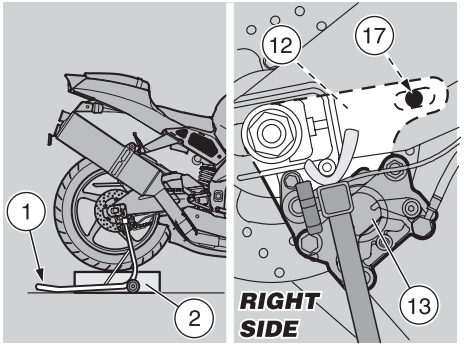
- Remove the drive chain (8) from the rear sprocket (9) and lay it down outside of the rear sprocket.

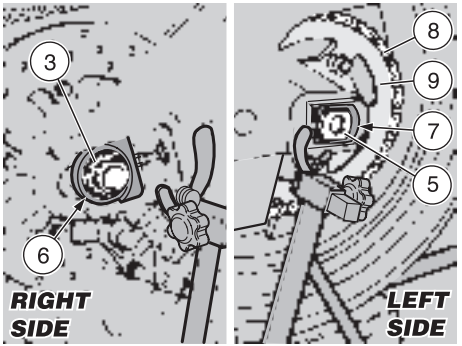
NOTE Place the drive chain (8) outside of the rear sprocket (9).

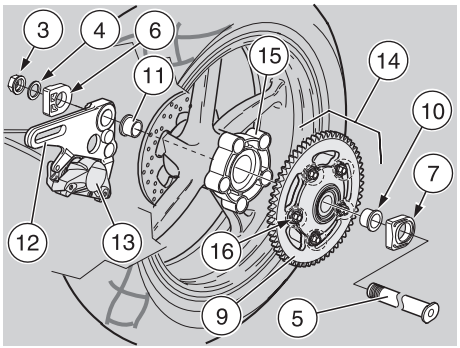
- Move the wheel forward and pull the drive chain (8) away from the rear sprocket (9).

⚠ CAUTION

Never touch the rear brake pedal after removing the rear wheel. If you do, the caliper pistons may be pushed out of their seats, and brake fluid will be spilled. Should you accidentally do this, take your vehicle to your Local aprilia Dealer who will know how to repair this damage.







◆ Pull the wheel backwards, removing it from the swing arm from behind, carefully removing the disc from the brake caliper.

NOTE The left spacer ring (10) and the right spacer ring (11) remain locate in their seats on the wheel; but if they have come out of their seats retrieve them.

NOTE The torque plate (12) of the brake caliper (13) remains installed on the right side of the rear fork.

Proceed with care. If the final drive unit (14) is installed on the flexible coupling holder (15), do not overturn or rotate the rear wheel in horizontal position on the rear sprocket side (A), since the final drive unit would come off and fall, and this may damage the rear sprocket (9).

NOTE 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, it is not necessary to remove the final drive unit.

NOTE Do not unscrew the five nuts (16). The complete final drive unit must be withdrawn from the flexible coupling holder.

◆ Working (B) with both hands on the outer diameter of the sprocket (9), withdraw the final drive unit parallely to the wheel axis.

REASSEMBLY

If the final drive unit has been removed (14):

NOTE Introduce the final drive unit, parallely to the wheel axis, inserting the flexible couplings in the corresponding seats on the flexible coupling holder (15).

◆ Working (C) with both hands on the outer diameter of the sprocket (9), insert the final drive unit in the flexible coupling holder (15).

⚠ CAUTION

While reassembling the rear wheel, be careful not to damage the brake line, the disc and the pads.

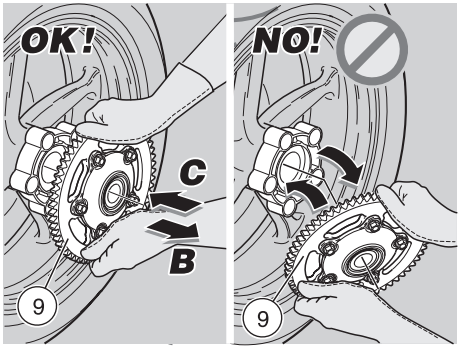
NOTE Perform the follow operation only if the left spacer ring (10) and/or the right spacer ring (11) have come out of their seats on the wheel:

◆ Install the left (10) and right (11) spacer rings in their seats on the wheel with the larger diameter towards the outside of the vehicle (see figure).

⚠ CAUTION

Before proceeding with the reassembly, make sure that the torque plate (12) of the brake caliper (13) is positioned correctly; the plate slot must be inserted in the appropriate stop pin (17) in the inner part of the right side of the swinging arm.

Insert the disc in the brake caliper carefully.

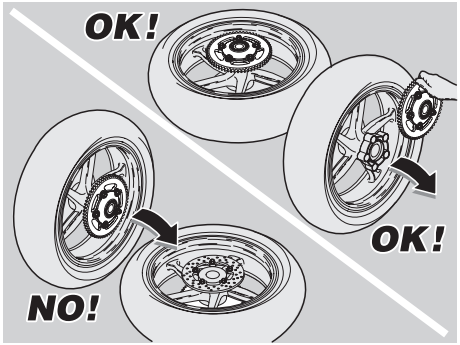


◆ Place the wheel centrally in the swinging arm, on the support (2).

⚠ WARNING

Keep your fingers well away from the chain and sprocket. You could easily lose a finger if it becomes pinched between these two parts. Use heavy work gloves while installing the rear wheel. Never attempt to line the rear wheel up using your fingers. Failure to heed this warning can result in serious personal injury.

◆ Move the wheel as far forward as possible, to install the drive chain (8) on the rear sprocket (9).
◆ Install the right (6) and left (7) chain tighteners in their seats on the swing arm.
◆ Apply a thin film of lubricating grease, see p. 153 (LUBRICANT CHART), to the rear axle (5).
◆ Pull the rear wheel backwards until the bearing holes are lined up with the holes in the swinging arm.



◆ Rotate the torque plate (12), complete with brake caliper (13), with the stop pin (17) in proper position until it is appropriately aligned with the holes in the swing arm.

NOTE To facilitate the insertion of the axle (5), slightly lift the wheel.

◆ Install the axle (5) completely through the wheel from the left side.

NOTE Ensure that the axle (5) is pushed all the way home with the head in the appropriate seat on the left chain tightener.

◆ Install the washer (4) and tighten the wheel nut (3) finger tight.
◆ Remove the support (2) from under the rear tire.
◆ Check the chain tension, see p. 114 (DRIVE CHAIN).
◆ Tighten the wheel nut (3).

Wheel nut (3) tightening torque: 86.80 ftlb (120 Nm).

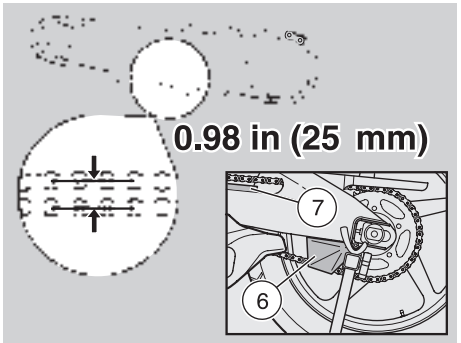
◆ Ensure that the following components are neither dirty nor oily:
– tire;
– wheel;
– brake disc.

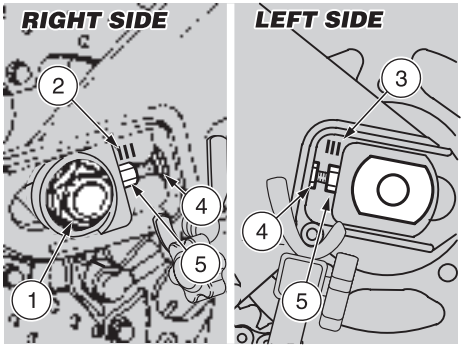
⚠ WARNING

After servicing the brakes, always check them for function. If the stroke of the lever or pedal is excessive, or if you detect that the effectiveness of the brakes is reduced in any way, have your vehicle serviced by your Local aprilia Dealer. It may be necessary to have your dealer bleed the system, or there may be some other problem with the brake system.

Never ride your vehicle in traffic immediately after servicing the brakes.
Always apply the brake pedal or lever several times before riding your vehicle. Then, try your vehicle in a parking lot or other safe area with little traffic to ensure that the brakes are working properly. Failure to observe this warning can lead to a serious accident with subsequent serious injury or death.

Have the tightening torques, centering and balancing of the wheel checked by your Local aprilia Dealer. These are critical safety operations, and failure to observe this warning could lead to an upset with subsequent serious injury or death.





DRIVE CHAIN

Carefully read p. 84 (MAINTENANCE).

Every 300 mi (500 km) check the condition, the wear, the play (tension) and the lubrication of the drive chain.

The vehicle is equipped with an endless chain. There is no master link used.

⚠ WARNING

An excessively loose chain may cause noise or make the chain rattle, with consequent wear of the shoe and of the chain guide plate.

Do not ride your vehicle with an improperly adjusted chain, see p. 115 (ADJUSTMENT).

To inspect the condition of the chain, grasp the chain where it goes around the sprocket and try to pull it away from the sprocket. If you can move it more than one-eighth of an inch away from the sprocket, the chain is worn out and the chain and both front and rear sprockets must be replaced. See your Local aprilia Dealer.

⚠ CAUTION

Lack of maintenance can cause premature wear of the chain and damage to the sprockets.

Maintain your chain more often if your vehicle is used on dusty or muddy roads.

⚠ WARNING

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.

Failure to observe this warning can lead to serious burns.

⚠ WARNING

Keep your fingers well clear of the chain and sprocket, especially if you are turning the rear wheel while working on the vehicle. You can easily be seriously injured if a finger is caught between the chain and sprocket. Use work-gloves to carrying out these operations.

CHECKING THE PLAY

To check the play:

- Stop the engine.
- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Shift to neutral.
- Check the chain play. It should be **0.98 in (25 mm)** at mid-bottom span as shown above.
- Move the vehicle forward or backward, or support the rear wheel in the air and turn the wheel to several positions, to check the chain slack at several locations. If the slack is markedly different with the wheel in different positions, the chain and sprockets must be replaced.

⚠ WARNING

Do not ever operate your vehicle with a damaged chain. This could cause wheel seizure which could lead to an upset with subsequent serious injury or death. Lubricate your chain frequently to minimize the possibility of this kind of damage, see p. 115 (CLEANING AND LUBRICATION).

If the play is the same at several locations, but is more or less than **0.98 in (25 mm)**, adjust it, see below (ADJUSTMENT).

ADJUSTMENT

NOTE To adjust the chain it is necessary to use the appropriate rear support stand OPT.

To adjust the chain tension:

◆ Place the vehicle on the appropriate rear support stand OPT, see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).

Wheel nut (1) tightening torque: 86.80 ftlb (120 Nm).

◆ Loosen the nut (1) several turns.

NOTE In order to make wheel centering in the swinging arm easier, there are reference marks (2) and (3) on the swing arm. See illustration above.

◆ Loosen the two lock nuts (4).
◆ Adjust the tension adjusters (5) to obtain the appropriate chain play, ensuring that the edge of tension adjuster is in the same position with regard to the reference marks (2) and (3) on each side of your vehicle.
◆ Tighten the two lock nuts (4).
◆ Tighten the nut (1).

Wheel nut (1) tightening torque: 86.80 ftlb (120 Nm).

◆ Check the chain play again, see p. 114 (CHECKING THE PLAY).

CHECKING THE WEAR OF THE CHAIN AND SPROCKETS

In addition to the check, see p. 114 (CHECKING THE PLAY), every 2,300 mi (3,750 km) inspect the chain and sprockets to make sure that there are no:

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

You may check the wear of the chain and sprocket by grasping the chain where it contacts the rear sprocket, and pulling it away from the sprocket as far as you can. If you are able to pull the chain far enough away from the sprocket so that you can see light between the side plates of the chain and the sprocket teeth, the chain and sprocket are worn out and should be replaced.

NOTE Always replace both sprockets and the chain when any of these components are replaced.

⚠ CAUTION

If chain rollers are damaged, the pins and/or the O rings are loose or missing, both sprockets as well as the chain must be replaced.

⚠ CAUTION

Lubricate the chain frequently, especially if it displays any rust or if it is dry to the touch. If, after lubricating the chain, it still has links which cannot be turned easily, the chain must be replaced.

◆ Check the wear of U-shaped chain guide (6).
◆ Finally, check the wear of the swinging arm protection shoe (7).

CLEANING AND LUBRICATION

⚠ CAUTION

The drive chain is provided with O rings between the link rollers and side plates, in order to retain the lubrication and to exclude dirt and grit.
Carry out chain adjustment, lubrication, cleaning and replacement with great care. Remember to keep your fingers clear of the chain and sprocket.

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

◆ Wash the chain with a non-flammable solvent. If your chain rusts quickly, lubricate it more often.

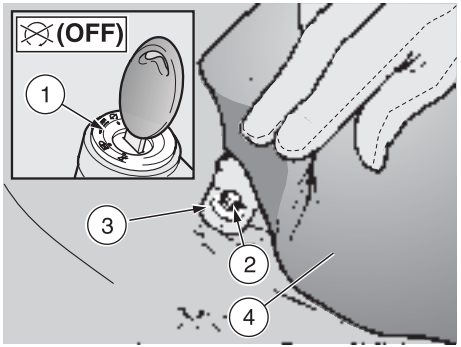
Lubricate the chain every 312 mi (500 km) or whenever it appears dry.

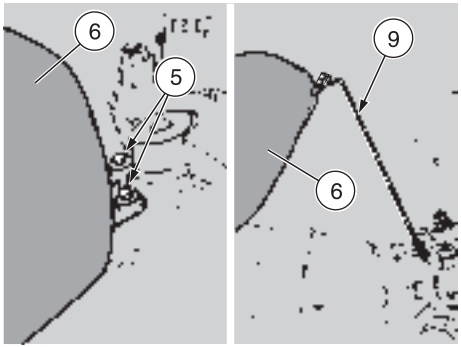
After washing the chain and letting it dry, lubricate it exclusively with spray grease for chains provided with sealing rings, see p. 153 (LUBRICANT CHART).

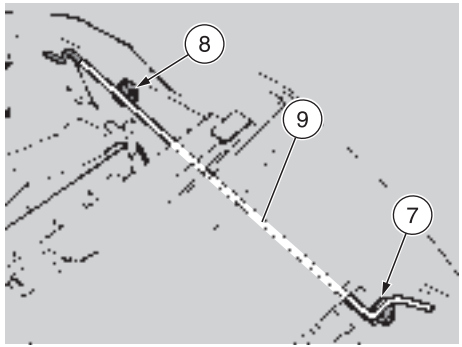
⚠ CAUTION

Make sure that the chain lubricant you use is appropriate for "O" ring chains. There are some lubricants available which contain substances which will destroy the "O" rings in your chain. If you have any question, contact your Local aprilia Dealer.

NOTE Do not use the vehicle immediately after lubricating the chain, give the lubricant a chance to dry, otherwise the chain will spray the lubricant all over you and your vehicle.







REMOVING THE RIDER SADDLE

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Turn the ignition switch (1) to "⊗" (OFF) position.
- ★ Partially lift the rear side edge of the rider saddle.
- ★ Unscrew and remove the screw (2) and retrieve the bushing (3).

Screw (2) tightening torque: 8.68 ftlb (12 Nm).

- Lift and remove the saddle (4).

NOTE Upon reassembly, insert the front tab of the saddle in the appropriate seat.

⚠ CAUTION

Do not leave your vehicle unattended without ensuring that the saddle (4) is properly positioned and locked. Should you forget and ride away with the saddle loose, you could be injured.

LIFTING THE FUEL TANK

Carefully read p. 54 (FUEL) and p. 84 (MAINTENANCE).

