Dear customer,

Thank you for choosing a Aprilia vehicle.

We have created this manual to help you get the most out of your vehicle. Please read it thoroughly before driving the vehicle for the first time, and take time to familiarise yourself with the controls and behaviour of the vehicle, as this will make sure that the vehicle is used correctly and as effectively as possible. This document contains tips, warnings and important information for the safety, correct operation, maintenance and care of your vehicle.

Keep this manual, so that it is readily available whenever needed, and hand it over to the new owner in case of sale, as it is an integral part of the vehicle itself.

Enjoy your reading, then, and enjoy your journey!

We strongly recommend that you download and view the full and updated version of the manual, which is available from the website:

https://manuals.aprilia.com





Ed: 03-05\_2024 Cod. 2Q000567 (USA)

#### **INSTRUCTIONS**

The instructions given in this manual are intended to provide a clear and simple guide for using your vehicle. Details are also given of routine maintenance procedures and regular checks which should be carried out on the vehicle by a Aprilia dealer or authorised service centre.

Any operations not specifically described in this booklet require the use of special tools and/or particular technical knowledge: we recommend having these operations carried out by a Apriliadealer or authorised service centre.

Read this manual thoroughly before using your vehicle. Follow the instructions contained in this manual for your personal safety and to ensure the durability of your vehicle. Failure to observe these instructions may cause personal injury or damage to the vehicle.

#### WARNING

This use and maintenance manual contains descriptions of the technical data and functional characteristics of the vehicle applicable for the different variants and configurations currently in production. Only the information relative to the configuration, engine variant and version of the vehicle purchased by you must be taken into consideration.

Piaggio & C. S.p.A. reserves the right to implement modifications to the model described in this document at any time, for any technical or commercial reasons it deems fit.

#### CHANGE/MODIFY THE VEHICLE

Any modifications or alterations made to the vehicle may void the warranty and may also compromise the road-holding characteristics of the vehicle and cause an accident, putting the safety of the driver and occupants at serious risk.

This use and maintenance manual contains paragraphs identified by signal word DANGER, with warnings for avoiding accident or injury, and paragraphs identified by the signal words WARNING and NOTE, with information to help the user avoid improper use of the vehicle and its components. A number of paragraphs identified by the signal word WARNING are also included with information to help avoid procedures and actions which could damage your vehicle. Observe all DANGER and WARNING instructions and indications in this manual, which are identified by the symbols:



Safety of Persons

The total or partial failure to follow these instructions may lead to serious personal injury.



Integrity of the vehicle

The total or partial failure to follow these instructions may lead to serious damage to the vehicle and may even invalidate the warranty.



Safeguarding the Environment

Indicates the correct behaviour to adopt for an environmentally-friendly use of the vehicle.

#### Note

Indicates a note that provides important information to make the process easier and clearer.

# LIST OF TOPICS

GENERAL MANDATORY REQUIREMENTS		KEY VEHICLE PAGE	33
GENERAL SAFETY INSTRUCTIONS	8	RACE PAGE	3
FOREWORD	8	KEY RACE PAGE	3
MOTORCYCLE CARE	8	MUSIC PAGE (IF PRESENT)	
CARBON MONOXIDE	10	KEY MUSIC PAGE	38
FUEL	10	PHONE PAGE (IF PRESENT)	40
HOT PARTS	11	KEY PHONE PAGE	40
COOLANT	11	NAVI PAGE (IF PRESENT)	4
USED ENGINE OIL AND TRANSMISSION OIL	11	KEY NAVI PAGE	43
BRAKE FLUID	12	WARNINGS	4
BATTERY ELECTROLYTE AND HYDROGEN GAS	12	ALARMS	
STAND	13	MAPPING SELECTION	5
GENERAL PRECAUTIONS AND WARNINGS	13	ADVANCED FUNCTIONS	
ROAD TRAFFIC CODE AND VEHICLE USE	14	SMARTPHONE ASSOCIATION	5
WARRANTY FOR NOISE EMISSIONS	14	KEY SWITCH	5
INFORMATION ON EXHAUST FUMES AND NOISE		IGNITION SWITCH	5
CONTROL SYSTEM	14	ENGAGING THE STEERING LOCK	59
POSITIONING OF WARNING LABELS	16	HORN BUTTON	5
KEY TO LABELS	16	TURN INDICATOR SWITCH	59
EVAPORATIVE EMISSION CONTROL SYSTEM	18	LIGHT SWITCH	
WARRANTY RIGHTS AND OBLIGATIONS	20	HIGH BEAM FLASH SWITCH	60
VEHICLE		STARTER BUTTON	
MAIN COMPONENTS DISTRIBUTION	24	ENGINE STOP SWITCH	6
KEY FOR LOCATION OF MAIN COMPONENTS		RIDING MODE BUTTON	6
INSTRUMENT CLUSTER	27	A-PRC SYSTEM (APRILIA PERFORMANCE RIDE	
INSTRUMENT CLUSTER - KEY		CONTROL)	
CONTROL BUTTONS	28	THE SADDLE	6
INDICATOR LIGHT UNIT	28	DOCUMENT / TOOL KIT COMPARTMENT	6
DIGITAL DISPLAY	28	OBD SOCKET	
ROAD PAGE	29	IDENTIFICATION	68
KEY ROAD PAGE		USE	
ON BOARD COMPUTER PAGE		CONTROLS	
KEY ON BOARD COMPUTER PAGE	31	REFUELLING	7
VEHICLE PAGE	33	ADJUSTING THE REAR SHOCK ARSORRERS	7.

REAR SHOCK ABSORBERS SETTING	
FRONT FORK ADJUSTMENT	76
SETTING THE FRONT FORK	76
CLUTCH LEVER ADJUSTMENT	
GEAR PEDAL ADJUSTMENT	77
RUNNING-IN	
ENGINE STARTER	
SETTING OFF AND RIDING	
ENGINE STOP	
IT IS EASY TO PARK ANYWHERE ON THE ROAD	
CATALYTIC CONVERTER	82
STAND	
THEFT PREVENTION TIPS	83
SAFE RIDING	
BASIC SAFETY RULES	90
MAINTENANCE	
FOREWORD	94
ENGINE OIL LEVEL	
CHECKING THE ENGINE OIL LEVEL	
ENGINE OIL TOP-UP	
ENGINE OIL CHANGE	
ENGINE OIL FILTER REPLACEMENT	96
TYRES	
SPARK PLUG REMOVAL	
AIR FILTER REMOVAL	
COOLANT LEVEL	98
CHECKING THE COOLANT	
TOP UP COOLANT	98
BRAKE FLUID LEVEL CHECK	99
TOPPING UP BRAKE FLUID	99
BATTERY	
BATTERY REMOVAL	
INSTALLING A NEW BATTERY	102
CHARGING THE BATTERY	103

LONG INACTIVITY	103
FUSES	104
BULBS	
FRONT LIGHT CLUSTER	107
HEADLIGHT ADJUSTMENT	
REAR LIGHT ASSEMBLY	109
REAR TURN INDICATORS	109
NUMBER PLATE LIGHT	
REAR-VIEW MIRRORS	
FRONT AND REAR DISC BRAKE	109
VEHICLE INACTIVITY	11
VEHICLE CLEANING	112
TRANSPORT	
DRIVE CHAIN	
CHAIN CLEARANCE CHECK	115
CHAIN CLEARANCE ADJUSTMENT	115
CHECKING WEAR OF CHAIN, PINION AND	
SPROCKET	
CHAIN LUBRICATION AND CLEANING	116
ECHNICAL DATA	
DATA	
PARE PARTS AND ACCESSORIES	
WARNINGS	
CHEDULED MAINTENANCE	
THE VALUE OF SERVICE	126
SCHEDULED MAINTENANCE TABLE	126
RECOMMENDED PRODUCTS	
TABLE OF RECOMMENDED PRODUCTS	129

# **RS 457**





CHAPTER 01 General mandatory requirements

# **General Safety Instructions**

#### **Foreword**

N.B



THE MAINTENANCE INTERVALS PRESCRIBED BY THE SCHEDULED MAINTENANCE TABLE MUST BE CONSIDERED AS A GENERAL GUIDE FOR USING THE VEHICLE IN NORMAL RUNNING CONDITIONS.

IT MAY BE NECESSARY TO REDUCE THE MAINTENANCE **INTERVALS PARTICULAR** UNDER SOME CONDITIONS. **ESPECIALLY WHEN** USED IN **GEOGRAPHICAL** LOCATIONS WITH **ADVFRSF** CLIMATIC CONDITIONS. USE ON UNEVEN GROUND OR SEVERE INDIVIDUAL USE.

N.B



IF THE VEHICLE IS INVOLVED IN A FALL, WHETHER WHILE MOVING OR STATIONARY, ALWAYS TAKE IT TO AN OFFICIAL APRILIA DEALER, WHICH WILL CHECK IT THOROUGHLY TO

MAKE SURE THAT IT IS UNDAMAGED AND IN PERFECT WORKING ORDER.

NB

B

THIS USE AND MAINTENANCE MANUAL IS AN IMPORTANT DOCUMENT AND MUST ALWAYS BE KEPT WITH THE VEHICLE.

IF THE VEHICLE IS RESOLD, PLEASE PROVIDE THIS MANUAL TO THE NEW OWNER.

Aprilia has created this use and maintenance manual to provide you, the user, with correct and updated information. However, considering the fact that Aprilia is constantly improving the design of its vehicles, there may be slight differences between the characteristics of the vehicle in your possession and the information contained in this use and maintenance manual. For any questions concerning your vehicle, contact your official Aprilia dealer who will always be updated with the latest information available from the company. For checks and repairs not expressly described in this use and maintenance manual, for the purchase of original spare parts, accessories and other Aprilia products, as well as support on specific problems, please contact your local Aprilia dealer. These professionals will provide you a quick and accurate service.

Thank you for choosing Aprilia.

We wish you a pleasant ride!

This use and maintenance manual is copyright protected in all countries, and total or partial reproduction by any print or electronic means is strictly prohibited.

# Motorcycle care

Aprilia recommends using quality products for cleaning the vehicle. The use of unsuitable products can damage vehicle components. For cleaning do not use solvents such as "nitro thinner", "cold cleaning agents", fuels or the like, or cleaning products that contain alcohol.

#### WASHING THE MOTORCYCLE

Aprilia recommends softening with plenty water and then carefully removing insects and stubborn stains before washing the vehicle.

To prevent stains, do not wash the motorcycle immediately after exposure to sunlight, and do not wash it in the sun.

If the vehicle is used during the winter months, be sure to frequently wash the motorcycle. To remove anti-icing salt sprayed on roads in the winter, wash the motorcycle with cold water immediately after use.

#### **ATTENTION**



AFTER CLEANING YOUR MOTORCYCLE, THE EFFICIENCY OF THE BRAKING SYSTEM MAY BE TEMPORARILY AFFECTED DUE TO THE PRESENCE OF WATER ON THE FRICTION SURFACES. CONSIDER AN INCREASE IN BRAKING SPACE, OPERATE THE BRAKES REPEATEDLY TO RESTORE NORMAL CONDITIONS. CARRY OUT THE PRE-RIDE CHECKS BEFORE USE.

#### **WARNING**



USE OF HOT WATER INTENSIFIES THE EFFECT OF THE SALT. USE ONLY PLENTY OF COLD WATER TO WASH AND REMOVE ANTI-ICING SALT.

## WARNING



USE OF HIGH PRESSURE WASHING SYSTEMS (OR STEAM CLEANERS) CAN DAMAGE THE SEALS, OIL SEALS, BRAKING SYSTEM, ELECTRICAL SYSTEM AND THE SADDLE. DO NOT USE STEAM

OR HIGH PRESSURE CLEANING SYSTEMS. DO NOT USE STEAM OR HIGH PRESSURE WASHING SYSTEMS. DO NOT INSIST WITH THE PRESSURE NOZZLE ON THE STEERING BEARING, WHEEL BEARINGS, INSIDE THE REAR WHEEL HUB, ON THE HYDRAULIC BRAKING CIRCUIT AND ON THE ELECTRICAL PARTS.

# CLEANING OF SENSITIVE PARTS

#### **BODYWORK**

To keep the motorcycle bright, wash it regularly, especially if used in areas with high levels of pollution or mud. Stubborn stains of tree resin, petrol, oil, brake liquid or bird droppings should be removed immediately, otherwise the stains risk becoming permanent.

After washing it is easy to identify marks and residual stains, remove them from the body using a soft cloth and brand-name, non-abrasive polish, and protect with a protective wax for cars. Periodic care, a thorough cleaning and regular protective wax for the bodywork preserves the aesthetic quality of the motorcycle over the long term.

## **PLASTIC COMPONENTS**

# WARNING



IF THE PLASTIC COMPONENTS ARE CLEANED USING AGGRESSIVE AGENTS, THE SURFACE MAY BE DAMAGED. DO NOT USE CLEANING PRODUCTS CONTAINING ALCOHOL, SOLVENTS OR THAT ARE ABRASIVE FOR THE CLEANING OF PLASTIC PARTS. ROTARY BRUSHES OR SPONGES WITH HARD SURFACES CAN MAKE SCRATCHES.

#### CHROME PARTS AND POLISHED METAL

#### **WARNING**



TREAT THE PARTS MADE OF CHROME, ALUMINIUM OR POLISHED STEEL IN A SPECIAL MANNER. WASH THEM WITH PLENTY OF WATER AND CAR SHAMPOO, POLISH AND REGULARLY BRIGHTEN THEM WITH POLISH PASTE, PROTECT THEM WITH WAXES OR SUITABLE ACID-FREE PRODUCTS (E.G. VASELINE).

#### **RADIATOR**

## WARNING



IF THE VEHICLE IS USED IN WINTER ON ROADS TREATED WITH SALT, WASH THE RADIATOR FREQUENTLY TO PREVENT COSMETIC DAMAGE TO THE FINISH AND THE RISK OF ENGINE OVERHEATING. WASH WITH PLENTY OF WATER. WASH WITH A LOW PRESSURE JET OF WATER, USING A GARDEN HOSE FOR EXAMPLE.

#### RUBBER PARTS

Clean the rubber parts using water and mild shampoo (brand-name, suitable for car bodies)

# **WARNING**



THE USE OF SILICONE SPRAY TO CLEAN THE RUBBER SEALS MAY CAUSE DAMAGE. DO NOT USE OTHER PRODUCTS CONTAINING SILICON FOR CLEANING THE MOTORCYCLE.

## Carbon monoxide

If you need to keep the engine running while working on the vehicle, please ensure that you do so in an open or very well ventilated area. Never run the engine in an enclosed area. If you do work in an enclosed area, make sure to use a fume extraction system.

## **ATTENTION**



EXHAUST EMISSIONS CONTAIN CARBON MONOXIDE, A POISONOUS GAS WHICH CAN CAUSE LOSS OF CONSCIOUSNESS AND EVEN DEATH.

# **ATTENTION**



CARBON MONOXIDE IS ODOURLESS AND COLOURLESS, THEREFORE IT CANNOT BE DETECTED BY SMELL, SIGHT OR OTHER SENSES. DO NOT BREATHE IN EXHAUST FUMES UNDER ANY CIRCUMSTANCES.

#### **Fuel**

Keep the petrol out of the reach of children. Petrol is toxic. Do not use the mouth to siphon the petrol. Avoid contact of the petrol with the skin. If you should accidentally come into contact with petrol, change your clothes immediately and wash the area where petrol has been spilled thoroughly with soap and warm water. Should you accidentally ingest petrol, do not induce vomiting. Drink plenty of fresh water or milk and consult a doctor immediately.

If petrol should inadvertently come into contact with the eyes, rinse thoroughly with clean, fresh water and consult a doctor immediately.

# **ATTENTION**





FUEL USED TO DRIVE EXPLOSION ENGINES IS HIGHLY INFLAMMABLE AND CAN BECOME EXPLOSIVE UNDER SPECIFIC CONDITIONS. IT IS THEREFORE RECOMMENDED TO CARRY OUT REFUELLING AND MAINTENANCE PROCEDURES IN A VENTILATED AREA WITH THE ENGINE SWITCHED OFF. DO NOT SMOKE DURING REFUELLING AND NEAR FUEL VAPOURS, AVOIDING ANY CONTACT WITH NAKED FLAMES, SPARKS OR OTHER SOURCES WHICH MAY CAUSE THEM TO IGNITE OR EXPLODE.

DO NOT DISPERSE FUEL IN THE ENVIRONMENT. ALWAYS USE APPROPRIATE DISPOSAL METHODS.

KEEP OUT OF THE REACH OF CHILDREN.

# **WARNING**



IF THE VEHICLE FALLS OR IS ON A STEEP INCLINE FUEL CAN LEAK.

# Hot parts

The engine and the exhaust system components get very hot and remain in this condition for a certain time interval after the engine has been switched off. Before handling these components, make sure that you are wearing insulating gloves or wait until the engine and the exhaust system have cooled down

#### Coolant

Coolant contains ethylene glycol, which may be flammable in certain conditions. Ethylene glycol burns with an invisible flame which may still cause burns.

# **ATTENTION**





TAKE PARTICULAR CARE NOT HOT TO SPILL COOLANT ONTO PARTS OR THE ENGINE AND **EXHAUST SYSTEM:** THE FLUID MAY IGNITE AND BURN WITH AΝ **INVISIBLE** FLAME. WHEN CARRYING OUT **MAINTENANCE** OPERATIONS, IT IS ADVISABLE TO WEAR LATEX GLOVES. WHILE POISONOUS, COOLANT HAS A SWEET TASTE WHICH MAKES IT EXTREMELY APPEALING TO ANIMALS. NEVER LEAVE COOLANT IN OPEN CONTAINERS WHERE IT MAY BE REACHED AND DRUNK BY AN ANIMAL.

KEEP OUT OF THE REACH OF CHILDREN. NEVER REMOVE THE RADIATOR CAP WHILE THE ENGINE IS STILL HOT.

COOLANT IS UNDER PRESSURE AND MAY CAUSE BURNS.

## **ATTENTION**



COOLANT IS TOXIC IF INGESTED; CONTACT WITH YOUR EYES OR SKIN MAY CAUSE IRRITATION. IF THE FLUID GETS IN CONTACT WITH THE EYES OR SKIN, RINSE REPEATEDLY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

IF SWALLOWED, INDUCE VOMITING, RINSE THE MOUTH AND THROAT WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE IMMEDIATELY.

RISK OF BURNS: NEVER REMOVE THE RADIATOR CAP WHILE THE ENGINE IS

HOT. WITH THE ENGINE AND COOLANT AT OPERATING TEMPERATURE, THE COOLANT WILL BE UNDER PRESSURE. REMOVING THE RADIATOR CAP WHEN THE ENGINE IS HOT COULD CAUSE HOT COOLANT TO ESCAPE WITHOUT WARNING UNDER PRESSURE, WITH THE RISK OF POSSIBLE BURNS. WAIT UNTIL THE ENGINE HAS COOLED COMPLETELY BEFORE UNSCREWING AND REMOVING THE RADIATOR CAP.

Used engine oil and transmission oil

#### ATTENTION



WHEN CARRYING OUT MAINTENANCE OPERATIONS, IT IS ADVISABLE TO WEAR PROTECTIVE IMPERMEABLE GLOVES.

THE ENGINE OR GEARBOX OIL MAY CAUSE SERIOUS INJURIES TO THE SKIN IF HANDLED FOR PROLONGED PERIODS OF TIME AND ON A REGULAR BASIS. WASH YOUR HANDS CAREFULLY AFTER HANDLING OIL.

ALWAYS MAKE USE OF APPROPRIATE DISPOSAL METHODS. OIL IS DANGEROUS FOR THE ENVIRONMENT AND FEDERAL LAW

FORBIDS ITS DISPOSAL WITHOUT AUTHORISATION. TAKE THE WASTE OIL TO A SPECIAL COLLECTION CENTRE OR ASK FOR IT TO BE COLLECTED BY THE NEAREST WASTE OIL RECOVERY COMPANY.

DO NOT DISPOSE OF OIL INTO THE ENVIRONMENT.

KEEP OUT OF THE REACH OF CHILDREN.

#### Brake fluid

## **ATTENTION**



FLUID **EXTREMELY** BRAKE IS POISONOUS. NEVER ALLOW BRAKE FLUID TO BE INGESTED OR SWALLOWED. IF ACCIDENTALLY SWALLOWED. DRINK LARGE QUANTITIES OF MILK OR WATER AND SEEK MEDICAL ADVICE IMMEDIATELY. BRAKE FLUID IS HIGHLY DESTRUCTIVE TO SKIN AND EYE TISSUE. IF YOU ACCIDENTALLY SPILL BRAKE FLUID ON YOURSELF. TAKE OFF YOUR CLOTHES, WASH WITH HOT WATER AND SOAP AND SEEK MEDICAL ADVICE IMMEDIATELY. IF BRAKE FLUID GETS ACCIDENTALLY IN CONTACT WITH YOUR EYES, RINSE WITH ABUNDANT FRESH WATER AND SEEK MEDICAL ADVICE IMMEDIATELY. KEEP BRAKE FLUID OUT OF THE REACH OF CHILDREN.

## **ATTENTION**



**BRAKE** FLUID CAN DAMAGE PAINT FINISH. **PLASTIC** AND RUBBER. WHEN SERVICING THE **BRAKING SYSTEM. PROTECT THESE** COMPONENTS WITH A CLEAN **CLOTH. ALWAYS WEAR PROTECTIVE GOGGLES WHEN SERVICING THESE** SYSTEMS. BRAKE **FLUID** EXTREMELY HARMFUL FOR THE **EYES. IN THE EVENT OF ACCIDENTAL** CONTACT WITH THE EYES, RINSE THE EYES IMMEDIATELY WITH PLENTY OF COOL. CLEAN WATER AND SEEK IMMEDIATE MEDICAL ATTENTION.

KEEP OUT OF THE REACH OF CHILDREN.

# Battery electrolyte and hydrogen gas

(if applicable)

## **ATTENTION**



THE BATTERY ELECTROLYTE IS TOXIC. CORROSIVE AND. AS IT CONTAINS SULPHURIC ACID. MAY CAUSE BURNING IF IT COMES INTO CONTACT WITH THE SKIN. WHEN HANDLING BATTERY ELECTROLYTE, WEAR TIGHT-FITTING GLOVES AND PROTECTIVE APPAREL. IN THE **EVENT OF SKIN CONTACT WITH THE** ELECTROLYTIC FLUID, RINSE WELL WITH PLENTY OF CLEAN WATER. IT IS PARTICULARLY IMPORTANT TO PROTECT YOUR EYES BECAUSE **EVEN TINY AMOUNTS OF BATTERY** ACID MAY CAUSE BLINDNESS. IF THE FLUID GETS INTO CONTACT WITH THE EYES. WASH WITH ABUNDANT WATER FOR FIFTEEN MINUTES AND CONSULT AN EYE SPECIALIST IMMEDIATELY. THE BATTERY RELEASES EXPLOSIVE GASES: KEEP IT AWAY FROM SPARKS. CIGARETTES FLAMES. OR ANY OTHER HEAT SOURCES. **ENSURE ADEQUATE VENTILATION** WHEN SERVICING OR RECHARGING THE BATTERY.

KEEP OUT OF THE REACH OF CHILDREN.

BATTERY LIQUID IS CORROSIVE. DO NOT POUR OR SPREAD IT ESPECIALLY ON PLASTIC PARTS. ENSURE THAT THE ELECTROLYTIC ACID IS COMPATIBLE WITH THE BATTERY BEING ACTIVATED.

#### Stand

# **ATTENTION**



DO NOT SIT ON THE VEHICLE WHILE STATIONARY ON THE SIDE STAND. THE PARKING STAND IS EXCLUSIVELY DESIGNED TO KEEP THE VEHICLE BALANCED. THE ADDITIONAL WEIGHT OF A RIDER, PASSENGER OR BOTH COULD CAUSE THE VEHICLE TO FALL, RESULTING IN SERIOUS INJURY OR DEATH.

#### **BEFORE MOVING THE VEHICLE:**

CHECK THAT THE SIDE STAND AND/OR THE CENTRAL STAND (IF PROVIDED) ARE COMPLETELY RAISED. IF THE STANDS ARE NOT FULLY RAISED, THIS MAY BE SERIOUS INJURY OR DEATH.

# General precautions and warnings

# DANGER OF OVERHEATING

WHEN THE VEHICLE IS STATIONARY, DO NOT KEEP THE ENGINE RUNNING MORE THAN NECESSARY, THIS MAY CAUSE EXCESSIVE OVERHEATING. IN EXTREME CASES, RISK OF FIRE.

- WHEN THE VEHICLE IS STATIONARY, DO NOT UNNECESSARILY RUN THE ENGINE.
- TO PREVENT DAMAGE FROM EXCESSIVE OVERHEATING, AUTOMATIC ENGINE SHUT-DOWN IS PROVIDED FOR LONG STAYS IN NEUTRAL, AT IDLE SPEED, AND IN EXTREMELY HOT CONDITIONS. IN ANY CASE, EVEN AFTER THE AUTOMATIC SHUT-DOWN, THE ENGINE CAN BE SWITCHED ON AGAIN IMMEDIATELY.
- START IMMEDIATELY AFTER IGNITION, MAKING SURE TO RIDE A SHORT INITIAL DISTANCE AT LOW RPM.
- AFTER USE, AS SOON AS PARKED, THE ENGINE MUST BE IMMEDIATELY TURNED OFF.
- AFTER USE, DO NOT PLACE OBJECTS IN CONTACT WITH THE VEHICLE, WHEN IT IS STILL HOT, AS THEY COULD IGNITE (E.G. PROTECTIVE FABRICS, JACKET, ETC.).
- IF THE ENGINE TEMPERATURE
  IS VERY HIGH, IT IS POSSIBLE
  THAT THE COOLING FAN WILL
  CONTINUE TO RUN FOR SEVERAL
  SECONDS EVEN AFTER THE
  ENGINE HAS BEEN SWITCHED OFF.
  THIS BEHAVIOUR IS NOT TO BE
  CONSIDERED ABNORMAL, IT'S A
  STRATEGY SPECIFICALLY CREATED
  TO PROTECT THE ENGINE.

#### **TAMPERING**

 NEVER TAMPER WITH ANY PART OF THE MOTORCYCLE (E.G. ENGINE CONTROL UNIT, THROTTLE VALVES, CLUTCH, EXHAUST SYSTEM, ETC.).
 THIS MAY CAUSE DAMAGE TO THE COMPONENTS INVOLVED, FAILURE OF RELEVANT SAFETY FUNCTIONS AND LOSS OF THE WARRANTY.

#### **DANGER OF BURNS**

IN CASE OF OVERHEATING OF THE ENGINE AND EXHAUST SYSTEMS WHILE RUNNING, PAY PARTICULAR ATTENTION:

- DANGER OF BURNS.
- AFTER TURNING OFF THE VEHICLE, PAY ATTENTION THAT NO PERSON OR OBJECT COMES IN CONTACT WITH THE ENGINE AND THE EXHAUST SYSTEM.

