Dear Customer,

Congratulations! Over one crore Indians are part of the TVS XL family and now, it gives us great pleasure to welcome you to it. We hope you have a great journey ahead just as millions of satisfied TVS customers have.

With stringent quality checks, great attention and care has been taken to ensure that your TVS XL 100 is in a perfect operating condition as it leaves our factory. With a powerful engine and great new features, all you have to do is to fill up your new TVS XL 100 with fuel and get going.

This manual will help you get the best performance out of your new TVS XL 100. From information on how best to ride it to its maintenance, you will find all the relevant information in the following pages. Follow them carefully to make the most of your vehicle.

We're delighted to inform you that as part of our company policy, you are entitled to benefits for the maintenance of your vehicle. Free services and other warranty repairs can be availed from the TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers nearest to you. The staff at the Authorised Distributor or Dealer / Authorised Service Centers have been trained by us to take great care of your after sales/service requirements.

We wish you a long and fruitful journey ahead with your TVS XL 100, for years and years to come.

Warm regards,

TVS MOTOR COMPANY LIMITED

This manual should be considered as a permanent part of the vehicle and should remain with the vehicle when resold or transferred to a new owner.

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.

Pictures shown in this manual are 'TVS XL 100 i-Touch Start' unless specified

Part Number :- P7210020

Revision 1, Dec 2018

Operating this vehicle safely is an important responsibility of the rider. To help you make decisions about safety, we have provided 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 hazards associated with operating or maintaining the vehicle, you must use your own judgement.

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.***

Caution

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

Note

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

Running-in information	01
Know your TVS XL 100	02
Riding your TVS XL 100	15
Maintenance	19
Scheduled service record sheet	36
Technical specifications	38

The first 1000 km is a crucial part of your vehicle. Proper running-in operation during this period helps in ensuring a **maximum life** and **smooth performance** of your vehicle.

The reliability and performance of your vehicle depends on the special care and restrain exercised during the running-in period. It is especially important that you avoid operating the engine in high speed (RPM), which could expose the engine parts to excessive stress. Maximum recommended speed during the running-in is:

Maximum 40 kmph speed upto 1000 km (vary the engine speed for better mating of parts).

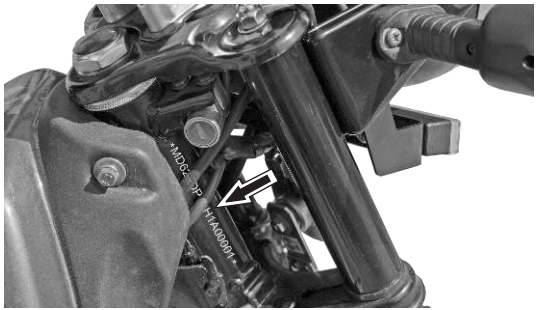
The first service at 500 ~ 750 km is most important. During running-in period all the engine components and other parts will have set in. All adjustments to be restored, all fasteners to be tightened. Engine cum transmission oil to be replaced. Timely performance of the first free service will ensure optimum service life and performance from the engine.

Caution

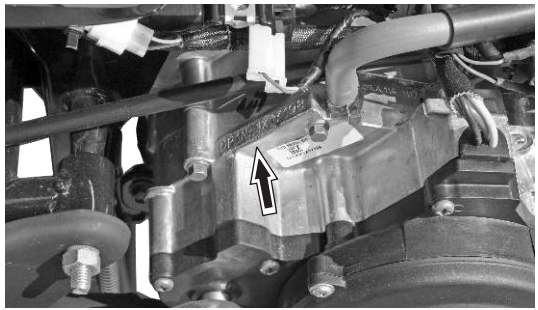
Replacing the engine cum transmission oil during first service is most important for better life of engine. Always use TVS TRU4 PREMIUM oil (SAE 10W30 API-SL, JASO MA2) for better performance and life.

VEHICLE IDENTIFICATION NUMBER

Serial numbers of both frame and engine are required for vehicle identification. They are also required to assist your Dealer for operating parts or referring to special information.



The frame serial number is stamped on the right side of the steering head tube.



The engine serial number is stamped on the top surface of right side crankcase near engine breather tube.

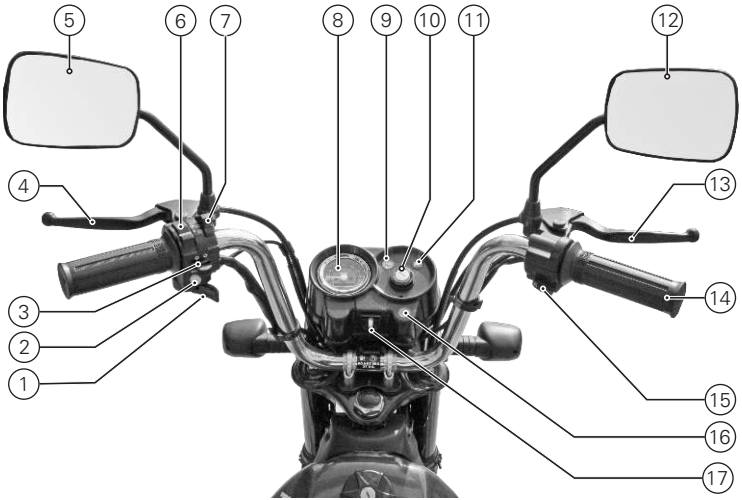
Frame number

Engine number

Control key number

Please fill the above boxes now for future reference

LOCATION OF PARTS - HANDLE BAR



1. Choke lever
2. Horn switch
3. Turn signal lamp switch
4. Rear brake lever
5. Rear view mirror L#
6. Headlamp switch
7. High / low beam switch
8. Speedometer
9. Turn signal indicator lamp
10. Ignition switch
11. High beam indicator lamp
12. Rear view mirror R#
13. Front brake lever
14. Throttle grip
15. Electric starter switch**
16. Electric system indicator lamp**
17. Smart phone charger**

Optional accessory will be charged extra
** Applicable for 'i-Touch Start' models only

CONTROL KEY

TVS XL 100 comes with a pair of identical control keys. These keys are to operate ignition switch, steering lock, fuel tank cap, tool box lock and seat lock*.

IGNITION SWITCH

The ignition switch has two positions:

1. 'OFF' position

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



2. 'ON' position

In this position, all the electrical circuits are 'ON' and the engine can be started now. Key cannot be removed in this position.

Note

Tail lamp, day time running (DRL), brake lamp and head lamp glows only after starting the vehicle.

