



Read this manual carefully before operating this vehicle.

Baca manual ini dengan teliti sebelum mengendalikan kendaraan.

Owner's Manual

Manual Pemilik

Vanguard
250

WELCOME

Congratulations and thank you for selecting Aveta product!

This manual should be considered a permanent part of the vehicle and should remain with the vehicle when it is resold.

This publication includes the latest production information on the primary data, basic structure, and main procedures for operating, maintaining, and troubleshooting the motorcycle.

Please note that ongoing product enhancements may result in variations between the vehicle and this manual. Aveta Global Marketing Sdn Bhd reserves the right to make changes at any time without incurring any obligation.

Scan here for digital owner's manual



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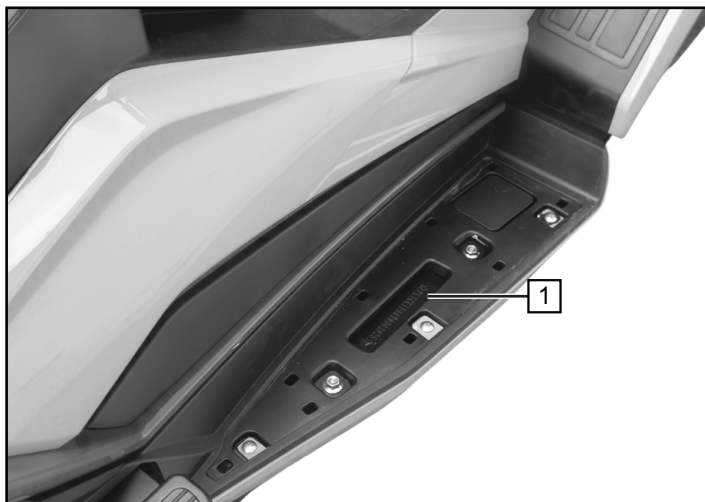
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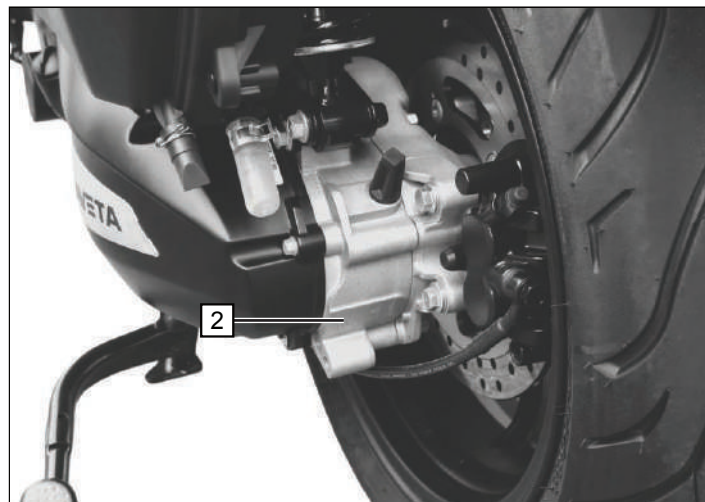
OVERVIEW AND OPERATION

Chassis number



The chassis number (also known as the VIN) is stamped directly onto the frame. It is located beneath the access cover (1) on the floorboard.

Engine number



The engine number (2) is stamped on the upper rear section of the left engine crankcase.

OVERVIEW AND OPERATION

Right-hand side view



1. Rearview Mirror
2. Brake Fluid Reservoir
3. Rear Brake Lever
4. Side Storage Compartment
5. Headlight
6. Front Turn Signal
7. Seat Cushion
8. Passenger Grab Rail
9. License Plate Light
10. Side Reflector

OVERVIEW AND OPERATION

Left-hand side view



OVERVIEW AND OPERATION

Instrument Display



1. Speedometer
2. Odometer/Trip
3. Fuel indicator
4. Date/Time
5. RPM
6. Temperature

km/h/mph

km/mile



Instrument Light

7. Left and right direction indicator
8. High beam indicator
9. EFI Indicator

↔ green



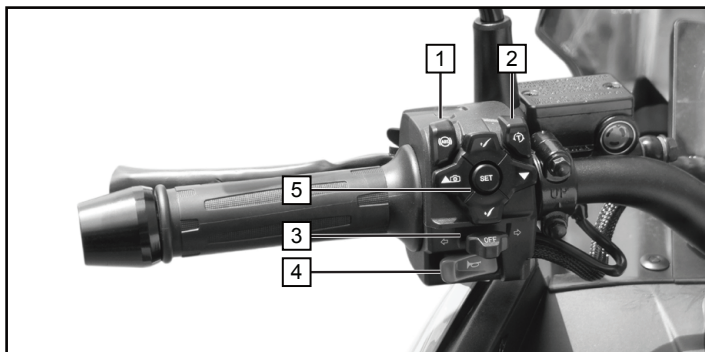
blue



orange

OVERVIEW AND OPERATION

Handlebar instrument, left



1. ABS switch

2. TCS switch

3. Turn signal switch

“↶” Left turn signal

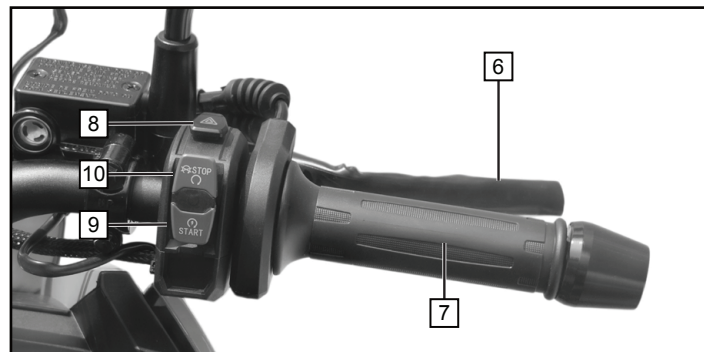
“↷” Right turn signal

4. Horn button

5. 'SET' toggle button

- Toggle upward to move up in setting screen
- Toggle downward to move down in setting screen
- Press 'SET' button for select.

Handlebar instrument, right



6. Brake lever

7. Throttle grip

8. Emergency warning switch

- **To turn on :** Press the button directly to activate the hazard warning light function.
- **To turn off :** Press the button again to return to the normal turn signal mode.

9. Electric start button

Press the brake lever and the electric start button to start the engine.

10. Engine off switch



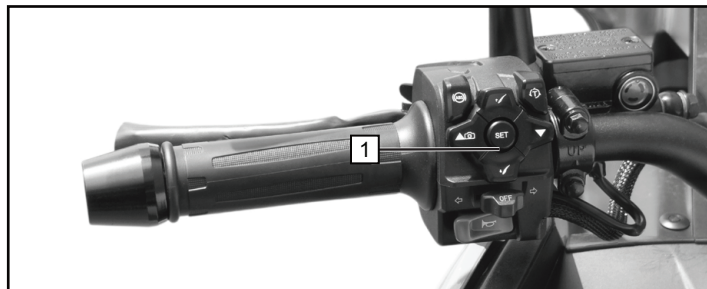
“” The entire vehicle circuit is disconnected.



“” Complete closure of the vehicle circuit.

OVERVIEW AND OPERATION

Screen navigation settings



There is "SET" buttons (1) on the left handle switch to adjust the settings of the instrument.

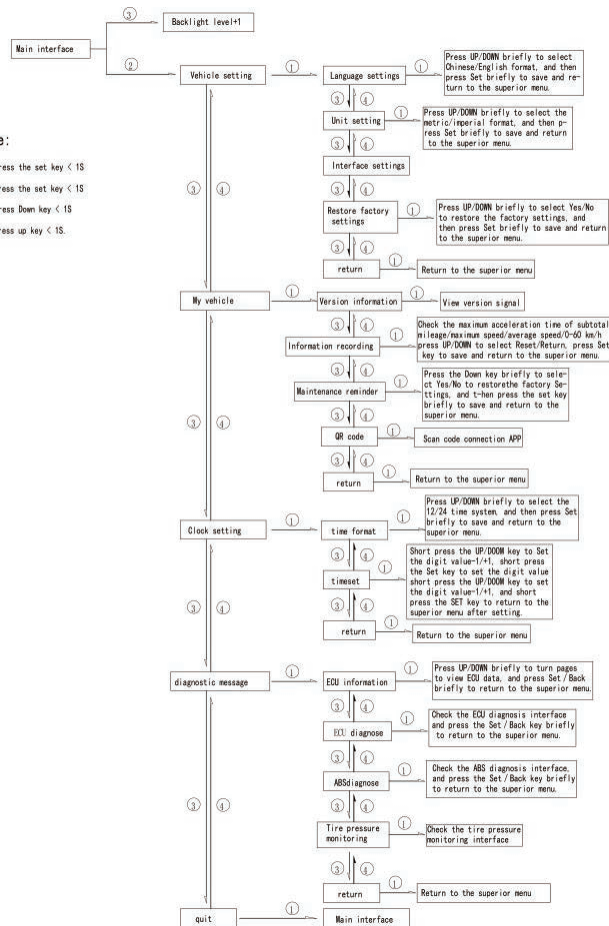


NOTE

The interface will return to the main interface automatically if no operation was performed for 30 seconds.