Unless otherwise specified in this Use and Maintenance Manual, do not remove any mechanical or electrical component.

#### WARNING



SOME OF THE CONNECTORS ON THE VEHICLE MAY BE ACCIDENTALLY SWAPPED, AND MAY COMPROMISE NORMAL VEHICLE OPERATION AND/OR CAUSE IRREPARABLE DAMAGE

# TO PARTS OF THE VEHICLE IF INCORRECTLY INSTALLED.

If you have any questions regarding your warranty rights and responsibilities, please contact Piaggio Group Americas, Inc., 860 Washington Street, 9th Floor, New York, NY 10014 U.S.A. Telephone number: (212) 380 4400, email: customercare@us.piaggio.com, the U.S. Environmental Protection Agency, 2000 Traverwood Ann Arbor, MI 48105 or the California Air Resources Board at P.O. Box 8001, 9528 Telstar Avenue, El Monte, CA 91734-8001.

If it is found that your vehicle has a defect that could cause an accident. injury or death, immediately report it to NHTSA (National Highway Traffic Safety Administration) and Aprilia. If NHTSA receives other similar information, it could initiate an investigation, and if a safety defect is found affecting a group of vehicles it could request its withdrawal or the application of corrective measures. In any case, the NHTSA does not intervene in the event of individual problems between persons, dealers or Aprilia. To contact NHTSA, call the Vehicle Safety Hotline tollfree number (888 327 4236) or write to: U.S. Department of Transportation, National Highway Safety Administration, 1200 New Jersey Ave., SE, Washington DC 20590. For more information regarding vehicle safety. call the toll-free number

Your safety and that of the persons around you depends not only on your driving skills, but also on your knowledge of the vehicle and the safety rules.

Therefore, it is essential not to use the vehicle on public roads or highways before having received instructions from a qualified and prepared safety organization, for example MOTORCYCLE SAFETY FOUNDATION.

# LIST OF DEFECTS THAT COMPROMISE THE SAFETY

If it is found that your vehicle has a defect that could cause an accident or death, immediately report it to the National Highway Traffic Safety Administration (NHTSA), a section of the American Department of Transportation. After receiving information on alleged defects. NHTSA could open an investigation to find out if there is a group of defective vehicles on the market. At that point, it could launch an information campaign and recall the vehicles from the market. However neither the NHTSA nor the Department of Transportation will be involved in personal matters regarding the consumer and manufacturer.

Additional information can be obtained by calling the specified number.

# Road traffic code and vehicle use

The road traffic code rules vary from state to state. It is extremely important to know

in advance the road traffic code rules of the country where the vehicle will be used.

# Warranty for noise emissions

Piaggio & Co. S.p.A warrants that the exhaust system complies with all US EPA federal noise emission standards in effect at the time of production. Any questions concerning the exhaust system of this vehicle must be addressed to any authorised Aprilia dealer or to the Aprilia Customer Care by calling (212) 380 4433, or by writing to:

# Aprilia Customer Care c/o Piaggio Group Americas. Inc.

860 Washington Street, 9th Floor,

New York, NY 10014

U.S.A.

Telephone number: (212) 380 4400

email: customercare@us.piaggio.com

# Information on exhaust fumes and noise control system

# Origins of emissions

# **ATTENTION**



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 PHOTO-CHEMICAL SMOG.

WHILE CARBON MONOXIDE DOES NOT REACT IN THE SAME WAY AS HYDROCARBONS, IT IS HIGHLY TOXIC AND HARMFUL. APRILIA USES A CARBURETTOR ADJUSTMENT SET TO A "LEAN" MIXTURE AND OTHER SYSTEMS TO REDUCE THE PRODUCTION OF CARBON MONOXIDE AND HYDROCARBONS.

# **Tampering**

It is forbidden to tamper the noise control system. The following actions are prohibited by federal law:

a) The removal and any action, by anyone, aimed at rendering inoperative, except for maintenance, repair or replacement, any device or design element incorporated in all new vehicles, in order to control the noise emission before sale or delivery of the vehicle to the final purchaser or while it is being used.

or

b) the use of the vehicle after this device or design element has been removed or rendered inoperative by any person. These tampering actions also include the actions listed below:

- a) Removal or perforation of the silencer, deflectors, manifold pipes or any other component for conveying the exhaust gases.
- **b)** Disassembly or perforation of any component of the intake system.
- c) Insufficient proper maintenance.
- d) Replacement of any moving part of the vehicle or parts of the intake or exhaust system with parts other than those specified by the manufacturer.
- e) Removal of decals or warning labels regarding emissions or safe vehicle operation. ANY DAMAGE RESULTING FROM THE REMOVAL OF THE DECALS AND/OR THE WARNING LABELS WILL NOT BE COVERED BY THE TERMS OF THE APRILIA LIMITED WARRANTY FOR **NEW VEHICLES.** Besides, many countries may refuse to grant registration of a vehicle that does not have the necessary emission and/or safety warning labels if these are not regularly attached to the vehicle. The vehicle owner must consider that Piaggio Group Americas, Inc. / Aprilia USA will not recognise any warranty if the vehicle or any of its components is damaged or defective due to negligence, improper maintenance, unauthorized modifications, use in organised or non-organised

competitions or in events such as Track Days.

# WARNING



THIS PRODUCT SHOULD BE REPAIRED OR REPLACED IF THE NOISE FROM THE VEHICLE INCREASES SIGNIFICANTLY DURING USE. OTHERWISE, THERE WILL BE SANCTIONS IMPOSED AGAINST THE OWNER IN ACCORDANCE WITH STATE OR LOCAL LAWS.

# Problems affecting emissions

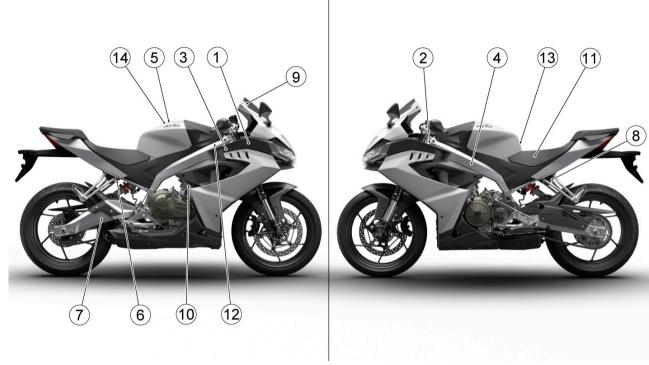
If one of the following symptoms are experienced, have the vehicle checked and repaired immediately by your local **Aprilia** dealer.

## Symptoms:

- Difficulty starting, or stalling the engine after starting.
- · Unstable idle speed.
- Ignition problems, misfire during acceleration. Pre-ignition/pinking
- · Manoeuvring difficulties.
- Poor engine performance, reduced handling or excessive fuel consumption.

•

# Positioning of warning labels



# Key to labels

# License plate 1

• Plate only on the America version vehicle.

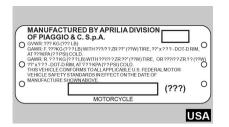


Plate only on the Canada version vehicle.



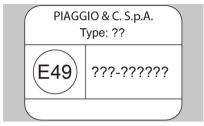
# License plate 2

Plate only on the Canada version vehicle.

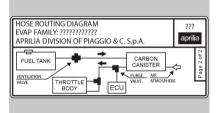


License plate 3

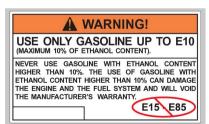
# THE PLATE IS ATTACHED TO THE INSIDE OF THE FAIRING



## License plate 4



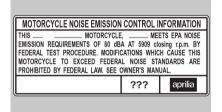
# License plate 5



License plate 6



## License plate 7



#### Plate 8



License plate 9

#### **A** 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.

as to interiere win view.

-Do not allow any alcaline or strong acid cleaner, gasoline, brake fluid or any other solvent to contact the windshild.

-When replacing windshield, use only Aprilia original replacement windshield.

## License plate 10

#### A 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.

License plate 11

**Evaporative emission control system** 

# THE PLATE IS ATTACHED TO THE BATTERY COVER, UNDER THE RIDER'S SEAT.

# aprilia BATTERY SERVICE WARNING!

WARNING!

This battery is completely sealed. Do not attempt to remove the cap. Replace with sealed battery only. Always keep the battery charged (see Owner's Manual).

Never disconnect the battery.

Never disconnect the battery or regulator with the engine running. This will completely destroy the entire electrical system.

# License plate 12

# **▲** WARNING!

USE ONLY DOT 4 BRAKE FLUID FROM A SEALED CONTAINER CLEAN FILLER CAP BEFORE REMOVING

# License plate 13

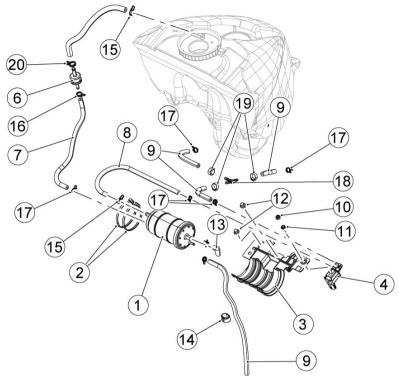
#### A WARNING!

- 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.

# License plate 14

#### A 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.



# Key:

- 1. Canister
- 2. 4.5X280 clamp
- 3. Canister support
- 4. Bleed valve

- 5. SAE Pipe J30 L=210
- 6. Safety valve
- 7. SAE pipe J30 L=300
- 8. SAE pipe J30 L=335
- 9. SAE pipe J30 L=600
- 10 . Nut
- 11 . T-shaped bushing

- 12 . Flanged hex cap screw
- 13.Pipette
- 14 . Spring clamp
- 15 . Clamp
- 16.Clamp
- 17 . Pipe clamp
- 18.3-way fitting

19 .Pipe clamp

20 .Pipe clamp

# Warranty rights and obligations

The United States Environmental Protection Agency, the California Air Resources Board and Aprilia Division of Piaggio & C. S.p.A. (hereinafter referred as "Aprilia") are pleased to illustrate the warranty of the emissions control system on your vehicles from 1999 onwards. In California, new motorcycles must be designed, built and equipped to meet stringent United States anti-smog standards. Where a legitimate condition exists. Aprilia will repair your motorcycle free of charge, including diagnosis, spare parts and labour costs. Aprilia must guarantee the emission control system on your motorcycle for the time periods listed below except for breach. neglect or improper maintenance of your motorcycle.

Your emission control system may include components such as the carburettor or fuel injection system, ignition system, catalyst, and engine control unit. This could also include pipes, belts, connectors and other emission related units.

If there is a legitimate condition, **Aprilia** will repair your motorcycle free of charge, including diagnosis, spare parts and labour costs.

# Manufacturer's warranty coverage

Class I motorcycles (3.05 - 10.31 cu in) (50 - 169 cc)): for a period of use of five (5) years or 7,456 mi (12.000 km) whichever is sooner.

Class II motorcycles (10.37 - 17.02 cu in) (170 – 279 cc)): for a period of use of five (5) years or 11,184 mi (18.000 km) whichever is sooner.

Class III motorcycles (17.09 cu in (280 cc) and higher): for a period of use of five (5) years or 18,641 mi (30.000 km) whichever is sooner.

If an emissions-related component on your motorcycle is defective, it will be repaired or replaced by **Aprilia**. This is your WARRANTY FOR DEFECTS of the emission control system.

# Aprilia - STATEMENT OF LIMITED WARRANTY ON THE EMISSION CONTROL SYSTEM (FOR US MARKET ONLY)

Piaggio & C. s.p.a., Via G. Galilei, 1, 30033 Noale (VE) Italy (hereinafter referred to as "Aprilia") guarantees that all new Aprilia motorcycles from 1999 and later which include as standard the headlight, the taillight and the brake lights are approved for road use:

(a) have been designed, constructed and equipped in accordance with all United States Environmental Protection Agency and California Air Resources Board regulations in effect at the time the vehicle was manufactured:

and

b) are free from defects in material and workmanship that could result in noncompliance with the regulations in force of the United States Environmental Protection Agency or the California Air Resources Board for a period of use, based on the engine displacement, of 6.000 km (3,750 mi), if the engine displacement is less than 50 cc (3 cu in): 12.000 km (7.456 km), if the engine displacement is less than 170 cc (10.37 cu in); 18.000 km (11.185 mi), if the engine displacement is equal to or greater than 170 cc (10.37 cu in), but in any case less than 280 cc (17.1 cu in); or 30.000 km (18.641 mi), if the engine displacement is equal to or greater than 280 cc (17.1 cu in); or 5 (five) years from the date of the initial public sale, whichever is sooner.

# Liability under warranty of the vehicle owner

- As the owner, you are responsible for carrying out the scheduled maintenance indicated in your use and maintenance manual. Aprilia recommends that you keep all receipts relating to the maintenance of your motorcycle even if Aprilia cannot deny the warranty solely for lack of receipts or proof that the entire scheduled maintenance has been carried out.
- It is your responsibility to have your motorcycle checked by an Aprilia

dealer as soon as a problem occurs. Warranty repairs should be completed within a reasonable period of time, not exceeding 30 days.

 As owner of the motorcycle, you should be aware that Aprilia may deny the warranty if your motorcycle or component is found to be defective as a result of violations, negligence, improper maintenance or unauthorised modifications.

If you have any questions regarding your warranty rights and responsibilities, please contact **Piaggio Group Americas, Inc.**, 860 Washington Street, 9th Floor, New York, NY 10014 U.S.A., Telephone number: (212) 380 4400, email: customercare@us.piaggio.com, or **California Air Resources Board** at P.O. Box 8001, 9528 Telstar Avenue, El Monte, CA 91734-8001.

## I - Coverage

Defects under warranty must be repaired during normal business hours by an Official Aprilia Dealer based in the United States of America in accordance with the Clean Air Act and applicable regulations of the United States Environmental Protection Agency and California Air Resources Board. All components replaced under this warranty will become the property of Piaggio Group Americas, Inc.

Only in the State of California, emissionrelated warranty parts are specifically defined by the state's Emission Warranty

Parts List. The components under warranty are as follows: carburettor and internal components: intake bellow: fuel tank: fuel injection system: ignition advance mechanism: crankcase breather: air shutoff valves; fuel cap for vehicles with evaporative emissions control; oil filler cap: pressure control valve: vapour/ fuel separator: canister: igniter: switch regulators; ignition coils; ignition cables; ignition points; capacitors and spark plugs that are defective before the first scheduled replacement; and pipes, clamps, fittings and tubing used directly on these components. Since emission related components vary from model to model, some models may not have all of these components and other models may have components with equivalent operation.

Only in the State of California, emergency repairs of the emission control system, as required by the California Administrative Code, may be carried out by third parties other than an Official Aprilia Dealer. An emergency situation is considered a situation in which a Aprilia Official Dealer is not available, a component is not available or cannot be found within 30 days, or the repair is not completed within 30 days. In case of emergency repairs, any spare part can be used. Piaggio Group Americas. Inc. will reimburse the owner's expenses, including the diagnosis, without exceeding the Aprilia suggested retail price for all parts under warranty replaced and for labour costs, based on the times recommended by Aprilia for repairs under warranty and at the hourly rate specified for the geographical area. The owner may be required to keep receipts and defective parts for reimbursement.

#### II - Limitations

The Emission Control System Warranty does not cover the following:

- **a)** Repairs or replacements necessary as a result of:
- (1) accidents.
- (2) improper use.
- (3) improperly performed repairs or replacements with incorrect installation,
- (4) use of spare parts or accessories that do not comply with Aprilia specifications which could adversely affect the performance.
- (5) use in competition, Track Days and other similar events.
- b) Checks, replacement of components or other services and adjustments necessary for scheduled maintenance.
- c) Any motorcycle on which the odometer mileage has been changed in such a way that the actual mileage can no longer be readily established.

# III - Limited liability

a) Aprilia's liability in respect of the emission control warranty is limited exclusively to the elimination of defects in the material and/or workmanship by an authorised Aprilia dealer during the dealer's

normal business hours. This warranty does not cover the inconvenience of not using the vehicle because it was not available for use, nor does it cover the transport of the vehicle from and/or to the authorised **Aprilia** dealer.

Aprilia and Piaggio Group Americas, Inc. WILL BE DEEMED FREE FROM ANY OTHER EXPENSES, LOSS OR DAMAGES, DIRECT, INDIRECT, CASUAL OR PUNITIVE, ARISING FROM THE SALE OR USE OR IMPOSSIBILITY OF USE OF THE Aprilia MOTORCYCLE FOR ANY PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION FOR INCIDENTAL OR INDIRECT DAMAGES AND SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

**b** ) NO WARRANTY IS GRANTED WITH RESPECT TO THE EMISSION CONTROL SYSTEM EXPRESSED BY Aprilia and/or Piaggio Group Americas, Inc. EXCEPT AS SPECIFICALLY SET FORTH HEREIN. ANY WARRANTY REGARDING THE EMISSION CONTROL SYSTEM IMPLIED BY LAW, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR SUITABILITY FOR A PARTICULAR USE. IS LIMITED TO THE TERMS OF THE EMISSION CONTROL SYSTEM WARRANTY SET OUT IN THIS WARRANTY. THESE WARRANTY STATEMENTS EXCLUDE AND REPLACE ANY OTHER RIGHTS OF COMPENSATION. SOME STATES DO NOT ALLOW LIMITATIONS ON THE **DURATION OF THE IMPLIED WARRANTY** 

AND SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

c) No dealer is authorised to modify the warranty on the **Aprilia** emission control system.

# IV - Legal rights

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND ANY OTHER RIGHTS WHICH MAY VARY IN DIFFERENT STATES.

# V- This warranty is an addition to the limited warranty of the manufacturer for the vehicle

The Use and Maintenance Manual includes information on noise and emissions warranties, but does not mention anything about the standard warranty for the motorcycle and its components. However, the Use and Maintenance Manual in its current format states that this warranty supplements the **Aprilia** limited warranty on the motorcycle.

#### VI - Further information

Any spare parts with equivalent performance and durability can be used to carry out any maintenance repairs. However, **Aprilia** assumes no responsibility for these parts. The owner is responsible for carrying out all scheduled maintenance. This maintenance can be carried out by an authorized **Aprilia** dealer or by the owner himself. The warranty period start at the first date of delivery to a retail client.

# Piaggio & C. S.p.A.

via G. Galilei, 1

30033 Noale (VE) Italy

# Piaggio Group Americas, Inc.

860 Washington Street, 9th Floor

New York, NY 10014

U.S.A.

Telephone number: (212) 380 4400

email: customercare@us.piaggio.com

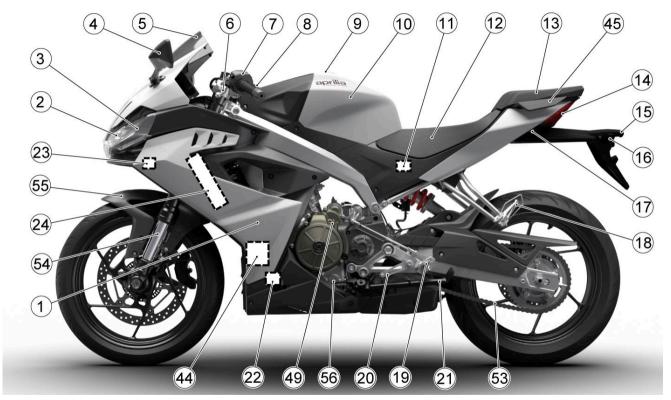
# **RS 457**





CHAPTER 02 Vehicle

# Main components distribution





# Key for location of main components

- 1. Left side fairing
- 2. Left low beam headlight

- **3** . Left indicator (incorporated in the front light cluster)
- 4. Left rear-view mirror
- 5. Top fairing

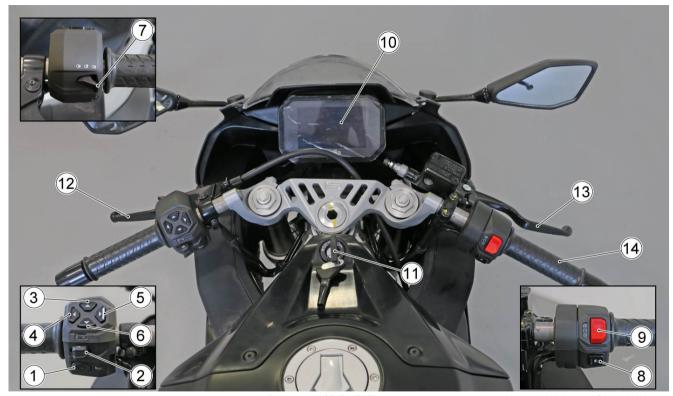
- 6. Clutch lever
- 7. Left hand switch
- 8. Key switch
- 9. Fuel tank cap

- 10 .Fuel tank
- 11. Main fuse
- 12 . Rider saddle
- 13 . Passenger saddle
- 14 . Rear light
- 15 . Number plate light
- 16 . Rear left turn indicator
- 17 . Passenger saddle opening lock
- 18 .Left hand passenger footrest
- 19 .Left rider footrest
- 20 . Gearbox lever
- 21 .Side stand
- 22 .Engine oil filter
- 23 . Horn
- 24 . Coolant radiator
- 25 . Front brake calliper

- 26 . Front brake disc
- 27 . Rear tone wheel
- 28 . Rear ABS sensor
- 29 . Rear brake calliper
- 30 . Right hand passenger footrest
- 31 . Rear right turn indicator
- 32 . Secondary fuses
- 33 . Battery
- 34 . Rear brake oil tank
- 35 . Throttle control
- **36** . Right hand switch
- 37 . Front brake fluid tank
- 38 . Front brake lever
- 39 . Right rear-view mirror
- **40** .Right turn indicator (incorporated in the front light cluster)

- 41 . Right low beam headlight
- 42 . Rear brake disc
- 43 . Central high-beam headlamp
- 44 . Coolant expansion tank
- 45 . Passenger handle
- 46 . Front tone wheel
- 47 . Front ABS sensor
- 48 .RH fork stanchion
- 49 . Engine oil load cap
- 50 . Rear brake lever
- 51 . Right hand rider footrest
- 52 . Rear shock absorber
- 53 Drive chain
- 54 . Left fork stem
- 55 . Front mudguard
- 56 . Engine oil level inspection port

# Instrument cluster



# Instrument cluster - Key

- 1. Audible warning device;
- 2. Turn indicator control;
- 3. Up button (MODE UP);

- 4. Left button (MODE LEFT);
- 5. Right button (MODE RIGHT);
- 6. Down button (MODE DOWN);

- 7. Low beam / high beam / flash high beam switch;
- 8. Riding mode button;
- 9. Engine start / stop switch;

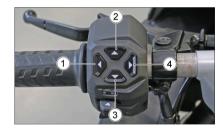
- 10 .Instruments and indicators:
- 11 . Ignition switch / steering lock;
- 12 .Clutch lever;
- 13 . Front brake lever;
- 14 . Throttle grip.

# **Control buttons**

Using the control buttons on the left-hand handlebar, it is possible to navigate through the pages of the display, view trip A / B information and, if the "Aprilia MIA" control unit is present, also telephone, multimedia and navigation information.

The navigation buttons are as follows:

- MODE LEFT (left / select / confirm / press and hold to reset)
- 2. MODE UP (up)
- 3. MODE DOWN (down)
- 4. MODE RIGHT (right)



# Indicator light unit



## Key:

- 1. Turn indicator warning light, green.
- 2. ABS Warning Light, orange.
- 3. High beam indicator lamp, blue.
- 4. Neutral indicator lamp, green.
- **5** . MI warning light, orange.

# Digital display

Turning the ignition switch to 'KEY ON', the following illuminate on the dashboard for about two seconds:

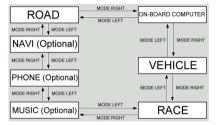
- A dynamic graphic presentation.
- All indicator lights.

The digital display consists of a user interface with four 'Standard' pages plus three 'Optional' pages, the latter of which can only be displayed if the 'APRILIA MIA' control unit is present

Two different riding modes are available: ROAD and RACE.

As standard the selected mode is ROAD. To switch to RACE mode it is necessary to scroll through the pages by briefly pressing the MODE RIGHT or MODE LEFT buttons.

The diagram below shows the order of the digital display pages, which can be scrolled through by briefly pressing the MODE RIGHT or MODE LEFT buttons.



Each "key ON" will display the last page selected before the "key OFF".

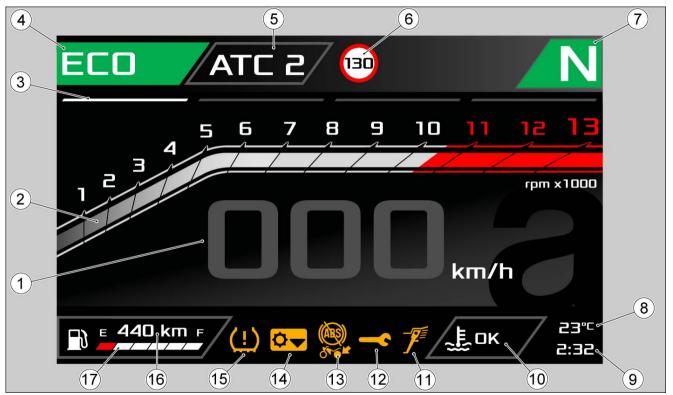
#### WARNING



AT KEY-OFF, THE SYSTEM TAKES A SHORT TIME TO SWITCH OFF THE DASHBOARD CORRECTLY AND SAVE ALL DATA FROM THE E.C.U. CONTROL UNIT. IT IS THEREFORE NECESSARY TO WAIT 5 SECONDS BEFORE PERFORMING THE KEY-ON AGAIN.

All seven pages in the digital display are shown below.

# **ROAD** page



# **Key ROAD page**

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Engine speed (rpm x 1000);:

To set the Shift light (gear shift threshold) function, please refer to the "Advanced Functions" section.

- 3) Key Display page:
- the white highlighted box represents the displayed page.
- 4) Riding mode selected:
- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected:
- It is possible to set the traction control (ATC) to the levels - (off) to 3 (maximum intervention).
- To change the traction control level, briefly press the MODE UP (1) and MODE DOWN (2) buttons; to switch it off, select level 1 and press the MODE DOWN button (2) for a long time.



- 6) Indication regarding the speed limit applicable on the current road (if Aprilia MIA control unit present);
- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in °C or °F);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".
- 10) Coolant status indication:
- Please refer to the section 'Warnings':
- 11) Open side stand indicator:
- Please refer to the section 'Warnings';
- 12) Service icon:

- · Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".
- 14) Quickshfit status (where implemented):
- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- Please refer to the section 'Warnings':
- 16) Range (displayed in km or mi);
- To set the unit of measurement, please refer to "Advanced Functions".
- 17) Fuel gauge:
- Please refer to the section 'Warnings';

# On Board Computer page



# **Key ON BOARD COMPUTER page**

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Trip log "A" and "B" (the white box indicates the log you are viewing):
- Each trip journal contains the following information:
- TRIP: Distance travelled (displayed in km or mi);

- MAX: Maximum speed reached (viewable in km/h or mi/h);
- FUEL: Average fuel consumption during the trip (displayed in km/l - l/100km mpg (UK) - mpg (USA));
- TIME: Total travel time in days (d) and hours (h);
- ODO: Total vehicle mileage NOT RESETTABLE (displayed in km or mi).
- The counting of trip information is only carried out on the selected journal; To scroll between travel logs "'A" and "B", briefly press the MODE UP (1) and MODE DOWN (2) buttons.
- To reset the trip information, select the log to be reset and press and hold the MODE LEFT (3) button.



