TVS

# TVS ORBITER


## OWNER'S MANUAL

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Revision 3, As on 10 March 2026

**Incase you need any Clarification please contact**
**TVS Motor Company Authorised Dealers**
**Or**
**TVS Motor Company's Area Offices**
**Or**
**Toll Free Number : 1800-258-7111 (Support/RSA*)**
**Email : customercare@tvsmotor.com**

**Disclaimer :** TVS Motor Company or any of its officials / Authorized Main Dealer / Authorized Dealer do not ask customers for bank / card / wallet details / authentication. In case you face any such claim, please report to the relevant local authorities immediately.

* RSA might be on paid basis, unless policy is active.

## CONTACT AT OUR AREA OFFICES

**TAMILNADU - 1**

1. **TVS Motor Company Limited**
   V Floor, Gee Gee Universal,
   No. 2, MC Nichols Road,
   Chetpet, Chennai - 600 031.
   Phone : 044 - 28361651/28361654
   Email : AO.Chennai@tvsmotor.com

**TAMILNADU - 2**

2. **TVS Motor Company Limited**
   No. 10, 2nd floor,
   Shree Shanmugapriya Towers,
   Kannuswamy Street,
   Behind Hotel Annapoorna,
   R S Puram, Coimbatore - 641 002.
   Phone : 0422 - 4350060/2541035
   Email : AO.Coimbatore@tvsmotor.com

**TAMILNADU - 3**

3. **TVS Motor Company Limited**
   Sastha Square, 2nd Floor,
   No. 46/4,5, 46/6A6,
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   Next to Bharat Petroleum, Ponmeni,
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**KERALA**

4. **TVS Motor Company Limited**
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   Door No. 27/631, A6,
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**KARNATAKA - 1**

5. **TVS Motor Company Limited**
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   Email : AO.Bangalore@tvsmotor.com

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6. **TVS Motor Company Limited**
   5th Floor, Marvel Ecron building,
   CTS No-4784/A1/B2,
   Gokul Road, Hubballi - 580 030.

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7. **TVS Motor Company Limited**
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   No. 3-11-30, Plot No. 11,
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   Opposite Symbiosis Law School,
   Lohegaon,
   Pune - 411 047.
   Email : AO.Pune@tvsmotor.com

**MAHARASHTRA - 3**

10. **TVS Motor Company Limited**
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    Shriram Shyam Towers,
    Near LIC Square, Sardar,
    Nagpur - 440 001.
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    Email : Service.Nagpur@tvsmotor.com

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    Currency Tower, VIP Road Corner,
    Raipur – 492 001.
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    Near Gallops Motors, S G Highway,
    Makarba, Ahmedabad - 380 051.
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**DELHI, HARYANA, UTTAR PRADESH WEST & UTTAR PRADESH HILLS**

**16. TVS Motor Company Limited**
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## SAFETY INFORMATION

Operating this vehicle safely is an important responsibility of the rider. To help you make decisions on safety, we have provided necessary operating procedure and other information in this manual. This information alerts you on potential hazards that could hurt you or others. Since it is not possible to warn you about all the hazards associated with operating or maintaining the vehicle, you must use your own judgment.

Your vehicle maybe equipped with features which improves your convenience, such as but not limited to, Hill Hold Assist, etc. Be aware that these systems are supplementary and should not be relied upon heavily while operating the vehicle. The responsibility of safely operating this vehicles lies solely with the rider.

You will find important safety information in following form in this manual. These words carry the following connotations:

**Warning**

Disregarding this message might result in injury to the rider or deadly accidents.

**Caution**

This message indicates special procedures or precautions to be followed to avoid damage to the vehicle.

**Note**

This message provides further clarification for clear understanding of any particular information.

## NOTICE

Take time to familiarize yourself with your TVS Orbiter and its performance characteristics.

This owner's manual contains important information to help you get the best experience with your new TVS Orbiter. Please take the time to read it thoroughly before your first ride. Understanding the scooter's operation is essential for your safety and enjoyment. The more familiar you are with your vehicle, the more confident and enjoyable your rides will be. Make sure that anyone else who rides your TVS Orbiter also reads and understands this manual.

All information, illustrations, photographs and specifications contained in this owner's manual are based on the latest product information available at the time of this publication. TVS Motor Company Limited may, however, incorporate modifications or improvements on its vehicles at any time without notice, and therefore, in such events it is possible that the relevant part of the owner's manual does not apply to your vehicle.

Prior permission of TVS Motor Company Limited is required for quoting, copying or reproducing any part of this owner's manual.

**Note**

Accessories shown in the picture may not be part of the standard equipment.

Images and features are for reference purposes only. It may change without prior notice. Please check with dealer before purchase.

Pictures shown in this manual are of TVS Orbiter V2 (2 battery pack) alloy wheel with two battery pack unless specified.

Your scooter is provided with always glowing head lamp (AHO). The head lamp glows automatically once the ignition is turned ON.

Since your vehicle is fitted with side stand cut-off system ensure to retract the side stand before switching ON the vehicle.

**TVS Orbiter model comes in two variants - TVS Orbiter V2 with 2 battery packs with a range of 115 km and TVS Orbiter V1 with 1 battery pack with a range of 75 km.**

## FOREWORD

Hello!

Welcome to the family of choice makers! You are now the proud owner of the TVS Orbiter—a vehicle that blends thoughtful design, cutting-edge technology, and everyday practicality.

The TVS Orbiter is built to meet your real-world needs without unnecessary clutter. It's more than just a ride—it's your reliable companion, crafted to simplify your life. From smart storage solutions to intuitive connectivity, every detail is designed with you in mind.

Engineered for the modern commuter, the TVS Orbiter strikes the right balance between speed, performance, and range—making it ideal for both daily travel and spontaneous getaways. And when it comes to staying connected, our mobile app offers a suite of features like geo-fence alerts, crash notifications, anti-theft protection, and over-the-air updates to keep your ride future-ready.

With its fresh design and striking colors, the TVS Orbiter promises a strong road presence and a comfortable ride that makes every journey enjoyable.

To get the most out of your TVS Orbiter, please read this manual thoroughly. For a worry-free experience, always service your vehicle at TVS Motor Company Authorized Dealers.

Here's to making smarter choices and riding with pride.

Happy riding!

## TVSM Green Initiative

Congratulations on buying your TVSM electric vehicle! By choosing an Electric Vehicle you are not only embracing cutting edge technology but also demonstrating your commitment towards environmental sustainability.

Your choice to drive an electric vehicle significantly reduces the stress on our environment, helping to combat climate change and preserve our planet for future generations.

Thank you for your contribution to a cleaner, greener world!

With zero tailpipe emissions, the vehicle will reduce the amount of greenhouse gases in the environment. This avoidance of emission of greenhouse gases translates into Verified Carbon Units (VCUs).

**TVS, in a step towards our Corporate Responsibility and to show our dedication towards the environment, is pooling these VCUs.**

As a customer of TVS electric vehicle (EV), you hereby consent to transfer the VCUs, or any other similar benefits associated with your TVS EV to TVS Motor Company Limited (TVSM). By using the vehicle, you acknowledge and agree to the following terms and conditions:

**Ownership of VCUs:**

(i) TVSM shall have the sole and absolute rights on the VCUs, or any other similar benefits generated, based on the use / operation of your TVS EV, from the date of purchase until the lifetime of the vehicle.

(ii) TVSM shall also be entitled to use such VCUs or any similar benefits, for any lawful purpose, at its sole discretion and as it deems fit, including but not limited to carbon offsetting.

You can ask any query related to this program by writing to us on sustainability@tvsmotor.com

## UNIQUE FEATURES OF TVS ORBITER

### BEST AERODYNAMIC SCOOTER

Your scooter features a best-in-class aerodynamic design that reduces air resistance for improved efficiency, extended range, and a smoother ride. Every element is shaped for optimal performance and style.

### 34 LITRE TWIN HELMET SPACE

Your scooter has a 34 litre under-seat storage space to carry your luggage belongings, two helmet etc., refer page no. 24 for details.

### LONG PLATFORM SEAT ASSEMBLY

Longer seat, measuring 845 mm, ensures comfortable travel for your family members

### CRYSTAL LED HEADLAMP

Your scooter comes in with a premium LED head lamp. Efficient and bright, this gives your scooter a totally upgraded Look and Style with better visibility for night rides.

### 14" - 12" WHEEL COMBO

The 14-inch front wheel and 12-inch rear wheel combination offers superior stability, progressive braking, and enhanced comfort even on rough roads.

### CRUISE CONTROL

Your scooter is equipped with a Cruise Control feature that lets you ride at a preset speed without applying the throttle. Refer to page no. 21 for activation instructions.

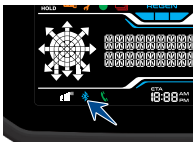
### FULLY DIGITAL CONNECTED CLUSTER

The TVS Orbiter SmartXonnect is equipped with a “Fully Digital Connected Cluster” featuring a reverse LCD display and a range of innovative features, including Bluetooth® connectivity, Distance to empty indication, Digital odometer, Trip meters (A and B), Service reminder, modes indications, and more. Refer page no. 27 for more details.

### LONG AND UPRIGHT HANDLEBAR

Your scooter has a long and upright handlebar with an optimum seat height. It helps in a comfortable posture supporting your back for long as well as city rides.

## SMARTXONNECT-BLUETOOTH CONNECTIVITY



The TVS Orbiter SmartXonnect's connected speedometer comes with built-in Bluetooth® connectivity, allowing you to connect your Android™ smartphone or iPhone® to access features such as caller ID, Missed call notifications, Navigation, Geofencing, Anti- theft, and Voice assistance etc. Additionally, you can view Ride statistics, Charging stations integrated app and find the Last parked location of your vehicle using the TVS Connect app.

Log in to the TVS Connect app to discover more SmartXonnect features.

## MINIMALISTIC DESIGN

This vehicle comes with a clean and clutter free design with integrated components and sleek surfaces. This gives your scooter a modern and premium appeal

## USB CHARGING IN FRONT WITH GLOVE BOX

Your scooter has a USB Charging port in the front along with a glove box where you can keep all your essentials such as phone, wallet, keys or headphones

## BEST-IN-CLASS RIDER & PILLION ERGONOMICS

This vehicle has a thoughtfully designed seating, back angle and legroom for both rider and pillion.

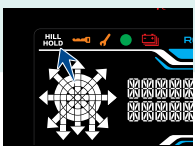
## REVERSE PARKING ASSIST


Switching this mode on will set the speed at approximately 5 kmph for forward movement and approximately 3 KMPH for reverse. Just give the desired throttle and move as per your requirement

## INTEGRATED PASS-BY SWITCH

Integrated pass-by Switch is a feature that allows you to easily switch between high & low beam of the head lamp with easy press and auto release. It is helpful especially while overtaking. Refer page no. 22 for details.

## HILL HOLD ASSIST




Hill hold assist prevents the vehicle from rolling forward or backward on an inclined road. Refer page no. 30 for details.

## REGENERATIVE BRAKING

Regenerative braking recuperates energy lost during braking / deceleration of traction motor under specified conditions and charges the battery. Refer page no. 31 for details.

## ALL IN ONE LOCK

Your scooter has all in one lock that unlocks the seat at the ignition lock itself. Refer page no. 20 for details.

## TELESCOPIC FRONT FORK

Your scooter has Motorcycle-like 'Telescopic Front Suspension' for extreme riding comfort even while riding on bad roads.

## PARKING BRAKE (REAR BRAKE LOCK)

'Parking Brake' is another unique safety feature which protects your scooter from falling due to wheel rotation when it is parked with the side stand on a slope. Refer page no. 22 for details.

## RETRACTABLE BAG HOOKS

Your scooter has two retractable 'Bag Hooks' to carry light luggage like carry bags weighing upto 3 kg.

One hook is located below the handle bar on the rear panel and the other one is located on the cover front below the front end of seat.

## EASY ACCESS BOX

Your scooter is provided with easy access box. Used to hold your mobiles while charging or hold a small bottle.

## SYNCHRONISED BRAKE TECHNOLOGY (SBT)

Taking technological innovation to next level, your scooter comes with 'Synchronised Brake Technology (SBT)'. This feature enhances the safety by avoiding skidding during sudden braking.

## TUBELESS TYRES

Another important unique feature in your scooter is 'Tubeless Tyres'. Tubeless tyres reduce the chances of getting punctured. Even if there is a puncture, sudden leakage of air is avoided, thereby provide better safety and convenience. It is also very easy to repair the punctured tyres.

## SAFE RIDING TIPS

### SAFE RIDING RECOMMENDATIONS

Any two wheeler riding requires some precautions to be taken to ensure the safety of the rider, pillion rider and other road users. These precautions are:

#### Familiarise yourself with new TVS Orbiter

Riding skill and your mechanical knowledge form the foundation of safe riding practices. We suggest you to practice riding TVS Orbiter in a low-traffic condition until you are thoroughly familiar with your vehicle and its controls. Remember practice makes you perfect.