Note

If the vehicle is not started for more than 30 minutes after switching on the ignition key the vehicle may not start with the self start. Turn OFF the ignition key and turn it ON again to start the vehicle using self start.**

Keep the ignition key in off position, when the vehicle is not in use, to prevent battery drain.**

* Seat lock is not applicable for Comfort models
** Applicable for 'i-Touch Start' models only

SPEEDOMETER ASSEMBLY

1. Odometer

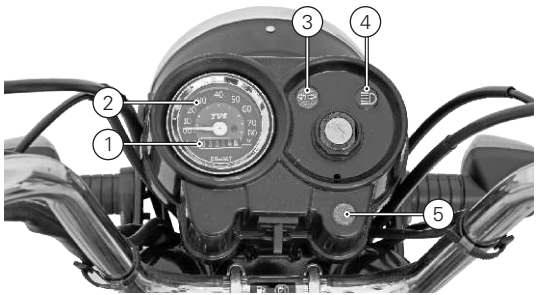
Registers and displays the total distance covered by the vehicle in kilometers. The last digit denotes one tenth of a kilometer.

2. Speedometer

Indicates vehicle speed in kilometers per hour.

3. Turn signal indicator lamp

Flashes when the 'left' or 'right' side turn signal lamp is activated.



4. High beam indicator lamp

Glows when the head lamp high beam is activated.

5. Electrical system indicator lamp**

Electrical system indicator lamp (ESIL) blinks while starting the vehicle using electric starter and goes OFF once the engine gets started.

If this indicator glows continuously even after starting the vehicle, it indicates that there is some problem with the vehicle's electrical system and the vehicle may not get start. Contact TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers immediately.

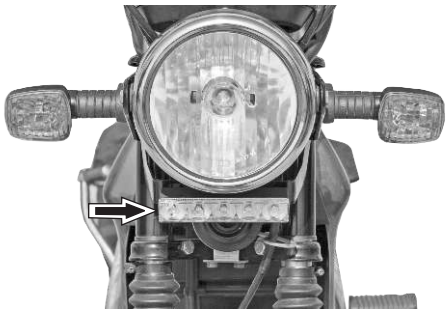
Note

*Please make a note that the failure of bulbs will not be shown by the electrical system indicator lamp (ESIL)**.*

** Applicable for 'i-Touch Start' models only

DAY TIME RUNNING LAMP (DRL)

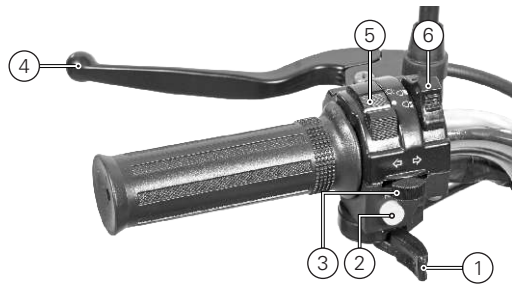
TVS XL 100 comes with a day time running LED lamp which glows automatically once the engine is started and continue to glow till the engine is turned 'OFF' or head lamp is switched 'ON'.



HANDLE BAR LEFT SIDE

1. Choke lever

Pull the choke lever towards left to apply choke. **During cold start, apply the choke and start the vehicle without opening of throttle.** Once the engine is started and running in stable RPM, release the choke and ride the vehicle.



Caution

Always use choke for starting the cold engine. Never open the throttle fully when the choke is applied. It may lead to flooding of engine and difficulty in starting.

2. Horn switch

Press the switch ' ' to operate the horn.

3. Turn signal lamp switch

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

4. Rear brake lever

The rear brake is applied by squeezing the rear brake lever gently towards the handle grip. The brake lamp glows on application of the rear brake.

5. Head lamp switch

Head lamp switch has two positions, they are:

OFF : Head lamp and speedometer lamp are turned 'OFF' when the switch is positioned at ' ' even though the engine is running.

ON : Head lamp and speedometer lamp glows when the switch is positioned at ' ' and engine is running.

6. Head lamp high / low beam switch

With the head lamp in 'ON' condition, slide the beam control switch towards ' ' to turn-on the head lamp high beam. Slide the switch towards ' ' to turn-on the head lamp low beam.

Warning

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

Use appropriate head lamp beam 'high / low' as per the traffic and road conditions for your safety and to avoid inconvenience to other riders.

Note

In 'i-Touch Start, models, if the vehicle is left in idling for more than 20 seconds (approx.) with the head lamp ON condition, the intensity of the head lamp will reduce automatically to avoid draining of battery.

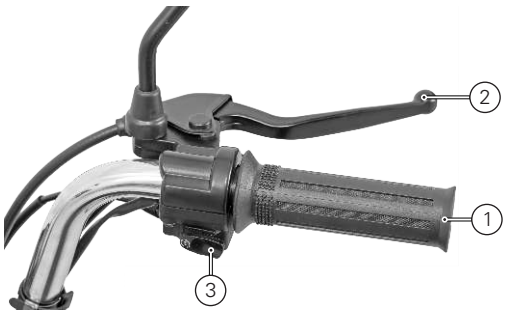
HANDLE BAR RIGHT SIDE

1. Throttle grip

Engine speed is controlled by the rotation of the throttle grip. Twist it towards you to increase the engine speed and away from you or release it to decrease the engine speed.

2. Front brake lever

The front brake is applied by squeezing the front brake lever gently towards the throttle grip. The brake lamp glows on application of the front brake.



3. Electric starter switch**

Apply any one the brake. Press and release the starter switch '⟳' to start the engine electrically.

Note

*The ESI lamp blinks during start of the vehicle using electric start. Refer page 05 for more details**.*

Caution

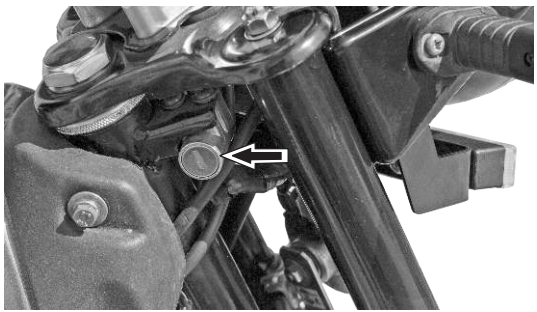
*The vehicle cannot be started using electric starter with low / discharged battery. Contact TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers for rectification**.*

** Applicable for 'i-Touch Start' models only

STEERING LOCK

TVS XL 100 is provided with separate lock for locking the steering.

To lock the steering, turn the handle bar fully towards left, insert the control key into the lock and rotate it in clockwise direction and take out the key. For unlocking insert the key in the lock and turn it in anti-clockwise direction and take out the key.



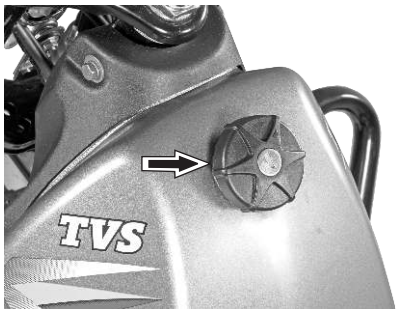
Warning

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

FUEL TANK* CAP

To open fuel tank cap, insert the key into the lock and turn it in clockwise direction. Now, rotate the fuel tank cap in anti-clockwise direction and take out. Key cannot be taken out of the cap in this condition.

Fill the required amount of petrol (as per the tank capacity) and refit the fuel tank cap in the reverse order of removal.