Notes:

- ① Press the set key < 1S
- ② Press the set key < 1S
- ③ Press Down key < 1S
- ④ Press up key < 1S.



OVERVIEW AND OPERATION

Ignition and fork-column lock



WARNING

While riding, do not switch the ignition off "⚡" !

NOTE

Key

The scooter comes with two ignition keys. Keep the spare key in a safe place.

Key positions

NOTE

Activate the parking light only for a limited period, considering the battery's charge level.

The key can be removed in positions "off" and "lock"

Emergency mechanical lock



1. The entire circuit is disconnected, and the engine cannot be started.



2. The entire circuit is closed, and the engine can be started.

SEAT 3. Open the seat cushion.

Open the seat

"SEAT" The seat can be opened.

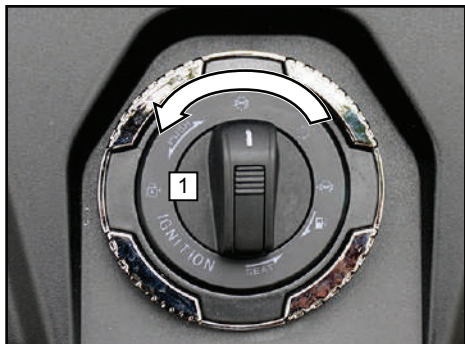
Head lock position



" " Indicates the position of the steering handle lock. Insert the key and turn it to the left to lock the steering handle.

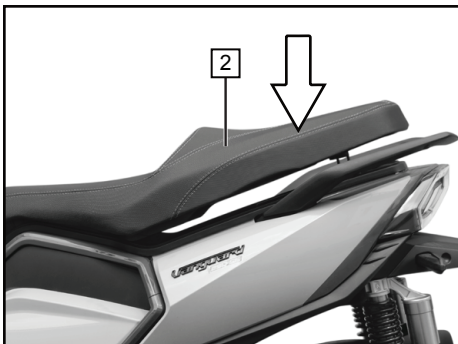
OVERVIEW AND OPERATION

Underseat storage



NOTE

- Do not store valuables in the underseat storage box.
- Ensure the seat is completely locked after pressing it down.
- Remove valuables before washing to prevent them from getting wet.
- Do not place heat-sensitive objects in the underseat storage box due to engine heat and high temperatures.



Unlock the seat

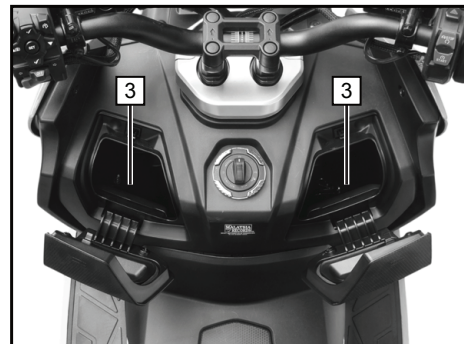
- Press the ignition button(1), and rotate to the left to open the seat.

Lock the seat

- Press down the seat (2) until the lock is engaged.
- Pull out the ignition key.

Maximum load capacity: 10 kg

Side compartments



The side compartment (3) is equipped with a press buckle that allows the box cover to open when pressed. Press the cover again to securely close the compartment.

Use the side compartment (3) only for small baggage items.

CAUTION

Maximum load capacity: 1.5 kg
Do not transport bulky loads.

Electronic windshield operation instructions



Pre-Operation Check

- Ensure the ignition switch is in the "ON" position.
- Check for any obstacles around the windshield to prevent jamming or damage during operation.

Raising the Windshield

- Locate the windshield control switch (marked with an upward arrow) on the handlebar.
- Press and hold the switch to smoothly raise the windshield to your desired height.
- Release the switch to stop the windshield at its current position.



TIPS

Adjust the windshield height based on your riding speed and personal height to effectively deflect airflow.

Lowering the Windshield

- Press and hold the windshield control switch (marked with a downward arrow).
- The windshield will lower towards its lowest position.
- Release the switch to stop the windshield at any desired height.

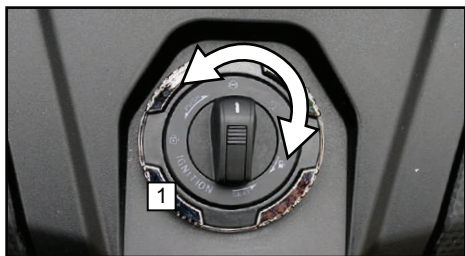


TIPS

For low-speed riding or when parked, lower the windshield to its minimum height for an unobstructed view.

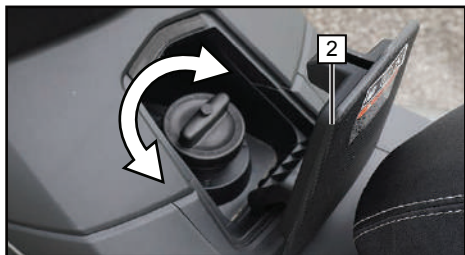
OVERVIEW AND OPERATION

Fuel tank cap



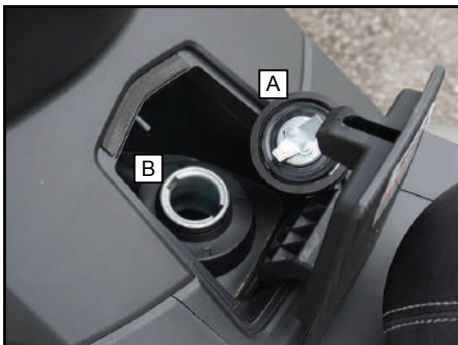
Unlock

- Press the ignition button (1), rotate to the right to open the fuel tank flap(2)
- Turn the cap clockwise to open the tank.



Lock

- Align A to B, press the tank cap and turn it clockwised.
- Close the fuel tank flap(2).



NOTE

The tank cap is located at the front of the seat.

WARNING

Fuel is highly flammable and explosive. Turn off the engine before refueling. No smoking, open flames, or lit cigarettes near the tank.

Fuel expands in heat. Do not fill to the brim or refuel with the engine running.

Refueling

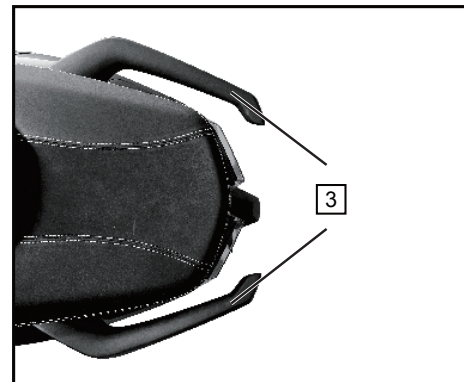
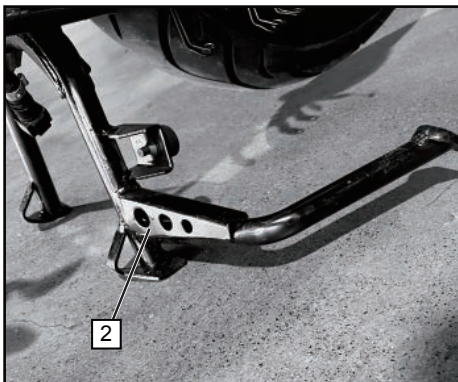
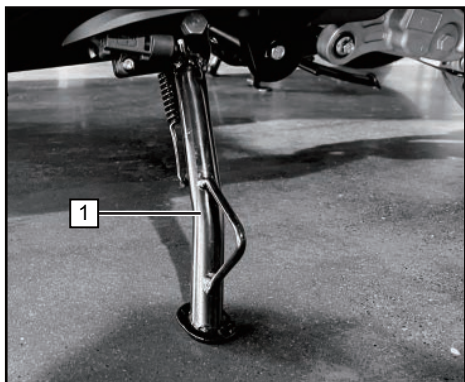


NOTE

- When fuel indicator (1) flashes, reserve fuel (~1 L) is in use. Refuel promptly.
- Avoid running the fuel tank until it is completely empty.
- The "⛽" tank symbol is a refuel reminder.
- Use premium lead-free fuel (min. 95 octane) only.

OVERVIEW AND OPERATION

Side and center stand



WARNING

Always ensure the side stand is resting on firm, level ground. On sloping roads, park the scooter facing uphill for maximum stability.

The side stand must be fully retracted before riding to prevent accidents!

NOTE

The scooter is equipped with a side stand safety switch. If the side stand is deployed, the engine will automatically shut off and cannot be started.

Parking on the Side Stand

- Switch off the engine.
- Hold the left handlebar grip with your left hand.
- Hold the pillion grab handle (3) with your right hand.
- Use your foot to push the side stand (1) fully forward until it stops.

Parking on the Center Stand

- Switch off the engine.
- Hold the left handlebar grip with your left hand.
- Hold the pillion grab handle (3) with your right hand.
- Use your foot to press the center stand (2) down until both of its feet rest evenly on the ground.
- Place your full body weight onto the center stand foot lever.
- Simultaneously lift upward and pull the scooter rearward onto the center stand.

