Congratulations on your new SXV.

This innovative motorcycle is designed to provide high performance and great fun under all usage conditions - in other words, with an intent to revolutionise the concept of supermotard motorcycles. **aprilia**'s first and foremost commitment is to build motorcycles with high technological content, that are extremely safe to ride and will retain their value over time.

IMPORTANT NOTICE ON VEHICLE USE AND LEGAL WARRANTY

aprilia SXV motorcycles have been conceived and designed for race-track and off-road competitions. As a result, they meet the rules and class requirements currently adopted by major international motorcycling associations.

Having the motorcycle serviced at the recommended intervals as specified in the maintenance charts provided in this manual is critical to avoiding premature wear and severe failures. To preserve motorcycle performance and avoid severe damage, have the recommended maintenance procedures performed by Authorised **aprilia** Dealers or Service Centres or - at the track - by a qualified mechanic.

The SXV come in a derated version which can be legally used on public roads and is covered by a legal warranty. In order to maintain the warranty, the recommended maintenance must be performed at the specified intervals by Authorised **aprilia** Dealers or Service Centres and each service must be recorded in the warranty booklet.

Please note that these motorcycles are not suitable for road use. Gear ratios, cooling system, suspension set-up, braking system and engine power delivery are designed and tuned up for racing, and the operating conditions encountered in competitions differ greatly from those experienced when riding on public roads. Below is a short non-exhaustive list of typical operating conditions that may lead to severe engine damage: long stops at traffic lights, motorway trips with the engine steadily running at maximum rpm, or drafting vehicles.

Any changes or modifications to the motorcycle, especially performance enhancing modifications, will make the motorcycle illegal to ride on public roads and void the legal warranty. A modified motorcycle may be used for racing in organised races approved by competent authorities.

For your own safety, use only genuine **aprilia** parts and accessories. **aprilia** disclaims all liabilities for the event non-genuine parts are used and for resulting damage.

APRILIA WOULD LIKE TO THANK YOU

for having chosen one of its products. We have compiled this booklet to provide a comprehensive overview of your vehicle's quality features. Please read it carefully before riding the vehicle for the first time. It contains information, tips and precautions for using your vehicle. It also describes features, details and devices to assure you that you have made the right choice. We believe that if you follow our suggestions, you will soon find yourself in harmony with your new vehicle, and ride it fully satisfied for a long time. This booklet forms an integral part of the vehicle; should the vehicle be sold, it must be transferred to the new owner.

SXV 450-550

Ed. 03 2008

Ed. 03 2008

The instructions given in this manual are intended to provide a clear, simple guide to using your vehicle; it also describes routine maintenance procedures and regular checks that should be carried out on the vehicle at an **Aprilia Dealer or Authorised Workshop**. The booklet also contains instructions for simple repairs. Any operations not specifically described in this booklet require the use of special tools and/or particular technical knowledge: for these operations, please take your vehicle to an **Aprilia Dealer or Authorised Workshop**.

Personal safety

Failure to completely observe these instructions will result in serious risk of personal injury.

Safeguarding the environment

Sections marked with this symbol indicate the correct use of the vehicle to prevent damaging the environment.

Vehicle intactness

The incomplete or non-observance of these regulations leads to the risk of serious damage to the vehicle and sometimes even the invalidity of the guarantee

The symbols illustrated above are very important. They are used to highlight parts of the booklet that should be read with particular care. The different symbols are used to make each topic in the manual simple and quick to locate. Before starting the engine, read this booklet carefully, particularly the "SAFE RIDING" section. Your safety as well as other's does not only depend on the quickness of your reflexes and agility, but also on how well you know your vehicle, the state of maintenance of the vehicle itself and your knowledge of the rules for SAFE RIDING. For your safety, get to know your vehicle well so as to safely ride and master it given any riding condition. IMPORTANT This booklet is an integral part of the vehicle, and must be handed over to the new owner in the event of sale.

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SXV 450-550

Chap. 01
General rules

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.

CAUTION

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

CAUTION

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

CAUTION

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 OR NEAR FUEL VAPOUR. AVOID ANY CON-

TACT WITH NAKED FLAME, SPARKS OR OTHER HEAT SOURCES WHICH MAY CAUSE IGNITION OR EXPLOSION.

DO NOT ALLOW FUEL TO DISPERSE INTO THE ENVIRONMENT.

KEEP OUT OF THE REACH OF CHILDREN.

Hot components

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.

CAUTION

TAKE PARTICULAR CARE NOT TO SPILL COOLANT ONTO HOT PARTS OR THE ENGINE AND EXHAUST SYSTEM; THE FLUID MAY CATCH FIRE AND BURN WITH INVISIBLE FLAMES. 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.

Used engine oil and gearbox oil

CAUTION

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.

HAND THE OIL OVER TO OR HAVE IT COLLECTED BY THE NEAREST USED OIL RECYCLING COMPANY OR THE SUPPLIER.

DO NOT DISPOSE OF OIL IN THE ENVIRONMENT

KEEP OUT OF THE REACH OF CHILDREN.

Brake and clutch fluid

BRAKE FLUID CAN DAMAGE PAINT FINISH, PLASTIC AND RUBBER. WHEN SERVICING THE BRAKING SYSTEM, PROTECT THESE COMPONENTS WITH A CLEAN CLOTH. ALWAYS WEAR PROTECTIVE EYEWEAR WHEN WORKING ON THE BRAKE SYSTEM. BRAKE FLUID IS 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 hydrogen gas and electrolyte

CAUTION

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. IN THE EVENT OF CONTACT WITH THE EYES, RINSE WITH PLENTY OF WATER FOR FIFTEEN MINUTES AND CONSULT AN EYE SPECIALIST IMMEDIATELY. THE BATTERY RELEASES EXPLOSIVE GASES; KEEP IT AWAY FROM FLAMES, SPARKS, CIGARETTES 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 SPILL ON PLASTIC COMPONENTS IN PARTICULAR. ENSURE THAT THE ELECTROLYTIC ACID IS COMPATIBLE WITH THE BATTERY BEING ACTIVATED.

Reporting of defects that affect safety

GENERAL PRECAUTIONS AND INFORMATION

When repairs, disassembly and reassembly of the vehicle is carried out, follow the following recommendations strictly.

BEFORE DISASSEMBLING COMPONENTS

- Remove the dirt, mud, dust and foreign objects from the vehicle before disassembling components. Wherever required, use the special tools designed for this vehicle.

DISASSEMBLING COMPONENTS

- Do not loosen and/or tighten the screws and nuts using pliers or other tools, but always use the specific wrench.
- Mark the positions on all the connection joints (hoses, cables, etc.) before separating them and identify them with different distinctive marks.
- Each piece should be clearly marked in order to be identified during the installation phase.
- Carefully clean and wash the disassembled components with detergents with a low flammability grade.
- Keep the coupled parts together because they have "adapted" to one another following normal wear.
- Some components must be used together or replaced entirely.
- Keep away from heat sources.

REASSEMBLING THE COMPONENTS

CAUTION

THE BEARING MUST ROTATE FREELY, WITHOUT JAMMING AND/OR NOISE, OTHERWISE THEY MUST BE REPLACED.

- Use only **aprilia** ORIGINAL SPARE PARTS.
- Always use the recommended lubricants and consumable material.
- Lubricate the parts (when possible) before reassembling them.
- When tightening screws and nuts, begin with the larger diameter or internal ones, proceeding diagonally. Tighten with subsequent steps before applying the prescribed torque.
- Always replace the locknuts, gaskets, seal rings, snap rings, O-Rings (OR), cotter pins and screws if they have damaged thread, with new ones.
- When disassembling the bearings, lubricate them abundantly.
- Ensure that each component has been assembled correctly.

- After a repair or periodic maintenance operation, carry out the preliminary checks and test the vehicle on private property or in an area with light traffic.
- Clean all coupling surfaces, oil seal rims and gaskets before refitting them. Smear a light layer of lithium-based grease on the oil seal rims. Reassemble oil seals and bearings with the brand or lot number facing outward (visible side).

ELECTRICAL CONNECTORS

The electrical connectors should be disconnected as follows. Failure to observe these procedures will cause irreparable damage to the connector and the wiring:

If present, press on the specific safety catches.

- Grip the two connectors and unplug them, pulling them apart in opposite directions.
- If there is dirt, rust, moisture, etc., carefully clean the inside of the connector using pressurised air.
- Ensure that the cables make correct contact with the terminals inside the connectors.
- Then plug in the two connectors, ensuring correct coupling (if the specific catches are present, you will hear a typical "click").

CAUTION

TO UNPLUG THE TWO CONNECTORS, DO NOT PULL ON THE CABLES.

NOTE

THE TWO CONNECTORS CAN BE PLUGGED IN ONLY IN ONE DIRECTION, THEREFORE JOIN THEM TOGETHER IN THE RIGHT DIRECTION.

TIGHTENING TORQUE

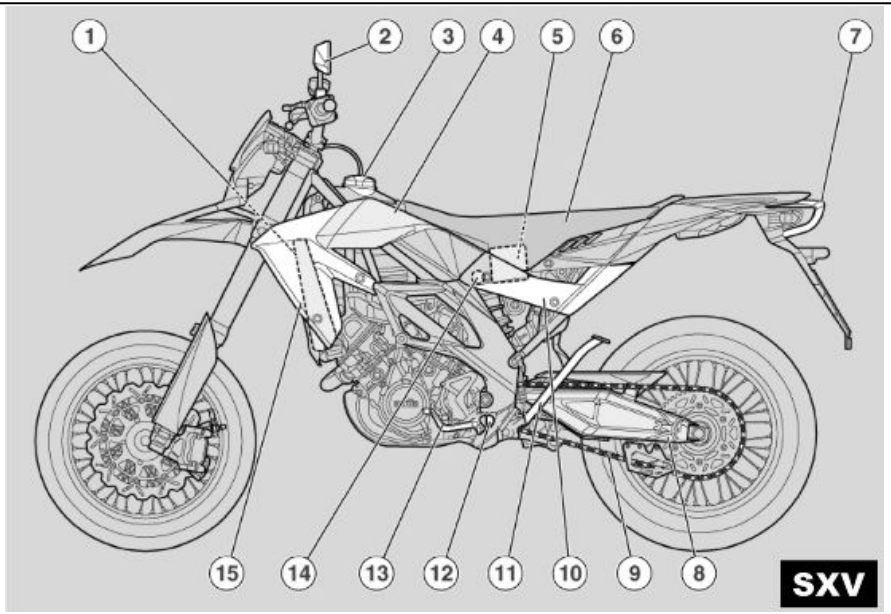
CAUTION

REMEMBER THAT THE TIGHTENING TORQUE FOR ALL THE FIXING ELEMENTS LOCATED ON WHEELS, BRAKES, WHEEL AXLES AND OTHER SUS-

PENSION COMPONENTS PLAY A FUNDAMENTAL ROLE IN GUARANTEEING THE SAFETY OF THE VEHICLE AND MUST BE KEPT AT THE PRESCRIBED VALUES. REGULARLY CHECK THE TIGHTENING TORQUE OF THE FIXING ELEMENTS AND ALWAYS USE A TORQUE WRENCH WHEN REFITTING. IF THESE WARNINGS ARE NOT OBSERVED, ONE OF THESE COMPONENTS COULD LOOSEN AND COME OFF, BLOCKING A WHEEL OR CAUSING OTHER PROBLEMS THAT WOULD COMPROMISE MANOEUVRABILITY, LEADING TO A CRASH WITH THE RISK OF SERIOUS INJURY OR EVEN DEATH.

SXV 450-550

Chap. 02
Vehicle



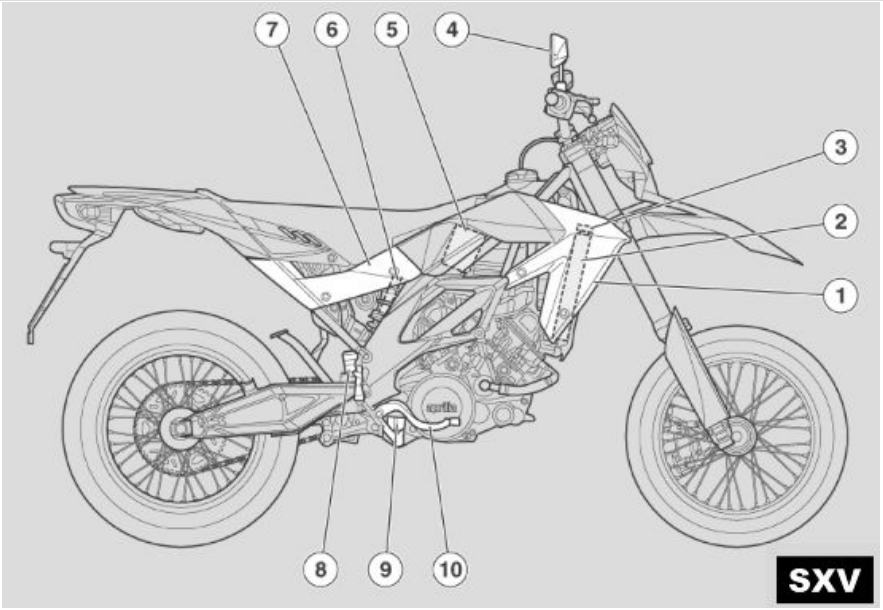
02_01

Arrangement of the main components (02_01)

LEGEND left side

1. Left coolant radiator
2. Left rear-view mirror
3. Fuel tank cap
4. Fuel tank
5. Battery
6. Saddle
7. Rear light

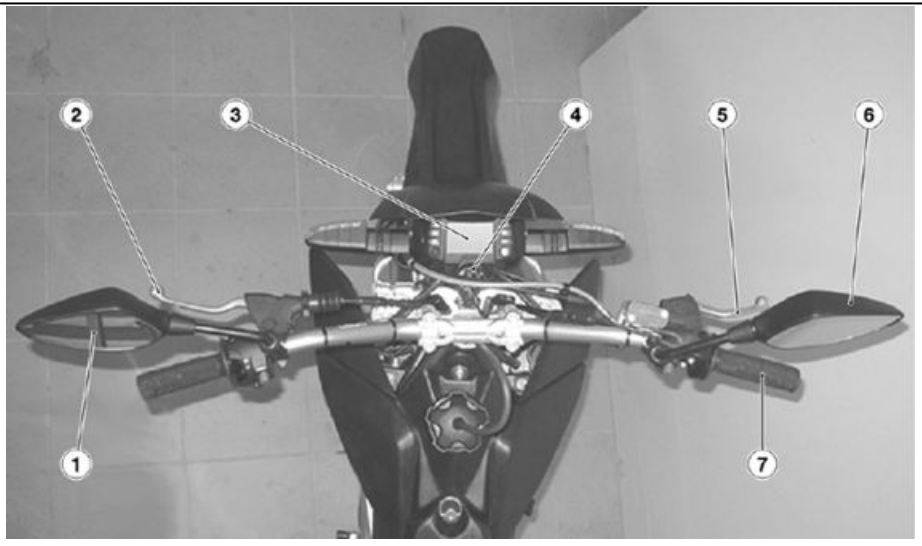
8. Rear fork
9. Transmission chain
10. Rear left side
11. Side stand
12. Driver's left footrest
13. Gear control lever
14. Main fuse holder (30A)
15. Left front side



02_02

Right side KEY

1. Right front side
2. Right coolant radiator
3. Coolant expansion tank cap
4. Right rear-view mirror
5. Air filter housing
6. Secondary fuse holder
7. Right rear side
8. Pump with rear brake fluid reservoir
9. Driver's right footrest
10. Rear brake control lever



02_03

Dashboard (02_03)

KEY

1. Left rear-view mirror
2. Clutch control lever
3. Instruments and gauges
4. Ignition switch - steering lock (ON - OFF - LOCK)
5. Front brake lever
6. Right rear-view mirror
7. Throttle grip

02_04

Analog instrument panel (02_04)

KEY

1. MODE button
2. Neutral gear warning light (green)
3. Engine oil pressure warning light (red)
4. Engine control system warning light
5. Multifunctional digital display
6. Low fuel warning light, (orange)
7. High-beam warning light, (blue)

8. Turn indicator warning light (green)
9. Overrevving warning light

Light unit

Turn indicator warning light

Flashes when the turning indication is activated

Engine control system warning light

It comes on when the ignition switch is set to **ON** and the engine has not been started, thus performing the warning light activation test. If the warning light does not come on at this stage, contact an **Official aprilia Dealer**.