** Fuel tank is not a measuring instrument and capacity of the fuel tank may slightly vary from the indicated capacity.*

Warning

Avoid spilling of fuel on the hot engine. Never refill fuel near open flame. Do not smoke while refueling. Do not use cell phones while refueling.

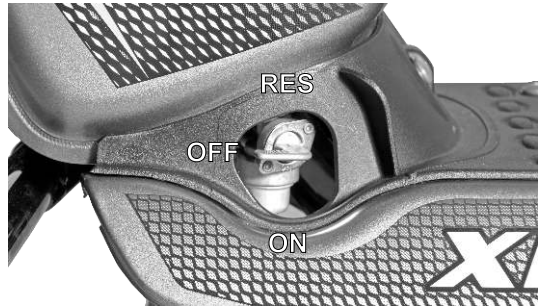
Note

Whenever refueling the vehicle, fill upto the bottom of the neck portion of the fuel tank. Filling above the neck may result in improper breathing of fuel tank and seepage of fuel.

FUEL COCK

Fuel cock has the following three positions:

- ON: Fuel flows in this position when the fuel is above the reserve level in the tank.
- RES: Switch over the fuel cock lever to this position when the fuel stops flowing in 'ON' position.
- OFF: Fuel flow cuts off from the tank to carburettor.



While riding the vehicle with fuel cock lever in 'ON' position and if the fuel in the tank reaches reserve level, you may experience engine sluggishness and jerky feeling. Take the vehicle to the left side of the road while taking care of traffic and change the fuel cock lever position to 'RES'.

Caution

Leaving the fuel cock in 'ON' or 'RESERVE' position may cause the fuel tank to completely drain out, incase any malfunctioning of carburettor float system.

KICKSTARTER LEVER



The kickstarter lever is located on the right side of the engine. The engine can be started by kicking the lever with the ignition key in 'ON' position while applying the rear brake as a safety precaution.

Warning

Hold the rear brake as a safety precaution while starting the vehicle to avoid rear wheel rotation and loss of control.

Note

*Please remember that the vehicle can't be started even by using kickstarter with the drained battery fitted in it. Disconnect the battery positive terminal and tape properly to start the vehicle. Contact TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers immediately**.*

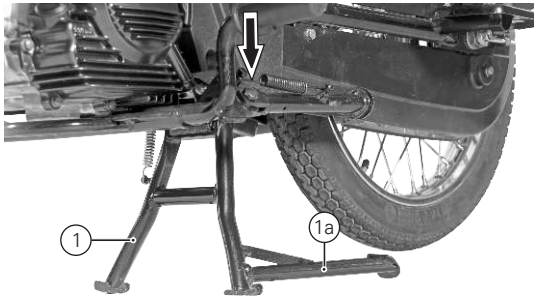
** Applicable for 'i-Touch Start' models only

STANDS

To place the vehicle on center stand (1), hold the handle bar left grip with the left hand and load carrier with the right hand.

Place your foot firmly on the center stand extension (1a) and press with adequate effort. Ensure both the legs of stand are touching the ground before placing the vehicle on stand.

TVS XL 100 also has a provision for fixing a side stand (side stand is optional). Side stand can be operated with your foot by pushing it away from the vehicle till it stops.



Warning

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

Caution

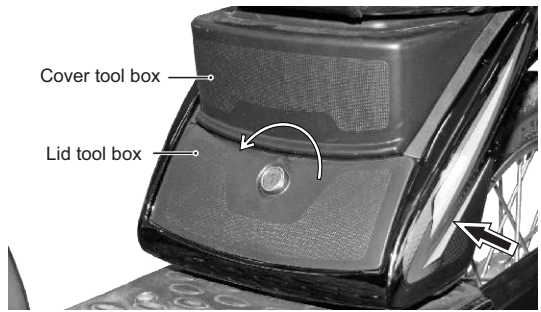
Never sit on the vehicle when it is supported by side stand. Always park the vehicle on a flat, firm surface.

** Fuse and battery is applicable for 'i-Touch Start' models only. The vehicle's battery can be accessed only after removing the cover tool box.

TOOL BOX

Tool box is located below the seat assembly at the front end. To access the tool kit, first aid kit, fuse and battery** the lid tool box need to be opened. Follow the procedure given below to open the lid:

1. Insert the control key into the lock of lid tool box and rotate it in anti-clockwise direction. Gently take out the lid from the tool box.
2. While reassembling locate the lid at the bottom of the tool box properly, press the top side firmly and then lock it by rotating the key in clockwise direction. Take out the key once the lid is locked.

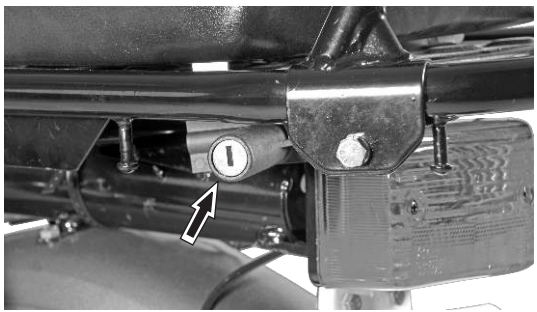


SEAT LOCK*

To access the carrier*, the pillion seat assembly* need to be removed.

To remove the pillion seat assembly, insert the control key into the seat lock which is located at the left side rear end of the vehicle and rotate the key in clockwise direction. Once the lock is released, gently take out the seat from its mounting.

To assemble back the seat, locate the seat in its position and push it towards the front and then press down.



* Not applicable for Comfort models

TOOL KIT

To assist you in performing certain aspects of periodic maintenance and emergency repairs, a tool kit is supplied along with the vehicle and it is located inside the tool box.

To access the tool kit, open the tool box lid as explained in the page no. 12.

The tool kit consists of the following :

1. Grip driver x 1
2. Bit (+) (–) x 1
3. 17 x 19 open end spanner x 1
4. Tool bag x 1

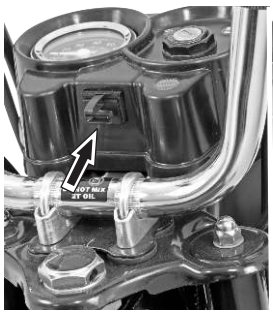


Note

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 Distributor or Dealer / Authorised Service Centers.

SMART PHONE CHARGER**

A smart phone charger has been provided in your vehicle for charging your smart phone even when you are traveling and it is located in the cowl of speedometer. Follow the guidelines given below to use the charger properly.





DO's

1. Ensure that no water enters into the USB charging unit by closing the flap properly and by avoiding the direct water jet towards the unit.
2. Use the USB chager only with standard approved USB charging cable recommended for your smart phone.
3. 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 any other device, other than smart phone phones. Only one smart phone should be charged at a given time.
3. Do not try to force the USB connector in, check whether it is inserted in the appropriate direction, to prevent the damage to the charger.
4. Do not charge your smart phone when engine is off.

** Applicable for 'i-Touch Start' models only

Before riding your vehicle, make yourself throughly familiar with all the controls of the vehicle and their functions.