⚠ WARNING

Risk of fire.
Wait until the engine and the exhaust silencer have completely cooled down.
Fuel vapours are noxious for your health.
Make sure that the room in which you are working is properly ventilated.
Do not inhale fuel vapours.
Do not smoke and do not use open flames.

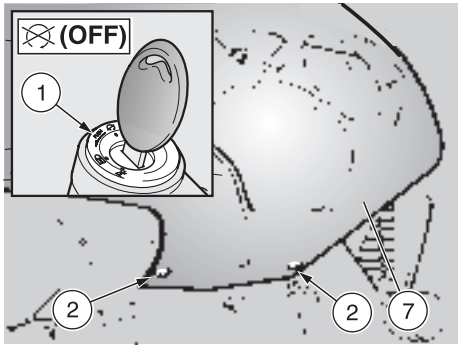
DISPOSE OF UNWANTED FUEL PROPERLY.

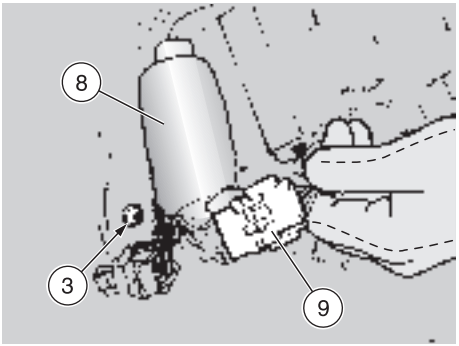
⚠ CAUTION

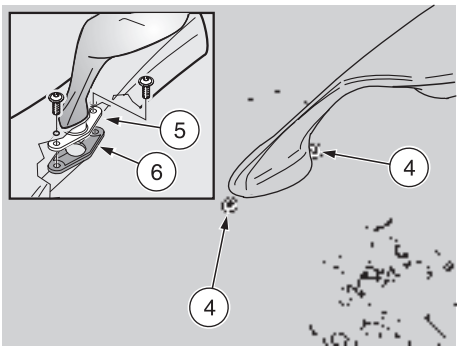
Never drain the fuel tank, either partially or completely. This may cause damage to the inner components of the fuel tank, or to other parts of the fuel system.

Always ensure that the fuel filler cap is correctly closed.

- RSV Remove the passenger saddle (or the glove/tool kit compartment cover OPT), see p. 50 (UNLOCKING/LOCKING THE PASSENGER SADDLE RSV).
- RSV R Remove the glove/tool kit compartment cover, see p. 51 (UNLOCKING/LOCKING THE GLOVE/TOOL KIT COMPARTMENT COVER RSV R).
- Remove the rider saddle, see beside (REMOVING THE RIDER SADDLE).
- Rotate the handlebars to the straight ahead position.
- Unscrew and remove the two screws (5) that fasten the front part of the fuel tank (6).
- Remove the fuel tank support rod (9) from its seats (7 – 8).
- Lift the front part of the fuel tank (6). Prop it into position using the rod (9) as shown in the figure.







REMOVING THE FRONT PART OF THE FAIRING

Carefully read p. 84 (MAINTENANCE).

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Turn the ignition switch (1) to "⊗" (OFF) position.
- Unscrew and remove the two lower screws (2).
- ★ Unscrew and remove the side screw (3).

⚠ CAUTION

The rear-view mirrors remain attached to the front part of the fairing, but they will not be not attached firmly. Do not use the mirrors to handle the fairing, as you will damage both mirrors and fairing.

- ★ Unscrew and remove the two upper screws (4).

★ **NOTE** The position of the plate (5) and how it fits with the seat (6) on the support frame on the front part of the fairing for reassembly.

⚠ CAUTION

Handle the plastic and painted components with care and avoid scraping or damaging them.
Be very careful not to damage the electrical cables.

- Move the front part of the fairing (7) slightly forward.
- Lift the rubber boot (8).
- Disconnect the headlight electric connector (9).

⚠ WARNING

Upon reassembly, make sure that the electric connector (9) is correctly coupled.

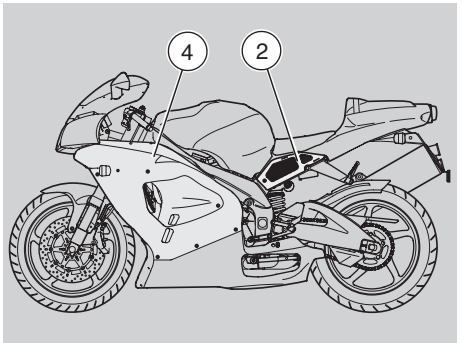
- Remove the front part of the fairing (7) completely, together with the headlight and the rear-view mirrors.

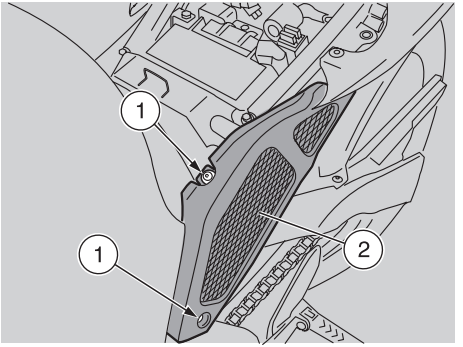
⚠ CAUTION

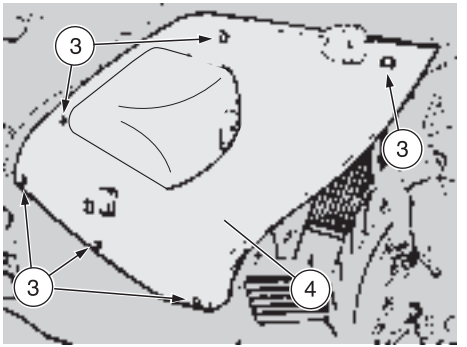
Upon reassembly, tighten the screws only moderately. Be careful not to over tighten the screws, this will damage the surrounding plastic and painted components.

After reassembly:

- Correctly adjust the reflecting surface of the rear view mirrors.







REMOVING THE SIDE COVERS

Carefully read p. 84 (MAINTENANCE).

⚠ WARNING

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.

- Remove the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).
- Unscrew and remove the two screws (1).

⚠ CAUTION

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

- Remove the side cover (2).

NOTE Upon reassembly, make sure that the rear coupling is positioned correctly.

Repeat these operations to remove the other side cover.

⚠ CAUTION

Upon reassembly, tighten the screws only moderately. Be careful not to over tighten the screws, this will damage the surrounding plastic and painted components.

REMOVING THE SIDE FAIRINGS

Carefully read p. 84 (MAINTENANCE).

⚠ WARNING

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.

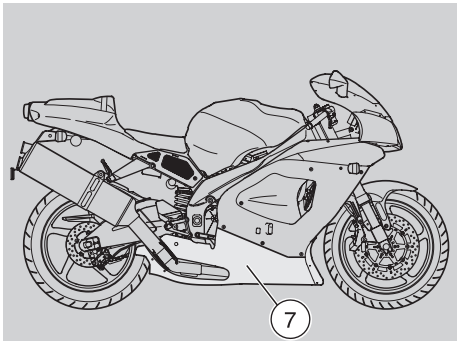
- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Loosen the six quick turn screws (3) 1/4 turn counterclockwise.

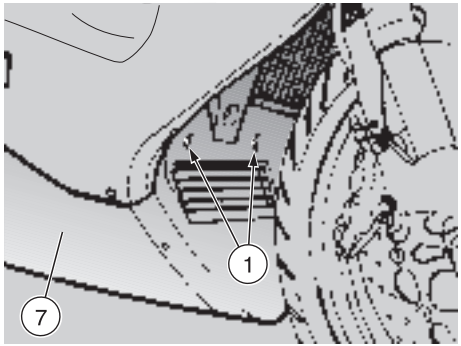
⚠ CAUTION

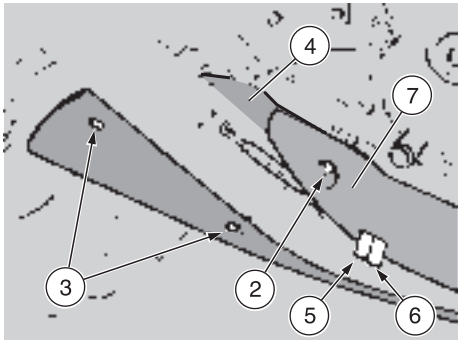
Handle the plastic and painted components with care and avoid scraping or damaging them.

- Remove the side fairing (4).

NOTE Repeat these operations to remove the other side fairing.







REMOVING THE LOWER FAIRING

Carefully read p. 84 (MAINTENANCE).

NOTE To remove the lower fairing, it is necessary to use the appropriate rear support stand OPT.

- Place the vehicle on the appropriate rear support stand, see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Remove the two side fairings, see p. 118 (REMOVING THE SIDE FAIRINGS).

⚠ WARNING

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.

- Unscrew and remove the two front screws (1).
- ★ Unscrew and remove the rear screw (2).
- Unscrew and remove the two screws (3) of the rear right profile (4) (inside the exhaust silencer).

⚠ CAUTION

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

- Extend the side stand.

NOTE The line (6) is not used with the "California evaporative emission system".

- Withdraw the two lines (5) and (6) from the hole provided on the fairing.
- Remove the entire lower fairing (7) by lowering it and with small movements try to find the best position to withdraw it from the side stand.

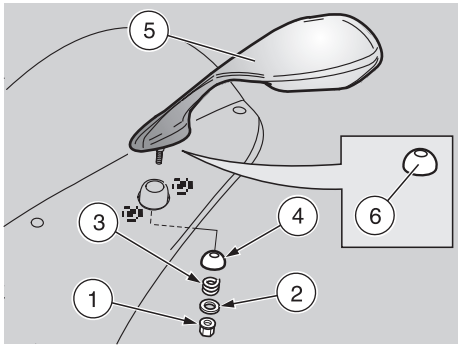
NOTE Upon reassembly, pass the two lines (5) and (6) through the hole provided in the fairing.

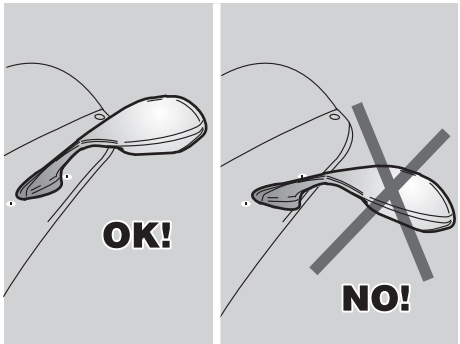
- Remove the right rear profile (4).

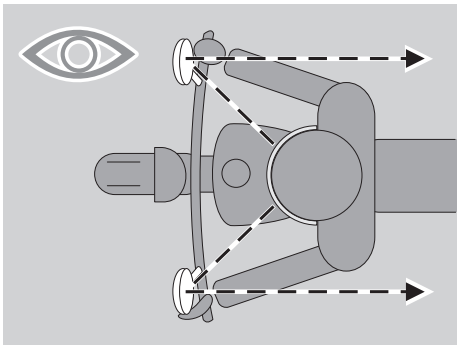
NOTE Upon reassembly, the upper part of the profile (4) must be fitted between the lower fairing (7) and the support plate.

⚠ CAUTION

Upon reassembly, tighten the screws only moderately. Be careful not to over tighten the screws, this will damage the surrounding plastic and painted components.







REMOVING THE REAR-VIEW MIRRORS

Carefully read p. 84 (MAINTENANCE).

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Unscrew and remove the nut (1), remove the washer (2), the spring (3) and the half sphere (4).

⚠ CAUTION

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

- Remove the rear-view mirror (5).
- If it has fallen from its seat, retrieve the cup (6).

NOTE Repeat these operations to remove the other rear-view mirror.

⚠ WARNING

After reassembly, correctly adjust the rear-view mirrors and tighten the nuts in such a way that the mirrors are secure. Failure to heed this warning can prevent you from seeing danger approaching from behind and lead to a serious accident.

After reassembly:

- Correctly adjust the reflecting surface of the rear view mirrors.

REMOVING THE FRONT BRAKE CALIPERS RSV

⚠ WARNING

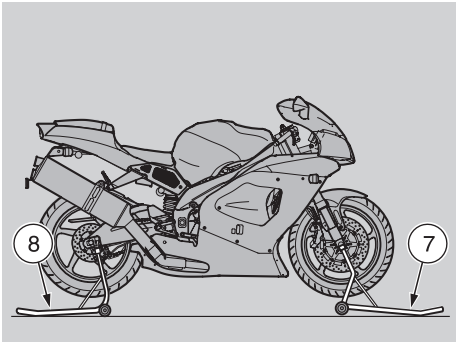
The disassembly and reassembly of the front brake calipers can be difficult for those unfamiliar with vehicle maintenance. You may wish to have your Local aprilia Dealer carry out these operations.

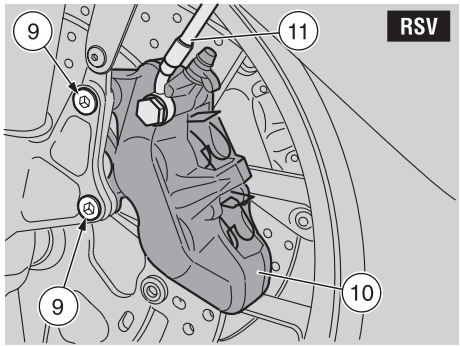
If you wish to perform these operations yourself, carefully read p. 84 (MAINTENANCE).

The front brake system is equipped with two separate calipers, one on the left and one on the right side of the vehicle.

The following information may refer to only one brake caliper but is applicable to both.

While disassembling and reassembling the front brake calipers, pay extra care not to damage the brake lines, discs or pads.





⚠ WARNING

Make sure that the vehicle is stable. If it falls over, it may cause damage to bystanders and other property, as well as being damaged itself.

- Rotate the wheel manually, so that the space between two spokes of the rims lines up with the brake caliper.
- Have a helper steady the handlebar in the straight ahead position.

Brake caliper screw (9) tightening torque: 36.16 ftlb (50 Nm).

- ✱ Remove the two screws (9) that fasten the front brake caliper (10).

⚠ CAUTION

Never touch the front brake lever after removing the brake caliper from the disc. If you do, the calipers pistons may be pushed out of their seats, and brake fluid will be spilled. Should you accidentally do this, take your vehicle to your Local aprilia Dealer who will know how to repair this damage.

- ✱ Remove the brake caliper (10) from the disc, leaving it attached to its line (11).

Operate on the second brake caliper:

- Repeat the operations marked with ✱.

REASSEMBLY

⚠ WARNING

Keep your fingers clear, do not allow them to become crushed between the wheel, the caliper or the fork. Do not attempt to align the holes in the caliper using your fingers. Failure to obey this warning can cause serious injury.

- ✖ Insert the brake caliper (10) over the disc and place it so that its fastening holes and the holes on the support are aligned.

⚠ WARNING

When reassembling the brake caliper, replace the caliper screws (9) with two new screws of the same type.

- ✖ Tighten the two screws (9) to the appropriate torque.

Brake caliper screw (9) tightening torque: 36.16 ftlb (50 Nm).

Operate on the second brake caliper:

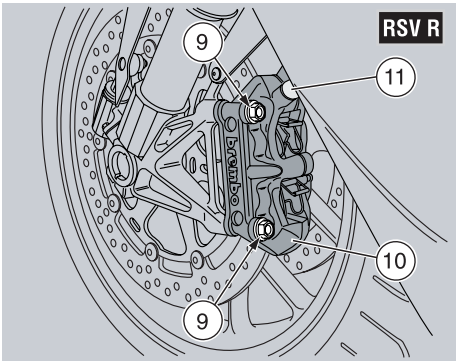
- Repeat the operations marked with ✖.
- Remove the front support stand OPT (7), see p. 107 (PLACING THE VEHICLE ON THE FRONT SUPPORT STAND OPT).