CAUTION

IF THE ENGINE CONTROL LIGHT (4) STAYS ON AFTER START-UP OR COMES ON DURING REGULAR ENGINE OPERATION, THIS MEANS THAT THERE IS A FAULT IN THE START-UP/IGNITION SYSTEM. SHOULD THIS OCCUR, CONTACT AN Official aprilia Dealer AS SOON AS POSSIBLE.

High-beam warning light

Comes on when the high beam light is activated or the high beam light is flashed.

Low fuel warning light

Comes on when 2.2 ± 1 l (4 ± 1.8 in) of fuel are left in the fuel tank.

CAUTION

AVOID DEPLETING THE FUEL RESERVE AT ALL COSTS, OR YOU WILL DAMAGE THE FUEL PUMP.

Neutral gear switch warning light
Comes on when neutral is selected.

Engine oil pressure warning light
It comes on when the ignition switch is set to **ON** and the engine in not switched on and performs the warning light activation test. If the warning light does not come on at this stage, contact an **Official aprilia Dealer**.

CAUTION

IF THE ENGINE OIL PRESSURE WARNING LIGHT (3) STAYS ON AFTER START-UP OR COMES ON DURING THE ENGINE'S REGULAR OPERATION, THIS MEANS THAT THE ENGINE OIL PRESSURE IN THE CIRCUIT IS TOO LOW. SHOULD THIS OCCUR, STOP THE ENGINE AT ONCE AND CONTACT AN Official aprilia Dealer.

Overrevving warning light
It flashes when the activation threshold (maximum rev. number) programmed by the user is crossed.

Multifunctional digital display

Speedometer (km/h - MPH) Displays driving speed in three digits and in real time.

Odometer km/mi Displays the partial or total number of kilometres/miles covered

Rpm indicator (rpm)
Displays the number of engine's rpms.

CAUTION

DO NOT EXCEED THE ENGINE'S MAXIMUM SPEED, (SEE RUNNING IN)

Clock
Displays hours and minutes, depending on the setting.

Battery voltage

Displays the battery charge status in Volt.

Battery voltage Displays the battery's charge status in Volt.

02_05

Digital lcd display (02_05, 02_06, 02_07, 02_08, 02_09, 02_10, 02_11, 02_12, 02_13, 02_14, 02_15, 02_16)

CONTROLS
1. MODE button Display and adjust (only works when the vehicle is at a standstill).

02_06

2 SCROLL button; Visualise and adjust all functions except time.

By turning the ignition key in the «**ON**» position, the following indicators are lit on the instrument panel for 3 seconds:

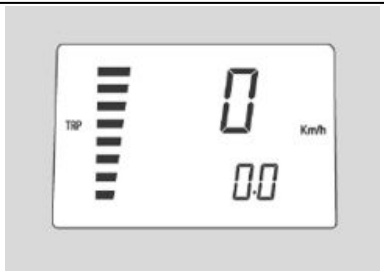
- All warning lights;
- Backlighting;
- All segments on the multifunctional digital display.

02_07

Immediately after the initial check is performed, the multifunctional display shows the current battery charge status, then the last values displayed on the active screen before the vehicle was last switched off.

ODO

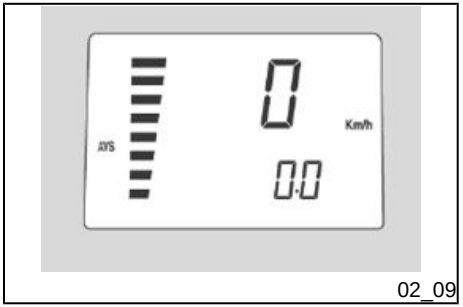
- INSTANTANEOUS SPEED (area A)
- TOTAL ODOMETER (area B)
- GRAPHIC RPM INDICATOR, operational (area C)



02_08

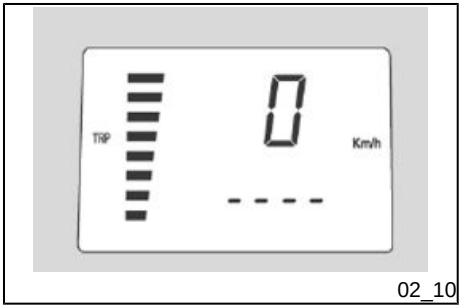
TRIP
The TRIP configuration displays partial journey information.

To select the TRIP configuration, press the MODE button when the vehicle is at a standstill, whereas press the SCROLL button when the vehicle is in motion: the ODOMETER INDICATION goes from TOTAL to PARTIAL.



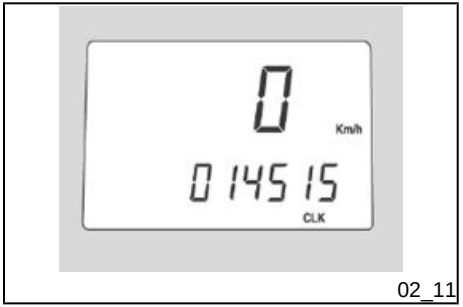
02_09

By pressing the MODE button again when the vehicle is at a standstill or the SCROLL button when it is in motion, the PARTIAL ODOMETER indication is substituted by the AVERAGE SPEED (AVS) recorded for the journey.



02_10

To reset the PARTIAL ODOMETER and the relevant AVERAGE SPEED value (AVS), press the MODE or the SCROLL buttons for more than six seconds when the vehicle is at a standstill. After this time interval has elapsed, the value displayed in area B are replaced by four horizontal dashes. When the button is released, the dashes are replaced by four noughts (000.0).



02_11

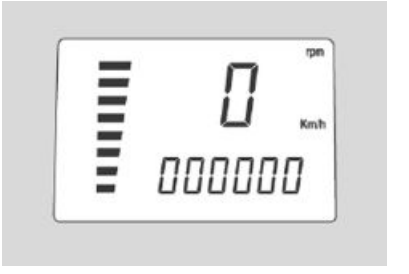
TIME
With the AVERAGE SPEED (AVS) screen displayed, you can access the TIME function by pressing the MODE button when the vehicle is at a standstill or the SCROLL button when the vehicle is in motion. If the current speed unit of measurement is km/h, the time value is displayed in the 24 hour format, while if the unit is mph the time format is 12 hours with an AM/PM indication.

02_12

SETTING

- Press MODE until the time digits blink;
- Each time the MODE button is pressed, the time increases by one unit. Hold down the button to increase time units automatically;
- If you do not touch the control for two seconds, the hour is set and the clock switches to minute setting;

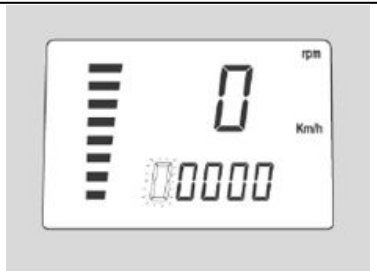
Follow the same procedure to set minutes and seconds. Memorise the new values as before by not pressing any keys for two seconds. If miles are the unit measure, the AM and PM indications will start to blink alternatively after the setting operation has been completed. When you press MODE to select the correct indication, this is linked to current time and it changes automatically when the clock goes from 12:59:59 to 13.



02_13

RPM INDICATOR

From the TIME display it is possible to access the LAP TIMER configuration by pressing briefly on the SCROLL button. The value is shown in the B area and is also indicated graphically with a bar in the C area of the display.



02_14

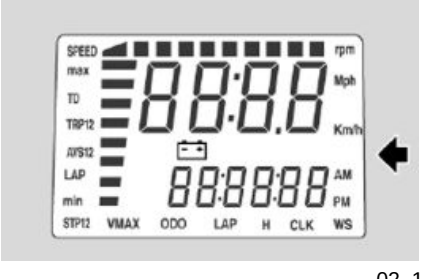
OVERREVVING SETTING

Standard overrevving values are normally already set in the multifunctional display. If you wish to set a lower value, follow the steps outlined below when the vehicle and the engine are at a standstill:

- Press the MODE and SCROLL buttons at the same time for more than 5 seconds. Five noughts (00000) will be displayed in the B area, with the first nought blinking.
- Each time the MODE button is pressed, the value of the blinking number is increased by one unit.

02_15

Not touching the control for two seconds causes the value to be memorised and moves the system on to the adjustment of the subsequent digit; Follow the same procedure to set the second and third digits. Memorise the new values as before, by not activating any controls for two seconds. The last two noughts cannot be modified. If the value set is correct, i.e. lower than the maximum overrevving value, you can be memorise it by holding the SCROLL button down longer than two seconds. If you go over the threshold value, the warning light «**3**» on the instrument panel starts to blink until you go below the threshold value again.



02_16

BATTERY ICON

The battery icon comes on when the battery charge is too low. If it is displayed during the vehicle regular operation, check the battery charge status and recharge the system. It is normal for the icon to be displayed before and during start-up, to then disappear once the engine has started.

Key switch (02_17)

The ignition switch is located on the headstock upper plate.

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

The lights go off when the ignition switch is set to «**OFF**».

NOTE

THE KEY ACTIVATES THE IGNITION SWITCH AND OPERATES THE STEERING LOCK.

NOTE

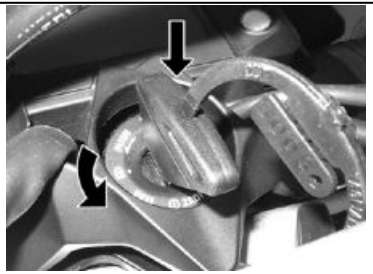
THE LIGHTS COME ON AUTOMATICALLY AFTER THE ENGINE STARTS.

02_17

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

OFF: The engine and lights cannot be set to work. The key can be extracted.

ON: The engine can be started. The key cannot be extracted

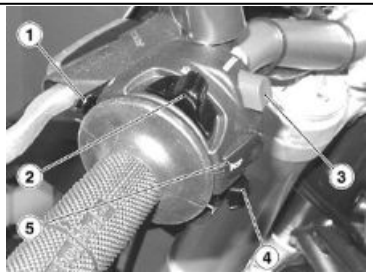


02_18

Locking the steering wheel (02_18)

To lock the steering:

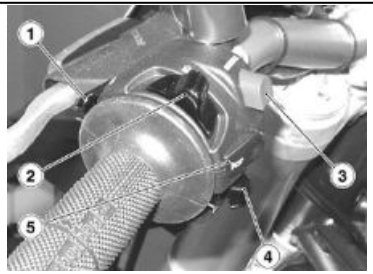
- Turn the handlebar fully to the left.
- Turn the key to «**OFF**».
- Push in the key and turn it anticlockwise (to the left), steer the handlebar slowly until the key is set to «**LOCK**».
- Extract the key.



02_19

Horn button (02_19)

To action the horn, press button «**3**».



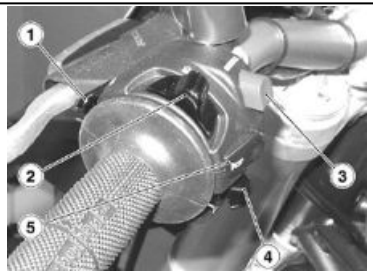
02_20

Switch direction indicators (02_20)

To indicate left turn, turn the switch «**4**» to the left; to indicate right turn, turn the switch «**4**» to the right. To deactivate the turn indicator, press the «**4**» switch.

NOTE

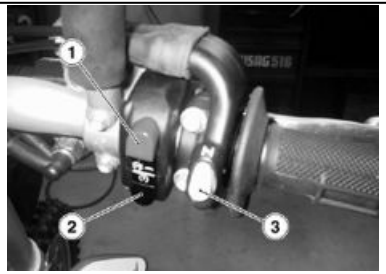
THE ELECTRICAL COMPONENTS FUNCTION ONLY WHEN THE IGNITION KEY IS SET TO "ON"



02_21

High/low beam selector (02_21)

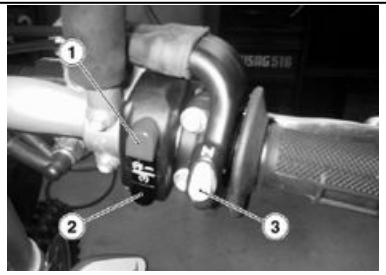
If the light switch «**2**» is set to the upper position, this activates the high-beam light; if it is set to the lower position, the low-beam light is switched on. In case of danger and/ or emergency it is possible to activate high-beam flashing using the «**1**» button.



02_22

Start-up button (02_22)

By pressing the starter button «**2**», the starter motor makes the engine rotate.



02_23

Engine stop switch (02_23)

It acts as an engine cut-off or emergency stop switch. With switch «**1**» set to «**ON**» is possible to start the engine; by pressing it into the «**OFF**» position, the engine stops.

CAUTION

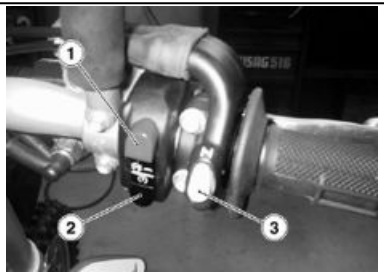
DO NOT OPERATE THE ENGINE STOP SWITCH WHILE RIDING THE VEHICLE.

CAUTION

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

CAUTION

WHEN THE VEHICLE IS NOT MOVING, AFTER THE ENGINE HAS BEEN STOPPED, SET THE IGNITION SWITCH TO «OFF»



02_24

Manual starter control (02_24)

If the engine is started without being warmed up, the ECU cannot keep it running autonomously. In this case, use the cold start «**3**» control.

02_25

Opening the saddle (02_25, 02_26)

- Turn the fastening clip.
- Push the saddle forwards.

02_26

- Remove the saddle.

SXV 450-550

Chap. 03
Use

Checks

CAUTION

BEFORE DEPARTURE, ALWAYS CARRY OUT A PRELIMINARY CHECK OF THE VEHICLE, FOR CORRECT AND SAFE OPERATION. FAILURE TO DO SO MAY LEAD TO SEVERE PERSONAL INJURY OR VEHICLE DAMAGE. CONTACT AN Authorised Aprilia Dealer IMMEDIATELY IF IN ANY DOUBT ABOUT THE FUNCTIONS OF ANY CONTROLS OR IF ANY MALFUNCTIONS ARE FOUND OR SUSPECTED. CHECKS DO NOT TAKE LONG AND RESULT IN SIGNIFICANTLY ENHANCED SAFETY.