Checklist

Perform a safety check using the checklist before each ride.

- Take the safety check seriously. Complete any necessary maintenance before riding, or consult a specialized dealer for assistance.
- This ensures that your motorcycle complies with traffic regulations.
- A technically sound motorcycle is essential for the safety of both you and other road users.

Before starting your ride, check the following:

- Steering (smooth and free play)
- Engine oil quantity
- Fuel quantity
- Front brake
- Rear brake
- Tyres (profile and pressure) brake
- Telescopic fork
- Load / lights
- Total weight
- Lights
- Brake fluid (lever)
- Brake (operation)

In case of problems or difficulties, contact a dealer, who will do everything possible to assist you.



Do not touch the ignition system while the engine is running or the ignition is on.



The exhaust system becomes extremely hot. Whether riding, idling, or parking, ensure that no flammable materials (e.g: hay, leaves, grass, coverings, or luggage) come into contact with it.

SAFETY CHECKS

Accessories installation



WARNING

For your safety, always use original accessories or products approved by Aveta.

We cannot guarantee the safety or compatibility of third-party products when used with your scooter.

Even official approvals for third-party products do not always provide complete assurance, as testing may not cover all scenarios.



NOTE

Aveta-approved accessories, products, and expert advice are available from all specialized dealers.

Correct loading

- Ensure the left-right weight distribution is balanced.
- Check that all fastenings are secure and tightened properly.
- Avoid transporting bulky loads.
- Do not cover or obstruct the lights.



WARNING

Ensure the total allowable weight is not exceeded.

Check the tire pressure

Check the lights



WARNING

Before every ride, check that all lighting components are functioning properly.

- Make sure the headlamps and lenses are clean.

Safe riding



CAUTION

Riding safety is largely also determined by the manner of riding.

Therefore :

- Put on a tested/ approved safety helmet and correct close the buckle.
- Wear suitable protective clothes.
- Rest your feet on the footrests.
- Do not ride if your riding ability has been compromised.

Your reactions can be adversely affected not only by alcohol, but also by drugs and medicines.

- Strictly observe all traffic regulations
- Always adapt your riding speed to the traffic and road conditions.

On smooth, slippery roads take into account that your riding stability and braking power are limited by the grip of the tyres on the road top.

Ride economically and be aware of the environment

Fuel consumption, environmental pollution, and wear on the engine, brakes, and tires depend on various factors.

Your personal riding style plays a significant role in determining fuel efficiency, exhaust gas emissions, and noise levels.

Allow the engine to warm up while riding, as idling takes longer to reach operating temperature. During the warm-up phase, engine wear and pollutant emissions are significantly higher. Therefore, it's best to start riding immediately after start-up.

Avoid rapid acceleration

Open the throttle only as much as necessary to reduce fuel consumption, pollution, and wear on the engine and components.

Avoid using excessive revs. Shift up gears as soon as possible, and only shift down when absolutely necessary.

Ride as evenly as possible and look ahead

Sudden acceleration and hard braking result in higher fuel consumption and increased emissions.

Aim to maintain a steady speed and anticipate road conditions to reduce unnecessary stops and starts.

Turn off the engine when stopped in traffic

Riding conditions have a significant impact on fuel consumption. Unfavorable conditions include:

- High traffic density, especially in cities with frequent stops at traffic lights.
- Frequent short rides with repeated engine starts and warm-ups.
- Riding at low speeds in a column of motorcycles, which requires higher engine revs.

Plan your rides to avoid heavy traffic whenever possible.

Fuel consumption can also be impacted by factors beyond your control, such as poor road conditions, hilly terrain, and cold weather.

To improve fuel efficiency and reduce environmental impact, follow these recommendations:

- Regular maintenance ensures fuel-efficient operation, low emissions, and long-lasting performance.
- Professional servicing guarantees optimal performance, economical fuel consumption, and reduced environmental pollution.
- Low tire pressure increases rolling resistance, which leads to higher fuel consumption, faster tire wear, and reduced stability.
- Keeping track of fuel usage can help identify potential inefficiencies.
- Proper engine lubrication reduces wear, maintains efficiency, and ensures longer engine life.

Running-in period

Running-in instructions for engine and transmission.



CAUTION

Excessive revs during the running-in period increase engine wear. Any engine faults that occur during this time must be reported to a specialized dealer immediately.



NOTE

During the running-in period, ride at frequently changing load and RPM ranges. Opt for winding or slightly hilly routes to vary the engine's workload. Avoid consistently low RPMs or using full throttle under heavy load conditions.

During the first 500 km:

Do not exceed 1/2 throttle.

Up to 1000 km:

Do not exceed 3/4 throttle.



CAUTION

The first inspection must be performed immediately after completing the first 1000 km.

Avoid delays by scheduling an appointment with a specialized dealer in advance.

Running-in new tyres



CAUTION

New tires have a smooth surface and must be carefully "broken in" to achieve full grip.

Roughen the tire surface by riding at varying lean angles during this process.

Running-in new brake linings



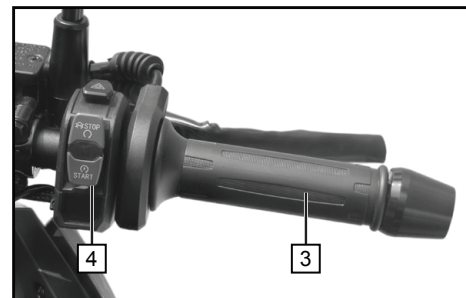
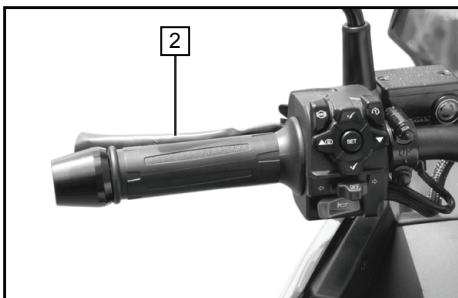
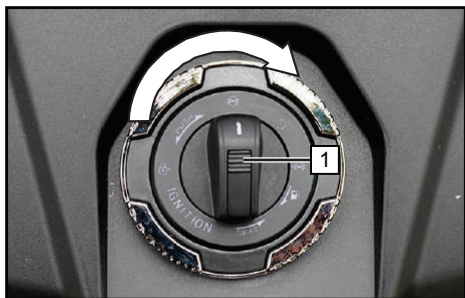
WARNING

New brake linings require a running-in period and will not provide full braking efficiency until after 500 km.

During this time, braking performance may be slightly reduced. Compensate by applying increased pressure on the brake lever.

Avoid unnecessary hard braking during the running-in period.

Starting with the electric starter



WARNING

Place the scooter on the center stand before starting. Squeeze the rear brake lever to prevent the scooter from moving.

Avoid high engine RPM while the vehicle is stationary, as this will engage the clutch and could cause the scooter to lurch forward.

NOTE

The scooter is equipped with a side stand safety switch. If the side stand is deployed down, the engine cannot be started.

Before starting

- Place the scooter on the center stand.
- Turn the ignition switch (1) to the "ON" position.
- Keep the throttle (3) completely closed. Squeeze the rear brake lever (2)
- Operate the start button (4).
- If the engine fails to start after 3 to 5 seconds, open the throttle (3) slightly (1/8 to 1/4 turn) and try again.
- Push the scooter forward off the center stand.
- Mount the scooter.
- Release the brake to begin riding.

CAUTION

If the engine does not start immediately, release the start button, wait a few seconds, and try again. To preserve battery life, only press the start button for short intervals. Never hold the start button for more than 10 seconds continuously.

WARNING

Never run the engine in an enclosed space. Exhaust gases are highly toxic and can be fatal.

Braking

Wet brakes

Washing the scooter or riding through water or rain can delay the braking effect due to wet or (in winter) ice-covered brake discs and linings.



WARNING

Carefully apply the brakes several times at low speeds until they are completely dry.

Salted Roads

When riding on salted roads without braking for an extended period, a salt film can form, which may delay the full braking effect.



WARNING

Apply the brakes carefully to clear any salt deposited on the brake discs.



WARNING

The brake discs and pads must remain completely free of oil and grease!

If the scooter is stored or not used for a while, a rust film may form on the brake discs. A light rust film can make the brakes overly sensitive, while a thick rust film can cause the brakes to lock up entirely.

When taking the scooter out after a long lay-up period, carefully apply the brakes several times at low speeds until they function normally.



NOTE

It is highly recommended to practice emergency braking techniques. However, please do so in a safe, controlled environment where you will not pose a risk to yourself or others (e.g., an empty parking lot).