⚠ WARNING

After servicing the brakes, always check them for function. If the stroke of the lever or pedal is excessive, or if you detect that the effectiveness of the brakes is reduced in any way, have your vehicle serviced by your Local aprilia Dealer. It may be necessary to have your dealer bleed the system, or there may

be some other problem with the brake system.

Never ride your vehicle in traffic immediately after servicing the brakes. Always apply the brake pedal or lever several times before riding your vehicle. Then, try your vehicle in a parking lot or other safe area with little traffic to ensure that the brakes are working properly. Failure to observe this warning can lead to a serious accident with subsequent serious injury or death.



REMOVING THE FRONT BRAKE CALIPERS RSV R

⚠ WARNING

The disassembly and reassembly of the front brake calipers can be difficult for those unfamiliar with vehicle maintenance. You may wish to have your Local aprilia Dealer carry out these operations.

If you wish to perform these operations yourself, carefully read p. 84 (MAINTENANCE).

The front brake system is equipped with two separate calipers, one on the left and one on the right side of the vehicle.

The following information may refer to only one brake caliper but is applicable to both.

While disassembling and reassembling the front brake calipers, pay extra care not to damage the brake lines, discs or pads.

NOTE You must use the appropriate front OPT and rear OPT support stands (7) (8) to remove the front brake calipers.

DISASSEMBLY

◆ Place the vehicle on the appropriate front support stand OPT, see p. 107 (PLACING THE VEHICLE ON THE FRONT SUPPORT STAND OPT).

⚠ WARNING

Make sure that the vehicle is stable. If it falls over, it may cause damage to bystanders and other property, as well as being damaged itself.

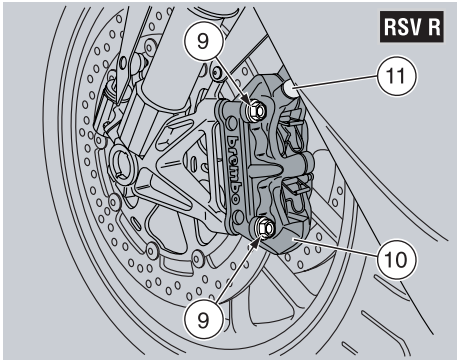
◆ Rotate the wheel manually, so that the space between two spokes of the rims lines up with the brake caliper.
◆ Have a helper steady the handlebar in the straight ahead position.

Brake caliper screw (9) tightening torque: 36.16 ftlb (50 Nm).

◆ ∗ Remove the two screws (9) that fasten the front brake caliper (10).

⚠ CAUTION

Never touch the front brake lever after removing the brake caliper from the disc. If you do, the calipers pistons may be pushed out of their seats, and brake fluid will be spilled. Should you accidentally do this, take your vehicle to your Local aprilia Dealer who will know



how to repair this damage.

◆ ✱ Remove the brake caliper (10) from the disc, leaving it attached to its line (11).

Operate on the second brake caliper:

◆ Repeat the operations marked with ✱.

REASSEMBLY

⚠ WARNING

Keep your fingers clear, do not allow them to become crushed between the wheel, the caliper or the fork. Do not attempt to align the holes in the caliper using your fingers. Failure to obey this warning can cause serious injury.

◆ ✖ Insert the brake caliper (10) over the disc and place it so that its fastening holes and the holes on the support are aligned.

⚠ WARNING

When reassembling the brake caliper, replace the caliper screws (9) with two new screws of the same type.

◆ ✖ Screw in the two bolts (9) by hand until they rest on the caliper.
◆ ✖ Pull the brake lever to properly position the caliper on the disc.
◆ ✖ Keep brake lever pulled and tighten the 2 bolts (9) to the specified torque.

Brake caliper screw (9) tightening torque: 36.16 ftlb (50 Nm).

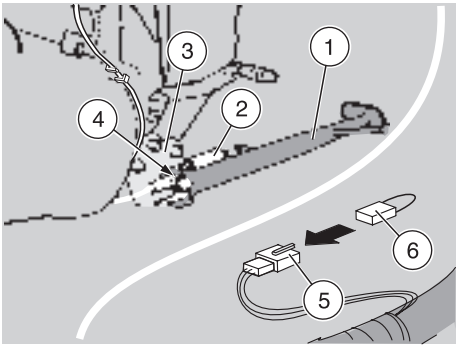
Operate on the second brake caliper:

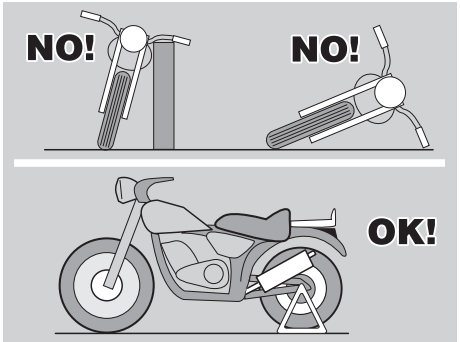
◆ Repeat the operations marked with ✖.
◆ Remove the front support stand OPT (7), see p. 107 (PLACING THE VEHICLE ON THE FRONT SUPPORT STAND OPT).

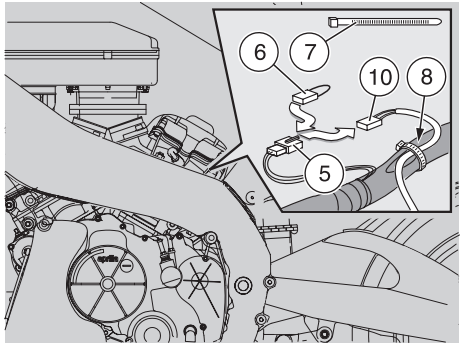
⚠ WARNING

After servicing the brakes, always check them for function. If the stroke of the lever or pedal is excessive, or if you detect that the effectiveness of the brakes is reduced in any way, have your vehicle serviced by your Local aprilia Dealer. It may be necessary to have your dealer bleed the system, or there may be some other problem with the brake system.

Never ride your vehicle in traffic immediately after servicing the brakes. Always apply the brake pedal or lever several times before riding your vehicle. Then, try your vehicle in a parking lot or other safe area with little traffic to ensure that the brakes are working properly. Failure to observe this warning can lead to a serious accident with subsequent serious injury or death.







REMOVING THE SIDE STAND

Carefully read p. 84 (MAINTENANCE).

It is advisable to remove the side stand if the vehicle is to be used for competition. When removing the side stand, you must remove the stand (1) complete with:

– springs (2);
– support (3);
– safety switch (4).

⚠ WARNING

Failure to remove the side stand before using your vehicle in competition can result in reduced cornering clearance. This could lead to a serious crash with subsequent serious injury or even death.

NOTE Removing the safety switch (4) disconnects the electrical circuit, and your vehicle's engine will not run with the transmission in gear. You must restore the circuit function by connecting the wiring device (6) (**aprilia** part # 8124943), which is available at your Local **aprilia** Dealer, to the connector (5).

⚠ CAUTION

Never lean the vehicle against walls or lay it on the ground. This could lead to the vehicle falling over, causing damage to the vehicle and injury to yourself or any other bystanders.

To park the vehicle without the stand only the rear support stand OPT may be used.

⚠ WARNING

Never disconnect or remove the safety switch (4) without also removing the stand. Disconnecting or removing the safety switch (4) only makes it possible to start the vehicle and ride off with extended stand which may result in upset, and serious injuries or even death to the rider or bystanders, and damage to the vehicle.

To remove the side stand:

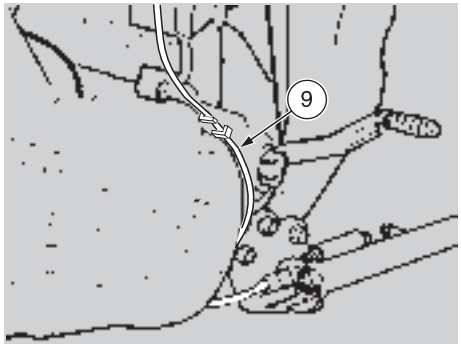
- Remove the left side cover, see p. 118 (REMOVING THE SIDE COVERS).
- Remove the lower fairing, see p. 119 (REMOVING THE LOWER FAIRING).
- Lift the fuel tank, see p. 116 (LIFTING THE FUEL TANK).

NOTE Obtain a tie-wrap (7) to use for reassembly.

⚠ CAUTION

Do not force cables, tubes, lines, connectors and wires.

- Cut the tie-wrap (8) and release the cable (9).
- Disconnect the electric connector (10) from the connector (5).

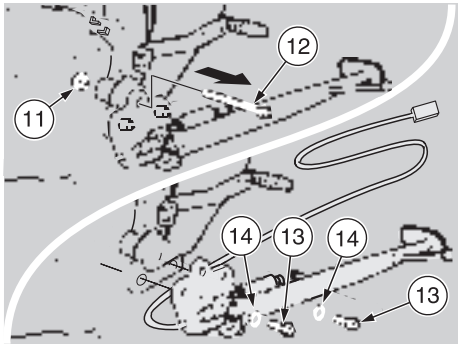


- Connect the wiring device (6) (**aprilia** part # 8124943) [replacing the electric connector (10)].
- Withdraw the cable (9) completely.
- Replace the fuel tank, see p. 116 (LIFTING THE FUEL TANK).
- Replace the left side cover, see p. 118 (REMOVING THE SIDE COVERS).
- Prevent the nut (11) from rotating with a wrench and remove the screw (12) using the appropriate socket.

Screw (12) tightening torque: 7.23 ftlb (10 Nm).

NOTE Support the stand, in order to prevent it from accidentally falling down.

Screw (13) tightening torque: 28.92 ftlb (40 Nm).



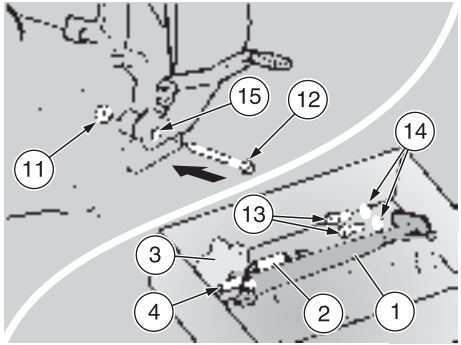
- Remove the screws (13) and retrieve the washers (14).
- Remove the stand (1) complete with:
  - springs (2);
  - support (3);
  - safety switch (4).

⚠ WARNING

The screw (12) and the nut (11) fasten the engine to the frame. Failure to replace them can cause serious mechanical difficulties with a subsequent serious accident, injury or even death.

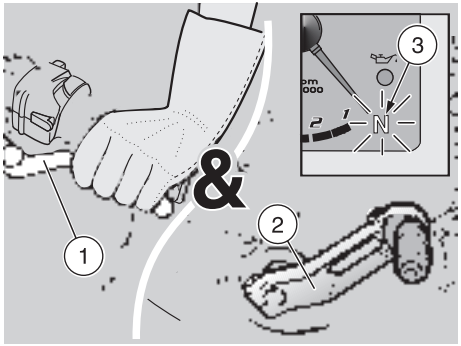
- Insert the screw (12) into the hole (15), tighten the nut (11) finger tight only.
- Keep the nut (11) from turning with a wrench and tighten the screw (12) with an appropriate wrench.

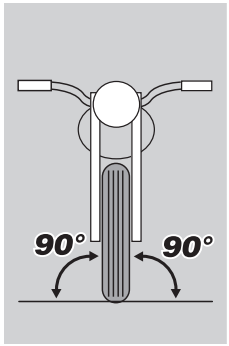
Screw (12) tightening torque: 7.23 ftlb (10 Nm).

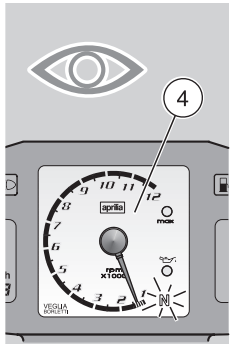


NOTE Store the removed components together: complete stand, screws (13) and washers (14), in order to be able to reinstall them correctly when you return your vehicle to road use.

- Replace the lower fairing (and the two side fairings), see p. 119 (REMOVING THE LOWER FAIRING).







IDLE ADJUSTMENT

Carefully read p. 84 (MAINTENANCE).

If the idle becomes irregular, too fast, or too slow, it must be adjusted.

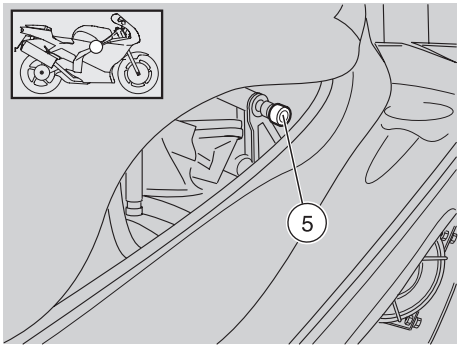
To adjust the idle:

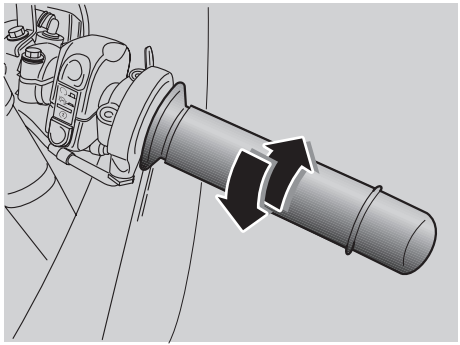
⚠ WARNING

Exhaust gases contain carbon monoxide, which is extremely poisonous if inhaled.
Do not start the engine in closed or badly-ventilated rooms.
Failure to observe this warning may cause loss of consciousness or even lead to death by asphyxia.

- Ride for a few miles until the engine reaches normal running temperature, see p. 15 (Coolant temperature indicator "🌡").
- Pull in the clutch lever (1) completely and put the shift lever (2) in neutral so that the green "N" light (3) is on.
- Keep the vehicle vertical, with both wheels resting on the ground.
- Observe the tachometer (4).

The engine must idle 1,250 ± 100 rpm, CO 1% [+ 1% – 0.5% (total range from 0.5% to 2%)].





If it does not:

◆ Adjust the knob (5) positioned on the right side of the vehicle.

Rotate the knob clockwise to increase engine rpm.

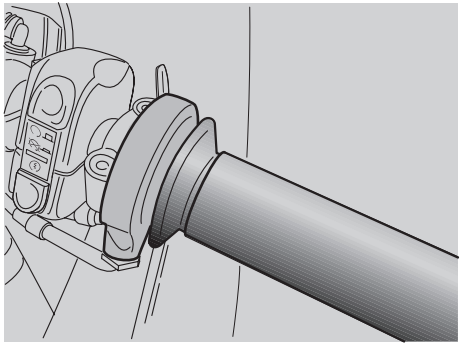
Rotate the knob counterclockwise to decrease the engine rpm.

◆ Accelerate and decelerate the engine a few times to make sure, when the throttle returns to idle, that the engine idle speed is still correct.

NOTE If necessary, contact your Local **aprilia** Dealer.

⚠ WARNING

After you have adjusted the idle, rotate the handlebars full left and full right with the engine idling. Check to ensure that the idle speed is not affected by this. Also check that the throttle smoothly and fully closes when released.



ADJUSTING THE THROTTLE CONTROL

Carefully read p. 84 (MAINTENANCE).

This vehicle is equipped with two throttle cables.

The following information may refer to just one throttle cable but should be observed with regard to both throttle cables.

⚠ WARNING

If the throttle sticks open, it may cause a collision with another vehicle, or an upset.

If the throttle sticks, kill the engine with the engine stop switch located on the right handlebar.
Do not attempt to restart the engine until the throttle has been repaired and works perfectly. Failure to obey this warning can lead to a runaway with seriously injuries or even death.