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 throttle functions smoothly and can be fully opened and closed in all steering positions. Adjust and/or lubricate if necessary.
Engine oil	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.
Brake levers	Check they function smoothly. Lubricate the joints and adjust the travel if necessary.
Clutch	Check for proper operation. Check clutch lever free play and fluid level. Check for leaks. Top-up the fluid if necessary; the clutch must work without gripping and/or sliding.
Steering	Check that the rotation is uniform, smooth and there are no signs of clearance or slackness.
Side stand	Check its operation. Check that there is no friction when the side stand is pulled up and down and that the springs' tension makes it snap back to its rest position. Lubricate joints and couplings as required.
Clamping elements	Check that the clamping elements are not loose. Adjust or tighten them as required.
Drive chain	Check the play.

Fuel tank	Check level and refill if necessary. Check the circuit for leaks or obstructions. Check that the tank cap closes correctly.
Coolant	The coolant level in the radiator must be such as to cover the grids.
Engine stop switch (RUN - OFF)	Check function.
Lights, warning lights, horn, rear stop light switch and electrical devices	Check function of horn and lights. Replace bulbs or repair any faults noted.

03_01

Refuelling (03_01)

Use premium unleaded petrol as per DIN 51 607, minimum octane rating of 95 (NORM) and 85 (NOMM).

To refuel:

- unscrew and remove the fuel tank cap «**1**».
- Fill up the vehicle.

CAUTION

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 OR NEAR FUEL VAPOUR. AVOID ANY CON-

TACT WITH NAKED FLAME, SPARKS OR OTHER HEAT SOURCES WHICH MAY CAUSE IGNITION OR EXPLOSION.

DO NOT ALLOW FUEL TO DISPERSE INTO THE ENVIRONMENT.

KEEP OUT OF THE REACH OF CHILDREN.

CAUTION

AVOID SPILLING FUEL FROM THE FILLER OR IT MAY IGNITE IF IT COMES INTO CONTACT WITH HOT ENGINE PARTS. IN THE EVENT OF ACCIDENTAL FUEL SPILLAGE, MAKE SURE THAT THE AFFECTED AREA IS FULLY DRY BEFORE STARTING THE ENGINE. FUEL EXPANDS WITH HEAT AND DIRECT SUNLIGHT. THEREFORE, NEVER FILL THE FUEL TANK UP TO THE RIM. CLOSE THE CAP ADEQUATELY AFTER REFUELLING. BE CAREFUL FUEL DOES NOT GET INTO CONTACT WITH THE SKIN, DO NOT INHALE VAPOURS OR SWALLOW FUEL. DO NOT TRANSFER FUEL FROM ONE CONTAINER TO ANOTHER USING A HOSE.

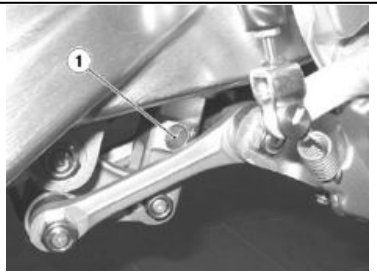
Characteristic

FUEL TANK CAPACITY (including reserve):

7.5 litres (13.6 pt)

Reservoir reserve:

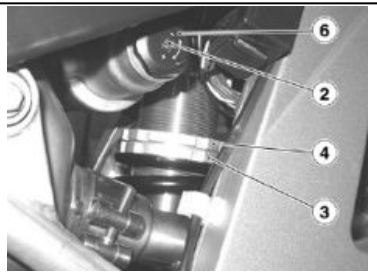
2.2 litres (4 pt) (mechanical reserve)



03_02

Rear shock absorbers adjustment (03_02, 03_03, 03_04, 03_05)

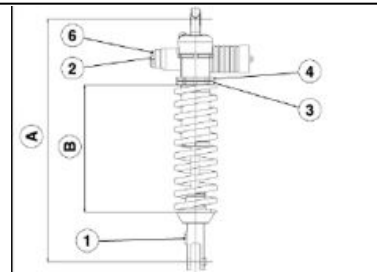
The rear suspension consists of a spring and shock-absorber group, linked to the frame via silent-block and the rear fork levers. To adjust the setting, the shock absorber has one set screw to adjust rebound damping, one set screw «**2**» to adjust compression damping, a ring nut for preloading adjustment of spring «**3**» and a ring nut «**4**».



03_03

REAR SHOCK ABSORBER ADJUSTMENT

The standard setting of the rear shock absorber is adjusted so as to satisfy all main high and low speed riding conditions, both with reduced and full vehicle load. It is at any rate possible to insert personal settings, depending on vehicle utilisation.



03_04

CAUTION

TO COUNT THE NUMBER OF RELEASES AND/OR REVOLUTIONS OF ADJUSTMENT SETTINGS (1 - 2) ALWAYS START FROM THE MOST RIGID SETTING (WHOLE CLOCKWISE ROTATION OF THE SETTING). DO NOT FORCE THE SET SCREWS (1 - 2) TO TURN BEYOND THE END OF THE STROKE ON BOTH SIDES SO AS NOT DAMAGE THEM.

03_05

- Using the relevant wrench, unscrew the locking ring nut «**4**» slightly.
- Turn the adjustment ring nut «**3**» to adjust preloading of the «**B**» spring.
- When the optimal adjustment level has been achieved, screw locking nut ring «**4**» completely.
- Turn the «**1**» screw to rebound damping.
- Turn the «**2**» knob to adjust compression damping (see table).

CAUTION

SET SPRING PRELOAD AND REBOUND DAMPING BASED ON THE VEHICLE'S USAGE CONDITIONS. IF YOU INCREASE THE SPRING PRELOAD, YOU ALSO NEED TO INCREASE REBOUND DAMPING, IN ORDER TO AVOID SUDDEN JERKS WHEN RIDING. SHOULD YOU NEED ANY ASSISTANCE, CONTACT AN Official aprilia Dealer.

TO AVOID COMPROMISING THE SHOCK ABSORBER'S OPERATION, DO NOT LOOSEN SCREW «5» AND DO NOT TAMPER WITH THE SEAL UNDERNEATH IT, AS NITROGEN MAY COME OUT, WITH RESULTING RISK OF AN ACCIDENT.

CAUTION

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. USING SPORT SETTINGS AND RIDING THE VEHICLE ON ROADS AND MOTORWAYS WITH THESE SETTINGS IS STRICTLY FORBIDDEN.

STANDARD ADJUSTMENT OF SXV REAR SUSPENSION

Shock absorber centre-to-centre distance (A)	457 ± 1.5 mm (18 ± 0.06 in)
(preloaded) Spring (B) length	245 mm (9.6 in)
Rebound adjustment, screw (1)	13 clicks
Compression adjustment, screw (2)	16 click
By-pass adjustment knob (6)	Fully open (-)

03_06

Front fork adjustment (03_06, 03_07)

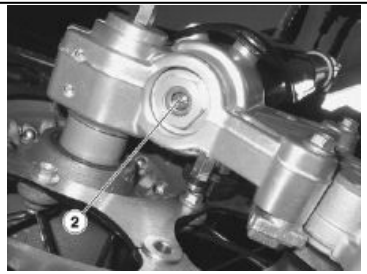
FRONT SUSPENSION

The front suspension consists of a hydraulic fork connected to the headstock by two yokes. For adjusting the suspension setup, each stanchion has an upper screw «**1**» for adjusting hydraulic rebound damping and a lower screw «**2**» for adjusting hydraulic compression damping.

FRONT FORK ADJUSTMENT

CAUTION

TO PREVENT DAMAGE, DO NOT FORCE THE ADJUSTER (1-2) ROTATION BEYOND THE RESPECTIVE END OF TRAVEL IN EITHER DIRECTION. SET THE SAME SPRING PRELOAD AND HYDRAULIC DAMPING SETTING FOR BOTH STANCHIONS: RIDING THE VEHICLE WITH DIFFERENT SETTINGS FOR THE TWO STANCHIONS REDUCES STABILITY. WHEN SPRING PRELOAD IS INCREASED, REBOUND DAMPING MUST ALSO BE INCREASED TO PREVENT EXCESSIVE SUSPENSION KICKBACK WHEN RIDING.



03_07

The standard setting of the front fork is adjusted so as to satisfy all main high and low speed riding conditions, both with reduced and full vehicle load. It is at any rate possible to insert personal settings, depending on vehicle usage.

Standard adjustment of **SXV** front suspension:

- Rebound damping adjustment, screw «**1**»: open (**) 10 clicks from fully closed (*);
- Compression damping adjustment, screw «**2**»: open (**) 10 clicks from fully closed (*) «**H**»;
- Stem «**A**» protrusion (***) from top plate (excluding cover): to the rim.

(*)= Clockwise

(**)= Anticlockwise

(***)= Only use an Official aprilia Dealer for this type of adjustment

CAUTION

TO COUNT THE NUMBER OF CLICKS AND/OR TURNS FOR ADJUSTER SCREWS (1 -2) ALWAYS START FROM THE STIFFEST SETTING (ADJUSTER SCREW TURNED FULLY CLOCKWISE).

CAUTION

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. USING SPORT SETTINGS AND RIDING THE VEHICLE ON ROADS AND MOTORWAYS WITH THESE SETTINGS IS STRICTLY FORBIDDEN.

Running in

Engine running-in is essential to preserving engine life and performance over time. Twisty roads and gradients are ideal to run in engine, brakes and suspensions effec-

tively. Vary your driving speed during the run-in. In this way, you allow for the work of components to be "loaded" and then "unloaded", thus cooling the engine parts. Even if it is important to "stretch" engine components during the running-in, make sure not to strain them.

Follow the guidelines detailed below:

- Do not twist the throttle grip abruptly and completely when the engine is working at a low revs, either during or after run-in.
- for the first 3 operating hours, do not exceed 50% of the throttle grip travel and never go over 8000 rpm,
- for the next 12 hours, do not exceed 75% of the throttle grip travel.

NOTE

EVEN AFTER THE RUNNING-IN PERIOD, AVOID RUNNING THE ENGINE TO TOP SPEED, WHEN THE LIMITER CUTS IN:

- **SXV 450 12000 rpm**
- **SXV 550 11500 rpm**

CAUTION

THE SPEED LIMITER WARNING LIGHT (NOT THE ECU LIMITER) HAS A FACTORY SETTING OF 8000 RPM.

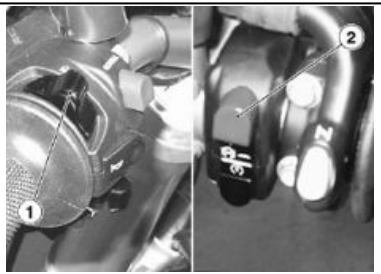
Starting up the engine (03_08, 03_09, 03_10, 03_11, 03_12)

CAUTION

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.

CAUTION

BEFORE STARTING THE ENGINE, READ THE "SAFE RIDING" SECTION CAREFULLY.



03_08

03_09

- Get onto the bike in riding position.
- Make sure that the stand has been retracted completely.
- Make sure that the light switch «**1**» is set to
- . Set the engine stop switch «**2**» to **RUN**.
- Turn the key to set the ignition switch to «**ON**».

03_10

At this stage:

- the ignition screen is displayed on the dashboard for tree seconds.
- All instrument panel lights come on for three seconds.

03_11

- Pull a brake lever to block at least one of the wheels.
- Fully action the clutch and engage neutral [green (N) warning light on].

CAUTION

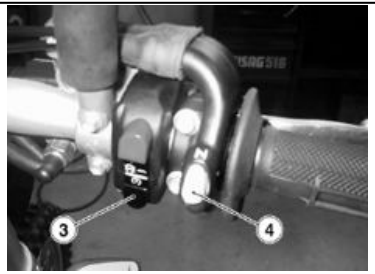
DO NOT START THE ENGINE WHEN A GEAR AND THE CLUTCH ARE ENGAGED.

CAUTION

IN ORDER TO AVOID EXCESSIVE BATTERY CONSUMPTION, DO NOT KEEP THE START-UP BUTTON ON «3» FOR MORE THAN THREE SECONDS AT A TIME FOR FIVE SUCCESSIVE ATTEMPTS. IF THE ENGINE DOES NOT START, WAIT FOR SOME TIME TO ALLOW THE STARTER MOTOR TO COOL.

CAUTION

TO AVOID OVERLOADING THE START-UP COMPONENTS, THE VEHICLE ELECTRONIC CONTROL UNIT INTERVENES IN CASE OF DIFFICULT START-UP: THE STARTER MOTOR CAN BE ACTIVATED FOR A MAXIMUM OF 6 SECONDS, TIME AFTER WHICH THE CONTROL UNIT DISABLES START-UP FOR 10 SECONDS. ONLY AFTER THIS TIME HAS ELAPSED, YOU CAN ATTEMPT A NEW START-UP. IN CASE OF EMERGENCY, THE TIMER CAN BE RESET WITH A "KEY OFF/KEY ON", AND THEN THE VEHICLE CAN BE STARTED.



03_12

STARTING PROCEDURE WITH WARMED-UP ENGINE

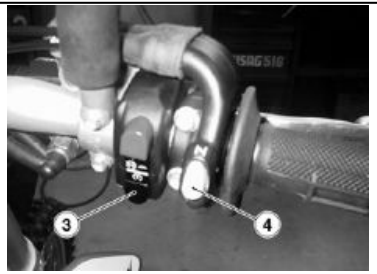
- Press the starter button «**3**» without opening the throttle and release it as soon as the engine starts.

Difficult start up (03_13)

- Rotate the throttle grip.
- Press the cold-start button «**4**» downwards.
- Release the throttle control. The control will be slightly accelerated to allow the engine to run during warm-up.
- To disconnect the system, simply put the throttle control back to its resting state.

CAUTION

AVOID PRESSING THE «ON» STARTER BUTTON WHEN THE ENGINE HAS ALREADY STARTED, AS THIS COULD DAMAGE THE STARTER MOTOR. IF THE ENGINE OIL PRESSURE WARNING LIGHT COMES ON, THIS MEANS THAT OIL PRESSURE IN THE CIRCUIT IS TOO LOW. STOP THE ENGINE IMMEDIATELY AND CONTACT AN APRILIA OFFICIAL DEALER.



03_13

Engage at least a break lever and do not accelerate until you set off.

CAUTION

DUE TO THE ENGINE'S TIGHT MANUFACTURING TOLERANCES AND THE FACT THAT OIL DUCTS ARE SIZED FOR SPORTS USAGE, THE ENGINE MAY NOT START AT TEMPERATURES LOWER THAN 0 °C (32 °F). DO NOT ATTEMPT TO START THE ENGINE TIME AND TIME AGAIN TO AVOID DAMAGING THE STARTER MOTOR. IT IS THEREFORE ADVISABLE TO PARK THE VEHICLE INDOORS, PARTICULARLY DURING THE WINTER.

CAUTION

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.

Stopping the engine (03_14)

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

CAUTION

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

DO NOT LEAN THE MOTORCYCLE ON A WALL OR LAY ON THE GROUND.

MAKE SURE THE MOTORCYCLE AND ESPECIALLY ITS HOT PARTS DO NOT POSE ANY RISK TO PEOPLE OR CHILDREN. DO NOT LEAVE YOUR MOTORCYCLE UNATTENDED WITH THE ENGINE ON OR THE KEY IN THE IGNITION SWITCH.

