



TATA MOTORS

Tata Sumo Victa DI Turbo

Owner's Manual & Service Book

TATA MOTORS

TATA Motors Limited Mumbai Pune

The contents given in this book are not binding, subject to change without notice and are for illustration purpose only.

DOYOUKNOW?

While taking delivery of your New TATA Sumo Victa DI TC you are privileged to have the following:

- Owner's Manual & Service Book
- 3. First Aid Kit
- Jack and Handle
- 7. Spare Fuses (Provided in fuse box)
- 9. Complimentary diesel in the fuel tank.
- 10. Immobiliser Manual
 - a. Wheel Spanner
 - c. Ring Spanner (8-9)

- 2. Battery warranty Card
- 4. Advance Warning Triangle
- 6. Spare Headlamps Bulbs 2 Nos.
- 8. Pre delivery inspection and service.
- 10. Music System Manual
- 12. Tool Kit
- b. Screw Driver
- d. Socket Handle

You are also entitled for:

- 1 Free Services as per details given in your Owner's manual and service book, at any Tata Motors Dealership or Tata Motors Authorised Service Centre (TASC) or Tata Motors Authorised Service Point (TASP).
- 1 On the spot settlement of warranty as per terms and conditions given in this book.

We welcome your suggestions for better service.

Should you require any assistance, please contact Works Manager of Tata Motors Dealership or TASC.

EXCELLENT CUSTOMER SUPPORT FOR TOTAL SATISFACTION

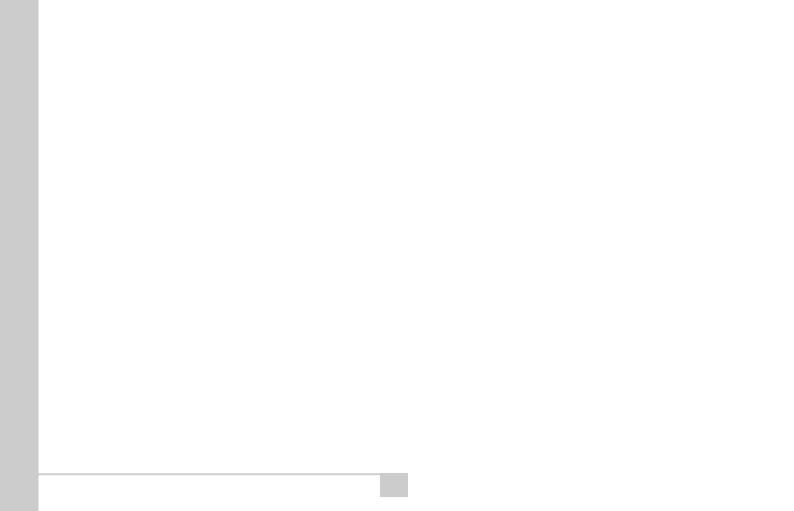
Dear Customer,

Thank you for choosing the **Tata Sumo Victa DI Turbo** another quality offering from the company's growing range of passenger vehicles.

We would request you to acquainted with the details in this owner's manual, which will enable you to derive optimum performance from your **Tata Sumo Victa DI Turbo.** We look forward to having you as a satisfied customer and hope to have you retain us as your first choice for any of your motoring needs.

We are privileged to have you as our customer.

TATA MOTORS LIMITED



FOREWORD

Thank you for selecting **TATA Sumo Victa DI Turbo** vehicle of your choice.

We welcome you to the world of advanced automotive engineering in a form especially suited to our operating conditions.

This book gives you all the information necessary for making your ownership of the vehicle, a thoroughly satisfying experience.

To assist you in maintaining your vehicle as per recommended schedule, we have a widespread network of dealers and service centres. The list is included in this book for your convenience.

Should you need any special assistance, please call on our Authorised dealer.

Please note that by adhering to the correct operating procedures and by availing the scheduled maintenance services at our authorised service outlets, you can obtain the maximum performance from your vehicle.

We request you to go through the book and drive many miles of motoring pleasure.

TATA MOTORS

We provide safe, high quality, high performance vehicles. In order to maintain the level of performance and reliability in the vehicle, it is important that only Tata motors genuine accessories are to be fitted. Any accessory that is fitted or modification that is carried out without authorisation can hamper the safety and performance of the vehicle besides depriving you of your warranty benefits.

Use of genuine parts, designed and manufactured to our exacting standards, are the best way to maintain your vehicle in peak operating condition. Please do not use substitutes. They always prove costlier in the long run.

Failure to use genuine parts can invalidate any future warranty claims.

The information and specification given in this book are valid as on the date of printing. Tata Motors reserves the right to make changes in design and specifications and / or to make additions to or improvements in this product without obligation to install them on products previously sold.

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ENVIRONMENTAL PROTECTION

TATA MOTORS is committed to produce vehicles usina environmentally sustainable technology. A number of features have been incorporated in Tata Motors Passenger Car Vehicles which have been designed to ensure environmental compatibility throughout the life cycle of the vehicle. We would like to inform you that your vehicle meets Emission norms and this is being regularly validated at the stage manufacturing.

As a user, you too can protect the environment by operating your vehicle in a pro-active manner. A lot depends on your driving style and the way you maintain your vehicle. We are giving below a few tips for your guidance.

Driving

- Avoid frequent and violent accelerations.
- Do not carry any unnecessary weight on the vehicle as it overloads the engine. Avoid using devices requiring high power consumption during slow traffic condition.
- Monitor the cars fuel consumption regularly and if it shows a rising trend, get the car immediately attended at our Authorised Service Centre.
- Switch off the engine during long stops at traffic jams or signals. If the situation demands that engine be kept running, avoid frequent revving up of the engine. Also avoid frequent stopping and restarting, if uncalled for.

- It is not necessary to rev up the engine before turning it off as it unnecessarily burns the fuel.
- Shift to higher gears as soon as possible. Use each gear upto 2/3rd of its maximum engine speed. A chart indicating gear shifting speed is given in this book.

Maintenance of the vehicle

- Ensure that recommended maintenance is carried out on the vehicle regularly at our Authorised Service Outlets.
- As soon as you see any leakages of oil or fuel in the car, get it attended immediately.
- Use only recommended brands and grades of lubricants and clean uncontaminated fuels.
- Get your vehicle checked for emission periodically by

authorised dealer and regularly renew the P.U.C. certificate.

- Ensure that fuel filter, oil filter and breathers are periodically checked and if required, replace the same by only genuine Tata Motor's recommended brands.
- Do not pour used oils or coolants into the sewage drains, garden soil or open streams. Dispose the used filters and batteries in compliance with the current legislation.
- P Do not allow any unauthorised person to tamper with engine settings or to carry modifications on the vehicle.
- Never allow the vehicle to run out of fuel.
- Parts like brake liners, clutch disc should be vacuum cleaned. Do not use the compressed air for cleaning these parts which may spread the dust in the atmosphere.

While carrying out the servicing or repairs on your vehicle, you should pay keen attention to some of the important aggregates, which greatly affect emission. These components are:

- 1. Fuel injection pump, Injectors/ Nozzles
- 2. Air intake & Exhaust system especially for leakages
- 3. Cylinder head for valve leakage
- 4. All filters such as air, oil and fuel filters (check periodically)
- 5. Turbocharger and intercooler (if fitted)
- 6. Catalytic converter (if fitted)
- 7. EGR System and components
- 8. Electrical Connections for EGR

ENVIRONMENTAL PROTECTION

This Owner's Manual contains further information on driving precautions and maintenance care leading to environment protection. Please familiarise yourself with these aspects before driving.

WARRANTY

We **WARRANT** each **TATA SUMO VICTA DI TC** vehicles & parts thereof manufactured by us to be free from defect in material and workmanship, subject to the following terms & conditions:

- 1. The warranty for the rest of the vehicle shall be for 18 months from the date of sale of the vehicle, irrespective of the distance covered. However, for the cars used for commercial applications (including those used for hire or reward viz those operating with a yellow number plate), the warranty shall be limited to 18 months or 50,000 kms, whichever occurs earlier
 - This warranty for the engine (Tata 497SP) fitted in the vehicle shall be for a period of three years from the date of sale of the vehicle, or 3,00,000 kms of its running, whichever occurs earlier.
- 2. Our obligation under this warranty shall be limited to repairing or replacing, free of charge, such parts

- of the vehicle which, in our opinion, are defective, on the vehicle being brought to us or to our dealers within the warranty period. The parts so repaired or replaced shall also be warranted for quality and workmanship but such warranty shall be co-terminus with this original warranty.
- 3. Any part which is found to be defective and is replaced by us under the warranty shall be our property.
- 4. As for such parts as tyres, batteries & electrical equipment, fuel injection equipment, power steering equipment, A/C equipment & antitheft device not manufactured by us but supplied by other parties, this warranty shall not apply, but buyers of the vehicle shall be entitled to, so far as permissible by law, all such rights as we may have against such parties under their warranties in respect of such parts. Our Dealers/TASC's will assist the purchaser in taking up the complaint with the

- respective manufacturers and their decision on the warranty will be final.
- 5. This warranty shall not apply if the vehicle or any part thereof is repaired or altered otherwise than in accordance with our standard repair procedure, or by any person other than our sales or service establishments, our authorised dealers or service centres, or service points in any way so as, in our judgement which shall be final and binding to effect its reliability nor shall it apply if, in our opinion which shall be final and binding the vehicle is subjected to misuse, negligence, inadequate improper or maintenance or accident or loading in excess of such carrying capacity as certified by us, or such services as prescribed in our Owner's Manual and Service Book are not carried out by the buyer through our sales or service establishments. authorised dealers or service centres. or service points.