Inspection before riding

- Check the following items before riding
  - Enough fuel for the planned distance of running.
  - Correct tyre pressure and adequate tread depth / no cracks or cuts.
  - Proper working of all lamps and horn.
  - Smooth movement of steering.
  - Smooth operation of throttle.
  - Correct free play of front and rear brake.
  - Free rotation of wheels.

Starting the engine

- Turn the fuel cock lever to the 'ON' or 'RESERVE' position. Insert the control key into the ignition switch and turn it to the 'ON' position.
- Hold any one of the brake and just Press the electric starter switch to start the engine electrically otherwise kickstart.

Caution

'In i-Touch Start' vehicles, incase if the ESI lamp glows after switching 'ON' the ignition and while pressing the electric starter switch, turn 'OFF' the ignition and once again repeat the procedure of starting the vehicle using electrical starter. If the ESI lamp still glows take the vehicle to TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers.

When the engine is cold

- ❑ Actuate and hold the choke by pressing it towards left side.
- ❑ Start the engine using electrical starter / kick starter with no opening / very less opening of throttle.
- ❑ Once the engine is started and running stable, release the choke lever and ride the vehicle (when the engine is warm / hot do not use choke).

Caution

Do not keep the engine in idling rpm for long and do not open excessive throttle when engine is idling, else it leads to overheating and damage to internal components.

Riding

- After starting the engine, sit comfortably on the seat and open the throttle gradually. **Do not open throttle suddenly to full.**
- The clutch engages automatically.
- Keep your feet on the foot rest. From now on, your road speed is controlled only by throttle.
- Always keep to the left of the road. This will allow other fast moving vehicles to overtake you safely and easily.
- To overtake other vehicles, look ahead of you and into the rear view mirror to ensure that there are no vehicles close by. Then open the throttle and overtake from the right.

Stopping and parking

- Close the throttle completely. Apply both brakes simultaneously.
- Turn OFF the ignition and fuel cock.
- Park the vehicle on a firm, flat surface.
- Lock the steering and take out the control key.

FUEL RECOMMENDATION

Use unleaded petrol only.

The petrol should be 85 to 95 octane by research method. Use recommended fuel additives for longer life of engine components and lower maintenance. Petrol mixed with ethanol will have impact on engine components. Contact your TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers for usage.

Caution

Never mix oil in petrol in the fuel tank. Always fill fuel from the reputed and reliable fuel stations.

SOME USEFUL TIPS

Smooth riding

- Avoid engine idling for long period. It is better to switch it 'OFF' and start again.
- It is harmful to increase the engine speed with brakes applied as the engine gets unduly strained.
- Avoid riding continuously at speed below 20 kmph as this will result in faster wear of the clutch shoes.
- Make your self familiar with the traffic signs and regulations.
- **For safe riding, it is advised to use a good quality helmet while driving.**
- **Avoid use of mobile phones while riding as it could lead to fatal accident.**

Improve service life of your vehicle

- Adhere to the recommended maintenance schedule and follow running-in information.
- Apply brakes only when necessary.
- Always ride within the optimum speed range for better fuel economy.
- Avoid overloading.

FUEL ECONOMY

The maximum fuel economy is obtained between 30 to 45 km/h (indicated by a green zone on the speedometer). There is a drop in fuel economy both at lower speeds and even more at higher speeds. Frequent braking, long periods of idling and overloading will result in much lower fuel economy.

Note

The on-road mileage of TVS XL 100 is dependent on several factors like road condition, quality of fuel, riding speed, operation of clutch and brake, tyre inflation, maintenance / timely servicing of vehicle, load etc.. and hence will differ from the mileage given under standard test conditions such as made in recognised test agency like ARAI.

Tips to improve fuel economy

- Minimise braking and idling.
- Avoid sudden acceleration, applying brakes and throttle simultaneously and overloading.
- Ride in optimum road speed i.e. 30 to 45 km/h.
- Perform maintenance as per the schedule.
- Use recommended oils and fuel only.
- Always maintain your vehicle in good state by getting it periodically serviced.
- Reduce petrol evaporation by parking your vehicle in shade
- Reduce speed on bumps and rough roads.
- Anticipate the barriers ahead and decelerate at the earliest.

EMISSION CONTROL

All the TVS vehicles are tested in the factory for optimum fuel efficiency and CO levels. **Do not disturb the Carburettor settings as this may lead to higher fuel consumption and also higher CO levels**. If the vehicle needs any adjustments, please consult nearest TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers.

While adequate care is exercised at the factory to ensure that the emissions are within the limits, it is essential for the owner to always maintain their vehicles in good condition by getting it periodically serviced and checked by TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers so that the emission and fuel consumption level are maintained as per norms.

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 if used / operated in dusty climate, certain jobs should be performed more often to ensure reliability of the vehicle. Cylinder head, steering components, suspension, chain 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 Distributor or Dealer / Authorised Service Centers.

Periodic inspections may reveal one or more parts that may need replacement. Whenever replacing parts on TVS XL 100, 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. Be sure that the periodic maintenance is performed thoroughly in accordance with the instructions given in this owner's manual.

In more dusty areas, the air filter element may required early replacement than the mentioned kilometers to avoid costly damages to the engine.

PERIODIC MAINTENANCE SCHEDULE (months or km whichever occurs earlier)

Item Service km Period from date of sale	Service 1st 500-750 1 month	 2nd 2500-3000 3 months	 3rd 5000-6000 6 months	 Every 3000 km	 Every 6000 km	Remarks
Engine cum transmission oil	R	I & T	R	I & T	R	
Oil filter (strainer)	C	–	C	–	C	
Centrifugal filter	–	–	C	–	C	
Spark plug	C & A	–	–	–	–	Replace every 12000 km
Air cleaner element	I	–	–	–	–	Replace Every 9000 km
SAI filter element	I	–	–	–	–	Replace every 12000 km
Carburettor assembly	C & A	–	–	–	–	C & A every 12000 km after first service
Tappet clearance	I & A	–	I & A	–	I & A	
Fuel cock sediment bowl	C	C	C	C	–	
Hose fuel	I	I	I	I	–	Replace every three years
Plate clutch assy (clutch shoe)	–	–	–	–	–	Inspect and if required replace every 12000 km
Drum clutch (clutch housing)	–	–	–	–	–	Inspect and if required replace every 12000 km
All control cables[1]	I, A & L	I, A & L	I, A & L	I, A & L	–	
Throttle grip	–	–	L	–	L	Lubricate using grease
Choke operation	I	I	I	I	–	
Steering smooth operation / play	I & A	I & A	I & A	I & A	–	C & L with fresh grease every 12000 km
Front fork oil	–	–	–	–	–	Replace every 12000 km
Front and rear suspension	I	I	I	I	–	Inspect for proper functioning
Speedometer hub drive / cable	–	–	L	–	L	Lubricate using grease
All fasteners	I & TI	I & TI	I & TI	I & TI	–	