DO NOT SEAT ON THE MOTORCYCLE WHEN THE STAND IS LOWERED.

To park the vehicle:

- Select an appropriate parking spot.
- Stop the vehicle.
- Set the engine stop switch «**1**» to «**OFF**».
- Turn the key and set the ignition switch «**2**» to «**OFF**».

03_14

- Get off the vehicle.
- Rest the vehicle on its stand.
- Block the steering and take out the key.

03_15

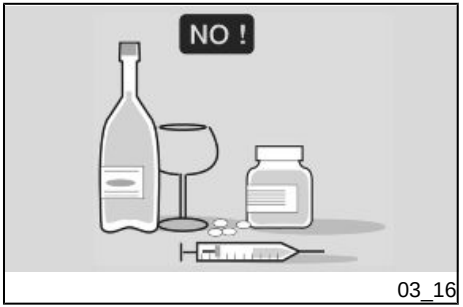
Stand (03_15)

To place the vehicle on the stand:

- Grasp the left grip «**1**» and put the right hand on the upper rear part of the vehicle «**2**».
- Push the side stand fully down with your right foot «**3**».
- With the stand fully extended, lean the vehicle to the side until the stand rests on the ground.
- Turn the handlebar fully to the left.

CAUTION

MAKE SURE THE GROUND WHERE YOU HAVE PARKED IS UNOCCUPIED, FIRM AND LEVEL.



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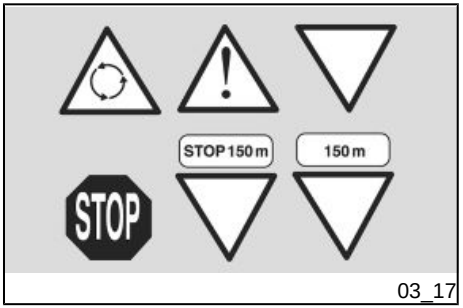

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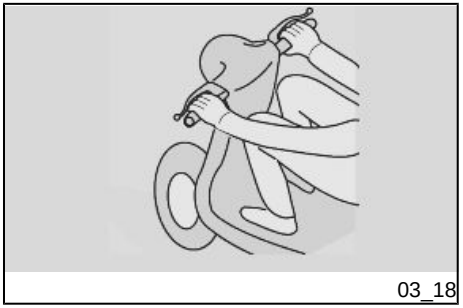


03_18

Safe driving (03_16, 03_17, 03_18, 03_19, 03_20, 03_21, 03_22, 03_23, 03_24, 03_25, 03_26, 03_27)

MAIN SAFETY RULES

To ride the motorcycle it is necessary to comply with all legal requirements (driving license, minimum driving age, psychophysical performance, insurance, taxes and fees, registration, license plate, etc.).

You should practise using the motorcycle in traffic-free areas and/or private property until you have become thoroughly acquainted with the vehicle.

Driving under the influence of medication, alcohol and narcotic drugs or psychotropic substances dramatically increases the risk of accidents.

Do not ride your motorcycle if you feel tired or drowsy and always keep safe psycho-physical riding conditions.

The main cause of motorcycle accidents is users' inexperience.

NEVER lend the vehicle to beginners and always make sure that the rider complies with all necessary requirements for a safe riding.

Strictly obey all national and local traffic signs and rules.

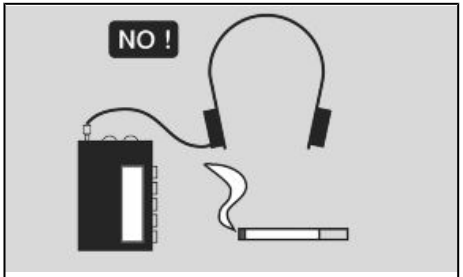
Avoid any abrupt and dangerous swerves for your own as well as others' safety (for example: rearing up on the back wheel, riding over the speed limit, etc.). Besides, always assess and bear in mind the road surface conditions, visibility, etc.

Do not knock obstacles that can damage the motorcycle or cause loss of control.

Do not ride on the course of the vehicle in front just to improve your own speed.

CAUTION

ALWAYS RIDE WITH BOTH HANDS ON THE HANDLEBAR AND FEET ON THE FOOTRESTS (OR THE RIDER' S FOOTRESTS) IN THE ADEQUATE RIDING POSITION.



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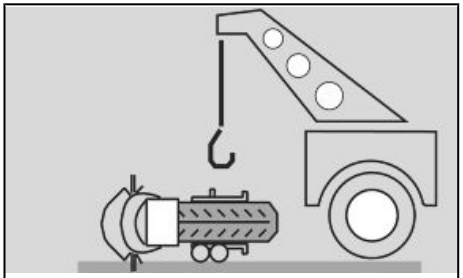
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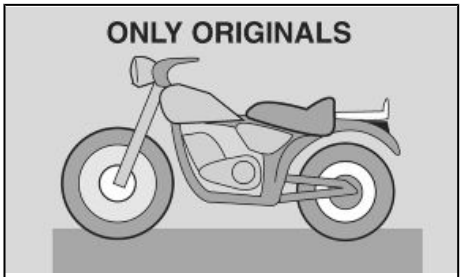


03_21

Never stand on your feet or stretch yourself while riding.

The rider should always be attentive, never get distracted or influenced by people, things or actions (never smoke, eat, drink, read, etc.) while riding.

Always use fuel and lubricants specific for the motorcycle, of the type recommended in the "LUBRICANTS TABLE". Check fuel, oil and coolant frequently for correct level.

In case of an accident or after the motorcycle has fallen down or suffered a sudden bump, make sure the control levers, piping, cables, brake circuit and main parts of the motorcycle have not been damaged.

If necessary, take the motorcycle to an Official Aprilia Dealer to check especially the frame, handlebar, suspensions, safety components and any device the user cannot assess without the aid of a specialist.

Report any malfunction to the engineers and/or mechanics in order to facilitate their work.

Never ride the motorcycle if the damage jeopardises safety.

Do not modify the position, angle or colour of: license plate, turn indicators, lighting devices and horn.

Any changes to the motorcycle will void the warranty.

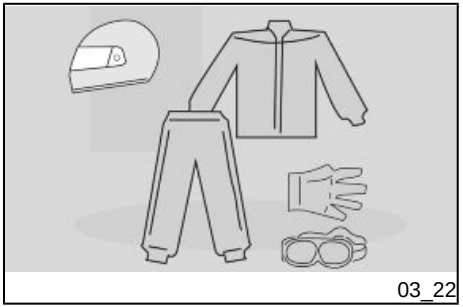
Any change introduced to the motorcycle and the removal of original parts may jeopardise the motorcycle performance and therefore reduce safety or even render the motorcycle inappropriate for legal riding.

Comply with all national and local laws and regulations on motorcycle equipment.

In particular do not introduce technical changes leading to improve performance and under no circumstances alter the original specifications of the vehicle.

Never race with vehicles.

Never ride off-road.



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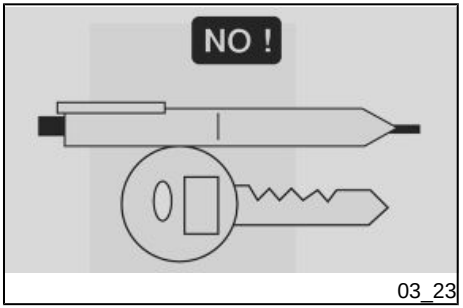

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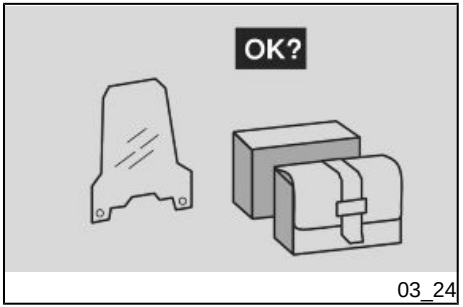


03_24

CLOTHING

Before riding off, remember to put on the helmet and fasten it correctly. Make sure it is a homologated model, that it is undamaged, of the right size and that the visor is clean.

Wear appropriate protective clothes, preferably light-coloured and/or in reflective material. In this way you will be easily visible to other drivers, thus reducing the risk of being hit, and you will be better protected in case of falling.

Always wear tight-fitting clothes without open cuffs; avoid hanging strings, belts or ties; these or any other objects should not interfere with a safe riding when getting entangled with the riding elements or due to a special movement.

Never carry in your pockets objects that can be potentially dangerous in case of fall, like: pointed objects such as keys, pens, glass containers, etc. (the same rule applies to passengers).

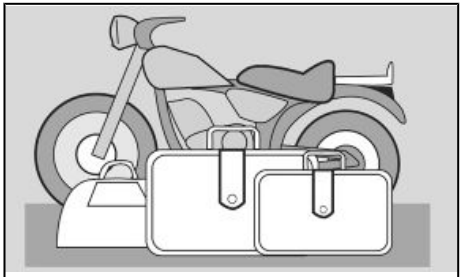
ACCESSORIES

User is personally responsible for the installation and use of the accessories.

While assembling accessories, make sure that they do not cover the sound or light alarm devices or affect their correct functioning, do not limit the suspension travel or the steering angle, do not obstruct control actuation or reduce the ground clearance and inclination angle at corners.

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

Fairings and large windscreens fitted to the motorcycle may cause aerodynamic forces that affect the scooter stability while riding, mainly at high speeds.



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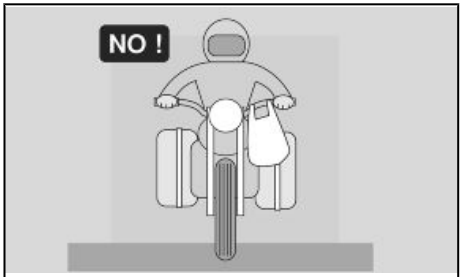
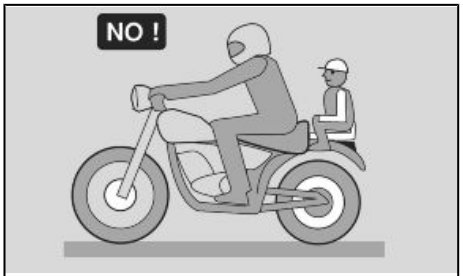


03_26



03_27

Make sure the accessory is firm and secured to the scooter and that it does not pose any risks while riding the motorcycle.

Do not add or modify electrical equipment that exceed the vehicle capacity as this may result in a sudden stop or a dangerous lack of power required to keep the sound and light alarm devices operative.

aprilia advises using original accessories (**aprilia** genuine accessories).

Load

NOTE

THE VEHICLE IS NOT SUITABLE FOR TRANSPORTING LOADS OR LUGGAGE.

SXV 450-550

Chap. 04
Maintenance

Engine oil level (04_01, 04_02)

Checking and topping up engine oil level

CAUTION

IF THE ENGINE OIL PRESSURE WARNING LIGHT COMES ON DURING NORMAL ENGINE OPERATION, IT MEANS THAT THE ENGINE OIL PRESSURE IN THE CIRCUIT IS TOO LOW.

CHECK ENGINE OIL LEVEL, SEE (CHECKING AND TOPPING UP ENGINE OIL LEVEL). IF THE LEVEL IS NOT CORRECT, STOP THE ENGINE IMMEDIATELY AND CONTACT AN OFFICIAL APRILIA DEALER. HANDLE CAREFULLY.

DO NOT SPILL OIL!

AVOID SPILLING OIL OVER COMPONENTS, THE AREA YOUR ARE WORKING IN AND ITS SURROUNDS. REMOVE ANY TRACE OF OIL CAREFULLY.

IN THE EVENT OF A LEAK OR MALFUNCTION, CONTACT AN OFFICIAL APRILIA DEALER.

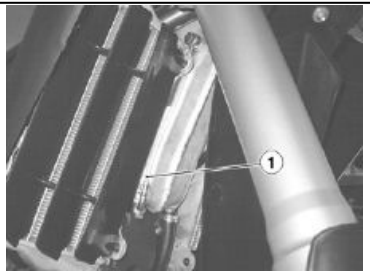
To check:

CAUTION

THIS TYPE OF VEHICLE HAS SEPARATE LUBRICATION CIRCUITS FOR ENGINE AND TRANSMISSION/CLUTCH. OIL LEVEL CHECK AND REPLACEMENT MUST BE CARRIED OUT FOR BOTH CIRCUITS.

CAUTION

THE ENGINE MUST BE WARM TO CHECK ENGINE OIL LEVEL. IF ENGINE OIL LEVEL IS CHECKED WHEN THE ENGINE IS COLD, THE OIL MAY GO TEMPORARILY BELOW THE MINIMUM LEVEL. THIS IS NOT A PROBLEM AS LONG AS THE ENGINE OIL PRESSURE WARNING LIGHT DOES NOT COME ON.



04_01

NOTE

IN ORDER TO WARM-UP THE ENGINE AND BRING THE OIL TO THE RIGHT TEMPERATURE, RIDE THE VEHICLE FOR A SHORT PERIOD OF TIME (10 - 15 MIN), KEEP THE ENGINE RUNNING AT IDLE FOR AT LEAST 30 SECONDS AFTER YOU HAVE COME TO A HALT, THEN CUT OFF THE ENGINE.

- Hold the vehicle level with the two wheels on the ground.
- Check the oil level

using the relevant transparent dipstick «**1**».
MAX = maximum level

MIN = minimum level

- The correct oil level is near the MAX mark.

04_02

Top up as required:

CAUTION

IF YOU RIDE YOUR VEHICLE IN A SPORTY FASHION WITH OIL LEVEL TOO HIGH, SOME OIL MAY SPLATTER AND GET INTO THE FILTER BOX THROUGH THE ENGINE BREATHER.

CAUTION

DO NOT GO BEYOND THE MAX AND BELOW THE MIN LEVEL MARKS TO AVOID SEVERE ENGINE DAMAGE.

- Unscrew and remove the filler plug «**2**».
- Top up the oil in the tank until you reach the correct level.

CAUTION

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

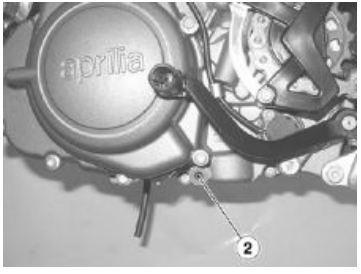
NOTE

USE GOOD QUALITY LUBRICANTS.

Engine oil change (04_03, 04_04, 04_05, 04_06)

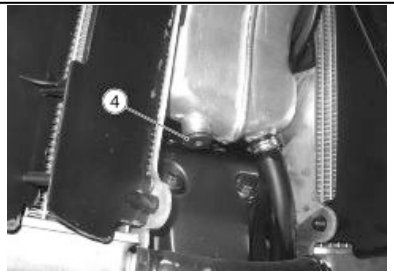
04_03

- Park the vehicle on firm and level ground.
- Rest the vehicle on its stand.



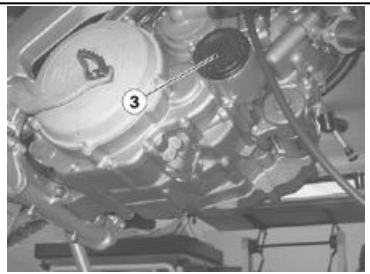
04_04

- Stop the engine and let it cool off so that the oil in the crankcase flows down and cools as well.
- Unscrew and take out the cap (1).
- Place a container to collect the oil underneath the engine oil drainage plug on the flywheel side.
- Unscrew and remove the oil drainage plug (2) and then drain all the engine oil .
- Place a container to collect the oil underneath the engine oil drainage plug of the recovery tank.



