

TVS KING KARGO

225 **LIQUID
COOLED**

(Liquid cooled 4 Stroke LPG /CNG)

CUSTOMER DATA

NAME :

Address :

.....

.....

PIN Code : Mobile No :

Tel. No : Alt. Mobile No :

Booklet No : Date of sale :

Vehicle Chassis No : Engine No :

Dear customer,

We at TVS Motor Company congratulate you for choosing TVS King Kargo. We wish you many miles of enjoyable riding and better earnings in the years ahead.

TVS King Kargo is manufactured at the world class manufacturing facility of TVS Motor Company with best quality of material and workmanship .We hope it will fulfill your dreams and ambitions.

This booklet is your guide to maintain and operate your TVS King Kargo. So please read and follow the manual carefully to enjoy years of pleasurable riding and increased earnings. As with any good machine, proper care and maintenance is essential for trouble free operation and optimum performance of your vehicle.

FOREWORD

Our dealerships are well equipped with the required diagnostic equipments and a dedicated company trained service team for professional care of your vehicle so that you can be rest assured of our support in the unlikely event of any trouble with the vehicle's performance. Hence we urge you to get your vehicle serviced only at Authorized TVS Motor Company Distributor or Dealers / Authorized Service Centers.

For any problem or further clarification, you can contact our Help Line Number or write to TVS Motor Company quoting your Engine. No & Chassis .no .

You are requested to fill the user information coupon provided in this booklet.

Wishing you pleasant riding and increased earnings for years to come.

With warm regards,
TVS Motor Company.

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.

NOTICE

NOTE

Pictures illustrated in this manual are of TVS King Kargo LK LT / LK PF / LK DAC and TVS king Kargo ZK LT / ZK PF / ZK DAC

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

ACCESSORIES DETAILS

Sl. No.	DESCRIPTION	QUANTITY
1.	Tool kit	1 Set 6 tools
2.	Spare Wheel	1 Number
3.	Keys	2 Numbers

In case of critical problems during the course of product usage, servicing or any technical assistance you may contact us at

TVS MOTOR COMPANY **TVS** 

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Website: www.tvsmotor.com/ib/home

Safety of yours and others are very important while operating this vehicle .

To help you make informed decision about safety, we have provided operating procedure and other information on labels in this manual. This information alerts you on potential hazards that could hurt you , others and goods.

We are providing the following safety labels and safety messages in the manual

SAFETY INFORMATION



WARNING Disregarding this message might result in injury to the driver ,customer and to the goods .



CAUTION This message indicates special procedure or precaution to be followed to avoid damages to the vehicle



NOTE This message provides further clarification for better understanding of any particular information

	Description	Page.No.
CONTENTS	Vehicle Identification Number	07
	Know Your Vehicle	08
	Features in TVS King	13
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USEFUL INFORMATION

- Periodic maintenance helps good performance of an automobile and our services are planned to keep your vehicle performing good.
- Carry out the proper services at specified intervals.
- Always use choke for cold starting when the vehicle is running in petrol.
- Use clutch only while shifting gears. Do not engage and dis-engage the clutch suddenly.
- Do not run the vehicle at full throttle for long periods and in stationary condition.
- Check and top up engine oil, coolant if required and replace the differential and engine oil as recommended.
- Always use recommended grade of lubricants, coolants and Genuine TVS Motor spare parts.
- Maintain recommended tyre pressure and rotate tyres as recommended.
- Reduce the speed while taking sharp turns. Do not apply the brakes while turning.
- Don't overload the vehicle. Recommended to fill the fuel early morning.

Running-in information.

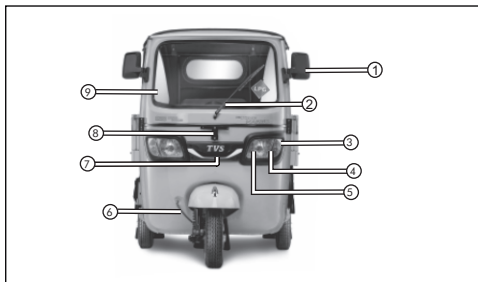
The first 2000 km is a crucial part of TVS King Kargo. Proper running-in operation during this period helps in ensuring a longer life and smooth performance of your vehicle. During running-in period do not exceed following speed limits .

Km.	1st gear	2nd gear	3rd gear	4th gear
0 - 750	10 km/h	15 km/h	25 km/h	40 km/h

Always keep within specified speed limit

Do not operate the engine in a manner that could expose the engine to excessive stress.

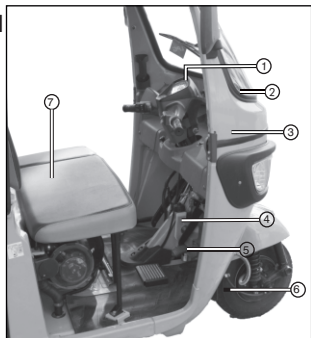
FRONT VIEW



FRONT VIEW

1. Rear view mirror
2. Wiper blade
3. Turn signal lamp
4. Head lamp
5. Position lamp
6. Front brake fluid hose
7. Logo grill
8. Number plate front
9. Wind shield glass

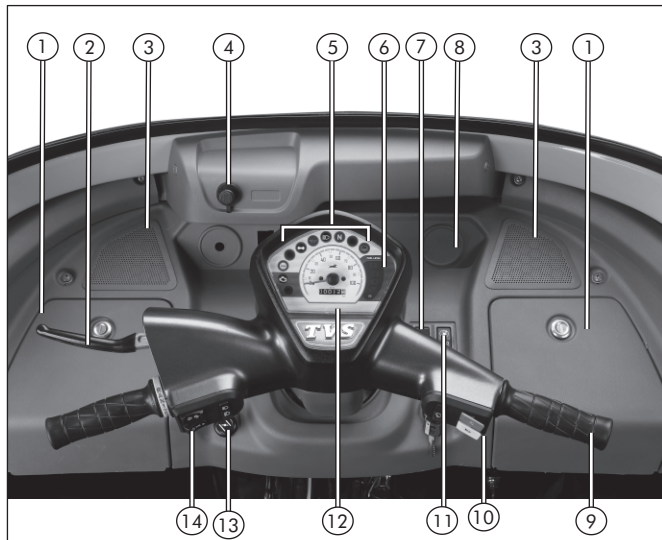
DRIVER CABIN - RH



DRIVER CABIN - RH

1. Handle bar
2. Wiper Motor
3. Dash board
4. Hand brake control lever
5. Tandem master cylinder
6. Brake Pedal
7. Driver seat

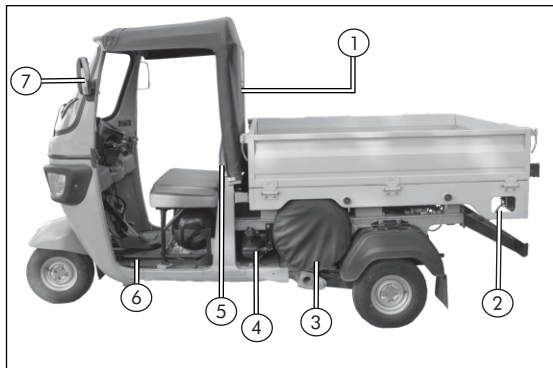
* Accessories shown may not be a part of standard equipment

CONTROL PANEL - LPG MODEL**CONTROL PANEL - LPG / CNG MODEL**

1. Glove box
2. Clutch operating lever
3. Speaker grill
4. Mobile charger unit
5. Cluster assembly tell tale lamp
6. LPG / CNG level gauge
7. Hazard Switch
8. Dummy Plug
9. Throttle grip
10. Control switch assembly RH
11. Gas change over Switch
12. Speedometer
13. Petrol choke knob
14. Control switch assembly LH

* Accessories shown may not be a part of standard equipment

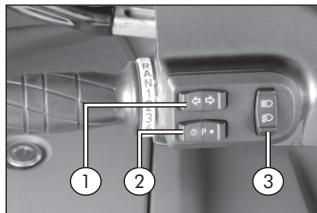
VEHICLE - LH



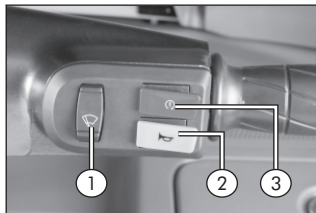
VEHICLE - LH

1. Soft top assembly
2. Load Body Integrated Foot Step
3. Spare Wheel with cover
4. Petrol tank
5. Driver back rest
6. Hand starter lever
7. LH mirror

CONTROL SWITCHES - LH



CONTROL SWITCHES - RH



CONTROL SWITCHES - LH

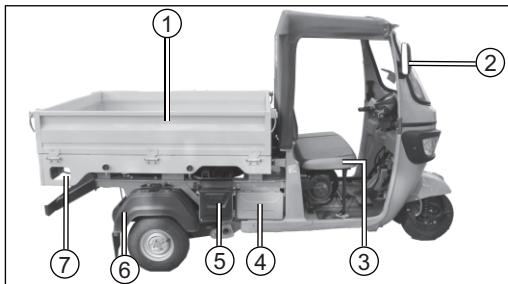
1. Turn signal lamp switch
2. Head lamp ON / PARK / OFF switch
3. Head lamp High / Low beam switch

CONTROL SWITCHES - RH

1. Wiper switch
2. Horn switch
3. Single Start Stop Switch

* Accessories shown may not be a part of standard equipment

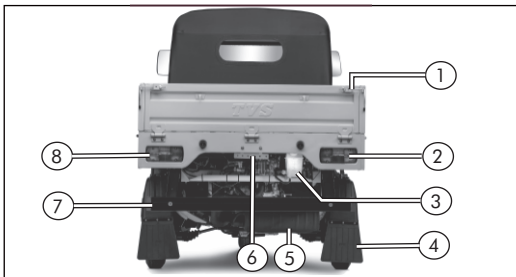
VEHICLE RH & REAR



VEHICLE RH

1. Rope Tying hook
2. RH mirror
3. Driver seat
4. Step utility box - 50 Ltr
5. Battery with cover
6. Mud guard
7. Integrated load body foot

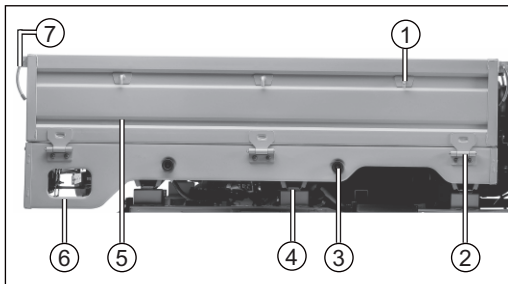
VEHICLE REAR VIEW



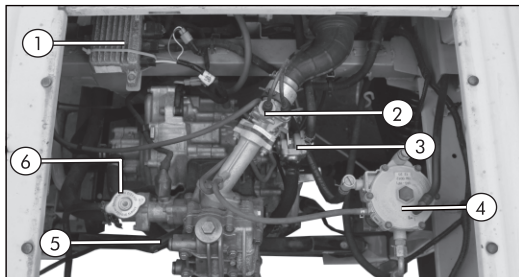
VEHICLE REAR

1. Load body side door latch lever Rear RH
2. Flushed type Rear combination Lamp RH
3. Coolant reservoir
4. Mud Flap
5. Muffler assembly
6. Rear number plate bracket
7. Chassis Mounted adjustable Bumper
8. Flushed type Rear combination Lamp LH

* Accessories shown may not be a part of standard equipment

LOAD DECK**LOAD DECK**

1. Rope tying hook
2. Side door hinges
3. Load deck door stopper
4. Load deck mounting - 6 nos
5. 3 Side open able doors
6. Integrated load body foot step
7. Load body side door latch lever Rear RH

ENGINE COMPARTMENT TOP VIEW**ENGINE COMPARTMENT TOP VIEW**

1. ISG
2. Carburetor
3. SAI unit
4. Reducer LPG / CNG
5. Suppressor cap
6. Cap radiator

Here you can familiarize yourself with operation of features provided in your vehicle.