#### Riding apparel

Loose, fancy clothing can be uncomfortable and unsafe when riding a two-wheeler. Choose good quality two wheeler riding apparel.

#### Know your limits

Ride within the boundaries of your own skill at all times. Knowing these limits and staying within them will help you avoid accidents.

**⚠ Warning**

**Two wheeler safety starts with wearing a good quality helmet.** One of the most serious injuries that can happen is a head injury. Always wear an ISI approved helmet that should fit your head comfortably and securely. You should also have good quality goggles to protect your eyes and help your vision.

**To prevent or minimize accident, never consume alcohol or drugs before or during the operation of your vehicle. Even minimal consumption of these will affect the rider's ability to control the vehicle.**

#### Posture

Proper vehicle riding starts with proper posture.

1. Keep your elbows relaxed and flexible.
2. Sit and adjust yourself on seat so that arms and shoulders are relaxed.
3. Look widely instead of gazing at one point.

**⚠ Warning**

**One-hand riding is dangerous.** Keep both hands firmly on the handle bar and both feet securely on the floor board. Under no circumstances should both the hands be removed from the handle bar, as it is very dangerous.

Avoid use of mobile phones while riding as it could lead to fatal accident.

Slow down to a safe speed before negotiating a corner. If this is the first time that you are riding a vehicle of this type, we suggest that you practice on a safe, open area to become thoroughly familiar with the operation of the vehicle.

### Cornering

When cornering, centrifugal force works in a direction perpendicular to the direction in which the vehicle is moving. Centrifugal force increases in proportion with speed and the radius of the corner.

During cornering, reduce speed so as to lessen the effects of centrifugal force. By all means, avoid abrupt application of brake or sudden steering.

### Braking

For safe riding, it is very important to master the braking techniques.

1. Close / release the throttle completely.
2. Hold the vehicle upright as you apply the brake.
3. Progressive application of brake is safer.
4. **Apply both the brakes. 'SBT' provides additional braking even when 'only rear brake' is applied, But applying 'both the brakes' helps you to use the full potential of the brakes.**
5. Riding down hills, while cornering and wet roads, close throttle and come to a slower speed to avoid the loss of control over the vehicle due to skidding.

### Causes for poor braking

1. If the brake shoes / drum are worn out or if there is water or oil on them, sufficient friction does not develop and brakes do not work well.
2. Even when the brake works normally, if the road surface is wet or the tyre surface is worn-out, tyres do not take a firm hold on the surface, increasing the stopping distance.
3. Approximately 60% braking effect is from front brake. **Non-usage of front brake causes poor braking.**

### ⚠ Warning

As the vehicle speed increases, the stopping distance also increases progressively. Be sure that, you have sufficient distance between you and the vehicle or obstruction ahead of you.

Using only the front or rear brake is dangerous and can cause skidding and loss of control. Apply both the brakes together and with great care on a wet road or other slippery surfaces. Any abrupt braking on slippery or irregular roads can cause loss of rider control.

Your vehicle is equipped with Hill hold assist system, this system is for your convenience only. Do not overly rely on Hill hold assist as it is not intended to hold the vehicle stationary for extended period of time. Use the parking brake for holding the vehicle on an incline. Hill hold assist may not operate effectively on steep inclines and on slippery surfaces such as road covered with oil, ice etc.

## ACCESSORY INSTALLATION AND SAFETY TIPS

Use extreme caution while selecting and installing the accessories for your scooter.

The addition of **unsuitable accessories can lead to unsafe operating conditions.** Your friendly Dealer will assist you in selecting quality accessories and installing them correctly.

While selecting the accessories, make sure that the accessories **should not obstruct lighting, steering, suspension level and ground clearance.**

**Additional electrical equipments is not acceptable as it will void the warranty terms of the vehicle.**

### Caution

1. Leaving the ignition cum steering lock in 'ON' position for a prolonged time will drain the battery when the vehicle is not in use. Switch 'OFF' and take the key out when the vehicle is not in use.
2. Always lock the steering while parking for safety.
3. It is recommended to use the tool kit in case of emergency only. It is always advisable to take your vehicle to TVS Motor Company Authorized Main Dealer.
4. Never sit on vehicle when it is supported by stands.
5. Utility box can be used to carry a load of maximum 10 kg.
6. Do not carry perishable items inside the utility box. It is not fully sealed. Do not allow / spray water inside the utility box. Take care not to spill liquid into the utility box.
7. Care should be taken not to attach the luggage which hangs out of your scooter. Please note that the luggage attached to your scooter should not interfere with your feet movement.
8. The charging time of the vehicle may vary, depending on the vehicle's battery state of charge.
9. The flap has been designed to prevent water entry inside the charging port and is not replaceable. No warranty for charger is applicable in case of flap damage.
10. Always release the side stand to its full up position before moving the vehicle.
11. Be aware of reverse park assist mode. In this mode, the vehicle will move in reverse when throttle is given.
12. Always park the vehicle on a flat, firm surface, in shaded area and away from flood, fire and other unsafe environments.
13. Do not park the vehicle in direct sunlight or water logged areas for long time.
14. Do not ride the vehicle in flooded roads.
15. While charging vehicle always switch on AC supply, only after plugging in both end of the charging cord at their respective positions.

### Warning

1. Never attempt to move the vehicle when the steering is locked, you may lose balance.
2. Use appropriate head lamp beam 'high / low' as per the traffic and road conditions for your safety and avoid inconvenience to other riders.
3. Operating the TVS Orbiter overloaded will hamper riding stability and may lead to loss of control. Hence, it is advisable to carry the recommended amount of load only.
4. Don't touch any open cables or terminals.
5. Do not leave your vehicle without charging for a long period of time (Vehicles should be charged to 30% SOC atleast once in 15 days).

### Caution

1. Do not expose battery to temperature above 60°C.
2. If battery alarm rings, isolate the battery pack in a ventilated area.
3. Do not disassemble, open or service the battery pack.
4. Batteries should not be swapped with other vehicles.

## Vehicle Performance Variation

We at TVS, value your safety and comfort and hence have taken certain measures to ensure the best riding experience of your TVS Orbiter.

In line with this, we have deployed a safety measure for critical vehicle parts like the motor, battery and the MCU.


To ensue the safety of you and your TVS Orbiter, in high temperature condition, overloaded condition or continuous peak performance usage whenever the temperature of vehicle components reaches a critical point, as a safety measure performance of some systems are deliberately reduced to optimize the temperature. This is indicated by the MIL on your dashboard glowing after sometime accompanied by a message or in extreme high temperature conditions ride mode will be changed to ECO till the component cools down.

For example, if you have accelerated the scooter with brakes applied, the temperature of the motor and the MCU starts increasing. Once it reaches a critical point, the Motor Controller Unit starts "derating" the vehicle to control the increase in temperature beyond critical point, thus slowing the vehicle down a little. This may result in loss of vehicle performance to a certain extent, and you may experience some drop in performance.

In extreme conditions, for example; when ambient temperature is extremely high and vehicle is being driven continuously in overloaded condition, even after the MIL indication on your cluster is on, it may result in the vehicle coming to a complete stop.

In any such situation that you may face, it is recommend to allow the vehicle to cool down by riding it in slow speed in Eco Mode or stop the vehicle for some time till the MIL indicator on your instrument cluster goes away. Usually this should only take a few minutes. This will ensure the safety of you as well as life of electric components in the scooter.

**Incase if the MIL indicator is glowing continuously even when vehicle is in cold condition, take your vehicle to TVS Motor Company Authorised Main Dealer for rectification.**

### Note

Real world performance may vary with road, load, and driving patterns. All parameters at TVSM are tested under ideal conditions. Refer specifications sheet.

It is not suitable to ride uphill when the vehicle is under performance optimisation.

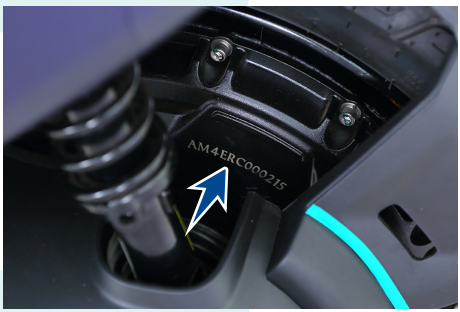
Incase of MIL Indication follow the message instruction on cluster to resolve the error.

## KNOW YOUR TVS ORBITER

### VEHICLE IDENTIFICATION NUMBER

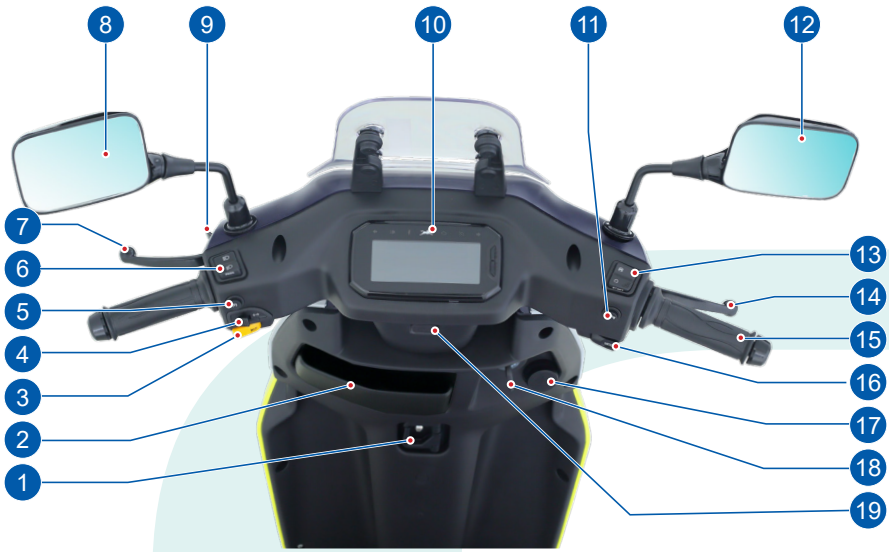
The frame and traction motor serial numbers are the only means of identifying your vehicle from others of the same type. They are also required to assist your Dealer for ordering parts or referring to special information.

The frame serial number is stamped on the frame, at the rear end below the seat assembly. Open the seat assembly to read the frame number.




The traction motor serial number is stamped on the hub of the rear wheel assembly. Rotate the rear wheel assembly to read the motor number.

## LOCATION OF PARTS - HANDLE BAR




1. Bag hook (front)
2. Easy access box
3. Horn switch
4. Turn signal lamp switch
5. Cruise control switch
6. High / low beam cum pass-by switch
7. Left hand brake lever
8. Rear view mirror L*
9. Parking brake
10. Speedometer assembly
11. Park assist switch
12. Rear view mirror R*
13. Ride / kill switch
14. Right hand brake lever
15. Throttle grip
16. Mode switch
17. Charger socket
18. All in one lock
19. Mobile charger

* Mandatory and optional accessory will be charged extra

## LOCATION OF PARTS - VEHICLE LEFT SIDE


1. Rear shockabosrber L
2. Pillion foot rest L
3. Side stand
4. Front brake adjusting nuts
5. Pillion handle

## LOCATION OF PARTS - VEHICLE RIGHT SIDE


1. Front wheel axle nut
2. Cover front
3. Pillion foot rest R
4. Traction motor
5. Rear shockabosrber R
6. Seat assembly

## LOCATION OF PARTS - VEHICLE FRONT & REAR



### FRONT

1. LED Head lamp
2. Position lamp
3. Turn signal lamp front LH
4. Turn signal lamp front RH

### REAR

1. Turn signal lamp rear RH
2. Tail / brake lamp
3. Rear brake adjuster nut
4. Reflex reflector
5. Turn signal lamp rear LH

* License plates are mandatory accessory will be charged extra

## ALL IN ONE LOCK

TVS Orbiter comes with an 'All in one lock'. It has four positions and they are:

### 1. 'OFF' position

All the electrical circuits are turned 'OFF' in this position. Vehicle will not start. Key can be taken out.

### 2. 'ON' position

All electrical circuits are activated. Vehicle's instrument cluster will wake up and the vehicle can be shifted to drive mode. Control key cannot be taken out from the lock in this position.

### 3. Steering 'LOCK' position

TVS Orbiter's steering can be locked in both 'left' and 'right' directions.

To lock the steering, turn the handle bar all the way to the 'left' or 'right'. Push the key 'IN', turn it to the 'LOCK' position and take out. All the electrical circuits are turned 'OFF' in this position. **Insert the key into the lock and turn it to 'OFF' or 'ON' position to unlock the steering.**

**Note**

The Instrument cluster, front position lamp, license plate lamp glow, automatic headlamp on (AHO) and tail lamp will glow automatically once the ignition key is turned 'ON' without activating any other switches.