04_05

- Unscrew and remove the oil drainage plug from the reservoir (4) and drain all the engine oil.



04_06

- Unscrew the engine oil filter cover (2). Remove it with its gasket, collect the OR.
- Remove the engine oil filter.
- Fit a new engine oil filter.
- Screw the engine oil filter cover (3).
- Screw and tighten the oil drainage plug (2).
- Screw and tighten the cap (4).
- Pour approx. 1250 cm³ (76.3 cu.in) of engine oil through the filler opening.
- Screw and tighten the cap (1).
- Start the engine and let it run for several minutes. Stop the engine and let it cool down.
- Check engine oil level.

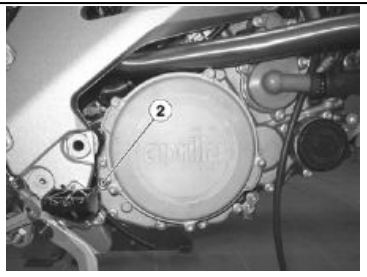
Gearbox oil level (04_07, 04_08, 04_09, 04_10)

CAUTION

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

04_07

- Stop the engine.
- Wait some minutes for the oil to flow from the transmission to the clutch.
- Keep the vehicle upright with the two wheels on the ground.
- Remove the rear brake lever by undoing the screw (1); collect the washer.



04_08

- Unscrew and remove the cap/dipstick (2).
- The oil level is correct when it is close to the cap/dipstick (2) opening.

04_09

If necessary:

- Remove the filler cap (3).
- Top-up with oil up to the cap/dipstick (2) opening.

CAUTION

DO NOT ADD ADDITIVES OR OTHER SUBSTANCES TO THE FLUID.

WHEN USING A FUNNEL OR ANY OTHER ELEMENT, MAKE SURE IT IS PERFECTLY CLEAN.

- Wait several minutes to allow the oil to flow from the clutch to the transmission. Then check the oil level again.

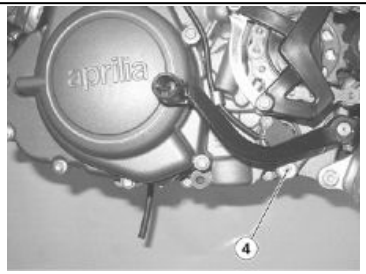
REPLACEMENT

NOTE

USE OIL RECOMMENDED IN THE PRODUCTS TABLE.

NOTE

TO ENSURE EASIER AND FULL OIL DRAINAGE THE OIL MUST BE HOT AND THEREFORE MORE FLUID.



04_10

- Lower the oil pan guard.
- Put an adequately sized container near the drainage plug «**4**».
- Unscrew and remove the drainage plug«**4**».
- Unscrew and remove the filler cap «**3**».
- Drain and let the oil drip into the container for several minutes.
- Check and, if needed, replace the washers of drainage plug «**4**».
- Screw and tighten the drainage plug «**4**» back on.
- Remove the rear brake lever by unscrewing the screw «**1**», keeping the washer.
- Unscrew and remove the cap/dipstick «**2**».
- Top up with fresh oil until the level reaches the cap/dipstick hole mark «**2**».
- Wait several minutes to allow the oil to flow from the clutch to the transmission.
- Then check the oil level again.
- Screw the filler cap «**3**» back on.

CAUTION

OIL FLOWING FROM THE CLUTCH TO THE TRANSMISSION AND FROM THE TRANSMISSION TO THE CLUTCH CAN BE PARTICULARLY SLOW WHEN THE OIL OR ENGINE TEMPERATURE IS LOW.

- Reassemble the rear brake lever, remembering to insert the washer between the lever and the crankcase, screwing the screw «**1**» back on.

Tyres

This vehicle is fitted with tyres with inner tubes (Tube type).

CAUTION

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.

WHEEL MUST BE BALANCED AFTER A TYRE IS MENDED.

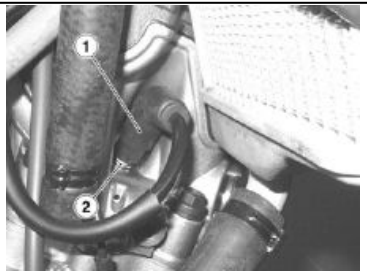
USE ONLY TYRE SIZES INDICATED BY THE MANUFACTURER. DO NOT FIT TYRES WITH INNER TUBES ON RIMS FOR TUBELESS TYRES OR VICE VERSA. CHECK THAT THE INFLATION VALVES HAVE THEIR CAPS FITTED TO AVOID UNEXPECTED FLAT TYRES.

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 A SPECIALISED TYRE WORKSHOP.

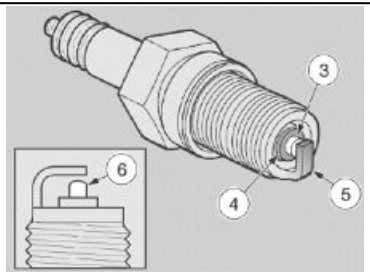
NEW TYRES MAY BE COATED WITH AN OILY FILM: RIDE WITH CAUTION DURING THE FIRST KILOMETRES. DO NOT APPLY UNSUITABLE LIQUIDS ON TYRES.

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.



04_11



04_12

Spark plug dismantlement (04_11, 04_12, 04_13)

Periodically remove the spark plugs, clean them of carbon deposits and, if necessary, replace them.

CAUTION

EVEN IF A SINGLE SPARK PLUG REQUIRES REPLACING, ALWAYS REPLACE BOTH SPARK PLUGS.

In order to reach the spark plugs:

CAUTION

BEFORE CARRYING OUT THE FOLLOWING OPERATIONS AND IN ORDER TO AVOID BURNS, LEAVE ENGINE AND EXHAUST TO COOL OFF TO AMBIENT TEMPERATURE.

- Rest the vehicle on its stand.

NOTE

THE VEHICLE HAS A SPARK PLUG (2) FOR EACH CYLINDER. THE FOLLOWING STEPS RELATE TO JUST ONE SPARK PLUG BUT APPLY TO BOTH.

- Remove the tube (1) of the spark plug (2).
- Clean off any trace of dirt from the spark plug (2) base.
- Insert the spanner supplied in the tool kit into the hexagonal head of the spark plug (2).
- Unscrew the spark plug (2) and remove it from its seat, making sure no dust or dirt gets into the cylinder.

Checking and cleaning:

CAUTION

THE ELECTRODES OF THE SPARK PLUGS INSTALLED ON THIS VEHICLE ARE PLATINUM ELECTRODES. DO NOT USE METAL BRUSHES AND/OR ABRASIVE PRODUCTS TO CLEAN THE SPARK PLUGS. USE ONLY A COMPRESSED AIR JET.

KEY:

central electrode (3);

insulator (4);

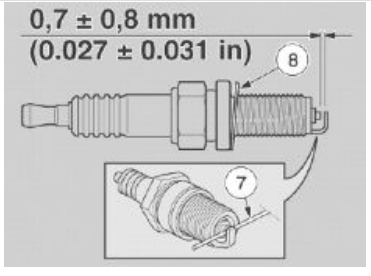
side electrode (5).

- Check that the electrodes and the insulator of the spark plug (2) do not show signs of carbon deposits and corrosion. If necessary, clean them using a compressed air jet.

Replace the spark (2) if its insulator is cracked, the electrodes show signs of corrosion or excessive deposits, or the top of the central electrode gets rounded (6).

CAUTION

WHEN REPLACING THE SPARK PLUG (2), CHECK THE PITCH AND LENGTH OF THE THREAD. IF THE THREADED PART IS TOO SHORT, CARBON DEPOSITS WILL BUILD UP ON THE THREAD'S SEAT AND MAY THUS CAUSE DAMAGE TO THE ENGINE WHEN THE CORRECT THREADED PART IS INSTALLED. USE RECOMMENDED SPARK PLUGS ONLY. USING A SPARK PLUG OTHER THAN SPECIFIED MIGHT COMPROMISE ENGINE PERFORMANCE AND LIFE. CHECK THE GAP BETWEEN THE ELECTRODES WITH A FEELER GAUGE TO AVOID DAMAGING THE PLATINUM COATING.



04_13

- Check the gap between the electrodes with a feeler gauge.

CAUTION

DO NOT ATTEMPT IN ANY WAY TO CHANGE THE DISTANCE BETWEEN THE ELECTRODES.

The gap between the electrodes should be between 0.7 - 0.8 mm (0.027 - 0.031 in). Otherwise, replace the spark plug (2).

- Make sure the washer is in good conditions.

Installation:

- Once the washer is fitted, screw the spark plug (2) manually to avoid damaging the thread.
- Tighten using the spanner supplied in the tool kit. Make each spark plug (2) complete 1/2 of a turn to compress the washer.

CAUTION

IT IS ESSENTIAL TO TIGHTEN THE SPARK PLUG (2) PROPERLY. A LOOSE SPARK PLUG MAY CAUSE ENGINE OVERHEATING AND RESULT IN SEVERE DAMAGE.

Locking torques (N*m)

Spark plug - M10x1.25

12 Nm (8.85 lbf ft)

- Position the spark plug tube (1) correctly so that it does not get detached due to engine vibrations.

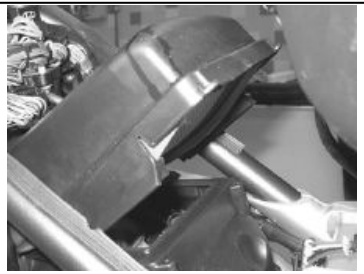
04_14

Removing the air filter (04_14, 04_15)

- Remove the saddle.
- Raise the tank.
- Release the air filter cover by gripping and lifting the handles from both sides.
- Slide out the air filter housing cover from behind, complete with filter.

NOTE

UPON REFITTING THE AIR FILTER, ENSURE THAT ITS BOX IS PERFECTLY CLEAN. REMOVE ANY TRACE OF DIRT THAT MAY HAVE ENTERED DURING REMOVAL. UPON REFITTING, MAKE SURE THAT THE AIR INTAKES ARE CORRECTLY FITTED.



04_15

CAUTION

MAKE SURE THAT THE RESERVOIR RETAINING EDGE NEVER COMES INTO CONTACT WITH THE BATTERY POSITIVE LEAD.

CAUTION

IN THE EVENT OF A FALL, CLEAN THE AIR FILTER AND ITS BOX CAREFULLY, REMOVING ANY TRACES OF OIL WHICH MAY HAVE ENTERED FROM THE OIL RESERVOIR THROUGH THE OIL VAPOUR BREATHER PIPES.

CAUTION

REMOVE THE AIR FILTER COVER ONLY WHEN THE VEHICLE IS PERFECTLY CLEAN SO AS TO PREVENT ANY TRACE OF DIRT FROM GETTING INTO THE BOX.

Cooling fluid level (04_16, 04_17)

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

CAUTION

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 MOUTH AND THROAT WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE IMMEDIATELY.

Coolant solution is 50% water and 50% antifreeze fluid.

This mixture is suitable for the majority of operating temperatures and offers adequate corrosion protection.

It is advisable to use the same mixture even in hot weather as this minimises loss due to evaporation and the need of frequent top-ups.

This reduces the quantity of salt deposits left in the radiator by evaporating water to ensure constant cooling system performance.

04_16

When the external temperature drops below zero degrees centigrade, check the cooling system frequently and add more antifreeze solution if needed (up to 60% max.).

Use distilled water in the coolant mixture to avoid damaging the engine.

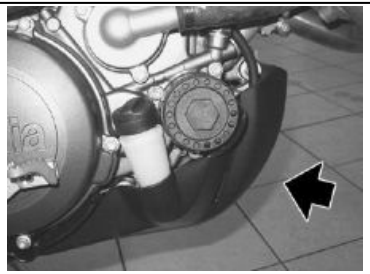
CAUTION

DO NOT REMOVE THE EXPANSION TANK PLUG «1» WHEN THE ENGINE IS HOT, SINCE COOLANT IS UNDER PRESSURE AND VERY HOT. CONTACT WITH SKIN OR CLOTHES MAY CAUSE SEVERE BURNS AND/OR INJURIES.

Check and top-up

CAUTION

WAIT FOR THE ENGINE TO COOL DOWN BEFORE CHECKING OR TOPPING-UP THE COOLANT LEVEL.



04_17

- Stop the engine and wait for it to cool down.
- Place the vehicle on firm and level ground.
- Keep the vehicle upright, with both wheels on the ground.
- Rotate the radiator cap «**1**» anticlockwise until it clicks once.
- Wait for several seconds to allow any pressure in the system to be equalised.
- Rotate the radiator cap «**1**» again anticlockwise and remove it.
- Check that the liquid covers the radiator plates completely.
- Also check the level in the expansion tank (underneath the engine sump cover) from the relevant window.
- The correct level should be between the MIN and MAX marks.

CAUTION

DO NOT ADD ADDITIVES OR OTHER SUBSTANCES TO THE FLUID.

WHEN USING A FUNNEL OR ANY OTHER ELEMENT, MAKE SURE IT IS PERFECTLY CLEAN.

- If required, top-up with coolant until the radiator plates are covered. Do not exceed this level; otherwise, the coolant will spill during engine operation. When using a funnel or any other element, make sure it is perfectly clean.
- Refit the radiator cap (1).

CAUTION

IN THE EVENT OF EXCESSIVE COOLANT CONSUMPTION, CHECK COOLING SYSTEM FOR LEAKS.

HAVE ANY MALFUNCTION REPAIRED BY AN Official aprilia Dealer.

Checking the brake oil level (04_18, 04_19, 04_20, 04_21)

Maintenance procedures

Brake fluid level and top-up

The information provided below relates to an individual braking system but is applicable to both.

NOTE

THIS VEHICLE IS EQUIPPED WITH FRONT AND REAR DISC BRAKES, EACH OPERATED BY AN INDEPENDENT HYDRAULIC CIRCUIT.

CAUTION

UNEXPECTED CLEARANCE VARIATIONS OR ELASTIC RESISTANCE IN THE BRAKE LEVER ARE DUE TO FAILURE IN THE HYDRAULIC CIRCUIT. CONTACT AN Official Aprilia Dealer IN CASE OF DOUBTS ON THE CORRECT OPERATION OF THE BRAKING SYSTEM OR WHEN UNABLE TO CARRY OUT ROUTINE CHECK PROCEDURES.

CAUTION

MAKE ESPECIALLY SURE THAT BRAKE DISCS ARE NOT SMEARED OR LUBRICATED, PARTICULARLY AFTER MAINTENANCE AND CHECK PROCEDURES HAVE BEEN CARRIED OUT.

CHECK THAT BRAKE WIRES ARE NOT TWISTED OR WORN.

PAY UTMOST ATTENTION THAT NO WATER OR DUST INADVERTENTLY GETS INTO THE CIRCUIT.

IT IS ADVISABLE TO WEAR LATEX GLOVES WHEN SERVICING THE HYDRAULIC CIRCUIT.

THE BRAKE FLUID MAY CAUSE IRRITATION IF IN CONTACT WITH SKIN OR EYES.