- 3) Key Display page:
- the white highlighted box represents the displayed page.
- 4) Riding mode selected:
- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected (grey icon):
- On this page the traction control (ATC) level is only displayed, it is NOT possible to change it.
- 6) Indication regarding the speed limit applicable on the current road (if Aprilia MIA control unit present):
- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in  $^{\circ}$ C or  $^{\circ}$ F);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".

- 10) Coolant status indication:
- Please refer to the section 'Warnings';
- 11) Open side stand indicator:
- Please refer to the section 'Warnings';
- 12) Service icon:
- Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".
- 14) Quickshfit status (where implemented):
- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- Please refer to the section 'Warnings';
- 16) Range (displayed in km or mi);
- To set the unit of measurement, please refer to "Advanced Functions".
- 17) Fuel gauge:
- Please refer to the section 'Warnings';

# **Vehicle Page**



# **Key Vehicle page**

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Tyre pressure display and warnings (where applicable);
- 3) Key Display page:
- the white highlighted box represents the displayed page.
- 4) Riding mode selected:

- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected (grey icon):
- On this page the traction control (ATC) level is only displayed, it is NOT possible to change it.
- 6) Indication regarding the speed limit applicable on the current road (if Aprilia MIA control unit present);
- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in °C or °F);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".
- 10) Coolant status indication:
- · Please refer to the section 'Warnings';
- 11) Open side stand indicator:

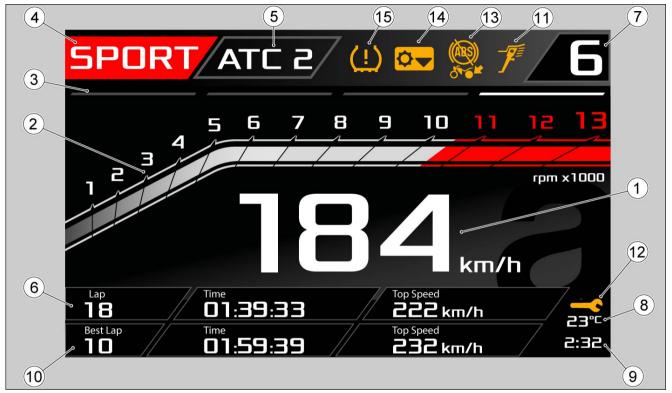
- · Please refer to the section 'Warnings';
- 12) Service icon:
- · Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".
- 14) Quickshfit status (where implemented):
- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- · Please refer to the section 'Warnings';
- 16) Range (displayed in km or mi);
- To set the unit of measurement, please refer to "Advanced Functions".
- 17) Fuel gauge:
- Please refer to the section 'Warnings';
- 18) Distance remaining until next service:

- the icon next to the numerical value is normally grey, when the counter reaches zero it turns orange and at the same time the service icon (12) lights up;
- 19) Coolant temperature
- 20) Battery voltage;

# If the Aprilia MIA ECU is fitted:

- 21) Data link with smartphone:
- White icon: the function is active;
- Grey icon: the function is deactivated
- 22) Smartphone associated with the instrument cluster:
- White icon: the function is active:
- Grey icon: the function is deactivated
- 23) Battery level of the associated smartphone;
- 24) GPS / Navigator:
- White icon: the function is active;
- Grey icon: the function is deactivated

# **RACE** page



# **Key RACE page**

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Engine speed (rpm x 1000);

- To set the Shift light (gear shift threshold) function, please refer to the "Advanced Functions" section.
- 3) Key Display page:

- the white highlighted box represents the displayed page.
- 4) Riding mode selected:
- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected:
- It is possible to set the traction control (ATC) to the levels - (off) to 3 (maximum intervention).
- To change the traction control level, briefly press the MODE UP (1) and MODE DOWN (2) buttons; to switch it off, select level 1 and press the MODE DOWN button (2) for a long time.



- 6) Timed lap in progress:
- The lap number (LAP), the current lap time (Time) and the maximum speed reached (Max speed) are displayed;
- To activate the lap timer, with the vehicle running, operate the high beam flashing button (1) on the left-hand rocker switch.
   If the button (1) is pressed again within the first 5 seconds after the start of the

- countdown, the lap timer restarts from zero.
- After 5 seconds from the start of the lap timer, the next time button (1) is pressed, the lap timer is memorised, resulting in an increase in the LAP number and the start of the next LAP count.
- Pressing and holding the button (1), or when the speed returns to zero, the measurement is annulled, and the last measurement is shown on the display. Timekeeping starts again following the steps described above.
- After 50 counts the acquisition of new counts will overwrite the first one recorded.



- With a speed below 5 km/h, pressing the MODE LEFT button (3) displays the LAP TIMER MENU. Please refer to the section "Advanced Functions" for more information.
- To exit the LAP TIMER MENU, briefly press the MODE LEFT button (3) or reach a speed above 5 km/h.



- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in °C or °F);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".
- 10) Best lap:
- The lap number (LAP), lap time (Time) and maximum speed reached (Max speed) are displayed;
- With a speed below 5 km/h, pressing the MODE LEFT button (3) displays the LAP TIMER MENU. Please refer to the section "Advanced Functions" for more information.
- To exit the LAP TIMER MENU, briefly press the MODE LEFT button (3) or reach a speed above 5 km/h.



- 11) Open side stand indicator:
- · Please refer to the section 'Warnings';
- 12) Service icon:
- Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".

- 14) Quickshfit status (where implemented):
- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- Please refer to the section 'Warnings';



Key Music page

N.B

TO BE ABI

TO BE ABLE TO USE THE SPECIFIC FUNCTIONS ON THIS PAGE, IT

IS FIRST NECESSARY TO PAIR A SMARTPHONE WITH THE VEHICLE. FOR THE PAIRING PROCEDURE, PLEASE REFER TO THE SECTION 'PAIRING SMARTPHONES'.

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Current track;
- 3) Key Display page:
- the white highlighted box represents the displayed page.
- 4) Riding mode selected:
- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected (grey icon):
- On this page the traction control (ATC) level is only displayed, it is NOT possible to change it.
- 6) Indication regarding the speed limit applicable on the current road (if Aprilia MIA control unit present);
- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in °C or °F);:
- To set the unit of measurement, please refer to "Advanced Functions".

- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".
- 10) Coolant status indication:
- Please refer to the section 'Warnings';
- 11) Open side stand indicator:
- Please refer to the section 'Warnings';
- 12) Service icon:
- Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".
- 14) Quickshfit status (where implemented):
- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- Please refer to the section 'Warnings';
- 16) Range (displayed in km or mi);
- To set the unit of measurement, please refer to "Advanced Functions".

- 17) Fuel gauge:
- Please refer to the section 'Warnings';
- 18) Music playback control panel:
- Briefly pressing the MODE LEFT (3) button starts the music playback, pressing it again pauses the playback;
- Pressing the MODE UP (1) button briefly switches to the next music track;
- Pressing the MODE DOWN (3) button briefly switches to the previous music track;
- A long press of the MODE UP (1) or MODE DOWN (2) buttons with music playback in progress activates the volume control:
- Pressing the MODE UP (1) button briefly turns up the volume;
- Pressing the MODE DOWN (3) button briefly turns down the volume.





Key Phone page

N.B

TO BE

TO BE ABLE TO USE THE SPECIFIC FUNCTIONS ON THIS PAGE, IT

IS FIRST NECESSARY TO PAIR A SMARTPHONE WITH THE VEHICLE. FOR THE PAIRING PROCEDURE, PLEASE REFER TO THE SECTION 'PAIRING SMARTPHONES'.

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h)::
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Information pop-ups regarding calls;
- 3) Key Display page:
- the white highlighted box represents the displayed page.
- 4) Riding mode selected:
- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected (grey icon):
- On this page the traction control (ATC) level is only displayed, it is NOT possible to change it.
- 6) Indication regarding the speed limit applicable on the current road (if Aprilia MIA control unit present);
- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in °C or °F);:
- To set the unit of measurement, please refer to "Advanced Functions"
- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".
- 10) Coolant status indication:
- Please refer to the section 'Warnings';

- 11) Open side stand indicator:
- · Please refer to the section 'Warnings';
- 12) Service icon:
- Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".
- 14) Quickshfit status (where implemented):
- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- Please refer to the section 'Warnings';
- 16) Range (displayed in km or mi);
- To set the unit of measurement, please refer to "Advanced Functions".
- 17) Fuel gauge:
- · Please refer to the section 'Warnings';
- 18) Call management control panel:

### Incoming call:

- Accept the call: press MODE LEFT (1) briefly.
- Accept the call: press MODE RIGHT (2) briefly



### Call in progress:

- End call: press and hold MODE RIGHT (3).
- Turn up the volume: press MODE UP (4) briefly.
- Turn down the volume: press MODE DOWN (5) briefly.



#### Missed call:

- Delete a missed call: press MODE RIGHT (6) briefly.
- Recall: press MODE LEFT (7) briefly.



 Interrupt an outgoing call: press and hold MODE RIGHT (8).



#### Second call:

If the smartphone paired with the "Aprilia MIA" system is capable of receiving a second incoming call, a number of functions for managing a second call are available, as shown below>

- Accept the incoming call (1) and put the current call (2) on hold: press MODE LEFT briefly.
- Reject the incoming call (1) and continue the current call (2): press and hold MODE LEFT.
- Switch between calls: press MODE LEFT briefly (if the second call was accepted).

- End the current call and switch to the paused call: press and hold MODE LEFT (if the second call was accepted).
- Turn up the volume: press MODE UP (3) briefly.
- Turn down the volume: press MODE DOWN (4) briefly.



## Navi page (if present)



**Key Navi page** 

N.B

B

TO BE ABLE TO USE THE SPECIFIC FUNCTIONS ON THIS PAGE, IT SMARTPHONE WITH THE VEHICLE. FOR THE PAIRING PROCEDURE. PLEASE REFER TO THE SECTION 'PAIRING SMARTPHONES'.

The 'APRILIA MIA' system, in conjunction with the 'APRILIA' app, allows GPS directions to be shown on the digital display via icons, distance data and travel times, with which the desired destination can be reached. Consult the navigation guide by accessing the "APRILIA" application with your account.

- 1) Vehicle speed (speedometer) (viewable in km/h or in mi/h);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 2) Navigator control panel:
- The navigation is started by pressing and holding the MODE LEFT (3) button.
- When navigation has started, a further long press of the MODE LEFT (3) button stops navigation.



- 3) Key Display page:
- the white highlighted box represents the displayed page.
- 4) Riding mode selected:

- For Riding mode selection, please refer to the "Mapping selection" section.
- 5) Traction control level selected (grey icon):
- On this page the traction control (ATC) level is only displayed, it is NOT possible to change it.
- 6) Indication regarding the speed limit applicable on the current road (if Aprilia MIA control unit present):
- 7) Gear engaged (only visible when the engine is running);
- 8) Ambient temperature (shown in °C or °F);:
- To set the unit of measurement, please refer to "Advanced Functions".
- 9) Clock (displayed in 24 or 12 hour format, without the AM / PM indication);
- To set the mode, please refer to the section "Advanced Functions".
- 10) Coolant status indication:
- Please refer to the section 'Warnings';
- 11) Open side stand indicator:
- · Please refer to the section 'Warnings';
- 12) Service icon:
- Please refer to the section 'Warnings';
- 13) Rear wheel ABS icon switched off:
- To deactivate/activate the ABS system at the rear wheel, please refer to the section "a-PRC system".
- 14) Quickshfit status (where implemented):

- For more information, please refer to the section "a-PRC System".
- 15) Tyre pressure alarm (can be displayed where applicable):
- Please refer to the section 'Warnings';
- 16) Range (displayed in km or mi);
- To set the unit of measurement, please refer to "Advanced Functions".
- 17) Fuel gauge:
- · Please refer to the section 'Warnings';
- 18) Time remaining to destination;
- 19) Distance remaining to destination (displayed in km or mi);
- 20) Next manoeuvre (in case of a roundabout, the number of the exit to be taken is displayed in the centre);
- 21) Distance to the next manoeuvre
- 22) Manoeuvre following the next manoeuvre (21);
- 23) Distance between the two manoeuvres (21) and (22);
- 24) Destination address;
- 25) Navigation icons:

#### Arrival:



#### Route recalculation:



## Lost signal:



Speed cameras:



## Warnings

N.B

B

THE ICONS SHOWN BELOW CHANGE POSITION, BUT NOT MEANING, DEPENDING THE PAGE OF THE DISPLAY. FOR THE EXACT POSITION, IN RELATION TO THE DISPLAYED PAGE, PLEASE REFER TO THE IMAGES ON THE PREVIOUS PAGES.

## **ICE HAZARD WARNING**

When the outside temperature is less than or equal to 3 °C (37.4 °F), down to a minimum of -15 °C (5 °F), the ambient temperature value will turn blue to indicate the possibility of icy road surfaces.



#### **ENGINE TEMPERATURE ICON**

**COLD**: When the engine is started for the first time, and until the coolant reaches operating temperature, the engine temperature icon will be blue and the word COLD will appear beside it.

The tachometer will show the revs between 6,000 and 10,000 rpm also in blue, indicating NOT to use the engine at these revs until the correct operating temperature is reached.



**OK**: Once the coolant reaches operating temperature, the engine temperature icon will turn white and OK will appear beside it.

Engine speeds between 6,000 and 10,000 rpm will also turn white, indicating that it is now possible to use the engine at these speeds as well.



**HOT**: If the coolant reaches an excessively high temperature, the engine temperature icon will turn red, the word HOT will appear beside it, and both will flash to indicate an emergency situation.



**WARNING** 



STOP THE VEHICLE AND WAIT FOR THE ENGINE TO COOL.

#### WARNING



ORDER TO PROTECT THE **ENGINE. THE ELECTRONIC CONTROL** UNIT HAS A STRATEGY WHICH. THE COOLANT TEMPERATURE PARTICULARLY HIGH, COULD LEAD TO THE ENGINE SHUTTING DOWN AFTER A LONG PERIOD WITH THE VEHICLE STATIONARY AND THE GEARBOX IN NEUTRAL. THIS STRATEGY, FOR SAFETY REASONS, WILL NEVER BE ACTIVATED IF THE VEHICLE IS IN MOTION OR IF THE **GEARBOX IS NOT IN NEUTRAL.** 

#### SIDE STAND DOWN ICON

When the side stand down icon lights up, this indicates that the side stand is open. This involves the immediate switching off of the engine, should it be started, to ensure the safety of passengers. In case you want to start the engine if the light is on, the gearbox must be in neutral.



#### **MAINTENANCE ICON**

When a maintenance interval threshold is exceeded, an amber icon with a spanner is shown

This indicator may be reset once the scheduled service has been completed by an authorised Aprilia Dealer or service centre.



#### **REAR WHEEL ABS ICON DEACTIVATED**

When the ABS on the rear wheel is deactivated, a pop-up appears in the display with the words "Rear ABS Disabled" and the dedicated warning light switches on. After 5 seconds, the pop-up disappears, leaving only the warning light active.

For more information on the ABS system and its activation/deactivation, please refer to the "a-PRC System" section.



## QUICK SHIFT STATUS ICON (where required)

This icon provides information on the status of the quick shift system (AQS) for gear shifting, the icon will change colour according to the status of the system:

WHITE ICON: The system is active;

**GREY ICON**: The system has been manually disabled by the user:

**ORANGE ICON**: The system is temporarily unavailable (e.g. due to too high RPM, first gear engaged, etc.)

**RED ICON**: the system is disabled due to a problem. In this case carry out the following operations:

- stop the vehicle;
- · perform key OFF-ON;
- exceed a speed of 5km/h (3.1 mph), if the light goes out the system is now active:

If the icon continues to be red, please contact an **OFFICIAL Aprilia DEALER**.



## TYRE PRESSURE ICON (if present);

When the TPMS (Tire Pressure Measurement System) warning light comes on, it indicates a tyre pressure fault; It will therefore be necessary to stop as soon as possible to check, and restore, the correct tyre pressure.

For more information, please refer to the section "TYRES".



N.B



WITH EACH KEY "ON", THE TPMS ICON WILL FLASH UNTIL THE SYSTEM DETECTS A VALID SIGNAL FROM BOTH SENSORS. THE FLASHING CAN LAST UP TO THREE MINUTES.

## **FUEL LEVEL**

The display shows the fuel level in the tank, represented by a bar with a series of six marks.



When the fuel level falls below the second mark, the fuel pump icon turns orange to indicate "reserve" status and an orange popup is displayed with the text "Fuel reserve"; such a pop-up disappears after 5seconds.

If at the next key "ON" the vehicle is still in reserve, the "Fuel reserve" pop-up is displayed for the first 5 seconds and then disappears.



N.B

B

IF THE RESERVE FUEL WARNING LAMP FLASHES AT KEY-ON, THIS INDICATES THAT THE FUEL LEVEL SENSOR IS DISCONNECTED.

IN THE EVENT OF A FUEL LEVEL SENSOR FAILURE OCCURRING WHILE THE VEHICLE IS IN USE, THE LEVEL INDICATOR BARS WILL NO LONGER BE SHOWN ON THE DIGITAL DISPLAY. IN THIS CASE, TAKE THE VEHICLE TO AN Official Aprilia Dealership.

WARNING



INTENSE OR PERFORMANCE USAGE WHILE IN RESERVE MAY DAMAGE THE ENGINE.

#### **FUEL RANGE**

Indicates the remaining range that can be covered with the petrol in the tank (displayed in km or mi).



#### **Alarms**

In the event of an anomaly being detected, a red pop-up appears in the digital display, containing text that differs according to the cause of the anomaly. By pressing the "MODE RIGHT" button, the information pop-up is hidden; instead, the display will show the general warning icon to remind you of the presence of a vehicle fault.

Take your vehicle as soon as possible to an Authorised **Aprilia** Dealer.



#### SERVICE ALARM

In case of failure found in the dashboard or in the electronic control unit, the dashboard signals the failure by displaying the word SERVICE and the red general warning light turns on.

If there is an immobilizer failure at ignition, the instrument cluster requests you to enter a user code. If the code is entered correctly, the instrument cluster signals the failure by displaying the word SERVICE and the red general warning light turns on.



#### URGENT SERVICE ALARM

A serious failure is signalled by a fast flashing (two flashes per second) of the

general warning light and by the words URGENT SERVICE on the digital display. Take your vehicle as soon as possible to an Authorised Aprilia Dealer. In these cases. the control unit activates a safety procedure that limits the vehicle performance so that the rider is able to reach an Authorised Aprilia Dealer at low speed. Depending on the type of failure, performance can be limited in three ways: a) by reducing the maximum torque produced: b) by keeping the engine at idle speed but slightly accelerated (during this operation. the throttle control is disabled); c) the engine rpm is steady at around 3000 rpm; Under these conditions the throttle control provides limited management of the torque.



#### Oil failure

If a fault is detected with the oil pressure, the digital display shows "ALARM OIL PRESSURE".



#### WARNING



THE SIGNAL IS ACCOMPANIED BY THE RED GENERAL WARNING LIGHT FLASHING. STOP THE VEHICLE AND IMMEDIATELY CONTACT AN Approved Aprilia Dealer.

If a fault is detected with the oil pressure sensor, the digital display shows "ALARM OIL SENSOR"



#### WARNING



THE WARNING IS ACCOMPANIED BY THE RED GENERAL WARNING LIGHT FLASHING. IT IS NECESSARY TO VISIT AN official Aprilia Dealer AS SOON AS POSSIBLE.

## Electronic control unit disconnected alarm

If no connection is detected, the instrument panel indicates this anomaly by displaying the "ALARM CAN ECU DISCONNECTED" text.



#### N.B



THE MESSAGE "ALARM CAN ECU DISCONNECTED" REMAINS ON THE DIGITAL DISPLAY AND THE HAZARD WARNING LIGHTS WILL CONTINUE TO FLASH (TO WARN OTHER ROAD

USERS BEHIND THE VEHICLE OF POTENTIAL DANGER) UNTIL THE RIDER ACTIVATES THE RIGHT HAND TURN SIGNAL TO INDICATE THAT THEY ARE ABOUT TO PULL OVER AND STOP.

#### ATC alarm disabled

The "Alarm ATC disabled" alarm appears if a problem occurs that causes the traction control ATC system to be disabled.



**ATTENTION** 



DRIVE CAREFULLY AND IMMEDIATELY CONTACT AN Official Aprilia Dealer.

"CAN BUS OFF" electronic control unit disconnected alarm

If no connection is detected, the instrument panel indicates this anomaly by displaying the "ALARM CAN BUS OFF" text.



## Vehicle configuration alarm

In the event that the vehicle's ECU loses its configuration data, the dashboard will display the "Vehicle not configured" alarm to indicate that it needs to be reconfigured by an Official **Aprilia** Dealer.



#### TPMS ontrol unit disconnected alarm

If the vehicle is no longer receiving signals from the TPMS (Tire Pressure Management System) control unit, the dashboard will display the alarm "Alarm CAN TMPS disconnected". No tyre status information

will be displayed until the fault is resolved and communication between the vehicle control unit and the TPMS control unit is restored



#### TPMS control unit configuration alarm

The "Alarm TPMS not configured" indicates that the TPMS control unit must be configured by an Official **Aprilia** Dealer in order to communicate with the vehicle's control unit. As long as this error is present, it will not be possible to display information regarding the state of the tyres.



## mapping selection

The vehicle control unit provides 3 different "riding modes" for managing the electronic throttle and engine:

- ECO
- SPORT
- RAIN

The riding mode **ECO** is designed for daily use with no sport settings, the output is smooth and the engine management is adjusted to optimise consumption.

The riding mode **SPORT** is designed for sport use, the output is more aggressive and the throttle response quicker than in ECO mode.

The **RAIN** riding mode is intended for use on surfaces with poor traction. The engine response is smooth, the throttle response less responsive and the traction control is set at maximum level.

To cycle through the different riding modes, press the specific button on the right hand handlebar control set briefly. Riding mode selection can be made on any page of the digital display being viewed.



N.B

B

DIFFERENT RIDING MODES MAY ALSO BE SELECTED ON THE FLY WHILE THE VEHICLE IS MOVING, PROVIDED THAT THE THROTTLE GRIP IS RELEASED.

**MODES ALSO** RIDING MAY BE PRESELECTED WHILE THE THROTTLE IS OPEN. IN THIS CASE. THE NEW MODE IS ONLY EFFECTIVELY IMPLEMENTED WHEN THE THROTTLE IS CLOSED AGAIN. THE ICON FLASHES WHEN A NEW MODE IS PRESELECTED AND PENDING IMPLEMENTATION.

N.B



IF THE THROTTLE IS OPENED WHILE THE NEW RIDING MODE IS SHOWN IN FLASHING MODE ON THE DISPLAY (I.E. MODE IS PRESELECTED ONLY AND PENDING IMPLEMENTATION BY THE ECU), THE PRESELECTED NEW RIDING MODE WILL NOT BE EFFECTIVELY IMPLEMENTED UNTIL THE THROTTLE GRIP IS RELEASED.

IF A NEW RIDING MODE IS SELECTED WHILE THE THROTTLE IS OPEN, THE RIDING MODE REQUESTED WILL BE SHOWN IN FLASHING MODE UNTIL THE THROTTLE GRIP IS RELEASED.

N.B

B

IF THE REQUESTED RIDING MODE CONTINUES TO BE DISPLAYED IN FLASHING MODE, THIS MEANS THAT NOT ALL THE CONDITIONS NECESSARY FOR IMPLEMENTATION OF A NEW MODE ARE MET, E.G.: THROTTLE OPEN, CLUTCH LEVER IN USE ETC.

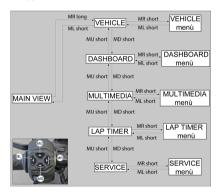
## **Advanced functions**

With the vehicle stationary, pressing and holding the MODE RIGHT (4) button allows access to the user menu, regardless of which page of the display is being viewed.

To return to the display page, briefly press the MODE SET (1) button.



The flowchart below represents the menu structure, which can be navigated using the control buttons on the left-hand steering wheel.



The user menu is composed of the following entries:

- 1) Vehicle
- 2) Instrument cluster

- 3) Multimedia
- 4) Lap timer
- 5) Service

By briefly pressing the MODE UP (2) and MODE DOWN (3) buttons, it is possible to scroll through the items by positioning the red bar over the desired one. Once the bar is positioned, briefly press the MODE RIGHT button (4) to enter it.

Press the MODE SET button briefly to go back to the main menu.



## 1) Vehicle

The following items can be found within the "Vehicle" menu:

- 1.1) Shift light
- 1.2) AQS down
- 1.3) Calibration

## 1.1) Shift light

This function allows you to set the rpm threshold. When exceeded, the tachometer bar will start flashing. The function is only active in ROAD and RACE modes.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the threshold.

Press the MODE LEFT button briefly to return to the main menu.



## 1.2) AQS Down

This function may be used to enable or disable the automatic matching system allowing downshifts without using the clutch.

Highlight the function in red using the MODE UP or MODE DOWN buttons and briefly press the MODE RIGHT to change the activation state (on-off).

Press the MODE LEFT button briefly to return to the main "MENU".



## 1.3) Calibration

When the Calibration function is selected (with the vehicle at a standstill), once calibration is activated by pressing MODE RIGHT briefly to the right, a screen appears with the following description at the bottom left of the display:

Calibration running Speed not correct



To calibrate the a-PRC system (Aprilia Performance Ride Control), ride the vehicle on a straight section of level road in the second gear at a speed of 40 +/- 2 km/h (24.85 +/- 1.24 mph) for about 10 seconds.

The message "Calibration - Hold speed" appears on the digital display.



If calibration is completed successfully, the message "Calibration done Key OFF (60s)" is displayed.



N.B



WHEN THE TEXT "Calibration done Key OFF wait 60 seconds" APPEARS ON THE DISPLAY, STOP THE VEHICLE AND TURN THE IGNITION TO KEY-OFF FOR AT LEAST 60 SECONDS TO COMPLETE CALIBRATION.

THIS ALLOWS THE CALIBRATION TO BE STORED IN THE MEMORY.

NB

B

THE CALIBRATION PROCEDURE IS USED TO OPTIMISE a-PRC FUNCTIONALITY IN THE EVENT OF CHANGING TYRE TYPE OR FINAL DRIVE RATIO (PINION-SPROCKET COMBINATION).