If any fastener in the throttle system becomes loose, likewise you will lose control of your vehicle.

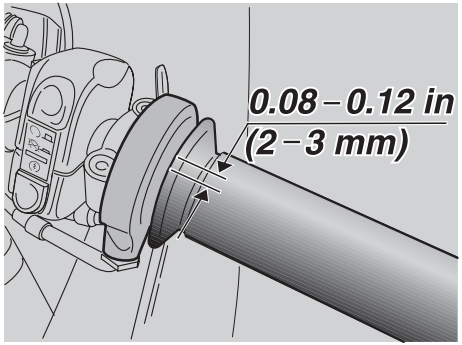
Either situation can lead to an upset or collision with subsequent serious injury or death.

Your vehicle is equipped with a double cable throttle. One cable opens the throttle when you rotate the throttle grip toward you; the other closes the throttle when you rotate the grip away from you. It is essential, when you release the throttle grip, that it automatically return to the idle position.

This double cable arrangement enhances safety by providing for positive closing of the throttle.

⚠ WARNING

In the event of a throttle sticking emergency, always kill the engine using the engine stop switch located near the throttle grip on the right handlebar. Never use your vehicle if the throttle does not automatically fully return to the idle position when the throttle grip is released. Contact your Local aprilia Dealer for repairs. Failure to heed this warning can lead to a serious accident and subsequent injury or even death.

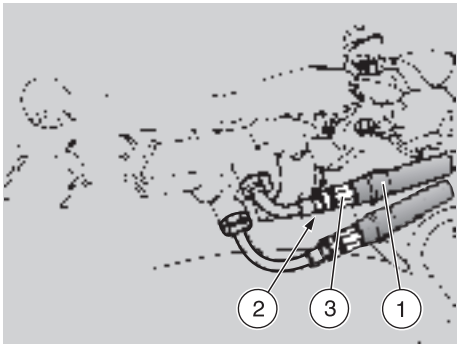


⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

Have your Local aprilia Dealer check the throttle cables after the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km).

The play of the throttle cable must be between **0.08 – 0.12 in (2 – 3 mm)**, measured at the edge of the grip, see the illustration above.



To adjust the cable:

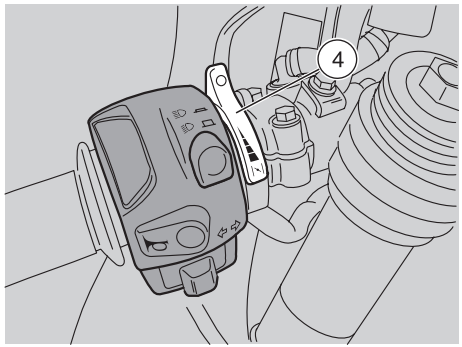
- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Pull back the rubber boot (1).
- Loosen the lock nut (2).
- Rotate the adjuster (3) so as to obtain the proper play.
- After the adjustment, tighten the lock nut (2) and check the play again.
- Replace the rubber boot (1).
- Repeat the adjustment for the second cable.

⚠ WARNING

Exhaust gases contain carbon monoxide, which is extremely poisonous if inhaled.
Do not start the engine in closed or badly-ventilated rooms.
Failure to observe this warning may cause loss of consciousness or even lead to death by asphyxia.

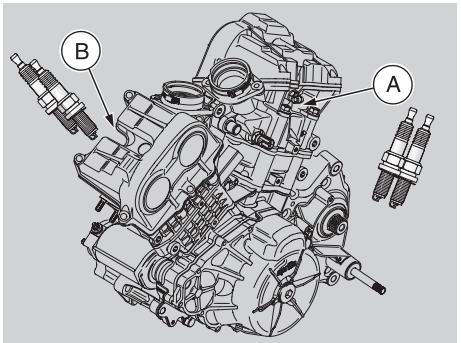
⚠ WARNING

After you have adjusted the throttle, rotate the handlebars full left and full right with the engine idling. Check to ensure that the idle speed is not affected by this. Also check that the throttle smoothly and fully closes when released.



ADJUSTING THE COLD START (CHOKE) CONTROL (⌇)

The operations necessary to adjust the cold start control "⌇" (4) require specific skills and therefore should be carried out by your Local aprilia Dealer.



SPARK PLUGS

Carefully read p. 84 (MAINTENANCE).

⚠ CAUTION

Perform these maintenance operations at one-half of the specified intervals, if your vehicle is often used in rainy or very dusty conditions, on unpaved roads, or in any kind of competition.

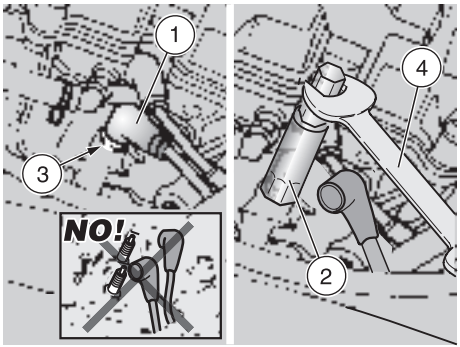
⚠ CAUTION

You must clean and/or renew, one by one, all four spark plugs.

Clean the spark plugs every 4,650 mi (7,500 km); renew them every 9,350 mi (15,000 km).

If you use your vehicle for competition, change the spark plugs every 2,300 mi (3,750 km).

Periodically remove the spark plugs and clean them carefully, removing carbon deposits; renew them if necessary.



The frequency with which this operation must be carried out will vary with the use of the vehicle. However, spark plugs must be cleaned and renewed no less often than described above.

⚠ CAUTION

Even if only one spark plug needs replacing, always renew all of them.

TO GAIN ACCESS TO THE SPARK PLUG

⚠ WARNING

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.

◆ Lift the fuel tank, see p. 116 (LIFTING THE FUEL TANK).

NOTE Your vehicle is equipped with two spark plugs per cylinder (A) (B).
The following operations refers to the two spark plugs installed in one cylinder only, but is valid for the plugs of both cylinders.

⚠ CAUTION

Carry out all the operations indicated on the first spark plug and then repeat them on the second spark plug of the same cylinder.

TO REMOVE THE SPARK PLUG

⚠ CAUTION

Never disconnect the spark plug cap with the engine running, since you may get an electric shock from the ignition system.

Do not reverse the position of the two spark plug caps.

Do not remove the two spark plug caps at the same time.

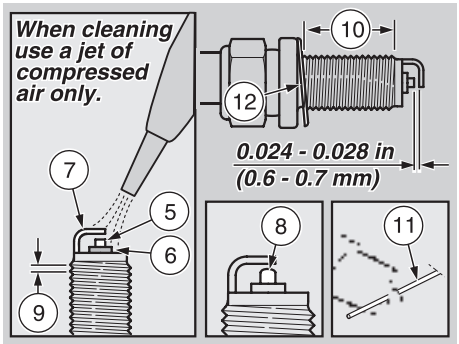
◆ Remove the spark plug cap (1).

⚠ WARNING

During this operation, always wear goggles which provide your eyes with 360° protection. Be very careful using compressed air jets, they can cause serious personal injury if directed towards your body.

◆ Using compressed air, blow all the dirt away from the base of the spark plug.

NOTE Use the special wrenches from the tool kit, see p. 52 (GLOVE/TOOL KIT COMPARTMENT).



- Place the special spark plug socket wrench (2) completely over the spark plug (3).
- Place the 11–13 mm open-end wrench (4) over the hexagonal seat of the special spark plug wrench (2).

⚠ CAUTION

Make sure that no dirt falls into the cylinder through the spark plug hole.

- Unscrew the spark plug and extract it from its seat.

TO CHECK AND CLEAN THE SPARK PLUG

⚠ CAUTION

This vehicle is fitted with spark plugs featuring platinum-type electrodes.
When cleaning, do not use wire brushes and/or abrasive products. Use a jet of compressed air only.

Key:
5) center electrode;
6) ceramic nose;
7) side electrode.

Inspect the spark plug, and make sure that there are neither carbon deposits, nor corrosion marks on the electrodes (5) and (7) and on the ceramic nose (6); if necessary, clean them with a jet of compressed air.

If the spark plug ceramic nose is cracked, or if the electrodes are corroded, or there are excessive deposits on the electrodes of the nose, or the tip (8) of the central electrode (5) is rounded, the spark plug must be renewed.

⚠ CAUTION

When replacing a spark plug, always check the pitch (9) and length (10) of the thread.

The use of a spark plug with too short a threaded portion will result in carbon deposits building up on the internal thread of the head. This can result in damage to the engine when the appropriate spark plug is installed.

The use of the spark plug with too long a threaded portion can cause the plug to strike the piston, with consequent irreparable damage.

Use only the recommended spark plug type, see p. 148 (TECHNICAL DATA). Failure to observe this caution will result in reduction in the service life and performance of the engine.
Use a round wire feeler gauge (11) to check the spark plug gap, in order to avoid damaging the platinum coating.

- Using a round wire feeler gauge (11), check the spark plug gap.

⚠ CAUTION

Do not try to adjust the spark plug gap in any way.

The gap must be **0.024 – 0.028 in (0.6 – 0.7 mm)**, otherwise it is necessary to renew the spark plug.

- Make sure the gasket (12) is in good condition.

TO INSTALL THE SPARK PLUG

- With the gasket (12) in place, screw the spark plug into the head finger tight.
- Tighten the spark plug with the special spark plug wrench, approximately one-half turn after it first snugly contacts the cylinder head.

Spark plug tightening torque:
14.47 ftlb (20 Nm).

⚠ CAUTION

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

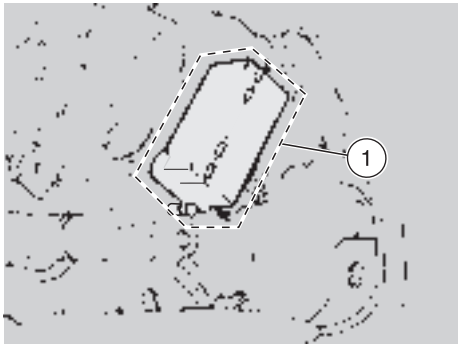
⚠ CAUTION

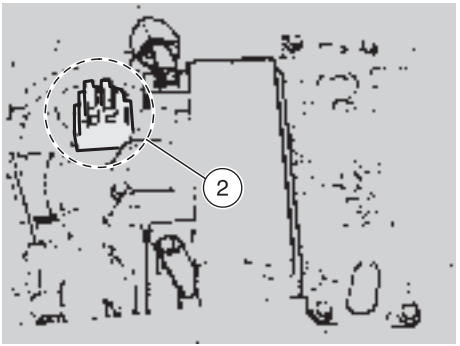
Do not mix up the spark plug caps (1) position.

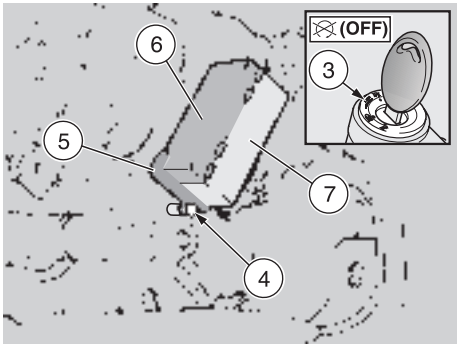
- Install the spark plug cap (1) properly, so that it does not come off due to the vibrations of the engine.

NOTE Repeat the operations described to remove, check and clean the other (second) spark plug of the same cylinder and the other two spark plugs of the second cylinder.

- Replace the fuel tank, see p. 116 (LIFTING THE FUEL TANK).







CHANGING FUSES

Carefully read p. 84 (MAINTENANCE).

⚠ WARNING

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

⚠ CAUTION

Do not repair faulty fuses.
Use only recommended fuses.
Using fuses of an improper capacity can cause damage to the electrical system or an electrical fire, which could result in total destruction of your vehicle as well as injury to you.

NOTE If a fuse blows frequently, there probably is a short circuit or an overload in the electrical system. If this occurs, take the vehicle to your Local **aprilia** 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.

Your vehicle is equipped with two group of fuses:

– the 15A secondary fuses group (1) placed on the right side of the fairing, see p. 132 (15A SECONDARY FUSES CIRCUIT);
– the 30A main fuses group (2) placed under the rider saddle, see p. 133 (30A MAIN FUSES CIRCUIT).

NOTE Check the fuses in the order:
– first the fuses of the 15A secondary fuses group (1);
– second the fuses of the 30A main fuses group (2).

To check the fuses of the secondary fuses group (1):

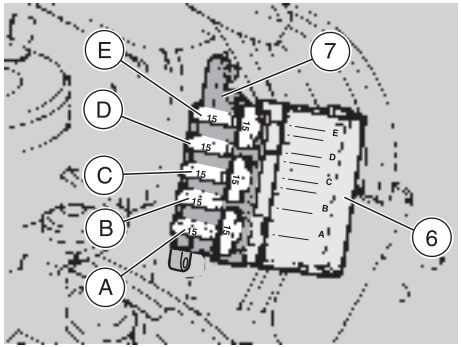
◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
◆ Turn the ignition switch (3) in the "⊠" (OFF) position.

NOTE Working from the right side of the fairing:

◆ Unscrew and remove the screw (4).
◆ Remove the safety clip (5).
◆ Open the cover (6) of the box (7) containing the secondary fuses group (1).

15A SECONDARY FUSES CIRCUIT

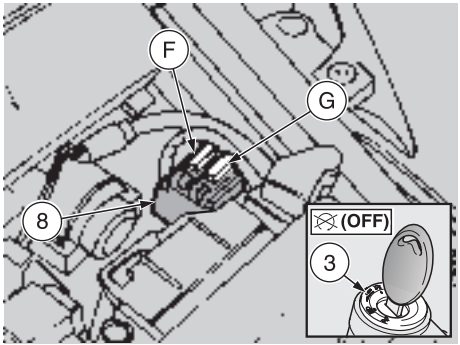
A) From voltage regulator to:
high beam relay, low beam relay.
B) From voltage regulator to:
coils, engine stop relay, fuel pump.
C) From ignition switch to:
electric fans, clock.



D) From ignition switch to:
parking lights, rear stoplights, horn, dashboard lights, direction indicators.

E) From ignition switch to:
electronic unit, fuel pump relay, engine stop relay.

NOTE Three fuses are spare fuses.



To check the fuses of the main fuses group (2):

- Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
- Turn the ignition switch (3) in the "⊗" (OFF) position.
- Remove the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).
- The fuse carrier (8) contains the main fuses group (2).

30A MAIN FUSES CIRCUIT

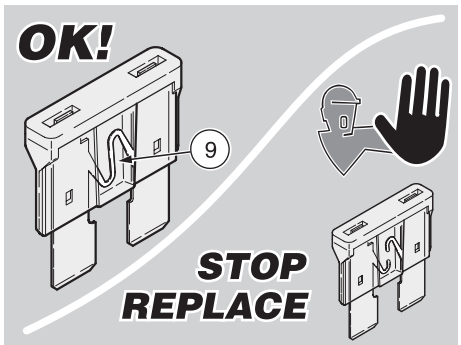
F) From battery to: ignition.

G) From battery to: ignition.

NOTE One fuse is a spare fuse.

⚠ CAUTION

Extract the fuses one by one, in such a way as to avoid replacing them incorrectly during reassembly.



NOTE If you remove one of the 30A fuses, this will set the digital clock and the red line setting to zero. To reset these functions, see p. 40 (MULTIFUNCTION COMPUTER).

- Remove, one by one, the fuse and inspect the filament (9). If it is open, the fuse must be replaced.
- Replace the blown fuse with the appropriate spare fuse or with a new fuse having the same amperage rating.

⚠ WARNING

If you replace the fuse and it blows again immediately, there is a serious problem with the electrical system of your vehicle. Do not attempt to continue using your vehicle. Take it to your Local aprilia Dealer for repair and service.