1. Control Key operations
2. Safety Features
3. Operating Features

Accessories provided with the vehicle

1. Tool Kit
2. Owner's Manual
3. Chassis Mounted Bumper
4. Idol Stand Kit
5. Driver Cabin Lamp
6. Magazine Holder
7. Water Bottle Holder
8. Head Tube Cover
9. Brake Pedal Foot Rest
10. Spare wheel with cover
11. Battery cover
12. Engine cabin lamp
13. Rain cover
14. Screw Jack & Lever
15. Canvas soft top

FEATURES IN YOUR VEHICLE

Control key operations**Ignition switch**

TVS King Kargo comes with a set of two control keys.

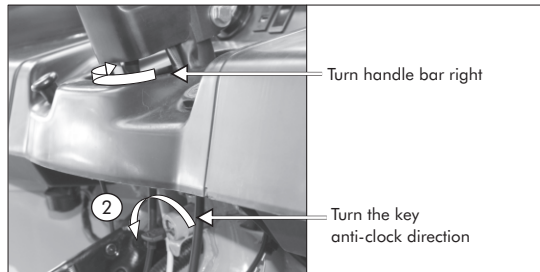
This key is used to operate ignition switch, steering lock, glove box and fuel lid.

1. Ignition switch

The ignition switch has two positions.

OFF: All electrical circuits are turned OFF in this position. Key can be taken out in this position

ON: In this position the engine can be started. Horn, turn signal wiper motor and tell tale lamp, can be operated. Key cannot be taken out in this position

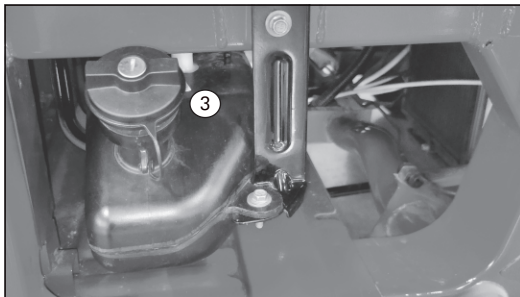
**2. Steering lock.**

To protect your vehicle from theft, steering lock is provided in your TVS King Kargo. It is positioned on the steering column, below the dash board.

To lock the steering,

- Turn the handle bar to extreme right.
- Turn the key in anti-clock direction
- Take out the key

* Accessories shown may not be a part of standard equipment



Fuel tank cap with locking system

3. Fuel tank cap with locking system

Fuel tank cap is provided on the LH side of the vehicle.

To fill the fuel open the fuel tank cap by inserting key and turn it in anti-clock wise direction and pull outwards.

Key cannot be taken out in this position.

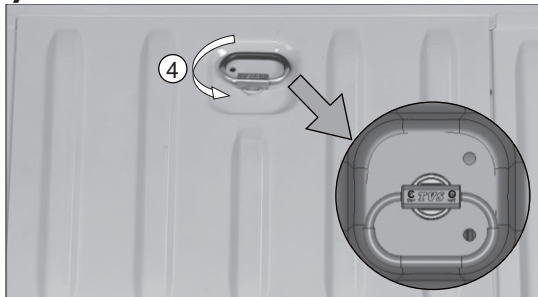
Open the petrol tank cap to fill the fuel.

To lock the lid close the lid and turn the key in clock wise direction

CAUTION

Use only unleaded petrol. Do not mix 2T oil with petrol.

* Accessories shown may not be a part of standard equipment



Service door

4. Service door

To open the Service door a latch lever is provided on the service door. Turn it in anti-clock wise direction to open the Service door. Direction is engraved in the handle

C: Closed Direction; O: Open Direction

To lock the service door, place the service door correctly, and turn the latch lever in clock wise direction. Refer the direction embossed on the Latch lever.

NOTE

Your TVS LPG vehicle petrol tank capacity is 3 Litres



Glove box

5. Glove box

It is provided on the left hand side and right hand side of the dash board. We can store up to 2.9 liters (Aprox) in each glow box.

To open the glove box turn the key anti clockwise. Key cannot be taken out in this position. To lock the utility box close the lid, turn the key in clock wise direction and take out key.

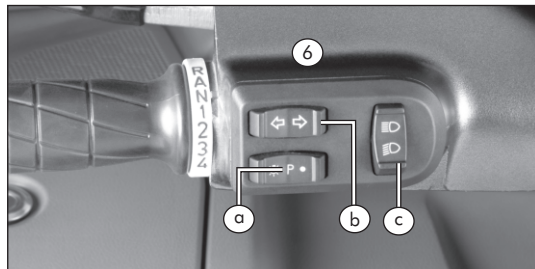
Safety features

These features are provided to assist you in safe driving.

CAUTION

Do not keep any valuable things & documents inside glove box

* Accessories shown may not be a part of standard equipment



Switch assembly LH

6. Switch assembly LH


It is positioned on Handlebar LH

a) Head Lamp Switch



It has three positions explained as follows

● : Head lamp, position lamps, speedometer lamp, tail lamp and number plate lamp will not glow with switch in this position though ignition switch may be in 'ON' position. and engine is in running condition.

P : Position Lamp, tail lamp and speedometer lamp and number plate lamp will glow when switch is in this position with ignition switch in 'ON' though engine is not running.

TVS King Kargo comes with DC headlamp. In this switch position, '  'head lamp also will glow along with speedometer lamps, tail lamps, number plate lamp and position lamp irrespective of Engine ON / Off condition.

b) Turn signal lamp switch (Left & Right)

On pushing the turn signal switch in left or right '   'the respective indicator lamps will glow in both front and rear. It gives an indication in which direction you are turning.



To turn off turn signal lamp bring the switch to central position.

WARNING

Always use the appropriate turn signal lamps when you take a turn.

Switch off turn signal lamp after negotiating turn.

c) Head Lamp high/low beam switch

Press the knob towards '  ' to operate in high beam of the headlamp and towards '  ' to operate in low beam.

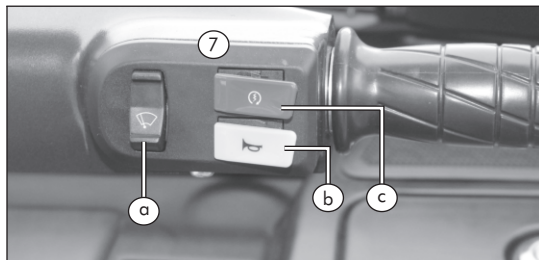
WARNING

Use appropriate beam (High / Low) as per the traffic and road condition for safety and comfortable riding.

* Accessories shown may not be a part of standard equipment

7. Switch assembly RH

It is located on the handlebar RH



a) Wiper motor Switch

It has two positions


ON : Wiper motor operates in this position.

OFF : Wiper motor stops operating in this position.

CAUTION

Do not operate the wiper motor on the dry wind shield glass. During washing please ensure that the wiper motor is wrapped with polythene sheet to prevent water entry.

b) Horn Switch:

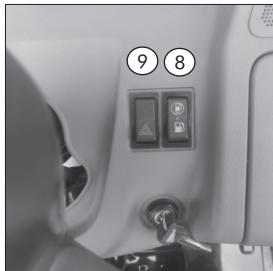
Press the button  provided on the RH switch assembly to operate the horn.

c) Self Starter Switch

Press the 'Ⓢ' switch to start the engine electrically with ignition switch in 'ON' condition and transmission in neutral. Press the 'Ⓢ' switch continuously for 3 sec when the vehicle is in idling RPM (<1500 RPM) & Neutral condition to stop the engine.

8. Fuel change over switch (Only LPG / CNG)

Press the switch down 'G' to operate the vehicle in gas and press up 'P' to operate in petrol. In middle position '----'




Switch assembly center

* Accessories shown may not be a part of standard equipment

both gas and petrol solenoid will be closed. This position is used to drain the residual fuel in line before switching over to the gas.

9. Hazard switch

Press this switch  to operate warning lamps in case of vehicle breakdown on road for repair or emergency. This switch can be operated even when ignition is in OFF position.

10. Wiper motor.

It is located on the wind shield frame above dash board.

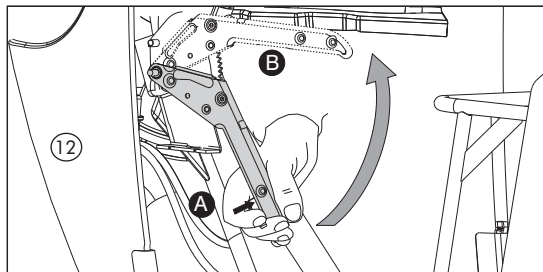
11. Mobile charger

Your TVS King Kargo comes with smart USB type mobile charger on idol stand as shown in the below fig.



Wiper motor & Mobile charger

Parking brake lever



12. Parking brake lever.

It is provided below the dash board. Use the parking brake while parking the vehicle especially on gradient to prevent vehicle rolling.

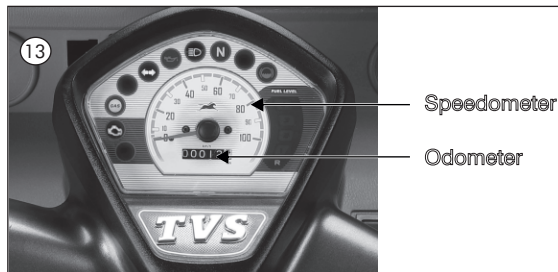
Press the lock button ' A ' and pull the lever ' B ' upward to apply the brake. To release brake again press the lock button and push the lever downwards.