Item / Service km / Period from date of sale	Service					Remarks
	1st 500-750 1 month	2nd 2500-3000 3 months	3rd 5000-6000 6 months	Every 3000 km	Every 6000 km	
Drive chain*	C, L & A	C, L & A	C, L & A	C, L & A	–	
All bulbs, horn and switches	I	I	I	I	–	Inspect for proper functioning
Head lamp beam	I & A	I & A	I & A	I & A	–	
Battery voltage**	I	I	I	I	–	Recharge if necessary
Brake effectiveness / play	I & A	I & A	I & A	I & A	–	
Brake cams	–	–	L	–	L	Lubricate using grease
Wheel freeness	I	I	I	I	–	
Wheel spokes	I & TI	–	I & TI	–	I & TI	
Tyre pressure in cold condition	I & S	I & S	I & S	I & S	–	
Engine Idling speed	I & S	I & S	I & S	I & S	–	
Idling CO%[2]	I & S	–	–	–	–	Refer page no. 18 for emission control
Center / side stand pivot	L	L	L	L	–	Lubricate using TRU4 oil
Kick starter pedal pivot	L	L	L	L	–	Lubricate using TRU4 oil
Control levers	L	L	L	L	–	Lubricate using grease
Swing arm bearings	–	–	–	–	–	C & L using grease every two years

R - Replace; I - Inspect; T - Top up; C - Clean; A - Adjust; L - Lubricate; TI - Tighten; S - Set

[1] Inspect for proper operation and adjust play. Lubricate ends using grease.

[2] Idling CO% should be set with the help of exhaust gas analyser and tachometer only.

*Clean the drive chain and apply TRU SPRAY / TRU4 oil as frequently as every 750 kms and adjust when necessary for better chain life and smooth vehicle running.

** Applicable for 'i-Touch Start' models only

RECOMMENDED LUBRICANTS

Application	Qty	Manufacturer	Brand
Engine cum transmission oil	900 ml	TVS Motor Company	TVS TRU4 PREMIUM oil, (SAE 10W30 API-SL, JASO MA2)
Front fork oil	100 ml / leg	IOC / Castrol	20W40 oil
Grease	–	Bharath petroleum	MP Grease no. 3
		IOC	Servo Gem no. 3
		Bechem	Bechem premium grade 3
Chain lubricant	–	TVS Motor Company	TRU SPRAY
Fuel additives	As recommended		IFTEX

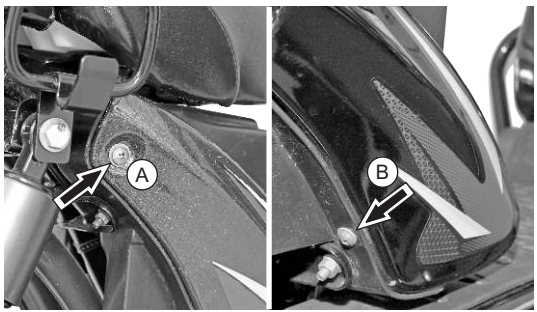
SELF-MAINTENANCE PROCEDURES

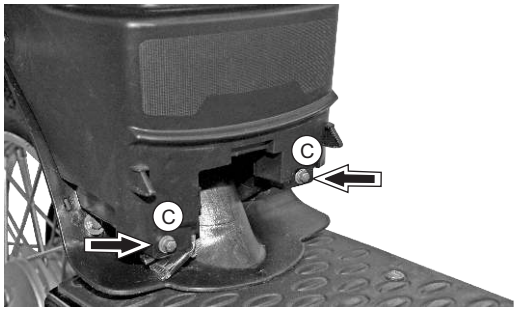
BATTERY

TVS XL 100 'i-Touch Start' vehicles are fitted with a maintenance free battery and it is located inside the tool box below seat's front side.

Remove the lid tool box, cover tool box and cover battery to access the battery by following the procedure given below:

1. Remove the lid tool box as explained in page no. 12.
2. Remove the top mounting screws (A) from both the sides of tool box.





3. Similarly, remove the bottom mounting screws (B) from both side of tool box and take out the tool box.
4. Remove the mounting bolts (C) form the cover tool box and gently take out the cover.

Since the battery fitted in your vehicle is of maintenance free type (MF), it is not required to top-up the battery with distilled water. But to ensure the performance and long life of the battery follow the steps given below:

- Check and ensure the battery voltage as per the maintenance schedule given in page no. 21.

- If the voltage measured is less than 12.4 Volts, charge the battery using recommended battery charger at TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers.
- While connecting the terminals, observe the correct polarity. Connect the red wire to the '+' terminal and black wire to the '-' terminal of the battery.
- Apply petroleum jelly at terminals to prevent it from corrosion.



- Do not add any additional electrical accessories which may affect the battery life and also results in startability issue.

Incase of any abnormality or for removal of battery from the vehicle, contact TVS Motor Company Authorised Distributor or Dealer / Authorised Dealer.

Caution

Never check the battery charge by shorting the terminals. Always connect the positive terminal first (red wire) and then negative (black wire) to avoid sparking.

The inversion of the battery wires can damage the battery and the recharging system.

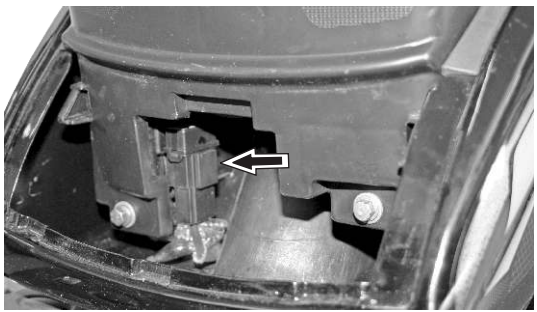
If the battery is removed from the vehicle, please ensure to tape the terminals of the wiring harness to avoid the terminals make contact with each other which will prevent the vehicle from starting.

FUSE REPLACEMENT**

Non-working of electrical systems may be due to safety fuse failure. Short circuit or overload in the electrical system are the main causes for fuse failure. Two different fuses are provided in the XL 100 they are:

- Main fuse - 15A
- Lighting fuse - 10A

The main fuse is located inside the tool box below battery and the lighting fuse is located inside the head lamp.



Follow the procedure given below to inspect and replace the fuse:

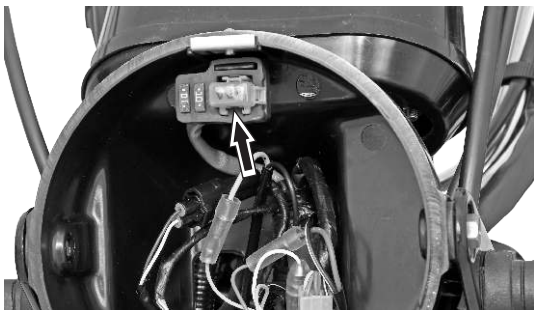
Main fuse

1. Turn 'OFF' the Ignition.
2. Remove the lid tool box as explained in page no. 12
3. Take out the fuse case.
4. Open the fuse case and pull out the blown fuse.
5. Replace the blown fuse with a new (extra fuse is provided in the wiring harness itself in a pouch).
6. Close the fuse case and re-fix it properly into its location.
7. Turn 'ON' the ignition lock and check for proper functioning of the electrical systems. Incase the fuse fails again, consult the nearest TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers.