**Caution**

Leaving the ignition cum steering lock in 'ON' position will drain the battery when the vehicle is not in use. Switch 'OFF' and take the key out when the vehicle is not in use. For safety always lock the steering.

**Warning**

Never attempt to move the vehicle when the steering is locked, you may lose balance.

Never attempt to move the vehicle while the switch 'On' sequence is in progress/ while attempting to enter drive/park assist modes.

### 4. Seat 'Unlock' position

Seat lock operation is inbuilt in 'All in one lock' of TVS Orbiter. To open the seat, keep the key in 'OFF' position and turn it to anticlockwise direction without pushing the key 'IN'.

To lock the seat again, press the seat at the rear end to its position till a 'Click' sound is heard.

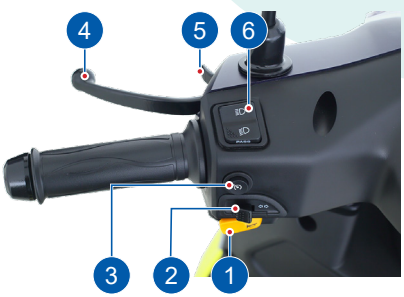

## CRYSTAL TECH LED HEADLAMP

TVS Orbiter comes with a crystal tech LED head lamp which glows automatically once the ignition is turned 'ON'. The head lamp beam (high / low) can be controlled by changing the beam control switch position to 'Low' or 'High' beam.

## POSITION LAMP CUM TURN SIGNAL LAMP

TVS Orbiter comes with a LED position lamp cum turn signal lamp, the position lamp glows automatically once the ignition is turned 'ON'.

## HANDLE BAR LEFT SIDE




### 1. Horn switch

Press the switch ' ' to operate the horn.

### 2. Turn signal lamp switch

Slide the turn signal lamp switch to the left ' ' or right side ' ' to operate respective turn signal lamps (LH / RH). Press the switch to turn 'OFF'.

**Warning**

Always use the appropriate turn signal lamps when you intend to change lanes or take turns. Be sure to switch 'OFF' it after negotiating the lanes or turns.

### 3. Cruise control switch

Cruise control allows you to maintain a constant speed without continuously using the throttle—ideal for long, steady rides.

To activate cruise control on your TVS Orbiter,

1. Ensure that neither brake lever is pressed or sticking.
2. Press the cruise control switch once, ("Cruise Ready" message will appear on the instrument cluster for 10 seconds, followed by "Press Cruise" for the next 10 seconds and Cruise indicator lamp '(image)' will blinking for 30 seconds.
3. While holding the throttle at the desired speed, press the cruise control switch again (without using the brakes) within 30 seconds of first press.
4. Once the cruise is activated, the cruise indicator lamp ' ' will glow constantly.

To exit from cruise control on your TVS Orbiter,

1. Apply either of the brakes.
2. Open throttle towards you.

**Note**

Ensure not to press the brake lever while activating cruise control. If brakes are applied while activating, "Release brake" message will be displayed on the cluster.

If while riding in steep roads, any unintended change in speed (approximate ± 5 kmph) will cause the cruise control to exit

If any unintended operation of the control switches like mode switch, kill switch, park assist switch or side stand opening will cause the cruise control to exit.

The approximate working speed range of cruise control is **20 to 55 km/h (± 10%).**

Cruise control will not work in following conditions

1. If there is any active error in the vehicle.
2. If the temperature of Motor/ MCU increases beyond the limit and enters 'Derating'. Refer page no. 15 for vehicle performance variation.
3. If any of the cruise switch or brake switches malfunction or are sticking.

Do not use cruise control in any of the following situations.

Doing so may result in death or serious injury.

- In heavy traffic
- On roads with sharp bends
- On winding roads
- On slippery roads, such as those covered with rain, ice or oil.
- On steep hills vehicle speed may exceed the set speed when driving down a steep hill.

**Warning**

Since your vehicle is fitted with SBT brake system it is essential to maintain the brake system in good condition. Adjust the brakes system at regular intervals for the proper working of SBT.

Ensure to release the brake lock before riding the vehicle.

### 4. Rear brake lever (SBT brake lever)

Synchronised Braking Technology (SBT) can be operated by pressing the left hand brake lever gently towards the handle grip.

SBT technology helps to operate both front and rear brakes by distributing the force optimally between the two braking system.

### 5. Parking brake (rear brake lock lever)

Brake lock protects your scooter from rolling-off, when parked on side stand (or) helps you relax while waiting in a long traffic signal (or) a slope.

To activate brake lock, press the brake lever almost half towards the grip and hold, then press the parking brake lever to the maximum and release the brake lever slowly. Ensure the brake is locked properly. Pressing the brake lever further releases the brake lock automatically.

### 6. High/low beam cum pass-by switch

**The head lamp glows automatically once the ignition is turned ON. Only the head lamp beam (high / low) can be controlled by pressing the 'high / low beam' switch.**

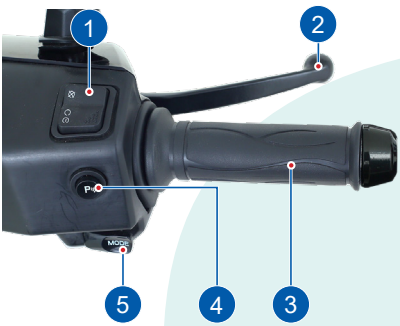
Press the switch towards ' ' to operate head lamp high beam or press it towards ' ' to operate head lamp low beam.

TVS Orbiter has a combined switch for head lamp 'high / low beam' and 'pass-by' operation. To operate the pass-by, keep the switch in low beam position and gently press & release the switch. This makes the head lamp high beam to flash and signal the approaching vehicle. The pass-by signal can be used while overtaking during day time.

### Warning

Use appropriate head lamp beam 'high / low' as per the traffic and road conditions for your safety and to avoid inconvenience to other riders. It is strongly recommended to ride the vehicle in 'low beam' during day time and while there is oncoming traffic present.

## HANDLE BAR RIGHT SIDE




### 1. Ride switch

The TVS Orbiter comes equipped with an integrated ride switch, where the switch is utilized to deactivate the motor while keeping the other DC systems operational. To engage the kill function, push it towards the ' ' position. In this mode, the motor circuit is disabled, preventing the motor from starting.

To activate the motor circuit and start the motor, return the switch to the ' ' position. To initiate motor operation (enter ride mode), press the switch to the ' ' position while holding the brake lever.

### 2. Right hand brake lever

Front brake system can be operated by pressing the right hand brake lever gently towards the throttle grip. The brake lamp glows on application of either right hand or left hand brake lever.

### 3. Throttle

Vehicle speed is controlled by the rotation of the right throttle grip. Twist it towards you to increase the vehicle speed and twist it away from you or release it to decrease the vehicle speed.

### Caution

It is not recommended to add any additional throttle grip (cover).

### 4. Park assist switch

Park assist switch activates park assist mode and allows vehicle to roll forward or backward in restricted speed thereby to reduce the effort of parking by yourself. Refer page no. 43 for more details.

### 5. Mode switch

Mode switch allows to switch between following ride modes:

1. ECO mode
2. CITY mode

### Note

In park assist maximum speed in forward is approximately 5 km/h and in reverse is 3 km/h.

## SIDE STAND

Side stand can be operated with your left foot by pushing it away from the vehicle till it stops.

### Caution

Never sit on vehicle when it is supported by stands. Always park the vehicle on a flat, firm surface.

### Warning

Always retract the side stand to its full up position before moving the vehicle.

## TOOL KIT AND FIRST AID KIT

To assist you in performing certain basic and emergency repairs, a tool kit is supplied along with the vehicle and it is located below the seat base. A first aid kit is also included for use in case of emergencies. To access the tool kit, seat need to be opened. Follow the procedure given in the page no. 20 for the seat opening procedure.

The tool kit consists one number each of the following. Ensure the contents of the tool kit.

1. 10x12 mm spanner
2. Combination screw driver bit
3. Screw driver handle
4. Tool bag

**Caution**

It is recommended to use the tool kit in case of any emergency only. It is always advisable to take your vehicle to TVS Motor Company Authorised Dealers for any repairs or consultation.

**Warning**

Do not remove the tool kit and first aid kit from the vehicle. Always ensure to keep them along with the vehicle. Ensure the first aid equipments are changed periodically based on the date of expiry.

## TWIN HELMET SPACE

Twin helmet space is located below the seat. Lift the seat by unlocking the seat lock as explained in the page no. 20 to access the Twin helmet space.

**Caution**

**Twin helmet space has the storage space of 34 liters.**

Do not carry perishable items inside the utility box. It is not fully sealed. Do not allow / spray water to get inside the magic boot. Take care not to spill petrol or oil into the magic boot.

Do not keep heat-sensitive items inside as it may get hot on long rides. **Do not keep valuable items inside the magic boot when leaving the vehicle unattended.**

## EASY ACCESS BOX

TVS Orbiter is provided with easy access box, which has 2 liter storage capacity and used to hold your mobiles while charging.

**Warning**

Ensure that your mobile or any material stored is safely held with in the glove box front while riding.

## BAG HOOKS

There is a bag hook provided with your scooter to carry light luggage like carry bags weighing upto 3 kg. The hook is located below handle bar on the rear panel.

Pull out the hook from its position. Open the top lid and hang your cargo's. Lid will get close automatically. Push back the hook to its original position once it is free.

**Caution**

Care should be taken not to attach the luggage which hangs out of your scooter. Please note that the luggage attached to your scooter should not interfere your feet movement.

**Warning**

Operating the TVS Orbiter overloaded will hamper the riding stability and may lead to loss of control. Hence, it is advisable to carry the recommended amount of load only.

## SMART PHONE CHARGER*

This smart phone charging socket enables you to charge your smart phone when you are riding.

This USB - A type socket is located on the handle bar below the instrument cluster. Please go through the operating manual of the mobile phone and use a suitable USB - A type cable recommended by the mobile phone manufacturer for that particular model. Please follow the guidelines provided for the proper usage of the socket:

### DO's

1. Ensure that USB cable is fully inserted into socket.
2. Ensure that no water enters into the socket by closing the USB flap properly.
3. Use only mobile phone company's authorized USB cable for mobile charging.
4. Do make sure the flap is not damaged while opening / inserting the USB cable.

### DON'Ts

1. Do not leave the USB charging flap open / partially closed.
2. Do not attempt to use / charge by using multi-pin USB adapters / connect multiple devices simultaneously.
3. Do not try to force the USB connector in, check if it is inserted in the appropriate direction, to prevent damage.
4. Do not charge your mobile when the vehicle is in 'OFF' condition.
5. Do not use damaged cables to charge the mobile.
6. Do not use the port to charge other device like laptops or other high powered electronic devices. This port is for charging mobile phones only.

### Caution

Secure your mobile phone properly during charging and protect it from any liquid, dust etc.

The charging time of the mobile may vary, depending on the mobile battery's state of charge.

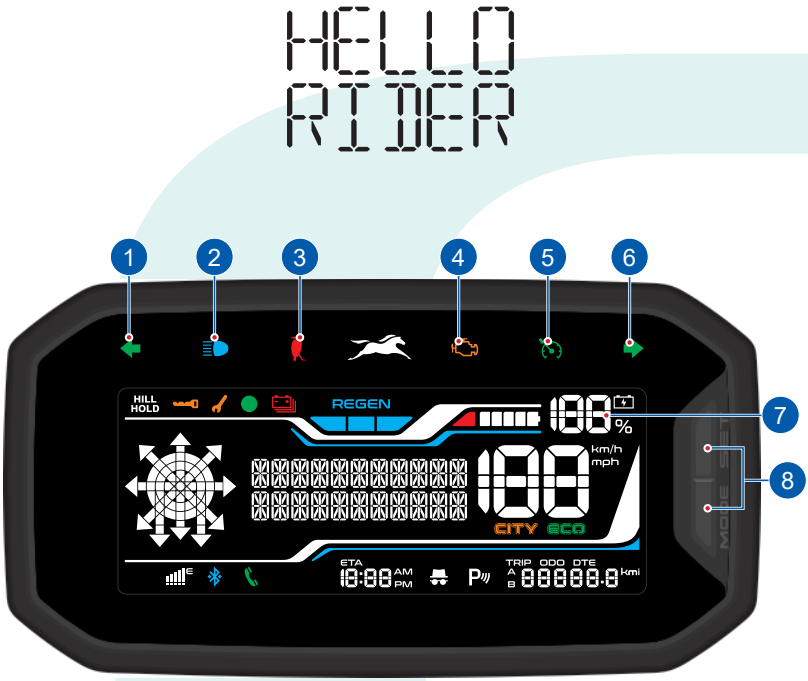
The flap in the unit has been designed to prevent water entry and it is not replaceable. **No warranty will be applicable for the charging socket.**

**** TVS does not bear any liability for damage caused to your device while it is connected to the accessory socket.***

## FULLY DIGITAL CONNECTED CLUSTER

The fully digital connected cluster of the TVS Orbiter boasts a wide range of innovative functionalities, complemented by informative tell-tale indicators.