WARNING

Ensure that hand brake is released before driving the vehicle

* Accessories shown may not be a part of standard equipment

Control features



13. Speedometer & Odometer

1. Speedometer

Indicates the vehicle on- road speed in kilometer per hour.

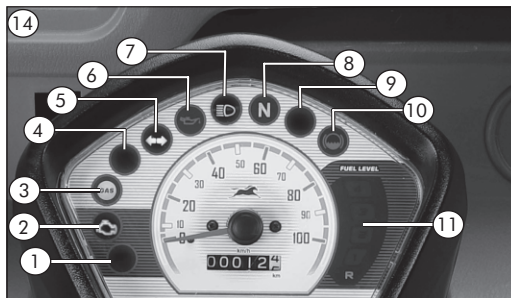
2. Odometer

It registers the total distance covered by the vehicle.

NOTE

Check kilometer readings carefully to service your vehicle at the recommended kilometers mentioned in service coupons.

Features in your vehicle LPG / CNG Model



1. Petrol indicator lamp
2. Malfunction indicator lamp (EFI)*
3. Gas indicator lamp
4. ISG Mal function Indicator
5. Turn signal indicator lamps
6. Engine oil pressure indicator
7. High beam indicator lamp
8. Neutral indicator lamp
9. High temperature warning lamp
10. Low Brake oil Warning lamp*
11. LPG / CNG Level indicator

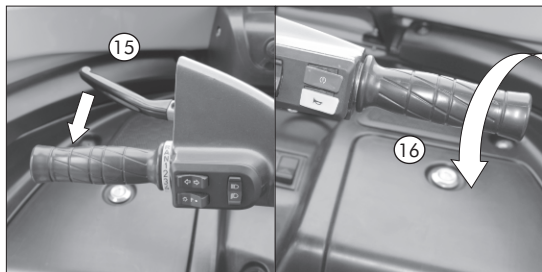
* Not Applicable for this Model

LPG Model

14. Tell tale lamps

Symbols	Description	Glow indication	Action to be taken	Colour
	Turn signal indicator lamp	Left or right indicator is in 'ON'	Switch off after taking turn	Green
	Neutral indicator lamp	Vehicle is in neutral gear condition	Safe to start the engine	Green
	High beam indicator lamp	Head lamp high beam is in 'ON'	An indication signal	Blue
	Engine oil pressure indicator	Low engine oil pressure	Take the vehicle to dealer	Red
	High temp warning lamp	Indicates high coolant temperature	Check Coolant level / Report to nearest Authorised Service Center	Red
	Petrol indicator lamp	Shows vehicle is operating in petrol	An Indication signal	Orange
	Low LPG / CNG warning lamp	LPG level is below minimum level	Fill LPG / CNG	Red
	LPG/CNG level indicator lamp	Shows level of LPG / CNG in tank	Fill gas according to reqmt.	Green
	Gas indicator lamp	Shows vehicle is operating in LPG / CNG	Take care about safety	Green
	Malfunction Indicator lamp	NA	NA	NA
	Low Brake oil Warning lamp	NA	NA	NA

* Accessories shown may not be a part of standard equipment



Clutch lever & Tube complete throttle.

15. Clutch lever.

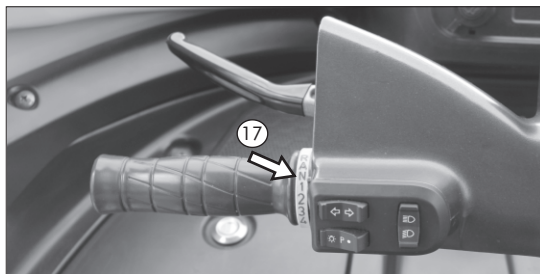
Use the clutch lever to disengage/engage the drive, from the engine to transmission while shifting gears. Depress the lever towards your side to dis-engage and release the lever to engage the clutch

CAUTION

Always use clutch lever while changing gears to ensure smoother gear shifting

16. Tube complete throttle

Engine rpm is controlled by the position of the throttle grip. Rotate it in anti-clockwise to increase the engine rpm. Rotate it clockwise or release it to decrease the engine speed.



Tube complete gear shift

17. Tube complete gear shift

To shift gears depress the clutch lever and rotate the gear shift twist grip downwards to engage forward and upwards to engage the reverse gear.

In between the neutral 'N' and reverse 'R' there is an alert 'A' position

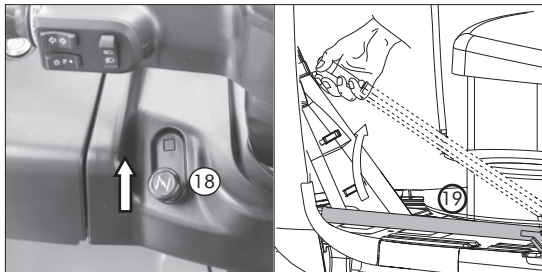
* Accessories shown may not be a part of standard equipment

18. Petrol Choke

Use the petrol choke lever when vehicle is starting in petrol mode, pull the lever up -wards to operate the choke

⚠ CAUTION

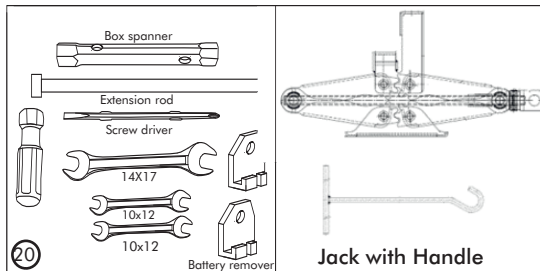
Remember to release the choke in petrol mode after starting.



Hand starter lever & choke knob

19. Hand starter lever

Pull the hand starter lever upward to start engine



20

Tool kit

20. Tool Kit & Screw Jack with Handle

Tool kit is located in the lockable glove box on the right hand side of the dashboard. Jack with handle is located in the RH side Lockable Utility Box.

⚠ CAUTION

Always follow the procedures given in self maintenance section while using tools provided in the tool kit & Jack Please bring your vehicle to the Authorized distributor or dealer / Authorized service center in case of any major repairs.

* Accessories shown may not be a part of standard equipment



UTILITY BOX

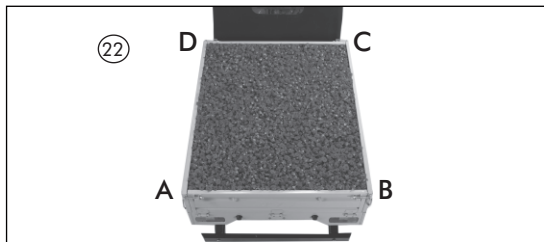
21. Utility box

Utility box is fitted in RH side of the vehicle. It is provided with locking system. you can store up to 50Lit capacity. Vehicle Jack is placed inside this utility box.

To open the Utility box, first turn the key anti clockwise direction. Pul out the lid utility box. Key cannot be taken out in this position. To lock the utility box close the lid, turn the key in clock wise direction and take out key.

CAUTION

Utility box provided is not a water proof. Do not keep any important documents inside.



LOAD DECK

22. Load deck

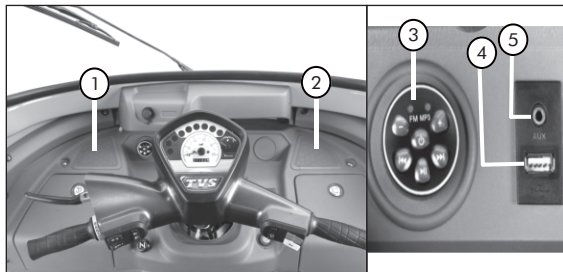
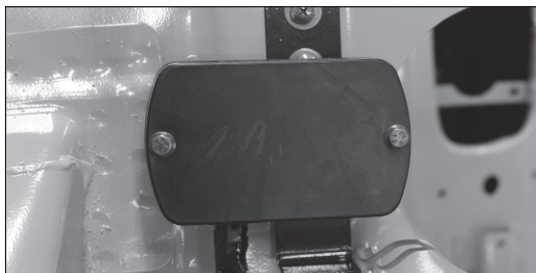
Your TVS King Kargo ZK/LK variant comes with load deck. You can carry the goods as per the recommended load carrying capacity. Size of the load deck is Length 1500mm, Width 1300mm, Height 280mm. It is provided with 3 sides openable side doors (LH , RH & Rear). To open the side door gently pull out the latches(A,B,C,D) from its lock & move to and fro direction. Engine service door is also provided on the Load deck. Refer Procedure opening of service door for opening & closing Page no.15

INTEGRATED MUSIC SYSTEM

TVS KARGO brings you most exciting distinct feature of "Music System" in its all models which accompany you all the way, gives you a joyful ride and always ensures your every trip is entertained. Factory fitted USB drive allows you to enjoy your favorite music. Set of Speakers not only gives you a pleasant journey but also entertains your passenger. Stay tuned to FM channels with TVS KARGO FM stereo system.

Description

1. Speaker LH
2. Speaker RH
3. Switch cluster
4. USB port
5. Aux Port

**Mp3 Mounting**

Features in your vehicle

Music player	: Automotive qualified music player capable of playing from common flash drives in MP3 format and FM radio.
Power wattage	: 10 +10 Watts Stereo Amplifier - Class AB
Dimensions of Music Player	: 76mm x 120mm x 31.5mm
Weight of Music Player	: 196 grams
Operating Temperature	: 0 - 80° C
Recommended usefully charged battery	: Maximum 2 hours continuous run on vehicle with 'ON' stand condition (from fully charged battery)
Auto battery Cutoff	: Music player discontinues it self when battery voltage is less than 8.5 V DC in order to save power for subsequent normal operation of vehicle.

Aux Port	: 3.5 mm Stereo.
USB Socket	: 1 no. of USB socket for interface with common flash drives.
Speakers	: 2 nos. of 15+15 Watts speakers with water & dust protection.
FM Radio	: PLL based auto tuning capability in frequency range of 88-108 MHZ.
Volume Controls	: 8 steps digital "UP - DOWN" volume control.
Switch Cluster	: Water & dust proof switches with soft touch and ease convenience.
LED indicators	: FM and MP3 indication, brighter LED's for day time visibility.

The various switch cluster operations of music system are listed as follows:



CAUTION

Switch cluster has a waterproof sticker on its top, replace this sticker without fail whenever it peels off.