NOTE If you use the spare fuse, replace it as soon as convenient.

BATTERY

Carefully read p. 84 (MAINTENANCE).

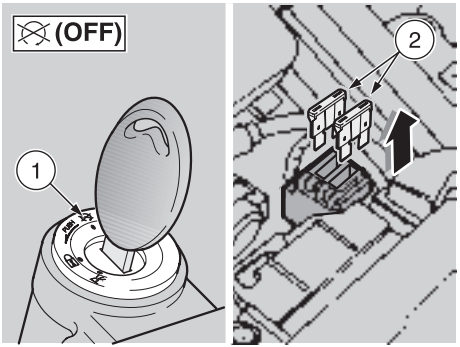
Your vehicle is equipped with a sealed maintenance free battery. Except for the tightness of the terminals, and required recharging, this battery does not require any other maintenance.

Check the tightness of the terminals after the first 600 mi (1,000 km) and thereafter every 4,650 mi (7,500 km) or 12 months.

⚠ WARNING

Batteries, when charged, give off hydrogen gas, which is highly explosive. Therefore, do not smoke while working on or around the battery, and keep open flames or sparks away from the battery. Keep gasoline and other flammable substances well away from the battery, since a battery spark could easily ignite them and cause a devastating fire.

Since the battery gives off explosive hydrogen gas, especially when it is being charged, when you are charging a battery, make sure that the room is properly ventilated. Do not inhale the gases released during charging. Do not permit any open flames, sparks or cigarettes or any other source of heat anywhere near the battery while it is charging.



⚠ CAUTION

Never switch the battery cables. Observe the proper polarity of the battery. Incorrectly attaching the battery to your vehicle will irreparably destroy the electrical system of your vehicle.

Connect and disconnect the battery only with the ignition switch (1) in the "⊗" (OFF) position.

First connect the positive cable red (+), then the negative (–).

Disconnect the negative cable (–) first, then the positive red (+).

If your battery needs to be charged, use a constant voltage, or "taper" charger, with a current rating no greater than 1/10th the capacity of the battery (i.e., for a 50 amp hour battery, the maximum charging current should be 5 amps). Use of a more powerful charger can not only damage the battery irreparably, but could cause it to overheat and explode.

BATTERY STORAGE

⚠ CAUTION

If this vehicle is not used for more than twenty days, remove the 30A fuses (2), see p. 132 (CHANGING FUSES). This will prevent the discharge of the battery caused by the slight current consumption of the multifunction computer.

NOTE The removal of the 30A fuses will cause the digital clock and the red line setting to go to zero. To reset these functions, see p. 40 (MULTIFUNCTION COMPUTER).

Carefully read p. 134 (BATTERY).

If your vehicle remains unused for more than a couple of weeks, it will be necessary to "trickle charge" the battery, to prevent battery damage, see p. 136 (RECHARGING THE BATTERY).

- Remove the battery, see p. 135 (REMOVING THE BATTERY), and put it in a cool, dry place.
- The best way to prevent battery deterioration is to constantly leave a "trickle" charger with a capacity of about 1/10th amp attached. These chargers are very economically available from your Local **aprilia** Dealer, and will ensure that your battery always remains in tip top condition.
- If this cannot be done, charge the battery for about 30 minutes using a battery charger with a current capacity of no greater than 1/10th the capacity of the battery, see p. 136 (RECHARGING THE BATTERY).

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 normal charge, see p. 136 (RECHARGING THE BATTERY).
- While we recommend removing the battery from the vehicle, if you must leave it in your vehicle, disconnect both battery cables.

CHECKING AND CLEANING THE TERMINALS

Carefully read p. 134 (BATTERY).

- Make sure that the ignition switch (1) is in "⊗" (OFF) position.
- Remove the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).
- Remove the red rubber boot (3).
- Make sure that the cable terminals (4) (5) and the battery terminals (6) (7) are:

– in good conditions (and not corroded or covered with deposits);
– covered with neutral grease or Vaseline.

If it is necessary to clean the battery terminals and the cable terminals:

- Remove the battery, see p. 135 (REMOVING THE BATTERY).
- Brush the cable terminals (4) (5) and the battery terminals (6) (7) with a wire brush to eliminate any sign of corrosion.
- Install the battery, see p. 136 (INSTALLING THE BATTERY).

REMOVING THE BATTERY

Carefully read p. 134 (BATTERY).

NOTE The removal of the battery will cause the digital clock and the red line setting to go to zero. To reset these functions, see p. 40 (MULTIFUNCTION COMPUTER).

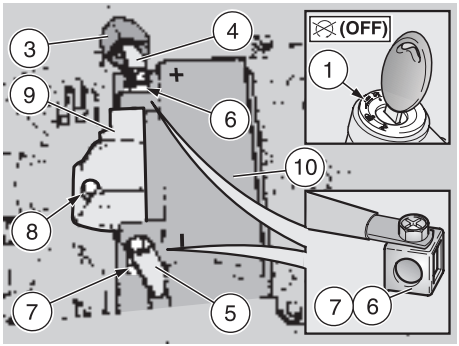
- Make sure that the ignition switch (1) is in "⊗" (OFF) position.
- Remove the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).
- Unscrew and remove the screw (8).
- Remove the battery bracket (9) that locks the battery.
- Remove the red protection rubber boot (3).
- Disconnect first the negative (**–**) cable terminal (5) and then the positive red (**+**) cable terminal (4).
- Remove the battery (10) from its compartment and put it on a flat surface, in a cool and dry place.

⚠ CAUTION

Once it has been removed, store the battery in a safe place and keep it away from children. Even a completely sealed, maintenance free battery can present a danger of injury.

- Replace the battery bracket (9).
- Screw the screw (8).
- Replace the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).

NOTE To reinstalling the battery, see p. 136 (INSTALLING THE BATTERY).



CHECKING THE ELECTROLYTE LEVEL

Carefully read p. 134 (BATTERY).

Your vehicle is equipped with a sealed maintenance free battery that does not require the check of the level battery.

RECHARGING THE BATTERY

Carefully read p. 134 (BATTERY).

⚠ WARNING

This battery is completely sealed. Do not attempt to remove the caps.
There is never any need to add water to this battery. Attempting to remove the caps will destroy the battery and could lead to injury through the spillage of caustic electrolyte. Recharge the battery according to the table below.

◆ Remove the battery, see p. 135 (REMOVING THE BATTERY).

⚠ WARNING

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

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

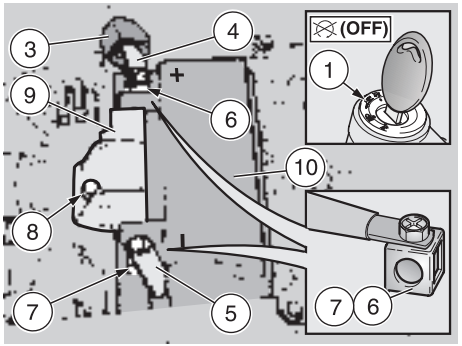
◆ Connect the battery charger to the battery.
◆ Set the charger for the desired type of recharge (see table).
◆ Charge the battery using a battery charger with a current capacity of no greater than 1/10th the capacity of the battery, see p. 148 (TECHNICAL DATA).
◆ Charge at voltage amperage and time stated below.

Tipe of recharge	Voltage (V)	Amperage (A)	Time (hours)
Normal RSV	12	1.2	8 – 10
Quick RSV	12	12	0.5
Normal RSV R	12	1.0	8 – 10
Quick RSV R	12	10	0.5

◆ Switch on the battery charger.

⚠ WARNING

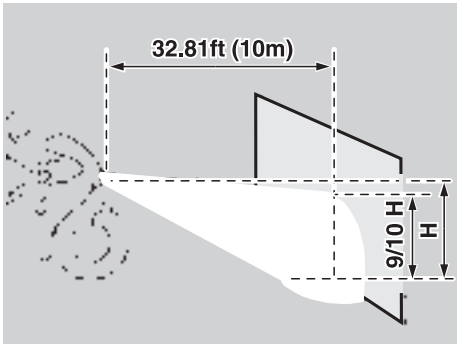
Wait for 5 or 10 minutes after you have finished charging the battery before reinstalling it, the battery continues to produce gas for a short period of time after the charger is removed.

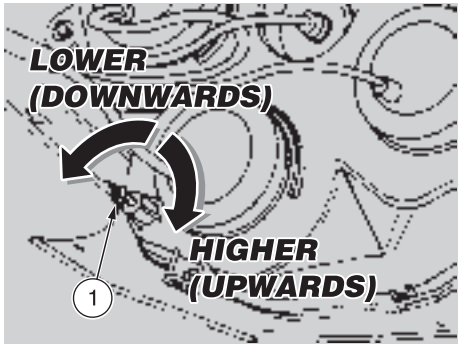


INSTALLING THE BATTERY

Carefully read p. 134 (BATTERY).

◆ Check the charge of the battery, see beside (RECHARGING THE BATTERY).
◆ Make sure that the ignition switch (1) is in the "⊗" (OFF) position.
◆ Remove the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).
◆ Unscrew and remove the screw (8).
◆ Remove the battery bracket (9).
◆ Put the battery (10) in its container.
◆ Replace the battery bracket (9).
◆ Screw and tighten the screw (8).
◆ Connect, in order, the positive red (**+**) cable terminal (4) and negative (**–**) cable terminal (5).
◆ Cover the terminals of the cables and of the battery with neutral grease or Vaseline.
◆ Replace the red rubber boot (3).
◆ Replace the rider saddle, see p. 116 (REMOVING THE RIDER SADDLE).
◆ Reset the digital clock and the red line functions, see p. 40 (MULTIFUNCTION COMPUTER).





ADJUSTING THE HEADLIGHT BEAM VERTICALLY

⚠ WARNING

Do not use the vehicle if the lights are not functioning properly.
Do not use the vehicle if the headlight is adjusted incorrectly. This could temporarily blind oncoming cars, and also reduce the rider's ability to see any obstacle along the road while riding at night.
It is always advisable to reduce speed when riding during the night, in such a way as to have the time necessary to avoid any obstacle and to adapt to the poorer visibility that inevitably results from darkness. Failure to observe this warning can cause you to collide with another object, with consequent risk of serious injury or even death.

NOTE The procedure described here is in compliance with the Italian standard that establishes the maximum height of the headlight beam.
For vehicles used in other countries, you must conform with the local regulations.

To quickly check the correct adjustment of the beam, place the vehicle on flat ground, **32.81 ft (10 m)** away from a wall.

Turn on the low beam, sit on the vehicle and make sure that the beam projected on the wall is slightly under the horizontal line of the headlight (about 9/10th of the total height).

To adjust the headlight beam vertically:

Working from the left underside of the front part of the fairing.

⚠ CAUTION

Do not force the screw beyond its limits.

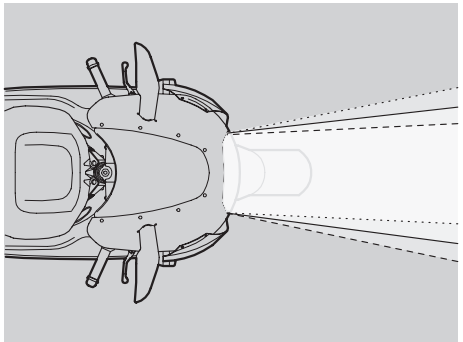
◆ Adjust the screw (1) with a short Philips screwdriver.

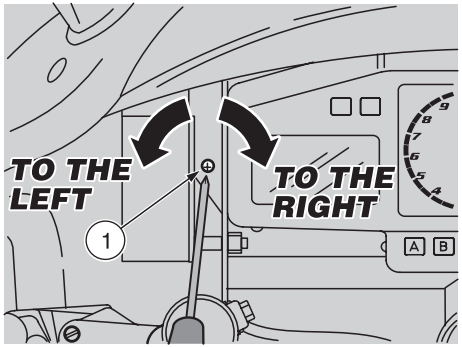
Turn the screw clockwise to adjust the beam higher (upwards).

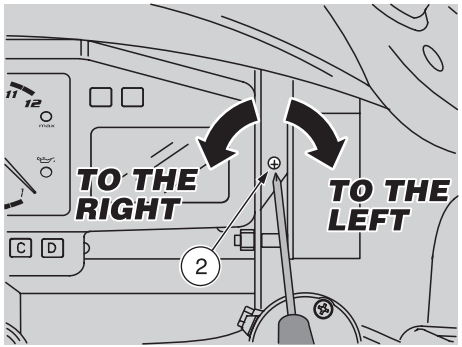
Turn the screw counterclockwise to adjust the beam lower (downwards).

⚠ WARNING

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







ADJUSTING THE HEADLIGHT BEAM HORIZONTALLY

⚠ WARNING

Do not use the vehicle if the lights are not functioning properly.
Do not use the vehicle if the headlight is adjusted incorrectly. This could temporarily blind oncoming cars, and also reduce the rider's ability to see any obstacle along the road while riding at night.
It is always advisable to reduce speed when riding during the night, in such a way as to have the time necessary to avoid any obstacle and to adapt to the poorer visibility that inevitably results from darkness. Failure to observe this warning can cause you to collide with another object, with consequent risk of serious injury or even death.

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

It is possible to adjust the horizontal position both to the right and to the left.

To adjust the headlight beam horizontally your vehicle is equipped with:

– one screw (1) to left side of the dashboard;
– one screw (2) to right side of the dashboard.

NOTE Full adjustment, left and right, of the headlight is obtained only by using both screws. Start the headlamp adjustment using just screw (1), if you run out of adjustment range, further adjustment may be obtained by using screw (2).

⚠ CAUTION

Do not force the screws beyond their limits.

Working from the rearside of the front part of the fairing.

◆ Adjust the screw (or the screws) with a Philips screwdriver.

With the screw (1) to left side of the dashboard:

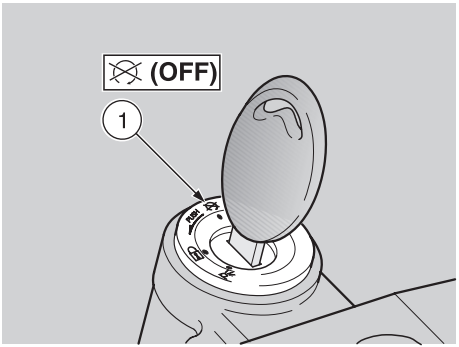
– turn the screw clockwise to adjust the beam to the right;
– turn the screw counterclockwise to adjust the beam to the left.

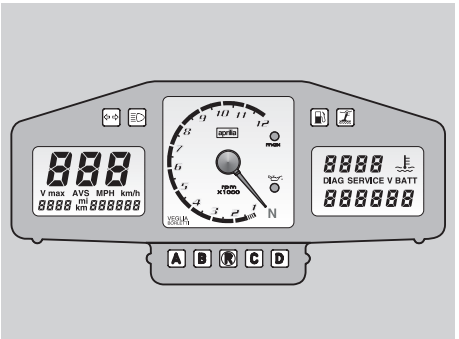
With the screw (2) to right side of the dashboard:

– turn the screw clockwise to adjust the beam to the left;
– turn the screw counterclockwise to adjust the beam to the right.

⚠ WARNING

Make sure that the horizontal adjustment of the headlight beam is correct. Different jurisdictions have different requirements for horizontal headlight aiming. Make sure that you conform with the rules of the jurisdictions in wich your vehicle is being used.





BULBS

Carefully read p. 84 (MAINTENANCE).