IF THE VEHICLE IS FITTED WITH TYRES OTHER THAN THOSE INDICATED IN THIS USE AND MAINTENANCE MANUAL, THE LEVEL SETTINGS OF THE SYSTEM MAY NEED TO BE MODIFIED IN ORDER TO OBTAIN THE SAME BEHAVIOUR AS BEFORE.

N.B

B

DURING CALIBRATION, ATC IS AUTOMATICALLY DEACTIVATED (IF PREVIOUSLY ACTIVATED).

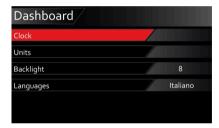
TURN THE IGNITION SWITCH OFF TO ABORT THE CALIBRATION PROCEDURE.

### 2) Instrument cluster

The following items can be found within the "Dashboard" menu:

- 2.1) Clock
- 2.2) Units
- 2.3) Backlight
- 2.4) Languages

Once you have entered the various functions, to return to the "Dashboard" menu, briefly press the MODE LEFT button.



#### 2.1) Clock

The "Clock" menu contains the following options:

- 2.1.1) Hours
- 2.1.2) Minutes

2.1.3) 12 H or 24 H mode (12 H or 24 H display)

The functions available in the "Clock" menu are described in the following sections.



## 2.1.1) Hours (Hours) / 2.2.2) Minutes (Minutes)

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the hour or minute value by increments. Once it reaches the maximum value, the unit starts again from zero.



## 2.1.3) 12 H or 24 H mode (12 H or 24 H display)

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the clock format to 12 or 24 H



#### 2.2) Units

This menu allows you to change the settings for displaying the units and is divided as follows:

- 2.2.1) Speed
- 2.2.2) Fuel consumption
- 2.2.3) Temperature
- 2.2.4) Pressure (where applicable)

The functions available in the "Units" menu are described in the following sections.



## 2.2.1) Speed

This function may be used to change the unit of measurement used for speed.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the measurement unit to km/h or mph in a cyclic manner.

Press the MODE LEFT button briefly to return to the "Dashboard" menu.



N.B

B

IF THE UNIT OF MEASURE SET AT THE FACTORY HAS BEEN CHANGED, THE SPEED'S UNIT OF MEASURE WILL FLASH FOR 30 SECONDS EACH TIME THE KEY IS ENGAGED.

#### 2.2.2) Fuel consumption

This function may be used to change the unit of measurement used for fuel consumption.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change

the unit of measurement to: km/l - l/100 km - mpg (UK) - mpg (USA), in a cyclic manner.

Press the MODE LEFT button briefly to return to the "Dashboard" menu.



## 2.2.3) Temperature

This function may be used to change the unit of measurement used for temperature.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press of the MODE RIGHT button to change the unit of measurement to °C - °F in a cyclic manner.

Press the MODE LEFT button briefly to return to the "Dashboard" menu.



## 2.2.4) Pressure (where applicable)

This function may be used to change the unit of measurement used for tyre pressure.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the unit of measurement to bar - psi in a cyclic manner.

Press the MODE LEFT button briefly to return to the "Dashboard" menu.

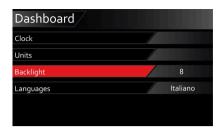


## 2.3) Backlight

This function allows you to change the backlight of the digital display, from a minimum value of 1 to a maximum value of 10.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the intensity value by increasing it. Once it reaches the maximum value, the intensity restarts from zero.

Press the MODE LEFT button briefly to return to the main menu.

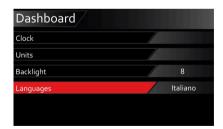


## 2.4) Languages

This function may be used to change the dashboard instrument panel display language.

Highlight the function in red using the MODE UP or MODE DOWN buttons, then briefly press the MODE RIGHT button to change the language to: English - Italian - French - German - Spanish, in a cyclic manner.

Press the MODE LEFT button briefly to return to the main menu.



## 3) Multimedia

The following items can be found within the "Multimedia" menu:

#### 3.1) Devices pairing

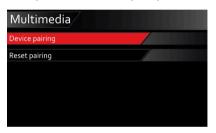
## 3.2) Reset pairing

Press the MODE LEFT button briefly to return to the main menu.

#### 3.1) Devices pairing

A short press on the MODE RIGHT button activates the smartphone pairing function with the vehicle.

Please refer to the section "Pairing Smartphones" for the complete procedure.



## 3.2) Reset pairing

The "Reset pairing" menu allows to delete and consequently disconnect the smartphone associated with the vehicle.

By briefly pressing the MODE RIGHT button, the function can be activated and the associated device disconnected.



## 4) Lap timer (Lap times)

By briefly pressing the MODE RIGHT button, it is possible to access the recordings of lap times, **ONLY WITH THE VEHICLE AT A STANDSTILL**.

This function allows you to display the memorised laps and the relative specific information, including:

- Number of the lap.
- Lap time.
- Maximum speed.

Use the MODE UP and MODE DOWN buttons to scroll through all the laps times recorded.

The "\*" before the lap number identifies the best recorded time.

A long press on the MODE RIGHT button resets the single highlighted time to zero, while a long press on the MODE LEFT button resets all recorded times to zero.

To exit the "Lap timer" (lap times) display, briefly press the MODE LEFT button.

LAP	TOP SPEED	TIME
01	173 km/h	01′40″50
02	185 km/h	01′39″53
03	192 km/h	01′38″24
04*	197 km/h	01′37″95
05	191 km/h	01′38″64
06	187 km/h	01′38″05

## 5) Service (Service)

The following items can be found within the "Service" menu:

- 5.1) Software (software version)
- 5.2) Graphic (graphic version)
- 5.3) Bootloader (firmware version)

Press the MODE LEFT button briefly to return to the main menu



### **Smartphone Association**

The vehicle is equipped with the "APRILIA MIA" accessory, which communicates with the smartphone via Bluetooth. Using the special "APRILIA" application installed

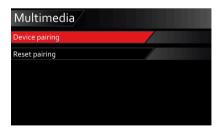
on the smartphone, it is possible to exchange data with the vehicle and manage multimedia contents.

Once a connection is established correctly between the vehicle and smartphone, the following functions can be directly managed by the digital display of the vehicle:

- call management;
- music playback;
- · GPS navigation.

Search for the "APRILIA" application from the Play Store or App Store, install it on your smartphone and register your account following the instructions provided by the application. Select "allow" for the position and notifications management requests.

On the vehicle, within the dashboard menu, select 'MULTIMEDIA' (refer to 'ADVANCED FUNCTIONS'), then select 'Device pairing'. Press the MODE RIGHT button briefly to enable the function.



Enable the Bluetooth search on your smartphone and select the 'BT ROUTER' device. If required, enter the password

'0000' and press pair, the device 'BT ROUTER' will now appear in the list of paired devices. Then wait for the vehicle to automatically connect the smartphone, **DO NOT** force the connection from the phone.

The smartphone icon, visible on the 'Vehicle' page, signals the successful association.



Allow the sharing of the phonebook and notifications when prompted by the 'APRILIA' application, these are required to display the caller's name on the display, the music playing and navigation information.



N.B



UPON THE FIRST PAIRING BETWEEN THE DISPLAY AND SMARTPHONE, MORE TIME MAY BE REQUIRED FOR THE SYNCHRONIZATION OF THE PHONE BOOK.

THE CONNECTION BETWEEN THE SMARTPHONE AND VEHICLE WILL BE SIGNALLED BY THE LIGHTING OF THE SMARTPHONE ICON ON THE DISPLAY.

If pairing between Smartphone and Vehicle is not successful, proceed as follows:

- restart the smartphone;
- turn the ignition key to "OFF" and then to ON":
- wait until the end of the animation on the display;
- If the smartphone icon on the page "Vehicle" is not illuminated after approximately 1 minute, proceed as follows:
- open "APRILIA" and select "Connect";
- select the device "BT ROUTER" from the list of suggestions and follow the instructions:
- once the Application is connected, select the Bluetooth icon that appears on the main screen;
- · open the Bluetooth devices menu;

- select "Configure" and delete all paired devices, leaving the current device as the last one;
- make sure that the smartphone icon in the "Vehicle" page is switched off;
- turn the ignition key to "OFF" and then to "ON", then wait until the animation on the display ends;
- the display must show the pop up "No connected device";
- repeat the pairing procedure from the start.

A wireless headset <u>must be connected to the phone</u> for proper audio transmission. The MIA system does not support the connection of the headset to the vehicle, but allows direct communication with the mobile device.

#### N.B



PLEASE NOTE THAT TO CONNECT THE APP TO THE VEHICLE AGAIN, THE FOLLOWING WILL BE NECESSARY:

- ON iOS, DELETE THE PREVIOUSLY INSTALLED APP AND REINSTALL IT.
- ON ANDROID, SIMPLY DELETE
  THE APPLICATION DATA FROM
  THE APP MANAGEMENT MENU
  (THIS WILL RETURN THE
  APPLICATION TO THE INITIAL

- CONDITION AND THE LOGIN AND FIRST CONNECTION TO THE VEHICLE MUST BE PERFORMED AGAIN).
- IN CASE OF CONNECTION TO A NEW VEHICLE, IT IS NECESSARY TO REMOVE THE PREVIOUS BT-ROUTER FROM THE ASSOCIATED DEVICES.

## Required operation for iOS 10.0 versions or higher:

If the "BT-ROUTER" device does not automatically request permission to share notifications, the following procedure is necessary:

- Enter the menu: "Settings" > "Bluetooth"
   > "Phone devices":
- · select 'BT ROUTER':
- select 'Info';
- enable options manually.

## **Key switch**

## **Ignition** switch

The ignition switch is on the front of the fuel tank where the steering headstock is.

The vehicle is supplied with two keys (one is the spare key).

The lights can only be switched off with the ignition switch turned to OFF.

N.B



THE KEY IS USED IN THE IGNITION/STEERING LOCK SWITCH, THE KEYHOLE FOR THE FUEL TANK CAP, AND FOR THE SADDLE COMPARTMENT.

N.B

B

THE LIGHTS COME ON AUTOMATICALLY AFTER THE ENGINE STARTS.

N.B

B

KEEP THE SPARE KEY IN DIFFERENT PLACE, NOT WITH THE VEHICLE.

**LOCK (1):** The steering is locked. It is not possible to start the engine or switch on the lights. The key can be extracted

**OFF (2):** The engine and lights cannot be set to work. The key can be extracted.

**ON (3):** The engine can be started. The key cannot be extracted.



## **Engaging the steering lock**

To lock the steering:

- · Turn the handlebar fully to the left.
- Turn the ignition switch to "OFF".
- Push the key in and turn it anticlockwise (to the left), and steer the handlebar slowly until the key engages in the "LOCK" position.
- · Extract the key.

#### **ATTENTION**



TO PREVENT THE LOSS OF CONTROL, NEVER TURN THE KEY TO THE "LOCK" POSITION WHILE THE VEHICLE IS RUNNING.



## Horn button

Press it to activate the horn.



## Turn indicator switch

Move the switch to the left to indicate a left turn; move the switch to the right to indicate a right turn. Pressing the switch deactivates the turn indicator.



#### **ATTENTION**



IF THE TURN SIGNAL INDICATOR LAMP FLASHES RAPIDLY, THIS MEANS THAN ONE OR BOTH OF THE TURN SIGNAL LED MODULES HAVE FAILED.

The turn indicators have a self-cancelling function that implements the following logic:

With the vehicle at standstill (speed = zero), the turn indicators continue flashing indefinitely.

With the vehicle in motion, the turn signals self-cancel when one the two following conditions is met:

- After a time (t) = 40 sec.
- After riding 500 m (0.31 mi)

If the vehicle speed reaches zero during this period, the time and distance counts are

reset and start again from zero when the vehicle starts moving once again.

Switching on the opposite side turn indicators without pressing the switch in the intermediate reset position causes both the time and distance counters to reset and recommence from zero.

## Light switch

- the switch in the middle position (2) keeps the low beam light on.
- the switch in position (1) switches on the high beam continuously.
- the switch in position (3) causes the high beam to flash in the event of danger and/or emergency.



## High beam flash switch

Press the button into position (3) to flash the high beam headlamp to signal danger and/ or an emergency.

Releasing the switch deactivates the high beam flash and remains the low beam lights active...



## Starter button

By pressing the button on the right side handlebar, the starter motor spins the engine.

The following conditions are necessary to permit engine start:

- If the vehicle is in neutral with the side stand extended: apply the front or rear brake and simultaneously press the starter button on the right hand handlebar control set.
- If any gear is engaged: pull the clutch lever, apply the front or rear brake and simultaneously press the starter button on the right hand handlebar control set.



## **Engine stop switch**

#### **ATTENTION**



DO NOT OPERATE THE ENGINE STOP SWITCH WHILE RIDING THE VEHICLE.

It acts as a safety or emergency switch.

- Press and hold the ignition switch in the "KEY ON" (1) position to start the engine:.
- Press the switch to set it to "KEY OFF"(2) to stop the engine.

#### N.B

B

WITH ENGINE OFF AND THE IGNITION SWITCH SET TO «ON» THE BATTERY MAY DISCHARGE.



## Riding mode button

This button is used to select the mapping of the engine management unit and to deactivate/activate the ABS on the rear wheel.

Please refer to the section "a-PRC System" on how to use the button.



## a-PRC system (Aprilia Performance Ride Control)

Aprilia Performance Ride Control is an integrated electronic control system that helps improving the performance and the driver's safety.

a-PRC consists of four systems:

**AEM:** Aprilia Engine Map; **ABS:** Anti-locking system;

ATC: Aprilia Traction Control;

AQS: Aprilia Quick Shift (if fitted).

#### **AEM**

Aprilia Engine Map is a system controlling the vehicle ECU mapping. Three different

mappings are available for vehicle and engine management:

- ECO: mapping for daily use with no sport settings, the output management is smooth and the engine management is adjusted to optimise fuel consumption.
- SPORT: mapping developed for sport setting, the output is more aggressive and the throttle response quicker than in ECO mode.
- RAIN mapping is intended for use on surfaces with poor traction. The engine response is smooth, the throttle response less responsive and the traction control is set at maximum level.

#### ABS

The ABS system improves vehicle control provided that the physical limits of vehicle grip on the road are not exceeded. The rider is fully responsible for riding at a suitable speed based on weather and road conditions, always leaving an appropriate safety margin.

Under no circumstances can the ABS system compensate for the rider's misjudgement or improper use of brakes.

The ABS system operates normally on both wheels, however it can be disabled at the rear, leaving it active on the front wheel only. In this case the "REAR ABS OFF" icon will be shown on the digital display and a pop-

up with the words "Rear ABS Disabled" will appear.



#### Rear ABS deactivation:

- · bring the speed of the vehicle to zero;
- press and hold the 'RIDING MODE' button on the right-hand steering wheel;
- the rear ABS is now deactivated, the relevant icon will be shown on the display.
- To reactivate it, press and hold the 'RIDING MODE' button again.

The rear ABS can be deactivated in each of the three riding modes, once deactivated if the riding mode is changed, the ABS is automatically reactivated.



In the event that rear ABS and ATC are disabled simultaneously, the Pop-up with the words "Rear ABS and ATC disabled" will appear in the display, the rear ABS OFF icon will be lit, and once the Pop-up has disappeared, the ATC level box will show "ATC -".



#### **ATTENTION**



SWITCHING OFF THE VEHICLE KEEPS THE LAST ABS SYSTEM SETTING ACTIVE AT "KEY OFF". BEFORE RIDING OFF, CHECK THE LEVEL OF CONTROL SELECTED.

N.B



WHEN THE ABS STARTS WORKING, A PULSING IS FELT ON THE BRAKE LEVER.

## **ATTENTION**



THE ANTI-LOCK BRAKING SYSTEM OF THE WHEEL DOES NOT PREVENT FALLS WHILE CORNERING.

AN EMERGENCY BRAKING WITH THE VEHICLE INCLINED, HANDLEBAR TURNED, ON UNEVEN OR SLIPPERY ROADS, OR WITH POOR GRIP, CREATES A LACK OF STABILITY DIFFICULT TO HANDLE. RIDE CAREFULLY AND SENSIBLY AND ALWAYS BRAKE GRADUALLY.

DO NOT SPEED RECKLESSLY. THE VEHICLE GRIP ON THE ROAD IS SUBJECT TO LAWS OF PHYSICS WHICH NOT EVEN THE ABS SYSTEM CAN ELIMINATE.

When the vehicle is started, after the initial instrument panel check cycle, the ABS warning lamp flashes until the vehicle reaches a speed of 3.1 mph (5 km/h), after which it goes out.



If the ABS warning lamp lights steadily or continues to flash even after exceeding a speed of 5 km/h (3.1 mph), this means that a fault has been detected and that the ABS system is disabled.

In this case carry out the following operations:

- stop the vehicle;
- Key OFF-ON;
- ride the vehicle to a speed above 5 km/ h (3.1 mph): the ABS warning light must be turned off:
- the ABS system is working.

If the ABS disabled indication remains:

N.B



SHOULD THIS OCCUR, CONTACT AN Aprilia Approved Dealer.

#### **ATTENTION**



IN THE EVENT OF A PROLONGED ROTATION OF THE REAR WHEEL WITH THE FRONT ONE LOCKED (BURNOUT, MOTORCYCLE PLACED ON MIDDLE STAND, ETC.) THE SYSTEM CAN BE AUTOMATICALLY DEACTIVATED WHEN THE ABS and a-PRC INDICATOR LIGHT IS ON AND STEADY.

TO REACTIVATE, TURN THE IGNITION SWITCH OFF AND THEN ON AGAIN AND SELECT THE REQUIRED SETTING.

## **ATTENTION**



THE SAFETY PROVIDED BY THE ABS DOES NOT, IN ANY CASE, JUSTIFY RISKY MANOEUVRES. EVEN THOUGH THE ABS SYSTEM ENSURES GREATER VEHICLE CONTROL IN THE EVENT OF EMERGENCY BRAKING, ALWAYS OBSERVE THE CORRECT MINIMUM SAFETY DISTANCE FROM THE VEHICLE IN FRONT OF YOU.

## **ATTENTION**



THE ABS SYSTEM ACTS ON BOTH THE FRONT AND REAR WHEELS BY OBTAINING INFORMATION FROM THE ROTATION/ LOCKING TONE WHEELS. ALWAYS CHECK THAT THE TONE WHEEL IS CLEAN, AND REGULARLY CHECK THAT THE DISTANCE FROM THE SENSOR IS CONSTANT ON ALL 360 DEGREES. SHOULD THE WHEELS BE REMOVED AND REFITTED. IT IS VERY IMPORTANT TO CHECK THAT THE DISTANCE BETWEEN TONE WHEEL AND SENSOR IS THE ONE SPECIFIED. FOR CHECKING AND ADJUSTMENT. CONTACT AN Authorised Aprilia Workshop.

## **ATTENTION**





WHERE THE MOTORCYCLE HAS AN ABS SYSTEM, NON-APPROVED BRAKE PADS AND TYRES COMPROMISE SMOOTH BRAKING, DRASTICALLY REDUCING DRIVING SAFETY.

N.B



a-PRC SYSTEM SENSORS, WITH HIGH PRECISION OF READING THE TONE WHEELS, CAN GENERATE, WITH MOTORCYCLE AT STANDSTILL AND ENGINE RUNNING, A km/h (mi) SPEED INDICATION IN THE DIGITAL DISPLAY.

SUCH PERFORMANCE IS NORMAL AND DOES NOT CAUSE MALFUNCTIONING OF THE a-PRC SYSTEM.

#### **ATTENTION**



IF THE GAP FOR ONE OR BOTH SENSORS IS NOT WITHIN THE TOLERANCE INDICATED BELOW, TAKE THE MOTORCYCLE TO AN Approved Aprilia Dealer

Distance between tone wheel and front sensor 0.5 - 2.00 mm (0.020 - 0.079 in)

Distance between tone wheel and rear sensor 0.5 - 2.00 mm (0.020 - 0.079 in)

## **Aprilia Traction Control**

#### Traction control:

a system designed to help the rider control wheelspin.

ATC is a system that monitors and, if necessary, limits rear wheelspin under acceleration to increase vehicle stability.

While ATC improves vehicle control, it does not allow the physical handling limits of the vehicle to be exceeded. The rider is fully responsible for riding at a suitable speed based on weather and road conditions, always leaving an appropriate safety margin.

Under no circumstances can ATC compensate for any rider error or improper use of the throttle.

#### **ATTENTION**



THE TRACTION CONTROL SYSTEM CANNOT PREVENT FALLS WHILE CORNERING.

ACCELERATING SUDDENLY WHILE THE VEHICLE IS INCLINED OR WITH THE HANDLEBARS TURNED WILL PUT THE VEHICLE IN AN UNSTABLE STATE THAT IS EXTREMELY DIFFICULT TO RECTIFY.

DO NOT SPEED RECKLESSLY. LIMITS OF GRIP ARE DETERMINED BY LAWS OF PHYSICS WHICH EVEN THE ATC SYSTEM CANNOT OVERCOME.

The ATC system also intervenes in an optimal manner during cornering, thus controlling skidding in this driving phase.

## ATC SYSTEM DEACTIVATED MANUALLY

When the vehicle is switched on, after the initial check of the dashboard, if the system is disabled, a pop-up with the words ATC 'Disabled' will appear.



This pop-up will be visible for 5 seconds, then in the relevant box the traction control level will be "ATC - ".



#### ATC SYSTEM ACTIVE

At key-on and after the initial instrument panel check cycle, if the system was active at the last key-off, the a-PRC indicator light flashes until the vehicle exceeds 5 Km/h (3.1 mph), after which it extinguishes.

If the a-PRC indicator light remains constantly lit, this means that a fault has

been detected and the ATC system has been automatically deactivated.

In this case carry out the following operations:

- stop the vehicle;
- Key OFF-ON;
- reactivate the system manually
- ride the vehicle to a speed above 5 km/h (3.1 mph): the a-PRC indicator light should extinguish:
- ATC system working correctly.

If the 'ATC system deactivated' indication persists:

#### N.B



SHOULD THIS OCCUR, CONTACT AN Aprilia Approved Dealer.

## **ATTENTION**



THE ATC SYSTEM ACTS ON THE REAR WHEEL ON THE BASIS OF INFORMATION RECEIVED FROM TONE WHEELS INSTALLED ON BOTH WHEELS. ALWAYS CHECK THAT THE TONE WHEELS ARE CLEAN, AND

REGULARLY CHECK THAT THE GAP BETWEEN THE TONE WHEEL AND THE SENSOR IS CONSTANT AROUND THE ENTIRE CIRCUMFERENCE OF THE TONE WHEEL ITSELF. SHOULD THE WHEELS BE REMOVED AND REFITTED. IT IS VERY IMPORTANT TO CHECK THAT THE DISTANCE BETWEEN TONE WHEEL AND SENSOR IS THE ONE SPECIFIED. FOR CHECKING AND ADJUSTMENT. CONTACT AN Authorised Aprilia Workshop, THE TRACTION CONTROL SYSTEM CANNOT PREVENT FALLS WHILE CORNERING.

#### **ATTENTION**



IN THE EVENT OF A PROLONGED ROTATION OF THE REAR WHEEL WITH THE FRONT ONE LOCKED (BURNOUT, MOTORCYCLE PLACED ON MIDDLE STAND, ETC.) THE SYSTEM CAN BE AUTOMATICALLY DEACTIVATED WHEN THE ABS and a-PRC INDICATOR LIGHT IS ON AND STEADY.

TO REACTIVATE, TURN THE IGNITION SWITCH OFF AND THEN ON AGAIN AND SELECT THE REQUIRED SETTING.

## N.B



a-PRC SYSTEM SENSORS, WITH HIGH PRECISION OF READING THE TONE WHEELS, CAN GENERATE, WITH MOTORCYCLE AT STANDSTILL AND ENGINE RUNNING, A km/h (mi) SPEED INDICATION IN THE DIGITAL DISPLAY.

SUCH PERFORMANCE IS NORMAL AND DOES NOT CAUSE MALFUNCTIONING OF THE a-PRC SYSTEM

Distance between tone wheel and front sensor 0.5 - 2.00 mm (0.020 - 0.079 in)

Distance between tone wheel and rear sensor 0.5 - 2.00 mm (0.020 - 0.079 in)

The system is normally active, but if it has been deactivated, it must be set to a level other than '-' (OFF) by means of the MODE buttons on the left-hand light switch in order to reactivate it.

Press the MODE UP (1) and MODE DOWN (2) buttons briefly to increase or decrease the ATC level setting from "-" (OFF) to "3" (maximum system control).



#### **ATTENTION**



TO GAIN FAMILIARITY WITH THE ATC SYSTEM, PREFERABLY USE LEVEL "3" TO START WITH, THEN TRY THE OTHER LEVELS TO IDENTIFY WHICH ARE THE BEST SUITED TO YOUR RIDING STYLE AND FOR DIFFERENT ROAD AND WEATHER CONDITIONS.

LEVEL "1" IS RECOMMENDED FOR EXPERT RIDERS IN IDEAL ROAD SURFACE CONDITIONS.

To deactivate the system, set the control level to "-" (OFF).



Once deactivated, the corresponding popup will appear and will be visible for 5 seconds.



In the event that rear ABS and ATC are disabled simultaneously, the Pop-up with the words "Rear ABS and ATC disabled" will appear in the display, the rear ABS OFF icon will be lit, and once the Pop-up has disappeared, the ATC level box will show "ATC -".



## **ATTENTION**



WHEN THE ATC SYSTEM DEACTIVATED, A POPUP WITH THE MESSAGE "ATC DISABLED" IS SHOWN ON THE SCREEN TO WARN THE RIDER THAT THERE IS NO TRACTION CONTROL ASSISTANCE.

THIS POP-UP CLEARS AFTER 5 SECONDS.

#### N.B



WHEN THE BATTERY IS CONNECTED FOR THE FIRST TIME, THE a-PRC INDICATOR LIGHT IS CONSTANTLY LIT (SYSTEM NOT ACTIVE).

Aprilia Quick Shift (where required)

It is a system that allows go up and down the gears without having to use the clutch 'and without changing the position of the throttle grip.

It uses the gear shift sensor signal on the gear lever to shift gears more quickly with a lower decrease in rpm than a traditional gear shift as regards upshifting.

The system is only active above an engine speed: of approximately 3,000 rpm.

#### WARNING



THE CLUTCH MUST BE USED FOR UPSHIFTS AT ENGINE SPEEDS BELOW 3,000 rpm.

#### N.B



THE SYSTEM IS ACTIVE WHEN SHIFTING UP ONLY WITH THE THROTTLE OPEN.

It can operate when downshifting as long as all the required conditions are met, including an rpm less than the maximum threshold, which varies according to the gear. If the downshifting system is not available temporarily for some reason (e.g.

RPM too high, first gear engaged), the instrument panel icon will be orange.



## The saddle

### Passenger saddle removal

- Rest the vehicle on its stand.
- Insert the key in the saddle lock located under the left passenger handle.
- Turn the key clockwise to release the passenger saddle from the lock.
- Lift the front part of the passenger saddle and bring it toward the rear of the vehicle to remove it.