SYMBOLS	BUTTONS	OPERATIONS
	ON / OFF	To switch ON & OFF the system
	Volume Up	To increase volume
	Volume Down	To decrease volume
	Play / Pause	In Bluetooth mode and MP3 mode: To Play or Pause the tracks Not function in FM mode
	Forward	In Bluetooth mode and MP3 mode: To Play next track For fast forward press this switch continuously after reaching the last song use reverse to reach the first song In FM mode: Tune to Next channel. Once highest frequency is reached use reverse button to reach lower frequency
	Reverse	In Bluetooth mode and MP3 mode: To Play previous track For fast reverse press this switch continuously after reaching the first song use forward to reach the last song In FM mode: Tune to Previous channel. Once lowest frequency is reached use forward button to reach higher frequency

Switching operations (⏻):

Power on switch has 4 position toggle mode operations (refer drawn flow chart).

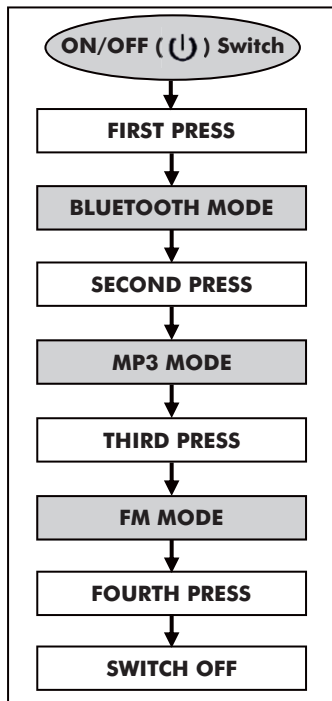
After switching on ignition key, press once '⏻', music system starts automatically on Bluetooth mode. At this position indicator provided for Bluetooth will start glowing continuously. To change the mode from Bluetooth to MP3 press once the button '⏻'. At this position continuously glowing the same indicator. Then next to change the mode from Mp3 to FM press once the button '⏻'. At this position continuously glowing indicator also shifts towards FM indicator.

Flash drive with MP3 songs stored in it shall be inserted before switching 'ON' music system or after switching 'ON' ignition key and removal of flash drive can be done both in ignition 'ON' and 'OFF' condition.

To switch off music system press button '⏻' once.

NOTE

This music system is designed to play only MP3 files stored in Flash drive. It searches MP3 files automatically and starts playing once the external source is connected.



Volume Control

This system has 8 steps of volume control. To increase the volume by one step press ' + ' button once, keep pressing ' + ' to get required volume level.

To decrease volume use button ' — ' accordingly.

During switch 'ON' the system starts with default of 50% volume.

CAUTION

Always maintain pleasant sound level in public places in order to have healthy atmosphere with co riders.

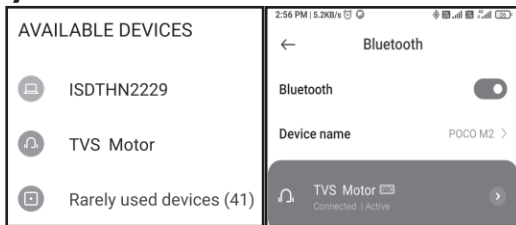
Forward / Reverse In Bluetooth Mode:

Press() button to switch on the Music system.

Music system will enter into "Bluetooth" mode.

Mp3 LED will start blink and FM mode continuously on for Bluetooth mode.

Switch on the Bluetooth in smart phone and scan the device.



Select TVS MOTOR and pair the device.



After pairing, you can play the songs from smart phone.


Press (+) button to increase the volume and Press (-) button to decrease the volume


NOTE

In Bluetooth mode, song selection is through smart phone only.

In Mp3 Mode:

To play next song press button '  ' once. To play previous song press button '  ' once. Keep pressing above buttons continuously to get desired songs.

To fast forward press and hold button '  ' continuously for more than 2 seconds.

To fast reverse press and hold button '  ' continuously for more than 2 seconds.

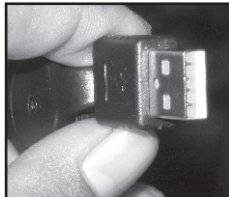
In FM Mode:

To tune to next channel press button '▶▶' once. To tune to previous channel press button '◀◀' once.

Play / Pause:

It is a toggle mode switch. To pause song press button '⏸' once. To resume press button '▶▶' once again. This function will not work in FM mode.

USB DRIVE :



USB socket provided in the system which can directly interface with commonly available Flash drives.

Ensure the polarity of Flash drive while assembling by confirming the plastic base always at the bottom side.

NOTE

We recommend you to switch OFF music system while starting the vehicle using electric starter.

Aux Port :

TVS KARGO music system is fitted of 3.5mm stereo aux port.



If you want to listen music from your music player or smart phone, use aux cable and connect your player to aux port.

CAUTION

We recommend not to use music system while it is raining, take care that no water is entering inside USB socket and headphone socket.

TVS Kargo music system is designed to work with input battery voltage of minimum 8.5 V DC. If battery voltage is less than 8.5 V, music system will not function.

Any attention grabbing activity like listening to good music while driving a high powered machine like "TVS KARGO" need to be done with adequate precautions for one's own safety and other road user's safety.

To avoid battery dropped when starting the engine using electric starter. Suggested only 30 minutes maximum for listening music when engine not in running condition.

Importance

Your safety and safety of others is very important. Operating this vehicle safely is a big responsibility.

For safe driving

SAFE RIDING TIPS

Always make a pre ride inspection before you start the vehicle. We suggest that you practice driving your vehicle in a non traffic situation until you are thoroughly familiar with your vehicle operations and its control. Always carry the fire extinguisher in LPG / CNG vehicle and care while parking the vehicle. Do not over load the vehicle more than Gross Vehicle Weight.

Daily checks before riding

Location	What to check for	Reference page
Engine oil & Differential oil	Check the availability up to required	46 & 47
LPG fuel level	Check fuel level & leakage while parking and before riding.	35
Brakes	Check for effectiveness, Brake pedal free play, dragging of brakes, brake sponginess.	51
Tyres	Correct tyre pressure, Adequate tread depth, No crack or cut	50
Battery	Ensure the working of Horn, Brake lamp, Head lamp All indicator lamp etc	38
Steering & suspension	Check for smoothness, any play or looseness.	
Controls (Clutch, Brake and Throttle etc.)	Check the free play, smooth operation, positive return to original position	54,55,&56
Tell tale lamps	Inspect all the tell tale lamps for any warning	20 & 21
Propeller shaft, Flange, Slider block and pin.	Sufficient quantity of recommended grease	52
Differential & gearbox breather tube	Check if both gear box and differential breather tube is blocked with mud or any dirt	

OPERATING YOUR VEHICLE

Starting the vehicle

- Insert the ignition key in the ignition switch and turn it clockwise to ON position. (Ref page no.14)
- Bring the transmission to neutral. Confirm by checking if the neutral indicator lamp on dash board is lit.
- Keep the fuel change over switch in 'G' to start in gas or 'P' to start in petrol. (LPG Model). Use choke while cold starting in Petrol Mode
- Pull the hand starter lever up-wards or use electric start switch to start the engine. (Refer page no 23). Do not give throttle while starting the engine.
- Wait for few minute and allow the engine to warm up before engaging the gears and moving on.

CAUTION

After parking the vehicle overnight always start the engine in petrol 'P' mode and use only hand starter. Do not open the throttle while the choke is applied, it will cause flooding of engine and difficulty in starting.

For Cold starting

- For 'Cold starting' i.e., in the morning after parking the vehicle overnight, start the engine in Petrol 'P' mode then switch over to gas 'G' mode as follows: (LPG)
- Keep fuel changeover switch to petrol 'P' to start the vehicle in petrol
- Start the engine as described and then warm up the engine for a minute before driving.
- Put the fuel changeover switch to '---' position, when engine starts jerking switch over to gas 'G' mode.

Setting the vehicle in motion (Ref fig.)

- When the engine has started release the parking brake.
- Dis-engage the clutch by depressing the clutch lever.
- Rotate the gear shift twist grip downward to engage the first gear.

**Setting the vehicle in motion**

- Open the throttle a little by rotating the throttle grip in the clock wise direction; simultaneously release the clutch lever gently and gradually.
- The vehicle will start moving forward. As the vehicle picks up speed shift to the next higher gear. Select the required gears in similar manner.

* Accessories shown may not be a part of standard equipment

Km.	1st gear	2nd gear	3rd gear	4th gear
Speed	15 km/h	20 km/h	30 km/h	55 km/h

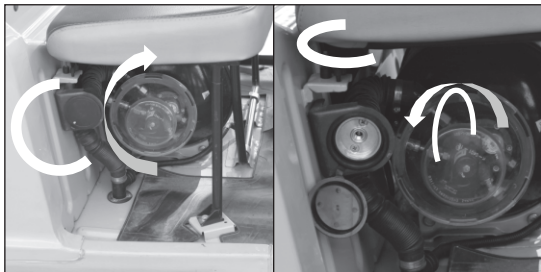
CAUTION

While shifting to each gear close the throttle fully and depress the clutch with out fail.

Ensure that the hand brake is released before moving the vehicle after parking.

Filling LPG

- Take the vehicle to gas bunk and stop the engine.
- Filler valve is present inside the cover LPG / CNG tank.
- Gently remove the Cover LPG / CNG Tank from the B Pillar partition by loosening the lock knob.
- Loosen and remove the cap filler valve by rotating it in the anti-clockwise direction
- Fill the required quantity of LPG / CNG. (Recommend to fill only Auto LPG / CNG)
- Refit and tighten cap filler valve in clockwise direction.

**⚠ WARNING**

After filling the gas always note down any leakage noise is coming from the filler valve area.

If so open the gas tight housing from the multi valve and close the manual valve and switch off the ignition (Ref. figure in page no.35)

Don't try to fill LPG / CNG beyond 80% of the tank capacity.

Don't adjust any of the Multi valve setting on your own.