Upon ignition, after self-check, the users are greeted with a welcoming message as illustrated, if your smart phone is not paired with the connected cluster. But if any phone was paired earlier through the TVS Connect mobile application, then the name of the person as stored in the app of the paired phone will be displayed instead of 'RIDER'. Various functionalities and tell-tale information of the meter are explained below in detail.



**1. Turn signal indicator lamp left ( )**

Flashes when the left side turn signal indication is activated.

**2. High beam indicator lamp ( )**

Glows either when the head lamp high beam or the pass-by is activated.

**3. Side stand indicator ( )**

The side stand warning indicator turns 'ON' to alert you whenever the vehicle's side stand is deployed. The vehicle will not start in this condition.

**Note**

**If the side stand is deployed the vehicle will not enter into drive mode. A message 'RETRACT SIDE STAND' will display on the notification area.**


**Retract the side stand fully to enter into drive mode and start riding.**

**4. Malfunction indicator lamp - MIL ( )**

Malfunction indication activation notifies you if there is an **impending warning or if there is a fault in the vehicle**. Depending on whether it is a warning or a fault you might need to contact nearest TVS Motor Company Authorised Dealers for diagnosis and troubleshooting.

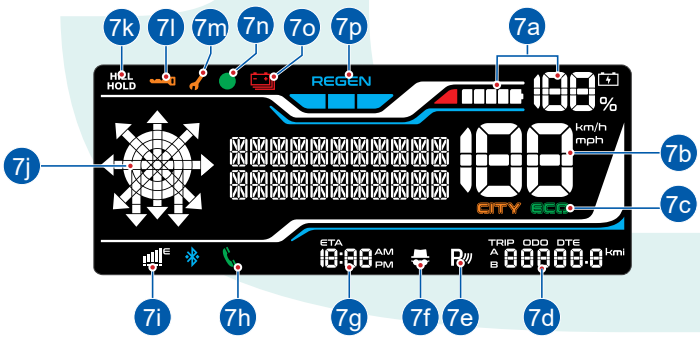
**5. Cruise control indicator ( )**

Cruise control indicator will blink while initiating the cruise function and will be 'ON' continuously when cruise control is active.

**6. Turn signal indicator lamp right ( )**

Flashes when the right side turn signal indication is activated.

**7. Multi function display**




**7a. Battery level indicator (SOC)**

Indicates remaining State of Charge of the vehicle's battery in percentage.

### 7b. Speedometer

Indicates vehicle speed in kilometers per hour.


### 7c. Mode indicator

Indicates whether the vehicle is in ECO or city mode.


### 7d. ODO, TRIP A, TRIP B, DTE


### ODO

Odometer registers the total distance covered by the vehicle in kilometer. The digit after the dot mark denotes one tenth of a kilometer.


### TRIP A & TRIP B

Trip meter indicates the trip distance traveled in kilometer. The digit after the dot mark denotes one tenth of a kilometer.

Provision is provided for the users to measure two different distances as per their convenience. Press the 'MODE' button on the cluster once to enter 'TRIP A' and twice to enter 'TRIP B' from 'ODO' mode. To reset any of the TRIP (A or B), press the 'MODE' button on the cluster for more than 5 seconds while the display is in respective TRIP and the vehicle is in static condition.


### DTE

DTE shows distance to empty, indicates the approximate distance that the vehicle can go with current level of battery charge, depending on riding pattern and road load.


**Note**

DTE is not an indication of the range of the vehicle.

### 7e. Park assist indicator 'P'

Park assist indicator turns 'ON' when the parking switch is pressed. Refer page no. 43.

### 7f. Incognito Mode ' '

Indicates that the incognito mode is ON. Refer page No. 33.

**7g. Digital clock, ETA**

**Digital clock**

Indicates the time in 12 hour time format (AM or PM). Clock is set automatically through the telematics unit on your vehicle. Time availability on the instrument cluster depends on connectivity to GPS satellites and network strength.


**ETA**

Indicates the estimated time of arrival of your desired destination while using navigation through TVS connect app.


**7h. Smartphone info**

'Smart phone info' displays your smart phone's Bluetooth, Call alerts and Message alerts when the connected cluster is connected via smart phone (TVS Connect App) Bluetooth ' '.

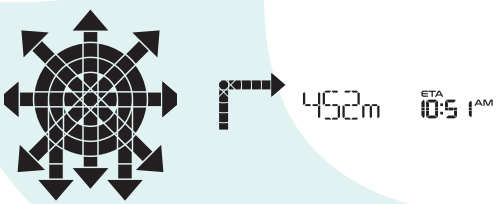
Once the cluster is connected with the smart phone, the cluster displays the call ' ' alert. If any alerts are received in the phone.

**7i. Telematics info**

The telematics info displays connection the strength of the telematics device. This is necessary to provide you with connected services and diagnostics, among other features.

**7j. Navigation window**

Once the vehicle is connected to app and navigation has been started on the app, the display of your TVS Orbiter connected cluster enters into navigation window and displays the turn by turn navigation instruction with a simple and elegant graphical representation.




**7k. HILL HOLD ASSIST ( HILL HOLD )**

Your Orbiter comes with a hill hold assist , which prevents the vehicle from rolling forward or backwards on an inclined road automatically when the hill hold feature is activated in cluster. To activate and deactivate hill hold refer page no. 32.

**7l. Crash/Fall Imobilization ( )**

Whenever the vehicle detects any crashes/falls, the vehicle is automatically immobilised for your safety and needs to be restarted (ignition on-off) to start mobility.

**7m. Service reminder ( )**

If the service is due, whenever the ignition is turned 'ON', an icon with spanner symbol ' ' turns on after the self-test cycle of connected cluster and continue to glow till the vehicle is serviced and the reminder is reset. An information message also will be popped-up in the notification area as shown:


Get the vehicle serviced at TVS Motor Company Authorised Main Dealer

**Note**

Service reminder indicator works only based on the distance (km) covered by the vehicle. This is only a reminder indicator. Customers are advised to keep track and follow the service schedule.

**7n. Over The Air (OTA) notification LED ( )**

A green colour LED indicator glows and indicates whether a vehicle software update is available for your TVS Orbiter. Refer page no. 43 for details.

**7o. Low battery indicator ( )**

It is yet another unique feature of your scooter which indicates you to charge the vehicle, when the charge percentage goes below minimum safe level indication starts at 5% SoC

**7p. Regenerative braking**

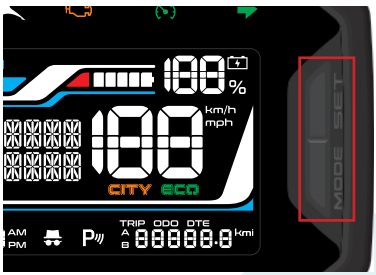
It recuperates energy lost during braking / deceleration of traction motor under specified conditions and charges the battery. Regen might not be active when the state of charge is high (higher the remaining range, lesser the regen) or when the battery temperature is high.

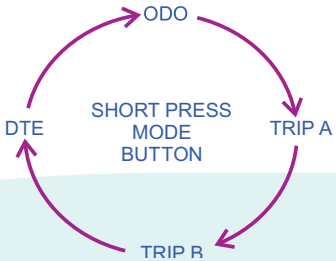

**7q. Notification area**

This is a general purpose notification area where the greeting message, various informations and warnings are displayed.

## 8. MODE AND SET SWITCH

'MODE' switch is used to change the mode between in ODO meter, ' TRIP A' and 'TRIP B'. 'SET' switch is used to set hill hold , switch on incognito mode and to erase stored values in various mode. Sequence of 'MODE' switch are as follows:




**TRIP A & B**

Trip meter indicates the trip distance traveled in kilometer. Refer page 29 for details.

**Resetting Trip A**

Press the 'MODE' switch once to change the display to 'TRIP A'. Now press the 'MODE' switch for 5 seconds to reset the respective TRIP data.

**Resetting Trip B**

Press the 'MODE' switch twice to change the display to 'TRIP B'. Now press the 'MODE' switch for 5 seconds to reset the respective TRIP data.

**Activate HILL HOLD**

By default during initial operation, Hill hold will be active. If deactivated, to re-activate hill hold, long press 'SET' button on the instrument cluster for atleast 3 seconds. A message 'PRESS MODE TO ACTIVATE HILL HOLD' will pop up in the notification area 2 seconds, press 'MODE' button now to activate Hill hold.

**Deactivate HILL HOLD**

To deactivate hill hold long press 'SET' button on cluster for atleast 3 seconds. A message 'PRESS MODE TO DEACTIVATE HILL HOLD' will pop up in the notification area for 2 seconds. Now press 'MODE' button to deactivate Hill hold. 'HILL HOLD DEACTIVATED' will be displayed for 2 seconds on the cluster.

**Note**

When the Hill Hold Control feature is engaged, the vehicle's motor may autonomously modulate its torque output to enhance vehicle stability while positioned on an incline. In the course of this operation, the rider may notice minor movement, as well as variations in motor noise or vibration. Such occurrences are inherent to the normal functioning of the system and are intentionally engineered to assist in maintaining vehicle balance and preventing unintentional rollback.

Though the Hill Hold functionality is designed to operate in most gradients however the feature might not engage at some extreme gradients, if battery charge is low, if tyre pressure is not as per specification and slippery/ice covered surfaces.

**INCOGNITO ON**

To turn ON incognito mode double press 'SET' switch. Once activated, Incognito ' ' sign on cluster will turn on Incognito mode will switch off the location tracking and navigation when enabled.

**Caution**

If vehicle incognito mode is activated, some of the connected mobile application features might not work like live tracking etc. Incognito mode will turn of automatically once the vehicle is turned off.

**Bluetooth paring mode ' '**

Using the Bluetooth pairing mode the connected instrument cluster of 'TVS Orbiter' can be connected to your Android™ smart phones and iPhone® via Bluetooth® through TVS CONNECT app which can be download from Google Play and the Apple store®.

## TVS CONNECT

First time Bluetooth paring:

To pair your Android smart phone or iPhone with your TVS Orbiter and TVS Connect, via Bluetooth, for the first time, follow the procedure described below:

1. Switch 'ON' the vehicle.
2. Instrument cluster can be in any mode for first time pairing.
3. To see cluster Bluetooth ID - be in ECO mode + ODO display + long press 'MODE' button . Cluster Bluetooth ID would be displayed in Alphanumeric in the cluster notification area. Ex : 'TVSBT00086255252'.


4. Open the 'TVS CONNECT' app login with credentials and press the '**CONNECT**' tab, while ensuring that the smart phone is near to the vehicle and Bluetooth is turned On.
5. The app searches for all Bluetooth devices near by and displays the list of devices available.
6. Now, select the right Bluetooth ID of the vehicle (EX: 'TVSBT00086255252') in app to initiate the pairing process.
7. On pairing, the connected cluster displays 'CONNECTION SUCCESSFUL' message for 3 secs and a Bluetooth icon ' ' will turned on continuously until the pairing condition exits.

**Note**

Once the smart phone is successfully paired with the connected speedometer, the rider's first and last name stored in the app will be displayed on the cluster notification area whenever the ignition is turned 'ON'.

8. If the Bluetooth connection gets disconnected, then the connected cluster displays the message 'RIDER DISCONNECTED' and the Bluetooth icon disappear instantly.

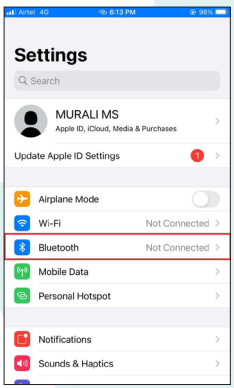

**Note**

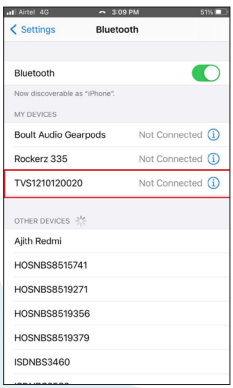
During the search of Bluetooth devices in app, if the vehicle's connected speedometer's Bluetooth device ID is not visible, try for one or two more iterations.

Only one device, android or iPhone can be connected at once. If the user needs to connect any other device the previous device has to be forgotten from the Bluetooth settings of the previous phone.