WARRANTY

- 6. This warranty shall not cover normal wear and tear or any inherent normal deterioration of the vehicle or any of its parts arising from the actual use of the vehicle or any damage due to negligent or improper operation or storage of the vehicle. This warranty shall not apply to normal maintenance services viz oils & fluid changes, head lamps focussing, fastener retightening, wheel balancing, tyre rotation, adjustment of valve clearance, fuel timing, ignition timing and consumables like bulbs, fuel filters and oil filters etc. This warranty shall not apply to any damage or deterioration caused by environmental pollution or bird droppings. This warranty shall not apply to V-belts, hoses and gas leaks in case of air conditioned vehicle. Slight irregularities not recognised as affecting the function or quality of the vehicle or parts, such as slight noise or vibration. defects appearing only under particular or irregular operations are items
- considered characteristic of the vehicle.
- 7. This warranty shall be null and void if the vehicle is subjected to abnormal use such as rallying, racing or participation in any other competitive sports. This warranty shall not apply to any repairs or replacement as a result of accident or collision.
- 3. This warranty is expressly in lieu of all warranties, whether by law or otherwise, expressed or implied, and all other obligations or liabilities on our part and we neither assume nor authorise any person to assume on our behalf, any other liability arising from the sale of the vehicle or any agreement in relation thereto.
- The buyer shall have no other rights except those set out above and have, particular, no right to repudiate the sale, or any agreement or to claim any reduction in the purchase price of the vehicle, or to demand any damages or compensation for losses,

TERMS AND CONDITIONS

- incidental or indirect, or inconvenience or consequential damages, loss of vehicle, or loss of time otherwise incurred or accrued.
- 10. Any claim arising from this warranty shall be recognised only if it is notified in writing to us or to our concerned dealer without any delay soon after such defect as covered and ascertained under this warranty.
- 11. This warranty shall stand terminated if the vehicle is transferred or otherwise alienated by the buyer without our prior written consent.
- 12. We reserve our rights to make any change or modification in the design of the vehicle or its parts or to introduce any improvement therein or to incorporate in the vehicle any additional part or accessory at any time without incurring any obligation to incorporate the same in the vehicles previously sold.

TATA MOTORS

Do's

- 1. Use recommended oils and lubricants only.
- 2. **Change oil** in engine, gear box, steering system and rear axle at prescribed intervals.
- Use only genuine oil filter and fuel filter elements. Replace them at regular intervals.
- Clean air filter element regularly. Replace filter element when service indicator shows red band even after cleaning the filter element.
- 5. **Ensure periodic servicing** as per maintenance schedule.
- 6. Insist on use of genuine spare parts.
- Ensure that caps of auxiliary tank and radiator are firmly fitted to keep the cooling system pressurised and to maintain coolant level. Always use genuine radiator cap

only of 1.0 kg/cm² (14 PSI), for replacement.

 Check tyres for damage from time to time and remove any foreign bodies embedded in treads.

In case of tyre replacement or repairs due to puncture have the wheel balanced **Keep grease**, **oil and fuel away from the tyres**. In case of uneven tyre wear get the vehicle attended to by any of our authorised service set-ups.

- Maintain correct tyre pressure.
- 10. Check battery every week and top up electrolyte level. Keep battery terminals clean and cable joints tight. Apply vaseline / petroleum jelly on terminals. Use distilled water only for topping up.
- 11. **Observe** correct polarity when connecting battery terminals.

Do's

- Disconnect alternator terminals while carrying out any welding on the vehicle.
- 13. **Avoid panic braking.** Use lower gears while descending gradients.
- 14. Start the vehicle always in the 1st gear to avoid premature clutch wear.
- 15. Keep both foot and parking brakes properly adjusted.
- 16 Before engaging reverse gear, ensure that vehicle has come to a stop, declutch, wait for a few seconds and shift into reverse gear.
- When parking on slopes, use wheel chocks, apply parking brake and keep vehicle in low gear.
- 18. In case of emergency parking or breakdown on road, push the hazard warning switch to flash all the blinker lights to warn other road users.

- 19. Release parking brake before driving off.
- 20. Release the ignition key as soon as engine starts.
- 21. Retighten wheel mounting nuts after 100 km of every wheel change. Tightening Torque: 12-15 mkg.
- 22. Use only recommended FUSES and always keep spare fuses in the box.
- 23. In case of engine not starting first check the fuse of fuel injection pump solenoid.
- 24. Ensure doors are properly closed.
- 25. If your vehicle has a turbocharged engine, keep engine at idling speed for atleast a minute after starting and also before stopping it, to protect the turbocharger against damage due to oil starvation.

Where Air conditioning system is installed

- After parking in the sun, drive with windows rolled down for a few minutes to blow off hot air before switching on A/C.
- 2. Keep all windows rolled-up when AC system is working.
- During stop and go city driving use lower gears to obtain efficient cooling.
- If you feel irritation in the eyes due to smoke or during long drive, stop A/C and ventilate for half a minute by winding down door glasses or use fresh air mode provided with HVAC system.
- 5. Before stopping the engine first switch "OFF' A/C and then the blower.

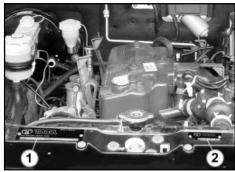
6. During off-season operate the air conditioner a few times every month to lubricate components.

Do's

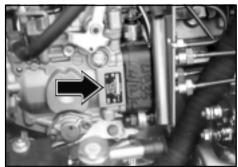
Dont's

- Do not use Clutch Pedal as Foot Rest. This will reduce clutch life.
- Do not Coast vehicle in Neutral and engine switched-off position. This is a safety hazard.
- 3. **Do not run engine without Radiator Cap.** Use genuine Cap only, to keep system pressurised.
- 4. Do not overtighten engine oil filter.
- 5. Front and rear suspension shock absorbers fitted on this vehicle have in-built rebound stopper. There is no separate rebound stopper fitted on the vehicle. Hence, do not drive the vehicle either without shock absorbers OR with non-genuine shock absorbers, otherwise suspension is likely to be damaged.
- If your vehicle has a turbocharged engine, do not stop the engine at once, allow it to run at idling speed for atleast 1 minute. Also do not

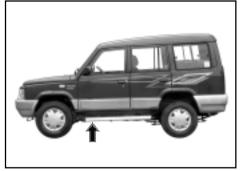
- accelerate engine till the engine oil pressure has built up.
- 7. Do not cause heating of A/C pipe (where fitted), while welding/brazing in its viscinity.
- 8. Do not disturb the fast idling control device actuator setting, where fitted.
- Do not open any hose/pipe points of A/C system (where fitted).
- 10. Do not put your hand inside the condenser fan when the grille is removed. Disconnect power supply to fan and switch off engine before any maintenance work, where applicable.



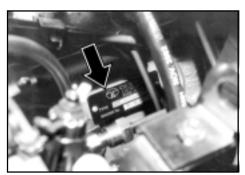
1. Chassis number plate 2. Body Shell (Cab) number plate



FIP number (MICO)

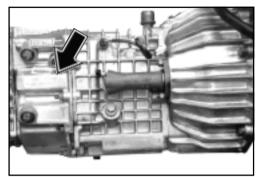


Chassis number on frame

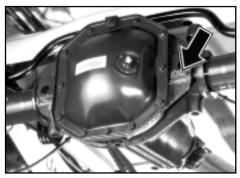


Engine number

LOCATION OF CHASSIS AND AGGREGATE SERIAL NUMBERS



Gear box number



Rear axle number (Tata Motors)

Key

Your vehicle comes with two identical keys.

With this key, you can operate - 1. Door Locks 2. Steering Lock cum Ignition switch 3. Tail gate Lock 4. Glove Box 5. Fuel Flap lock (if fitted). It is advisable to keep one of the keys in a safe place for use in case of an emergency.

∴ CAUTION

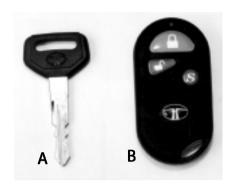
Do not use a locally made key, but obtain a duplicate through your Tata Motors dealer.

Do not leave the key inside the car.

Anti-theft Device (if installed)

This is an electronic car security system with remote (keyless) operation for door Unlock/Lock. It immobilises the vehicleby disabling vital circuits related to engine.

Please refer supplier's instruction manual supplied along with the vehicle for further details of operations and features.



A. Key B. Remote - Anti Theft Device



1. Door opening from outside

HANDLING

DOOR LOCKING & WINDOW WINDING

Door Locking

The front doors can be locked and unlocked from the outside with the key or from the inside using the door lock lever. In your vehicle, the driver's door & co-driver's door (if provided) have separate locking facilities. To lock from inside turn the lever (2) towards the inner hinged handle (3).

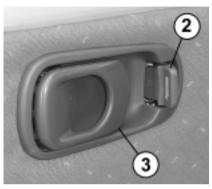
Where the central locking system is provided, if you lock/unlock the driver door with the key, the remaining three doors get locked/unlocked at a time. The tail gate door is not part of the central locking provision.

To open the door from the outside use the swing handle (1). After unlocking the door with the key, pull the swing handle upward. The swing handles are provided on each door.

To open the door from the inside pull hinged handle outward.

Manual window winding

For raising and lowering window glasses use handle (1)



2. Locking / Unlocking Lever 3. Hinged Handle



4. Window winding Lever

HANDLING

POWER WINDOWS

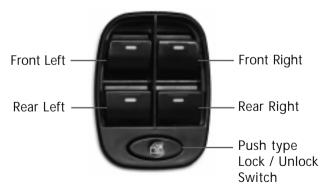
Power Windows: (if provided)

Separate knobs are provided on the switch to operate the four door window glasses individually .

To open the door window glass, push the respective knobs down. To close the door window glass, pull the respective knobs up.

In the lock position, the rear window switches become inoperative. However the rear windows can be operated by the switches on the console. Illumination on rear window switches goes 'OFF' in locked position. press down the lock button to unlock.

Individual window winding switches have been provided only on the rear doors.





Switches on the central console for operating the door glasses



Individual Switches on the rear doors for operating the rear door glasses

HANDLING SUN VISORS

Sun visors

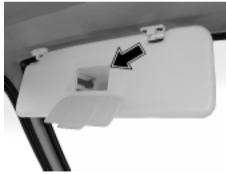
Two adjustable sun visors are provided inside the cab to prevent sun glare.

Lower the sun visors to protect the eyes from bright sunlight. The sun visors also moves sideways towards the door.

A vanity mirror has been provided on the co-driver's sun visor.



Sun Visors



Vanity Mirror

HANDLING

OUTER & INNER REAR VIEW MIRRORS

Outer Rear view mirrors

Outer rear view mirror is fitted on the driver's door from the outside. It can be adjusted to the desired positions by hand. In few versions it can be adjusted by the lever provided inside the door. The mirror can be folded backwards for convenience when the vehicle is to be driven through narrow passages. In few versions, the same rear view mirror is also provided on co-driver's door

Inner Rear view mirror

Inner rear view mirror is also fitted inside the cab between sun visors.

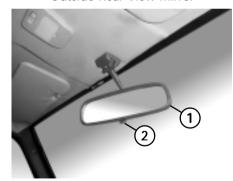
In few versions an additional adjustable anti-glare rear view mirror is provided inside the cab. Provision has been made for two positions.