Test your cylinder as per safety requirements every 5 years (LPG /CNG) , and recommend to fill only Auto LPG / CNG To check leakage note gas level on the level gauge fitted on the LPG /CNG cylinder while parking over night. Check the level again before using the vehicle. If there is difference in level Take the vehicle to the authorised service station

SAFETY TIPS IN LPG VEHICLE

- Do not switch over to LPG / CNG mode while the vehicle is running in petrol mode.
- Do not open the pressure regulator and other LPG / CNG components at your own.
- In case of leakage, close the cylinder valve immediately, also switch off the ignition.
- Don't replace temperature & pressure relief device on the cylinder valve by dummy disc in case of failure. Use genuine spares only.
- Always ensure that the venting connections are tight and the gas vents out to the atmosphere in case of leakage.
- Test your cylinder for strength as per safety requirements every five years for LPG /CNG from the date of previous testing by CCOE - approved agency.
- Don't carry out any welding & fabrication work near the LPG / CNG cylinder.
- Always work in good Ventilated workshop area.
- Don't take any flammable material near LPG / CNG components.
- Never discharge LPG / CNG in public places or in prohibited and closed areas.
- Use the correct rated fuse in the electrical unit.
- Don't fix the Electronic control unit where water ingress is possible.
- Use genuine original spares and avoid duplicates.
- Always keep the earthing of the wiring harness intact at all the times.
- Avoid short-circuiting of electrical connections.
- It is recommended to fill only Auto LPG / CNG.

Stopping and parking

- Close the throttle completely and apply the brake.
- As the vehicle speed reduces depress the clutch lever and down shift the gears.
- Bring the transmission to neutral position just before vehicle stops.
- Press the Self Starter switch continuously for 2 sec when the vehicle is in idling RPM (<1500 RPM) & Neutral condition to stop the engine, then turn ignition switch to OFF position and take out the key.

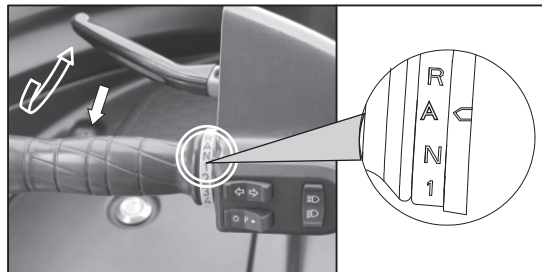
▲ WARNING

Do not press the clutch while braking at high speeds. Always apply the parking brake while parking on gradient.

- Apply parking brake. Lock the steering by turning the handle bar to the right. (Refer page no. 19.)

Reverse gear operation

- Bring the vehicle in neutral position
- Allow the vehicle to stop completely
- Press the clutch lever.
- Turn the gear change twist grip upwards to move to alert 'A' position, beeper sound can be hear. (Refer fig.)

**Reverse gear operation**

- Turn the gear change twist grip upwards to reverse 'R' position to engage the reverse gear. (Refer fig.)
- Engage the clutch gradually to move the vehicle.

Fuel saving tips

- Carry out the periodic maintenance services regularly at TVS authorised service stations.
- Perform daily checks as specified in page no 32.
- Avoid sudden and frequent braking.
- Use Start Stop function to switch OFF the engine if you have to idle the vehicle for more than 1 minutes.

- Clean, check and adjust the sparkplug gap periodically. For service procedure (See page no. 49)
- Clean air filter element as per schedule (See page57)
- Lubricate propeller shaft, slider block, pin and flange as per lubrication schedule.(Page no.45)

* Accessories shown may not be a part of standard equipment

Battery location

Battery specification

- TVS LPG / CNG vehicle comes with lead acid type 12V, 32Ah maintenance free battery.
- Battery is located Right side of the load deck chassis.
- Battery is closed completely with the battery cover.& having theft proof lock provided.



Battery location in LPG vehicle.

It is recommended to top up distilled water only at Authorized proprietary Service Centres.

For maintenance of electrical system, it is recommended to approach our Distributor / Dealer or Authorized Service centers.

LPG COMPLIANCE PLATE

It is located on the right hand side of the 1st stge cover of LPG / CNG tank below the driver seat.

It has the following contents.

- Auto LPG tank identification no.
- Date of installation
- Water capacity of cylinder liters.
- Date of last retest.
- Vehicle registration no.

LPG / CNG tank identification number is required while registering the LPG / CNG vehicle



S.No	Sub Activity	Parameters	1000	5000	10000	15000	20000	25000	30000	35000	40000	45000	50000	55000	60000	65000	70000	75000	80000	85000	90000	95000	100000		
			Kms 40-45 Days	Kms 95-100 Days	Kms 145-150 Days	Kms 200-205 Days	Kms 250-255 Days	Kms 305-310 Days	Kms 355-360 Days	Kms 410-415 Days	Kms 460-465 Days	Kms 515-520 Days	Kms 565-570 Days	Kms 620-625 Days	Kms 670-675 Days	Kms 725-730 Days	Kms 775-780 Days	Kms 830-835 Days	Kms 880-885 Days	Kms 935-940 Days	Kms 985-990 Days	Kms 1040-1045 Days	Kms 1090-1095 Days	Kms	Kms
1	Clean	Wash and Clean Vehicle	Every 1000Kms																						
2	Check & Top up	Engine Oil	Every 2000Kms																						
3		Differential oil	●		●		●		●		●		●		●		●		●		●		●		
4		Brake fluid in brake fluid reservoir	●		●		●		●		●		●		●		●		●		●		●		
5		Coolant level	●		●		●		●		●		●		●		●		●		●		●		
6		Clutch Lever End Play and Engine end Play adjustment /setting	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
7		Tyre pressure	Every 500Kms / Daily																						
8		Lubricate Brake Pedal Fulcrum Joint		●		●		●		●		●		●		●		●		●		●		●	
9	Clean and Adjust Steering Friction Plate		●		●		●		●		●		●		●		●		●		●		●		
10	Check Inspect & Top up	Brake fluid in brake fluid reservoir			●		●		●		●		●		●		●		●		●		●		
11		Coolant level	●		●		●		●		●		●		●		●		●		●		●		
12		Cooling system circuit leak check	●		●		●		●		●		●		●		●		●		●		●		
13		Battery Electrolyte Level			●		●		●		●		●		●		●		●		●		●		
14	Check & Adjust	Engine foundation bolt	●		●		●		●		●		●		●		●		●		●		●		
15		Brake Effectiveness	●		●		●		●		●		●		●		●		●		●		●		
16		Fasteners of Door assy (hinge) & Striker assy, dash board, rear view mirror wind shield, Soft top frame, latch nut and body	●		●		●		●		●		●		●		●		●		●		●		
17		Valve tappet clearance	●		●		●		●		●		●		●		●		●		●		●		
18		Oil circulation at cylinder over head camshaft	●		●		●		●		●		●		●		●		●		●		●		

* Periodic Maintenance vary in-between the Free Service Schedule can be carried out by End-User itself

S.No	Sub Activity	Parameters	1000	5000	10000	15000	20000	25000	30000	35000	40000	45000	50000	55000	60000	65000	70000	75000	80000	85000	90000	95000	100000			
			Kms 40-45 Days	Kms 95-100 Days	Kms 145-150 Days	Kms 200-205 Days	Kms 250-255 Days	Kms 305-310 Days	Kms 355-360 Days	Kms 410-415 Days	Kms 460-465 Days	Kms 515-520 Days	Kms 565-570 Days	Kms 620-625 Days	Kms 670-675 Days	Kms 725-730 Days	Kms 775-780 Days	Kms 830-835 Days	Kms 880-885 Days	Kms 935-940 Days	Kms 985-990 Days	Kms 1040-1045 Days	Kms 1090-1095 Days			
19	Check & Adjust	Carburetor - idle speed, CO%, HC	●		●		●		●		●		●		●		●		●		●		●			
20		Check play of all control cables and adjust if required	●		●		●		●		●		●		●		●		●		●		●			
21		Tyre pressure	●		●		●		●		●		●		●		●		●		●		●			
22		Radiator mounting screw adjustment	●		●		●		●		●		●		●		●		●		●		●			
23		Steering Lock Nut	●		●		●		●		●		●		●		●		●		●		●			
24		Handle bar bolt Tightness	When ever customer complaint																							
25		Wheel Rim Nut Tightness			●		●		●		●		●		●		●		●		●		●		●	
26		Body Mounting bolts			●		●		●		●		●		●		●		●		●		●		●	
27		Replace	Engine oil	●		●		●		●		●		●		●		●		●		●		●		
28			Oil Filter	●		●		●		●		●		●		●		●		●		●		●		
29	Differential oil		●		●		●		●		●		●		●		●		●		●		●			
30	Spark plug				●		●		●		●		●		●		●		●		●		●			
31	Air filter element										●										●					
32	Brake Shoe									●						●							●			
33	Replace Breather Tube											●							●							
34	Replace Coolant pump assy		1,20,000Kms																							
35	Replace Water pump Damper assy & Bolt		40,000Kms / 1Yrs																							
36	Replace Radiator & Cooling system hoses		70,000Kms / 2Yrs																							

S.No	Sub Activity	Parameters	1000	5000	10000	15000	20000	25000	30000	35000	40000	45000	50000	55000	60000	65000	70000	75000	80000	85000	90000	95000	100000	
			Kms 40-45 Days	Kms 95-100 Days	Kms 145-150 Days	Kms 200-205 Days	Kms 250-255 Days	Kms 305-310 Days	Kms 355-360 Days	Kms 410-415 Days	Kms 460-465 Days	Kms 515-520 Days	Kms 565-570 Days	Kms 620-625 Days	Kms 670-675 Days	Kms 725-730 Days	Kms 775-780 Days	Kms 830-835 Days	Kms 880-885 Days	Kms 935-940 Days	Kms 985-990 Days	Kms 1040-1045 Days	Kms 1090-1095 Days	
37	Replace	Replace Front shock absorber	70,000Kms																					
38		Replace Rear shock absorber	70,000Kms																					
39		Replace Load Body Seating Balata Sheet	70,000Kms																					
40	Clean	Vehicle	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
41		Radiator core for dust or mud accumulation & clean from out side if required		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
42		Air filter element	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
43		fuel tap (strainer only)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
44		Petrol tank									●									●				
45		Oil strainer (replace if damaged)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
46		Decarbonize cylinder head and piston					●					●				●				●				●
47		Hose cleaning (All). Replace, if damaged										●												
48		Brake Shoe Liner			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
49		Clean Coolant tank	Once in a year																					
50	Clean Cooling fan assembly	70,000Kms / 2Yrs																						
51	Inspect	Engine Breather Tube		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
52		Compression pressure		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
53		Adjuster assembly chain tensioned spring		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
54		Inspect Pipe nut joints (cracks & damages)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* Fuel tap only in Petrol model