⚠ WARNING

Do not use the vehicle if the lights are not functioning properly.
Do not use the vehicle if the headlight is adjusted incorrectly. This could temporarily blind oncoming cars, and also reduce the rider's ability to see any obstacle along the road while riding at night.
It is always advisable to reduce speed when riding during the night, in such a way as to have the time necessary to avoid any obstacle and to adapt to the poorer visibility that inevitably results from darkness. Failure to observe this warning can cause you to collide with another object, with consequent risk of serious injury or even death.

⚠ WARNING

Risk of fire.

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

⚠ CAUTION

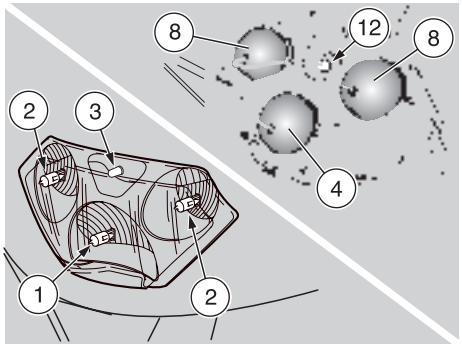
Before changing a bulb, turn the ignition switch (1) to the "⛒" (OFF) position and wait a few minutes so that the bulb cools down.
Change the bulb wearing clean gloves or using a clean and dry cloth.
Do not leave fingerprints on the bulb, since these may cause its overheating and consequent breakage.
If you touch the bulb with your bare fingers, remove any fingerprints with alcohol in order to avoid any damage.

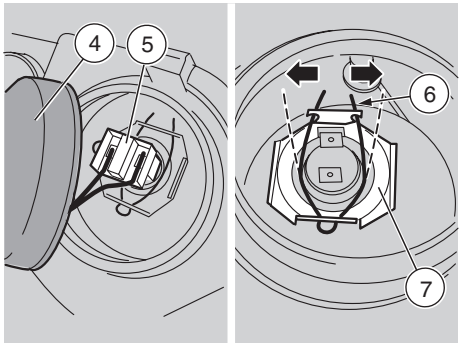
TAKE CARE TO AVOID DAMAGING THE ELECTRIC CABLES.

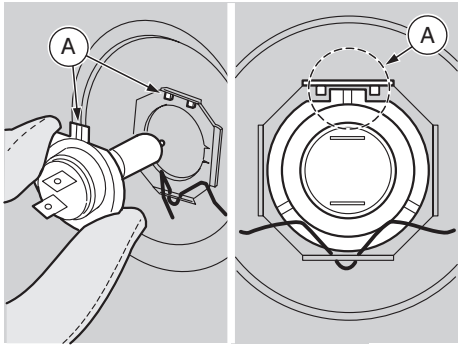
NOTE Before changing a bulb, check the fuses, see p. 132 (CHANGING FUSES).

CHANGING THE DASHBOARD BULBS

In the unlikely event that the dashboard bulbs need changing, please see your Local **aprilia** Dealer. This operation is difficult and delicate, and should be entrusted to your local dealer.







CHANGING THE HEADLIGHT BULBS

Carefully read p. 139 (BULBS).

NOTE Before changing a bulb, check the fuses, see p. 132 (CHANGING FUSES).

The headlight contains:

– one low beam bulb (1) (central lower position).
– two high beam bulbs (2) (one upper right position, one upper left position);
– one parking light bulb (3) (central upper position);

The high and low beam bulbs are identical. If the low beam is burned out and no spare bulb is available, it is possible to substitute the high beam bulb for the low beam bulb.

This should only be done to make it possible to ride a short distance at night to a shop where a new bulb can be obtained or home.

To change the bulbs:

LOW BEAM BULB (CENTRAL LOWER POSITION)

◆ Remove the front part of the fairing completely, see p. 117 (REMOVING THE FRONT PART OF THE FAIRING).

Working from the central underside of the front part of the fairing.

◆ Pull back the rubber boot (4) with your fingers.

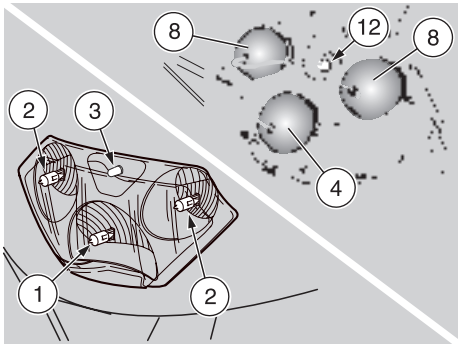
⚠ CAUTION

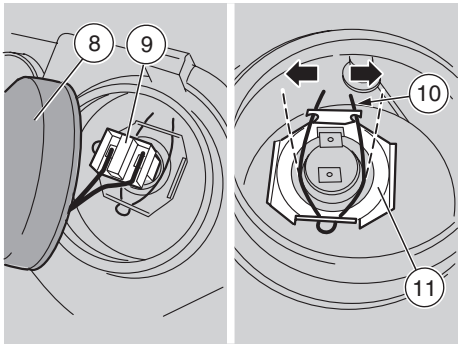
To extract the bulb electric connector, do not pull its electric wires.

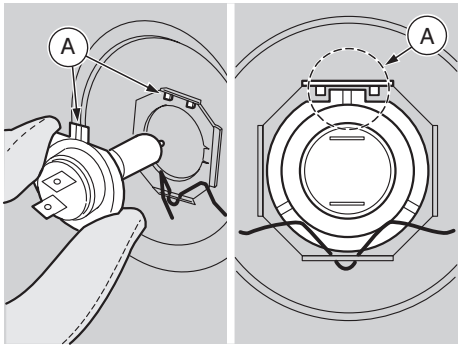
◆ Grasp the bulb electric connector (5), pull it and disconnect it from the bulb (1).
◆ Release the two ends of the clip (6) positioned at the rear of the bulb socket (7).
◆ Remove the bulb (1) from the seat.

NOTE Be sure to maintain the same orientation as the old bulb when you install the new bulb. Do not try to force the bulb, it will go easily if it is properly oriented.

◆ Correctly install the new bulb into its socket (7), ensuring that the tabs (A) are correctly positioned.
◆ Replace the two ends of the clip (6) in them seat.
◆ Connect the bulb electric connector (5).
◆ Replace the rubber boot (4) with the cable passage downwards.
◆ Replace the front part of the fairing completely, see p. 117 (REMOVING THE FRONT PART OF THE FAIRING).







HIGH BEAM BULB (ONE UPPER RIGHT POSITION, ONE UPPER LEFT POSITION)

NOTE Remove the bulb electric connectors one by one in such a way as to avoid replacing them incorrectly during reassembly.

If the bulb electric connectors must all be removed at the same time, mark the bulb electric connectors and take great care to reassemble them in the proper position.

◆ Remove the front part of the fairing completely, see p. 117 (REMOVING THE FRONT PART OF THE FAIRING).

For the right high beam bulb only:

Working from the right side of the rear part of the fairing.

For the left high beam bulb only:

Working from the left side of the rear part of the fairing.

◆ Pull back the rubber boot (8) with your fingers.

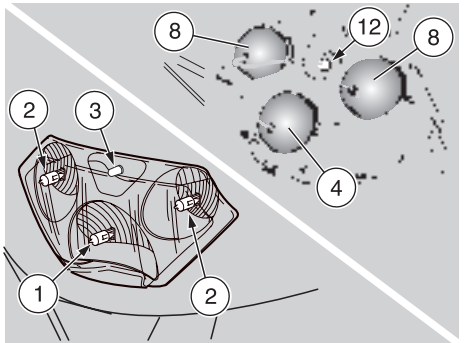
⚠ CAUTION

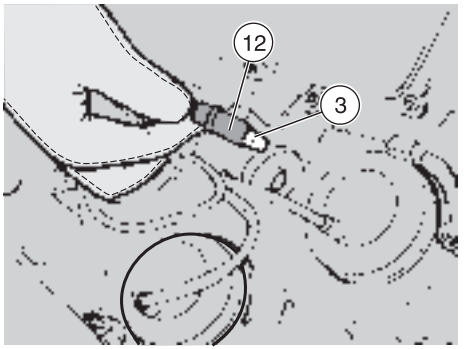
To extract the bulb electric connector, do not pull its electric wires.

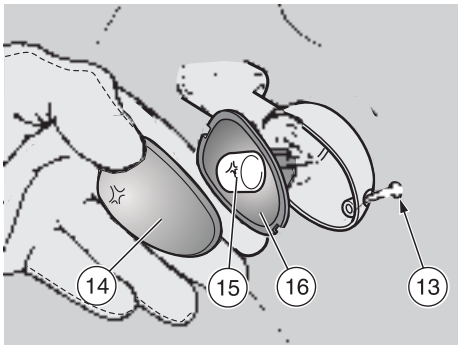
◆ Grasp the bulb electric connector (9) pull it and disconnect it from the bulb (2).
◆ Release the two ends of the clip (10) positioned at the rear of the bulb socket (11).
◆ Remove the bulb (2) from the seat.

NOTE Be sure to maintain the same orientation as the old bulb when you install the new bulb. Do not try to force the bulb, it will go easily if it is properly oriented.

◆ Correctly install the new bulb into its socket (11), ensuring that the tabs (A) are correctly positioned.
◆ Replace the two ends of the clip (10) in them seat.
◆ Connect the bulb electric connector (9).
◆ Replace the rubber boot (8) with the cable passage downwards.
◆ Replace the front part of the fairing completely, see p. 117 (REMOVING THE FRONT PART OF THE FAIRING).







PARKING LIGHT BULB (CENTRAL UPPER POSITION)

◆ Remove the front part of the fairing completely, see p. 117 (REMOVING THE FRONT PART OF THE FAIRING).

Working from the central upper position of the rear part of the fairing.

⚠ CAUTION

While removing a bulb socket, do not pull on the wires.

◆ Grasp the bulb socket (12), pull it and remove it from its seat.
◆ Remove the parking light bulb (3) and replace it with an identical bulb.

NOTE Ensure that the bulb is correctly inserted in the bulb socket.

◆ Insert the bulb socket (12) in its seat.
◆ Replace the front part of the fairing completely, see p. 117 (REMOVING THE FRONT PART OF THE FAIRING).

CHANGING THE FRONT AND REAR DIRECTION INDICATOR BULBS

Carefully read p. 139 (BULBS).

NOTE Before changing a bulb, check the fuses, see p. 132 (CHANGING FUSES).

To change the bulb:

◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
◆ Unscrew and remove the screw (13).

NOTE While removing the lens, use extra care to be sure that you do not break the key.

◆ Remove the lens (14).

NOTE Upon reassembly, place the lens correctly in its seat.

⚠ CAUTION

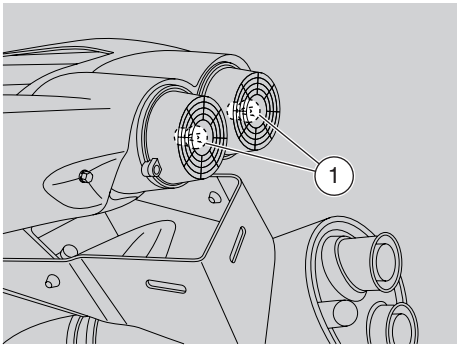
Tighten the screw (13) moderately and with care to avoid damaging the lens.

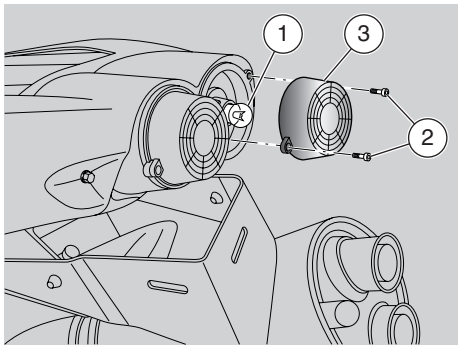
◆ Push the bulb (15) in slightly and rotate it counterclockwise.
◆ Extract the bulb from its seat.

NOTE Insert the bulb in the bulb socket, carefully aligning the two bulb pins with their guides in the socket.

◆ Correctly install a new bulb of the same type.

NOTE If the bulb socket (16) has fallen out of its seat, replace it correctly, ensuring that the slot in the reflector aligns with the screw hole in the body of the turn signal lamp.





CHANGING THE REAR LIGHT BULBS

Carefully read p. 139 (BULBS).

⚠ WARNING

Do not ride your vehicle if the tail light and the stoplight are not working properly. The stoplight is particularly important to prevent other vehicles from rearending you. Obviously, failure to comply with these instructions could lead to a serious accident with subsequent injuries or even death.

NOTE Before changing a bulb, check the fuses, see p. 132 (CHANGING FUSES), also check the operation of the stoplight switches, see p. 97 (CHECKING THE SWITCHES).

The rear light comprises two units. Each unit contains:

– one parking light/stoplight/license plate bulb (1).

To change the bulb:

◆ Place the vehicle on the stand, see p. 83 (PLACING THE VEHICLE ON THE STAND).
◆ Unscrew and remove the two screws (2).
◆ Remove the lens (3).

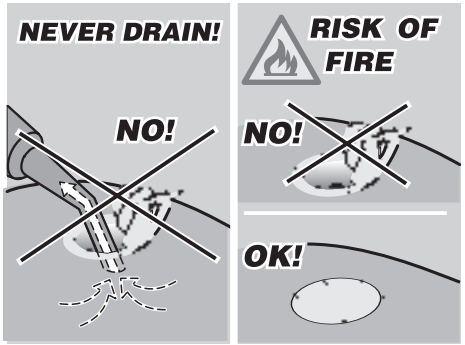
NOTE Upon reassembly, make sure that the lens seats properly.

⚠ CAUTION

Upon reassembly, do not overtighten the two screws (2). Overtightening will crack the lens.

◆ To remove the bulb (1), push the bulb slightly forward and rotate it counterclockwise.
◆ Pull it from its seat.
◆ Correctly install a new bulb of the same type.

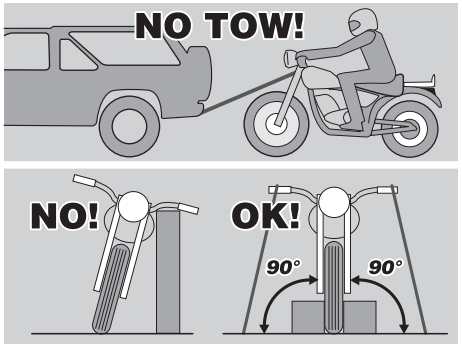
NOTE Ensure that the orientation of your replacement bulb is identical to that of the original bulb. Do not try to force the bulb, it will fit easily if it is properly oriented.



⚠ CAUTION

Never drain the fuel tank, either partially or completely. This may cause damage to the inner components of the fuel tank, or to other parts of the fuel system.

Always ensure that the fuel filler cap is correctly closed.



⚠ WARNING

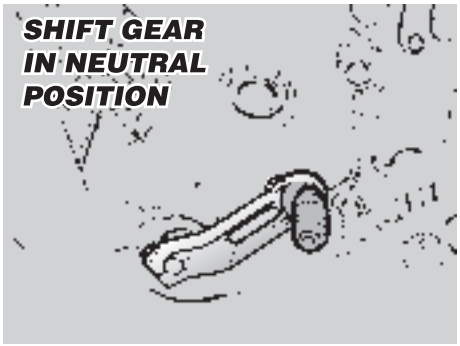
Never attempt to tow your vehicle with another vehicle.

⚠ WARNING

While your vehicle is being transported, it must be kept in a vertical position, firmly tied down, and with the wheels blocked.

Transport your vehicle in neutral gear only.

Failure to heed this warning could cause serious damage to the transmission due to vibration of the transport truck.