- 1. Normal position
- 2. Anti-glare position

Use anti-glare position only if necessary as it reduces the rear view clarity considerably.



Outside Rear View Mirror



Inner rear view mirror
 Operating Knob

Driver's & Co-driver's seat

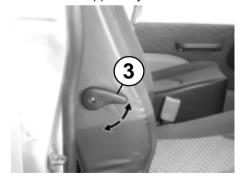
Adjustable type seat is provided for driver and co-driver. The driver seat is fitted with lever and handle, to adjust the seat. The seat can be adjusted in forward and backward directions. In few versions, both seats are also provided with lumbar support (3) to give you maximum driving comfort.

To achieve correct position for proper driving, lift the handle (2) and slide the seat either forward or backward. Once the desired position is achieved push down the handle to lock the seat. Turn the lever (1) to adjust backrest to the desired position. Release the lever to lock it.

Do not adjust seat while driving.



Seat backrest inclination adjustment lever
 Seat sliding (forward & backward) lever
 Lumbar support adjustment knob



SEATS HANDLING

Middle seat

A cushion bench seat has been provided for the middle passengers. In few versions, a cushion bench 60:40 split seat has been provided for the middle passengers. Any one of the split can be folded by releasing the latch, on the backrest simultaneously (Fig. 1 on next page). For more luggage space or to access front facing third row seat, the folded middle seat can be somersaulted further.

For fixing the rear seat back upright, just push back the seat in position. It will get locked by itself.

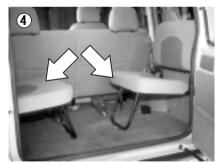


Middle seat

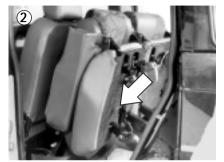
Middle seat (60:40) Folding



Slide the knob and fold the seat.



Rear jump seat



Press the knob and pull the seat to its position.



Total luggage space where front facing seat is removed & middle seat folded



Front facing rear seat



Luggage space where rear jump seats are folded

Seats at rear

Two rows of seats, single or double are provided at rear for passengers (Fig. 4 on previous page). These seats can be folded for carrying bulkier baggage as per procedure given below:

- 1. Lift the seat squab and hold against backrest.
- 2. Engage strap with the hook on seat squab.
- Fold the seat stand.

To open the seats follow the reverse order. Ensure stand is fully opened and vertical to the floor.

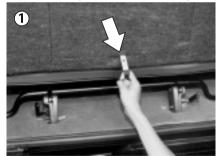
Front facing third row seat (Optional)

The foldable and detachable type soft cushioned comfortable bench seat has been provided at the rear (Fig. 3 on previous page).

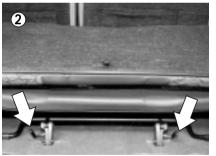
For folding back, a seat pull strap has been provided behind seat back as shown in Fig. 1.

For detaching seat, operate two levers provided over wheel house area. (Fig. 3)

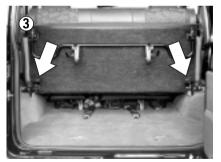
Front facing rear seat folding operation



For folding back, pull the strap as shown in figure



Lift the lever and fold the seat further to get maximum luggage space



For detaching seat, operate two levers provided on wheel house area and pull it out.

HANDLING SEAT BELTS

SEAT BELT

The vehicle has been fitted with three point belt for extra safety for driver, co-driver and passengers on middle seat. If not fastened, with key in 'IGN' position, audio alarm (only for GX) and visual indication is given on instrument panel.

Fastening the belt

Insert belt tongue into buckle, a positive locking 'click' indicates correct and safe assembly.

Releasing the belt

Press the release button, the tongue will be ejected clear of the locking mechanism within the buckle.

Belt adjustment

When the vehicle is at rest, adjust the length of the belt to suit convenience. Insert belt tongue in buckle. A positive click indicates correct assembly.

Adjust length of the belt to suit you and fasten. The lap section should be comfortably tight, the diagonal sections should be adjusted so that a flat hand will pass between the chest and the strap.

To tighten (shorten) the belt.

Pull free end of webbing through adjuster until required adjustment is achieved.

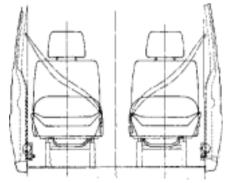
To loosen (lengthen) the belt.

Tilt the adjuster by means of the grip and slide it along the strap until suitably adjusted.





1.Seat Belt 2.Tongue 3.Lock Buckle 4.Lap Belt



Seat-belt Arrangement on Driver & Co-driver's Seat

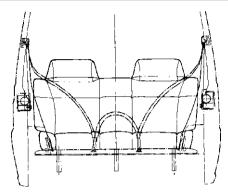
HANDLING

Lap belt for middle passengers of front bench seat.

Middle passenger is provide with lap belt. Adjust length of belt to suit convenience. Insert belt tongue in buckle. A positive click indicate correct assembly. To release press the release button. The tongue will be ejected from the button.

⚠ CAUTION

- The belt is designed for use of only one person.
- 1 It is not intended for children under 10 years.
- 1 The belt should at all time be adjusted and used in accordance with the instructions and no excessive slackness in the belt should be evident.
- 1 Avoid twisting the straps during use.
- 1 Webbing must not be allowed to chafe against sharp edges on seat or bodywork.
- Do not make any alterations or additions to the belt. If in doubt consult the authorised service outlet
- 1 The belt that have been cut, frayed, damaged or have been stressed through impact, should be replaced.
- 1 To clean and occasional wipe with warm soapy water will maintain the webbing in a clean condition. Do not use bleach or dye under any circumstances.
- 1 Periodic inspection of the installation will ensure safe and reliable service of the seat belt.



Seat-belt Arrangement on Middle Seat

ADJUSTABLE HEADRESTRAINT

Adjustable Headrestraint

The driver, co-driver and middle seat of your vehicle are fitted with adjustable headrestraint. Headrestraint can help to protect you from whiplash and other injuries. For best protection adjust the top of the headrestraint as shown in the figure.

The headrestraint can be adjusted by using release button as shown in figure.



Poor Adjustment

Good Adjustment



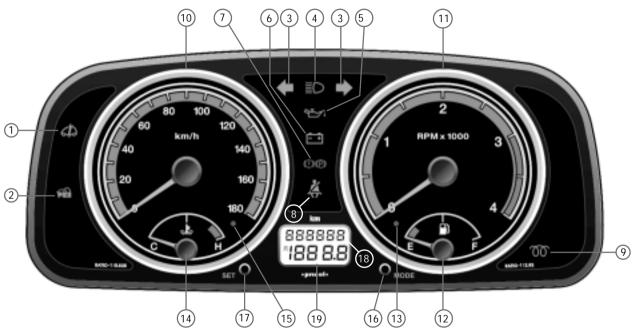
Release Button for Head rest height adjustment



Driving Controls - Sumo Victa DI Turbo

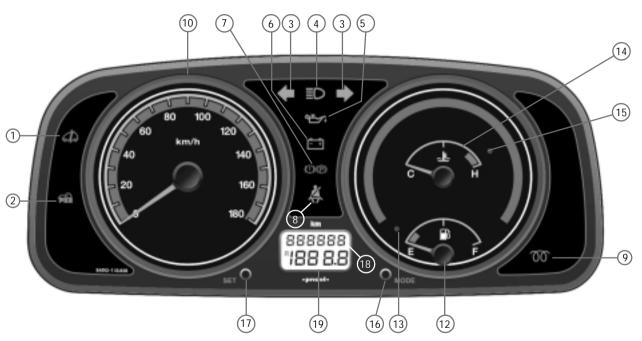
- 1. Steering Wheel
- 2. Instrument Cluster
- 3. Combi Switch
- 4. Head Lamp Leveling Switch
- 5. Ignition Switch Cum Steering Lock
- 6. Bonnet Opening Lever
- 7. Clutch Pedal
- 8. Brake Pedal
- 9. Accelerator Pedal
- 10. Fuel Flap Opening Lever
- 11. Parking Brake
- 12. Gear Shifting Lever

INSTRUMENT PANEL



All indicators may not be provided on some instrument cluster and may not be applicable to all models.

INSTRUMENT PANEL



All indicators may not be provided on some instrument cluster and may not be applicable to all models.

- 1. SERVICE Indicator (Amber)
- 2. Immobilizer Warning If fitted (Red)
- 3. Direction Indicator (Green)
- 4. Head Lamp Main Beam Indicator (Blue)
- 5. Low Engine Oil Pressure Indicator (Red)
- 6. Battery Charging Indicator (Red)
- Brake Fluid Level Check/Parking Brake Indicator (Red)
- 8. Seat Belt Indicator (Red)
- 9. Glow Plug Indicator
- 10. Speedometer

- 11. RPM Meter (if fitted)
- 12. Fuel Gauge
- 13. Low Fuel warning Indicator
- 14. Temperature Gauge
- 15. High Temperature Warning Indicator
- 16. Mode Selector Knob (Odometer)
- 17. Set Knob (Odometer)
- 18. Cumulative Odometer
- 19. Trip Odometer

HANDLING

SERVICE Indicator:



This lamp indicates your vehicle's engine condition when a malfunctioning occurs in the engine, wiring harness, EMS, etc. this lamp indicates as below:

- 1. Comes 'ON' when key is in 'IGN' position and goes 'OFF' when engine is running.
- 2. Remains "ON" while the engine is running if malfunctioning occurs.

A CAUTION

When "Service" lamp is ON while the engine is running, the engine's performance deteriorates marginally and sometimes drastically. Please get the malfunctioning rectified at a nearest authorized service outlet.

Immobiliser Warning:



This system disables engine starting if original key is not used. The user has to use original key for authentification and unlocking the car. Refer to Immobiliser section for details.

Lamp Blink: Car is in immobilised condition when key is not inserted.

Lamp OFF: Normal condition (Authenticated user) and engine will start.

Lamp On: Problem with key / system. Show your car to TATA Authorised service centre.

Turn Signal:



Turn signal lamps can be operated only when the ignition supply is 'ON and by using the turn indicator switch on the combi switch. The direction indicator arrow (LHS) and (RHS) on the instrument cluster flashes along with external indicator lights as selected.

High Beam Indicator:



Symbol lights up when the headlamp high beam is 'ON'.

Low Oil Pressure Indicator:



When the ignition key is turned to the 'IGN' position, symbol lights up and goes off as soon as the required engine oil pressure is developed after starting the engine.