S.No	Sub Activity	Parameters	1000	5000	10000	15000	20000	25000	30000	35000	40000	45000	50000	55000	60000	65000	70000	75000	80000	85000	90000	95000	100000
			Kms 40-45 Days	Kms 95-100 Days	Kms 145-150 Days	Kms 200-205 Days	Kms 250-255 Days	Kms 305-310 Days	Kms 355-360 Days	Kms 410-415 Days	Kms 460-465 Days	Kms 515-520 Days	Kms 565-570 Days	Kms 620-625 Days	Kms 670-675 Days	Kms 725-730 Days	Kms 775-780 Days	Kms 830-835 Days	Kms 880-885 Days	Kms 935-940 Days	Kms 985-990 Days	Kms 1040-1045 Days	Kms 1090-1095 Days
55	Inspect	Inspect Electrical connection checking			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
56		Rubber Bellow for Crack or Damage			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
57		Inspect petrol hose			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
58	Electrical	Check all lights, horn & switches functioning			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
59	Greasing & Lubrication	Steering races & balls			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
60		Speedo gear & pinion	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
61		Speedo cable inner			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
62		Muff cup (Flange)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
63		Brake lever fulcrum point			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
64		Hand starter front shaft			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
65		Hand starter rear shaft (Engine End)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
66	Others	Tyre Rotation		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
67		Check battery voltage and charge if required			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
68		Apply petroleum jelly on battery terminals			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
69	LPG / CNG	Service LPG reducer	Only in case of complaint																				
70		Check LPG kit / tank mountings	Only in case of complaint																				
71		Check Multi valve / vapor box for any leakage	Only in case of complaint																				
72		Check joints of pipes and hoses in gas system for leakage using soap solution	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Product	Recommended grade	Manufacturer	Quantity.
Engine oil	4T, SAE 20 W 50 APIL SL JASO Ma2*	TVS Tru4 Duramate	1750 ml
Differential	4T, SAE 20 W 50 APIL SL JASO Ma2 [#]	TVS Tru4 Duramate	250 ml
Brake fluid	DOT 3 / DOT 4	TVS Girling	250 ml
Grease (Muff cup)	IPOL IPLEX RR3	IPOL	120g
Grease (Steering)	BECHEM PREMIUM III	BECHEM	30g
Coolant	Antifreeze -37°, 50:50	TRU4 DURACOOOL Premix	1400ml

 CAUTION

Use only TVS Motor Recommended genuine lubricant & coolant.

 NOTE

Warranty shall not apply, if the mandatory parts are not replaced or periodic maintenance not done with in the specified kilometers or date, which ever occurs earlier. Warranty shall not apply on usage of Non-Genuine engine oil and coolant.

* Applicable only for Asia & Asean Country's

[#] Applicable only for Africa, Middle east & Latam Country's

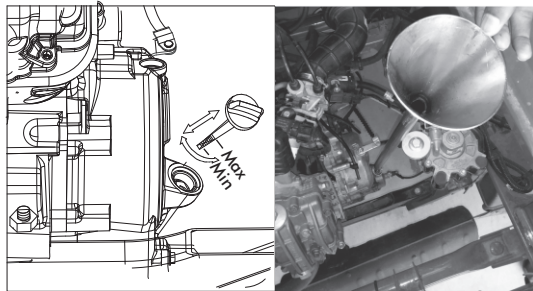
SELF MAINTENANCE PROCEDURE

The following maintenance can be done by your self to ensure good performance of your vehicle.

CAUTION

Attending major maintenance work and repairs yourself can affect the performance of your vehicle. Approach TVS authorised Dealer or service center in the case of any major problem.

Engine Oil level checking and topping up



Engine Oil level checking and topping up

* Accessories shown may not be a part of standard equipment

Engine Oil level can be measured by means of dip stick provided on the cover crank case as shown in the fig.

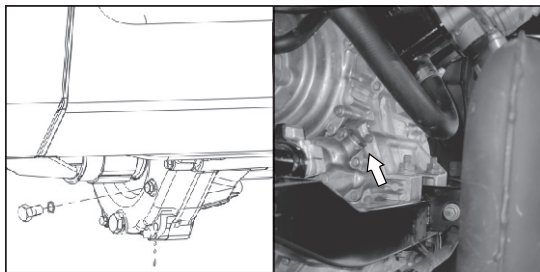
- Park the vehicle on level ground
- Allow 5 to 10 min for the oil to settle down.
- Remove the dip stick from its location.
- Wipe it clean with dry cotton waste.
- Re-insert the dip stick with out threading inn.
- Again take out the dipstick to note the oil level, it should be In-between the 'Min & Max' level or up to 'Max' level.
- In case the oil level is below the 'MIN' level mark top it up to 'Max' level.
- Insert and tighten the dip stick completely.

Differential Oil level checking and topping up

Differential oil level can be checked with the help of oil level checking bolt provided on cover differential.

- Park the vehicle on the level ground.
- Allow 5 to 10 min. for the oil to settle down.
- Unscrew the oil level check bolt using 10mm spanner
- The oil level is correct, if oil just starts flowing out when the plug is removed.
- If not, oil level is less, top up with recommended oil, by using special toll till the oil starts flowing out.

- To top up oil loosen filler bolt using 17mm spanner.
- Fill recommended oil by using special tool to fill and tighten filler bolt with washer.
- Tighten the level plug with washer with out fail.

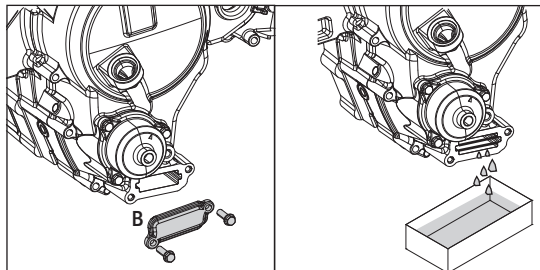


Differential oil level checking and topping up

Tool name	Tool size
Ring spanner, Socket spanner	10mm, 17mm

Engine Oil Replacement

- Run the Engine for a few minutes to warm up the oil
- Park the vehicle on level ground
- Allow some time for the oil to settle down.
- Place a oil pan under the drain plug and un-screw hex.

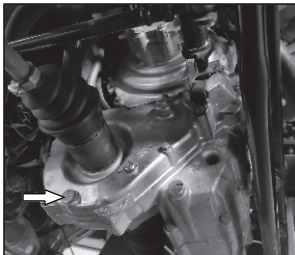


Engine Oil Replacement

flange nuts (2nos.) and take out the cover oil strainer(B). Also Remove 17 mm Magnetic drain bolt provided on the crank case LH, and clean.

- Refit drain plug along with plain washer and tighten it.
- Remove the dip stick and pour the correct quantity of recommended oil by using special tool.
- Insert and tighten the dip stick completely.
- Check the oil level.
- Replace engine oil at every 10000 kms.

Tool name	Tool size
Ring spanner	10 mm



Differential Oil Replacement

Differential Oil Replacement

- Run the Engine for a few minutes to warm up the oil
- Park the vehicle on level ground
- Allow some time for the oil to settle down.
- Place a pan under the drain plug and remove the oil drain plug with plain washer. Drain the oil completely.
- Refit drain plug along with plain washer and tighten it.
- Loosen and take out the filler bolt and fill correct quantity of recommended oil by using special tool.
- Tighten filler bolt. Check oil level
- Replace differential oil at every 10000Km

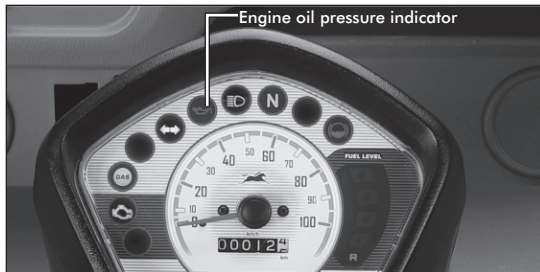
Tool name	Tool size
Ring spanner, Tubular spanner	17mm

CAUTION

Always use recommended transmission, differential oil and special tool. Two different grade and brand of oil should not be mixed

LOW Engine Oil Pressure Indicator

- It is located on cluster assembly tell tale lamp as shown in the figure.
- This indicator must glow in Ignition switch ON and before starting the engine.



Engine Oil Pressure Indicator

- It must switch off as soon as engine start i.e., engine rpm increases, or else bring the vehicle to authorised dealer or service center

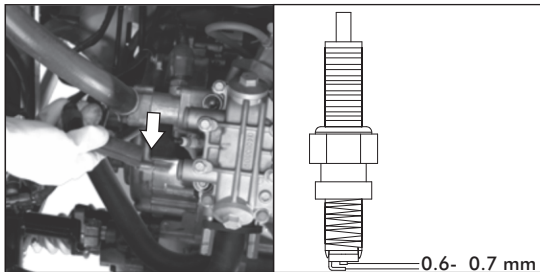
⚠ CAUTION

Do not run the vehicle if the low engine oil pressure indicator continues to glow while driving

SPARK PLUG

Cleaning the spark plug

- Pull out the suppressor cap from the spark plug.
- Remove the spark plug by using plug spanner provided in the tool kit.



- Clean carbon from the electrodes and around the base with the help of spark plug cleaner.
- Adjust the gap to the specified limit if incorrect
- Spark plug should be replaced at every 10000km.

Tool name	16 mm plug spanner
Spark plug Gap	0.6 - 0.7mm
Spark plug Type	Bosch UR 6 DE
Spark plug cap	Resistive

⚠ CAUTION

To adjust spark plug gap or replacement approach our Dealer or Authorized service center.

Plug the spark plug hole when the spark plug is removed to avoid entry of foreign particles inside cylinder

Always use recommended make and type of spark plug.

Changing tyres and wheels

1. Spare wheel removal

- Spare wheel is fitted to the Left Side chassis of the vehicle below the load deck.
- Gently pull out the spare wheel cover, Remove the Spare wheel lock using Key, then Loosen the spare wheel mounting nuts along with spring washer using 17 mm tubular spanner. (2nos.) (A , B)
- Take out the spare wheel.



Spare wheel removal

NOTE

Mount the spare wheel on the bracket properly and tighten the nuts thoroughly, close the spare wheel with cover.

Tyre and wheel changing procedure.

Removal

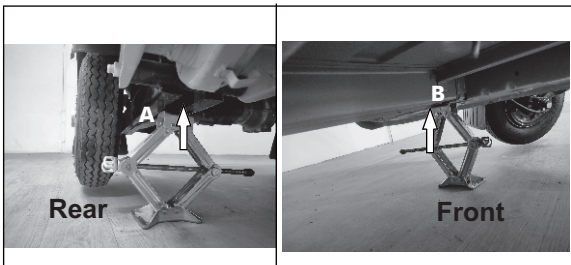
- Apply parking brake
- Loosen the wheel retaining nuts. (2 nos.)
- Take out the Jack & Rod from RH Side Utility Box.
- Place the jack as shown in the fig. (For removing front wheel B (Cross Member). rear wheel A. (Trailing Arm))
- Lift up the vehicle until the wheel clears the ground.
- Remove the retaining nuts and take out the wheel.