Dirty brakes

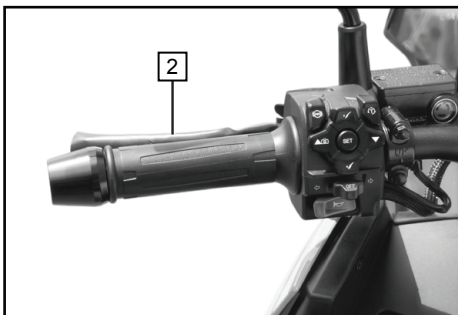
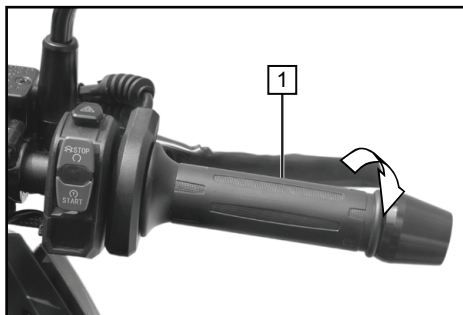
When riding on dirty or muddy roads, the braking effect can be delayed due to debris on the brake discs and pads.



WARNING

Carefully operate the brakes until the discs and pads are clean. Be aware that riding with dirty brakes will significantly increase brake pad wear!

Braking



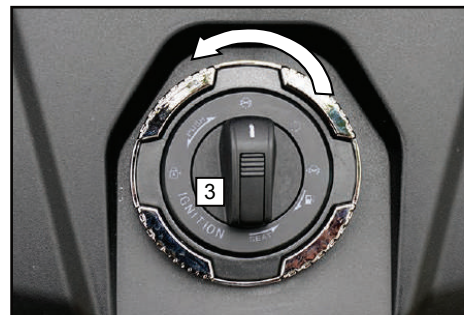
Brake Operation

- The front and rear brakes operate independently of each other. The front brake is controlled by the right-hand brake lever (1), and the rear brake is controlled by the left-hand brake lever (2).
- When slowing down or stopping, completely release the throttle and apply both brakes simultaneously for optimal stopping power.

Safe Braking Practices

- On tight curves, sandy or dirty streets, wet asphalt, and icy roads, use the front brake with extreme caution. If the front wheel locks up, the scooter will slide sideways.
- Always brake smoothly and with care. Locked wheels provide significantly less braking force and can lead to skidding or crashing.
- As a general rule, apply the brakes before entering a curve, not while you are in it. Braking while leaning into a curve significantly increases the risk of the tires losing traction and sliding.

Stopping the engine



- Turn the ignition switch (3) to the "OFF" position "X".

VIDEO RECORDER INSTRUCTIONS

General precautions

- This product requires a 12V power supply with a negative ground.
- Always turn off the motorcycle's ignition before installing the device. Only turn the power back on once installation is complete.

WARNING

Never use a high-pressure water washer directly on the main recorder unit or the camera lenses, as this forces water into the housing and will cause damage.

- Do not use alcohol, stain removers, detergents, or other corrosive solvents to clean the recorder unit or lenses. These chemicals will damage the finish and severely compromise the device's waterproofing.
- Avoid sharply bending, kinking, or pinching the power cords and camera cables during installation.
- This device supports MicroSD memory cards up to 128GB. For optimal recording performance, please use a Class 10 high-speed card. The memory card must be formatted within the recorder before its first use.
- Over time, memory cards accumulate fragmented files. To ensure reliable continuous recording, please format the memory card regularly.

NOTE

After inserting the memory card, securely press the rubber cover flat into place to maintain the recorder's waterproof seal!

WARNING

This dashcam is intended solely as a video recording tool. Never watch the recorder's screen while riding. Relying on the display screen to monitor traffic conditions in front of or behind you is extremely dangerous and strictly prohibited!

Product Description

1. Status Indicator / Reset Button
2. Front Camera Connector
3. Power Cord Connector
4. MicroSD Card Slot

Operation and APP Instructions

1. **Powering On/Off** : The video recorder will automatically turn on and begin recording when the motorcycle's ignition is turned to the "ON" position. It will automatically stop recording and shut down when the ignition is turned "OFF".
2. **Inserting the Memory Card** : Push the MicroSD card straight into the card slot until you hear it "click" into place.
3. **Removing the Memory Card** : Gently press the MicroSD card inward. The card will pop out slightly for easy removal.



NOTE

Removing the memory card while the device is recording may corrupt or damage your video files. Always shut down the device (turn off the motorcycle's ignition) before removing the memory card.

VIDEO RECORDER INSTRUCTIONS

Video recorder instructions

Wi-Fi Function & App Download

To use the Wi-Fi features, download the "Road Cam" app. You can search for "Road Cam" in the Google Play Store (Android) or the Apple App Store (iOS), or simply scan the QR code below to download it directly.



NOTE

The camera system operates independently of the motorcycle's digital display. Video playback and live viewing are accessed exclusively through the mobile app.

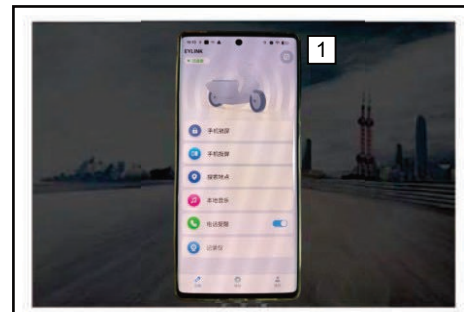
Connecting to the App (Using "Road Cam" as an example)

1. Open your smartphone's Wi-Fi settings.
2. Search for and connect to the recorder's Wi-Fi network (the network name will start with "mt022_").
3. Enter the default password: 12345678.
4. Once connected, return to your home screen and open the "Road Cam" app.
5. Tap the central camera icon in the app to enter the main interface.

NOTE

If your smartphone displays a prompt stating that the current Wi-Fi network has no internet access and asks if you want to switch networks, select Cancel (or "Keep Connection").

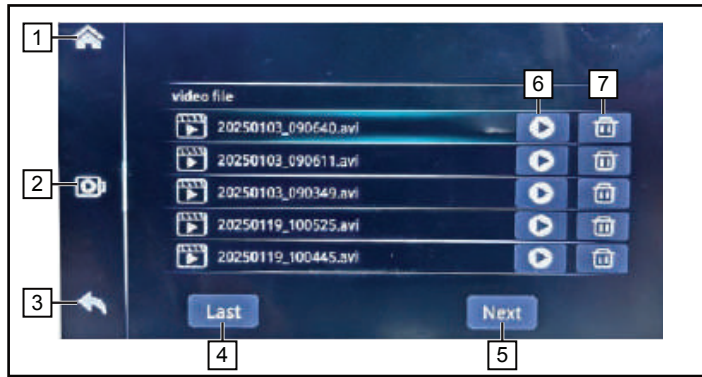
Click the icon to enter the main interface of the application.



1. Main App Interface
2. Connected Recorder Interface
3. Locally Downloaded Videos

VIDEO RECORDER INSTRUCTIONS (SE VERSION ONLY)

Video recorder instructions



1. Home
2. Camera Mode (Return to Live View)
3. Back
4. Previous Page
5. Next Page
6. Play Video
7. Delete



8. Start / Stop Recording
9. Video Gallery (View Recorded Files)

SERVICE INSTRUCTIONS

Servicing the scooter / cleaning agent



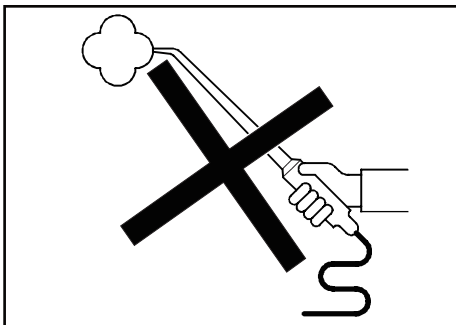
NOTE

Regular, expert service will help maintain the value of your scooter and is a condition for guarantee claims for corrosion and other such damage.



CAUTION

Rubber and plastic parts will be damaged by caustic or penetrating cleaning agents or solvents.



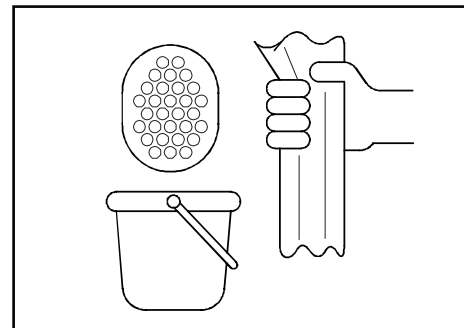
WARNING

Always carry out a brake test after cleaning and before starting a ride!



CAUTION

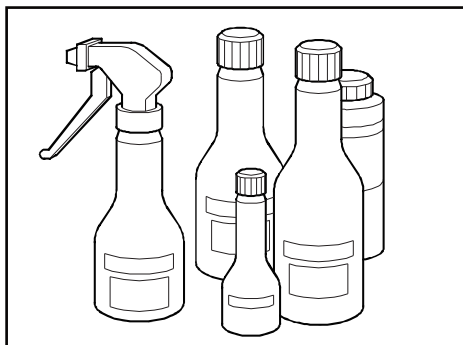
Do not use steam or high-pressure jet devices!
Such devices can damage seals, the hydraulic braking system and the electrical system.



Cleaning

- To wash the motorcycle, use a soft sponge and clean water.
- Afterwards, dry off with a polishing cloth or chamois.
- Do not wipe off dust or dirt with a dry cloth, to avoid scratching the paint or covering.