If the low oil pressure indicator does not glow or remains 'ON' with the 'IGN' on and engine is running, it indicates a fault in the electrical circuit/lubrication system. Check & get the problem attended to at an Authorised Service outlet.

Battery Indicator:



Symbol lights up when the 'IGN' is turned 'ON' and should go 'OFF' after the engine starts.

NOTICE

If it remains 'ON' while the engine is running. It indicates that the battery is not getting charged. Switch off all unnecessary electrical equipment and get the problem attended to at an Authorised Service outlet.

Parking Brake Indicator cum Low Brake Fluid Warning Light:



This indicator has multiple functions as follows:

- It lights up when the parking brakes is applied and goes off when parking brake is released.
- It also lights up when brake fluid level is low.
- When ignition key is turned to "IGN" position, this indicator lights up and goes off when engine starts in normal condition. If it continueously ON while engine is running, get the problem attended to an Authorised Service Outlet.

Seat Belt Indicator:



The indicator initially flashes when the ignition is ON and seat belt is not fastened. It will continue to flash until the vehicle exceeds a speed of 20 kmph. After that, it will remain continuously ON accompanied by a buzzer that will buzz approximately for 100 seconds. After that, the buzzer goes OFF but the indicator continues to remain ON.

Glow plug Indicator:



This indicator lights up when the 'IGN' is switched 'ON' and goes 'OFF' after a few moments automatically depending on the engine temperature, indicating readiness to crank the engine.

NOTICE

Do not crank the engine until this light goes 'OFF'. The duration of 'ON' time varies with engine block temperature and it glows for longer duration with a cold engine.

Odometer and Trip meter (on LCD):

The odometer records the total distance the vehicle has been driven. The trip meter can be used to measure the distance traveled on each trip or between fuel fillings. Keep track of the odometer reading & follow the maintenance schedule regularly for meeting service requirements.

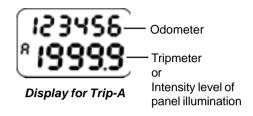
Odometer, Trip meter and Illumination intensity control on instrument panel (LCD):

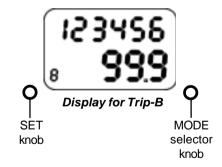
The instrument panel has an LCD to display the following: Main Odometer (Non- resettable) - Counts up to 999999 kms

- Trip meter A (Resettable) Counts up to 1999.9 kms
- Trip meter B (Resettable) Counts up to 1999.9 kms
- Intensity level of instrument panel illumination selection among preset levels.

LCD has two line display. The first line displays the Odometer count.

The second line displays either of Trip meter A, Trip meter B, Intensity level of panel illumination. The selection and control of functions are done through 'MODE' and 'SET' push buttons (knobs) provided on either side of the LCD. The 'MODE' knob is used to select one of the Trip meter A, Trip meter B OR Intensity level of panel illumination. Switching among the above three functions can be done by pressing the knob.





The 'SET' knob is used to control the chosen function. Pressing the knob for a few seconds resets the chosen trip meter and varies the intensity level of instrument panel illumination.

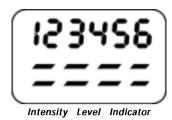
The panel illumination intensity varies among preset levels as follows:

- = Min
- = = = Max

This display returns to Trip meter A after a few seconds of intensity level selection, if left in this mode.

NOTICE

Main odometer and trip meter 'A' indication will remain on display even if the ignition key is removed.

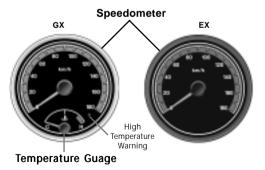


Temperature gauge:

The gauge indicates the temperature of the engine coolant. The red zone at 'H' indicates temperature higher than the normal. Avoid driving, when the pointer is in the red zone. It indicates engine overheating, which may be due to insufficient coolant in the radiator or due to any other defect. At this stage take the car to the nearest Authorised Service outlet for necessary attention.

Caution: Never remove the radiator pressure cap from the radiator when the engine is hot. Do not restart the engine until the problem has been duly attended.

The speedometer: The speedometer indicates the vehicle speed in km/hr.

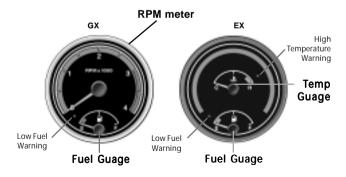


RPM meter (if provided):

The meter indicates engine speed in revolutions per minute (rpm) Change gears at appropriate engine rpm and vehicle speed to get optimum fuel economy. The permitted engine rpm upper limit is the start of Red Zone on the dial.

Fuel Gauge:

The fuel gauge indicates the approximate fuel level in the tank. Refill the fuel tank at the earliest, before the needle touches the red band on the gauge. At this point, fuel level in tank is low and it is advised to get fuel filled immediately



STEERING LOCK CUM IGNITION SWITCH

Steering lock cum ignition switch:

Steering is provided with steering lock cum ignition switch

- To lock steering while parking the vehicle as safety against theft.
- To start and stop the engine.
- To switch 'ON' and 'OFF' the electrical system other than listed below

Horn, parking lamps, engine inspection lamp and hazard warning indicators are not connected through this switch and operate independently.

To switch on and off the accessories only.

The switch is located on the steering column support and has the following key positions:

LOCK

Key can be inserted or taken out only in this position. Steering gets locked only after the key is withdrawn from the switch. After withdrawing the key from the switch ensure that steering is locked by turning steering wheel clockwise and anticlockwise. To unlock the steering, insert the key into the switch and turn it clockwise. If any difficulty arises in unlocking turn the steering wheel a little clockwise or anticlockwise while turning the key.

ACC

By turning the key to 'ACC' position power supply to accessories is switched 'ON'.



Steering Lock Cum Ignition Switch

STEERING LOCK CUM IGNITION SWITCH

ON

By turning the key to this position all remaining electrical systems become operative and lamps of battery charging indicator, low oil pressure will come 'ON'.

In 'ON' position, the glow plug controller switches 'ON' the glow plugs and glow indicator lights up. After a few seconds, depending on the ambient temperature, the indicator light only goes off indicating that the engine can be started. Glow plugs remain 'ON' for few seconds and switches 'OFF' automatically.

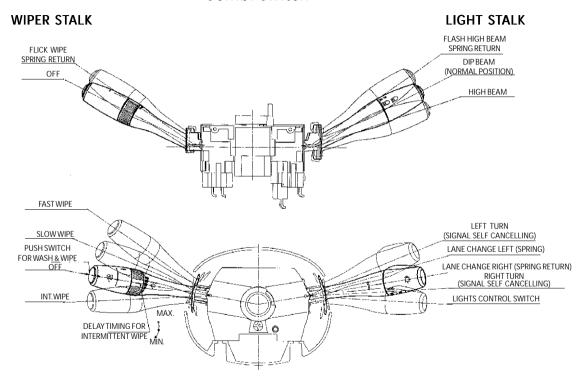
As a safety feature glow plugs are automatically switched 'OFF' after a lapse of certain time if the engine is not started to conserve battery.

In this case to start the engine repeat the operation by first going to 'ACC' or 'LOCK' position.

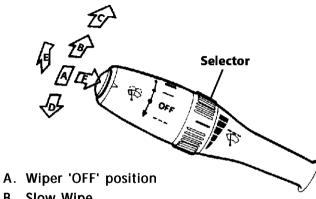
START

Turn the key further clockwise to start position (spring loaded) to operate starter motor. As soon as the engine starts release the ignition key, so that key can come back to 'ON' position and starter motor disengages and glow plug is switched 'OFF'. Vehicle is driven in this position. By turning the ignition key from 'ON' position to 'ACC' or 'LOCK' position engine can be stopped.

Combi-switch

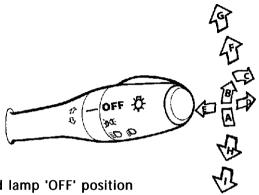


Wiper Control Lever - Left



- **B. Slow Wipe**
- C. Fast Wipe
- Intermittent wipe *
- E. Pull up for windshield wipe (Flick Wipe Spring Return)
- F. Press side knob for wash
- Rotate selector to set delay timing for intermittent wipe

Lights Control Lever - Right



- A. Head lamp 'OFF' position
- B. Position lamp 'ON'
- C. Position lamp & head lamp 'ON'
- D. Push down the lever for high beam
- E. Pull up the lever (spring return) for high beam flash
- F. Lane change left (self cancelling)
- G. Side Indicator LH
- H. Lane change right (self cancelling)
- Side Indicator RH

MUSIC SYSTEM & ENGINE COMPARTMENT LAMP

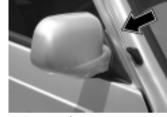
Music System

The music system is fitted in the centre console. Two speakers are provided in the dashboard as well as two speakers are in the rear.

The Antenna is loacated on the RH side of front windshield glass on the A piller.

Please refer the music system User's Manual provided in the vehicle for understanding it's function.



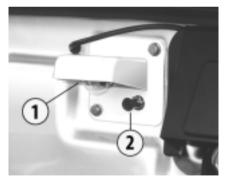


Music System

Antenna

Engine Compartment Lamp:

To operate engine compartment light, pull switch (2).



Engine Compartment Lamp

TAIL LAMP

HANDLING

Tail Lamp:

The tail lamp assembly incorporates the following:

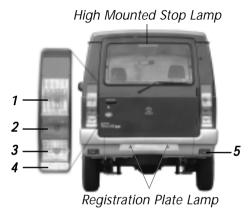
- 1. Rear direction indicator
- 2. Parking / Rear stop lamp
- 3. Reverse light
- 4. Reflex reflecor
- 5. Fog lamp

Registration Plate Lamp:

Two concealed lamps are provided for illumination of the rear registration plate.

High Mounted Stop Lamp:

High mounted stop lamp is incorporated on the tail gate from inside and it glows whenever service brake is applied.



Interior Lamps:

Two interior lamps are provided for convenience. While one lamp is situated near the inside rear view mirror (IRVM), the other is located just above the passenger compartment. The individual 'ON / OFF' switches are provided to operate these lamps.