CAUTION

RINSE CAREFULLY ALL BODY PARTS WHICH HAVE COME INTO CONTACT WITH THE FLUID AND, SHOULD THE FLUID COME INTO CONTACT WITH THE EYES, SEEK MEDICAL ADVICE OR CONTACT AN OPHTHALMOLOGIST.

CAUTION

DO NOT DISPOSE OF THE FLUID INTO THE ENVIRONMENT.

CAUTION

KEEP OUT OF THE REACH OF CHILDREN.

CAUTION

WHEN YOU USE THE BRAKE FLUID, MAKE SURE NOT TO SPILL IT ONTO PLASTIC OR PAINTED COMPONENTS AS IT WILL DAMAGE THEM BEYOND REPAIR.

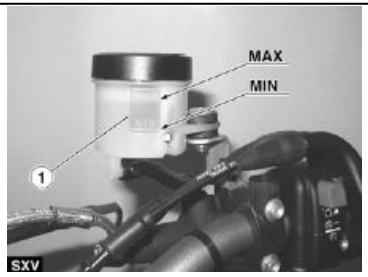
Disc brake

CAUTION

BRAKES ARE THE MOST IMPORTANT COMPONENTS TO ENSURE SAFETY AND THEREFORE THEY HAVE TO BE ALWAYS IN PERFECT CONDITIONS; CHECK THE BRAKES BEFORE EACH RIDE.

REPLACE THE BRAKE FLUID ACCORDING TO THE SCHEDULED MAINTENANCE TABLE.

USE THE BRAKE FLUID SPECIFIED IN THE LUBRICANT CHART.



04_18

Brake fluid decreases gradually in the reservoir as the brake pads wear down, to compensate the wear automatically.

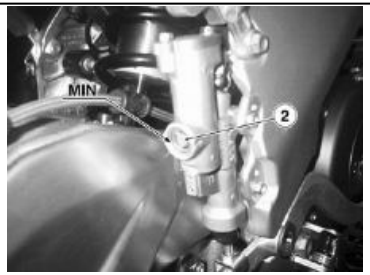
The front brake fluid reservoir (1) is placed near the front brake lever connection.

The rear brake fluid reservoir (2) is integrated in the brake pump fastened to the frame, on the right side, near the fork.

Check the brake fluid level in the reservoirs before setting off.

CAUTION

DO NOT USE YOUR MOTORCYCLE IF A FLUID LEAK IN THE BRAKING CIRCUIT IS DETECTED.



04_19

Front brake

Checking

- Place the vehicle upright and keep the handlebar right.
- Make sure the fluid level in the reservoir (1) is above the MIN level reference mark.

MIN = minimum level

MAX = maximum level

If the fluid does not reach the MIN. mark

CAUTION

FLUID LEVEL DECREASES GRADUALLY AS BRAKE PADS WEAR DOWN.

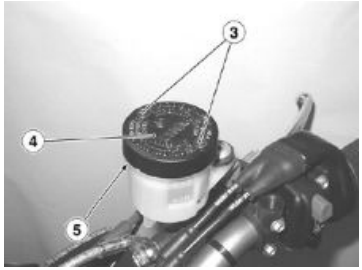
- Check the brake pads and discs for wear

If the pads and/or the disc do not need replacing, top up the fluid.

Topping up SXV

CAUTION

RISK OF BRAKE FLUID SPILLAGE. DO NOT PULL THE FRONT BRAKE LEVER WHEN THE SCREWS «3» ARE LOOSE OR, PRIMARILY, WHEN THE BRAKE FLUID RESERVOIR COVER «4» IS REMOVED.



04_20

- Using a short Phillips screwdriver remove the screws «**3**» of the brake fluid reservoir.

CAUTION

AVOID PROLONGED AIR EXPOSURE OF THE BRAKE FLUID. THE BRAKE FLUID IS HYGROSCOPIC AND ABSORBS MOISTURE WHEN IS IN CONTACT WITH THE AIR. LEAVE THE BRAKE FLUID RESERVOIR «1» OPEN ONLY FOR THE TIME NEEDED TO COMPLETE THE TOPPING UP PROCEDURE.

- Lift and remove the cap «**4**» together with its screws «**3**» and washer «**5**».

CAUTION

TO AVOID SPILLING BRAKE FLUID DURING TOP-UP, DO NOT SHAKE THE VEHICLE. DO NOT ADD ADDITIVES OR OTHER SUBSTANCES TO THE FLUID. WHEN USING A FUNNEL OR ANY OTHER ELEMENT, MAKE SURE IT IS PERFECTLY CLEAN.

- Top up the reservoir «**1**» with the brake fluid, until you go beyond the MIN minimum level mark.

CAUTION

TOP UP TO MAX LEVEL MARK ONLY WHEN BRAKE PADS ARE NEW. IT IS ADVISABLE NOT TO TOP UP TO THE MAX LEVEL MARK WHEN THE BRAKE PADS ARE WORN BECAUSE YOUR RISK SPILLING THE FLUID WHEN CHANGING THE BRAKE PADS.

CHECK BRAKING EFFICIENCY.

WHEN THE BRAKE LEVER HAS EXCEEDING TRAVEL OR IF YOU NOTICE A LOSS OF BREAKING, CONTACT AN APRILIA OFFICIAL DEALER. THE BRAKING SYSTEM MAY NEED BLEEDING.

Rear brake

Checking

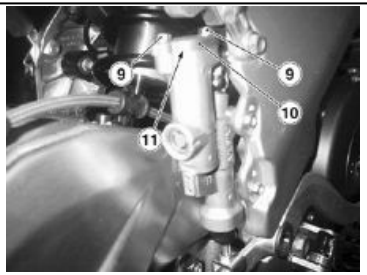
- Keep the vehicle upright.
- Check that the liquid contained in the reservoir is higher than the MIN. mark.

MIN = minimum level

If the fluid does not reach the MIN. mark

CAUTION

FLUID LEVEL DECREASES GRADUALLY AS BRAKE PADS WEAR DOWN.



04_21

- Check the brake pads and discs for wear

If the pads and/or the disc do not need replacing, top up the fluid.

Topping up

CAUTION

RISK OF BRAKE FLUID SPILLING. DO NOT PULL THE FRONT BRAKE LEVER WHEN THE SCREWS «9» ARE LOOSE OR, PRIMARILY, WHEN THE BRAKE FLUID RESERVOIR CAP «10» IS REMOVED.

- Using a wrench, unscrew the two screws «**9**» of the brake fluid reservoir «**2**».

CAUTION

AVOID PROLONGED AIR EXPOSURE OF THE BRAKE FLUID. THE BRAKE FLUID IS HYGROSCOPIC AND ABSORBS MOISTURE WHEN IS IN CONTACT WITH THE AIR. LEAVE THE BRAKE FLUID RESERVOIR «2» OPEN ONLY FOR THE TIME NEEDED TO COMPLETE THE TOPPING UP PROCEDURE.

- Lift and remove the cover (10) together with the screws (9) and the gasket (11).

CAUTION

TO AVOID SPILLING BRAKE FLUID DURING TOP-UP, DO NOT SHAKE THE VEHICLE. DO NOT ADD ADDITIVES OR OTHER SUBSTANCES TO THE FLUID. WHEN USING A FUNNEL OR ANY OTHER ELEMENT, MAKE SURE IT IS PERFECTLY CLEAN.

- Top-up the reservoir (2) with the brake fluid until the level is over the MIN level reference mark.

CAUTION

TOP UP TO MAX LEVEL MARK ONLY WHEN BRAKE PADS ARE NEW. IT IS ADVISABLE NOT TO TOP UP TO THE MAX LEVEL MARK WHEN THE BRAKE PADS ARE WORN BECAUSE YOUR RISK SPILLING THE FLUID WHEN CHANGING THE BRAKE PADS.

CHECK BRAKING EFFICIENCY.

WHEN THE BRAKE LEVER HAS EXCEEDING TRAVEL OR IF YOU NOTICE A LOSS OF BREAKING, CONTACT AN APRILIA OFFICIAL DEALER. THE BRAKING SYSTEM MAY NEED BLEEDING.

04_22

Battery (04_22, 04_23, 04_24)

- Remove the saddle.
- Unscrew and remove the negative wire fastening screw, keeping the washer.

04_23

- Unscrew and remove the negative wire fastening screw, keeping the washer.

04_24

- Remove the battery.

Fuses (04_25, 04_26, 04_27, 04_28, 04_29)

CAUTION

NEVER ATTEMPT TO REPAIR FAULTY FUSES. NEVER USE A FUSE OF A RATING OTHER THAN SPECIFIED. THIS COULD DAMAGE THE ELECTRICAL SYSTEM OR CAUSE A SHORT CIRCUIT, WITH THE RISK OF FIRE.

CAUTION

IF A FUSE BLOWS OUT FREQUENTLY, THAT MAY BE DUE TO A SHORT CIRCUIT OR OVERLOAD. IF THIS OCCURS, CONTACT AN Official Aprilia Dealer.

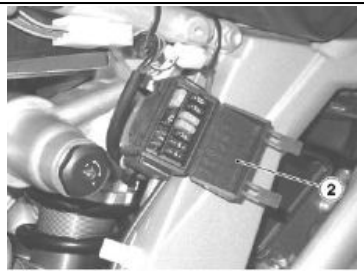
04_25

Checking the fuses is necessary whenever an electrical component fails to operate or is malfunctioning or when the engine does not start.

Check the secondary fuses first and then the main 30A fuse.

To check:

- Set the ignition switch to (OFF) to avoid an accidental short circuit.
- Remove the right side fairing by undoing the two screws (1) and slide if off from its seat.



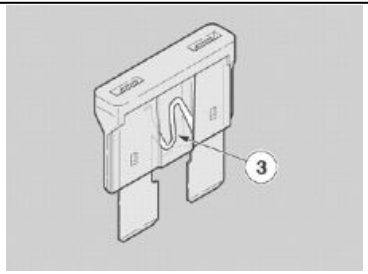
04_26

- Lift the cover (2) of the secondary fuse box.

- Take out one fuse at a time and check whether the filament (3) 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 amperage.

NOTE

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

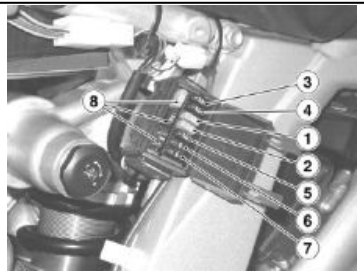


04_27

- Remove the left side fairing by following the same procedure for the right side fairing.
- To check the main fuses, carry out the same operations described above for secondary fuses.

SECONDARY FUSES DISTRIBUTION

(1) 15A fuse	ECU relay energising
(2) 15A fuse	Taillights, indicators, horn, instrument panel, stop light
(3) 7.5A fuse	Front headlights
(4) 7.5A fuse	ECU relay power
(5) 7.5A fuse	Injectors coils
(6) 7.5A fuse	Electric fan
(7) 5A fuse	Fuel pump



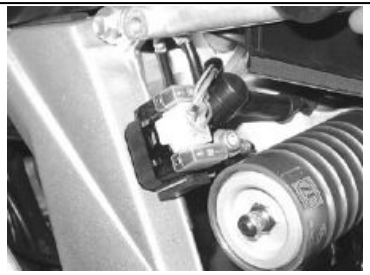
04_28

NOTE

THERE ARE THREE SPARE FUSES «8».

MAIN FUSES - DISTRIBUTION

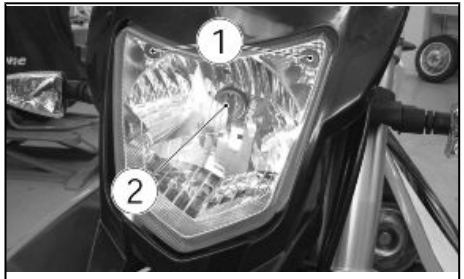
30A fuse	Battery recharge (there is just one fuse, the second one is spare).


04_29

Lamps

NOTE

BEFORE REPLACING A BULB, CHECK THE FUSES.



04_30

Front light group (04_30, 04_31, 04_32, 04_33, 04_34)

In the front headlight there are:

- Two tail light bulbs «**1**».
- One low-beam / high-beam light bulb «**2**».


04_31

To replace:

- Rest the vehicle on its stand.
- Undo the two upper screws.
- Slide off the front cowl from the mudguard seats.

Side light lamp «1»

- Slide off the tail light bulb and replace it with another of the same type.

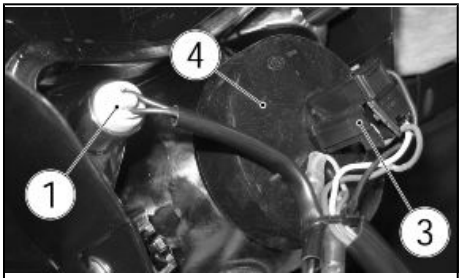
High/low beam light bulb«2»

- Hold the bulb electrical connector «**3**», pull and disconnect it from the bulb holder.
- Slide off the cover «**4**» from the parabole fitting and from the bulb connectors.
- Release the two ends of the retaining spring «**5**» located in the bulb holder.
- Extract the bulb from its fitting.

Upon refitting:

- Fit a bulb of the same type adequately.
- Slide in the cover «**4**» in the bulb connectors and the parabole fitting.

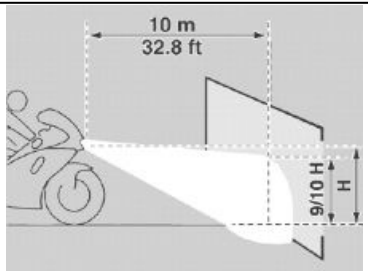
04_32



04_33

04_34

- Connect the bulb electrical connector «**3**».



04_35

04_36

Headlight adjustment (04_35, 04_36)

NOTE

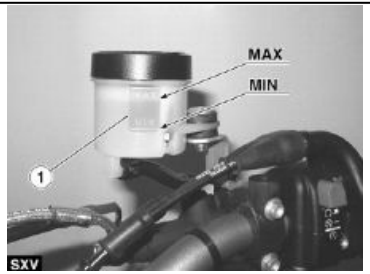
IN COMPLIANCE WITH LOCAL LEGAL REQUIREMENTS, SPECIFIC PROCEDURES MUST BE FOLLOWED WHEN CHECKING LIGHT BEAM ADJUSTMENT.

For a quick check of the correct direction of the front light beam:

- Place the vehicle 10m away from a vertical wall and make sure the ground is level.
- Turn on the low-beam light, sit on the scooter and check that the light beam projected to the wall is a little below the headlight horizontal straight line (about 9/10 of the total height).

To adjust the light beam:

- Working from both sides, undo screw «**1**».
- Adjust the headlamp until the desired position is obtained
- Working from both sides, tighten screw «**1**».



04_37

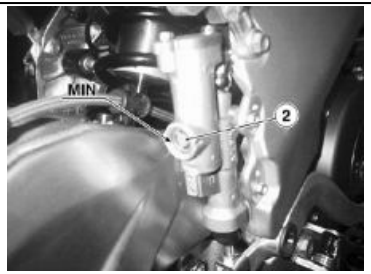
Front and rear disc brake (04_37, 04_38, 04_39, 04_40)

CAUTION

BRAKES ARE THE MOST IMPORTANT COMPONENTS TO ENSURE SAFETY AND THEREFORE THEY HAVE TO BE ALWAYS IN PERFECT CONDITIONS; CHECK THE BRAKES BEFORE EACH RIDE. A DIRTY DISC SOILS THE PADS, LEADING TO LOSS OF BRAKING. DIRTY PADS MUST BE REPLACED, WHEREAS A DIRTY BRAKE DISC MAY BE CLEANED WITH A HIGH-QUALITY DEGREASING PRODUCT. HAVE THE BRAKE FLUID CHANGED AT AN Official aprilia Dealer ONCE A YEAR. USE THE BRAKE FLUID SPECIFIED IN THE RECOMMENDED PRODUCT TABLE.