Servicing the scooter / cleaning agent



Preservation Agents

When necessary, the scooter must be preserved with commercially available preserving and cleaning agents.

- By way of precaution (especially in winter), regularly treat parts liable to corrosion with preservation agents.



CAUTION

Never use paint-polishing agents on plastic parts.

- After a longish ride, thoroughly clean the chassis and the aluminium parts and preserve them with a commercially available anti-corrosion agent.

Operation in winter and anti-corrosion protection



NOTE

Protect the environment by using only environmentally friendly preservation agents, and use them frugally.

Use of the motorcycle in the winter can cause considerable damage due to the presence of salt on the roads.



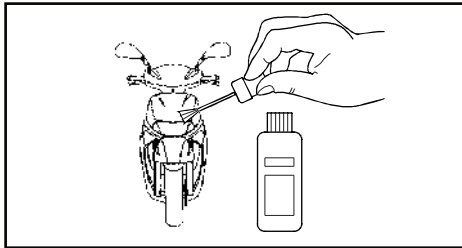
CAUTION

Do not use hot water, which would increase the effect of the salt.

- At the end of each ride, wash the motorcycle with cold water.
- Thoroughly dry the motorcycle.
- Treat parts liable to corrosion with waxborne anti-corrosion agents.

SERVICE INSTRUCTIONS

Repairing paint damage



Minor paint damage should be immediately repaired.

Repairing paint damage

If the scooter is not used for a longer period, it is recommended to support the scooter so that its weight is not on the tyres.

You can prevent the tyres from becoming dry and brittle by spraying them with a silicone-rubber treatment. First thoroughly clean the tyres.

Do not store the scooter or the tyres in hot spaces (such as a boiler room) for longer periods.



WARNING

A minimum tyre-profile depth of 2.0mm must be maintained at all times.

Lay-up / Commission

Lay-up

- Clean the scooter.
- Remove the battery.
Observe the maintenance instructions.
Spray suitable lubricants on to the brake lever and the side standard and packing stand and bearings.
- Rub bright chromium-plated parts with acid-free grease(vaseline).
- Store the scooter in a dry room and jack it up so that its weight is not on the wheels.



NOTE

Combine lay-up / commission activities with an inspection by a dealer.

Commission

- Remove the preservation agents from the outside.
- Clean the motorcycle.
- Install the charged battery.
- Preserve the battery terminals with terminal grease.
- Check adjust the tyre pressure.
- Check the brakes.
- Carry out activities according to the inspection plan.
- Carry out the safety checks.

Technical changes, accessories and spare parts

WARNING

Technical changes to the scooter can lead to cancellation of the EC operating license.

Should you want to make technical changes, observe our guidelines. This will serve to prevent the scooter from being damaged and the traffic and operational safety being retained. A specialised dealer can carry out these activities with meticulous care.

Always consult a dealer before buying accessories or making any technical changes.

CAUTION

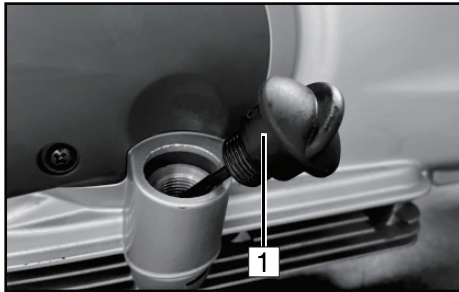
We recommend using only approved accessories and original spare parts for our scooter.

This is in your own interests: the safety, suitability and reliability of these accessories and parts will have been tested specifically for the scooter.

Although we keep track of the market, we cannot evaluate nor be held liable for the quality of non-approved accessories and parts, even if they have a certificate of acceptance from an officially recognised technical testing / supervision agency, or a license issued by the authorities.

For approved accessories and original spare parts, see AVETA specialised dealer. Aveta authorised dealer will also ensure that all accessories and spare parts are professionally installed.

Engine oil



Checking the oil level

CAUTION

Checking the oil while the engine is cold will lead to a wrong measurement and therefore the wrong oil quantity. In order to avoid engine damage, never exceed the maximum oil level nor let it drop below the minimum level.

NOTE

Make sure that the scooter during oil-level checks stands level in all respects. Even the slightest inclination towards the side will produce measurement errors.

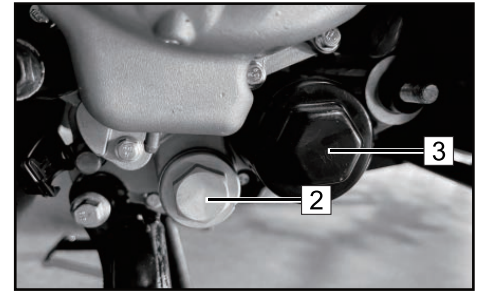


- Stop the warmed-up engine, wait for approx. 5 minutes and hold the scooter upright.
- Propping up the scooter on the parking stand.
- Stop the engine and remove the oil filler cap(1) on the lower right of the crank-case.
- Clean the oil filler cap at the MIN-MAX area with a clean rag.

CAUTION

For checking the oil level only insert the oil filler cap and don't screw in!

Otherwise there will be a wrong measurement in order to avoid engine damage.



- The oil level must be between the minimum and maximum marks.
- Tighten the oil filler cap by hand.

If required, replenish the engine oil SAE 10W/40 via the oil level up to the MAX level mark.

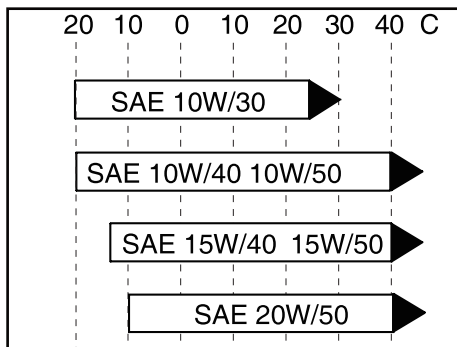
- When changing new engine oil, remove the oil hole screw(2) and oil filter(3), till all engine oil is flow out, then tighten the screw(2) and install a new oil filter, add new oil till the level up to the MAX mark.

Engine oil

CAUTION

Do not use additives. Since the oil also serves to lubricate the clutch, do not use car engine oils supplemented with friction modifiers (such energy-conserving oils can lead to the clutch slipping).

- If required, replenish the engine oil (for classification and viscosity, see the table) via the oil-filler opening up to the maximum level marking.



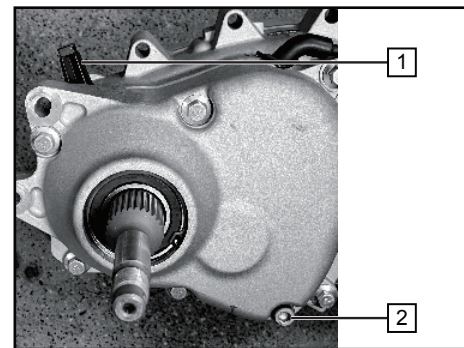
Recommended grade:

Per API:SG or higher or also with additional release status: ACEA A3/96 (CCMC G5)

Recommended viscosity:

Viscosity depends on the outside temperature. For short while, the temperature may exceed or fall short of the limits of the SAE grades.

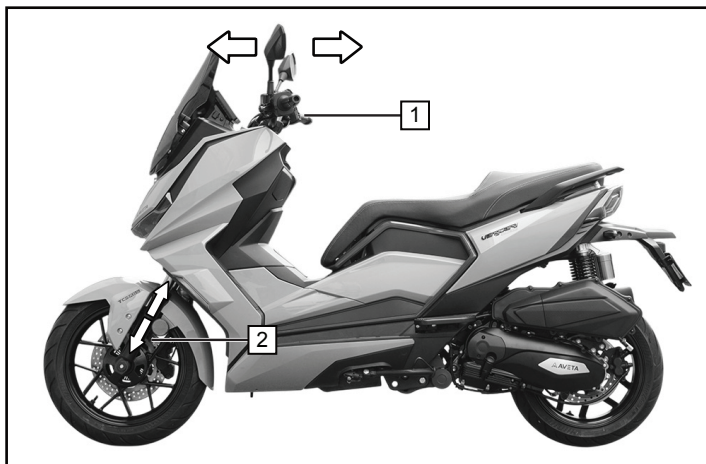
The recommended viscosity grade SAE 10W/40 covers the ambient temperature range -15°C to +40°C and therefore represents the optimum for our latitudes.



Checking the transmission oil level

- Stop the warmed-up engine, wait for approximately 5 minutes.
- Remove the oil filler screw(1) and check if the oil level is below the oil-filler opening.
- If required, replenish transmission oil Hypoid SAE 85W-90 via the oil-filler opening.
- When change new transmission oil, open the oil hole screw(2), till all transmission oil is flow out, then tighten the screw(2) and add new oil via the oil-filler opening.
- Tighten the oil filler screw(1).

Checking the steering bearings



NOTE

The telescopic fork should not jam up when turned and it should swing back lightly to both end positions.

- Pull the hand brake to block the front wheel brake.
- Hold the handlebar with both hands and try to move the handle bar(1) back and front.