Lamp positions Interior Roof lamp

Position	Function	
II	The lamp will remain ON at all times irrespective of whether any of the doors is open	
ı	The lamp will come 'ON' only when any of the five doors are opened (For GX version)	
I	In this mode, the lamp will come ON only when driver's door is opened (For EX version)	
0	The lamp will remain 'OFF' irrespective of whether any of the five doors are opened	



Rooflamp



1. Lamp off 2. Door control mode 3. Lamp on

HEAD LAMP LEVELING SWITCH

Headlamp Leveling Switch (If fitted)

A motorised headlamp leveling arrangement with the setting knob at the LH side of dash board.

As and when required headlamp leveling setting is done by roatating the knob to select one of the level marked in theswitch depending upon the loading of vehicle.

Loading Condition	Switch position / Marks assigned.
Unladen + One person in Driver seat / Driver + Co-Driver /Driver + Co driver + all the Seats farthest to rear occupied	0
All the seats occupied / Laden (All seats occupied Luggage in boot space to achieve permissible load on the rear axle.	1
Driver + Evenly distributed load in the boot to obtain permissible load on corresponding axle.	2

Since the leveling switch takes care of focus patern under different load conditions; it is advisable to select the correct position before starting a trip (depending on load)



Headlamp Levelling Switch

ACCESSORY SWITCHES

ACCESSORY SWITCHES

There are six (6) operating switches provided on the centre console of your vehicle's dashboard, just above the Music System.

Rear Windshield Demister

Push the operating switch on the fascia to turn the demister "ON". The demister will switch off automatically after 15 minutes.

NOTICE

Clean the windshield glass carefully from inside to avoid any damage to demister heater element

Rear Fog lamp (unlatched switch)

The fog lamps are provided on rear bumper to improve the visibility and warning in foggy weather or during heavy rains. The rear fog lamps can be switched on with parking lamp and front fog lamps ON and can be remain

ON till the parking lamp is switched OFF. The rear fog lamps can also be switched ON even if only headlights are ON.

NOTICE

Use only during foggy conditions or heavy rains if required.





ACCESSORY SWITCHES

HANDLING

Rear Windshield Wash and Wipe (unlatched switch)

Push and hold the switch knob for the operation of the wash function for the desired duration for rear visibility through glass. The function indicator lights up when wash function is "ON". Along with wash fluid getting sprayed, the wiper also operates with a delay to wipe the glass surface through a timer control unit. On release of this switch, this function stops.



Rear Windshield Wiper (latched switch)

To operate this function, push to switch 'ON' and again, push to switch 'OFF'

The function indicator lights up when the wiper function is 'ON'.



ACCESSORY SWITCHES

Front Fog lamp (unlatched switch)

The fog lamps are provided on front bumper to improve the visibility in foggy weather or during heavy rains. The front fog lamps can be switched ON with parking lamp ON and can be remain on till the parking lamp is switched OFF.

NOTICE

Use only during foggy conditions or heavy rains if required.

Hazard Warning

Hazard warning is used in case of breakdown especially during night and vehicle has to be parked at the side of the road or vehicle being operated in adverse condition.

This can be operated without Ignition ON. Press hazard warning switch to switch ON. All outside turn signal lights and indicators on cluster will flash simultaneously to warn the other road users about hazardous condition of the vehicle. Depress the switch to switch OFF the hazard function.

⚠ CAUTION

Ensure that all turn signal indicators are working properly. Get it rectified in case of problem.





POWER SOCKET AND ASH TRAY

Power Socket:

A power socket is provided on the central console below A/C control knobs. This can be used connecting loads upto 10A maximum. To use this socket, remove the cap first.

/ CAUTION

Always keep this socket covered with the cap when not in use.

Ash Tray:

Ash tray is proveded on the dash board central console. To open ash tray, pull it out by sliding.



Power Socket



Ash tray

BONNET OPENING / CLOSING

Bonnet opening and closing:

To open pull lever (1). This will release the bonnet lock. To open fully, lift the additional lock lever located on the bonnet centre with the help of finger. Use the bonnet stay rod to keep the bonnet open.

For closing the bonnet, disengage the stay rod, clamp it properly and press down the bonnet till it is fully shut.

Ensure that the bonnet is fully locked before driving off.

In case of failure of cable attached to lever (1) bonnet lock can be opened by inserting a screw driver from the top centre position of grill through a slot provided behind it on the sheet metal and by pressing the lock plate towards your left. Push upward the additional lock lever at your right and lift the bonnet while the lock plate is kept pressed with the help of screw driver.

Fuel filling Cap:

The fuel filling cap is located at the rear on the left hand side of the vehicle. The fuel filler lid can be opened by using a cable operated lever located on the right of the driver's seat. Simply push the lid back to its original position to lock it.

Note: This feature is available only in few versions.



Bonnet Opening Lever



Fuel Lid Opening Lever

FUEL LID OPENING & GEAR SHIFT LEVER

NOTICE

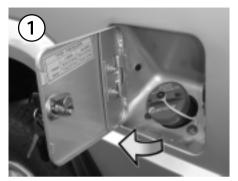
Remove the fuel filler cap slowly as the fuel inside may be under pressure and may spray out suddenly, causing injury.

To remove the fuel filler cap, turn it anti-clockwise. Turn the cap slowly to allow any residual pressure to escape.

In few version, the fuel lid can be opened by using key. The fuel lid is located on the left rear side of the vehicle.

Gear shift lever

The different gear positions are marked on the knob. The 5 th gear (an overdrive) has been provided to obtain better fuel economy while driving on highways.



1. Fuel Flap 2. Fuel Filler Cap



Gear Shifting Pattern

SPARE WHEEL

Spare Wheel

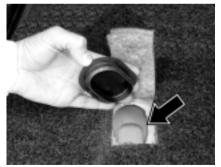
Spare wheel is mounted below the cab at rear.

Fitment of spare wheel:

- 1. Place the spare wheel on ground below its location with outer side of the wheel rim facing upwards.
- 2. Locate the retaining plate in the central hole of spare wheel.
- 3. Using the wheel spanner the spare wheel can be raised by rotating the wheel winch screw in anticlockwise direction.
- 4. Align one of the wheel mounting screw hole with the locating pin on frame while raising the spare wheel.
- 5. Continue to rotate the wheel winch screw in anticlockwise direction until spare wheel is raised completely.



Spare wheel



Spare wheel winch grommet



Loosening/Tightening of wheel winch screw



Lifting the spare wheel

JACK & TOOLS AND PARKING BRAKE

HANDLING

Vehicle Jack & Tools

Vehicle tool bag is kept below co-driver's seat. Jack and handle are kept either below the rear right jump seat or driver's seat. Jack is mounted on floor over studs by wing nuts screwed on them.

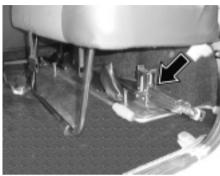
Lift the rear right seat squab to have access jack and handle.



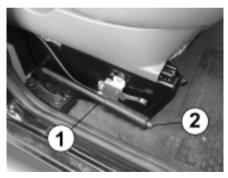
The parking brake is mounted on floor between RH door and driver's seat.

To apply the parking brake, pull lever UP. To release it, pull the lever up slightly, press the release button and push the lever DOWN.

Ensure parking brake is released before driving the vehicle. Indication is given on instrument cluster.



Jack and tool



1. Parking Brake 2. Operating Knob

CATALYTIC CONVERTER AND EGR SYSTEM (IF FITTED)

CATALYTIC CONVERTER: (if fitted)

Your vehicle is fitted with Diesel Oxidation Catalytic Converter to reduce exhaust pollution. The two way Catalytic Converter has coating of precious metals which enables conversion of pollutants.

Care of the Catalytic Converter:

The Catalytic Converter does not require any special maintenance however, following precaution should be taken for the effective functioning of the converter and to avoid damage to the Converter. It is mandatory to use Diesel fuel with sulphur content less than 0.25%. Use of any other diesel fuel can increase the pollutants.

WARNING

Avoid parking the vehicle over inflammable materials, such as dry leaves, grass etc., as the exhaust system is hot enough to initiate "FIRE":

TAKING CARE OF ENVIRONMENT:

Your vehicle is equipped with the EGR (Exhaust Gas Recirculation) System.

EGR System

The 497SPTC engine has an Exhaust Gas Recirculation system comprising of EGR valve, EGR Tube, Vacuum hoses, Electroneumatic switch, Potentionmeter on FIP throttle lever, EGR control unit and associated electrical circuitry.

With this, controlled amount of exhaust gas is mixed in air intake of the engine, which helps in reducing harmful pollutants.



Catalytic Converter

TURBO CHARGER (IF FITTED)

Turbocharger

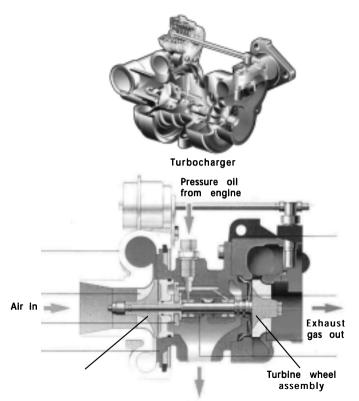
Turbocharger is an efficient supercharging device used in our engine. It makes use of thermal energy of engine exhaust gases to run a turbine which in turn drives a compressor to force air under pressure into the inlet manifold.

Lubrication of Turbocharger

The rotor assembly of the turbocharger is supported by two floating lead bronze sleeve bearings in the bearing housing. These bearings are lubricated with the linest filtered and cooled oil from the lubrication system of the engine. There is a heat shield arrangement provided between the gas chamber of the turbine and the bearing housing to avoid heating of the bearings.

Maintenance of Turbocharger:

- Tighten the following fasteners at PDI and thereafter at every 10,000 km.
 - Turbocharger mounting
 - Turbocharger hose connections and its mountings
- Check intercooler fins for any dust accumulations and clean by compressed air at every 20,000 km. (if fitted)
- It is advisable to run the engine at idle speed for about one minute, after starting and before stopping the engine. This ensures adequate lubricating oil supply to the turbocharger.



Oil drain to engine

POWER STEERING (When provided)

Power steering is fitted for lighter steering effort and easy manoeuvrability. The system consists of steering gear box, hydraulic pump and hydraulic reservoir suitably mounted and connected by piping. Pump drive is through belt from engine. Power assistance is available during normal functioning of the power steering system.

In case of any failure in hydraulic system, the steering can be operated mechanically with increased steering effort for bringing the vehicle to a repair station.

Procedure for oil filling and bleeding the power steering system. (Ensure that the reservoir is totally cleaned before starting the work.)