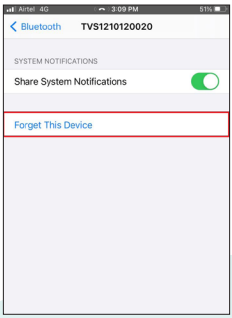
**Steps to 'Forget This Device' in iPhone:**

If the user needs to a different iphone with the cluster iPhones with the connected cluster, the previous iPhone has to be forgotten using 'Forget This Device' from Bluetooth settings in the following manner:



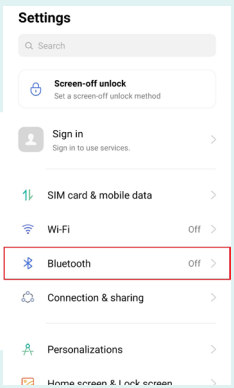



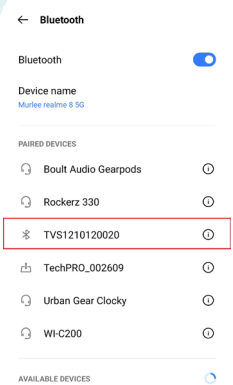
1. In the previous connected iPhone, open the SETTINGS -> BLUETOOTH.
2. Select the instrument cluster, which was connected previously.
3. Click on the 'Forget this device'.



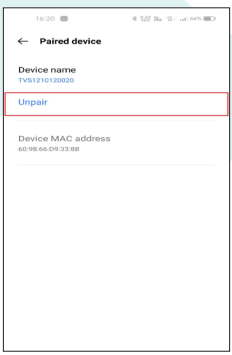

**Steps to 'unpair' in android Phone:**

If the user needs to connect different android Phones with the single instrument cluster, the previous android Phone has to be forgotten using 'unpair' from Bluetooth settings in the following manner:




1. In the previous connected android Phone, open the SETTINGS -> BLUETOOTH.
2. Select the instrument cluster, which was connected previously.
3. Click on the 'Unpair'.



**Auto pairing**

Once the first time pairing is done between vehicle's connected cluster and your smart phone, the phone will automatically connect with the vehicle when the following conditions are met:

1. Vehicle is switched 'ON' and vehicle is near to the smart phone.
2. Smart phone's Bluetooth is turned 'ON'.
3. First time pairing is ensured.
4. In case of iPhone, the 'TVS CONNECT' app should be opened or be opened in background for auto-pairing to happen.

Every time auto-pairing happens, app will open automatically and connect with the cluster. The connected cluster displays 'CONNECTION SUCCESSFUL' message at the notification area.


Once the connected cluster of your TVS Orbiter is connected with your smart phone, the connected cluster displays Bluetooth '' icon,

If your smart phone is disconnected from the vehicle's connected cluster then, 'RIDER DISCONNECTED' message will be displayed on the connected cluster's display.


**Note**

If the phone enters battery saver mode, auto-connection might not happen. It takes maximum of five minutes for auto-connection and it can happen in vehicle running or idling condition.

In case of Android phones with Android OS version above 9.0, for App to work seamlessly, any battery optimization setting to be removed in the TVS Connect App and GPS shall be allowed to run in background in high accuracy mode.

Even if your phone's Bluetooth is already paired to other gadgets like smart watch, health band or helmet, the auto-connection works with your TVS Orbiter SmartXonnect's connected speedometer.

**Incoming call alert display ' ' **

The connected cluster's TFT will display the incoming calls alerts from the smart phone via Bluetooth. Ex. 'CALL FROM ARAV', will be displayed if the contact is stored in the smart phone otherwise number will be displayed. Ex. 'CALL FROM 9999999999'.


Incase if the incoming call is missed, the number of missed calls will be displayed as shown below for 10 seconds.


**Navigation assist**

Once the navigation option is enabled on the mobile app, the cluster enters the navigation mode and displays the below message:


Once the Turn-by-Turn navigation route is synchronized with mobile app, the same will be indicated by the cluster to the user using the alpha-numeric display as shown below:


If the route suggested by the app is not followed by you, re-routing will be done by the app and the same will be displayed by connected cluster:


Similarly, when you reached your destination, the connected cluster displays arrival message as shown below:


**Note**

The time remaining and distance remaining to reach the destination will be displayed for 5 seconds when the mode button on the cluster is pressed and when the navigation assist is enabled.

## TVS CONNECT APP

A dedicated smart phone app is available in the Google Play and the Apple store for your 'TVS Orbiter' and it can be installed in your Android and Apple smart phones. This app allows access to certain features of your vehicle, such as but not limited to:

- Remote monitoring of charging status – The charging status of the vehicle can be checked using your (TVS Connect app) even if you are not near the vehicle.
- Live tracking – The live status of the vehicle can be checked remotely at any time using TVS Connect app prescribed for this vehicle.
- Geo-fencing – The telematics system can be set to provide alerts if your vehicle is moved out of a set geographical boundary (can be defined through mobile app).
- Theft notifications – The telematics system can be used to track unauthorised usage but cannot prevent it. The system will notify the unauthorized movement of a vehicle with live location status. The notifications can be checked on the mobile app.
- To send navigational assist instructions inputs to the connected speedometer from your smart phone.
- To save the last traveled route.
- To access the last parked location of your TVS Orbiter.
- To generate and store ride reports.

This dedicated mobile app of your TVS Orbiter can be downloaded from the Google Play store and the App Store® by searching the key word '**TVS CONNECT**' else by scanning the below QR code.

**Android**

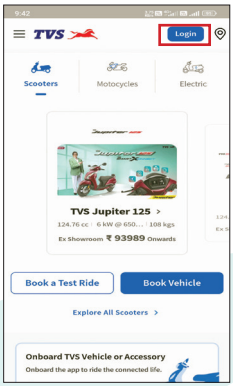
**iOS**

**Note**

This smart phone app is compatible only for the smart phones with Android OS version pie (9) and above, iOS version 9 and above. The BLUETOOTH version should be 4.0 and above. Android and Google Play are trademarks of Google LLC. App Store® and iOS are trademark of Apple. Certain features of the app might be only available through a paid subscription package. Features dependent on telemetry might not function as intended in case of poor network connectivity and visibility of GPS satellites.

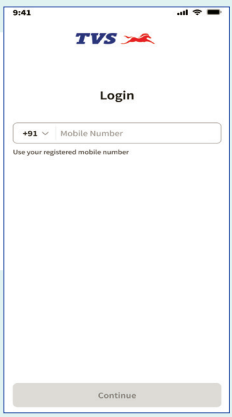
**How to login**

On opening the **TVS CONNECT** app the following introduction screen will be displayed. Click on the 'Login' tab provided at the top of the screen to begin a login process.




On entering the login screen you will be prompted for your registered mobile number entry. Enter the mobile number and press 'Continue' tab to proceed further.

Now, an OTP verification screen will get open. Key-in or copy & paste the OTP received from TVSM to login.





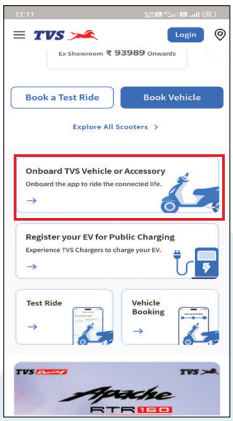
**Note**

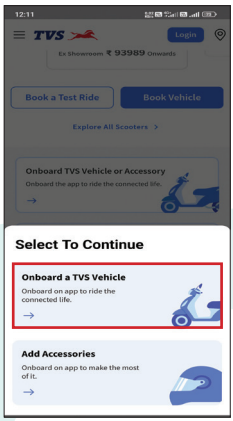
During login process, you will be prompted for various permissions by the App. Please provide access to all permissions requested for correct app functionality.

## Onboarding TVS Vehicle

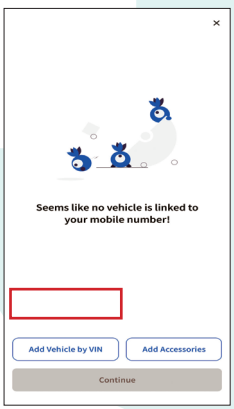
You can onboard your TVS vehicle into the App by following the procedure given below:

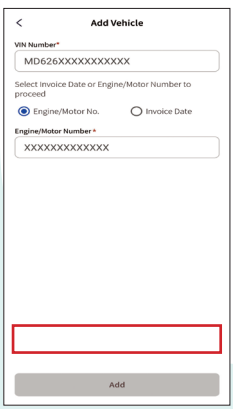
- Scroll down the initial screen and click on the 'Onboard TVS Vehicle or Accessory' tab and select the 'Onboard a TVS Vehicle' option.




- On selecting this option, a screen with options of adding your vehicle or accessories will get open Select the 'Add Vehicle by VIN' tab of the screen.
- Provide VIN and Motor No. or Invoice details in the requested columns
- Key-in the necessary data to add the required vehicle and press the 'Add' button at the bottom of the screen.




**Note**

Refer App help for complete details.

On successful login, the application screen will display live status of the connected vehicle like SOC, ODO, ride summary etc.


**Note**

Please ensure that you enter the mobile number used while invoicing and while first time onboarding a vehicle. After completing a trip, whenever the vehicle is switched on again, TVS Connect App will auto reconnect to vehicle.

If all permissions have been provided to the app and no power saving measures have been activated internally by your device.

**Warning**

TVS Motor Company Limited does not recommend usage of any type of Mobile or Hand Held Devices, and applications / features whether installed or associated with the vehicle which deprives the rider's attention and focus while riding the Two Wheeler. The customers and riders are strictly advised to understand the applicable laws, road safety Rules and the local laws on usage of electronic devices while operating the vehicle. Usage of any Mobile or hand held devices, and / or applications / features while riding the vehicle is on move is totally at customer's / rider's risk. The product and features have technical limitations and are for general overview only.

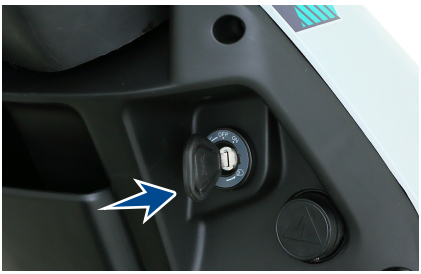
**Note**

TVSM has developed the mobile application (TVS Connect) in order to provide navigation services. TVSM may use the personal driving data details to provide assistance to locate and track the vehicle on good effort basis.

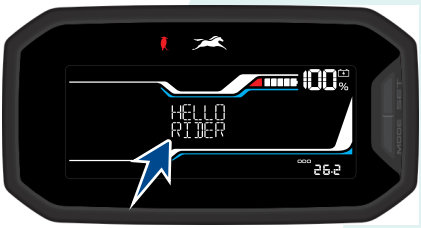
By purchasing TVS Orbiter, Customer acknowledges and consent to the collection and utilization of vehicle Telematics data, including but not limited to battery performance, number of kilometers the vehicle has run, for the use of connected features for TVS Connect app by the Customer. The information relating to the vehicle collected by TVSM does not include any personal information provided by you, shall be deemed to be TVSM proprietary information and shall be solely owned by TVSM. TVSM may use such information in the manner deems fit and necessary.

## DRIVING THE VEHICLE

Switch on the vehicle by turning the key clockwise to 'ON' position.



The instrument cluster will perform self check and a welcome message along with Rider name (if configured through app) for few seconds and vehicle will enter into idle mode.




**To activate the drive mode of the vehicle-**

Activate the 'Motor' by pressing the switch to Motor 'On' position.

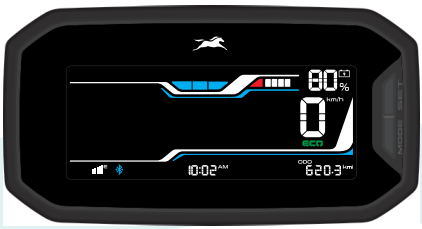

Press ride switch again to '⚡' position and either one of the brake lever simultaneously until you hear a beep sound.


Once the vehicle is activated, it will enter into ECO mode-

Give throttle to drive the vehicle in ECO mode or press mode switch again to drive in city mode.

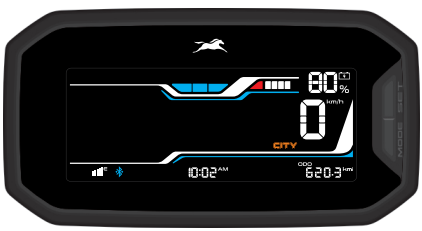
### ECO MODE

- While in City mode, press vehicle mode switch to enter in ECO mode.
- In this mode the vehicle speed reaches up to 45 km/h.
- You can attain more range as compared to city mode.




### CITY MODE

- While in ECO mode, press vehicle mode switch to enter in city mode.
- In this mode the vehicle speed can go above 45 km/h.
- This mode will provide better acceleration than ECO mode.