NOTE

THIS VEHICLE IS EQUIPPED WITH FRONT AND REAR DISC BRAKES, EACH OPERATED BY AN INDEPENDENT HYDRAULIC CIRCUIT.



04_38

The front braking system has single disc (left side).

The rear braking system has single disc (right side).

The information provided below relates to an individual braking system but is applicable to both.

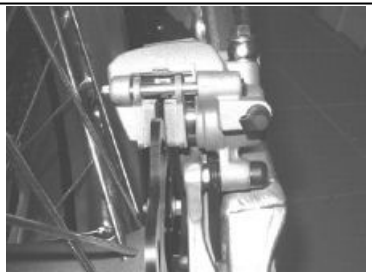
Brake fluid decreases gradually in the reservoir (1-2) as the brake pads wear down, to compensate the wear automatically.

The front brake reservoir «**1**» is placed near the front brake lever connection. The rear brake fluid reservoir «**2**» is integrated in the brake pump fastened to the frame near the fork.

Check the brake fluid level in the reservoirs «**1**» «**2**» and check brake pads for wear before setting off.

Checking brake pads for wear

04_39



04_40

Disc brake pad wear depend on the use, the riding style and the roads.

CAUTION

WEAR IS GREATER WHEN RIDING ON DIRTY AND WET ROADS OR OFFERED.

To carry out a quick pad check:

- Rest the vehicle on its stand.

Check the front brake calliper pads:

- Visually inspect the area between brake disc and brake pads looking from the bottom up the rear end;

Checking the rear brake calliper pads:

- Visually inspect the area between brake disc and brake pads looking from the bottom up the rear end;

NOTE

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.

When the lining material of even just one of the brake pads is worn down to nearly 1.5 mm (0.06 in) (or even if one of the wear indicators is no longer visible), replace both brake pads.

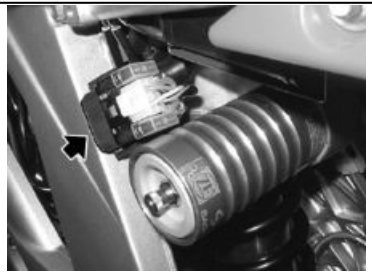
CAUTION

TAKE YOUR MOTORCYCLE TO AN Official Aprilia Dealer TO HAVE DISCS REPLACED.

Periods of inactivity (04_41)

CAUTION

WHEN THE VEHICLE IS LEFT UNUSED FOR OVER TWENTY DAYS, DISCONNECT THE 30 A FUSE TO PREVENT BATTERY DEGRADATION.



04_41

Take some measures to avoid the side effects of not using the vehicle. Besides, it is necessary to carry out general repairs and checks before garaging the vehicle as one can forget to do so afterwards.

Proceed as follows:

- Remove the battery.
- Wash and dry the scooter.
- Polish the painted surfaces.
- Inflate tyres.
- Store the scooter 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.

NOTE

PLACE A SUITABLE SUPPORT UNDER THE VEHICLE TO KEEP BOTH WHEELS OFF THE GROUND.

- Cover the vehicle. Avoid using plastic or waterproof materials.

After storage
Uncover and clean the vehicle.

NOTE

TAKE THE PLASTIC BAGS OFF THE EXHAUST PIPE OPENING.

- Uncover and clean the vehicle.
- Check the battery for correct charge and install it.
- Refill the fuel tank.
- Carry out the pre-ride checks.

CAUTION

AS A TEST, RIDE THE MOTORCYCLE FOR A FEW KILOMETRES AT A MODERATE SPEED AND AWAY FROM TRAFFIC AREAS.

Cleaning the vehicle

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. During some seasons, resins, fruits or leaves containing aggressive chemical substances that may damage the paintwork may fall from trees.
- Clean the dashboard with a soft, damp cloth.

CAUTION

BEFORE WASHING THE VEHICLE, COVER THE ENGINE AIR INTAKES AND THE EXHAUST PIPES.

CAUTION

IN CASE OF DISCOLOURATION OF THE SILENCER, APPLY FINISHING POLISH WITH A SOFT CLOTH.

CAUTION

AFTER CLEANING YOUR MOTORCYCLE, 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.

CAUTION

WARNING

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 clean off dirt and mud deposited from painted surfaces, soften caked dirt with a low-pressure water jet. Sponge off using a car body sponge soaked in a car body shampoo and water solution (2 ÷ 4% parts of shampoo in water). Then rinse with plenty of water, and dry with a chamois leather. To clean the engine outer parts, use degreasing detergent, brushes and old cloths. Anodised or painted aluminium parts such as forks, rims, frame, footrests etc. should be washed using water and mild soap. Using aggressive detergents may damage the surface treatment of these compo-

nents. Using aggressive detergents may damage the surface treatment of these components.

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 CAREFULLY BEFORE APPLYING SILICON WAX POLISH. DO NOT POLISH MATT-PAINTED SURFACES WITH POLISHING PASTE. THE VEHICLE SHOULD NEVER 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.

CAUTION

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.

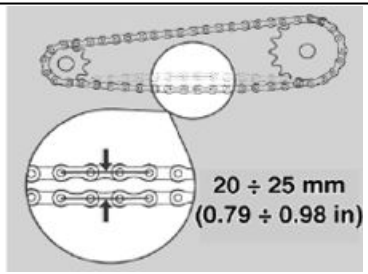
CAUTION

DO NOT APPLY PROTECTIVE WAX ON THE SADDLE AS IT MAY BECOME SLIPPERY.

Transport

During transport the vehicle must be well secured in an upright position and first gear must be engaged, to avoid fuel, oil and coolant leaks.

IN CASE OF FAILURE, DO NOT HAVE THE VEHICLE TOWED. ASK FOR ROAD ASSISTANCE SERVICE.



04_42

Chain backlash check (04_42)

To check clearance:

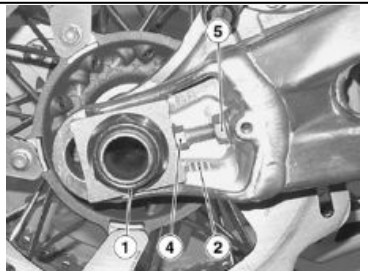
- Stop the engine.
- Rest the vehicle on its stand.
- Engage neutral gear.
- Check that vertical oscillation at the middle point between pinion and sprocket on the lower part of the chain is of about 20 ÷ 25 mm (0.79 ÷ 0.98 in).
- Move the vehicle forward so as to check vertical oscillation in other positions too. clearance should remain constant at all wheel rotation phases.

If the clearance is uniform, but higher or lower than 20 ÷ 25 mm (0.79 ÷ 0.98 in), adjust it as required.

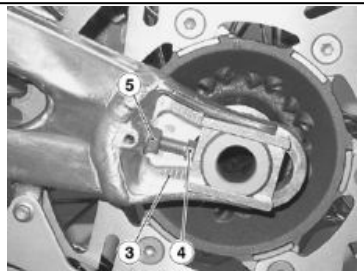
CAUTION

IF THE DEFLECTION MEASURED IS LARGER IN CERTAIN POSITIONS, THIS IS INDICATIVE OF CRUSHED OR SEIZED CHAIN LINKS.

LUBRICATE THE CHAIN REGULARLY TO PREVENT THE RISK OF SEIZURE.



04_43



04_44

Chain backlash adjustment (04_43, 04_44)

If you need to adjust chain tension after the check:

- Rest the vehicle on its stand.
- Loosen the nut (1) completely.
- Loosen both lock nuts (4).
- Actuate on the set screws (5) and adjust the chain backlash checking that the references (2 - 3) match on both sides of the vehicle.
- Tighten both lock nuts (4).
- Tighten the nut (1).
- Check chain clearance.

NOTE

WHEEL CENTRING IS CARRIED OUT USING THE IDENTIFIABLE FIXED REFERENCES (2-3) INSIDE THE CHAIN TENSIONER PAD MOUNTS ON THE SWINGARM ARMS, IN FRONT OF THE WHEEL AXLE.

Locking torques (N*m)

Tightening torque for wheel nut (1):

127 Nm (12.7 kgm)

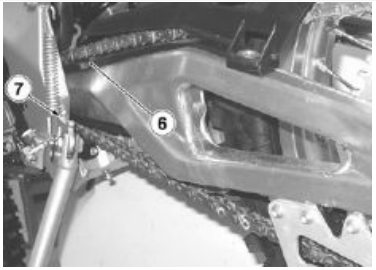
Checking wear of chain, front and rear sprockets (04_45)

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.

CAUTION

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.



04_45

- Check the chain slide pad «**6**» and the chain tensioner pad «**7**» for wear.
- Also check the fork protection pad for wear.

CAUTION

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

Lubricate the chain whenever necessary. Lubricate the chain with chain spray grease. Do not wash the chain with water jets, steam jets, high-pressure water jets and highly flammable solvents.

ADJUST, LUBRICATE, WASH AND REPLACE THE CHAIN WITH UTMOST CAUTION.

SXV 450-550

Chap. 05
Technical data

TECHNICAL DATA SXV 450 - SXV 550 (VEHICLE)

Max. length	2165 mm (85.23 in)
Max. width	815 mm (32.08 in)
Max. height (to windshield)	1170 mm (46.06 in)
Saddle height	880 mm (34.64 in)
Wheelbase	1470 mm (57.87 in)
Minimum ground clearance	270 mm (10.63 in)
Dry weight (of each liquid)	121,5 kg (267.86 lb)
Fuel tank capacity (including reserve)	7.5 l (1.98 gal)
Fuel reserve	2.2 l (0.58 gal)
Engine oil capacity	1.3 l (0.34 gal)
Fork oil capacity	125 mm (4.92 in) of clearance (for each stem, measured without spring and under compression)
Coolant capacity	1.1 l (0.29 gal) (50% water + 50% antifreeze solution with ethylene glycol)
Seats	1
Frame	Tubular steel perimeter frame and aluminium vertical members
Front suspension	hydraulic telescopic fork, Ø 45 mm (1.77 in) stems

Front suspension travel	275 mm (10.83 in)
Rear suspensions	oscillating swingarm and adjustable hydraulic single shock absorber
Rear wheel travel	252 mm (9.92 in) (usable)
Front brake	disc - Ø 320 mm (Ø 12.60 in), with hydraulic transmission
Rear brake	Ø 240 mm (Ø 9.45 in) hydraulic disc brake
Wheel rims	with spokes
Front wheel rim	3.50 x 17"
Rear wheel rim	5.50 x 17
Front tyre	120/70 17" 58W
Rear tyre	180/55 17" 73W
Front tyre pressure	180 kPa (1.8 bar)
Rear tyre pressure	200 kPa (2.0 bar)

SXV 450 TECHNICAL DATA (ENGINE)

Model	45SX
ENGINE	twin cylinder, 4-stroke with 4 valves per cylinder, single overhead camshaft
Number of cylinders	2
Total engine capacity	449 cm³ (27.40 cu.in)

Bore/stroke	76 mm / 49.5 mm (2.99 in / 1.95 in)
Compression ratio	13 ± 0.5
Ignition	starter
Idle speed	1800 ÷ 2000 rpm
Clutch	multiplate wet clutch
Lubrication system	Separate twin-sump lubrication with external reservoir
Air filter	with dry filtration cartridge
Cooling	Coolant
Gearbox	mechanical, 5 speeds with foot lever on the left hand side of the engine
Gear ratio	Primary: 22/56 = 1 : 2.545 Final: 15/46 = 1 : 3.067
1st	13/30 = 1 : 2.307 (secondary) 1: 18.013 (total)
2nd	15/27 = 1 : 1.800 (secondary) 1: 14.050 (total)
3rd	16/23 = 1 : 1.437 (secondary) 1: 11.221 (total)
4th	20/23 = 1 : 1.150 (secondary) 1: 8.976 (total)
5th	21/21 = 1 : 1.000 (secondary) 1: 7.806 (total)

Drive chain	endless (without master link) and with sealed links
Fuel system	electronic injection
Diffuser	Ø 38 mm (1.49 in)
Fuel system	premium unleaded petrol, minimum octane rating 95 (NORM) and 85 (NOMM)

SXV 550 TECHNICAL DATA (ENGINE)

Model	55SX125
ENGINE	twin cylinder, 4-stroke with 4 valves per cylinder, single overhead camshaft
Number of cylinders	2
Total engine capacity	553 cm^3 (33.75 cu.in)
Bore/stroke	80 mm / 55.0 mm (3.15 in / 2.16 in)
Compression ratio	12.5 ± 0.5
Ignition	starter
Idle speed	1800 ÷ 2000 rpm
Clutch	multiplate wet clutch
Lubrication system	Separate twin-sump lubrication with external reservoir
Air filter	with dry filtration cartridge
Cooling	Coolant

Gearbox	mechanical, 5 speeds with foot lever on the left hand side of the engine
Gear ratio	Primary: 22/56 = 1 : 2.545 Final: 16/46 = 1 : 2.875
1st	13/30 = 1 : 2.307 (secondary) 1: 16.888 (total)
2nd	15/27 = 1 : 1.800 (secondary) 1: 13.172 (total)
3rd	16/23 = 1 : 1.437 (secondary) 1: 10.519 (total)
4th	20/23 = 1 : 1.150 (secondary) 1: 8.415 (total)
5th	21/21 = 1 : 1.000 (secondary) 1: 7.318 (total)
Drive chain	endless (without master link) and with sealed links
Fuel system	electronic injection
Diffuser	Ø 40 mm (1.57 in)
Fuel system	premium unleaded petrol, minimum octane rating 95 (NORM) and 85 (NOMM)

ELECTRICAL COMPONENTS

Ignition	Electronic
Standard spark plug	NGK CR8EB
Spark plug electrode gap	0.7 ± 0.8 mm (0.028 in ± 0.031 in)
Resistance	5 kΩ
Battery	12V- 6 Ah
Main fuse	30 A
Auxiliary fuses	5A; 15A; 20A
Alternator (permanent magnet type)	12 V - 350 W
Low beam bulb	12V - 55W
High beam bulb	12V - 60W
Front side light bulb	12V - 3W
Turn indicator bulb	with micro-bulbs
License plate light bulb	12V - 5W
Tail light /stop light bulb	LED
Instrument panel lighting bulb	LED
Neutral gear warning light	LED
Engine oil pressure warning light	LED
Engine control system warning light	LED
Low fuel warning light	LED
High beam warning light	LED

Turn indicator warning light	LED
Overrevving warning light	LED

SXV 450-550

Chap. 06
Programmed maintenance

Scheduled maintenance table

Periodic maintenance chart for scooters in the original version (throttled) for road operation,

CAUTION

THE MAINTENANCE OPERATIONS LISTED MUST BE CARRIED OUT BY A DEALER OR AUTHORISED APRILIA WORKSHOP, OTHERWISE THE WARRANTY WILL BE VOIDED.