- Fill the reservoir nearly full. Crank the engine for 10 seconds without, if possible, allowing it to start. If the engine does start, shut off immediately. Check and refill the reservoir. Repeat atleast three times, each time checking and refilling the reservoir.
- Check for any leakage in the system and if noticed take corrective action.
- Start the engine and steer the vehicle from full left to full right turn 3-4 times. Add fluid if necessary to maintain the level up to the filter top.
- 4. With the engine at steady speed check for bubble /foaming in the fluid. If present it indicates that air is getting sucked into the system.

- Check the suction line / fittings and correct if necessary.
- Once the system is bled properly and free from foaming, there should not be appreciable change in fluid level in the reservoir, when the engine is started / stop repeatedly. Top up or remove excess fluid so that the final level is at 'H' mark on dipstick.
- 6. Now the system is ready for driving.

/!\ CAUTION

Do not allow the fluid level to drop significantly or run out of the reservoir during the above operation. This may induce air into the system.

Do not start the engine without fluid in the power steering system. This will result in serious damage to the pump.

NOTICE

Always use recommended brand of fluid from closed containers. Any dirty fluid poured in the system will result in damage to pump/gear.

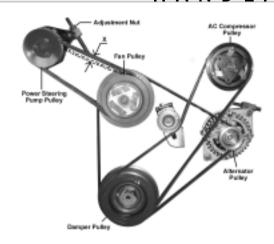
Power steering pump belt tension Check

Check the conditions of belts on the engine. Examine the edge of the belt for cracks or fraying.

Check the tension of the belt by pushing on it with your thumb Alternator/Power Steering belt as shown in Figure.

The belts should have deflection of 8 to 10 mm. (X)

If the belt tension is not proper, get it attended at the nearest Authorised service outlet.



HEATING, VENTILATION & AIR CONDITIONING: (if installed)

A. Temperature Control Knob:

The air temperature in the car can be controlled by operating the temperature control knob (A) at the left hand side of the control panel. The temperature can be increased by rotating the knob towards the red segment and decreased by rotating it towards the blue segment.

B. Blower Speed Regulation Knob:

The ventilation system has a three/four speed blower. The blower speeds can be regulated to any one of the following speeds by operating the knob (B) at the centre of the control panel.

● LOW ● MEDIUM ● HIGH ● VERY HIGH

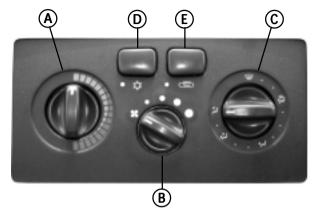
C. Air Direction Control Knob:

The air flow can be changed by turning the switch (C) to the desired direction.

ئے ج	Towards face
₽	Towards face and feet
₽	Towards feet
1	Towards feet and windshield (Recommended for clearing fogging on windshield)



Air demist / defrost windshield (Recommended for clearing heavy fog and snow)



H.V.A.C. Controls

A. Temperature Control Knob
B. Blower Speed Regulation Knob
C. Air Direction Control Knob
D. AC ON / OFF Switch
F. Air Circulation Switch

D. A.C. ON/OFF Switch:

The A.C. can be switched 'ON' by pressing(In case of HVAC) / rotating (In case of only A.C.) the switch (**D**) on the A.C. control panel provided the blower is 'ON' and the engine is running. The indicator lamp will show that the A.C. is 'ON'.



E. Air Circulation Switch:

In HVAC version to put air circulation mode in recirculation, press switch 'E'. The indicator lamp will show air circulation is in recirculation.



To put vehicle in Fresh mode release switch 'E'. Indicator lamp will be 'OFF'.

- In A.C. version, air circulation mode can be selected by pressing knob 'E'.
- In recirculation mode, air inside the vehicle is irculated again and again. In Fresh mode, air is taken from atmosphere and circulated in the vehicle. Recirculation mode can be used.
 - While driving in dusty condition
 - To avoid traffic pollution
 - To get quick cooling/heating as required.

Whenever discomfort is felt switch air circulation mode to fresh.

NOTICE

- 1.The A.C. can be switched `ON' only if the blower is 'ON' and engine is running. When A.C. is switched 'ON' engine idling RPM increases marginally, to adjust to the A.C. compressor load. When desired temperature is achieved A.C. trips 'OFF' automatically.
- 2.The A.C. compressor gets switched 'OFF' automatically when engine gets overheated. The A.C. is automatically switched 'ON' when the engine cools down.

Normal Cooling:

A.C. - ON

Knob 'B' - Desired speed position

Knob 'C' - Towards face ⇔ 🔏

Switch 'E'- Suitably as explained

Quick Cooling:

If your car is left in the sun with window closed, inside temperature increases.

To achieve quick cooling effect, open the windows briefly while you operate the air conditioner, with air circulation switch is in Fresh mode, fan at higher speed and air direction towards 'FACE'. All vents to be opened completely.

AIR CONDITIONING

Once temperature inside has come down sufficiently, close the windows and change air circulation suitably to fresh/ recirculation.

Demisting:

In rainy season or in areas of high humidity, mist formation inside windshield glass is observed. To clear mist dehumidified air is passed on the windshield glass.

The position of control knobs should be adjusted as follows:

A.C. - ON

Knob 'B' - Desired speed position

Knob 'C' - Towards windshield

Knob 'A' (for vehicles fitted with HVAC) - at suitable temperature Air circulation - at suitable position

NOTICE

When mist gets cleared switch the knob "C' position to Face mode. In high humidity areas, if cold air continues to flow over windshield, it may cause sudden fogging on outside surface of windshield.

Defrosting: (For vehicles fitted with HVAC unit)

In low temperature areas, to clear frost formation outside the windshield glass, this setting is used.

First start the engine and accelerate to warm up.Knob 'A' - Maximum hot position

Knob 'B' - Very High

Knob 'C' - Towards windshield
Switch 'F' - Fresh air mode condition

Once the windscreen has become clear, move the fan switch to desired speed.

NOTICE

Electric heater coil is provided for demisting of tail gate glass for deluxe versions.

Normal Heating: (For vehicles fitted with HVAC)

Knob 'A' - Suitable temperature position

Knob 'B' - Suitable blower speed

Knob 'C' - Towards face & feet 💢 🤳

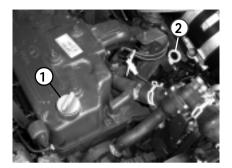
A.C. - OFF

Air Circulation- Fresh switch

PREPARING THE VEHICLE FOR THE DRIVE







1. Engine Oil Filler Cap 2. Dip Stick



Engine Oil Filter

Check the following regularly, particularly before starting on a long journey.

Fuel level in tank Top up if required with correct diesel fuel, secure cap and lock the flap.

2. Engine oil level

Check engine oil level before starting the engine or at least 20 minutes after stopping the engine. Top up if oil level is less than midway between upper and lower marks on the dipstick.

The oil level should not exceed the 'MAX' mark.

Use only the genuine company branded oils.

3. Coolant level

With the engine cool, check the coolant in the auxiliary tank. The level should be between the "FULL' and "MIN' mark, top up with the recommended coolant. Bring the level upto the 'FULL' mark. The level must not exceed the 'FULL' mark. If the coolant level drops within a short time after replenishing, there may be a leak in the system. Rectify the leakage and top up radiator also.

Use genuine company branded coolant.

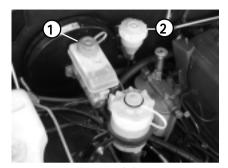
If no leak can be found inspection should be carried out at an authorised service outlet.







Battery



1. Brake Fluid Container 2. Clutch Fluid Container

NOTICE

Always use genuine radiator cap only of 1.0 kg / cm² (14 psi), if required to be replaced.

- 4. **Ensure battery electrolyte** level is 10-12 mm above top of battery plates. Top up with distilled water if required (NOT ACID).
 - Keep battery terminals clean and tight. Apply petroleum jelly / vaseline on terminals for protection against corrosion. Secure covers provided over terminals.
- 5. Check all lights, horn, gauges, switches and wiper for proper functioning.

- 6. Check condition and tension of fan belt. Adjust tension if necessary.
- 7. Check leakages of coolant, fuel and oil at all joints of hoses and pipes and rectify, if any. If coolant leakages is noticed, rectify the leakages and top up radiator also with recommended coolant.
- 8. Check level of brake fluid in plastic container. Top up if necessary. **Do not overfill.**
 - Use only genuine company branded brake fluid.
- Check level of clutch fluid in plastic container. Top up if necessary. Do not overfill as this would result in spillage during clutch operation.
 - Use only genuine company branded clutch fluid.

PREPARING THE VEHICLE FOR THE DRIVE





Windshield washer reservoir

Power Steering Fluid Dip Stick

- 10. **Check level of water** in Windshield washer reservoir. Top up with clean water if required.
 - Use good quality cleaning solvent available in the market in the ratio as specified by its manufacturer.
- 11. Check oil level in power steering hydraulic tank, where applicable.
- 12. Check and correct tyre inflation pressure (In cold condition).

D R I V I N G I N S T R U C T I O N

DRIVING AND GEAR SHIFTING

BEFORE DRIVING

Check

- Fuel level
- Coolant level
- Engine oil level
- Tyre pressure
- Brake and clutch fluid level
- Doors are firmly closed

Adjust

- Driver seat
- Rear view mirrors

Ensure

- Gear shift lever is in neutral position.
- All switches and lamps are working.
- Brake fail indicator is 'OFF'
- Fuel level indicated on fuel gauge is above reserve tank.

Start the engine and observe that:

- Low oil pressure indicator light goes 'OFF'
- Batterycharging indicator light goes 'OFF'
- ENSURE THAT PARKING BRAKE IS RELEASED (INDICATOR LAMP 'OFF')
- VEHICLE IS NOW READY FOR A DRIVE.
- DO NOT ALLOW VEHICLE TO ROLL BACK ON GRADIENTS.

During running - in period :

i.e. first 2,000 km of operation:

Do not exceed the following vehicle speeds :

Gear	Min	Max
1st	-	20
2nd	15	35
3rd	25	55
4th	35	75
5th	45	Max 95

- Avoid rapid acceleration and prolonged high speed running of the engine.
- Avoid sudden braking.
- Retighten wheel nuts to 12-15 mkg. torque after first 100 km of running of a new vehicle and after every wheel change.

DRIVING TIPS, BRAKING & FLIFL FCONOMY DRIVING TIPS, BRAKING TIPS,

Driving Tips

DRIVE SAFELY AND JUDICIOUSLY. REMEMBER SAFETY FIRST.