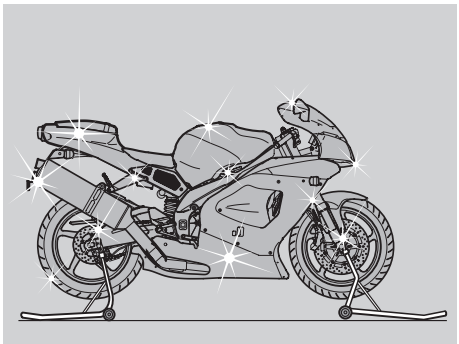


DRAINING THE FUEL TANK

⚠ CAUTION

Never drain the fuel tank, either partially or completely. This may cause damage to the inner components of the fuel tank, or to other parts of the fuel system.

Always ensure that the fuel filler cap is correctly closed.



Clean your vehicle regularly. Your vehicle will look better and work better if you keep it clean. You will find you will need to clean it more frequently if it is used in the following conditions:

– Polluted areas (cities and industrial areas).
– Areas characterized 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).

◆ Do not allow contaminants such as industrial dust, tar spots, dead insects, bird droppings, etc. to remain on the painted portions of your vehicle. They will very quickly etch into and damage the paint.
◆ Do not park your vehicle under trees, since some trees ooze resins that contain chemicals which can damage the paint.

⚠ WARNING

After your vehicle has been washed, the brake functioning will be temporarily impaired because of the wetness of the discs and pads. Do not ride in traffic until after you have dried the brakes by repeated braking from slow speed.

Always after washing your vehicle, carry out the preliminary checking operation, see p. 72 (PRELIMINARY CHECKING OPERATIONS).

⚠ CAUTION

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

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

Do not use polishing pastes on matt paints.

Do not wash the vehicle in direct sunlight, especially during the summer, when the paintwork is still warm, since if the shampoo dries before being rinsed away, it can damage the paint.

Do not use solvents or water hotter than 40°C to clean the plastic components of the vehicle.

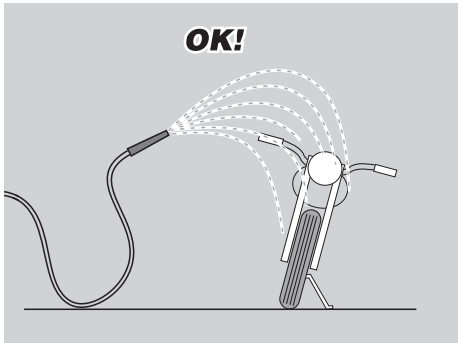
Never use a high pressure washer, a steam cleaner, or an air augmented water jet to clean your vehicle, especially the wheel hubs, handlebar controls, brake reservoirs and cylinders, instruments, electrical components or exhaust silencer.

Such cleaning machinery will force water into critical portions of your vehicle, which could damage your vehicle through corrosion or short circuiting.

Do not use alcohol or gasoline or solvents to clean the rubber parts, the plastic parts, and the saddle, use only clear water with a mild soap.

⚠ WARNING

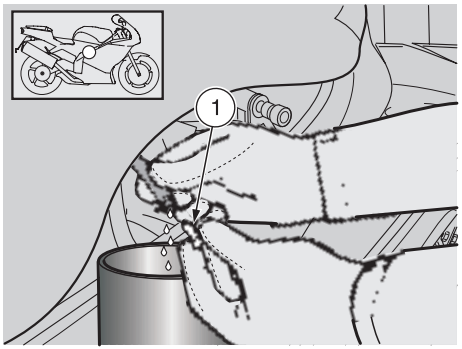
Do not apply any protective coating to the saddle, such coatings tend to make the saddle too slippery.



To remove dirt and mud from the painted surfaces, use a low pressure water hose. Carefully wet the dirty parts and remove mud and dirt with a soft car sponge. You may use proprietary car shampoos (2-4% parts of shampoo in clear water), to make this easier.

Carefully flush so that no dirt or girt remains on the paintwork, and dry with a clean chamois or clean terry towel.

To clean the engine and other non-painted parts, use a mild solvent and a bristle brush, along with plenty of rags.

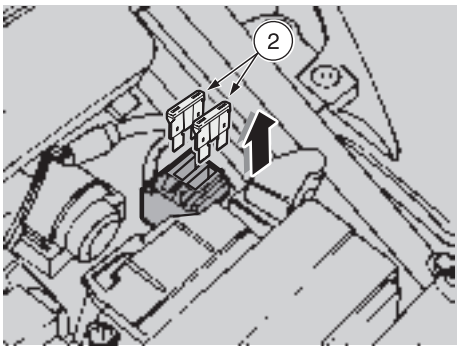


After washing the vehicle, always:

KEEP POLLUTING SUBSTANCES AND COMPONENTS AWAY FROM CHILDREN.

DISPOSE OF POLLUTING SUBSTANCES AND COMPONENTS PROPERLY.

◆ Remove the plug (1) to ensure that any water or other contaminant that may have accumulated inside the air cleaner case is drained.



LONG PERIODS OF INACTIVITY

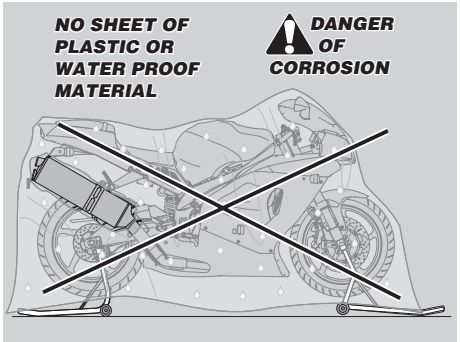
⚠ CAUTION

If this vehicle is not used for more than twenty days, remove the 30A fuses (2), see p. 132 (CHANGING FUSES). This will prevent the discharge of the battery caused by the slight current consumption of the multifunction computer.

NOTE The removal of the 30A fuses will cause the digital clock and the red line setting to go to zero. To reset these functions, see p. 40 (MULTIFUNCTION COMPUTER).

If the vehicle is to be stored for a relatively long period of time, such as over the winter, some simple precautions will make putting the vehicle back into service much easier.

It is much less difficult to prepare the vehicle for storage properly than it is to restore the vehicle to proper working condition af-

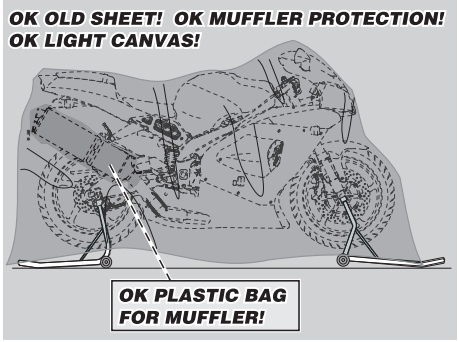


ter a storage period if you have forgotten or neglected to do this preparation.

To prepare the vehicle for storage:

- Remove the battery, see p. 135 (REMOVING THE BATTERY) and storage it, see p. 134 (BATTERY STORAGE).
- Wash and dry the vehicle, see p. 145 (CLEANING).
- Polish the painted surfaces with wax, see p. 145 (CLEANING).
- Inflate the tires, see p. 68 (TIRES).
- Do not drain the fuel tank. However, if available, you may wish to add a proprietary fuel storage additive, available from your Local **aprilia** Dealer or automobile supply stores. Follow the instructions on the container of the additive.

NOTE Do not add more than the recommended amount of additive.



⚠ CAUTION

Some fuel additives may damage some components of your fuel system. Check with your Local aprilia Dealer.

- Place the vehicle in a cool, dry room, away from direct sunlight, with minimum temperature variations.

⚠ WARNING

Before carrying out the following operations, let the engine and the exhaust silencer cool down until they reach room temperature.
Failure to observe this warning can lead to serious burns.

- Place a plastic bag over the outlet pipe of the muffler, and tape or tie it tight.

NOTE You must use the appropriate front and rear support stands to store your vehicle so that both tires are raised from the ground.

- Place the vehicle on the appropriate rear support stand OPT, see p. 106 (PLACING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Place the vehicle on the appropriate front support stand OPT, see p. 107 (PLACING THE VEHICLE ON THE FRONT SUPPORT STAND OPT).
- Cover the vehicle with an old sheet or a light canvas, do not use a sheet of plastic or other waterproof material. This will cause condensation which will result in corrosion.

PUTTING THE VEHICLE BACK INTO SERVICE

NOTE Remove the plastic bag from the outlet pipe of the muffler.

- Uncover and clean the vehicle, see p. 145 (CLEANING).
- Check the charge of the battery, see p. 136 (RECHARGING THE BATTERY) and install it, see p. 136 (INSTALLING THE BATTERY).
- Carry out the preliminary checking operations, see p. 72 (PRELIMINARY CHECKING OPERATIONS).

⚠ WARNING

Test ride the vehicle at moderate speed in a low traffic area before you ride in heavy traffic.

DIMENSIONS	Max. length	81.50 in (2,070 mm)
	Max. length (license plate holder extension included OPT)	84.25 in (2,140 mm)
	Max. width	28.54 in (725 mm)
	Max. height (front part of the fairing included)	46.06 in (1,170 mm)
	Seat height	32.28 in (820 mm)
	Wheelbase	55.71 in (1,415 mm)
	Min. ground clearance	5.12 in (130 mm)
	RSV Curb weight	486.78 lb (221 kg)
	RSV R Curb weight	464.75 lb (211 kg)
ENGINE	Type	60° longitudinal V-type, two-cylinder, 4-stroke, with 4 valves per cylinder, DOHC
	Number of cylinders	2
	Total displacement	60.90 cu in (998 cm^3)
	Bore/stroke	3.82 in/2.66 in (97.00 mm/67.50 mm)
	Compression ratio	11.4 ± 0.5 : 1
	Starting	electric
	Engine idling rpm	1,250 ± 100 rpm CO 1% [+ 1% – 0.5% (total range from 0.5% to 2%)]
	Valve clearance (with engine cold): – intake – exhaust	 0.005 - 0.006 in (0.12 - 0.17 mm) 0.009 - 0.011 in (0.23 - 0.28 mm)
	Clutch	multidisc in oil bath, with hydraulic control on the left side of the handlebar and PPC device
	Lubrication system	dry pan with separate oil tank and cooling radiator
	Air cleaner	with dry filter cartridge
	Cooling	liquid-cooled

CAPACITY	Fuel (reserve included)	4.75 US gal (18 ℓ)
	Fuel reserve	1.19 ± 0.26 US gal (4.5 ± 1 ℓ)
	Engine oil	oil change 3.91 US qt (3,700 cm^3) – oil and oil filter change 4.12 US qt (3,900 cm^3)
	RSV Fork oil (for each fork leg)	17.58 ± 0.08 US fl oz (520 ± 2.5 cm^3)
	RSV R (RSV OPT) "R" fork oil (for each fork leg)	16.91 ± 0.08 US fl oz (500 ± 2.5 cm^3)
	Coolant (50% water + 50% antifreeze with ethylene glycol)	0.66 US gal (2.5 ℓ)
	RSV Seats	2
	RSV R Seats	1
	RSV Vehicle max. load (rider+passenger+luggage)	396.47 lb (180 kg)
	RSV Gross weight limit (GVWR) (*)	883.25 lb (401 kg)
	RSV Permissible wheel loads (GAWR) (*):	
	– front	334.80 lb (152 kg)
	– rear	548.45 lb (249 kg
	RSV R Vehicle max. load (solo rider)	165.35 lb (75 kg)
	RSV R Gross weight limit (GVWR) (*)	674.00 lb (306 kg)
	RSV R Permissible wheel loads (GAWR) (*):	
	– front	307.70 lb (140 kg)
	– rear	366.30 lb (166 kg)

(*) These two weights: Gross Vehicle Weight Rating (GVWR) and Gross Axle Weight Rating (GAWR); are stamped on the certification plate positioned on the front part of the frame, see p. 6 (VEHICLE IDENTIFICATION NUMBER (V.I.N.) (FRAME NUMBER)).

TRANSMISSION	Type	mechanical, 6 gears with foot control on the left side of the engine

GEAR RATIOS

Ratio	Primary	Secondary	Final ratio	Total ratio
1st	31/60 = 1 : 1.935	15/34 = 1 : 2.267	17/42 = 1 : 2.471	1:10.839
2nd		19/31 = 1 : 1.632		1:7.802
3rd		20/26 = 1 : 1.300		1:6.216
4th		22/24 = 1 : 1.091		1:5.216
5th		25/24 = 1 : 0.960		1:4.591
6th		26/23 = 1 : 0.885		1:4.230

DRIVE CHAIN	Type	endless (with no master link) with sealed links
	Model	525
FUEL SUPPLY SYSTEM	Type	electronic injection (Multipoint)
	Choke	Ø 2.01 in (Ø 51 mm)
FUEL SUPPLY	Fuel	unleaded petrol minimum octane rating (M+R)/2 method 90
FRAME	Type	two-beam frame with light alloy cast elements and extruded elements
	Rake	25°
	Trail (with front tire 120/70)	3.90 in (99 mm)
SUSPENSIONS	Front	upside-down telescopic adjustable fork with hydraulic operation, fork leg Ø 1.69 in (Ø 43 mm)
	RSV Stroke	5.00 in (127 mm)
	RSV R (RSV OPT) Stroke (“R” fork)	4.72 in (120 mm)
	Rear	aluminum alloy rear swinging arm, lever system, and hydropneumatic 4-way adjustable mono-shock absorber
	Wheel stroke	5.31 in (135 mm)
BRAKES	Front	with double floating disc brake Ø 12.60 in (Ø 320 mm); calipers with four pins Ø 1.34 in (Ø 34 mm)
	Rear	disc brake Ø 8.66 in (Ø 220 mm); caliper with double pin Ø 1.26 in (Ø 32 mm)
WHEEL RIMS	Type	light alloy with withdrawable pin
	Front	17” x MT 3.50
	Rear	17” x MT 6.00

∗ = series RSV R; ∗∗ = series RSV ▲ = Normal use; ⛝ = Use on recetracks

Wheel	Make	Model	Type	Size	Recommended		Alternative	Pressure kPa (bar)		
								▲		⛝
								Solo rider	Rider and passenger	Solo rider
Front	PIRELLI	DRAGON EVO	MTR 21 CORSA	120/70–ZR 17"	▲	–	RSV	230 (2,3)	250 (2,5)	–
Rear	PIRELLI	DRAGON EVO	MTR 21 CORSA	180/55–ZR 17"	▲	–	RSV	250 (2,5)	280 (2,8)	–
Rear	PIRELLI	DRAGON EVO	MTR 21 CORSA	190/50–ZR 17"	▲	–	RSV	250 (2,5)	280 (2,8)	–
∗ Front	**PIRELLI**	**DRAGON SUPER-CORSA**	**–**	**120/70–ZR 17"**	▲	⛝	**RSV + RSV R**	**230 (2,3)**	**250 (2,5)**	**210 (2,1)**
∗ Rear	**PIRELLI**	**DRAGON S. C. CORSA**	**–**	**180/55–ZR 17"**	▲	⛝	**RSV + RSV R**	**250 (2,5)**	**280 (2,8)**	**200 (2,0)**
∗∗ Front	**METZELER**	**SPORTTEC**	**M1**	**120/70–ZR 17"**	▲	⛝	**RSV + RSV R**	**230 (2,3)**	**250 (2,5)**	**210 (2,1)**
Rear	METZELER	SPORTTEC	M1	180/55–ZR 17"	▲	⛝	RSV + RSV R	250 (2,5)	280 (2,8)	200 (2,0)
∗∗ Rear	**METZELER**	**SPORTTEC**	**M1**	**190/50–ZR 17"**	▲	⛝	**RSV + RSV R**	**250 (2,5)**	**280 (2,8)**	**200 (2,0)**
Front	METZELER	RENNSPORT	–	120/70–ZR 17"	▲	⛝	RSV + RSV R	230 (2,3)	250 (2,5)	210 (2,1)
Rear	METZELER	RENNSPORT	–	180/55–ZR 17"	▲	⛝	RSV + RSV R	250 (2,5)	280 (2,8)	200 (2,0)
Front	MICHELIN	SPORT CUP	–	120/70–ZR 17"	▲		RSV R	230 (2,3)	250 (2,5)	210 (2,1)
Front	MICHELIN	SPORT CUP	–	180/55–ZR 17"	▲		RSV R	250 (2,5)	280 (2,8)	190 (1,9)
Rear	MICHELIN	PILOT RACE	H	120/70–ZR 17"	–	⛝	RSV R	–	–	210 (2,1)
Front	MICHELIN	PILOT RACE	H	180/55–ZR 17"	–	⛝	RSV R	–	–	190 (1,9)
Front	BRIDGESTONE	BT 010	–	120/70–ZR 17"	▲	⛝	RSV	230 (2,3)	250 (2,5)	–
Rear	BRIDGESTONE	BT 010	–	190/55–ZR 17"	▲	⛝	RSV	250 (2,5)	280 (2,8)	–
Rear	BRIDGESTONE	BT 010	–	190/50–ZR 17"	▲	–	RSV	250 (2,5)	280 (2,8)	–
∗∗ Front	**DUNLOP**	**SPORTMAX**	**D 207F RR**	**120/70–ZR 17"**	▲		**RSV + RSV R**	**230 (2,3)**	**250 (2,5)**	**210 (2,1)**
∗∗ Rear	**DUNLOP**	**SPORTMAX**	**D 207 RR**	**190/50–ZR 17"**	▲	**–**	**RSV**	**250 (2,5)**	**280 (2,8)**	**–**
Rear	DUNLOP	SPORTMAX	D 207 RR	180/55–ZR 17"	▲	⛝	RSV R	250 (2,5)	280 (2,8)	190 (1,9)