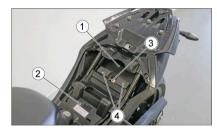
## Rider saddle removal

Remove the passenger seat.

- Lift the rear part of the rider saddle.
- Bring it towards the rear of the vehicle to release it from its mounts and then remove it from the vehicle.



Once the passenger and driver saddles are removed, there is access to the vehicle's glove compartment (1), to the battery (2), to the OBD2 socket (3) and to the secondary fuse boxes (4).



#### Rider saddle installation

 Place the rider's saddle in place, taking care to hook the two front fasteners into the relevant bracket, located between the fuel tank and the battery.  Once correctly attached, press down the rear part of the rider saddle.



## Passenger saddle installation

 Insert the two rear fasteners of the passenger saddle into the corresponding holders on the vehicle's tail fairing.



 Keeping the saddle in position, press downward the front part to engage the lock



#### **WARNING**



BEFORE LOWERING AND LOCKING THE SADDLE, MAKE SURE THAT THE IGNITION KEY HAS NOT BEEN FORGOTTEN IN AN UNSUITABLE POSITION UNDER THE SADDLE.

#### **ATTENTION**



BEFORE SETTING OFF, MAKE SURE THAT THE SADDLE IS CORRECTLY LOCKED INTO POSITION.

## Document / tool kit compartment

The document / tool kit compartment is located under the passenger saddle. To access these compartments:

Remove the passenger and rider saddles.



#### **OBD** socket

The vehicle is equipped with an OBD (On-Board Diagnostics) port to monitor its correct operation at an **Authorised Service Centre** 

The OBD socket is located between the secondary fuse boxes; to access it, remove the passenger seat and the rider's seat.



## Identification

Write down the chassis and engine number in the specific space in this booklet. The

chassis number is handy when purchasing spare parts.

#### WARNING



THE MODIFICATION OF THE IDENTIFICATION CODES IS A SERIOUS PUNISHABLE CRIME. HOWEVER, THE LIMITED WARRANTY FOR NEW VEHICLES WILL BE VOID IF THE VEHICLE IDENTIFICATION NUMBER (VIN) HAS BEEN MODIFIED OR NOT PROMPTLY DETERMINED.

#### FRAME NUMBER

The chassis number is stamped on the RH side of the headstock.

Chassis No. ....



### **ENGINE NUMBER**

The engine number is stamped on the rear side of the engine block, opposite the rear shock absorber.

Engine No. .....



## **RS 457**





CHAPTER 03 Use

# 3 Use

## **Controls**

#### **ATTENTION**





BEFORE SETTING-OFF, ALWAYS CARRY OUT A PRELIMINARY CHECK OF THE VEHICLE, SO THAT IT OPERATES CORRECTLY AND SAFELY. FAILURE TO DO SO MAY LEAD TO SERIOUS PERSONAL INJURIES AND/OR VEHICLE DAMAGE.

IT DOES NOT TAKE MUCH TIME TO DO A CHECK AND THE SAFETY BENEFITS ARE CONSIDERABLE.

CONTACT AN Authorised Aprilia Dealer IMMEDIATELY IF IN ANY DOUBT ABOUT THE FUNCTIONS OF ANY CONTROLS OR IF ANY MALFUNCTIONS ARE FOUND OR SUSPECTED.

This vehicle has been programmed to indicate in real time any operation failure stored in the electronic control unit memory.

Pre-ride checks		
Front and rear disc brake	Check for proper operation. Check brake lever empty travel and brake fluid level. Check for leaks. Check brake pads for wear. If necessary top-up with brake fluid.	
Throttle grip	Check that the rotation is smooth in both directions and that there is no jamming.	
Engine oil	Check and/or top- up as required.	
Coolant	Check and/or top- up as required.	
Wheels/ tyres	Check that tyres are in good conditions. Check inflation pressure, tyre wear and potential damage.	
	Remove any possible strange body that might be stuck in the tread design.	

Pre-ride checks	
Brake levers	Check they function smoothly.
	Lubricate the joints and adjust the travel if necessary.
Clutch lever	Check correct operation and empty travel. Lubricate the joints if necessary.
Steering	Check that the rotation is uniform, smooth and there are no signs of clearance or slackness.
Side stand	Check that it slides smoothly and that it snaps back to its rest position upon spring tension. Lubricate couplings and joints if necessary.
Clamping elements	Check that the clamping elements are not loose.
	Adjust or tighten them as required.

Pre-ride checks	
Fuel tank	Check level and refill if necessary.
	Check the circuit for leaks or obstructions.
	Check that the tank cap closes correctly.
Engine stop switch (ON - OFF)	Check function.
Lights, warning lights, horn and electrical devices	Check the correct functioning of the acoustic and visual devices. Replace bulbs or take action in the event of a fault.
Tone wheels	Check that the tone wheels are perfectly clean and in good conditions.

# Refuelling

# **ATTENTION**



THE FUEL IS EXTREMELY INFLAMMABLE AND MAY BECOME EXPLOSIVE IN CERTAIN CONDITIONS.

FOR THIS REASON, IT IS NECESSARY TO REFUEL THE VEHICLE AND PERFORM MAINTENANCE OPERATIONS INVOLVING THE FUEL SYSTEM IN A WELL VENTILATED AREA, WITH THE ENGINE SWITCHED OFF.

DO NOT REFUEL AND DO NOT PERFORM MAINTENANCE OPERATIONS WITH THE ENGINE RUNNING.

DO NOT SMOKE WHILE REFUELING OR IN PROXIMITY TO DANGEROUS FUMES. NEVER ALLOW THE FUEL TO COME INTO CONTACT WITH FLAMES, SPARKS OR HEAT SOURCES. TRY TO CAREFULLY AVOID FUEL SPILLAGE WHILE REFUELING. FUEL SPILLAGE WHILE REFUELING. FUEL SPILLAGE MAY IGNITE IF THEY COME INTO CONTACT WITH THE HOT ENGINE OR WITH THE EXHAUST SYSTEM SURFACES. IN CASE OF ACCIDENTAL FUEL SPILLAGE, MAKE SURE THAT THE FUEL HAS COMPLETELY DRIED OUT OR EVAPORATED BEFORE STARTING THE VEHICLE.

AVOID THE FUEL COMING INTO CONTACT WITH YOUR SKIN AND AVOID INHALING THE FUMES EMITTED BY THE FUEL.

NEVER ATTEMPT TO TRANSFER FUEL FROM ONE CONTAINER TO ANOTHER

USING YOUR MOUTH AS TRANSFER MEANS. USE A MANUAL PUMP OR A SIMILAR TOOL.

#### ATTENTION



THE FUEL IS POISONOUS AND CARCINOGENIC AND CONTAINS CHEMICALS THAT CAUSE IMPAIRMENTS AND SEVERAL BIRTH PROBLEMS.

IF YOU ACCIDENTALLY SPILL FUEL ON THE SKIN OR CLOTHES, CLEAN IMMEDIATELY WITH WATER AND SOAP AND CHANGE CLOTHES.

IF THE FUEL ACCIDENTALLY COMES INTO CONTACT WITH YOUR EYES, RINSE THEM WITH PLENTY OF WATER AND IMMEDIATELY SEEK MEDICAL ATTENTION. IF YOU ACCIDENTALLY INGEST FUEL, DO NOT INDUCE VOMITING. DRINK A LARGE AMOUNT OF MILK OR WATER AND CONTACT A DOCTOR AS SOON AS POSSIBLE.

IF YOUR VEHICLE TIPS OVER, IT WILL LOSE FUEL, WHICH IS EXTREMELY INFLAMMABLE. FLAMES AND SPARKS MAY RESULT IN SERIOUS FIRES THAT WILL NOT ONLY DESTROY YOUR VEHICLE, BUT WILL ALSO BE EXTREMELY DANGEROUS

ALWAYS KEEP THE FUEL AWAY FROM CHILDREN. DISPOSE OF CORRECTLY; DO NOT DRAIN IT INTO THE SEWAGE SYSTEM OR AT THE BATHROOM.

Fuel: Unleaded gasoline E10 (95 R.O.N.)

#### To refuel:

- · Lift the cover (1).
- Insert the key (2) into the fuel tank cap lock (3).
- Turn the key clockwise, pull and open the fuel filler cap.
- Refill.



# **WARNING**



ALWAYS USE PETROL WITH A MAXIMUM OF 10% BIOETHANOL CONTENT (E10).

DO NOT USE PETROL WITH AN ETHANOL CONTENT HIGHER THAN 10%; THIS USE COULD DAMAGE THE FUEL SYSTEM COMPONENTS AND/OR COMPROMISE ENGINE PERFORMANCE.

Fuel tank (including reserve) 131 (2.86 UK gal; 3.43 US gal)

Fuel tank reserve 3 I (0.66 UK gal; 0.79 US gal)

# **WARNING**



DO NOT ADD ADDITIVES OR ANY OTHER SUBSTANCES TO THE FUEL. WHEN USING A FUNNEL, ENSURE THAT IT IS PERFECTLY CLEAN.

# **ATTENTION**



DURING REFUELLING AVOID FUEL LEAKAGES, WHICH MAY CAUSE DAMAGE TO THINGS OR PERSONS AND FIRE HAZARD.

#### **ATTENTION**





WHILE REFUELLING, DO NOT USE ELECTRONIC DEVICES AND/OR CELLULAR PHONES THAT COULD CAUSE DAMAGE TO THINGS AND/OR PEOPLE DUE TO GASOLINE VAPOURS.

# After refuelling:

- The cap can only be closed if the key (2) is inserted.
- Once the key (2) is inserted, press the cap to close it again.
- · Remove the key (2).
- Close the cover (1).

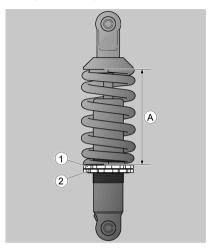
# **ATTENTION**



MAKE SURE THE CAP IS TIGHTLY CLOSED.

# Adjusting the rear shock absorbers

The rear suspension consists of a springshock absorber unit connected to the frame by uniball joints. The suspension has a ring nut (1) for adjusting the spring preload (A) and a locking counter ring nut (2).



N.B



HALVE THE SERVICE INTERVALS INDICATED IF THE VEHICLE IS USED IN PARTICULARLY RAINY OR DUSTY CONDITIONS, ON POOR ROADS OR FOR HIGH PERFORMANCE RIDING.

WARNING



PERIODICALLY CHECK AND IF NECESSARY, ADJUST THE REAR SHOCK ABSORBER.

THE STANDARD REGULATION OF THE REAR SHOCK ABSORBER IS INTENDED TO SATISFY NORMAL TOUR DRIVING CONDITIONS. IN ANY CASE IT IS POSSIBLE TO INSERT PERSONAL SETTINGS, DEPENDING ON VEHICLE UTILIZATION.

- Using a ring spanner, unscrew the locking counter-ring nut (2).
- Turn the adjustment ring (1) clockwise or anti-clockwise to adjust the spring preload (A).
- Once the adjustment is done, screw the counter ring nut (2).

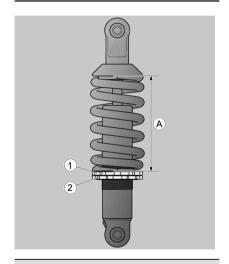


Rear shock absorbers setting

**ATTENTION** 



SPORT SETTINGS MAY BE USED ONLY FOR OFFICIAL COMPETITIONS TO BE CARRIED OUT ON TRACKS, AWAY FROM NORMAL ROAD TRAFFIC AND WITH THE AUTHORISATION OF THE RELEVANT AUTHORITIES.



STANDARD adjustment (for road use)

Spring length (A) 145.5 +/- 2 mm (5.72 +/- 0.078 in)

# 3 Use

# **Setting FOR SPORTS USE**

Spring length (A)

with standard adjustment 145.5 mm (5.72 in) screw 2 turns (clockwise)

# Front fork adjustment

- Operating the front brake lever, press the handlebar repeatedly to send the fork fully down. The shock absorber should compress and extend smoothly with no signs of oil leakage on the stanchions.
- Check the tightening of all the elements and the correct operation of the front and rear suspension joints.



# WARNING



PLEASE CONTACT AN Authorised Aprilia Dealer TO HAVE THE FRONT

# FORK OIL CHANGED AND ITS OIL SEALS REPLACED.

The front suspension consists of a hydraulic fork connected to the headstock by means of two plates.

For vehicle set-up settings, each fork stanchion is equipped with a nut (1) for spring preload adjustment.



# **ATTENTION**



TO AVOID DAMAGE, DO NOT FORCE THE ADJUSTERS BEYOND THE MAXIMUM SETTING POSITION IN EITHER DIRECTION.

SET BOTH STANCHIONS WITH THE SAME SPRING PRE-LOAD CALIBRATION: RIDING THE VEHICLE WITH DIFFERENT SETTINGS FOR THE TWO STANCHIONS REDUCES STABILITY.

The standard front fork setting is adjusted to suit most high and low speed riding conditions, whether the vehicle is partially or fully loaded.

However, the setting can be modified for specific needs according to vehicle use.

#### WARNING



FOR THE CORRECT SETTING PARAMETERS, READ THE SECTION "SETTING THE FRONT FORK" CAREFULLY. TAKE YOUR VEHICLE TO AN Authorised Aprilia Dealer, IF NECESSARY.

# Setting the front fork

N.B



TO COUNT THE NUMBER OF CLICKS AND/OR REVOLUTIONS OF ADJUSTMENT SETTINGS ALWAYS START FROM THE MOST RIGID SETTING (WHOLE CLOCKWISE ROTATION OF THE ADJUSTER SCREW).





# STANDARD adjustment (for road use)

Spring pre-loading, Fully open (\*\*) nut (1)

Stanchion 2 notches protrusion (A) (\*\*\*) from top yoke (excluding cover)

# **Setting FOR SPORTS USE**

Spring pre-loading, Fully open (\*\*) nut (1)

Stanchion 2 notches protrusion (A)

# **Setting FOR SPORTS USE**

(\*\*\*) from top yoke (excluding cover)

(\*) - Clockwise

(\*\*) - Anticlockwise

(\*\*\*) - this type of adjustment may only be made by an **Authorised Aprilia Dealer**.

# Clutch lever adjustment

Adjust the clutch lever if the engine stalls or if the vehicle creeps forward when the lever is pulled, or if the clutch slips, causing a lag in acceleration relative to increases in engine speed.

To adjust, after setting the vehicle on the centre stand:

- Loosen the locking ring nut (1);
- Turn the adjuster (2) in the direction of travel to increase the lever clearance (3), in the opposite direction to decrease it. Check the functionality of the control by holding the knob (4) as in the riding position.
- Ensure that the play is between 1 and 3 mm (0.039 and 0.12 in).

# WARNING



TAKE THE VEHICLE TO AN Official aprilia Dealer IF THE CLUTCH CANNOT BE ADJUSTED CORRECTLY OR IF THE CLUTCH DOES NOT FUNCTION CORRECTLY.

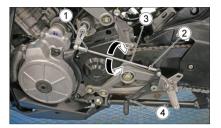


# Gear pedal adjustment

The gear shift pedal is ergonomically positioned during vehicle assembly; however, the height of the pedal can be customized to suit your driving preferences. To adjust the height of the gearbox pedal, proceed as follows:

- · Place the vehicle on the stand;
- Loosen the locknuts (1) and (2). (The nut (2) has left-hand thread and has a superficial machining to be able to recognize)
- Rotate the control rod (3) to adjust the height of the pedal (4). Turning the rod (3) clockwise (towards the engine) lowers the pedal (4), conversely turning it counterclockwise (towards the outside of the vehicle) raises the pedal.

 Once the correct position has been found, tighten the locknuts (1) and (2) securely.



# Running-in

Running in is essential to ensure the durability of the vehicle. During the first 1,000 Km (621 mi), observe the following rules to ensure the reliability and performance of the vehicle throughout its lifetime:

- Avoid full throttle starts and hard acceleration;
- Avoid hard or prolonged braking;
- Do not ride for prolonged periods at sustained high speed; preferably ride the motorcycle on varied routes with frequent, gentle acceleration and deceleration;
- Ride prudently to gradually gain familiarity with the motorcycle, testing progressively higher throttle apertures only as you gain confidence

图

THE FULL PERFORMANCE OF THE VEHICLE IS ONLY AVAILABLE AFTER PERFORMING THE SERVICE AT THE END OF THE RUNNING IN PERIOD.

# Follow these guidelines:

- Do not fully open the throttle grip abruptly at low engine speeds, either during or after the running in period.
- During the first 100 Km (62.14 miles) use the brakes gently, avoiding sudden or prolonged braking. This allows the brake pad friction material to bed in correctly with the brake discs.
- It is advisable to not exceed 7500 rpm for the first 1000 km (621.37 mi) and then not to exceed 9500 rpm up until 2000 km (1242.74 mi).

# **ATTENTION**





AFTER THE SPECIFIED MILEAGE, TAKE YOUR VEHICLE TO AN Authorised Aprilia Dealer FOR THE CHECKS INDICATED IN THE "SCHEDULED MAINTENANCE TABLE" IN THE SCHEDULED MAINTENANCE SECTION, TO AVOID INJURING

YOURSELF, OTHERS AND /OR DAMAGING THE VEHICLE.

# **Engine starter**

This vehicle is extremely powerful and must be used carefully and driven with caution and respect for its power and potential.

Do not place objects inside the top fairing (between the handlebar and the instrument cluster), as this may impede the movements of the handlebar and obstruct visibility of the instruments.

# **ATTENTION**



EXHAUST FUMES CONTAIN CARBON MONOXIDE, AN EXTREMELY HARMFUL SUBSTANCE IF INHALED. NEVER START THE ENGINE IN A CLOSED OR INSUFFICIENTLY VENTILATED SPACE.

# **ATTENTION**



FAILURE TO OBSERVE THIS WARNING COULD LEAD TO

N.B

UNCONSCIOUSNESS AND EVEN DEATH DUE TO SUFFOCATION.

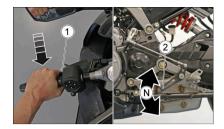
#### **ATTENTION**



WITH THE SIDE STAND LOWERED, THE ENGINE MAY ONLY BE STARTED WITH THE GEARBOX IN NEUTRAL. IF YOU ATTEMPT TO ENGAGE THE GEAR, THE ENGINE WILL STOP.

WITH THE SIDE STAND RETRACTED, THE ENGINE MAY BE STARTED WITH THE GEARBOX IN NEUTRAL OR WITH THE GEAR ENGAGED AND THE CLUTCH LEVER OPERATED.

- Get on the motorcycle, assuming the correct driving posture.
- Make sure that the side stand has been fully retracted.
- · Operate the front or rear brake (or both).
- Operate the clutch lever (1) and make sure that the transmission (2) is in neutral.



- Turn the ignition key (3) to "ON"
- Set the switch for stopping the engine (4) on "RUN".

# At this stage:

- The starting screen will be displayed on the digital display for about 2 seconds and then the screen with the standard parameters will appear.
- All the indicator lights on the dashboard will come on for about 2 seconds.
- · Press the starter button once only.
- With the engine operating normally, the number of rpm at which the engine is operating will be displayed instantaneously.



# WARNING



IF THE FUEL RESERVE LIGHT IN THE DIGITAL DISPLAY TURNS ORANGE, REFUELLING SHOULD BE CARRIED OUT AS SOON AS POSSIBLE. INTENSE OR PERFORMANCE USAGE WHILE IN RESERVE MAY DAMAGE THE ENGINE.

# **WARNING**



DO NOT SET OFF SUDDENLY WHEN THE ENGINE IS COLD. RIDE AT LOW SPEED FOR SEVERAL KILOMETRES. THIS WILL ALLOW THE ENGINE TO WARM UP AND REDUCE POLLUTING EMISSIONS AND FUEL CONSUMPTION.

# Setting off and riding

#### **ATTENTION**



WHEN RIDING WITHOUT PASSENGERS, MAKE SURE THE

PASSENGER FOOTRESTS ARE FOLDED.

#### **ATTENTION**

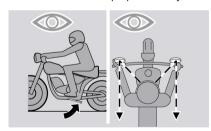


PASSENGERS MUST BE SUITABLY INSTRUCTED ON HOW TO BEHAVE TO PREVENT DANGEROUS SITUATIONS WHEN RIDING.

BEFORE SETTING OFF, MAKE SURE THE STAND HAS BEEN COMPLETELY RETRACTED TO ITS POSITION.

#### To start:

- Turn on the engine.
- Adjust the inclination of the rear-view mirrors to ensure proper visibility.

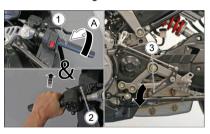


# **ATTENTION**

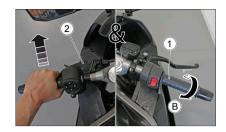


WITH THE VEHICLE AT STANDSTILL, PRACTICE USING THE REAR-VIEW MIRRORS. THE MIRRORS ARE CONVEX, SO OBJECTS MAY SEEM FARTHER AWAY THAN THEY REALLY ARE. THESE MIRRORS OFFER A WIDE-ANGLE VIEW AND ONLY EXPERIENCE HELPS YOU JUDGE THE DISTANCE SEPARATING YOU AND THE VEHICLE BEHIND.

- With the throttle (1) closed (Pos. A) and the engine at idle speed, operate the clutch lever (2).
- Push the gearbox lever (3) downward to select the first gear.



 Slowly release the clutch lever (2) while simultaneously accelerating by gently twisting the throttle grip (1) (Pos.B).



# **ATTENTION**



DO NOT RELEASE THE CLUTCH TOO QUICKLY OR SUDDENLY, AS THIS COULD CAUSE THE ENGINE TO STALL OR THE VEHICLE TO REAR UP ON THE BACK WHEEL. DO NOT ACCELERATE SUDDENLY WHEN RELEASING THE CLUTCH FOR THE SAME REASON.

 Ride at moderate speed for the first kilometres/miles to allow the engine to warm up.

#### N.B



THE VEHICLE HAS AN RPM LIMITER THAT IS PART OF THE "RIDE-BY-WIRE" INJECTION SYSTEM.

 Increase speed by turning the throttle grip (1) gradually (Pos. B), without exceeding the recommended maximum engine speed.

#### WARNING



SELECT THE APPROPRIATE GEAR AND SPEED FOR THE CONDITIONS. DO NOT ALLOW THE ENGINE SPEED TO DROP EXCESSIVELY.

- Release the throttle grip (1) (Pos. A), operate the clutch lever (2), lift the gear lever (3), release the clutch lever (2) and accelerate.
- Repeat the last two operations and engage a higher gear.

It is recommended to down-shift from a higher gear to a lower gear:

- When riding downhill and under braking, using engine compression to increase braking power.
- When going uphill, when the engaged gear does not suit the speed (high gear, moderate speed) and the number of engine revs falls.

## WARNING



DOWN-SHIFT ONE GEAR AT A TIME; WHEN SHIFTING TO A LOWER GEAR, DOWN-SHIFTING MORE THAN ONE GEAR AT A TIME COULD OVER-REV THE ENGINE; THAT IS, THE MAXIMUM RPM VALUE PERMITTED FOR THE ENGINE COULD BE EXCEEDED.

- Release the throttle grip (1) ( Pos. A).
- If necessary, pull the brake levers gently and reduce speed.
- Pull the clutch lever (2) and push the gear pedal (3) down to select the next lowest gear.
- Release the brake levers when it is operated.
- Release the clutch lever (2) to resume riding.



# **ATTENTION**



STOP THE VEHICLE MAINLY USING THE FRONT BRAKE.

THE REAR BRAKE MUST ONLY BE USED TO BALANCE THE BRAKING EFFECT, AND ONLY TOGETHER WITH THE FRONT BRAKE.

WHEN STOPPING UPHILL, DECELERATE COMPLETELY AND ONLY USE THE BRAKES TO MAINTAIN THE VEHICLE IN THE STOPPED POSITION

USING THE ENGINE TO KEEP THE MOTORCYCLE STOPPED COULD CAUSE THE CLUTCH TO OVERHEAT.

PROLONGED AND REPEATED USE OF THE BRAKES CAN CAUSE THEM TO **OVERHEAT. RESULTING IN REDUCED** BRAKING EFFECTIVENESS. ON LONG, STEEP DESCENTS, TO AVOID OVERHEATING THE BRAKE SYSTEM. REPEATED BUT NOT PROLONGED BRAKE APPLICATION IS RECOMMENDED TO REDUCE SPEED. IN THE EVENT OF OVERHEATING, THE VEHICLE MUST BE STOPPED AND THE BRAKE SYSTEM COOLED.

WHEN DRIVING DOWNHILL, NEVER RIDE WITH THE ENGINE TURNED OFF. WHEN RIDING ON WET SURFACES OR SURFACES WITH POOR GRIP (SNOW, ICE, MUD, ETC.) USE MODERATE SPEED, AVOID SUDDEN BRAKING OR MANOEUVRES THAT MAY CAUSE TO A LOSS OF TRACTION AND POSSIBLY TO A FALL OR CRASH.

# **Engine stop**

 Release the throttle grip (1), brake gradually and simultaneously downshift to slow down.

# Once the speed is reduced, before stopping the vehicle:

 Operate the clutch lever (2) so that engine does not shut off.

#### When the vehicle is at standstill:

- Put the gear lever in neutral until the digital display shows the green icon with the "N" lit (neutral).
- Release the clutch lever
- While at a temporary halt, keep at least one of the vehicle brakes held.



**ATTENTION** 



WHENEVER POSSIBLE, AVOID ROUGH BRAKING, SUDDEN

DECELERATION AND BRAKING IN EXCESS

# It is easy to park anywhere on the road

It is very important to select an adequate parking spot, in compliance with road signals and the guidelines described below.

#### **ATTENTION**



PARK ON SAFE AND LEVEL GROUND TO PREVENT THE VEHICLE FROM FALLING.

DO NOT LEAN THE VEHICLE AGAINST A WALL OR LAY IT ON THE GROUND.

ENSURE THAT THE VEHICLE AND, IN PARTICULAR, PARTS OF THE VEHICLE WHICH MAY BECOME HOT (ENGINE, OIL RADIATOR AND LINES, EXHAUST SYSTEM, BRAKE DISCS) ARE NOT A HAZARD TO PERSONS OR CHILDREN. DO NOT LEAVE YOUR VEHICLE UNATTENDED WITH THE ENGINE ON OR THE KEY IN THE IGNITION SWITCH.

WARNING



IF THE VEHICLE FALLS OR IS ON A STEEP INCLINE FUEL CAN LEAK.

#### **ATTENTION**





DO NOT REST THE RIDER OR PASSENGER WEIGHT ON THE SIDE STAND.

# Catalytic converter

The vehicle is equipped with an exhaust system with a three-way catalytic converter (using three catalyst metals: platinum, palladium and rhodium).

This device oxidises the CO (carbon monoxide) producing carbon dioxide, and the UHC (unburned hydrocarbons) producing water vapour and reduces NOx (nitrogen oxide) producing oxygen and nitrogen present in the exhaust fumes.