- Depress clutch pedal fully before shifting gears. This will ensure longer synchro cone life.
- For smooth starting of vehicle without jerks, synchronise release of clutch pedal with pressing of accelerator pedal.
- Start the vehicle in first gear only.
- Change gear at appropriate speed and do not lug the engine by too early shifting to higher gear at low speeds.

Recommended speeds for gear changes :

Gear	Speed in km/hr.
1st to 2nd	20
2nd to 3rd	35
3rd to 4th	60
4th to 5th	80

- Engage reverse gear, only when vehicle is stationary.
- Depress clutch pedal fully before engaging the reverse gear. Wait for a few seconds then engage the gear. If gear shifting does not occur, then release the clutch pedal, once again press the clutch pedal and engage the reverse gear.

Braking

- While braking on turns apply brakes gently.
- Before driving down a long steep gradient, reduce vehicle speed by changing to lower gear.
 - Do not ride the brakes as they may overheat and their performance may be impaired.
- Do not use half engaged clutch to hold the vehicle on up gradient as this will result in premature clutch failure.
- After driving through pockets of water, apply the brake a few timesat low speed to get rid of moisture inside the brake drums.
- When it beings to rain, reduce vehicle speed and avoid sudden braking.

Fuel Economy

- A. Drive smoothly, accelerate gradually and anticipate stops.
- B. Best fuel consumption is obtained at low engine speeds in the highest possible gear without labouring the engine.
- Driving with accelerator pedal fully depressed means using excessive fuel.
- Do not allow the engine labour by too early high gear changes. Change to lower gear when engine no longer runs smoothly.

- E. If possible, do not idle the engine for more than 5 minutes. Switch off the engine.
- F. Do not ride the clutch. Do not use clutch pedal as foot rest.
- G. Depending on traffic conditions, a constant speed should be maintained.
 - The vehicle uses more fuel, every time you speed up or slow down.
- H. Hard braking, abrupt cornering and rapid acceleration use more fuel. Avoid these.

Driving on Snowy or Icy Roads

Select the lower gear. Gently release the clutch and apply the accelerator for a smooth start and to avoid wheel spin.

⚠ CAUTION

Use of snow tyres and / or tyre chain is recommended.

Maintain a safe distance between vehicles to avoid sudden braking and slow down by shifting down the gears.

Avoid sudden acceleration, braking or turning. Such sharp manoeuvres can cause loss of traction and thereby loss of vehicle control.

Driving on Sandy or Muddy Roads

The extent of muddy / sandy, conditions and the traction available is difficult to judge and the vehicle can get bogged down deeply. Operation should be done at slow speed only. If possible, get down and check the path conditions before proceeding.

In case the traction on the wheels is sufficient, you may be able to proceed, it is better to select the lower gear and proceed in the normal manner. To match your power and speed requirements, you can shift up in any of the 5 forward gears or the reverse gear.

NOTICE

You may choose to reduce the tyre pressure marginally for additional grip on loose surfaces, though with a slight loss of ground clearance.

- Try to maintain a constant engine speed and avoid sudden acceleration which can cause wheel spin and loss of traction, possibly leading to bogging down of the vehicle
- If the vehicle gets stuck in loose sand, do not keep on accelerating as the wheel spin will only result in the wheels sinking deeper.

Driving Through Water

- Never venture to drive through water when it flows over guard stones
- Engine may get seriously damaged if attempted to cross over through deep water.
- If at all the situation demands that you have to drive through water then:
 - Keep engine in fast idling and crawl the vehicle in low gear.
 - After driving through water apply brakes several times to dry liners and to regain original braking.

Do not attempt to start the engine if vehicle gets flooded due to water.

- Tow the vehicle to a safe place.
- Take the vehicle to nearest AUTHORISED Workshop to check entry of water in cylinders.
- It will also be necessary to replace lubricants of engine, gearbox, transfer case, front axle and rear axle if water has entered.
- Get the starter and alternator checked.

Driving on a Rainy Day

- Check brakes, steering and windows.
- Check tyres for wear and tyre pressure.
- Check wiper blades for proper functioning.
- Avoid harsh braking and sharp turns. It may cause loss of control and lead to a skid.
- For slowing down, shift to lower gears and brake gently.
- Keep lights ON if visibility is poor.





Night Driving

- Dip the head lamp for oncoming traffic during night driving.
- Maintain a speed such that you can stop within illuminated distance of head lamps.
- Use head lamp main/dip beam to alert other road users on turns/cross roads etc.
- Use side indicators for lane change or turning.
- Put on hazard warning switch in case of hazardous parking or if your vehicle is disabled to warn the passing traffic.

Climbing Sharp Gradients

- Select the lower gear and start off smoothly. Apply power gently so there is no loss of traction by over-revving of the engine.
- Choose as smooth a slope as possible and select the appropriate gear so that gear changing in the middle of the climb is not required.
 - Changing gears in the middle of the climb can cause loss of momentum and engine stalling. Shifting to lower gear has to be done cautiously to avoid loss of traction.
- Under no conditions should the vehicle be moved diagonally across a hill. The danger is in loss of traction and sideways slippage,possibly resulting in tipping over. If unavoidable, choose as mild an angle as possible and keep the vehicle moving.

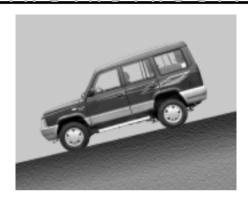




- If the wheels start to slip within few feet of the end of the climb, motion can be maintained by swinging the steered wheels left and right, thereby providing increased grip.
- If the vehicle stalls or losses headway while climbing a steep hill, make a quick shift to reverse and allow the vehicle to move back with the control of engine compression.

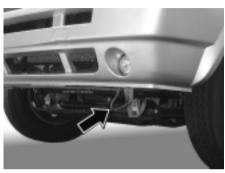
Descending Sharp Gradients

- Select the lower gear and depending on the severity of the gradient, shift into appropriate gear. Use engine braking judiciously without over-revving the engine.
- Brake application under such situations should be done very smoothly to avoid loss of control.
 - Select appropriate gear so that gear changing or clutch disengagement is not involved while descending the gradient.



Towing the Vehicle

- For towing the vehicle, the best way is to use a recovery van.
- Alternatively use a rigid tow bar.
- Avoid using flexible cable or rope as your vehicle may crash into towing vehicle when it stops suddenly.
- Switch 'ON' Hazard warning switch to warn the other road users.
- Keep the engine in idling so that power steering assistance is available. This will also built the vacuum for the brakes.
- In case of brake failure, use parking brake to control the vehicle.



Front Towing Hook



Rear Towing Hook

DRIVING SAFETY

Seat-Belt

Seat-belts are life saving equipment, use of seat-belt reduces the chance of injury and severity of injury in case of an accident. It is strongly recommended that all the car occupants should always wear seat-belt, while car is in motion.

Influence of Alcohol

Avoid driving under the influence of alcohol or other drugs. Alcohol and drugs will severely impair your control of the vehicle and increase the risk of injury to yourself and others.

Non use of mobile phones

Avoid using mobile phones while driving a car. This could divert your attention from road and result into an accident.



Fatigue 'Rest Revive survive'

Do not attempt driving when you feel tired, sleepy long distance driving can tire you very much and fatigue can dull your reflexes and judgment. Take a break and get refreshed at intervals.

SAFETY CHECKS

Windshield/wiper/windshield washer

Always keep windshield glass clean to avoid any distraction in visibility. Ensure proper working of wipers and condition of wiper blade. Ensure that windshield washer reservoir is full. Do not operate wiper alone when the windshield glass is dry this would damage the windshield.

Headlights

Keep headlight lenses clean. Check for operation of headlamp in both high/low beam condition. Check for correct focusing of headlamps. Use only recommended type of bulbs. Do not use the high beam unless it is inevitable. Its dazzle may glare the driver of the oncoming car thus causing an accident.

Side indicators / Hazard warning

Ensure that all side indicators/hazard warning lights are always in working condition and they are used when required.

Horn

Ensure proper blowing of horn. Horn provides safety to other road users by alerting your presence.

Brakes

Ensure proper working of brakes. Check brake fluid level in reservoir. Do not drive the car when brake warning lamp is 'ON'.

Tyres

Check the condition of tyres for any abnormalities. Maintain correct tyre pressure, it is very important particularly when subjected to extreme condition, such as high speed, high load and high outside temperature. Do not use worn or bald tyres on the front wheels.

First Aid Kit

First aid kit is provided in your vehicle. This is for use in case of minor injuries. It is to be regularly checked for any disintegration and should be updated with the new pure contents.

Advance Warning Triangle

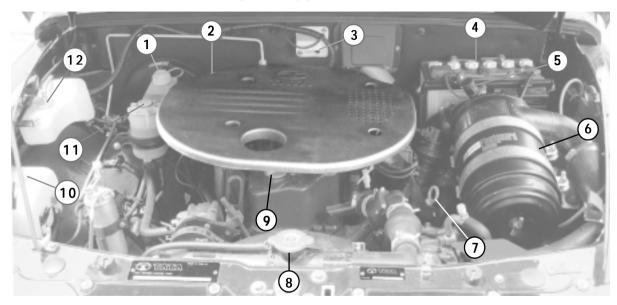
There is an advance warning triangle provided along with your vehicle. In case there is a breakdown and the vehicle is parked at the side of road, then the triangle is to be kept as per instructions given below:

Remove advance warning triangle from case and assemble.

Place the triangle on the road behind the vehicle when it stranded on the road. The triangle must be at least 50 meters behind the vehicle in the same lane of traffic. Increase the distance to 150 meters on a highway or if a bad/hill top obscures the view.

V E H I C L E M A I N T E N A N C E

ENGINE COMPARTMENT



- 1. Brake Fluid Reservoir
- 2. Clutch Fluid Reservoir
- 3. Engine Compartment Lamp
- 4. Battery

- 5. Fuse Box
- 6. Air Filter
- 7. Dip Stick
- 8. Radiator Cap

- 9. Engine Oil Filler Cap
- 10. Windshield washer Fluid Container
- 11. Power Steering Fluid Reservoir
- 12. Engine Coolant Tank

<u>VEHICLE MAINTENANCE</u>

CHANGING ENGINE OIL & OIL FILTER

Changing engine oil

Change engine oil in the crankcase at recommended interval. Engine oil should be drained while it is hot. Unscrew engine sump drain plug and allow oil to drain out fully.