⛝

IGNITION	Ignition timing	21.8° ± 2° at 2,800 rpm
SPARK PLUGS	Number per cylinder	2
	Standard	NGK R DCPR9E
	Spark plug gap	0.024 – 0.028 in (0.6 – 0.7 mm)
	Resistance	5 kΩ
ELECTRIC SYSTEM	Battery	12 V - 10 Ah
	Main fuses (# 2 fuses)	30 A
	Secondary fuses (# 5 fuses)	15 A
	Generator (with permanent magnet)	12 V - 400 W
BULBS	Low beam (halogen)	12 V - 55 W H7U
	High beam (halogen)	12 V - 55 W H7U
	Front parking light	12 V - 5 W
	Direction indicators	12 V - 10 W
	Rear parking light/stoplight/ license plate light	12 V - 5/21 W
	Tachometer	12 V - 1.2 W
	Left multifunction display	12 V - 1.2 W
	Right multifunction display	12 V - 1.2 W
WARNING LIGHTS	Neutral	12 V - 2 W
	Direction indicators	12 V - 3 W
	Fuel reserve	12 V - 3 W
	High beam	12 V - 2 W
	Side stand down	12 V - 2 W
	Engine oil pressure	12 V - 1.2 W (LED)
	Red line	12 V - 1.2 W (LED)

LUBRICANT CHART

Engine oil (recommended): IP EXTRA RAID 4, SAE 15W - 50 or Agip TEC 4T, SAE 15 W - 50.
As an alternative to the recommended oil, it is possible to use high-quality oils with characteristics in compliance with or superior to the CCMC G-4, A.P.I. SG. specifications.

RSV **Fork oil (recommended):** IP F.A. 5W or IP F.A. 20W; as an alternative Agip FORK 5W or Agip FORK 20W.
If you need an oil with intermediate characteristics in comparison with the IP F.A. 5W and IP F.A. 20W or Agip FORK 5W and Agip FORK 20W, these can be mixed as indicated below:

SAE 10W = IP F.A. 5W 67% of the volume, + IP F.A. 20W 33% of the volume or
Agip FORK 5W 67% of the volume + Agip FORK 20W 33% of the volume.

SAE 15W = IP F.A. 5W 33% of the volume, + IP F.A. 20W 67% of the volume or
Agip FORK 5W 33% of the volume + Agip FORK 20W 67% of the volume.

"R" RSV R (RSV OPT) **fork oil**: OHLINS 10W.

Bearings and other lubrication points (recommended): IP Bimol Grease 481, IP AUTOGREASE MP or Agip GREASE 30.

As an alternative to the recommended product, use high-quality grease for rolling bearings, working temperature range -30°C.... +140°C, dripping point 150°C... 230°C, high protection against corrosion, good resistance to water and oxidation.

Protection of the battery poles: neutral grease or vaseline.

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

⚠ WARNING

Use new brake fluid only.

Brake fluid (recommended): IP F.F., DOT 5 (DOT 4 compatible) or Agip BRAKE 5.1, DOT 5 (DOT 4 compatible).

⚠ WARNING

Use new clutch fluid only.

Clutch fluid (recommended): IP F.F., DOT 5 (DOT 4 compatible) or Agip BRAKE 5.1, DOT 5 (DOT 4 compatible).

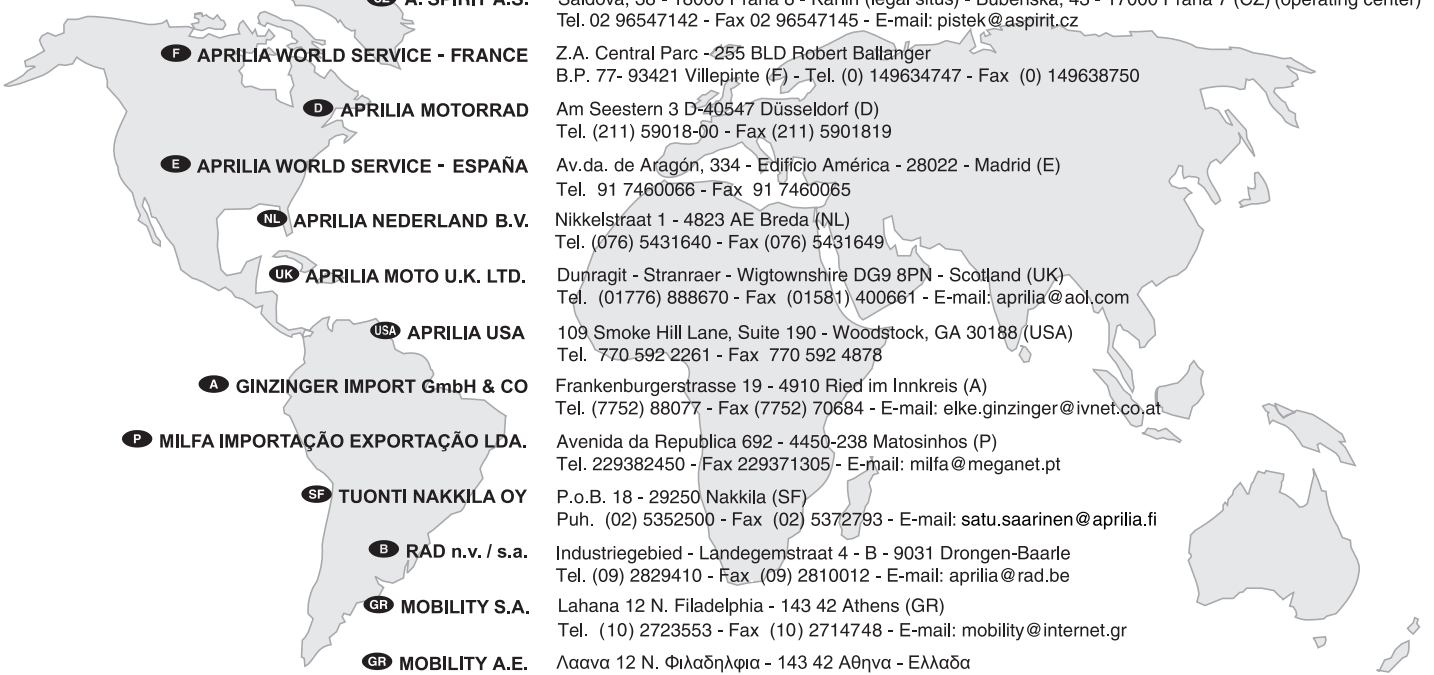
⚠ WARNING

Use only antifreeze and anticorrosive without nitrite, ensuring protection at -35°C at least.

Engine coolant (recommended): IP ECOBLU –40°C or Agip COOL.

OILN-USA

Importers



I APRILIA s.p.a.	via G. Galilei, 1 - 30033 Noale (VE) Italy Tel. +39(0)41 5829111 - Fax +39(0)41 441054 - Servizio Clienti **aprilia** +39(0)41 5786269
CZ A. SPIRIT A.S.	Saldova, 38 - 18000 Praha 8 - Karlin (legal situs) - Bubenska, 43 - 17000 Praha 7 (CZ) (operating center) Tel. 02 96547142 - Fax 02 96547145 - E-mail: pistek@aspirit.cz
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GR MOBILITY A.E.	Λαανα 12 Ν. Φιλαδηλφια - 143 42 Αθηνα - Ελλαδα Τηλ. (10) 2723553 - Φαξ (10) 2714748 - E-mail: mobility@internet.gr
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Importers

DK S **T.M.P.**	Hammervej 32 - 7900 Nikobing Mors (DK) Tel. (97) 722233 - Fax (97) 722143 / 33 - E-mail: thomas@aprilia.dk
J **アプリリア・ジャパン・コーポレーション**	〒222-0033神奈川県横浜市港北区新横浜3—22—5 新横浜目黒ビル　電話(0454)772632 —Fax (0454)772605
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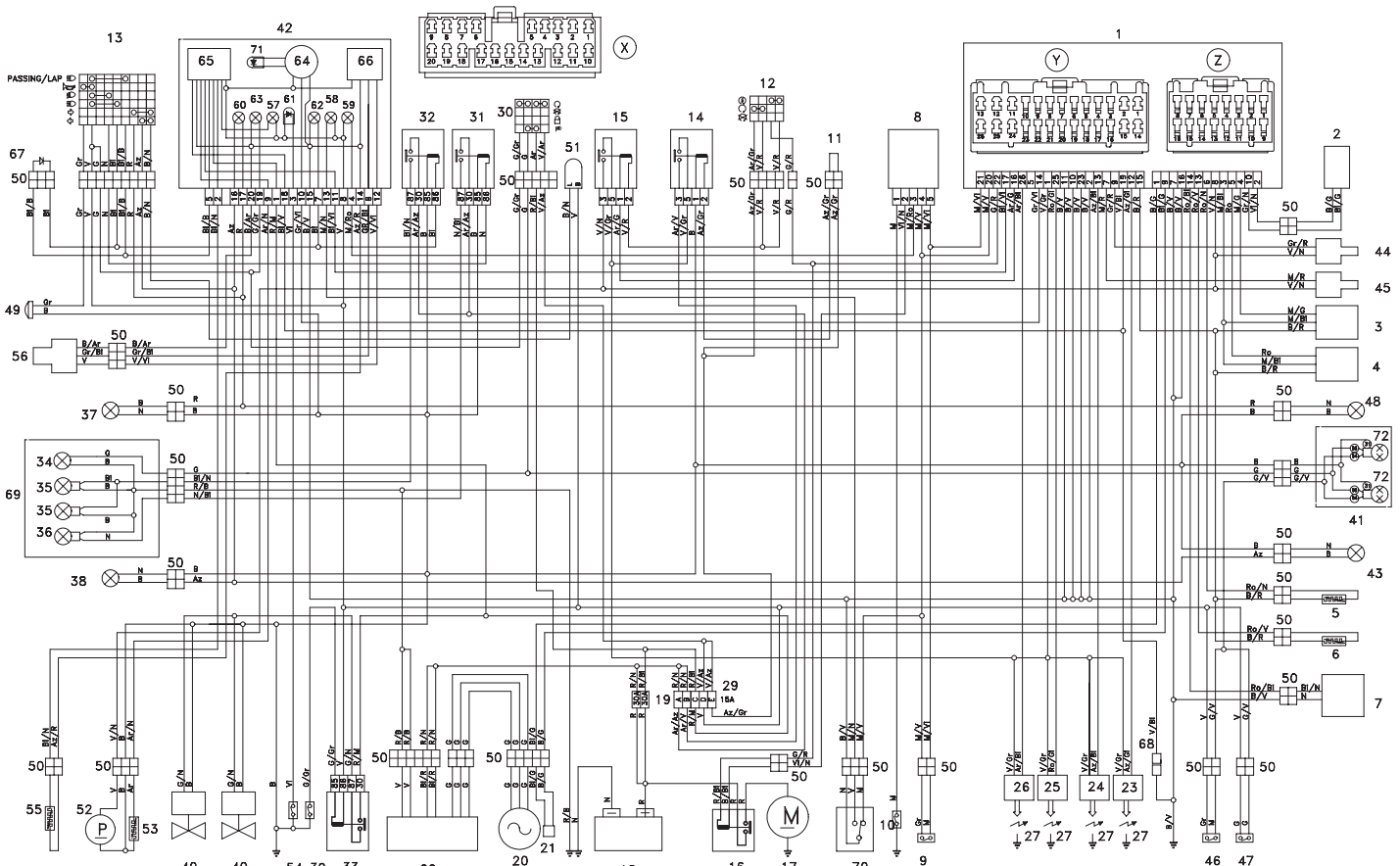
WIRING DIAGRAM RSV mille USA - RSV mille R USA



WIRING DIAGRAM KEY RSV mille USA - RSV mille R USA

1) Electronic unit
2) Cam position sensor
3) Throttle valve position sensor
4) Suction pressure sensor
5) Coolant thermistor
6) Air thermistor
7) Fall sensor
8) Diode module
9) Clutch control lever switch
10) Neutral switch
11) Arrangement for the installation of the anti-theft device
12) Right dimmer switch
13) Left dimmer switch
14) Engine stop relay
15) Fuel pump relay
16) Start relay
17) Starter
18) Battery
19) Main fuses (30A) (ignition)
20) Generator
21) Pick up
22) Voltage regulator
23) Rear cylinder coil
24) Rear cylinder coil
25) Front cylinder coil
26) Front cylinder coil
27) Spark plugs
28) –
29) Secondary fuses (15A)
    A - High beam, low beam
    B - ISC, coils, fuel pump
    C - Electric fans, clock
    D - Parking lights, stoplights, horn, dashboard lights, direction indicators
    E - Electronic unit, fuel pump relay, engine stop relay
30) Ignition switch
31) Low beam relay
32) High beam relay
33) Cooling fan relay
34) Front parking light bulb
35) High beam bulbs
36) Low beam bulb
37) Front right direction indicator
38) Front left direction indicator
39) Thermal switch
40) Cooling fans
41) Rear light
42) Dashboard
43) Rear left direction indicator
44) Front cylinder injector
45) Rear cylinder injector
46) Front stoplight switch
47) Rear stoplight switch
48) Rear right direction indicator
49) Horn
50) Multiple connectors
51) Flasher
52) Fuel pump
53) Low fuel sensor
54) Engine oil pressure switch
55) Coolant temperature thermistor
56) Speed sensor
57) Low fuel warning light
58) Side stand down warning light
59) Neutral warning light
60) Direction indicator warning light
61) Engine oil pressure warning light LED
62) High beam warning light
63) Dashboard bulbs
64) Tachometer
65) Multifunction display (right side)
66) Multifunction display (left side)
67) Light diode / LAP
68) TEST connectors
69) Headlight
70) Side stand switch
71) Red line warning light LED
72) Rear parking light/stoplight/license plate light bulbs

X) Dashboard connector (20-way)
Y) Electronic unit connector (26-way)
Z) Electronic unit connector (16-way)

CABLE COLORS

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

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ASK FOR GENUINE SPARE PARTS ONLY

aprilia 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 isn't necessary.

– Avoid disturbing noises.

– Respect nature.