# ATTENTION





AVOID PARKING THE VEHICLE NEAR DRY BRUSHWOOD OR IN PLACES ACCESSIBLE TO CHILDREN, AS THE

CATALYTIC CONVERTER IS VERY HOT WHEN IN USE; THEREFORE, PAY THE UTMOST ATTENTION AND DO NOT TOUCH IT UNTIL IT HAS COMPLETELY COOLED DOWN.

#### WARNING



DO NOT USE LEADED PETROL AS IT WILL DAMAGE THE CATALYTIC CONVERTER.

Vehicle owners are warned that the law may prohibit the following:

- the removal of any device or element belonging to a new vehicle or any other action by anyone leading to render it non-operating, if not for maintenance, repair or replacement reasons, in order to control noise emission before the sale or delivery of the vehicle to the ultimate buyer or while it is used;
- using the vehicle after that device or element has been removed or rendered non-operating.

Check the muffler/exhaust silencer and the silencer pipes, make sure there are no signs of rust or holes and that the exhaust system works properly.

If exhaust noise increases, take your vehicle at once to an Approved **Aprilia** Dealer.

# Stand

If it is necessary to extend the side stand for any reason (e.g. after moving the vehicle), proceed as follows:

- Select an appropriate parking spot.
- Grip the left grip and keep your right hand on the upper rear part of the vehicle.
- Lower the side stand with the right foot to fully extend the stand.
- Lean the motorcycle until the stand touches the ground.
- Turn the handlebar completely to the left.



# **ATTENTION**





MAKE SURE THAT THE GROUND ON WHICH THE MOTORCYCLE IS PARKED IS FIRM, EVEN AND FREE OF OBSTACLES.

# N.B



THE RELATIVE WARNING LAMP ON THE DASHBOARD INSTRUMENT PANEL ILLUMINATES WHEN THE SIDE STAND IS EXTENDED.

THE WARNING LAMP FLASHES IF THERE IS A MALFUNCTION OF THE SIDE STAND SENSOR.

ENGINE START AND USAGE OF THE VEHICLE ARE STILL PERMITTED, AS ENGAGING FIRST GEAR DOES NOT TRIGGER THE AUTOMATIC SAFETY ENGINE SHUT-OFF FUNCTION.

# theft prevention tips

# **ATTENTION**





WHEN USING A DISC LOCKING DEVICE, PAY UTMOST ATTENTION TO REMOVE IT BEFORE RIDING. FAILURE TO OBSERVE THIS WARNING MAY CAUSE SERIOUS DAMAGE TO THE BRAKING SYSTEM AND ACCIDENTS WITH CONSEQUENT PHYSICAL INJURIES OR EVEN DEATH.

**NEVER** leave the ignition key in the lock and always use the steering lock. Park the vehicle in a safe place such as a garage or a place with guards. Whenever possible, use an additional anti-theft device. Make sure all vehicle documents are in order and the road tax paid. Write down your personal details and telephone number on this page to help identifying the owner in case of vehicle retrieval after a theft.

SURNAME: ......

FIRST NAME: .....

ADDRESS: .....

TELEPHONE NO.: .....

N.B

B

IN MANY CASES, STOLEN VEHICLES CAN BE IDENTIFIED BY DATA IN THE USE / MAINTENANCE BOOKLET.

# Safe riding

# **MAIN SAFETY RULES**

The following instructions refer to the normal use of your vehicle and must be carefully observed. Observing these rules will allow you to increase your safety and that of the persons around you as well as maximise the life and usefulness of your vehicle. Two-wheeled vehicles obviously do not offer

some of the protections normally provided on cars, so it is essential to wear suitable protective clothing. In particular, when riding the vehicle, always wear a helmet, gloves, protective goggles and a heavy jacket, sturdy footwear and durable long trousers. However, it must always be kept in mind that even the best clothing and helmet cannot protect you in the event of a fall or collision with another vehicle. These features protect you best from scratches and abrasions, but their protective function is minimal in the event of an impact.

Make sure you meet all the requirements of the local law, including driver's license, minimum age, adequate preparation, insurance, taxes, vehicle registration, license plate, etc.



As soon as you receive the vehicle, familiarise yourself by practising in areas with low traffic intensity. Avoid driving the vehicle in heavy traffic areas until you have gained a good experience and total safety in riding.

Although this vehicle is approved for use on motorways and ring roads, it is

recommended that you do not travel on these roads at high speed until you have become very familiar with the vehicle and have achieved a high degree of skill in use.

A new vehicle must undergo an accurate break-in. Before starting the engine, make sure the brake, clutch, drive and throttle controls are working properly and check that the oil and fuel level is adequate. The exhaust system, brakes and some vehicle components can get very hot while riding. Do not touch these components.

Consumption of certain drugs and medicines, illegal or prescribed, as well as alcohol greatly increases the risk of accidents.

Do not drive while under the influence of alcohol or drugs, whether they are illegal or licensed by a doctor. Make sure that you are in good physical condition before driving your vehicle.



Do not drive in conditions of particular fatigue or tiredness. Alcohol, drugs and fatigue are the main cause of accidents.

Many accidents are due to the driver's inexperience.

Do not ride your vehicle until you have received training from a recognized organization such as the Motorcycle Safety Foundation

Always keep in mind that driving a twowheeled vehicle, while easy and fun, is very different from driving a car. Not necessarily an experienced car driver is able to safely drive a two-wheeled vehicle.

**NEVER** lend the vehicle to other people if you are not sure that they are experts and in possession of a driving license. Respect all the rules of the road traffic code. In particular, pay attention to all warning, traffic regulation and information signs.

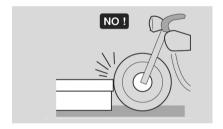
Avoid showing off with dangerous manoeuvres (e.g. rear up). In particular, respect the speed limits and remember that the conditions of the road surface vary according to the weather conditions; wet and icy roads are dangerous especially at high speed.



Car drivers often find it difficult to see twowheeled vehicles, so always give priority to cars even in cases where according to the road traffic code you would have priority.

Before changing lanes, always check that the road is clear behind you. Do not rely solely on the rear view mirror as it could underestimate the distance and speed of a vehicle or even not see it at all.

Avoid obstacles that could damage the vehicle or lead to loss of control of the vehicle.



Do not drive close to vehicles like trucks or cars, in front of you and do not remain in their lane to increase speed. In the event of an accident, motorcycles, scooters and mopeds do not offer the same level of protection as cars.

Especially the legs are exposed to the risk of injury. The additional installation of leg pads can concretely increase the risk of injury and the severity in the event of an accident.

Do not install leg pads available on the spare parts and accessories market. Failure

to follow these instructions can result in serious injury or even death.

Always ride with both hands on the handlebars and feet on the foot pegs.



Never change gear without using the clutch if your vehicle is equipped with one. Do not operate the shift lever or other controls abruptly and suddenly.

Misuse of this type could damage the internal components of the vehicle resulting in seizure, loss of control, accidents and serious or even fatal injuries.

Remain seated while driving. Do not stand up or try to stretch yourself while riding the vehicle. If you need to rest, pull over at a safe point on the road.

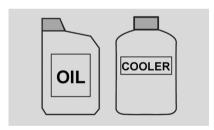
It is very important for your safety to always drive with the utmost attention. Pay attention to your actions, do not be distracted by other vehicles, persons and or things near the road, etc.

Do not smoke, eat, drink, read, etc. while driving the vehicle. If you need to consult

a road map, pull over and carry out the operation in complete safety.



Use only the fuels and lubricants specified for the vehicle listed in the RECOMMENDED PRODUCTS TABLE; regularly check the coolant, fuel and oil levels.



If the throttle remains locked, it could result in a collision with another vehicle or a fall. If the throttle remains locked, stop the engine with the engine stop switch located on the right handlebar.

Do not try to restart the engine until the throttle has been repaired and is fully functional. Failure to observe this warning

can result in loss of control resulting in serious injury or even death.

# **ATTENTION**



IN THE EVENT OF AN EMERGENCY CAUSING THE THROTTLE TO LOCK, ALWAYS STOP THE ENGINE USING THE ENGINE STOP SWITCH LOCATED NEAR THE THROTTLE GRIP.

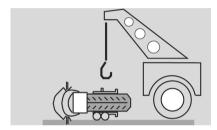
DO NOT OPERATE THE VEHICLE IF THE THROTTLE DOES NOT AUTOMATICALLY RETURN COMPLETELY TO IDLE ONCE THE THROTTLE GRIP IS RELEASED.

FOR REPAIRS, PLEASE CONTACT YOUR LOCAL Aprilia Dealer. FAILURE TO OBSERVE THIS WARNING COULD LEAD TO SERIOUS ACCIDENT WITH CONSEQUENT INJURY OR EVEN DEATH.

If you have been involved in an accident with your vehicle, make sure that the control levers, pipes, cables, brake system or other vital components have not been damaged. If your vehicle has been involved in an accident, immediately contact your local **Aprilia** dealer who has the necessary equipment and knowledge to check for any damage that could compromise your safety.

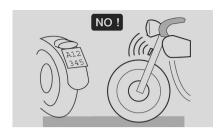
Your **Aprilia** dealer can help you to solve all safety problems under the condition that all mechanical malfunctions are reported to him.

Do not use the damaged vehicle. A damaged vehicle could lose stability or have other problems that could increase the risk of an accident resulting in serious injury or even death.



Do not try to change the position, angle or colour of your license plate. The license plate shall not be covered in any way, not even with transparent plastic. Do not modify the safety features of your vehicle, especially components such as turn indicators, rear view mirrors, lights or horns.

Any modification to the vehicle will result in the cancellation of the warranty. Do not modify the engine in order to increase its power. This could cause irreparable damage to the engine as well as compromise its performance and vehicle handling resulting in a fall and serious or even fatal injuries.



To repair your vehicle, use only original **Aprilia** accessories or **Aprilia** approved accessories. The use of aftermarket accessories and parts can seriously affect the safety of your vehicle as well as its performance and use. Any changes that affect performance or safety void the entire warranty.

Tampering with the emission and noise control system is prohibited by law and can be severely punished.

For some jurisdictions, vehicle confiscation is also provided.



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

Aprilia does not produce sidecars or trailers and can therefore not predict the consequences that these accessories may have on the handling and stability of the vehicle: however, it is warned that these effects could be negative and the guarantee is not recognised for any damage to components of the vehicle due to the use of accessories of this type.



Never use your vehicle to compete with other vehicles.



Brake using both the front and rear brakes. Using only one brake in the event of hard braking could cause the vehicle to skid or cause the driver to lose control of the vehicle.

When driving downhill, take advantage of the engine's braking action by selecting the same gear or a lower gear than those normally used uphill. Use the front and rear brake with moderation.

Always travel at an adequate speed and avoid unnecessary sudden acceleration not only for greater safety, but also to reduce fuel consumption and increase the life of the vehicle

When using the vehicle on wet or slippery surfaces, always bear in mind that grip decreases significantly. In these conditions, always manoeuvre the vehicle slowly and with the utmost caution.

Accelerating, braking, or sudden turns can cause you to lose control of the vehicle. When grip is reduced, accelerate and slow down using the engine braking force as much as possible. Avoid braking hard and too fast.

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

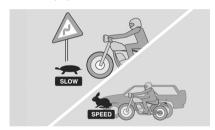
Slow down and drive carefully on uneven road surfaces.



Avoid accelerating by turning the throttle completely except in cases of absolute necessity such as overtaking.

Do not let the engine work "under stress", that means too low a number of revolutions. Downshift to a lower gear. Do not run the engine excessively. Observe the red line on the speedometer.

Remember that excessively aggressive cornering can cause the tyre to lose grip on the tyre sidewall resulting in a fall and serious injury or even death.



Always respect the speed limits imposed by law taking into consideration that it is not always possible to drive up to the indicated speed limit in all road conditions. Slowing down slightly increases your safety considerably in all road conditions.

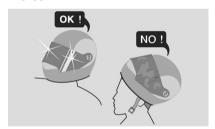
Do not ride the vehicle off-road.

Do not tamper with the exhaust or emissions control system of your vehicle as this is not only a form of environmental protection, but could incur criminal penalties.



#### **CLOTHING**

Before riding the vehicle, make sure your clothing is in suitable condition. Wear the helmet correctly making sure that the visor or goggles are clean.



Research and experience have shown that drivers of other vehicles often do not see the vehicles or motorcyclists. To make yourself more visible to other drivers, wear reflective clothing such as light-refracting vests or other types of clothing with reflective areas sewn onto the jacket, pants and gloves. Be especially careful of trucks and cars arriving from the oncoming lane as they may turn left right in front of you. Many traffic accidents are caused by a driver on the opposite side

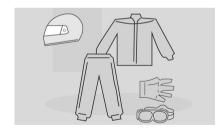
turning left without considering the vehicle in front

Inevitably, the driver in front of you will swear only having seen you when, after turning, being in your lane. Drive carefully!

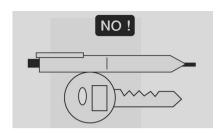
Wear appropriate protective clothes, preferably light-coloured and/or in reflective material. This way you are more visible to other drivers, considerably reducing the risk of being hit and enjoying greater protection in the event of an accident.

Always wear helmet.

Clothing should be particularly tight and closed at the wrists and ankles. Cords, belts and ties shall not hang out; prevent these and other objects from interfering with driving as they can get entangled with moving parts or driving mechanisms.



Do not keep sharp objects in your pocket which could be dangerous in case of a fall, e.g. keys, lead pencil, etc. Make sure that all other passenger also follow these recommendations



#### **ACCESSORIES**

The vehicle owner is responsible for the selection, installation and use of all accessories.

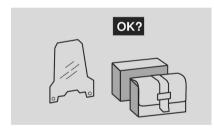
Installing inappropriate accessories or overloading the vehicle could make the vehicle unstable and lead to accidents resulting in serious injury or even death. Windscreens are particularly dangerous in the event of an accident as if they break they could injure or cut the rider. In case of doubt about any accessory to be installed or any load to be transported, we recommend you to consult your local **Aprilia** dealer in advance.

Do not install accessories which cover or limit the operation of the horns or lights, which limit the suspension travel and the steering angle, which hinder the operation of the controls and reduce the ground clearance and lean angle when cornering.

Do not use accessories that hinder access to the controls as they may increase the reaction time in case of an emergency.

The fairings and windscreens mounted on the vehicle can give rise to aerodynamic forces such as to compromise the stability of the vehicle while riding, particularly at high speeds.

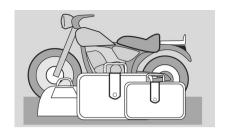
Make sure that everything that is mounted on the vehicle is securely fixed, cannot come off and lock wheels, forks, etc. Do not install electrical accessories and do not modify the vehicle electrical system. Any component that could cause an overload or electrical fault could result in the vehicle being stopped immediately, the lights or beeps turned off or dimmed, or malfunction of other safety accessories. Use original Aprilia accessories only.



#### LOADING

Do not overload the vehicle.

Secure bags or luggage as close to the vehicle's centre of gravity as possible and distribute the load as evenly as possible between the two sides to minimise imbalance. Always remember that loads tend to loosen during travel and therefore often check the safety of your load.



Do not let objects hang from the vehicle's semi-handlebars, mudguards or forks as they may impair the handling of the vehicle and prevent you from avoiding an accident. Failure to observe this warning can lead to a fall resulting in serious injury or even death.

Do not ride with the helmet hanging from the strap as it could easily get caught on the wheels, mudguard or forks causing a fall and result in serious injury or even death.



Only carry a passenger if the vehicle is equipped with passenger footrests, passenger grips and saddle.

When carrying a passenger, always remember that the vehicle has reduced handling, that the brakes are less effective

and that the centre of gravity is higher and further back

This favours the detachment of the front wheel from the ground especially during acceleration. Therefore, avoid abrupt acceleration and braking. Many accidents are caused by inexperienced riders carrying a passenger. Remember to carry out the riding manoeuvres with greater tolerance in case of excessive passenger weight.

Avoid sudden and excessive acceleration. Always slowdown in advance and calculate longer braking and manoeuvring distances. Failure to observe these instructions could result in the vehicle overturning or other accidents resulting in serious injury or even death.

Never transport items that are not anchored and make sure that everything transported on the vehicle is carefully secured.

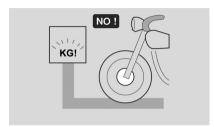
Do not carry luggage that protrudes from the luggage rack or that covers the lights, horn and headlamps.

Do not carry animals or children on the glove box or luggage rack.



Never exceed the maximum load indicated for each bag.

Overloading your vehicle can seriously reduce its stability and handling leading to a fall resulting in serious injury or even death.



# **Basic safety rules**

The following recommendations should receive your maximum attention, because they are provided to increase your safety, and decrease damage to people, things and vehicles, in the case of a fall of the rider or passenger from the vehicle and/or from the fall or overturning of the vehicle.

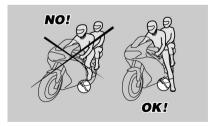
Mounting and dismounting the vehicle should always be performed with total freedom of movement and with the hands free of all objects. (i.e.- objects, helmet, gloves, or glasses).

Mount and dismount only on the left side of the vehicle, and only with the side stand lowered.





The stand is designed to support the weight of the vehicle and a small additional weight, which does not include the rider and passenger.



Mounting into driving position, with the side stand in place, is permitted only to prevent the possibility of the vehicle falling

or overturn, and does not indicate the possibility for the rider and passenger's weight to be placed on the side stand.

During mounting and dismounting the vehicle's weight can cause a loss of balance, with consequent loss of equilibrium and the possibility of falling or overturning.

# **ATTENTION**



THE RIDER SHOULD ALWAYS BE THE FIRST TO GET ON AND THE LAST TO GET OFF THE VEHICLE AND SHOULD CONTROL THE STABILITY AND BALANCE OF THE VEHICLE WHEN THE PASSENGER GETS ON AND OFF.

In any case, the passenger should mount and dismount the vehicle using caution to avoid causing the vehicle or the rider to lose balance.



# ATTENTION



THE RIDER MUST INSTRUCT THE PASSENGER HOW TO GET ON AND OFF THE VEHICLE.

THE VEHICLE INCLUDES PASSENGER FOOTRESTS WHICH SHOULD BE USED DURING MOUNTING AND DISMOUNTING. THE PASSENGER SHOULD ALWAYS USE THE LEFT FOOTREST FOR MOUNTING AND DISMOUNTING FROM THE VEHICLE.

DO NOT DISMOUNT OR EVEN ATTEMPT TO DISMOUNT BY JUMPING OR STRETCHING OUT YOUR LEG IN ORDER TO TOUCH THE GROUND. IN BOTH CASES THE STABILITY AND EQUILIBRIUM OF THE VEHICLE COULD BE COMPROMISED.

# **ATTENTION**



BAGGAGE OR OBJECTS ATTACHED TO THE REAR PART OF THE VEHICLE CAN CREATE AN OBSTACLE DURING MOUNTING AND DISMOUNTING FROM THE VEHICLE.

IN ALL CASES, THINK AHEAD AND MOVE YOUR RIGHT LEG CAREFULLY,

AS IT WILL HAVE TO AVOID AND CLEAR THE REAR PART OF THE VEHICLE (INCLUDING BAGGAGE AND THE TAIL FAIRING) WITHOUT CAUSING LOSS OF BALANCE.

#### MOUNTING

- Grip the handlebar properly and mount the vehicle without placing your weight upon the side stand.
- Place both feet on the ground and straighten the vehicle into the driving position, always maintaining its equilibrium.

## **ATTENTION**



IN THE CASE THAT YOU ARE NOT ABLE TO REST BOTH FEET ON THE GROUND, PUT THE RIGHT FOOT ON THE GROUND, (IN THE CASE OF A LOSS OF BALANCE THE LEFT SIDE IS "PROTECTED" BY THE SIDE STAND) AND KEEP YOUR LEFT FOOT READY TO BE POSITIONED.

- Have the passenger open the two passenger foot pegs.
- Show the passenger how to mount the vehicle

 Use your left foot to push on the side stand and make it fully return to its position.



# **ATTENTION**



THE RIDER SHOULD NOT OPEN OR TRY TO OPEN THE PASSENGER FOOTRESTS FROM THE RIDER'S SEAT, AS IT COULD COMPROMISE THE STABILITY AND BALANCE OF THE VEHICLE.

#### DISMOUNTING

- Select an appropriate parking spot.
- Stop the vehicle.
- Switch off the engine.

# **ATTENTION**



MAKE SURE THAT THE GROUND ON WHICH THE MOTORCYCLE IS PARKED IS FIRM, EVEN AND FREE OF OBSTACLES.

• Use the heel of your left foot to completely open the side stand.

#### **ATTENTION**



IN THE CASE THAT YOU ARE NOT ABLE TO REST BOTH FEET ON THE GROUND, PUT THE RIGHT FOOT ON THE GROUND, (IN THE CASE OF A LOSS OF BALANCE THE LEFT SIDE IS "PROTECTED" BY THE SIDE STAND) AND KEEP YOUR LEFT FOOT READY TO BE POSITIONED.

- Place both feet on the ground and keep the vehicle balanced in the driving position.
- Show the passenger how to dismount from the vehicle.

# **ATTENTION**



RISK OF FALLING OR OVERTURNING.

MAKE SURE THE PASSENGER HAS COME DOWN FROM THE VEHICLE.

# DO NOT PLACE YOUR WEIGHT UPON THE SIDE STAND.

- Lean the motorcycle until the stand touches the ground.
- Correctly grip the handlebar, and dismount from the vehicle.
- Turn the handlebar completely to the left.
- Place the passenger footrest in its place.

# **ATTENTION**



CHECK THE STABILITY OF THE VEHICLE.

# **RS 457**





CHAPTER 04 Maintenance

# **Foreword**

N.B



THE ELECTRONIC CONTROL SYSTEM OF THIS VEHICLE IDENTIFIES FAULTS IN REAL TIME AND STORES THEM IN ITS MEMORY FOR SUBSEQUENT READING WITH THE DIAGNOSTIC SYSTEM USED BY Authorised Aprilia Dealers.

# **Engine oil level**

# **ATTENTION**



CORRECT VEHICLE LUBRICATION IS A VERY DELICATE OPERATION FOR THE SAFETY. PAY ATTENTION TO KEEP THE LUBRICANT AT THE RIGHT LEVEL AND TO USE A GOOD QUALITY OIL OF THE CORRECT TYPE FOR YOUR VEHICLE OTHERWISE, THERE COULD BE ENGINE GRIPPING WHICH CAN CAUSE SERIOUS ACCIDENT OR EVEN DEATH.

# **ATTENTION**



USE LATEX GLOVES FOR MAINTENANCE OPERATIONS THAT REQUIRE CONTACT WITH THE USED OIL. THE USE OF ENGINE OIL CAN CAUSE SKIN TUMOURS IF HANDLED FOR A LONG TIME AND DAILY. CAREFULLY WASH YOUR HANDS WITH WATER AND SOAP AFTER USING USED ENGINE OIL.

KEEP OUT OF THE REACH OF CHILDREN.

DISPOSE OF OIL CORRECTLY.

# **WARNING**



PAY UTMOST ATTENTION WHEN PUTTING OIL IN YOUR VEHICLE NOT TO SPILL IT OUT.

IMMEDIATELY CLEAN ANY DROP OF SPILLED OIL AS THE OIL CAN COMPROMISE THE FINISHING OF YOUR VEHICLE. FURTHER, OIL MAKES TYRES EXTREMELY SLIPPERY AND THUS INCREASES THE RISK OF DANGEROUS ACCIDENTS AND SITUATIONS.

IN CASE OF OIL LOSS, DO NOT DRIVE YOUR VEHICLE. BEFORE USING THE VEHICLE, HAVE IT REPAIRED BY AN Official Moto Aprilia Dealer.

# **ATTENTION**





IF A POP-UP APPEARS ON THE DISPLAY WITH THE MESSAGE "ALARM OIL PRESSURE" OR "ALARM OIL SENSOR" AND AT THE SAME TIME THE GENERAL WARNING ICON LIGHTS UP AFTER THE ENGINE HAS BEEN STARTED OR WHILE RIDING. THIS MEANS THAT THE OIL IS NOT BUILDING ENOUGH PRESSURE OR AN OIL PRESSURE SENSOR ANOMALY HAS BEEN DETECTED. IN BOTH CASES, STOP THE ENGINE IMMEDIATELY AND CONTACT AN Official Aprilia Dealer.

FAILURE TO FOLLOW THIS WARNING CAN LEAD TO ENGINE SEIZURE, WHICH CAN CAUSE SERIOUS ACCIDENTS, EVEN DEATH.



Checking the engine oil level

Check the engine oil level frequently.

N.B



HALVE THE SERVICE INTERVALS INDICATED IF THE VEHICLE IS USED IN PARTICULARLY RAINY OR DUSTY CONDITIONS, ON POOR ROADS OR FOR HIGH PERFORMANCE RIDING.

# WARNING



THE OIL LEVEL MUST BE CHECKED WHEN THE ENGINE IS WARM.

WARNING



DO NOT LET THE ENGINE IDLE WITH THE VEHICLE AT A STANDSTILL TO WARM UP THE ENGINE AND OBTAIN THE OPERATING TEMPERATURE OF ENGINE OIL.

PREFERABLY CHECK THE OIL AFTER A JOURNEY OF AFTER TRAVELLING APPROXIMATELY 15 Km (10 miles) IN EXTRA-URBAN CONDITIONS (ENOUGH TO WARM UP THE ENGINE OIL TO OPERATING TEMPERATURE).

- Shut off the engine and wait a few seconds;
- Keep the vehicle upright with both wheels on the ground;
- Make sure that the vehicle is on a level surface;
- Check, through the oil sight glass on the engine crankcase, that the engine oil level is between the two reference marks.

**MAX** (top notch) = maximum level **MIN** (bottom notch) = minimum level



The level is correct if it is close to the upper "MAX" mark. If not, proceed with topping up the engine oil.

#### WARNING



THE OIL LEVEL MUST NEVER DROP BELOW THE MINIMUM MARKING OR EXCEED THE MAXIMUM MARKING; AN OIL LEVEL NOT WITHIN THE MINIMUM AND MAXIMUM MARKINGS MAY CAUSE SEVERE ENGINE DAMAGE.

# Engine oil top-up

If the engine oil needs to be topped up, proceed as follows:

Unscrew and remove the filler plug.



#### WARNING



ONLY USE THE ENGINE OIL TYPE INDICATED IN THE RECOMMENDED FLUIDS AND LUBRICANTS TABLE.

- Pour in enough engine oil to reach the correct level.
- Once the correct level has been reached, reinsert and tighten the filler plug.

# **WARNING**



DO NOT ADD ADDITIVES OR ANY OTHER SUBSTANCES TO THE OIL. WHEN USING A FUNNEL, ENSURE THAT IT IS PERFECTLY CLEAN.

# Engine oil change

## WARNING



THE ENGINE OIL MAY ONLY BE CHECKED AND CHANGED BY AN Authorised Aprilia Dealer.