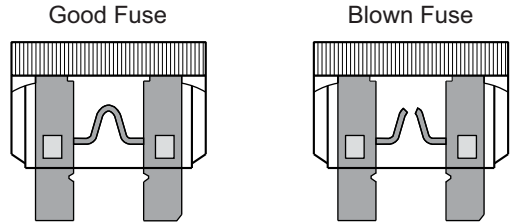
** Applicable for 'i-Touch Start' models only

Lighting fuse

1. Turn 'OFF' the Ignition.
2. Remove the screws from the headlamp housing assembly on both sides and gently take out the reflector unit.
3. Take out fuse case from the housing head lamp.
4. Open the fuse case and pull out the blown fuse.
5. Replace the blown fuse with a new (extra fuse is provided near the fuse case itself).
6. Close the fuse case and re-fix it properly into its location.



7. Turn 'ON' the ignition lock and check for proper functioning of the electrical systems. Incase the fuse fails again, consult the nearest TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers.



Caution

*Do not use vehicle by **shorting the wires without fuse**. This may result in overheating of electrical items / wiring and may result in fire.*

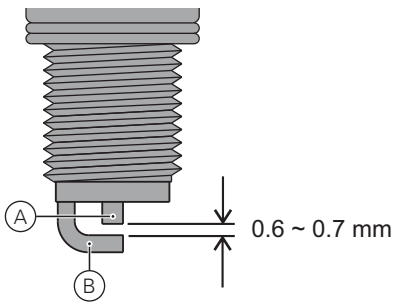
Do not use fuse of higher amperage than specified for the safety of electrical system.

SPARK PLUG

1. Pull out the suppressor cap from the spark plug.
2. Clean the dust and mud around the spark plug mounting to avoid falling inside the cylinder.
3. Remove the spark plug.

Inspect the spark plug for heavy carbon deposits, a spark plug with heavy carbon deposits will not produce strong sparks.

Hence, remove the carbon deposits from the spark plug with a small wire brush or using spark plug cleaning tool.



Inspect the spark plug electrodes (A) and (B) for any corrosion. If found any, replace the spark plug with a new.

Inspect the spark plug gap with a wire gauge / feeler gauge. Readjust the spark plug gap to **0.6 ~ 0.7 mm** if required.

After cleaning and adjusting the gap, reinstall the spark plug and tighten by hand to avoid cross threading. Finally tighten using spark plug spanner. Do not over tight or cross thread the spark plug.

Caution

Always use only recommended make and type of spark plug. ***Replace spark plug every 12000 km.***

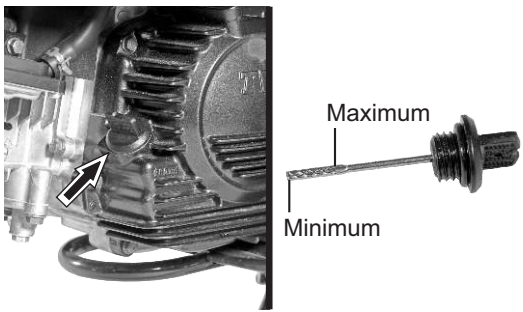
Cover the spark plug hole with cloth when the plug is removed to prevent dust / water entry.

It is advisable to tight the new spark plug by hand till the end and then loose and again re-tight the spark plug by 1/8 of rotation after sealing by using only the hand tool .

ENGINE CUM TRANSMISSION OIL LEVEL

Check the engine cum transmission oil level periodically.

1. Place the vehicle on center stand on a flat surface. Wipe-off the surroundings of the gauge oil level.
2. Remove the gauge oil level and wipe it clean.
3. Fix the gauge oil level back to its mounting hole. Do not thread in.
4. Take out the gauge oil level and check the level of the oil.



5. The oil level should be between minimum and maximum level marks of the gauge as shown in the figure.
6. If the oil level is less than the minimum level, add 'TVS TRU4 PREMIUM oil' (SAE 10W30 API-SL, JASO MA2) upto the maximum level mark.
7. Wipe out the oil traces with a clean cloth to prevent dust accumulation and assemble back the gauge oil level.

Caution

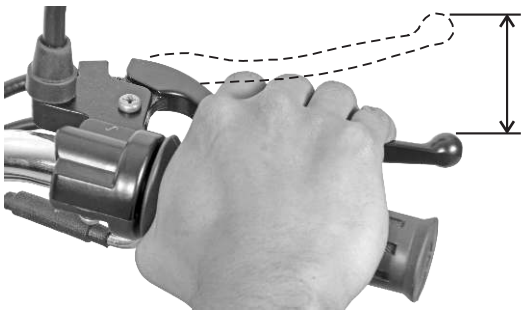
If the vehicle is driven with less engine cum transmission oil, engine components will be severely damaged. Check the oil level as per the schedule to avoid costly damage.

Do not fill excess oil may cause oil leak. Always use 'TVS TRU4 PREMIUM oil' (SAE 10W30 API-SL, JASO MA2) only.

BRAKES

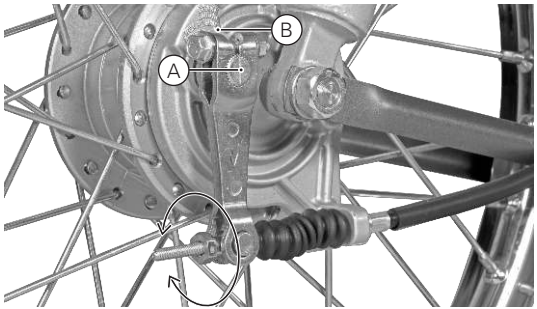
Front brake

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 the brake should be between 15 ~ 20 mm.



Warning

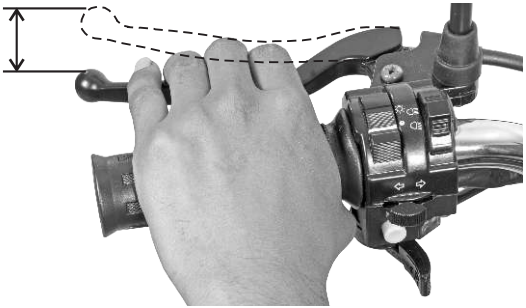
Brakes are items of personal safety and should always be maintained in proper condition.



3. If the measured free play is more or less than the specified limit, adjust the nut provided at the front wheel end to obtain the correct play.
4. Turn the adjuster nut in clockwise direction for reducing the free play or turn it in anticlockwise direction for increasing the free play.