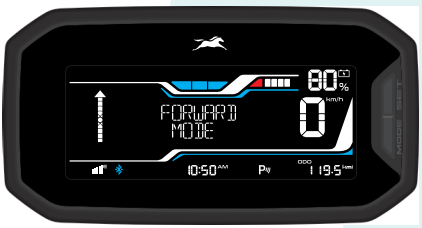

**Note**

Vehicle mode cannot be changed during re-generative braking.

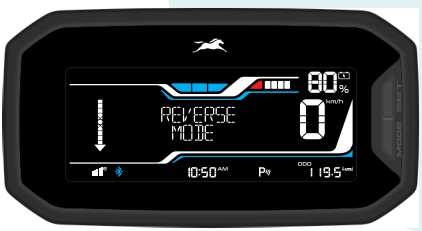
## PARKING THE VEHICLE

- User can select Park assistance while parking, by pressing park assist switch add Park assist symbol ' P ' & either of the brake switch simultaneously.

- The vehicle will enter into park assist forward mode as indicated on the cluster, apply throttle to move forward.




- Press park assist switch once again, for shifting to reverse mode as indicated on the cluster, apply throttle to move in reverse direction.




- During forward movement the speed is limited to approximately 5 km/h and during reverse speed is limited to approximately 3 km/h.
- To exit park assist press the mode switch.

**Note**

Park assist will be activated only when vehicle speed is 0 km/h.

**Caution**

While using the reverse park assist mode, be aware of your surroundings and alert since vehicle maneuvering work opposite of that in forward operation mode.

### OTA (Over the Air)

The software of your vehicle can be updated remotely whenever a new software is released via OTA (over the air). The update gets downloaded via telematics unit automatically, when the update is available.

OTA software is downloaded in the background if good network connectivity is available. Once the software is downloaded OTA notification ( ● ) will glow.

If the OTA notification glows green follow the below steps to start the updating of the vehicle Software.:

- Long press 'MODE and SET' button on cluster simultaneously to initiate the software update.


- The vehicle will ask for user consent for updating the software.
- Now press 'SET' to start the software update.
- Wait for atleast 30 minutes (depends on the software package) for successful OTA software update of the intended control units.

**Incase if your OTA update has failed:**


1. If OTA update has failed, Cluster will display Software installation failed message and screen will transform to idle screen after 5 seconds.
2. TCU will start flashing the baseline software for VCU, BMS, MCU & TCU after 10-15 min without any intervention from the user, this is called Rollback Flashing.
3. Rollback flashing will be only attempted 3 times, before being considered complete failure.
4. After rollback flashing starts, screen will change to Software update progress.
5. Rollback flashing will be completed within 30-35 minutes depending on the baseline package size.
6. Same DO's and DON'Ts for regular flashing to be followed.
7. The overall time taken from general OTA failure to complete rollback flashing is around 45 minutes.
8. TCU will take up to 15 minutes to start flashing rollback software from failure time.
9. If the OTA rollback flashing fails consecutively after 3 retries, then rollback will not be attempted furthermore.
10. For recovery in case of OTA and Rollback failure, contact nearest **TVS Motor Company Authorised Dealers** for recovery of the vehicle.

**DO'S:**

- Please charge the vehicle to at least 20% before attempting to update the Software.
- Keep the vehicle in Idle mode before approving software update.
- Keep the vehicle Ignition in ON condition while updating, even if the screen goes blank or vehicle stops responding, wait for at least 30 min. This ensures that the maximum time taken for flashing of all controllers is covered.
- Ensure that the vehicle is not disturbed during entire flashing process (Do not use throttle, side stand, switches etc.)

**DONT's**

- DO NOT switch OFF the vehicle once software update process has started.
- DO NOT move the vehicle till the software update completes, keep the vehicle in Idle position.
- DO NOT switch OFF the vehicle ignition if update is clicked in the software screen.
- DO NOT connect charger if update is clicked in the software screen.
- DO NOT turn off the ignition anytime during OTA update or rollback, even if the display goes blank or the update seems stuck.

## CHARGING THE VEHICLE

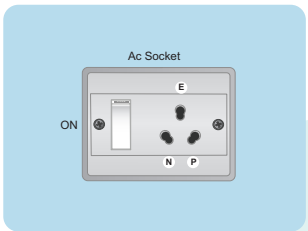
### CHARGER SOCKET

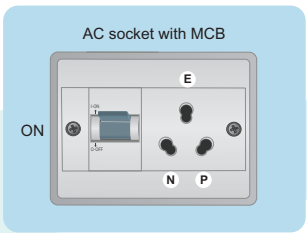
The Phase, Neutral & Earth terminals should be placed as per the image.

Use the Tester to find out the Phase line.

**Caution**

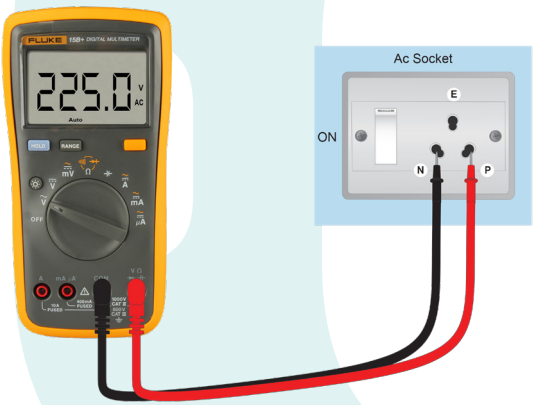
Any electrical work should be performed by authorized electrician only. Failure to do so might result in sever injury or risk to life.




A separate MCB switch is good to have for charging socket

### Multimeter




- The multimeter should be in AC voltage checking mode to check AC voltage in the socket.
- As shown in this picture, you can check the input voltage of the available socket.
- Normally the reading would be 230 ± 5V.

**Note**

Multimeter selector should be as shown in the picture for measuring AC voltage of domestic power socket.

The selector position will vary in each multimeter brand.

Red & Black couplers need to be connected as shown in the picture with Multimeter as well as the domestic 5 Amps power socket.

**Good to do for charging the vehicle at your home :-**

1. Ensure that domestic wiring is properly grounded.
2. Ensure that socket is having earth connection.
3. Use 16A socket with MCB (attached image) for charging (Charger will work in 5A socket also).
4. Install surge protector / voltage regulator.

**Must do for charging the vehicle at your home :-**

1. Connect to single phase power supply only.
2. Insert the AC adapter fully into the socket.
3. Check if Green light is glowing in RCD.
4. Domestic wiring earthing is must to avoid electrical shock on charger body
5. Manually press the Test & Reset buttons on RCD once to verify RCD tripping (safety feature to prevent electric shock) (Refer page no. 47 for details).

**Caution**

1. You should adhere to the electric tester usage guidelines.
2. Input AC voltage should be within the range of 220 to 240V.
3. Need to ensure proper earth connection in the AC domestic power socket.
4. Do not use extension cable or box to charge the vehicle for safety purpose.
5. Plug the charger in Single phase AC domestic socket only.
6. Proper installation of power socket /board along with separate MCB and fuse should be ensured.
7. Cables utilized for socket connection, should be free of tapping and cuts.
8. Power socket cables should be properly routed without any hanging cables and must be enclosed in a conduit.
9. The charging location should be separate and away from other vehicles or combustible materials and in well-ventilated areas.
10. Unattended charging of the vehicles should be avoided.
11. The charger should be stored in a clean, dry, and ventilated place.
12. Charger should be placed away from the vehicle while charging.
13. The charger fan and side vents should not obstruct and fan should be upward facing while charging.
14. Never spray water or any liquid directly on the charger.

## VEHICLE CHARGING

**Charger**

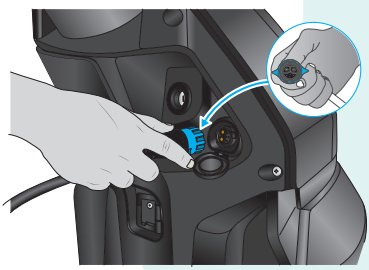
AC 3 Pin plug with Residual Current Device (RCD).

**Note**

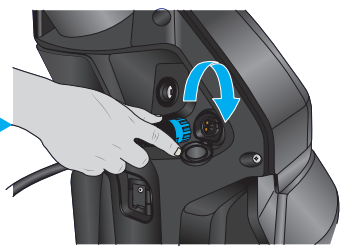
The charger shown is for representative purposes and might be different to that supplied. Depending on charger variant or rated power of charger, a 15A plug might be required for charging.

## ON BOARD CHARGING

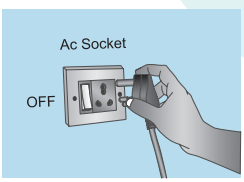
**CONNECTING FOR CHARGING***



Plug in cable to vehicle charging socket



Rotate clock wise




Plug in cable AC end to AC socket


RCD Power LED will glow once the switch in AC Domestic socket is turned ON.

## RCD STATUS


### Green light

Charger is working fine and vehicle will charge.

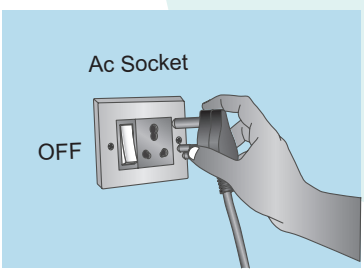

### Red light

High ac voltage supply tripping or earth leakage fault or test button is pressed - in all above cases red indicator will be on and charger will be disconnected from supply. if red led glows then manually reset button to be pressed to continue the charging

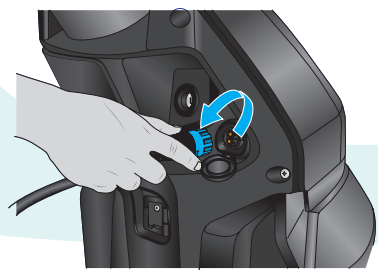

### No light

Check power out from the AC socket.

## DISCONNECTING CHARGER




Turn off and take out cable AC end from AC socket



Rotate counter clock wise to plug out cable other end from vehicle charging socket & close vehicle charging socket cap

**CHARGER DO's & DON'Ts**

1. Never use the charger with damaged housing or cable.
2. Never modify a charger or open its housing.
3. Connect the charger to a regular outlet only.
4. Never carry the charger by its electrical cable or pull at the cable.
5. Do not use charger if AC plug or DC pin is bent & take to nearest dealer.
6. For charging always connect the charger input plug into the power socket and charger connected to the vehicle before switching on the power supply.
7. Do not place the charger upside down (Fan facing downwards)
8. Do not keep the charger inside utility box while charging
9. Do not use charger near hot surfaces / combustible materials
10. For disconnection of the charger, remove it through the plug and not by pulling the cable.
11. Do not carry the chargers by pulling the wires. Always use the handle to carry the charger.
12. Do not apply excessive force on AC & DC cables of charger.
13. Do not keep charger on top of plastic cover/towel or other flammable substances.
14. Charger fan should not be covered during charging.
15. Charger should be kept away from dusty environments / pets as it may block cooling fan.
16. Do not open charger back plate & do not attempt to service or repair components. Doing so will result in termination of warranty.
17. Use original TVSM recommended spares & accessories only.
18. Don't use the charger in the rooms and areas with high intensity of electromagnetic disturbances (Eg: Surgical equipment room, RF shielded room etc.).
19. Never immerse in water or any other liquids.
20. Don't use chemical cleaning agents.
21. Use dry cloth only to clean the surface.
22. Disconnect the charger before cleaning the charger. Do not leave the connector on the ground to avoid damage through dust and water ingress.
23. The charger is maintenance free. In case of any faults, kindly contact the nearest dealer.
24. The charger should be stored in clean, dry environment only. It should not be stored in corrosive, or with other fluids which might be harmful to it.

## MAINTENANCE

### MAINTENANCE SCHEDULE

The maintenance schedule indicates the intervals between periodic services. At the end of each interval, be sure to inspect, check, replace, adjust, lubricate and service as instructed. If the maintenance is not done periodically, it will result in rapid wear and severe damage to the vehicle. If the vehicle is used under high stress conditions such as continuous full throttle operation or is operated in dusty area, certain jobs should be performed more often to ensure reliability of the vehicle. Steering components, suspension and wheel components etc., are key items and require very special and careful servicing.

**TVS Motor Company Limited strongly recommends that the jobs as per the maintenance schedule be performed by your TVS Motor Company Authorised Dealers.**

Periodic inspections may reveal one or more parts that may need replacement. Whenever replacing parts on TVS Orbiter, it is recommended that you use only the TVS Motor Company Genuine parts.

**Caution**

Proper running-in and maintenance are mandatory for making certain that your vehicle is reliable and gives optimum performance at all times. Make sure that the periodic maintenance is performed thoroughly in accordance with the instructions given in this owner's manual.