# Engine oil filter replacement

#### WARNING



THE ENGINE OIL FILTER MAY ONLY BE CHECKED AND CHANGED BY AN Authorised Aprilia Dealer.

# **Tyres**

This vehicle is fitted with tubeless tyres (without inner tubes).

# **ATTENTION**





CHECK TYRE INFLATION PRESSURE REGULARLY AT AMBIENT TEMPERATURE. MEASUREMENTS MAY BE INCORRECT IF TYRES

ARE WARM. CHECK PRESSURE MAINLY BEFORE AND AFTER LONG TRIPS. AN OVER-INFLATED TYRE WILL PROVIDE A HARSH RIDE AS SURFACE UNEVENNESS IS NOT CUSHIONED AND IS SENT TO THE HANDLEBAR, THUS REDUCING GRIP AND ROAD HOLDING SPECIALLY WHEN CORNERING.

ON THE OTHER HAND, AN UNDER-INFLATED TYRE CAUSES THE CONTACT PATCH TO INCLUDE A LARGER PORTION OF THE TYRE SIDE WALLS. IF SO, THE TYRE MIGHT SLIP ON OR GET DETACHED FROM THE WHEEL RIM, RESULTING IN LOSS OF CONTROL OVER THE VEHICLE.

EVENTUALLY THE VEHICLE MIGHT SKID IN A BEND.

CHECK THE SURFACE CONDITION AND WEAR BECAUSE POOR TYRE CONDITION COULD COMPROMISE GRIP AND HANDLING OF THE VEHICLE.

SOME TYRE TYPES APPROVED FOR THIS VEHICLE FEATURE WEAR INDICATORS.

THERE ARE SEVERAL TYPES OF WEAR INDICATORS. CONSULT YOUR DEALER ON METHODS TO CHECK FOR WEAR.

CARRY OUT A VISUAL INSPECTION FOR TYRE WEAR AND TEAR, REPLACE TYRES WHEN WORN.

WHEN TYRES ARE OLD, THE MATERIAL MAY HARDEN AND NOT PROVIDE ADEQUATE ROAD HOLDING, EVEN IF TYRES ARE STILL WITHIN THE WEAR LIMIT. REPLACE TYRES IF THIS OCCURS. REPLACE THE TYRE IF IT IS WORN OR IF THERE IS A PUNCTURE LARGER THAN 5 mm (0.197 in) IN THE TREAD AREA.

THE WHEELS MUST BE BALANCED AFTER A TYRE IS MENDED.

USE ONLY TYRE SIZES INDICATED BY THE MANUFACTURER. DO NOT FIT TYRES WITH INNER TUBES ON RIMS FOR TUBELESS TYRES OR VICE VERSA. CHECK THAT THE INFLATION VALVES HAVE THEIR CAPS FITTED TO AVOID UNEXPECTED FLAT TYRES.

REPLACEMENT. REPAIR. MAINTENANCE AND BALANCING **OPERATIONS** ARE HIGHLY IMPORTANT AND SO THEY SHOULD BE CARRIED USING THE SPECIFIC TOOLS AND WITH ADEQUATE EXPERTISE. HAVE YOUR TYRES AND WHEELS SERVICED AT AN AUTHORISED DEALER OR SPECIALISED TYRE WORKSHOP.

NEW TYRES MAY BE COATED WITH AN OILY FILM: RIDE WITH CAUTION DURING THE FIRST KILOMETRES. DO NOT APPLY UNSUITABLE LIQUIDS ON TYRES.

Minimum tread depth:

front and rear: 2 mm (0.079 in) (USA 3 mm) (USA - 0.118 in), and never less than specified by applicable legislation in the country in which the vehicle is used.

# (if applicable)

The vehicle is equipped with TPMS sensors (Tyre Pressure Measurement System) located on the inside of the rims near the inflation valves; they communicate the tyre pressure to the digital display via radio frequency.

In the "Vehicle" page on the digital display, a screen can be viewed where the reference values and any warning signals (if active) are constantly visible. Any warning is accompanied by the TPMS icon lighting up permanently, the latter being visible on every page of the digital display. When replacing tires, pay close attention to the following information:

- The bead breaking of the tyre must take place at a distance of at least 90° from the inflation valve.
- The positioning of the levers for the removal of the tyre must be at a distance of at least 10 cm (3.93 in) from the inflation valve.



N.B

B

WITH EACH KEY "ON", THE TPMS ICON WILL FLASH UNTIL THE SYSTEM DETECTS A VALID SIGNAL FROM BOTH SENSORS. THE FLASHING CAN LAST UP TO THREE MINUTES.

# Spark plug removal

# **WARNING**



THE SPARK PLUGS MAY ONLY BE CHECKED, CLEANED AND CHANGED BY AN Authorised Aprilia Dealer.

# Air filter removal

WARNING



THE AIR FILTER MAY ONLY BE CHECKED AND CHANGED BY AN Authorised Aprilia Dealer.

# Coolant level

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

#### **ATTENTION**



COOLANT IS TOXIC IF INGESTED; CONTACT WITH YOUR EYES OR SKIN MAY CAUSE IRRITATION. IF THE FLUID GETS IN CONTACT WITH THE EYES OR SKIN, RINSE REPEATEDLY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

IF SWALLOWED, INDUCE VOMITING, RINSE THE MOUTH AND THROAT WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE IMMEDIATELY.

#### **ATTENTION**



NEVER UNDO THE RADIATOR CAP WHEN THE ENGINE IS WARM, AS

THE COOLANT IS PRESSURISED AND VERY HOT. CONTACT WITH SKIN OR CLOTHES MAY CAUSE SEVERE BURNS AND/OR INJURIES.

# Checking the coolant

- Shut off the engine and wait until it cools off.
- Keep the vehicle upright with both wheels on a flat surface.
- Check, through the slit in the front wheel housing, that the liquid level in the expansion tank is between the references " MAX " (maximum) and " MIN " (minimum).
- Otherwise, proceed with topping up the coolant.



# **ATTENTION**





CARRY OUT THE CHECK AND TOP UP THE REFRIGERANT LIQUID WITH THE ENGINE SWITCHED OFF AND COLD.

# Top up coolant

## **ATTENTION**





CARRY OUT THE CHECK AND TOP UP THE REFRIGERANT LIQUID WITH THE ENGINE SWITCHED OFF AND COLD.

- Keep the vehicle upright with both wheels on a flat surface and check the stability.
- Remove the cap (1) of the expansion tank, which can be reached through the opening in the front wheel housing.
- Top up the antifreeze liquid until it is close to the reference "MAX" on the expansion tank. Use the antifreeze indicated in the "Recommended Products" section.



# Brake fluid level check

#### Front brake

- Rest the vehicle on its stand.
- Turn the handlebar completely to the right, so that the liquid contained in the tank is parallel to the cap.
- Make sure that the fluid level in the reservoir is above the "MIN" reference mark:

MIN = minimum level



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

- · Check the brake pads and disc for wear.
- If the pads and/or the disc do not need replacing, top up the fluid.

#### Rear brake

- Rest the vehicle on its stand.
- Keep the vehicle upright so that the fluid in the reservoir is at the same level as the plug.

 Make sure that the fluid level in the reservoir is above the "MIN" reference mark:

MIN = minimum level

MAX = maximum level



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

- · Check the brake pads and disc for wear.
- If the pads and/or disc do not need replacing, top up without exceeding the reference "MAX".

# Topping up brake fluid

# **WARNING**



RISK OF BRAKE FLUID SPILLING. DO NOT OPERATE THE BRAKE LEVER IF THE BRAKE FLUID RESERVOIR CAP IS LOOSE OR HAS BEEN REMOVED.

#### WARNING



AVOID PROLONGED AIR EXPOSURE OF THE BRAKE FLUID. BRAKE FLUID IS HYGROSCOPIC AND ABSORBS MOISTURE WHEN IN CONTACT WITH AIR. LEAVE THE BRAKE FLUID RESERVOIR OPEN ONLY FOR THE TIME NEEDED TO COMPLETE THE TOPPING-UP PROCEDURE.

# **WARNING**



TO AVOID SPILLING THE FLUID OF THE BRAKING SYSTEM WHILE TOPPING UP, KEEP THE LEVEL OF THE FLUID IN THE RESERVOIR PARALLEL WITH THE EDGE OF THE RESERVOIR ITSELF (IN HORIZONTAL POSITION). DO NOT ADD ADDITIVES OR OTHER SUBSTANCES TO THE FLUID. FUNNELS OR ANY OTHER IMPLEMENTS USED MUST BE PERFECTLY CLEAN.

# **ATTENTION**





THE BRAKE FLUID IS HIGHLY CORROSIVE. AVOID CONTACT WITH THE SKIN, EYES AND PARTS OF THE MOTORCYCLE.

WHEN TOPPING UP, PROTECT PARTS OF THE MOTORCYCLE IN THE VICINITY OF THE RESERVOIR WITH ABSORBENT MATERIAL.

## Recommended products:

**DOT 4 brake fluid** SAE J 1703; FMVSS 116; ISO 4925; CUNA NC 956 DOT4

# Front braking system

 Use a short Philips screwdriver to unscrew the screws (1) of the front brake fluid tank (2).



Remove the cover (3).



· Remove the gasket (4).



- Top up the reservoir with recommended brake fluid to above the minimum level marking "MIN".
- Once topping up is complete, replace the gasket and cover and tighten the relevant screws.



# WARNING



ONLY FILL TO THE "MAX" LEVEL AFTER FITTING NEW BRAKE PADS. DO NOT FILL TO THE "MAX" LEVEL WITH WORN PADS, AS THIS WILL CAUSE FLUID TO ESCAPE WHEN REPLACING BRAKE PADS.

CHECK BRAKING EFFICIENCY. IF THE DEAD ZONE OF THE BRAKE PEDAL OR BRAKE LEVER IS TOO LONG, OR IN CASE OF FLUID LOSS, IT MAY BE NECESSARY TO BLEED THE AIR TRAPPED IN THE SYSTEM.

HAVE THIS PROCEDURE PERFORMED BY AN Authorised Aprilia Dealer.

# Rear braking system

• Unscrew and remove the cap (1) of the rear brake fluid reservoir (2).



· Remove the gasket (3).



- Top up the reservoir with recommended brake fluid to above the minimum level marking "MIN".
- Once topping up is complete, replace the gasket and screw the tank cover back on.



# WARNING



ONLY FILL TO THE "MAX" LEVEL AFTER FITTING NEW BRAKE PADS. DO NOT FILL TO THE "MAX" LEVEL WITH WORN PADS, AS THIS WILL

CAUSE FLUID TO ESCAPE WHEN REPLACING BRAKE PADS.

CHECK BRAKING EFFICIENCY. IF THE DEAD ZONE OF THE BRAKE PEDAL OR BRAKE LEVER IS TOO LONG, OR IN CASE OF FLUID LOSS, IT MAY BE NECESSARY TO BLEED THE AIR TRAPPED IN THE SYSTEM.

HAVE THIS PROCEDURE PERFORMED BY AN Authorised Aprilia Dealer.

# **Battery**

# **Battery removal**

- Ensure that the ignition switch is turned to "OFF".
- Remove the passenger and rider saddles.
- Unscrew the two fastening screws (1).



Remove the battery cover (2).



Unscrew and remove the screw (3) from the negative terminal (-).



Move the negative lead (4) aside.



Unscrew and remove the screw (5) of the positive terminal (+).



Move the positive lead (6) aside.



# **WARNING**



TAKE UTMOST CAR AND DO NOT MAKE CONTACT BETWEEN THE BATTERY TERMINALS AND ANY METALLIC OBJECT IN ORDER TO PREVENT THE RISK OF SHORT CIRCUIT.

 Grip the battery (7) firmly, slide it upwards and remove it from its housing.

- Put the battery away on a level surface, in a cool and dry place.
- Reposition the rider and passenger saddles on the vehicle.



# Installing a new battery

#### WARNING



# CHECK THAT THE CABLE TERMINALS AND BATTERY LEADS ARE:

- IN GOOD CONDITION (NOT CORRODED OR COVERED BY DEPOSITS):
- COVERED BY NEUTRAL GREASE OR PETROLEUM JELLY.

# **WARNING**



# UPON REFITTING, CONNECT THE LEAD TO THE POSITIVE TERMINAL (+) FIRST AND AFTERWARDS THE LEAD TO THE NEGATIVE TERMINAL (-).

- If the rider and passenger saddles have been refitted onto the vehicle, remove them again.
- Install the battery (7) in its seat.



Position the positive cable (6) and secure it to the positive (+) terminal by tightening the screw (5) to a torque of 4.5 ± 0.5 Nm (3.32 ± 0.37 lbf ft).



Position the negative cable (4) and secure it to the negative terminal (-) by

tightening the screw (3) to a torque of  $4.5 \pm 0.5$  Nm (3.32  $\pm 0.37$  lbf ft).



 Position the battery cover (2), taking care to insert the front part into its seat on the vehicle



- Tighten the two screws (1).
- Position and secure the rider saddle as described in the "saddle opening" section



# Charging the battery

The battery may be charged with the battery itself in its mounting on the vehicle and connected to the electrical system of the vehicle. The battery may also be charged with the battery removed from the vehicle and disconnected from the electrical system.

To charge the battery:

- Set the battery charger for the recharge type indicated.
- Connect the battery to a battery charger of a suitable type for the battery itself.

## ATTENTION



WHEN RECHARGING OR USING THE BATTERY, BE CAREFUL TO HAVE THE ROOM ADEQUATELY AIRED. DO NOT BREATH GASES RELEASED WHEN THE BATTERY IS RECHARGING.

# SETTINGS AND PARAMETERS FOR CHARGING LEAD BATTERIES:

# Normal recharge

- Electric current: 1,0 A

- Time: 8-10 hours

# **Quick charge**

- Electric current: 10 A

- Time: 1 hour

# **WARNING**



THE CHARGE VOLTAGE MUST NEVER EXCEED 15V.

# **WARNING**



AFTER CHARGING, WAIT ONE OR TWO HOURS BEFORE CHECKING THE VOLTAGE. IF THE VOLTAGE IS BELOW 12.4V, ADDITIONAL CHARGING IS NECESSARY.

# Long inactivity

# **WARNING**



IF THE VEHICLE IS INACTIVE FOR MORE THAN FIFTEEN DAYS, DISCONNECT THE 30A FUSE TO PREVENT THE BATTERY FROM DETERIORATING DUE TO THE CONSUMPTION OF CURRENT BY THE MULTI-FUNCTION COMPUTER.

# **WARNING**



REMOVING THE 30A FUSE WILL RESET THE: DIGITAL CLOCK, TRIP INFORMATION AND CHRONOMETER TIMES.

If the vehicle is inactive longer than fifteen days, the battery needs to be recharged.

Remove the battery.

In winter or when the vehicle is out of use for prolonged periods, check charge level frequently (about once a month) to prevent deterioration

Recharge it fully with an ordinary charge.

If the battery is still on the vehicle, disconnect the cables from the terminals

## Fuses

It is necessary to check the fuses whenever an electrical component fails to operate or malfunctions or when the engine does not start.

Start by checking the secondary fuses in order of size (from the lowest amperage fuse to the highest), and then check the 30A main fuse.

# WARNING



DO NOT ATTEMPT TO REPAIR FAULTY FUSES.

NEVER USE A FUSE THAT IS DIFFERENT THAN WHAT IS SPECIFIED TO PREVENT DAMAGES TO THE ELECTRICAL SYSTEM OR SHORT CIRCUITS, AND THE RISK OF FIRE.

#### WARNING



A FUSE THAT BLOWS FREQUENTLY MAY INDICATE A SHORT CIRCUIT OR OVERLOAD. CONTACT AN authorised aprilia Dealer.

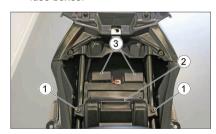
To check:

 To avoid an accidental short-circuit, place the power switch to "OFF".



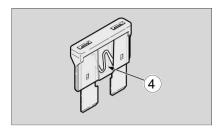
#### SECONDARY FUSES

- Remove the passenger and rider saddles.
- Undo the two fixing screws (1) and remove the battery cover (2).
- Open the covers (3) of the secondary fuse boxes.



- Take out one fuse at a time and check whether the filament (4) is broken.
- Before replacing the fuse, find and solve, if possible, the reason that caused the problem.

• If the fuse is damaged, replace it with one of the same current rating.





IF THE SPARE FUSE IS USED, REPLACE WITH ONE OF THE SAME TYPE IN THE CORRESPONDING FITTING.



Auxiliary fuses are placed in the central part of the motorcycle, under the rider saddle.

AUXILIARY FUSES DISTRIBUTION		
A) 5A fuse	Rear position, horn, licence plate light	
B) 2A fuse	Positive key-on power for Back Light	
C) 5A fuse	ECU positive switched live, instrument panel positive switched live, Positive key-on power for engine starter relay	
D) 2A fuse	Positive under consent start button	
E) 5A fuse	Positive key-on power for AMP (optional), positive key-on power for OBD2, positive key-on power for anti-theft (optional), positive key-on power for TPMS (optional)	
F) 5A fuse	Positive key-on power for headlamp (load)	

AUXILIARY FUSES	AUXILIARY FUSES DISTRIBUTION		
G) 2A fuse	Positive key-on power for USB (optional)		
H) 10A fuse	ABS valve power feed		
I) 15A fuse	ABS pump power feed		
L) 15A fuse	Fan relay power feed, ECU power feed, fuel pump relay power feed, lambda probe power feed pre and post catalytic converter, RH and LH injector power feed, RH and LH coil power feed, secondary air system valve power feed.		
M) 5A fuse	Instrument panel power feed, turn indicators power supply		
N) 7.5A fuse	ECU permanent positive lead		

# **AUXILIARY FUSES DISTRIBUTION**

O) 5A fuse

Anti-theft
preparation power
supply,
OBD2
power supply,
AMP power supply

(optional)

P) 7.5A fuse Cooling fan power feed

Q) Spare fuses

# **MAIN FUSE**

To access the main fuse, remove both saddles and the side fairing as follows:

Remove the rear fixing screw (1).



Remove the fastening screw located under the rider saddle (2).



Remove the three central fixing screws (3).



Remove the front fixing screw (4).



Release the retaining clip (5) of the side panel.



Remove the left fairing from the vehicle.



- Disconnect the connector (6) to access the main fuse (R).
- Remove the fuse and check whether the filament is broken.
- Before replacing the fuse, find and solve, if possible, the reason that caused the problem.
- If the fuse is damaged, replace it with one of the same current rating.



# N.B



IF THE SPARE FUSE IS USED, REPLACE WITH ONE OF THE SAME TYPE IN THE CORRESPONDING FITTING.

#### WARNING



REMOVING THE 30A FUSE WILL RESET THE: DIGITAL CLOCK, TRIP INFORMATION AND CHRONOMETER TIMES.

The main fuse is located behind the left hand side fairing of the motorcycle, under the rider saddle.

# **LOCATION OF THE MAIN FUSE**

R) 30A fuse

Battery charging, all vehicle utilities

P) spare fuse

# Bulbs

N.B



WHEN THE REAR WHEEL EXCEEDS THE SPEED OF 1 km/h (0.62 mph) (EVEN WITH THE ENGINE OFF, AND THE KEY SET TO ON), THE HEADLIGHTS WILL TURN ON AND WILL REMAIN ON FOR 30 SECONDS (FROM THE TIME IN WHICH THE REAR WHEEL STOPS MOVING).

# Front light cluster

The headlamp unit uses LED light sources only, and consists of the following modules:

- · two low beam headlight modules (1);
- one high beam headlight module (2);



- two daytime running lights modules (3);
- two turn indicator modules (4);



# WARNING



IN THE EVENT OF A MALFUNCTION OF THE HEADLAMP UNIT, CONTACT AN Official Aprilia Dealer.

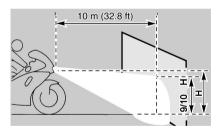
# Headlight adjustment

N.B



IN COMPLIANCE WITH LOCAL LEGAL REQUIREMENTS, SPECIFIC PROCEDURES MUST BE FOLLOWED WHEN CHECKING LIGHT BEAM ADJUSTMENT.

To quickly check if the headlamp is aimed correctly, place the vehicle on a level surface 10 m (32.8 ft) from a vertical wall. Turn on the low beam light, sit on the vehicle and check that the light beam projected to the wall is a little below the horizontal straight line of the headlight (about 9/10 of the total height).



In order to carry out the vertical adjustment of the light beam:

# (LOW BEAM HEADLIGHTS)

To adjust the vertical inclination of the low beam light headlamps, proceed as described below:

 Working from the inside of the top fairing, use a Phillips screwdriver to intercept the register (1) of the left headlamp. Turn the adjuster CLOCKWISE to RAISE the light beam, or COUNTER-CLOCKWISE to LOWER if



Repeat, if necessary, the adjustment operation for the right headlamp using the adjuster (2).



N.B



THE LOW BEAM HEADLAMPS ARE HIDDEN BY THE INNER COVERS OF THE FAIRING. HOWEVER, THEY CAN

BE REACHED WITHOUT REMOVING THE COVERS THEMSELVES, AS SHOWN IN THE FIGURES.

N.B



CHECK THAT THE VERTICAL ALIGNMENT OF THE BEAM IS CORRECT.

# (HIGH BEAM HEADLIGHT)

- Operating from underneath the headlamp unit, turn the adjuster screw (3). TIGHTEN (clockwise) to lower the light beam; LOOSEN (anticlockwise) to raise the light beam.
- This adjuster screw may be used to adjust the vertical alignment of the high beam light beam.



N.B



CHECK THAT THE VERTICAL ALIGNMENT OF THE BEAM IS CORRECT.

## Rear light assembly

#### WARNING



THE TAIL LIGHT ASSEMBLY MUST BE REMOVED, CHECKED AND, IF NECESSARY, REPLACED BY AN Authorised Aprilia Dealer.

#### Rear turn indicators

#### WARNING



FOR REMOVING, CHECKING AND REPLACING THE REAR INDICATORS, PLEASE SEE AN Authorised Aprilia Dealership.

## Number plate light

WARNING



TO HAVE THE LICENCE PLATE LIGHT REMOVED, CHECKED AND, IF NECESSARY, REPLACED, TAKE THE VEHICLE TO AN Official Aprilia Dealer.

#### **Rear-view mirrors**

The rear view mirrors may be folded inwards towards the rider.



 If necessary, adjust the position of the rear view mirrors as shown in the figure.



#### ATTENTION



THE VEHICLE MAY NOT BE RIDDEN ON PUBLIC ROADS WITH THE REAR VIEW MIRRORS REMOVED.

#### Front and rear disc brake

Do not ride your vehicle with worn or malfunctioning brakes! Brakes are one of the most important parts for your vehicle's safety system, and using a vehicle that does not have perfect brakes means you are at high risk of collisions and accidents, even fatal.

#### **ATTENTION**



IN CONDITIONS OF HUMID AND WET GROUND, THE PERFORMANCE OF THE BRAKING SYSTEM IS WIDELY REDUCED.

WHEN THE ROAD SURFACE IS WET DUE TO RAIN, YOU SHOULD CHOOSE TO MAINTAIN A DOUBLE SAFETY DISTANCE, ALSO BECAUSE THE TYRE GRIP TO THE GROUND IS EXTREMELY REDUCED. PAY UTMOST ATTENTION TO WATER THAT CAN COME INTO CONTACT WITH THE BRAKES AFTER YOU HAVE WASHED YOUR VEHICLE, OR AFTER PASSING

THROUGH PUDDLES ON THE ROAD, AS IT CAN SUFFICIENTLY WET YOUR BRAKING SYSTEM AND THEREFORE CONSIDERABLY REDUCE THEIR PERFORMANCE.

FAILURE TO OBSERVE THIS WARNING CAN LEAD TO SERIOUS ACCIDENTS AND EVEN DEATH.

Your vehicle is equipped with disc brakes with separate braking systems.

The front braking system is equipped with a single disc on the right side of the front wheel. The rear braking system is equipped with a single disc located on the right side of the rear wheel. The following information may refer to a single braking system but is valid for both braking systems.

#### **ATTENTION**





A DIRTY DISC SMEARS THE PADS RESULTING IN POOR BRAKING.

REPLACE DIRTY PADS AND CLEAN AGAIN THE DIRTY DISC USING A TOP QUALITY DEGREASING PRODUCT.

#### **ATTENTION**



BRAKES ARE EXTREMELY IMPORTANT FOR YOUR SAFETY. DO NOT USE YOUR VEHICLE IF THE BRAKES ARE NOT WORKING PERFECTLY. ALWAYS CHECK THE EFFICIENCY OF THE BRAKES BEFORE RIDING THE VEHICLE.

#### **ATTENTION**



IF THE POSITION OF THE BRAKE LEVER CHANGES, IT MAY BE DUE TO A PROBLEM WITH THE HYDRAULIC SYSTEM. FOR ANY DOUBT ABOUT THE PERFECT OPERATION OF THE BRAKES AND FOR THE NORMAL PERIODIC CHECK, CONTACT AN Official Aprilia Dealer BEFORE RIDING THE VEHICLE.

PAY UTMOST ATTENTION TO THE BRAKE DISCS AND THE FRICTION CAPACITY, MAKING SURE THEY ARE NOT DIRTY AND OILY, ESPECIALLY AFTER MAINTENANCE OR INSPECTION OPERATIONS.

CHECK THAT THE BRAKE PIPES ARE NOT GLAZED OR TWISTED, AND THAT THERE IS NO LEAKAGE.

KEEP BRAKE FLUID OUT OF THE REACH OF CHILDREN. DISPOSE OF BRAKE FLUID CORRECTLY.

#### **ATTENTION**



CHECK BRAKE PADS FOR WEAR MAINLY BEFORE EACH RIDE.

#### To perform a quick pad wear check:

Rest the vehicle on its stand.



- Carry out a visual inspection of brake disc and pads as follows:
- look from above at the rear to check the front brake calliper (1);



- look from above at the rear to check the front brake calliper (2).



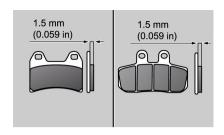
#### **ATTENTION**





EXCESSIVE WEAR OF THE FRICTION MATERIAL MAKES THE PAD METAL SUPPORT GET INTO CONTACT WITH THE DISC, WHICH RESULTS IN A METALLIC NOISE AND SPARKS IN THE CALLIPER; THEREFORE, BRAKING EFFICIENCY AND DISC SAFETY AND INTEGRITY ARE AT RISK.

Once the friction material of even one front or rear pad has worn to a thickness of approximately 1.5 mm (0.059 in) (or even if even one of the wear indicators is no longer visible), contact an Official Aprilia Dealer to replace all the brake pads.



#### **ATTENTION**





USE ONLY ORIGINAL BRAKE PADS.

THE USE OF BRAKE PADS OTHER THAN ORIGINAL ONES CAN COMPROMISE PERFORMANCE AND/ OR DAMAGE THE BRAKING SYSTEM.