Rear brake

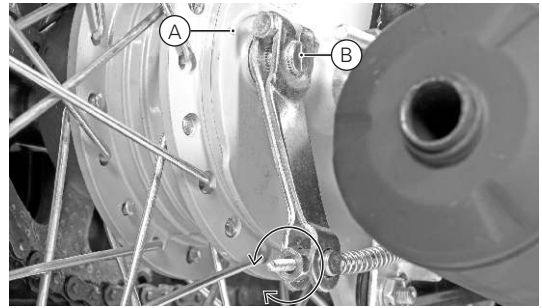
1. Measure the free play of the rear brake lever at the lever end as shown in the figure.
2. The free play of the brake lever before the engagement of the brake should be between 15 ~ 20 mm.



3. If the measured free play is more or less than the specified 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 the free play or turn it in anticlockwise direction for increasing the free play.

Warning

Check the brake play periodically. However the brake play needs to be adjusted more frequently depending upon the usage.



Brake shoe wear limit indicator

When the brake is applied, wear limit index mark (A) on front and rear brake cams should be within the range of wear limit indicator (B) on the front and rear brake panel. Incase the index mark is going beyond the wear limit, index the lever to next slot with the help of Dealer to extended shoe life.

Warning

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

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 tyre wear, but also seriously affects the stability of the vehicle.

Under inflated tyres make smooth cornering difficult and over inflated tyres decrease 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 limits at all times.

	Solo	Dual
Front	1.75 kg/cm² (25 PSI)	1.75 kg/cm² (25 PSI)
Rear	2.46 kg/cm² (35 PSI)	2.81 kg/cm² (40 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 (A) level (indicated by TWI on the tyre).



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.

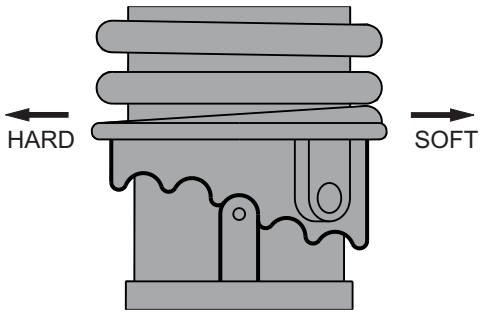
Use of a tyre other than the standard may cause instability.

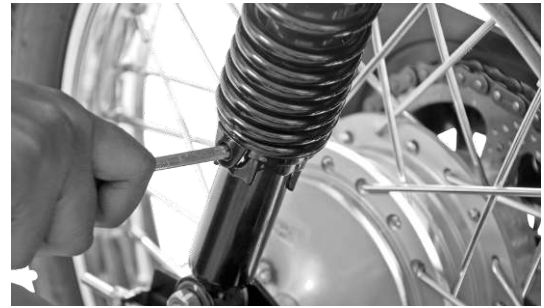
REAR SHOCK ABSORBERS

TVS XL 100 is provided with 5 step adjustable rear shock absorbers to meet different load condition. 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.

Adjust the spring preload by shifting the adjuster to the required notch according to the different load condition.





The more you compress the shock absorber spring, the suspension becomes more stiff.

Caution

Keep both left and right shock absorbers spring adjusters in the same position.

DRIVE CHAIN

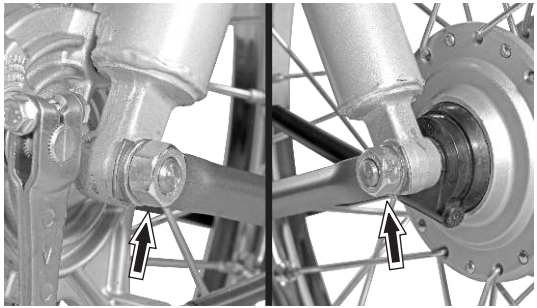
Proper lubrication and adjustment of drive chain gives long service life of chain. Poor maintenance of chain causes premature wear or damage to the drive chain and sprockets.

The drive chain must be checked, lubricated and adjusted at specified intervals mentioned in the maintenance schedule.

If the vehicle is used under severe conditions and more dusty area, the drive chain must be attended more frequently. Get the drive chain checked, lubricated and adjusted at TVS Motor Company Authorised Distributor or Dealer / Authorised Service Centers at specified intervals if required more frequently depending upon usage.

FRONT WHEEL REMOVAL

1. Remove the hexagonal nut along with washer from either LH or RH side of front axle.
2. Pull out the axle from the wheel along with the hexagonal nut and a washer.
3. Place a support (wooden block) below the engine to prevent the vehicle from falling.



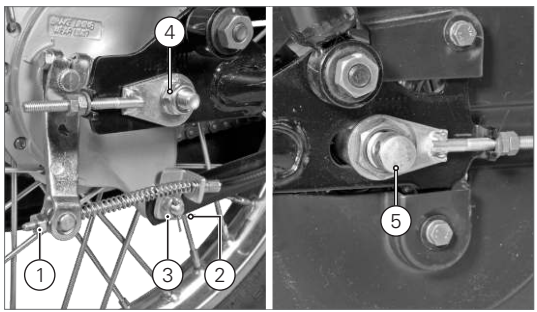
4. Lift the front fork up, dislocate the brake panel along with the brake cable. Remove the hub drive and slide the wheel out.
5. Reverse the procedure for reassembling. Locate the lug on fork leg L to the slot in the brake panel while reassembling.

Warning

Always make sure that whenever the wheel is removed, axle nut is properly re-tightened to the specified torque.

REAR WHEEL REMOVAL

1. Remove the rear brake adjuster nut (1) and disconnect the brake cable from the brake panel assembly.
2. Remove the split pin (2) and the nut (3). Disconnect the torque link.
3. Remove the axle nut (4).
4. Pull out the axle (5) and take out the spacer from the rear wheel assembly.
5. Tilt the vehicle to the left and take out the wheel assembly along with the brake panel assembly.
6. Reverse the procedure for reassembly.



Caution

Once the split pins are removed, replace them with new ones.

STORAGE PROCEDURES

For storage of your vehicle for longer periods of over a month and above, we recommend to carry out the following steps:

1. Clean the vehicle thoroughly. Park the vehicle on center stand.
2. Empty the fuel tank. Turn the fuel cock lever to 'OFF' position.
3. Warm up the engine and drain engine cum transmission oil. Store the oil, if new, in a dust free container.
4. Run the engine with fuel cock OFF position till the carburettor fuel bowl becomes empty.
5. Remove the spark plug and feed in several drops of engine cum transmission oil through spark plug hole. Crank the engine few times and reinstall the spark plug.
6. Remove the battery, store it away from direct sunlight and freezing temperatures.

7. Place a suitable support at the bottom of the frame so that both the tyres are off the ground. This will ensure better tyre life.
8. Cover up the vehicle completely with a clean tarpaulin or any other suitable cover. Store the vehicle inside a garage or similar area to avoid damage due to dust and rain. Make sure that the storage area is well ventilated and free from any source of flame or spark.

Warning

The exhaust system becomes hot after a run. Park the vehicle in a place where pedestrians or children are not likely to touch the vehicle.

Caution

Do not park the vehicle on a slope or soft ground or else it may fall down.