Assembly

- While assembling the spare wheel tighten the wheel nuts diagonally.
- Lower the vehicle slowly to the ground then tighten the nuts fully to the recommended torque.

Tool name	Tool size
Ring spanner, Socket spanner	17mm

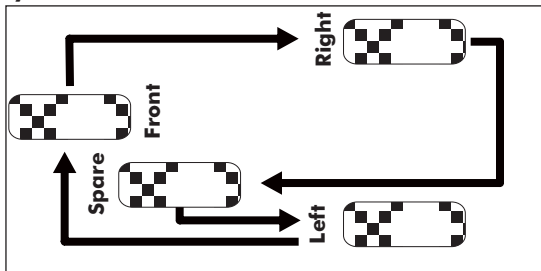
Load	Driver alone (kerb with driver)		Laden - 400 kg payload (Driver + 325kg)		Above - 400 kg payload >(Driver + 400kg)	
	FR	RR	FR	RR	FR	RR
Pressure (psi)	30	30	30	50	45	60



Jack position rear - A

Jack position front - B

Tyre rotation



Tyre rotation

Rotation of tyre is recommended for uniform tread wear on all the wheel positions to achieve optimum tyre life.

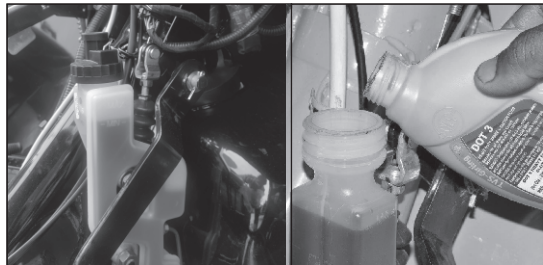
So it is advised that rotation of tyres be carried out after every 5000 kms.

CAUTION

The best tyres should always be fixed at the rear wheels which are driving wheels, thereafter follow the sequence of rotation as shown in the fig.

It is recommended to replace the tyre when the tyre wears off to the Tyre Wear Indicator level (indicated by TWI on the tyre)

BRAKES



Brake fluid level checking & topping up

Brake fluid level checking

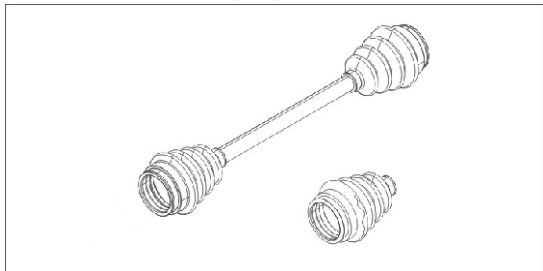
Incase Brake oil level is low immediately brake oil warning lamp glows on the telltale lamp. It can be checked on the brake fluid tank fitted on the Right side under the dash board in the driver cabin.

The level should be in-between the 'Max & Min' level.

If it is below the 'Min' level top up using recommended brake fluid up to 'Max' level.

WARNING

In the case of changing brake fluid it is recommended to approach our Dealer or Authorized Service centers. Avoid dust entry to the fluid reservoir while topping up. Bellows should be kept in good condition and replace.

Rubber bellows for propeller shaft**Rubber bellows**

Bellows should be kept in good condition and replaced immediately if torn or cracked by approaching our Dealer or Authorized service centers.

Torn or cracked bellows allow dust and water into the propeller shaft flanges which will cause damage to flange, slider block and pins. Inspect the bellows regularly.

ELECTRICAL**Head lamp bulb removal**

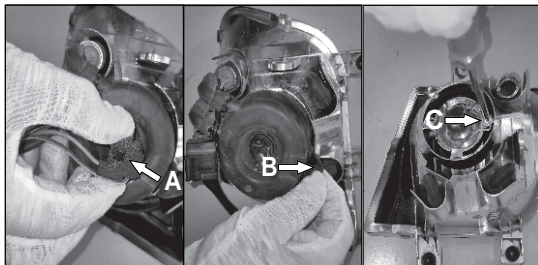
To replace bulb

- Remove the headlamp bulb holder (A) from reflector housing which is located under the dash board.
- Gently pull out the Rubber Boot (B) from reflector housing.

- Un-lock the clip (C) by loosening the star screw using star screw driver to take out the bulb assembly.
- Push the bulb in and turn it in anti-clockwise direction to remove the bulb from holder.
- Push the new bulb in and turn it in clockwise direction to fit new bulb.
- Put back the clip & tighten the start screw. Assemble Rubber boot & bulb Holder into reflector housing

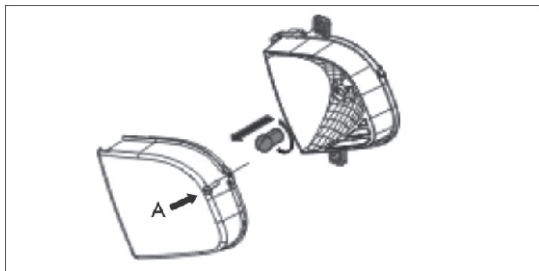
Tail/brake/ rear turn signal lamp bulb

- Loosen and remove screws holding the lens.
- Remove lens. Push in and twist in anti clockwise direction to remove bulb.
- Replace bulb and assemble back in reverse order of disassembly.

**Head lamp bulb removal**

Front turn signal bulb replacement

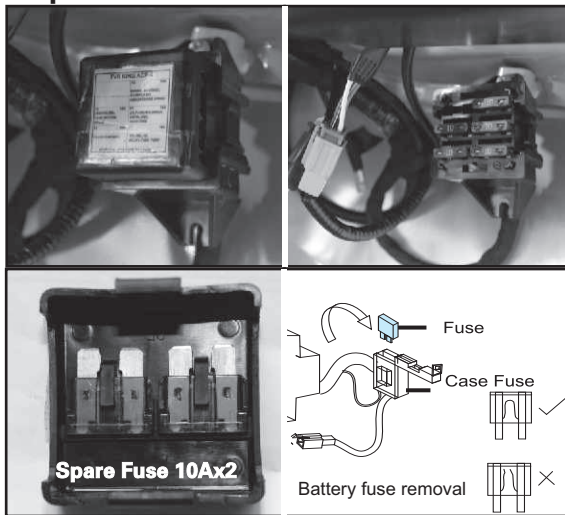
- Loosen and remove screws (1 nos.) (A) holding the lens.
- Remove lens. Push the bulb in and twist in anti clockwise direction to remove bulb.
- Replace bulb and assemble back in reverse order of removal.



Bulb removal

Battery fuse replacement

The fuse case fitted on the ISG cordset unit contains a 60 A (1-nos.) fuse. If the fuse is blown off, turn the ignition switch to OFF position. Open the fuse case, take out the fuse from copper fuse holder and replace it with spare fuse provided. Refer the figure.



Six fuses of 10A and one 2A is located below the dash board inside the fuse case. Check the respective fuse if Self Start, horn, bay lamp, faremeter, wiper, hazard, cluster lamps and gas or petrol solenoid is not working, replace the fuse with spare fuse (10Ax2) if blown off.

Throttle cable adjustment

Throttle cable free play can be measured by holding the adjuster and pulling the cable gently out. The gap between the adjuster and cable outer is the free play.

To adjust the throttle cable free play

- Loosen the lock nut (1) by holding adjuster (2)
- Adjust the cable slack by turning the adjuster (2) in or out to obtain the recommended free play.



Throttle cable adjustments

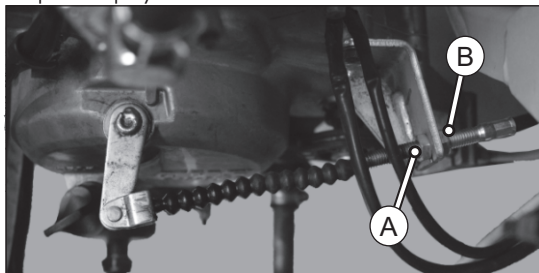
- After adjusting the free play, holding the adjuster, tighten the lock nut.

Throttle cable free play : 1 - 2 mm	
Tool name	Tool size
Double end spanner	10 mm (2) nos.

Clutch cable adjustment

Clutch free play is measured at the clutch lever end.

- Loosen lock nut (A).
- Adjust the play adjuster nut (B) in or out to get the specified play at the lever end.



Clutch cable adjustment

- After adjusting the play holding the adjuster nut lock the lock nut.

Clutch free play: 10 - 20 mm

Tool name	Tool size
Double end spanner	10 mm, 12mm

⚠ CAUTION

Too much or too less clutch free play will damage the clutch plates affecting the performance of the vehicle. Clutch play should be adjusted only when the engine is cold.

Clutch cable inner replacement

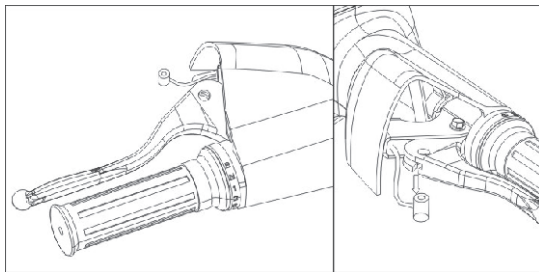
Removal

- Loosen the stopper nut at rear
- Remove cable from release lever (A)
- Take out the cable from stopper
- Disconnect cable from lever end
- Pull out cable inner from lever end



Clutch cable assembly at engine end

Tool name	Tool size
Double end spanner	10 mm, 12mm



Clutch cable assembly at pulley end

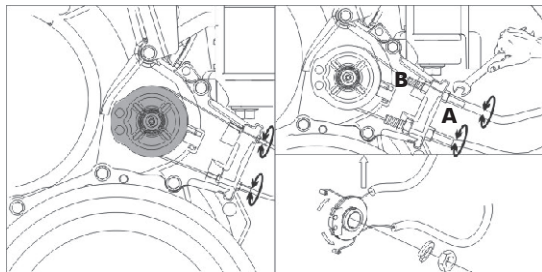
Assembly

- Connect cable to clutch lever
- Insert cable inner through cable outer
- Connect adjuster to stopper clutch cable at engine end
- Pull out clutch inner through clutch release lever and pinge bolt
- Tighten pinge bolt
- To adjust free play, loosen pinch bolt pull cable in or out and tighten pinge bolt.