# Vehicle inactivity

A number of precautionary measures must be taken to prevent the possible consequences of prolonged lack of usage of the vehicle. Besides, it is necessary to carry out general repairs and checks before garaging the motorcycle as one can forget to do so afterwards.

Proceed as follows:

- · Remove the battery.
- Wash and dry the motorcycle.
- Polish the painted surfaces.

- Inflate the tyres.
- Store the motorcycle in a cool, dry place, not exposed to sun rays and with minimum temperature variations.
- Wrap and tie a plastic bag around the exhaust pipe opening to keep moisture out.

#### N.B



USE A SUITABLE SUPPORT TO LIFT THE VEHICLE WITH BOTH TYRES OFF THE GROUND.



- Place the vehicle on the specific front stand (optional) and rear stand (optional).
- Cover the vehicle (do not use plastic or waterproof materials).

#### AFTER STORAGE

N.B



# REMOVE THE PLASTIC BAG FROM THE END OF THE SILENCER.

- Uncover and clean the vehicle.
- Check the battery for correct charge and install it.
- Refill the fuel tank
- Carry out the pre-ride checks.

#### N.B



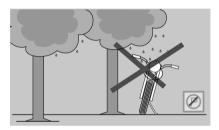
AS A TEST, RIDE THE MOTORCYCLE FOR A FEW KILOMETRES AT A MODERATE SPEED AND AWAY FROM TRAFFIC AREAS.

### Vehicle cleaning

Clean the motorcycle frequently if exposed to adverse conditions, such as:

- · Air pollution (cities and industrial areas).
- Salinity and humidity in the atmosphere (seashore areas, hot and wet weather).
- Special environmental/seasonal conditions (use of salt, anti-icing chemical products on the roads in winter).

- Always clean off any smog and pollution residue, tar stains, insects, bird droppings, etc. from the bodywork.
- Avoid parking the vehicle under trees. In some seasons, in fact, residues, resins, fruits or leaves may fall from the trees, containing chemicals that are harmful to the paintwork.
- Clean the dashboard with a soft, damp cloth.



#### WARNING



BEFORE WASHING THE VEHICLE, COVER THE ENGINE AIR INTAKES AND THE EXHAUST PIPES.

#### WARNING



IN CASE OF DISCOLOURATION OF THE SILENCER, APPLY FINISHING POLISH WITH A SOFT CLOTH.

#### **ATTENTION**





AFTER CLEANING YOUR VEHICLE, BRAKING EFFICIENCY MAY BE TEMPORARILY AFFECTED DUE TO THE PRESENCE OF WATER ON THE FRICTION SURFACES OF THE BRAKING CIRCUIT.

ALLOW LONGER BRAKING DISTANCES TO PREVENT ACCIDENTS.

BRAKE REPEATEDLY TO RESTORE NORMAL OPERATION.

CARRY OUT THE PRE-RIDE CHECKS.

#### N.B



AFTER HEAVY RAIN, WASHING OR IN CASE OF RAPID TEMPERATURE CHANGES, THE LENSES OF THE FRONT LIGHT ASSEMBLY MAY BECOME FOGGY.

THIS STATE IS DUE TO THE TEMPERATURE DIFFERENCE

BETWEEN THE OUTSIDE AND THE INSIDE AND DOES NOT INDICATE A FAULT OF THE FRONT LIGHT ASSEMBLY.

To remove dirt and mud accumulated on painted surfaces, wet the soiled areas thoroughly with a low-pressure water jet, then remove dirt and mud with a soft car body sponge soaked abundantly in a solution of car body shampoo in water (2 - 4% shampoo dissolved in water). Then rinse with plenty of water, and dry with a chamois leather.

To clean the external parts of the engine and the parts of anodised or painted aluminium, use neutral soap and water. Using aggressive detergents may damage the surface treatment of these components.

Cleaning should only be carried out when the engine is cold.



N.B



FAILURE TO COMPLY WITH THESE INDICATIONS MAY LEAD, IN CERTAIN CASES, TO THE VARIATION OF THE TONALITY OF THE TREATED SURFACE AND CONSEQUENTLY THE WARRANTY WILL BE VOID.

#### **WARNING**



TO CLEAN THE LIGHT ASSEMBLIES, USE A SPONGE SOAKED IN WATER AND MILD DETERGENT, GENTLY RUBBING THE SURFACE AND RINSING FREQUENTLY WITH PLENTY OF WATER.

DO NOT CLEAN THE FRONT LIGHT ASSEMBLY WITH DETERGENTS CONTAINING TENSIOACTIVE AGENTS AND/OR ALCOHOL.

REMEMBER TO CLEAN THE VEHICLE **BEFORE** CAREFULLY **APPLYING** SILICON WAX POLISH, DO NOT POLISH MATT-PAINTED SURFACES WITH POLISHING PASTE. THE SHOULD **NEVER** VEHICLE BE WASHED IN DIRECT SUNLIGHT. ESPECIALLY DURING SUMMER. OR WITH THE BODYWORK STILL HOT AS THE CAR SHAMPOO CAN DAMAGE THE PAINTWORK IF IT DRIES BEFORE BEING RINSED OFF.

#### WARNING

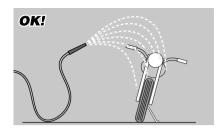


NEVER USE CLOTHS SOAKED IN PETROL, DIESEL OIL OR KEROSENE FOR CLEANING THE PAINTED OR PLASTIC SURFACES SO AS NOT TO DAMAGE THE LUSTRE FINISH OR ALTER THE MECHANICAL PROPERTIES.

#### WARNING



DO NOT USE WATER (OR LIQUIDS) AT TEMPERATURES OVER 40°C (104°F) WHEN CLEANING THE VEHICLE PLASTIC PARTS. DO NOT AIM HIGH PRESSURE AIR/WATER JETS OR STEAM JETS DIRECTLY ON THESE COMPONENTS. DO NOT USE ALCOHOL OR SOLVENTS TO CLEAN ANY RUBBER OR PLASTIC SADDLE COMPONENTS USE WATER AND MILD SOAP.



#### **WARNING**



**SOLVENTS** DO NOT USE OR **PETROL** BY-PRODUCTS (ACETONE. TRICHLOROETHYLENE. TURPENTINE. PETROL. THINNERS) TO CLEAN THE SADDLE. USE INSTFAD DETERGENTS WITH SURFACE ACTIVE AGENTS NOT EXCEEDING 5% (NEUTRAL SOAP, DEGREASING **DETERGENTS** OR ALCOHOL).

DRY THE SADDLE WELL AFTER CLEANING.

THE USE OF WAX OR SIMILAR PRODUCTS COMPROMISES THE SAFETY OF THE SADDLE ITSELF.

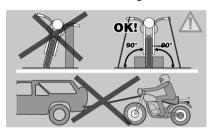
Lubricate the following components after washing the vehicle:

- drive chain;
- lever controls;

- pedal controls;
- · clutch cable;
- ignition lock;
- passenger footrests.

## **Transport**

 Fold the rear view mirrors inwards to reduce the risk of damage.



#### **ATTENTION**



BEFORE TRANSPORTING THE VEHICLE, CAREFULLY EMPTY THE FUEL TANK AND CHECK THAT IT IS COMPLETELY DRY.

DURING TRANSPORT, THE VEHICLE SHOULD BE UPRIGHT AND SECURELY ANCHORED AND SHOULD HAVE THE FIRST GEAR ENGAGED; SO AS TO AVOID POSSIBLE FUEL, OIL OR COOLANT LEAKS.

IN CASE OF FAILURE, DO NOT TOW THE VEHICLE BUT CONTACT A ROAD ASSISTANCE SERVICE INSTEAD TO HAVE THE INFLAMMABLE FLUIDS DRAINED.

#### **Drive chain**

#### **ATTENTION**





AN EXCESSIVELY LOOSE DRIVE CHAIN MAY **DETACH** FROM **FRONT** THE **PINION** OR SPROCKET, CAUSING AN ACCIDENT OR SIGNIFICANT **DAMAGES** PERSONS AND TO THE VEHICLE, CHECK REGULARLY THE CLEARANCE OF THE DRIVE CHAIN AND ADJUST THE CHAIN NECESSARY, TO CHANGE THE DRIVE CHAIN. CONTACT AN Authorised Aprilia Dealer, WHICH WILL BE PLEASED TO PROVIDE YOU WITH QUICK AND THOROUGH SERVICE.

#### **WARNING**



INCORRECT MAINTENANCE MAY CAUSE EARLY WEAR OF THE DRIVE CHAIN AND/OR DAMAGE THE

FRONT PINION AND/OR THE REAR SPROCKET. PERFORM DRIVE CHAIN MAINTENANCE OPERATIONS MORE FREQUENTLY IF YOU RIDE THE VEHICLE IN EXTREME CONDITIONS OR ON DUSTY AND/OR MUDDY ROADS.

#### WARNING



DO NOT MODIFY THE FINAL DRIVE GEAR RATIO OR THE NUMBER OF LINKS IN THE CHAIN.

#### Final drive ratio

15 / 43

#### Type

Regina 106 links with sealed master link

#### Model

520 - 106

#### Chain clearance check

# To check the clearance:

- Shut off the engine.
- · Rest the vehicle on the side stand.
- · Select neutral.
- Check that the vertical oscillation of the lower chain strand, measured on the sprocket axle at 302.5 mm (11.91 in)

from the centre of the rear wheel axle, is between 25 - 30 mm (0.98 - 1.18 in).



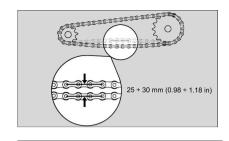
#### WARNING



WHEN CHECKING THE DEFLECTION OF THE CHAIN, THE CHAIN MUST NOT BE ABLE TO TOUCH THE UNDERSIDE PART OF THE SWINGARM IN THE POSITION INDICATED BY THE ARROW.

 Move the vehicle forwards to check the vertical deflection of the chain in other positions; the chain deflection must be constant throughout the entire rotation of the wheel

If the clearance is uniform, but not between 25 - 30 mm (0.98 - 1.18 in), adjust it.



#### **WARNING**



IF THE CLEARANCE IS GREATER IN SOME POSITIONS IT MEANS THAT SOME ELEMENTS OF THE CHAIN ARE CRUSHED OR HAVE SEIZED UP. IN THIS CASE THE CHAIN SHOULD BE REPLACED.

LUBRICATE THE CHAIN REGULARLY TO PREVENT THE RISK OF SEIZURE.

#### Chain clearance adjustment

#### WARNING



ANY WORK ON THE DRIVE CHAIN MUST BE PERFORMED BY AN Authorised Aprilia Dealer.

# 4 Maintenance

# Checking wear of chain, pinion and sprocket

Also check the following parts and check that the chain, the front sprocket and the rear sprocket do not have:

- damaged rollers.
- loosened pins.
- dry, corroded, crushed or seized links.
- · excessive wear.
- Missing sealing rings.
- excessively worn or damaged front or rear sprocket teeth.

#### **WARNING**



IF THE CHAIN ROLLERS ARE DAMAGED, THE PINS ARE LOOSE AND/OR THE SEAL RINGS ARE DAMAGED OR MISSING, THE ENTIRE CHAIN UNIT (PINION, SPROCKET AND CHAIN) NEEDS TO BE REPLACED.

#### **WARNING**



CHECK THE STATE OF WEAR OF THE CHAIN SLIDER.

WARNING



LUBRICATE THE CHAIN AT FREQUENT INTERVALS, ESPECIALLY IF ANY DRY OR CORRODED PARTS ARE NOTED. CRUSHED OR SEIZED LINKS MUST BE LUBRICATED AND RESTORED TO PROPER WORKING ORDER. IF THIS IS NOT POSSIBLE, HAVE THE CHAIN REPLACED BY AN Authorised Aprilia Dealer.

#### Chain lubrication and cleaning

Do not wash the chain with water jets, vapour jets, high-pressure water jets and highly flammable solvents.

- Wash the chain with fuel oil or kerosene.
   Maintenance operations should be more frequent if there are signs of early rust.
- Lubricate the chain whenever necessary.
- After washing and drying the chain, lubricate it with spray grease for sealed chains.

#### WARNING



THE DRIVE CHAIN IS FITTED WITH RUBBER O-RINGS BETWEEN ITS SIDE PLATES IN ORDER TO RETAIN THE

LUBRICATING GREASE. PROCEED WITH THE UTMOST CAUTION WHEN ADJUSTING, LUBRICATING, WASHING OT REPLACING THE CHAIN.

COMMERCIALLY AVAILABLE CHAIN LUBRICANTS MAY CONTAIN SUBSTANCES THAT DAMAGE THE RUBBER O-RINGS FITTED ON THE CHAIN.

DO NOT USE THE VEHICLE IMMEDIATELY AFTER LUBRICATING THE CHAIN SINCE THE LUBRICANT WOULD BE SPRAYED OUT AND CONTAMINATE THE SURROUNDING AREA.

# **RS 457**





CHAPTER 05
Technical data

# Data

Data					
Dimensions and m	ass				
Max. length	1960 mm (77.17 in)				
Max. width (at handlebar)	795 mm (31.30 in)				
Max. height (to top fairing)	1,140 mm (44.88 in)				
Wheelbase	1350 mm (53.15 in)				
Kerb weight	176 kg (388.01 lb)				
Maximum weight limit	386 kg (850.98 lb)				
Engine					
Туре	2 cylinder in line (transverse), 4 stroke, 4 valves per cylinder, double overhead camshafts				
Engine capacity	457 cc (27.89 cu in)				
Bore / stroke	69 mm / 61.11 mm (2.72 in / 2.41 in)				
Compression ratio	10.5 +/- 0.5: 1				
Idle engine speed	1,550 +/- 100 rpm				

Engine	
Engine revs at maximum speed	10700 +/- 100 rpm
Clutch	Multi plate wet clutch with mechanical control lever on left side of the handlebar. Anti-juddering and slipper clutch systems
Ignition	Electric
Timing	Morse chain on intake and exhaust shaft, with calibrated bucket tappets.
Lubrication system	Wet sump
Oil pump	Trochoidal pump
Oil filter	With external cartridge filter
Cooling	Liquid
Cooling system	3-way thermostatic valve, cooling radiator with electric fan and expansion tank

Engine	
Coolant pump	Centrifugal bearingless aspirating pump with integrated aluminium gasket
Air filter	Polyester
Capacity	
Fuel tank capacity	13   (2.86 UK gal;
(including reserve)	3.43 US gal)
Fuel tank reserve capacity	3 I (0.66 UK gal; 0.79 US gal)
Engine oil	oil change and oil filter replacement: 2200 cc in (134.25 cu in)
Coolant	1.5 I (0.33 UK gal; 0.40 US gal)
Seats	2
Drive ratios	
Primary drive ratio	39 / 80 (with gears)
Drive ratio, 1st gear	13 / 43 (secondary)

Drive ratios		Electronic control
Drive ratio, 2nd gear	19 / 44 (secondary)	
Drive ratio, 3rd gear	20 / 35 (secondary)	
Drive ratio, 4th gear	27 / 38 (secondary)	
Drive ratio, 5th gear	29 / 34 (secondary)	Power feed
Drive ratio, 6th gear	31 / 32 (secondary)	Fuel
Final drive ratio	15 / 43	
		Fuel supply system
Drive chain		Throttle body diameter
Type	Regina 106 links	Туре
	With sealed master link	1,00
Model	520 - 106	
Electronic control s	systems	
a-PRC system	(Aprilia Performance Ride Control) which includes: AEM (engine map management system), ABS (Anti-lock Braking System), ATC (traction control),	<b>Chassis</b> Type

Electronic control systems				
	AQS (where fitted) (Clutchless Assisted Shifting System both up and downshifting).			
Power feed				
Fuel	Unleaded gasoline E10 (95 R.O.N.)			
Fuel supply system				
Throttle body diameter	36 mm (1.42 in)			
Туре	Electronic injection with 1 injector per cylinder and 2 motorised throttle bodies (ride-bywire) with fixed length intake trumpets. 1 dynamic air intake. Selectable multimap.			
Chassis				
Туре	Composite structure aluminium			

Chassis					
	frame with cast elements.				
Steering rake angle	24.1° (measurements with respect to bare chassis)				
Suspension					
Front fork	Adjustable upside- down hydraulic fork with 41 mm (1.61 in) stanchions				
Travel	120 mm (4.72 in)				
Rear shock absorber	Shock absorber adjustable at spring preload.				
Travel	52 mm (2.05 in)				
Brakes					
Front	Ø 320 mm (12.60 in) disc, four-piston caliper - Ø 28 mm (1.10 in) and 2 pads - axial master cylinder and metal braided brake hose.				

Brakes	
Rear	Disc - Ø 220 mm (8.66 in), single-piston floating caliper - Ø 34 mm (1.34 in) - pump with separate tank and braided hose.
Wheel rims	
Front wheel	3.00 x 17", alloy
Rear wheel	4.50 x 17", alloy
T	
Tyres	
Front tire	110/70 ZR17 (54W)
	110/70 ZR17 (54H)
Inflation pressure	Rider: 2.0 bar (200 KPa) (29.00 PSI)
	Rider + Passenger: 2.0 bar (200 KPa) (29.00 PSI)
Rear tyre	150/60 ZR17 (66W)
	150/60 ZR17 (66H)
Inflation pressure	Rider: 2.2 bar (220 KPa) (31.91 PSI)

Tyres	
	Rider + Passenger: 2.2 bar (220 KPa) (31.91 PSI)
Electrical system	
Spark plugs	NGK IR MR9DI-7
Electrode gap	0.7 - 0.8 mm (0.027 - 0.031 in)
Battery	SF ETZ9-BS, 12V 8Ah
Coils	Stick coil
Recharging system	Flywheel with rare earth magnets
Generator	360 W
Main fuses	30A
Secondary fuses	2A (2), 5A (6) - 7,5A (7) - 10A - 15A (2)
Functions: Headlar Licence plate light	np/Tail light/
High beam/low beam light	LED
Front DRL	LED

Functions: Headlamp/Tail light/ Licence plate light					
Turn indicators	LED				
Rear running light / brake light	LED				
Number plate light	LED				
	,				
Indicator lamps					
Neutral	LED				
High beam headlight	LED				
ABS	LED				
MI	LED				
Turn indicators	LED				

#### **RED DIRECTIVE 2014/53/EU**

All the radio frequency devices installed on this vehicle by the constructor are compliant with EU Directive 2014/53/EU (also known as the RED directive). The relative homologation documents are available at the following web address:

redhomologation.piaggiogroup.com



# **RS 457**





CHAPTER 06
Spare parts and accessories

# Warnings

#### **ATTENTION**



TO PREVENT ACCIDENTS AND TO GUARANTEE PROPER STABILITY, PERFORMANCE AND SAFETY, RIDE THE VEHICLE VERY CAREFULLY WHEN IT IS FITTED WITH ACCESSORIES OR WITH UNUSUAL LOADS.

#### WARNING





IT IS ALSO RECOMMENDED THAT ORIGINAL PIAGGIO GROUP SPARE PARTS BE USED, AS THESE ARE THE ONLY ONES OFFERING YOU THE SAME QUALITY GUARANTEE AS THOSE INITIALLY FITTED ON THE VEHICLE.

NOTE THAT USING NON-ORIGINAL SPARE PARTS WILL VOID THE WARRANTY.

#### **ATTENTION**



PIAGGIO GROUP SELLS ITS OWN LINE OF ACCESSORIES, WHICH ARE APPROVED FOR USE WITH PIAGGIO VEHICLES AND COVERED BY A PIAGGIO WARRANTY. IT IS THEREFORE ESSENTIAL TO CONTACT A DEALERSHIP OR AN AUTHORISED SERVICE CENTRE IN ORDER TO CHOOSE AND FIT ACCESSORIES CORRECTLY.

USING NON-ORIGINAL ACCESSORIES MAY AFFECT THE STABILITY AND FUNCTIONS OF YOUR VEHICLE, COMPROMISING THE SAFETY OF THE VEHICLE AND EXPOSING THE RIDER TO DANGER.

#### WARNING





BE EXTREMELY CAREFUL WHEN INSTALLING AND REMOVING THE MECHANICAL ANTI-THEFT DEVICE ON THE VEHICLE (U-SHAPED PADLOCK, DISC BLOCK, ETC.).

MAINLY NEAR THE BRAKE PIPES, TRANSMISSIONS AND/OR ELECTRIC CABLES, AN INCORRECT INSTALLATION OR REMOVAL OF

THE ANTI-THEFT DEVICE AS WELL AS LEAVING IT ON BEFORE STARTING THE VEHICLE CAN SERIOUSLY DAMAGE ITS COMPONENTS, COMPROMISE THE CORRECT FUNCTIONING OF THE VEHICLE AND USERS' SAFETY.

#### **ATTENTION**





NEVER OPERATE THE VEHICLE WITH ACCESSORIES (BAGS, TOP BOX AND/OR WINDSHIELD) AT A SPEED HIGHER THAN 100 kph.

THE VEHICLE CAN BE RIDDEN AT A HIGHER SPEED WITHOUT THE ACCESSORIES MENTIONED BEFORE WITHIN THE LIMITS ESTABLISHED BY LAW.

IF THERE ARE ANY NON-ORIGINAL ACCESSORIES INSTALLED, OR AN ABNORMAL LOAD, OR IF THE MOTORCYCLE IS NOT IN A GENERALLY GOOD CONDITION, OR WHENEVER WEATHER CONDITIONS DEMAND IT, SPEED SHOULD BE FURTHER REDUCED.

# **RS 457**





CHAPTER 07 Scheduled maintenance

#### The value of service

Due to continuous updates and technical training programmes specific to Aprilia products, only **Aprilia** Official Network mechanics know this vehicle fully and have the specific tools necessary to carry out maintenance and repair operations correctly.

The reliability of the vehicle also depends on its mechanical conditions. Checking the vehicle before riding it, performing maintenance correctly and using only original Aprilia spare parts are essential factors for the reliability of your vehicle!

For information on the nearest **Official Dealer and/or Service Centre** consult our website:

www.Aprilia.com

#### Scheduled maintenance

Correct maintenance is fundamental for ensuring the longevity of your vehicle and maintaining optimum function and performance.

Scheduled maintenance table

To ensure that maintenance is carried out correctly, the constructor has defined the schedule of checks and services (performed at the owner's expense) summarised in the table given in the following page. It is generally advisable to have any minor malfunctions rectified immediately by an **Authorised Service Centre** without waiting until the next service

It is necessary to have your vehicle serviced to the prescribed intervals of time, even if you have not reached the predicted mileage. Services must be performed punctually at the correct intervals to maintain the validity of the warranty. See the "Warranty Conditions" for all other information concerning the applicability of the Warranty and on performing "Scheduled Maintenance" correctly.



THE MAINTENANCE INTERVALS PRESCRIBED BY THE SCHEDULED MAINTENANCE TABLE MUST BE CONSIDERED AS A GENERAL GUIDE FOR USING THE VEHICLE IN NORMAL RUNNING CONDITIONS.

IT MAY BE NECESSARY TO REDUCE THE MAINTENANCE INTERVALS SOME PARTICUI AR UNDER CONDITIONS. ESPECIALLY WHEN USED IN **GEOGRAPHICAL** LOCATIONS WITH **ADVERSE** CLIMATIC CONDITIONS. USE ON UNEVEN GROUND OR SEVERE INDIVIDUAL USE.



Km x 1000 (mi x 1000)	1 (0.6)	6 (3.7)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	12 MONTHS	24 MONTHS
Rear shock absorber (bearings - linkage mechanisms)				1		1	1	1

Km x 1000 (mi x 1000)	1 (0.6)	6 (3.7)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	12 MONTHS	24 MONTHS
Engine oil filler plug O-ring	I	ı	I	I	ı	I	I	ı
Flywheel cover cap O- Ring				I		I		
Fork plug O-ring					I			
Motorcycle set up	I	I	I	I	I	I		
Spark plug			I	R	I	R		
Drive chain (2)	L	L	L	L	L	L	L	L
Clutch cable	L	L	L	L	L	L	L	L
Front sprocket - rear sprocket - Chain slider	I	ı	I	I	ı	I		
Steering bearings and steering play	I	ı	I	I	I	1	I	I
Wheel bearings - Wheels	I	I	I	I	I	I	I	ı
Diagnosis by tool	I	I	I	I	ı	I	I	ı
Brake discs - Brake pads wear (1)	1	1	1	1	I	1	I	I
Air filter		I	I	R	ı	R		
Engine oil filter	R	R	R	R	R	R	R	R
Vehicle general operation	I	I	I	I	I	I	I	ı
Valve clearance				Α		А		
Head cover gasket				I		R		

Km x 1000 (mi x 1000)	1 (0.6)	6 (3.7)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	12 MONTHS	24 MONTHS
Engine oil discharge plug aluminium gasket	R	R	R	R	R	R	R	R
Coolant drain screw aluminium gasket								R
Spark plug shanks gasket				I		R		
Cooling system		I	I	I	I	I		
Brake systems	I	I	I	I	I	I	I	I
Safety switches (stand, stop, clutch, extra negative stroke, gas control)	ı	I	I	I	I	I	I	I
Brake fluid	I	I	1	I	l	I	I	R
Coolant	I	I	ı	ı	l	ı	I	R
Fork oil (3)					R			
Engine oil	R	R	R	R	R	R	R	R
Headlight aiming		I	I	I	I	I		
Fork oil seals	I	I	I	I	R	I		
Tyres - pressure / wear (1)	I	I	ı	I	l	I	I	ı
Nut/bolt tightness	I	I	I	I	I	I		
Head cover fastening screws dampers				I		R		

<sup>•</sup> I: CHECK AND CLEAN, ADJUST, LUBRICATE OR REPLACE, IF NECESSARY

- C: CLEAN
- R: REPLACE
- A: ADJUST
- L: LUBRICATE
- (1) Check and clean and adjust or replace, if necessary, before every journey.
- (2) Check and clean, adjust or replace if necessary every 1,000 km (621.37 mi).
- (3) Replace at whichever of the following occurs first: 36,000 km (22,370.00 mi) or 4 years.

## **Recommended products**

Piaggio Group recommends the use of products from its Castrol official partner for the scheduled maintenance of its vehicles.

Only use lubricants and fluids which meet or exceed the performance characteristics specified. This also applies when topping up only.



## **Table of recommended products**

Product	Description	Specifications	
Engine oil 10W -50	Synthetic-based lubricant for high performance four-stroke engines.	SAE 10W 50; API SL; JASO MA2	
Lithium-based grease	Lithium-calcium soap based grease.	colour - black, contains EP (Extreme Pressure) additives, excellent water-repellent properties.	
Anti-freeze liquid, ready to use, colour red	Glycol ethylene based antifreeze liquid with organic additive technology corrosion inhibitor. Colour red, ready to use.	ASTM D 3306 - ASTM D 4656 - ASTM D 4985 - CUNA NC 956-16	
DOT 4 brake fluid	Synthetic brake fluid.	SAE J 1703; FMVSS 116; ISO 4925; CUNA NC 956 DOT4	
Fork oil 7.5W	Fork oil.	SAE 7.5W	



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