If the fork column bearing shows noticeable play, it must be adjusted by a specialised dealer.

Checking the telescopic fork

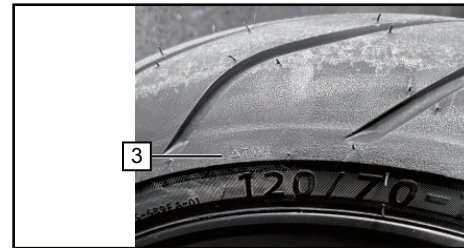
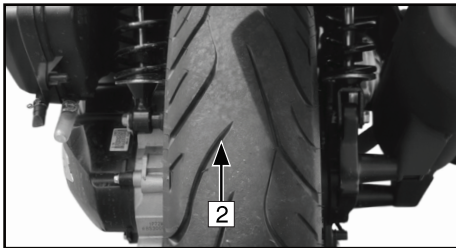
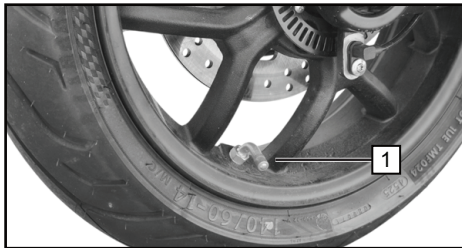
- Pull the hand brake to block the front wheel brake.
- Now pump the fork girders(2) several times up and down using the handlebar.
- The suspension should respond perfectly.
- Check the fork girders for oil leaks.



NOTE

If damage to the telescopic fork or the spring strut is found have the motorbike examined by a professional dealer.

Tire information



Checking the Tread Depth

- Measure the tread depth at the center (2) of the tire's tread.
- Recommended minimum tread depth: 2.0 mm
- Pay attention to the tread wear indicators (3).

WARNING

Always observe the minimum tread depth prescribed by local law. Never ride without valve caps (1). Firmly tightened valve caps help prevent sudden tire pressure loss.

Checking the tire pressure

Check and adjust pressure only when the tires are cold:

- Remove the valve caps.
- Check and adjust the tire pressure.
- Reinstall the valve caps firmly.

Tire Pressure Values

- **Single Rider:** Front: 220 kPa / Rear: 220 kPa
- **Two Riders (with pillion):** Front: 250 kPa / Rear: 270 kPa

WARNING

Adjust the tire pressure according to the total load weight. Never exceed the maximum weight capacity of the scooter or the load rating of the tires.

Tire size and type

This scooter is equipped with the following tire sizes:

Front: 120/70-15

Rear: 140/60-14

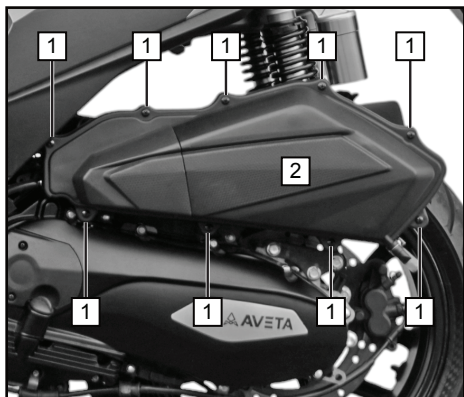
All tires are tubeless.

WARNING

Use only tires approved by the manufacturer. Using non-approved tire brands, types, or sizes can void the vehicle's warranty and operating permit.

Always use a matching pair of tires (front and rear) produced by the same manufacturer.

Replacing the air filter

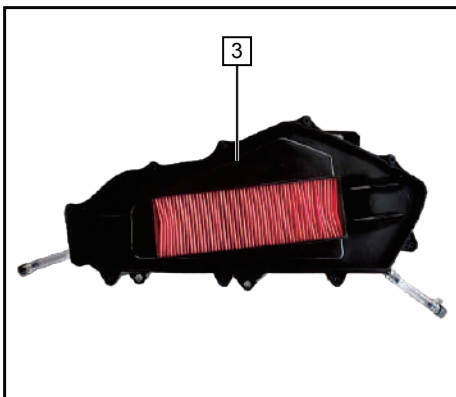


NOTE

The scooter is equipped with a paper air filter. If it is heavily soiled, the paper filter element (3) must be replaced.

Removal and Cleaning:

- Remove the Phillips-head screws (1) and take off the air filter cover (2).
- Remove the paper filter element (3).
- Gently tap out the dust from the paper filter and clean it using compressed air. Replace the filter entirely if it is excessively dirty or damaged.



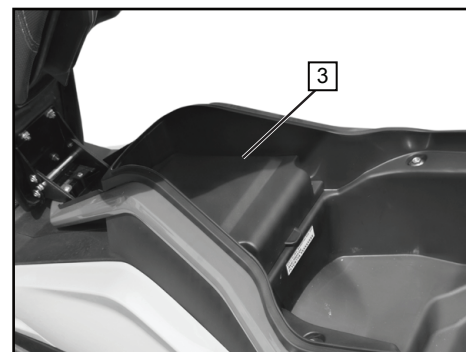
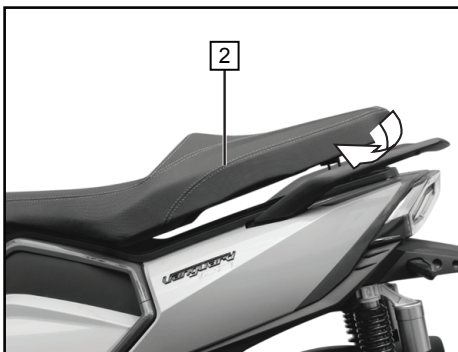
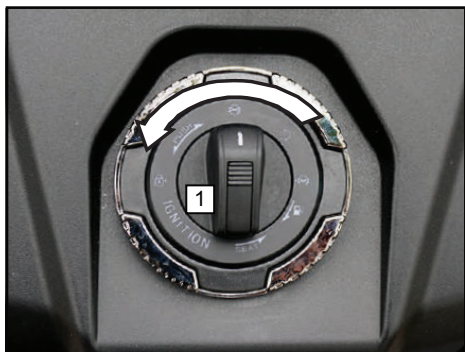
NOTE

Installation is performed in the reverse order of removal.

CAUTION

- Never run the engine without the air filter installed.
- Dust accumulation restricts airflow and is a major cause of reduced horsepower and increased fuel consumption.
- If the scooter is frequently ridden on dusty roads, replace the air filter element more often to prolong the engine's service life.
- Ensure the air filter is seated properly within the filter case. An improperly installed filter allows unfiltered air to enter, which will cause poor performance and lead to serious engine damage.
- Be careful not to get the air filter wet when washing the scooter. A waterlogged air filter will make the engine very difficult to start.

Checking the fuse



CAUTION

Never install a fuse with a larger amperage rating than specified. Doing so could destroy the entire electrical system or cause a fire.

The fuse box is located behind the inspection cover inside the under-seat storage compartment.

Checking and Replacing the Fuse

- Turn the ignition switch (1) counterclockwise to unlock and open the seat (2).
- Remove the inspection cover (3) located inside the under-seat storage compartment.
- Open the fuse box (4) and remove the fuse to inspect it.
- A faulty or blown fuse must be replaced with a new 20A fuse.
- Ensure the new fuse is seated securely. A loose connection can cause the fuse to blow.
- Installation is performed in the reverse order of removal.

Battery

WARNING

Always wear safety glasses when handling batteries. Keep children away from batteries and battery acid.

EXPLOSION DANGER

Batteries produce highly explosive gases while being charged. Keep sparks, open flames, and smoking materials away from the battery at all times.

FIRE HAZARD

Avoid short circuits. Prevent sparks and electrostatic discharge when handling cables and electrical devices.

CORROSIVE DANGER

Battery acid is highly corrosive and can cause severe chemical burns. Avoid contact with skin, eyes, or clothing.

FIRST AID

Eye Contact: If acid comes into contact with the eyes, immediately flush them with fresh water for several minutes and seek medical attention immediately.

Skin or Clothing Contact: Immediately wash the affected area with soapy water to neutralize the acid, then flush thoroughly with plenty of water.

Ingestion: If acid is swallowed, seek medical attention immediately.

CAUTION

- **Do not expose batteries to direct sunlight.**
- **Discharged batteries are susceptible to freezing. Store batteries in a location where the temperature remains between 5°C and 15°C.**
- **Proper maintenance, charging, and storage will significantly increase the battery's lifespan and are required conditions for honoring warranty claims.**

WARNING

Never dispose of a dead battery in standard household waste. Always take old batteries to an authorized recycling facility or collection point.