## PERIODIC MAINTENANCE SCHEDULE (months or km whichever occurs earlier)

| List of Operations | Job Description | Schedule | | 1 ST Service | 2nd Service | 3rd Service |
|---|---|---|---|---|---|---|
| | | Inspect/ Clean/ Lubricate/ Top-Up after Every | Replace at Every | 4000 km / 6 Months | 8000 km / 12 Months | 12000 km / 24 Months |
| Steering operation | Inspect and Adjust | 4000 km | - | I & A | I & A | I & A |
| All critical fasteners (Front and Rear wheel nuts, Side stand switch, Swing Arm) | Inspect and Torque | 4000 km | - | I & To | I & To | I & To |
| Side Stand and Center Stand (optional) pivot | Clean / Inspect-Check / Lubricate | 8000 km | - | - | C, L & A | - |
| All Electrical indicators and cluster functions | Inspect | 4000 km | - | I | I | I |
| Tyre pressure Front & Rear at cold condition | Inspect and set | 4000 km | - | I & S | I & S | I & S |
| Brake cam and shoe wear Front & Rear | Inspect, Clean and Lubricate | 4000 km | - | I & A | C, I & A | I & A |
| Brake effectiveness and play | Inspect and adjust | 4000 km | - | I & A | I & A | I & A |
| Charger and charging operation | Inspect and replace incase of cable wear | 4000 km | - | I | I | I |
| Fork oil | Replace | - | 24000 km | - | - | R |
| All terminals and couplers | Inspect & Check | 4000 km | - | I & C | I & C | I & C |
| Rear wheel noise and free rotation | Inspect & Check | 8000 km | - | - | I & C | - |
| Reset Service Reminder and check for DTC's and Software versions using Diagnostic Tool | Reset and Check | 4000 km | - | Re & C | Re & C | Re & C |

R - Replace; I - Inspect; To - Torque; C - Clean; A - Adjust; L - Lubricate; S - Set

Contd...

| List of Operations | Job Description | Schedule | | 4Th Service | 5th Service | 6th Service |
|---|---|---|---|---|---|---|
| | | Inspect / Clean / Lubricate / Top-Up after Every | Replace at Every | 16000 KM / 36 Months | 20000 KM / 48 Months | 24000 KM / 60 Months |
| Steering operation | Inspect and Adjust | 4000 km | - | I & A | I & A | I & A |
| All critical fasteners (Front and Rear wheel nuts, Side stand switch, Swing Arm) | Inspect and Torque | 4000 km | - | I & To | I & To | I & To |
| Side Stand and Center Stand (optional) pivot | Clean / Inspect-Check/ Lubricate | 8000 km | - | C, L & A | - | C, L & A |
| All Electrical indicators and cluster function | Inspect | 4000 km | - | I | I | I |
| Tyre pressure Front & Rear at cold condition | Inspect and set | 4000 km | - | I & S | I & S | I & S |
| Brake cam and shoe wear Front & Rear | Inspect, Clean and Lubricate | 4000 km | - | I & A | C, I & A | I & A |
| Brake effectiveness and play | Inspect and adjust | 4000 km | - | I & A | I & A | I & A |
| Charger and charging operation | Inspect and replace incase of cable wear | 4000 km | - | I | I | I |
| Fork oil | Replace | - | 24000 km | - | R | - |
| All terminals and couplers | Inspect & Check | 4000 km | - | I & C | I & C | I & C |
| Rear wheel noise and free rotation | Inspect & Check | 8000 km | - | I & C | - | I & C |
| Reset Service Reminder and check for DTC's and Software versions using Diagnostic Tool | Reset and Check | 4000 km | - | Re & C | Re & C | Re & C |

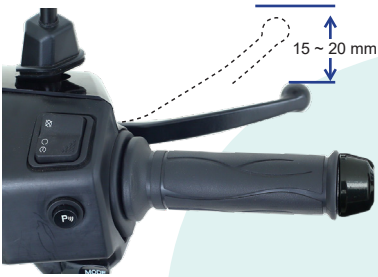
R - Replace; I - Inspect; To - Torque; C - Clean; A - Adjust; L - Lubricate; S - Set

## SELF - MAINTENANCE PROCEDURES

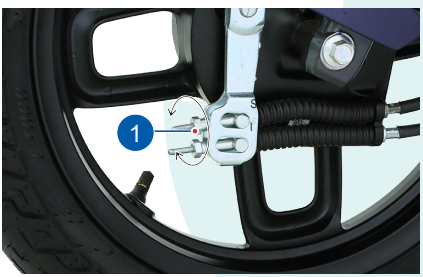
### BRAKES

#### Front brake

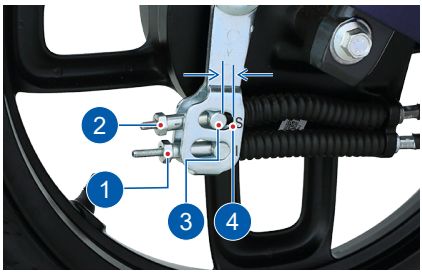
1. Measure the free play of the front brake lever at the lever end as shown in the figure.
2. The free play of the brake lever before the engagement of brake should be between 15 ~ 20 mm.



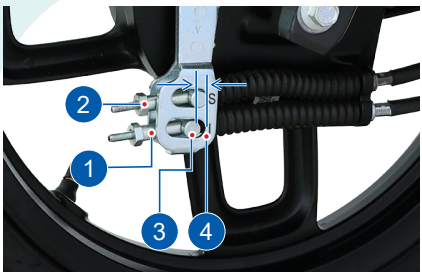

3. Turn the adjuster nut at the bottom side (1) in the slot marked as 'I' in clockwise direction for reducing the free play or in anti-clockwise direction for increasing the free play.




4. After obtaining the necessary free play, inspect for the clearance between the bullet (3) and slot end (4) marked as 'S' as shown in the figure.




5. If any clearance is found, turn the adjuster nut (2) at the top side in the slot marked as 'S' in clockwise direction until there is no clearance between the bullet top (3) and the slot top (4).



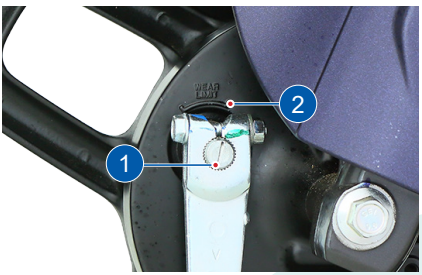

6. After adjusting the adjuster nut top, If any clearance is observed in between the bullet bottom (5) and the slot bottom (6) marked as 'I' as shown, then turn the adjuster nut (2) in anti-clockwise until there is no clearance.
7. Once again check and confirm the brake play at the lever end.

**⚠ Warning**

**Since the vehicle is fitted with Synchronised Braking Technology (SBT) adjust the brakes with additional care. If not it may result in brakes not working properly.** Please contact TVS Motor Company Authorised Dealers for further assistance.

**Front brake shoe wear indicator**

When the brake is applied, wear limit index mark (1) on the front brake cam should be within the wear limit indicator (2) on the front brake panel.




Incase the wear limit index mark (1) is going beyond wear limit indicator (2), index the lever to next slot with the help of the Dealer to extend the shoe life.

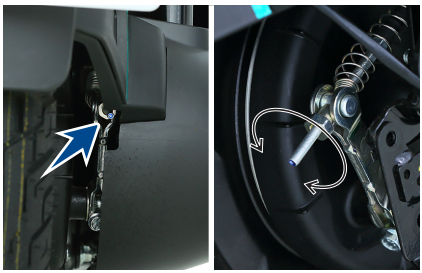
**Caution**

Replace the brake shoes as a set, if the wear limit indicator shows beyond the wear limit even after indexing the lever.

**Rear brake**

1. Measure the free play of the rear brake lever at the lever end as shown in the figure.
2. Free play of the brake lever before the engagement of brake should be between 10 ~ 15 mm.


3. If the measured distance is more than the limit, adjust the nut provided at the rear wheel end to obtain the correct play.



4. Turn the adjuster nut in clockwise direction for reducing free play or in anti-clockwise direction for increasing the free play.

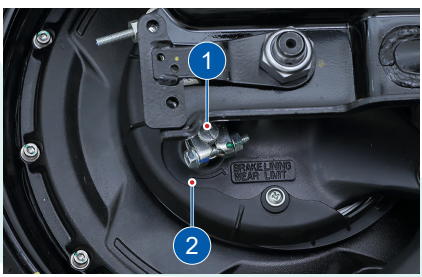
**Warning**

Check the front brake and the rear brake play periodically band adjust if required. However the brake play needs to be adjusted more frequently depending upon the usage.

**Brake shoe wear indicator**

When the brake is applied, the wear limit indication pointer (1) on the rear brake cam lever should be within the wear limit indicator (2) on the crankcase LH.

In case the wear limit indication pointer (1) is going beyond wear limit indicator (2), index the lever to next slot with the help of Dealers to extend shoe life.



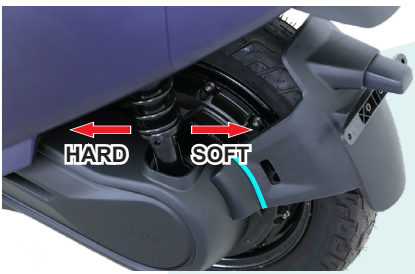

**Caution**

Replace the brake shoes as a set, if the wear limit indicator shows beyond the wear limit even after indexing the lever.

## REAR SHOCK ABSORBERS

TVS Orbiter is provided with 5 step adjustable rear shock absorbers to meet different road and load. There are 5 notches for adjusting spring load.

If the spring is adjusted to the minimum notch, then the shock absorber will be softer which is good for light loads. If the spring is adjusted to maximum notch, then it will be stiffer which is good for heavy loads.




**Caution**

Keep both left and right shock absorbers spring adjusters in the same position. Adjust step by step. Do not go at a stretch as it will damage the cam.

Adjust the spring pre-load by shifting the adjuster to the required notch according to the different load conditions. The more you compress the spring, the suspension becomes more stiff.

## TYRES

### Tyre pressure

Check the tyre pressure atleast once in a week if not more frequently. Insufficient air pressure in the tyres not only hasten the tyre wear, but also seriously affects the stability of the vehicle.

Under inflated tyres make smooth cornering difficult and over inflated tyres decreases the tyre contact with the ground which can lead to skidding and loss of control.

Be sure that the tyre pressure is within the specified limit at all times.

Tyre pressure in cold condition:

| | Solo | Dual |
|---|---|---|
| Front | 1.68 kg/cm$^2$ (24 PSI) | 1.68 kg/cm$^2$ (24 PSI) |
| Rear | 2.39 kg/cm$^2$ (34 PSI) | 2.53 kg/cm$^2$ (36 PSI) |

### Tyre tread condition

Operating the vehicle with excessively worn tyres will decrease riding stability and can lead to loss of control. It is recommended to replace the tyre when the tyre wears off to the tyre wear indicator level (indicated by TWI (A) on the tyre).


### Tyre rotation direction

While reassembling the tyres, after removing from the wheel rim, ensure that the arrow mark is facing the direction of wheel rotation while fixing the tyre on the wheel rim.

**Tyre puncture**

Your scooter is fitted with a tubeless tyre on both front and rear wheel. Incase of any puncture / tyre damage, it is advised to visit the nearest tyre manufacturer Dealer or the tyre repair shops who knows the repairing method of tubeless tyre.

It is not necessary to remove the tyre from wheel rim always to attend a puncture.

Even though, if there is need of tyre removal, it is strongly recommended to use a tyre removal / fitment machine.

If at all, tyre levers needs to be used, the levers should be free from sharp edges. Care should be taken not to damage the tyres and rims.

**Warning**

The tyre inflation pressure in cold condition and the tyre tread condition are extremely important for the performance and safety of the rider. Check the tyres frequently for inflation pressure as well as the wear pattern on it.

Use of a tyre other than the standard may cause instability.

**Caution**

The side walls of the tubeless tyre which in contact with the wheel rim are only seals the air inside the wheel assembly. Hence care should be taken not to damage the side walls of the tyres during removal / reassembly.

**Note**

Tyre pressure is a very important parameter in the daily operation of the vehicle. In order to extract the best possible range and performance.

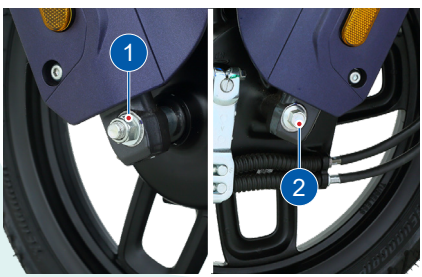
**Tyre maintenance tips**

If vehicle is in hold condition for long time.