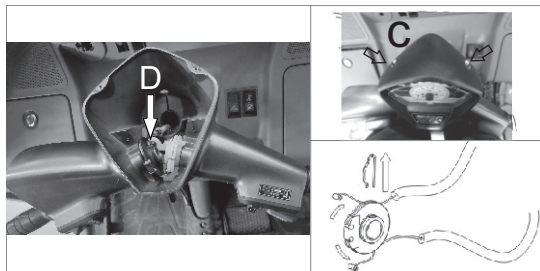
Gear cable inner replacement

Removal

- Loosen lock nut and adjuster nut near pulley at engine end
- Remove cover handle bar (C) by loosening two screws
- Remove the lock clip (D)
- Remove the handle bar sleeve and take out pulley gear shift.
- Pull out cable inner gear shift
- Loosen pulley gear shift nut at engine end and take the pulley out



Gear cable assembly at engine end.

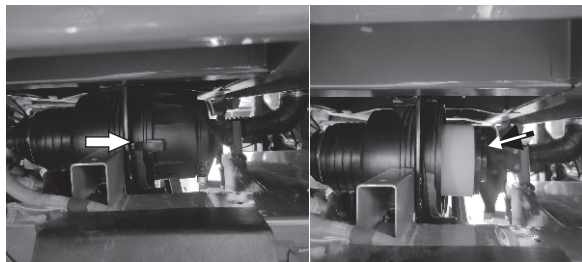


Gear cable assembly at handlebar end.

Assembly

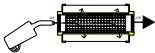
- Connect gear cable inner to pulley gear shifter at handle bar end.
- Insert cable inner through cable outer and adjuster
- Take out adjuster gearshift cable from stopper
- Loosen pulley nut and take out pulley
- Pull out cable inner and connect to pulley at engine end through pinge bolts
- Apply oil on inner and route it through outer and holes provided in the pulley gear shifter and tighten pinge bolts.

- Connect adjuster to stopper gear cable at engine end.
- Connect the pulley to shaft gear shifter and tighten nut.
- Connect pulley to handle bar end and insert sleeve in to handle bar
- Lock the pulley with clip
- Adjust cable free play by loosening lock nut and turning adjuster nut in or out.
- Refit cover handle bar and tighten screws.



Air filter cleaning


Removal

- Air filter is present below the load deck of RH side.
- Clean the Outer Surface of the air filter throughly.
- Loosen the three lock clip provided on the cover air filter, and take out the cover air filter.
- Take out the paper filter cartridge. 
- Blow the compressed air from inside out of the filter element to free the filter from dust particle.
- Replace the Paper filter element along with foam every 40000 kms. or found damaged for better performance of the vehicle and engine life.

- Clean the cover air filter and case air filter.
- Re-assemble the air filter element in the reverse order of removal. Ensure all the three clips are clamped with cover air filter and locked properly.

Cleaning the Paper filter element	Every 10000 kms
Replacement of Paper filter element	Every 40000 kms

CAUTION

While assembling the cover air filter locate the groove of cover air filter properly. (Match Arrow Mark provided on Cover as well as Air filter Body.) 

In case vehicle is operating very dusty environment, it is recommended to clean the air filter frequently for better life of engine

Engine High Temperature Warning Lamp

It is located on cluster assembly tell tale lamp as shown in the figure.

This indicator will glow only when engine temperature goes high due to some malfunction in the cooling system.

If you ride the vehicle with the High temperature warning lamp ON, engine goes to Limphome mode and engine gets switch off to avoid seizure.



Engine High temperature Warning Lamp

⚠ WARNING

Approach nearby TVS King Authorised Dealer / Service Center incase the high engine temperature warning lamp glows contentiously.

Engine won't get started incase of Temperature Sensor failure or Open circuit.

* Accessories shown may not be a part of standard equipment

Topping up the Coolant inside coolant Reservoir

- Coolant need to be topped up incase coolant level in the reservoir reach minimum level. Coolant reservoir is located bellow load deck , Rear RH side of Engine compartment. To top up the Coolant by using funnel.
- Open the Cap reservoir (A) by rotating anti-clockwise.
- Top up the recommended coolant up to MAX level by using funnel.
- Close the Reservoir cap



Coolant reservoir

⚠ CAUTION

Top up only TVSM recommended Premixed Coolant.
Do not over fill the reservoir.
Do-not mix the different brand coolant.

TVSM Recommended Coolant : Castrol Radicool SFO Premix

Do's

- When the vehicle is taken for body repairs (welding etc.) the Gas tank should be emptied
- Please check the position of the selector switch before starting the vehicle
- Always repair should be carried by trained person only
- If engine does not start in Gas mode, start in Petrol mode and then switch over to Gas then inspect vehicle
- Ensure that the LPG / CNG tank vapour box cover is always in closed position and not damaged. Replace the same as soon as damaged is noticed
- Ensure that conduit pipes are always in good condition and secured firmly. Replace in case damage is noticed
- Get the Auto LPG / CNG cylinder checked periodically (Refer to "Periodic maintenance schedule" of this manual)
- If any minor work or body repair is to be carried out, ensure to close manual shut off valve.
- Please adhere to the mandatory replacement & scheduled maintenance on time, if flexible hoses develop visible crack, replace immediately.

Don'ts

- Never install any other cylinder in place of LPG /CNG Cylinder.
- Never adjust setting of the Gas system without any complaint from customers
- The Auto LPG / CNG cylinder should never be repaired under any circumstances, in case of any problem, consult with TVSM Service personnel.
- Never carry inflammable material near Gas cylinder.
- It is recommended to perform the any service repair / replacement gas component, always at authorised service centres by trained technicians only.
- Avoid frequent change over from Gas to Petrol mode and petrol mode to Gas mode to avoid engine missing.
- Do not fill more than 80% capacity of the LPG / CNG cylinder
- Do not use domestic LPG / CNG in your vehicle
- Don't allow anybody to smoke while re-filling Gas
- Don't open the reducer or any Gas components without correct knowledge
- Don't use accessories which are not TVSM Genuine components. All the components used in the vehiclet have been individually tested and approved by the authorised government testing agencies. Use only tested / approved LPG / CNG Tank and multi valve.

S.No	Description	Odometer reading	Job card number / date	Servicing dealers stamp & sign
1.	1st service			
2.	2nd service			
3.	3rd service			
4.	4th service			
5.	5th service			
6.	6th service			
7.	7th service			
8.	8th service			
9.	9th service			
10.	10th service			
11.	11th service			
12.	12th service			
13.	13th service			
14.	14th service			
15.	15th service			
16.	16th service			

MANUFACTURER**Models**

TVS King - (4S LPG / CNG With Load Body / Plat form / Drive Away Chassis)

Engine

Type - 4 Stroke, Single Cylinder SI Engine, Liquid cooled

Displacement - 225.8 cc

Maximum Power-LPG - 7.80 kw @ 5000 rpm

Maximum power - CNG - 7.2 kw @ 5000 rpm

Maximum Torque - LPG - 18.5 Nm @ 3000 rpm

Maximum Torque - CNG - 16.5 Nm @ 3000 rpm

Engine idling rpm - 1200 ± 200 rpm (petrol mode)

Maximum speed - 60±2 km/h(CNG), 63 ± 2 km/h(LPG)

Idle CO (LPG / CNG) - <0.5% @ Tail Pipe

Engine idling rpm - 1200 ± 200 rpm (LPG / CNG)

Idle CO (Petrol) - <0.5% @ Tail Pipe, HC: 500 ppm

Starting System - Electric & Hand start (with ISG)

Gear - Manual 4 Forward & 1 Reverse

Transmission

Clutch Type - Multi plate wet type

Gear - Manual, 4 Forward & 1 Reverse

Differential - Integral with Engine

Chassis & Dimensions

Frame - Semi Monocoque chassis - Pressed longitudinal & cross members

Overall Length - 3010 mm

Overall Width - 1350 mm

Overall Height - 1720 mm

Ground Clearance - 169 mm

Wheel Base - 1990 mm

Rear Wheel Track - 1150 mm

Kerb Weight with 90% Fuel - 442 kg (LPG), 463 kg (CNG) - LT
- 416 kg (LPG), 437 kg (CNG) - PF
- 370 kg (LPG), 391 kg (CNG) - DAC

Maximum GVW - 816 kg (LPG), 837 kg (CNG) - LT
- 794 kg (LPG), 815 kg (CNG) - PF
- 745 kg (LPG), 766 kg (CNG)- DAC

Load tray (length, width & height) - 1500 x 1300 x 280 (LT)

Load tray (length & width) - 1500 x 1300

Load tray (length, width & height) - NA 2V, 5/21W X 2

Turn Signal Lamp - 12V, 10W X 4

GVW LPG / CNG - 846kg / 825 kg

Gradeability LPG / CNG - 10 Degree

* Specifications mentioned are subject to change on account of contentious improvement in the product without prior notice.

MANUFACTURER

Tyres

Size Front / Rear - 4.00-8, 76F 6PR / 4.00-8 76F 6PR

Load	Driver alone (kerb with driver)		Laden - 400 kg payload (Driver + 325kg)		Above - 400 kg payload >(Driver + 400kg)	
	FR	RR	FR	RR	FR	RR
Pressure (psi)	30	30	30	50	45	60

Brakes

Front & Rear - Drum & Foot Operated, Hydraulic,
Internally Expanding Shoe with Auto
Adjuster type

Parking - Hand brake (mechanical)

Brake fluid grade - DOT 3 / DOT 4

Electrical

Type - 12V DC, Negative Earth

Ignition Battery - 12V, 32 Ah

generator - 12V, 245Watt

Spark plug - Bosch UR6DE

Head lamp - 35/35W, DC Twin head lamp

Position lamp - 12V, 5W x 2

Tail/Brake lamp - 12V, 5/21W X 2

Revers lamp - 12V, 21W x 1

Turn Signal Lamp - 12V, 10W X 4
Speedometer lamp - 12V, 1.75W x 1
All instrument panel lamp - 12V, 1.75W x 6
Horn - 12V, DC
Fuse - 12V, 60A x1, 20Ax1 & 10A x 6

Capacity

Fuel tank capacity - LPG – 20.6 litres. Water Equivalent,
- CNG - 30 litres. Water Equivalent,
- Petrol – 3 litres. (Bi-Fuel)
Engine oil and Differential oil - TRU4 DURAMATE oil (20W40 grade
API-SL, JASO Ma2)*
- TRU4 DURALIFE oil (20W50 API-SL,
JASO Ma2)*
Differential oil quantity - 250 ml & 300 ml While Overhauling
Coolant quantity including - 1400ml TRU4 DURACOOOL Premix
Brake fluid quantity - 250 ml
Brake fluid grade - DOT 3 / DOT 4

* Applicable only for Asia & Asean Country's

* Applicable only for Africa, Middle east & Latam Country's

* Specifications mentioned are subject to change on account of contentions improvement in the product without prior notice.