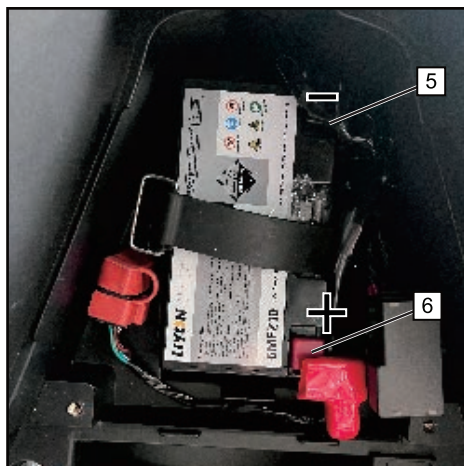
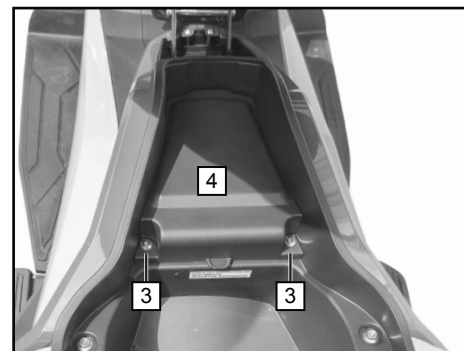
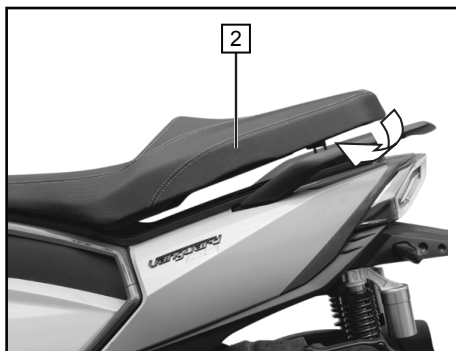
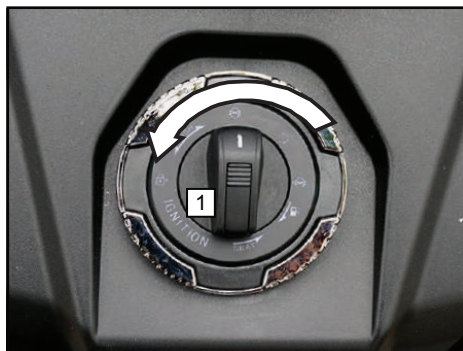
Charging the battery

- If the scooter is stored for a long period (3 to 4 months), the battery must be recharged.
- The charging current (in Amperes) must not exceed 1/10th of the battery's total capacity (Ah).
- Do not use a fast charger. The battery may only be charged using a charger specifically approved for Maintenance-Free (MF) batteries.

Maintenance

- Although the battery is a "maintenance-free" type, it still requires basic care.
- Never leave the battery in a fully discharged state.
- Keep the battery casing clean and dry, and ensure the terminal connections are firmly tightened.

Removing and installing the battery



CAUTION

The battery must only be connected or disconnected when the ignition is turned off.

- Turn off the ignition.
- Turn the ignition key to the left and open the seat cushion(2).
- Remove the two screw(3) and open the battery cover(4).

First disconnect the minus terminal (5, black cable).

Then disconnect the plus terminal (6, red cable).

- Disconnect the battery.
- Remove the battery.

Installation takes place in reverse order to disassembly.

When installing the battery, first connect the plus terminal (6, red cable).

The battery is maintenance-free. Do not try to open it.

TECHNICAL DATA

Vanguard 250 Main Technical Parameters

Engine Type	
Construction	Single-cylinder, liquid-cooled, four-stroke, four-valve
Piston displacement	244 cc
Bore	Φ72 mm
Stroke	60 mm
Compression ratio	11:1
Cooling	Liquid cooling
Maximum net power output	18.9 kW (8500 rpm)
Maximum net torque	22.5 Nm (6500 rpm)
Ignition system	Transistorized ignition system with electronic ignition control (ECU)
Spark plug	NGK CR8EB
Electrode gap	0.7 - 0.8 mm
Fuel supply	EFI
Idle speed	1700 ± 100 rpm
Air filter	Element-type air cleaner
Type of starter	Electric Starter

Power Transmission	
Clutch	Centrifugal type
Transmission	CVT

TECHNICAL DATA

Vanguard 250 Main Technical Parameters

Chassis	
Front suspension	Telescopic fork
Rear suspension	Unit swing, Dual gas-charged shock absorber
Wheels front	Light metal (Aluminium) : MT3.00x15
Wheels rear	Light metal (Aluminium) : MT4.00x14
Front tire	120/70-15
Rear tire	140/60-14
Tire pressure	One rider: Front: 220 kPa / Rear: 250kPa Two riders: Front: 250 kPa / Rear: 270 kPa
Front Brake	Disc, ABS
Rear Brake	Disc, ABS

TECHNICAL DATA

Vanguard 250 Main Technical Parameters

Lubricants and Operating Fluids	
Fuel tank capacity	13 liters
Fuel	Unleaded fuel, minimum 92 octane
Engine oil	SAE SJ 10W/40 (GB 11121)
Filling quantity	1.3 liters
Transmission oil	GL-5 80W/90 (GB 11121)
Filling quantity	0.25 liters

Electrical Equipment	
Generator	12V 200W
Battery	12V 9Ah MF
Fuse	20A
Headlight	Low beam / High beam
Position light	LED 12V 2.6W
Instrument light	LED 12V 0.1W
Control lights / High beam	LED 12V 0.8W
Brake / Rear light	LED 12V 2 W/ 0.5W
Front / Rear turn signals	LED Front: 2 x 12V1.5W Rear:2 x 12V2.2W

TECHNICAL DATA

Vanguard 250 Main Technical Parameters

Dimensions and weights	
Overall length	2120 mm
Width across handlebars	790 mm (without rearview mirrors)
Maximum height	1345 mm (without rearview mirrors)
Wheelbase	1535 mm
Seat height	780 mm
Curb weight	177 kg
Top speed	125 km/h
Ground Clearance	160 mm

INSPECTION PLAN

List of trouble codes

Component/ System	Fault code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	MIL activation	Demonstration Test
Fuel injector	P0262	Circuit check	short to battery plus			5 seconds after Fault	idle
	P0261		short to ground				idle
	P0201		open circuit				idle
Fuel pump	P0629	Circuit check	short to battery plus			5 seconds after Fault	idle
	P0628		short to ground				idle
	P0627		open circuit				idle
Idle air control system	P0509	Circuit check	short to battery plus			5 seconds after Fault	idle
	P0508		short to ground				
	P0511		open circuit				
	P0511		Over current				
Ignition Coil	P2300	Circuit check	short to ground			5 seconds after Fault	idle

INSPECTION PLAN

List of trouble codes

Ignitioncoils	P2300	1 cylinder ignition coil short circuit to ground	EUVprojectmustcheckitemPIN36andPIN5 (ignition ground)shortcircuit
MIL	P0650	MILLlightcontrolcircuit failure	WhenB_Milis set (MILLlightis on),PIN29andPIN33 (continuous powersupply) are short-circuited WhenB_Milis set (Mill lightis off), PIN29andPIN5 (ignition ground)are short-circuited. WhenB_Milis set (MILLlightis on), PIN29is opencircuit
TIP sensor	P1099	Tip sensorshorted to powersupply	PIN38andPIN33 (continuous powersupply)shortcircuit
	P1098	Tip sensorshortcircuit to ground	PIN38andPIN5 (ignition ground)are short-circuited andB_dump_ua is set.
Carbon canister control valve	P0459	The carboncanister control valve control circuit is short-circuited to the powersupply.	PIN6andPIN33 (continuous powersupply)are short-circuited and the carbon canisterdoesnot work (diagnosed only when the carboncanisteris working)
	P0458	Carboncanister control valvecontrol circuit shortcircuit to ground	PIN6andPIN5 (ignition ground)are short-circuited, and the carboncanister is alwaysworking (diagnosed only when the carboncanisteris not working)
	P0444	Carboncanister control valvecontrol circuit opencircuit	PIN6opencircuit (diagnosed only when the carboncanisteris working)
	P0441	The carboncanister control valve controls the flow unreasonably	Diagnosticenablecondition B_dteven is set,B_tevopenok=false or B_tevopenclose=flase anddtevcnt is greaterthan700. Referto TEVBG500.11
Intake manifold pressure sensor	P0108	Intakemanifold pressuresensorvoltage is toohighfault	PIN9andPIN30 (5Vpowersupply)are short-circuited
	P0107	Intake manifold pressuresensorvoltage is too low fault	PIN9andPIN5 (ignition ground)shortcircuit
	P0105	Intakemanifold pressuresensorvoltage failure	10mssamplingacquisition variablepsini_w/psdss_w changesDPDDF to the upper limit, and the calibration amountis always satisfied by psini_w-psdss_w<DPDDF;