1. Need movement of vehicle to avoid particular spot of tyre not to touch the ground for more than week time.
2. Inflation pressure should check on cold condition.
3. Weekly basis inflation pressure check helps to improve 10% of tread life & range.

**FRONT WHEEL REMOVAL AND REASSEMBLY**

1. Remove the axle nut (1) along with a washer.
2. Pull out the axle (2) along with a washer and take out a spacer from the left side of the wheel.
3. Place a support below the foot board to prevent the vehicle from falling and lift the vehicle up.
4. Dislocate the wheel assembly along with brake the panel from front fork. Separate the brake panel from the wheel and take out the wheel.
5. Reverse the procedure for reassembling. While reassembling ensure to locate the lug on fork leg L to the slot in the brake panel.




**Warning**

Always make sure, whenever the wheel is removed, the axle nuts are tightened properly to the specified torque.

## WARRANTY AND SERVICES

**TVS Motor Company Limited ('the Company') give this warranty with respect to the TVS Orbiter manufactured by the Company.**

While the Company has taken every care to maintain quality in the manufacture of the TVS Orbiter V1 & V2, the above said warranty is subject to other terms of warranty :

**Warranty is applicable during 3 years from the date of purchase or first 30,000 km run for TVS Orbiter V1 and during 3 years from the date of purchase or first 50,000 km run for TVS Orbiter V2, whichever is earlier for parts like battery, motor, controller and charger etc.** In the event of a change in vehicle ownership, the remaining warranty period is effective for the new owner

The Company's obligation under this warranty is limited to repairing or replacing, with new or equivalent of the affected parts at no cost to customer for part or labour. The affected parts must be proven to Company's satisfaction to have manufacturing defect due to faulty material or workmanship and in such cases the Company's decision either to repair or replace the affected parts will be final. In the event of replacement of parts, the Company also reserves the right to use parts of the same brand as the affected parts or any other brand which is used by the Company in the course of manufacture. All parts replaced under this warranty will become the property of the Company and must be returned to the company.

**Limitations of Warranty :**

The warranty does not cover damage or defects arising from the following conditions:

1. Misuse, abuse, or neglect of the Vehicle or the Battery, such as but not limited to:
   - The original serial number on the frame, motor or Battery being removed, distorted or altered.
   - The Battery cover is damaged or broken.
   - Battery cover is opened or attempted to open by force.
   - Short circuit due to misuse or wrongful testing.
   - Uneven charging of all the Batteries in a Vehicle.
   - Leaving battery under fully discharged condition for a long time. (Vehicles should be charged to 30% SOC atleast once in 15 days).
   - Replacing/swapping of the Battery associated with a given Vehicle, with that from another vehicle.
   - Not using Manufacturer recommended charger for charging of the Battery along with or in exclusion of the Vehicle.
   - The Vehicle not being at rest for at least 3 hours in a day
   - Exposure of Battery to direct sunlight or radiation of heat (above 25°C). Any natural wear and tear, including without limitation, aging.
2. Warranty claims on proprietary items such as tyres, tubes etc, should be preferred by the user directly on the respective manufacturer, as per their warranty terms and the Company shall not be liable in any manner in respect to the same.
3. Parts repaired or replaced under this warranty are warranted only throughout the remainder of the original warranty period.
4. The Company is not liable for any delay in servicing due to reasons beyond the control of the Company or any of its Authorised Main Dealers.
5. In any event, the Company is not liable for indirect, remote, incidental or consequential damages.

6. The Company may make any modification or improvement to vehicles in future production at any time without prior notice and without any obligation to install the same on vehicles previously dispatched for sale.
7. Any claim under this warranty will be valid only when the customer:
   - Takes his vehicle to an Authorised Main Dealer of the Company and reports the problem he / she felt in the vehicle to enable the Authorised Main Dealer to inspect the same and assess the cause for the reported problems.
8. This is the only warranty given by the Company for the TVS Orbiter. No employee, Dealer or other persons authorised to extend or enlarge this warranty.

**⚠ Warning**

Modifications to this vehicle not approved by the TVS Motor Company may cause loss of performance and render it unsafe for use and disqualifies for warranty coverage also.

## LIST OF PARTS NOT COVERED UNDER WARRANTY

| ITEM | WHAT TO CHECK FOR |
|---|---|
| Normal Maintenance operations | Fastener re-tightening, brakes as well as other normal adjustments. |
| Wear and tear items | Brake linings, fasteners, shims, washers, etc. |
| Electrical | Bulbs and fuses. |
| Service Maintenance Parts | Brake fluid, fork oil etc. |
| Rubber, rexine & plastic items | All hoses , pipes and plastic aesthetics |
| Proprietary Items | Tires and tubes (the warranty terms are subject to our agreement with proprietary OEM). |
| Other Factors | • Parts of the vehicle getting affected due to atmospheric effect / environmental factors (rusting, paint peel off etc.). However, depending on the vehicle usage condition, warranty would be accepted up to 2 years from the date of purchase.<br>• Parts of the vehicle which have been tampered with, altered, repaired or replaced by persons not authorised by the Company and which in the sole judgement of the Company affect the performance of the vehicle.<br>• Parts which are used in conjunction with parts not made or recommended by the Company.<br>• Parts suffering damage or resultant damage by accident, misuse, negligent treatment, use of bad quality lubricants or by omission to follow the guidance and instructions contained in this owner's manual.<br>• Vehicles on which motor number or chassis number is deleted, defaced or altered.<br>• Vehicles on which any warranty service including scheduled paid service is not availed when it falls due (at TVS Motor Company Authorised Main Dealer / Authorised Dealer).<br>• Vehicles used for racing or any competition or used otherwise than for ordinary personal transportation.<br>• Vehicles attached with side cars etc.<br>• Vehicles which have been taken out of India.<br>• Vehicles affected by natural calamities like flood, earthquake, tsunami, storm etc. |

## WARRANTY OF GPS DEVICE

Please note that the warranty on GPS device is offered by the manufacturer of GPS device and the same shall be available independently to the customer who owns this vehicle. All or any defects or issues with the GPS device shall be governed by and subjected to the warranty terms offered by the GPS device manufacturer. TVS Motor Company Limited shall not provide warranty to the GPS device independently and shall not be liable in any manner in respect to the same. In order to facilitate you to avail any warranty support from the GPS device Manufacturer, you may please contact Service department, TVS Motor Company Ltd, Harita, PB No. 4, Hosur-635 109, Tamilnadu. Email: customercare@tvsmotor.com

Contact information of such manufacturer of GPS device to avail warranty related support or queries shall be provided to you on your request.

Please refer to product website for further details on terms and conditions of the GPS device.

Periodic maintenance always helps good performance of an automobile and our services are planned to keep your TVS Orbiter performing good. **Please note that carrying out the services for your vehicle at scheduled intervals at any of the TVS Motor Company Authorised Main Dealer / Authorised Dealer is necessary for availing of warranty.** And please also remember that, after the services are over, periodic servicing of your vehicle at appropriate intervals, depending upon its extent of use, will keep your vehicle at its best level of performance.

In case you need any clarification or assistance, please feel free to write to us mentioning the frame serial number, traction motor serial number and date of purchase of your vehicle also the name and place of the Authorised Main Dealer / Authorised Dealer from whom you bought the vehicle and getting it serviced.

**Service Department**
**TVS MOTOR COMPANY LIMITED**
**P.O. Box No. 4, Harita, Hosur - 635 109,**
**TAMILNADU, INDIA.**
**Toll free no:- 1800-572-1818**

## Planned Service Schedule (kms or month whichever of the two occurs early)*

| Sl.No. | Service | Kilometer | Months |
|---|---|---|---|
| 1 | 1st Service | 4000 | 6 |
| 2 | 2nd Service | 8000 | 12 |
| 3 | 3rd Service | 12000 | 24 |
| 4 | 4th Service | 16000 | 36 |
| 5 | 5th Service | 20000 | 48 |
| 6 | 6th Service | 24000 | 60 |

## TECHNICAL SPECIFICATIONS

| DESCRIPTION | TVS Orbiter V2 | TVS Orbiter V1 |
|---|---|---|
| MANUFACTURER | TVS MOTOR COMPANY LIMITED<br>P. B. No.4, Harita, Hosur - 635 109, India. | |
| **POWER TRAIN** | | |
| Type | Plug in EV | |
| Battery type | Li-ion | |
| No. of batteries | 2 Packs | 1 Pack |
| Battery capacity | 3.1 kWh | 1.8 kWh |
| Rated voltage | 52V | |
| Charger specifications | 650W Off Board charger | |
| Charging time (0 to 80% SOC) | 80% SOC - 4 hrs. 10 min. (Approx) | 80% SOC - 2 hrs. 20 min. (Approx) |
| Motor type | BLDC | |
| Motor output power | 1.8 kW(Rated) / 2.5 kW (Peak)* | |
| Motor output torque | 30 Nm (Rated) / 120 Nm (Peak) | |
| True range per charge (ECO mode) | 115 km at full charge** | 75 km at full charge** |
| **CHASSIS** | | |
| Overall length | 1855 mm | |
| Overall width | 728 mm | |
| Overall height | 1284 mm | |
| Ground clearance | 165 mm | |
| Wheel base | 1330 mm | |
| Kerb weight | 112 kg | 100 kg |
| Pay load | 150 kg | |
| Maximum laden weight | 262 kg | 250 kg |
| Gradeability | 7° | |
| Frame | Tube-in-Tube Chassis | |
| Front suspension | Telescopic hydraulic type | |
| Rear suspension | Adjustable, Hydraulic Twin tube shock absorber | |

| DESCRIPTION | TVS Orbiter V2 | TVS Orbiter V1 |
|---|---|---|
| **TYRE** | | |
| Tyre size : | | |
| Front | 90/80-14 46P (Tubeless) | |
| Rear | 90/90-12 54J (Tubeless) | |
| Front tyre pressure | 1.69 kg/cm$^2$ (24 psi) | |
| Rear tyre pressure - Solo | 2.25 kg/cm$^2$ (34 psi) | |
| Rear tyre pressure - Dual | 2.54 kg/cm$^2$ (36 psi) | |
| **BRAKES** | | |
| Front | Hand operated internally expanding shoe type, 130 mm dia drum | |
| Rear | Hand operated internally expanding shoe type, 130 mm dia drum | |
| **ILLUMINATION & TELL - TALES** | | |
| Head lamp (High / Low) | 13.5V, 11W / 7W LED | |
| Horn | 12V, 2.5A Max | |
| **INSTRUMENT CLUSTER** | | |
| Power rating | 12V,3W,LCD | |
| Display | 165 X 87 | |
| Display type | LCD | |
| Brightness | 300 - 400 Lux | |
| **FUSES** | | |
| DC-DC fuse | 58V, 5 A | |
| Charger fuse | 58V, 50 A | |
| Load fuse before Ignition lock | 12V, 15 A | |
| Load fuse after Ignition lock | 12V, 10 A | |

**⚠ Warning**

Using fuses other than the specified rating can result in overloading of the electrical system and would result in premature failure of the vehicle.

| DESCRIPTION | TVS Orbiter V2 | TVS Orbiter V1 |
|---|---|---|
| **CAPACITIES** | | |
| Front fork oil grade | Gabriel front fork fluid | |
| Front fork oil capacity | 91 ± 1 cc | |

**Note**

Specifications are subject to change without notice.

* At component level.

** Real world range may vary with road, load, driving patterns and aging of battery packs. The true range measured for the TVS Orbiter is 115 km for TVS Orbiter V2 and 75 km for TVS Orbiter V1 under standard riding conditions, which consists of a solo rider of average weight (between 70 - 80kg), riding on city roads in ECO mode without any extra payload in a continuous or single day ride. The standard conditions also involve the vehicle being used without brake and accelerator being applied together and the recommended tyre pressure being filled up (cold tyre air pressure of 24 PSI for Front and 34 PSI for Rear tyre).

## GENERAL INFORMATION

**Dear Customer,**

It is mandatory under the Motor Vehicles Act to insure all motor vehicles. No motor vehicle can be used in a public place without a valid policy of insurance issued by an authorised insurer. Driving a motor vehicle without any such insurance is an offense under Motor Vehicles Act.

To assist our Customers on their insurance requirements such as the prompt issue and renewal of policies as well as expeditious settlement of claims if any, our preferred insurers are:

Oriental insurance

HDFC ERGO
Take it easy!

Liberty General Insurance
Liberty General Insurance Limited
IRDA Registration No. 150

bharti AXA
suraksha ka naya nazariya

IFFCO-TOKIO
GENERAL INSURANCE
Muskurate Raho

TATA AIG
INSURANCE
WITH YOU ALWAYS

RELIANCE GENERAL INSURANCE

ICICI Lombard
Nibhaye Vaade

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