TAKING THE VEHICLE OUT OF STORAGE FOR REGULAR USE

1. Take the vehicle out of the garage and clean it thoroughly.
2. Remount the battery after bench charging if required.
3. Fill the engine cum transmission oil [TVS TRU4 PREMIUM oil (SAE 10W30 API-SL, JASO MA2)] and check the level using gauge oil level.
4. Lubricate the parts as instructed in the periodic maintenance schedule.
5. Fill up fresh petrol in the fuel tank.
6. Check and inflate the tyres to the specified tyre pressure.
7. Check and correct the points mentioned in page no. 15 before riding.
8. Turn the ignition switch to 'ON' position. Start the engine with choke 'ON' for a few minutes and ride out.

Caution

Avoid using alkaline solution like detergent soaps for washing the vehicle. This may damage head lamp and other lamp assemblies.

SCHEDULED SERVICE RECORD

Sl.No.	Description (kms or month whichever of the two occurs early from the date of purchase)	Odometer reading	Job card no. / Date	Servicing Dealer's stamp and sign.
1	**1st service** between (a) **500 - 750 km** or (b) **1 month**			
2	**2nd service** between (a) **2500 - 3000 km** or (b) **3 months**			
3	**3rd service** between (a) **5000 - 6000 km** or (b) **6 months**			
5	**4th service** between (a) **8500 - 9000 km** or (b) **9 months**			
5	**5th service** between (a) **11500 - 12000 km** or (b) **12 months**			
6	**6th service** between (a) **14500 - 15000 km** or (b) **15 months**			
7	**7th service** between (a) **17500 - 18000 km** or (b) **18 months**			

Sl.No.	Description (kms or month whichever of the two occurs early from the date of purchase)	Odometer reading	Job card no. / Date	Servicing Dealer's stamp and sign.
8	**8th service** between (a) **20500 - 21000 km** or (b) **21 months**			
9	**9th service** between (a) **23500 - 24000 km** or (b) **24 months**			
10	**10th service** between (a) **26500 - 27000 km** or (b) **27 months**			
11	**11th service** between (a) **29500 - 30000 km** or (b) **30 months**			
12	**12th service** between (a) **32500 - 33000 km** or (b) **33 months**			
13	**13th service** between (a) **35500 - 36000 km** or (b) **36 months**			

MANUFACTURER	:	TVS MOTOR COMPANY LIMITED P.B. No. 4, Harita, Hosur - 635 109, India.

ENGINE

Type	:	Single cylinder, 4 stroke, air cooled spark ignition engine
Cylinder bore	:	51 mm
Stroke	:	48.8 mm
Piston displacement	:	99.7 cc
Compression ratio	:	9.7 : 1
Carburettor	:	SPACO AU
Air filter	:	Paper filter element
Lubrication system	:	Forced lubrication
Maximum power in kW	:	3.2 kW (4.3 bhp) @ 6000 rpm
Maximum torque in Nm	:	6.5 Nm @ 3500 rpm
Maximum speed	:	Around 62 km/h (XL 100, XL 100 i-Touch start, XL 100 Comfort STD)
	:	Around 58 km/h (XL 100 Heavy Duty, XL 100 Heavy Duty i-Touch start)
Engine idling rpm	:	1550 ± 100 rpm (under warm condition)
Starting system	:	Kick starter / Electric start**
Emission norms	:	BS IV

TRANSMISSION

Clutch	:	Centrifugal shoe type wet clutch
Primary transmission	:	Single speed gear box
Secondary transmission	:	Chain and sprockets
Final reduction	:	12.66 : 1 (XL100, XL 100 Comfort STD)
	:	13.87 : 1 (XL100 Heavy Duty)

CHASSIS

Overall length	:	1895 mm
Overall width	:	670 mm
Overall height	:	1077 mm
Ground clearance	:	145 mm
Wheel base	:	1228 mm
Kerb weight (with toolkit and 90% of fuel)	:	80 kg (XL 100, XL 100 Comfort STD)
	:	84 kg (XL 100 Heavy Duty)
	:	86 kg (XL 100 i-Touch start)
	:	87 kg (XL 100 Heavy Duty i-Touch start)
Pay load	:	130 kg

** Applicable for 'i-Touch Start' models only

CHASSIS

Maximum laden weight	:	210 kg (XL 100, XL 100 Comfort STD)
	:	214 kg (XL 100 Heavy Duty)
	:	216 kg (XL 100 i-Touch start)
	:	217 kg (XL 100 Heavy Duty i-Touch start)
Frame	:	Welded tubular step through construction
Front suspension	:	Telescopic spring type
Rear suspension	:	Swing arm fitted with hydraulic shock absorbers with variable rated spring.

TYRE

Tyre size		
Front	:	2.50-16 - 6 PR 41L
Rear	:	2.50-16 - 6 PR 41L
Tyre pressure		
Front	:	1.75 kg/cm^2 (25 PSI)
Rear - solo	:	2.46 kg/cm^2 (35 PSI)
Rear - dual	:	2.81 kg/cm^2 (40 PSI)

BRAKES

Front	:	Hand operated, internally expanding shoe type 80 mm dia. drum
Rear	:	Hand operated, internally expanding shoe type 110 mm dia. drum

ELECTRICAL

Type	:	AC generator
Ignition system	:	Electronic Ignition (pulsar type) IDI cum IG Coil : Control unit ISG**
Spark plug	:	BOSCH UR5KC / CHAMPION RG8MC
Spark plug gap	:	0.6 ~ 0.7 mm
Battery type**	:	12V, 3 Ah MF battery
Body earthing	:	Negative terminal
Head lamp	:	12V, 35/35W x 1
DRL	:	12V, LED
Tail / brake lamp	:	12V, 5/21W x 1
Turn signal lamp	:	12V, 10W x 4
Speedometer lamp	:	12V, 3.4W x 1
High beam indicator lamp	:	12V, 2W x 1
Turn signal indicator lamp	:	12V, 2W x 1

** Applicable for 'i-Touch Start' models only

ELECTRICAL

Horn	:	12V, DC x 1
Fuse**	:	12V, 15A x 1 (blade type)
	:	12V, 10A x 1 (blade type)
	:	12V, 15A x 1 (glass fuse)
ESI Lamp**	:	12V, 0.25W LED
Mobile charger**	:	12V, 12W

CAPACITIES

Fuel	:	Unleaded petrol
Fuel tank capacity#	:	4.0 liters (including reserve)
Reserve	:	1.3 liters (approx.)
Engine cum transmission oil grade	:	TVS TRU4 PREMIUM oil (SAE 10W30 API-SL, JASO MA2)
Engine cum transmission oil capacity	:	900 ml
Front fork oil grade	:	20W40 oil
Front fork oil capacity	:	100 ml per leg

** Applicable for 'i-Touch Start' models only

Note

Specifications are subjected to change without notice.

The fuel tank is not a measuring instrument and the capacity of fuel tank may slightly vary from the indicated capacity.