INSPECTION PLAN

List of trouble codes

	P0106	Intake manifold pressure sensor signal is unreasonable	Modify KFPSDMX so that psdss in the driving cycle > the current value of KFPSDMX or modify KFPSDN so that psdss in the driving cycle is less than KFFPSMN;
Speed sensor	P0322	Speed sensor signal failure	Disconnect PIN43and42 to start
Idle speed	P0507	Idle speed is too high fault	First, you need to let the vehicle speed sensor complete the diagnosis (turn the drum or ride in 1st gear for rapid acceleration, then close the accelerator and coast, and let the engine cut off the oil for more than 5 seconds). The vehicle speed diagnosis is completed Z_vfz=1 and there is no vehicle speed fault E_VFZ=0; The idle speed diagnosis can only be carried out after the vehicle speed diagnosis is completed, that is, B_IIa=1; B_mllr=1 requires dn_w_ua<DNDLLRU and qregi_ua=DQMNL_UA; B_mnlr=1 requires dn_W_ua>DNDLLRO and qregi_ua=DQMXL_UA
	P0506	Idle speed is too low fault	
Intake air temperature sensor	P0113	Intake air temperature sensor signal voltage is too high	PIN 11 and PIN30 (5V power supply) are short-circuited
	P0112	Intake air temperature sensor signal voltage is too low	PIN 11 and PIN5 (ignition ground) short circuit
	P0111	Intake air temperature sensor signal is unreasonable	option1: adjust TADHZLL to 100 °C, TMDTAHLL adjust to -5°C. That is, when tanslin < TADHZLL, tmot > TMDTAHLL fault report option2: DTAFIX adjust to the maximum value that can be filled in, and drive the vehicle to ensure the following working conditions tmst < TMSPTAFX&vfzg > VPTAFXO&ml > MLPTAFX And tmst < TMSPTAFX&vfzg < VPTAFXU&tmot > TMPTAFXU meets the conditions at least 2 times

INSPECTION PLAN

List of trouble codes

	P0111	Intake air temperature sensor signal is unreasonable	option1: adjust TADHZLL to 100°C, TMDTAHLL adjust to -5°C. That is, when $tanslin < TADHZLL$, $tmt > TMDTAHLL$ fault report option2: DTAFIX adjust to the maximum value that can be filled in, and drive the vehicle to ensure the following working conditions $tms < TMSPTAFX \& vfg > VPTAFXO \& ml > MLPTAFX$ And $tms < TMSPTAFX \& vfg < VPTAFXU \& tmt > TMPTAFXU$ meets the conditions at least 2 times;
engine coolant temperature	P0118	Engine coolant temperature sensor signal voltage is too high	PIN13 (watercooling) OR PIN22 (aircooling) and PIN30 (5V power supply) are short circuited
	P0117	Engine coolant temperature sensor signal voltage is too low	PIN13 (watercooling) OR PIN22 (aircooling) and PIN5 (ignition ground) are short circuited
	P0116	Engine coolant temperature signal is unreasonable	Driving the vehicle, pay attention to the upward trend of $tmrw$. When $tmrw=60$, modify TMOTELI to make tmt less than $tmrw-DTMDMA$
System voltage	P0563	System voltage is high	Change UBDMX to a smaller size so that $wub_w > UBDMX \text{ speed} > VMDUB$
	P0562	System voltage is low	Change the size of UBDMN1 to make $wub < UBDMN1 \text{ speed} > VMDUB$
	P0560	System voltage	Change the size of UBDMN1 to make $wub < UBDMN2 \text{ speed} > VMDUB$
vehicle speed sensor	P0501	Vehicle speed sensor A signal is unreasonable	When rotating the drum or riding in 1st gear, accelerate rapidly and then coast with the throttle closed, allowing the engine to back up and cut off the oil for more than 5 seconds; Modify VDMN to the maximum value
Throttle position sensor	P0123	TPS sensor signal voltage is high	PIN12 and PIN30 (5V power supply) are short-circuited
	P0122	TPS sensor signal voltage is low	PIN12 and PIN5 (ignition ground) short circuit
1-cylinder non-idling fuel supply system	P2177	The fuel supply system of cylinder 1 is too thin in non-idling state.	Modify FRKAP=0.75 during idling, and frau will self-learn to be less than FRAUDN.
	P2178	The fuel supply system of cylinder 1 in non-idling state is too rich.	Modify FRKAP=1.25 during idling, and frau will self-learn to be greater than FRAUDX

INSPECTION PLAN

List of trouble codes

Oxygen sensor heater (row 1)	P0032	Oxygen sensor heating signal voltage is high	PIN2 and PIN33 (continuous power supply) short circuit
	P0031	Oxygen sensor heating signal voltage is low	PIN2 and PIN5 (ignition ground) short circuit
	P0030	Oxygen sensor heating circuit open circuit	PIN2 disconnected
	P0053	Oxygen sensor heating resistance is too large	Oxygen Heating Resistor Simulator Set 35ohm Resistor
Oxygen sensor (row 1)	P0133	Oxygen sensor signal response efficiency is low	Oxygen aging simulator, set cycle extension delay time to 600ms
Oxygen sensor (row 1)	P0132	Oxygen sensor signal voltage is high	PIN19 and PIN30 (5V power supply) are short-circuited
	P0131	Oxygen sensor signal voltage is low	Demonstration when the engine is cold: that is, the starting temperature is less than TMSV 40°C ; The engine shutdown temperature is greater than TMSVA 60°C ; PIN19 and PIN5 (ignition ground) are short-circuited;
	P0134	Oxygen sensor signal voltage deactivated	Disconnect PIN19
	P0130	Oxygen sensor signal voltage	PIN 19 and PIN2 short circuit

INSPECTION PLAN

Maintenance Schedule

Item	Before each trip	1st Service (After 1000km)	Every 3,000km / 6 Months	Every 6,000km / 12 Months	Every 12,000km / 24 Months
Air filter *1		I	I		I
Engine oil	I	R	R	R	R
Engine oil strainer screen			C	C	C
Oil filter		R	R	R	R
Transmission oil	I	R		R	R
Spark plug		I	I	R	R
Valve clearance			I	I	I
Throttle operation	I	I	I	I	I
Fuel filter				I	I
Engine ventilation		I	C	C	C
Engine idle speed		I	I	I	I
Radiator coolant	I		I	I	I
Cooling system			I	I	I

I = Inspection
(clean, adjust, lubricate
or replace if necessary)

C = Clean
L = Lubricate
R = Replace

Notes:

*1 : Service more frequently when riding in unusually wet or dusty areas.

INSPECTION PLAN

Maintenance Schedule

Item	Before each trip	1st Service (After 1000km)	Every 3,000km / 6 Months	Every 6,000km / 12 Months	Every 12,000km / 24 Months
Drive Belt		I	I	I	R
Roller set weight		I	I	I	R
Clutch shoes wear				I	I
Battery		I	I	I	I
Brake fluid	I	I	I	I	I / R-Every 2 years
Brake pads wear	I	I	I	I	I
Brake system		I	I	I	I
Lights / Horn	I				
Steering head bearings				I	I
Suspension		I	I	I	I
Nuts, bolts, fasteners		I		I	I
Wheels / Tires	I		I	I	I
Main and side stands	I		I	I	I

I = Inspection

(clean, adjust, lubricate
or replace if necessary)

C = Clean

L = Lubricate

R = Replace

WARRANTY CLAIM POLICY

Warranty Claim Coverage and Guideline

No.	Engine component / Related with engine	Warranty Cover	Guideline
1.	Engine component / Related with engine	2 Years @ 20,000KM	Based on registration date
2.	Chassis component / Related with chassis	3 Months	Based on registration date
3.	Electrical Components	1 Year	Based on registration date
4.	Battery	3 months	Based on registration date
5.	Wear and tear	N/A	Subject to case-by-case approval

Warranty Claim Process Flow

1. To receive immediate assistance, customers are encouraged to visit any AVETA authorized dealer or contact our service hotline at **+60 12-956 5409 & 012-503 5409 (Customers/End Users)**. Our support team is available and ready to assist with any inquiries or concerns.
2. In order to be eligible for warranty claim services, customers must present a valid proof of purchase along with the defective part or the affected motorcycle to the nearest authorized AVETA dealer.
3. Please note that this warranty does not cover any inconvenience, loss of use of the motorcycle, or costs associated with transporting the motorcycle to or from an AVETA dealer.

WARRANTY CLAIM POLICY

Warranty Limitations and Exclusions

1. AVETA warranty does not cover consumable parts that are subject to normal wear and tear. These include items such as sprockets, air filters, light bulbs, engine oil, coolant, belting, clutch plates, bearings, brake shoes, brake pads, spark plugs, brake discs, gaskets, fuses, and oil filters.
2. The warranty is also void if any parts of the motorcycle have been subjected to misuse, involved in an accident, treated negligently, or used with parts and equipment not manufactured or approved by AVETA. Such use may adversely affect the performance and reliability of the motorcycle.
3. Any parts that have been altered, modified, or replaced in an unauthorized manner will not be covered under the warranty if, in AVETA's sole judgment, such changes impact the motorcycle's performance or reliability.
4. AVETA's warranty does not extend to any indirect or consequential losses. This includes loss of profits, transportation expenses, downtime, or any external repair charges resulting from the breakdown of the motorcycle.
5. Damage or rust caused by environmental exposure—such as to acids, detergents, animal urine, seawater, cement water—as well as damage due to natural disasters including floods, earthquakes, and fires, or any external factors beyond AVETA's control, are also excluded from warranty coverage.

Judgment of Warranty Claims

AVETA Malaysia reserves the sole and final right to determine the validity of all warranty claims.



Aveta Global Marketing Sdn Bhd

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