NOTE

CARRY OUT MAINTENANCE OPERATIONS AT HALF THE INTERVALS RECOMMENDED IF THE VEHICLE IS USED IN WET OR DUSTY AREAS, OFF ROAD OR FOR SPORTING APPLICATIONS.

END OF RUN-IN PERIOD 500 KM (311 MILES)

Throttle body assembly bolt torque - check
Throttle bodies - Synchronisation
Air filter and filter case - Check and cleaning
Fuel lines - Check condition and position
Idle speed adjustment - Check
Gearbox oil - Change
Clutch control - Check and adjust
Coolant level in radiator and expansion tank - Check

Engine oil and engine oil filter - Change
Oil pipes - Check condition and position
Throttle cables - Adjustment
Cold-start key - Adjustment
Brake fluid level - Check
Brake pipes - Check condition and tightness
Brake system screws torque - Check
Light operation/direction
Electrical system operation - Check
Tyre condition and pressure - Check
Wheel bearings clearance - Check
Wheel spokes and rim coaxiality - Check tension
Tightening of wheel pin nuts and screws - Check
Engine mounting bolt torque - Check
Tightening of chassis screws and nuts - Check
Fork - Check for sealing and operation
Tightening of fork plates and feet screws - Check
Shock absorber pins tightening - Check
Shock absorber - Check for sealing and operation
Steering bearings - Check and adjust
Headstock dust guards - Cleaning
Drive chain - Tension
Sealed link, chain sprocket and chain guide - Check for wear

Chain - lubricate

EVERY 3000 KM (1864 MILES)

Throttle body assembly bolt torque - check
Throttle bodies - Synchronisation
Air filter and filter case - Check and cleaning
Fuel lines - Check condition and position
Idle speed adjustment - Check
Gearbox oil - Change
Clutch springs - Check length
Clutch discs - Check for wear
Clutch control - Check and adjust
Coolant level in radiator and expansion tank - Check
System sealing - Check
Engine oil and engine oil filter - Change
Oil pipes - Check condition and position
Throttle cables - Adjustment
Cold-start key - Adjustment
Brake fluid level - Check
Brake pipes - Check condition and tightness
Brake system screws torque - Check

Brake discs thickness - Check
Brake pad thickness - Check
Electrical contacts and switches - Treatment with contact activator spray
Battery connections - Greasing
Light operation/direction
Electrical system operation - Check
Exhaust system - Check for leaks and alignment
Tyre condition and pressure - Check
Wheel bearings - check
Wheel spokes and rim coaxiality - Check tension
Tightening of wheel pin nuts and screws - Check
Engine mounting bolt torque - Check
Tightening of chassis screws and nuts - Check
Fork dust guards - Cleaning
Fork struts - Bleed
Fork - Check for sealing and operation
Tightening of fork plates and feet screws - Check
Shock absorber pins tightening - Check
Shock absorber - Check for sealing and operation
Steering bearing clearance - Check
Headstock dust guards - Cleaning
Drive chain - Tension
Sealed link, chain sprocket and chain guide - Check for wear

Steering bearings - Lubricate
Clutch lever pin - Lubricate
Throttle cables - Lubricate
Rider footrest bolts - Lubricate
Chain - lubricate
Rear suspension linkage system - Lubricate
Side stand bolt - Lubricate
Front wheel bolt and bearings - Lubricate
Rear fork bolt - Lubricate
Rear wheel bolt and bearings - Lubricate

EVERY 6000 KM (3728 MILES)

Paper air filter - Replacement
Spark plugs - Replacement

EVERY 9000 KM (5592 MILES)

Complete transmission - Check for wear
Pressure relief and non-return valve spring - Check
Cylinder liners - Check for wear

Connecting rods and main bushings - Check for wear
Start-up gears - Check for wear
Oil pump gears - Check
Head lubrication nozzles - Cleaning
Pistons and piston rings - Replacement
Piston pin - Check
Cam rockers - Radial check
Valve lifter - Check
Camshaft wear - Check
Camshaft bearings - Check
Valve seat sealing - Check
Valves - Check for wear
Valve clearance - Check and adjust
Valve guides - check for wear
Spring washers, caps, bowls - Check for wear
Chain tightener toothing - Check for wear
Valve springs - check length
Timing chain - Stretching measurement
Drive chain sliders - Check for wear
Fuel pump - Check
Fork - Comprehensive maintenance
Fork oil - Replacement
Shock absorber - Comprehensive maintenance

Crankshaft and connecting rod bearing clearance - Check
Chain guide slider - Check for wear
Chain guide eye - Check for wear
Chain tightener roller - Check for wear
Chain tightener slider - Check for wear

EVERY YEAR

Brake fluid - change

Periodic maintenance chart for scooters in free version for hobby sports applications.

END OF RUN-IN PERIOD AND EVERY 3 HOURS OF OPERATION

Throttle body assembly bolt torque - check
Throttle bodies - Synchronisation
Air filter and filter case - Check and cleaning
Fuel lines - Check condition and position
Idle speed adjustment - Check
Gearbox oil - Change
Clutch control - Check and adjust
Coolant level in radiator and expansion tank - Check

Engine oil and engine oil filter - Change
Oil pipes - Check condition and position
Throttle cables - Adjustment
Cold-start key - Adjustment
Brake fluid level - Check
Brake pipes - Check condition and tightness
Brake system screws torque - Check
Light operation/direction
Electrical system operation - Check
Tyre condition and pressure - Check
Wheel bearings clearance - Check
Wheel spokes and rim coaxiality - Check tension
Tightening of wheel pin nuts and screws - Check
Engine mounting bolt torque - Check
Tightening of chassis screws and nuts - Check
Fork - Check for sealing and operation
Tightening of fork plates and feet screws - Check
Shock absorber pins tightening - Check
Shock absorber - Check for sealing and operation
Steering bearings - Check and adjust
Headstock dust guards - Cleaning
Drive chain - Tension
Sealed link, chain sprocket and chain guide - Check for wear

Chain - lubricate

EVERY 15 HOURS OF OPERATION

Throttle body assembly bolt torque - check
Throttle bodies - Synchronisation
Air filter and filter case - Check and cleaning
Fuel lines - Check condition and position
Idle speed adjustment - Check
Gearbox oil - Change
Clutch springs - Check length
Clutch discs - Check for wear
Clutch control - Check and adjust
Coolant level in radiator and expansion tank - Check
System sealing - Check
Engine oil and engine oil filter - Change
Oil pipes - Check condition and position
Throttle cables - Adjustment
Cold-start key - Adjustment
Brake fluid level - Check
Brake pipes - Check condition and tightness
Brake system screws torque - Check

Brake discs thickness - Check
Brake pad thickness - Check
Electrical contacts and switches - Treatment with contact activator spray
Battery connections - Greasing
Light operation/direction
Electrical system operation - Check
Exhaust system - Check for leaks and alignment
Tyre condition and pressure - Check
Wheel bearings - check
Wheel spokes and rim coaxiality - Check tension
Tightening of wheel pin nuts and screws - Check
Engine mounting bolt torque - Check
Tightening of chassis screws and nuts - Check
Fork dust guards - Cleaning
Fork struts - Bleed
Fork - Check for sealing and operation
Tightening of fork plates and feet screws - Check
Shock absorber pins tightening - Check
Shock absorber - Check for sealing and operation
Steering bearing clearance - Check
Headstock dust guards - Cleaning
Drive chain - Tension
Sealed link, chain sprocket and chain guide - Check for wear

Steering bearings - Lubricate
Clutch lever pin - Lubricate
Throttle cables - Lubricate
Rider footrest bolts - Lubricate
Chain - lubricate
Rear suspension linkage system - Lubricate
Side stand bolt - Lubricate
Front wheel bolt and bearings - Lubricate
Rear fork bolt - Lubricate
Rear wheel bolt and bearings - Lubricate

EVERY 60 HOURS OF OPERATION

Paper air filter - Replacement
Spark plugs - Replacement

EVERY 90 HOURS OF OPERATION

Complete transmission - Check for wear
Pressure relief and non-return valve spring - Check
Cylinder liners - Check for wear

Connecting rods and main bushings - Check for wear
Start-up gears - Check for wear
Oil pump gears - Check
Head lubrication nozzles - Cleaning
Pistons and piston rings - Replacement
Piston pin - Check
Cam rockers - Radial check
Valve lifter - Check
Camshaft wear - Check
Camshaft bearings - Check
Valve seat sealing - Check
Valves - Check for wear
Valve clearance - Check and adjust
Valve guides - check for wear
Spring washers, caps, bowls - Check for wear
Chain tightener toothing - Check for wear
Valve springs - check length
Timing chain - Stretching measurement
Drive chain sliders - Check for wear
Fuel pump - Check
Fork - Comprehensive maintenance
Fork oil - Replacement
Shock absorber - Comprehensive maintenance

Crankshaft and connecting rod bearing clearance - Check
Chain guide slider - Check for wear
Chain guide eye - Check for wear
Chain tightener roller - Check for wear
Chain tightener slider - Check for wear

EVERY YEAR

Brake fluid - change

Periodic maintenance chart for scooters in free version for competitive sports applications.

END OF RUN-IN PERIOD AND EVERY 3 HOURS OF OPERATION

Throttle body assembly bolt torque - check
Throttle bodies - Synchronisation
Air filter and filter case - Check and cleaning
Fuel lines - Check condition and position
Idle speed adjustment - Check
Gearbox oil - Change
Clutch control - Check and adjust

Coolant level in radiator and expansion tank - Check
Engine oil and engine oil filter - Change
Oil pipes - Check condition and position
Throttle cables - Adjustment
Cold-start key - Adjustment
Brake fluid level - Check
Brake pipes - Check condition and tightness
Brake system screws torque - Check
Light operation/direction
Electrical system operation - Check
Tyre condition and pressure - Check
Wheel bearings clearance - Check
Wheel spokes and rim coaxiality - Check tension
Tightening of wheel pin nuts and screws - Check
Engine mounting bolt torque - Check
Tightening of chassis screws and nuts - Check
Fork - Check for sealing and operation
Tightening of fork plates and feet screws - Check
Shock absorber pins tightening - Check
Shock absorber - Check for sealing and operation
Steering bearings - Check and adjust
Headstock dust guards - Cleaning
Drive chain - Tension

Sealed link, chain sprocket and chain guide - Check for wear
Chain - lubricate

EVERY 15 HOURS OF OPERATION

Throttle body assembly bolt torque - check
Throttle bodies - Synchronisation
Air filter and filter case - Check and cleaning
Fuel lines - Check condition and position
Idle speed adjustment - Check
Gearbox oil - Change
Clutch springs - Check length
Clutch discs - Check for wear
Clutch control - Check and adjust
Coolant level in radiator and expansion tank - Check
System sealing - Check
Engine oil and engine oil filter - Change
Oil pipes - Check condition and position
Throttle cables - Adjustment
Cold-start key - Adjustment
Brake fluid level - Check
Brake pipes - Check condition and tightness

Brake system screws torque - Check
Brake discs thickness - Check
Brake pad thickness - Check
Electrical contacts and switches - Treatment with contact activator spray
Battery connections - Greasing
Light operation/direction
Electrical system operation - Check
Exhaust system - Check for leaks and alignment
Tyre condition and pressure - Check
Wheel bearings - check
Wheel spokes and rim coaxiality - Check tension
Tightening of wheel pin nuts and screws - Check
Engine mounting bolt torque - Check
Tightening of chassis screws and nuts - Check
Fork dust guards - Cleaning
Fork struts - Bleed
Fork - Check for sealing and operation
Tightening of fork plates and feet screws - Check
Shock absorber pins tightening - Check
Shock absorber - Check for sealing and operation
Steering bearing clearance - Check
Headstock dust guards - Cleaning
Drive chain - Tension

Sealed link, chain sprocket and chain guide - Check for wear
Steering bearings - Lubricate
Clutch lever pin - Lubricate
Throttle cables - Lubricate
Rider footrest bolts - Lubricate
Chain - lubricate
Rear suspension linkage system - Lubricate
Side stand bolt - Lubricate
Front wheel bolt and bearings - Lubricate
Rear fork bolt - Lubricate
Rear wheel bolt and bearings - Lubricate

EVERY 30 HOURS OF OPERATION

Paper air filter - Replacement
Spark plugs - Replacement

EVERY 75 HOURS OF OPERATION

Complete transmission - Check for wear
Pressure relief and non-return valve spring - Check

Cylinder liners - Check for wear
Connecting rods and main bushings - Check for wear
Start-up gears - Check for wear
Oil pump gears - Check
Head lubrication nozzles - Cleaning
Pistons and piston rings - Replacement
Piston pin - Check
Cam rockers - Radial check
Valve lifter - Check
Camshaft wear - Check
Camshaft bearings - Check
Valve seat sealing - Check
Valves - Check for wear
Valve clearance - Check and adjust
Valve guides - check for wear
Spring washers, caps, bowls - Check for wear
Chain tightener toothing - Check for wear
Valve springs - check length
Timing chain - Stretching measurement
Drive chain sliders - Check for wear
Fuel pump - Check
Fork - Comprehensive maintenance
Fork oil - Replacement

Shock absorber - Comprehensive maintenance
Crankshaft and connecting rod bearing clearance - Check
Chain guide slider - Check for wear
Chain guide eye - Check for wear
Chain tightener roller - Check for wear
Chain tightener slider - Check for wear

EVERY YEAR

Brake fluid - change

CAUTION

IF THE VEHICLE IS USED FOR COMPETITIONS, CARRY OUT THE 15-HOUR SERVICE AFTER EVERY RACE.

NOTE

- MAINTENANCE OPERATIONS BY THE SPECIALISED APRILIA WORKSHOP DO NOT REPLACE DAILY CHECKING BY THE RIDER!

- IF DISTORTIONS, DAMAGES OR WEAR EXCEEDING THE TOLERATED VALUES ARE FOUND, REPLACE THE INVOLVED COMPONENTS

- BEFORE CARRYING OUT ANY OPERATION, CLEAN YOUR VEHICLE CAREFULLY

- RIDING ON SANDY OR DUSTY ROADS OR UNDER EXTREME SITUATIONS MAY WEAR DOWN SOME COMPONENTS EVEN BEFORE THE SCHEDULED CHECK.

RECOMMENDED PRODUCTS TABLE SXV 450 - 550

Product	Description	Specifications
Engine oil 10W-60	Synthetic based lubricant for high performance four-stroke engines.	SAE 10W60; JASO MA, MA2; API SG
75W-90 gear box and transmission oil	Synthetic lubricant for gearboxes and transmissions.	SAE 75W-90; API GL4, GL5
Anti-freeze liquid, ready to use, colour red	Ethylene glycol-based antifreeze fluid with organic inhibition additives. 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
Lithium-based grease	Lithium-calcium soap based grease	colour - black, contains EP (Extreme Pressure) additives, excellent water-repellent properties
Fork oil 10W	Fork oil.	SAE 10W

SXV 450-550

Chap. 07
Special fittings

TABLE OF CONTENTS

THE VALUE OF SERVICE

Thanks to continuous technical updates and specific training programs on aprilia products, only **aprilia Official Network** mechanics know this vehicle fully and have the special 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, its regular maintenance and the use of **Original aprilia Spare Parts** only, are essential factors!

For information about the nearest **Official Dealer and/or Service Centre**, consult the Yellow Pages or search directly on the inset map in our Official Website:

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