Changing oil filter

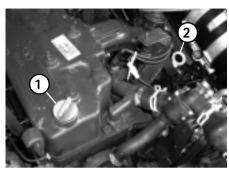
Unscrew and remove engine oil filter with the help of special tool, if necessary. Engine oil filter is a spin-on type and cannot be re-used. Change engine oil filter with every oil change.

Always use genuine engine oil filter for replacement

Destroy the oil filter to avoid resale of the same by unscrupulous people. Fill the new oil filter with fresh engine oil. Smear a little engine oil on rubber gasket of new engine oil filter. Hand tighten the filter fully and tighten it a further half turn with a special tool. Do not overtighten engine oil filter as this may damage oil filter and oil may leak out.

Before filling in fresh oil in the engine, refill the sump drain plug using a new sealing washer. Tighten drain plug to 4 mkg torque.

Fill in specified quantity of fresh engine oil in the engine crankcase. Start engine and run for a few minutes. Stop the engine and re-check oil level after approx. 20 minutes. Top up if oil level is less than midway between upper and lower marks on the dipstick.



1. Engine Oil Filler Cap 2. Dip Stick



Engine Oil Filter

Engine Air Filter

Periodically clean air filter element and replace it with a **new** one when air cleaner service indicator shows red band even after cleaning the air filter element, or at 40,000 km in clean condition or 25,000 km in dusty condition.

Always use genuine air filter element.

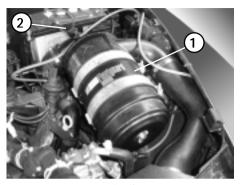
Remove the cover and the filter element.

Clean it gently by tapping and rolling on a table. Clean the cover and air ducting.

Check the element for puncture and pin holes by a light source. If found okay refit the filter element and the cover.

Reset service indicator by pressing rubber cap, red band will disappear from service indicator.

On starting the engine, if service indicator continues to show red band, replace the paper filter element with new one and reset the service indicator.



1. Air Filter 2. Service Indicator



Service Indicator

<u>VEHICLE MAINTENANCE</u>

FUEL FILTER AND FUEL SYSTEM

Changing fuel filter element

Unscrew drain plug and drain fuel from fuel bowls. Remove fuel filter with top cover from mounting bracket.

Unscrew fuel filter bowl mounting bolt and replace bowl with element

Replace fuel tank side filter element at specified intervals and FIP side filter element.

Assemble fuel filter and fit it on mounting bracket.

Priming fuel system

Unscrew fuel lift pump plunger knob. Pull and push it 10-14 times (30-40 times if fuel tank has been completely emptied). Tighten fuel lift pump plunger knob. Start engine and check for smooth running.

If erratic fuel supply is still felt, check for air suction in fuel pipeline from fuel tank to FIP and rectify.



Changing Fuel Filter Element



Priming Fuel System

V E H I C L E M A I N T E N A N C E

Fan belt tension adjustment

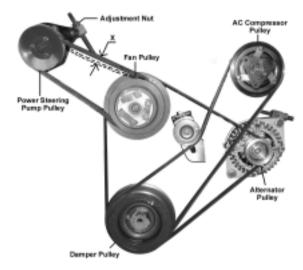
Check the conditions of belts on the engine. Examine the edge of the belt for cracks or fraying.

Check the tension of the belt by pushing on it with your thumb for A.C. compressor belt and Alternator / Power

Steering belt as shown in figure.

The belts should have deflection of 8 to 10 mm.

If the belt tension is not proper, get it attended at the nearest Authorised service outlet.



Belt Arrangement - Engine with AC compressor and power steering pump

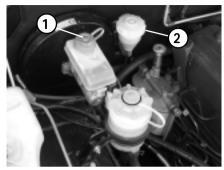
Bleeding clutch system

A dry friction, single disc, diaphragm type clutch has been fitted which is actuated hydraulically.

The procedure for bleeding the system is as follows:

- a Ensure that fluid level in clutch fluid container is upto maximum level.
- b. Remove dust cap from slave cylinder bleed screw and clean the screw thoroughly. Attach bleeding tube to bleed screw and place other end of tube in a clean glass jar containing sufficient clutch fluid to submerge tube end holding the jar just above the bleed screw level.
- c. Pump clutch pedal twice or thrice slowly throughout its stroke and by holding clutch pedal in depressed condition, loosen bleed screw on slave cylinder, Watch for air bubbles in glass jar.
- d. Retighten bleed screw on slave cylinder and repeat the process until air bubbles cease to appear at the end of tube in glass jar, allowing only fluid to flow.
- e. After completing bleeding operation, ensure that bleed screw on slave cylinder is fully tightened. Replace dust cap on the bleed screw.

During bleeding process keep a watch on fluid level in container and top-up.



1. Brake Fluid Container 2.Clutch Fluid Container



Bleeding clutch slave cylinder

Cooling system:

If engine overheating occurs, there could be a fault in the cooling system which may be on account of :

- 1. Less coolant in the system or dirt/ scale having accumulated inside coolant passages, especially in the radiator core.
- 2. Chocking of radiator passages due to foreign material or damages.
- 3. Defective/stuck thermostat.
- 4. Loose fan drive belt.
- 5. Coolant leakage from system.

Always use genuine radiator cap of 1.0 kg/cm2 (14 psi), if required to be replaced. A proper radiator cap firmly fitted maintains pressure in the cooling system.

Prevention of rust formation:

Use genuine co-branded premixed coolant in the cooling system to prevent rust formation and freezing of coolant inside the crankcase passages.

Fill the engine coolant auxiliary tank upto 'FULL' mark.

Changing of coolant in the cooling system:

- a. Drain the cooling system and flush it with clean water.
- b. Pour the genuine co-branded coolant into the radiator until it is full.
- c. Start the engine. Top up the radiator with coolant.
- d. Fill the auxiliary tank upto 'FULL' mark.
- e. Ensure no leakage in the system.



Engine Coolant Auxiliary Tank

Brake system

The dual circuit service brake system operated through the tandem master cylinder is designed such that one circuit will continue to provide braking action if the other circuit fails. This vehicle is fitted with disc brakes at front and drum brakes at rear.

Stopping the vehicle after loss of the brake fluid in one circuit will require more pedal pressure and pedal travel than normal. Also stopping distance will be longer.

Service brakes are vacuum assisted. In case of failure of vacuum, the vehicle can still be stooped, however with a higher effort.

Bleeding the brake system

If the brake pedal becomes spongy, this may be due to air in the hydraulic brake system.

Whenever any repair / overhaul or disconnecting of any brake pipe is done, or level of brake fluid has fallen so low that air has been drawn into master cylinder, it is necessary to bleed the system to remove the trapped air.

Proceed as follows for bleeding the brake system:

- Clean all dirt from around the fluid container. Remove cap and top-up fluid upto the maximum level.
- Remove dust cap at each bleed screw and clean the area around it.
- c. Attach the bleed tube to the front left calliper bleed screw and place the other end in a clean jar containing sufficient fluid to submerge the end of the tube holding the jar just above the bleed screw level.
- d. Pump the brake pedal 3-4 times slowly throughout its stroke and by holding the pedal depressed, loosen the bleed screw and watch for air bubbles in the glass jar.



Bleeding Screw - Front wheel cylinder



Bleeding Screw - Rear wheel cylinder

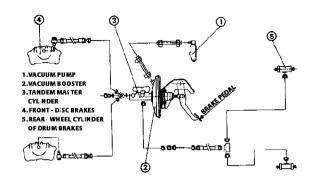
VEHICLE MAINTENANCE

- e. Re-tighten the bleed screw and release the brake pedal. Repeat the process until air bubbles cease to appear at the end of bleed tube, allowing only fluid to flow.
- f. Replace the dust cap on bleed screw.

Repeat the same procedure (steps 'a' to 'f') on the front right calliper, rear left wheel cylinder followed by rear right wheel cylinder. After completion of bleeding, apply the brake several times and check for any leakages at joints and bleed screws.

During the bleeding process keep the following points in mind:

- 1. Ensure that the fluid level in the fluid container does not fall low enough to cause air to be drawn into the hydraulic system.
- 2. Maintain absolute cleanliness. The brake system must be kept entirely free from petrol, kerosene or any form of mineral oil, as mineral contamination spreads rapidly in the hydraulic system, causing dangerous deterioration of the rubber seals.
- Never, under any circumstances, use the fluid which has been bled out from the system to top-up the container. It may be aerated, have too much moisture content and/or is contaminated.
- 4. Always use recommended brand of brake fluid.
- 5. As brake fluid absorbs moisture from the atmosphere, we recommend changing of brake fluid in the system annually.
- Take care to see that the brake fluid is not spilled on the paint work.





Brake Fluid Container

Brake adjustment

The front wheels are fitted with disc brake and rear wheels are fitted with drum brakes. Both these brakes are self-adjusting, therefore need no adjustment. In case you find brake pedal going down excessively while applying the brake, please contact our authorised service outlet.

Adjustment of parking brake:

Ensure that all four rear brake shoes have been properly adjusted.

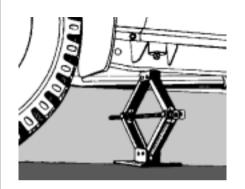
- 1 Put chocks on front wheels
- 2. Jack up the rear axle.
- Loosen check nut (2) . Pull parking brake lever upto second notch.
- 4. Tighten the parking brake adjustment nut (1) till rear wheels start jamming and cannot be rotated.
- 5. Release the parking brake and ensure that wheels are rotating freely., thentighten check nut (2). Operate parking brake a few times to ensure proper operation.

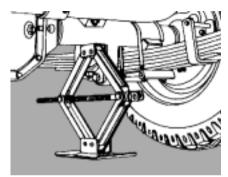
ENSURE THAT ON RELEASING THE PARKING BRAKE BOTH REAR WHEELS ARE FREE.

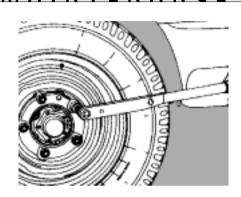
- 6. Lower down the rear axle.
- 7. Remove chocks from front wheels.



Parking Brake Adjustment Nut
 Check Nut







Wheels and tyres

Always use only recommended size wheel rims and tyres. Use of rims and tyres not recommended by us may have adverse effect on vehicle safety and further more could infringe on motor vehicle regulations.

Wheel change

When changing wheels use the jack provided with the vehicle.

Jack should be placed below chassis long member behind front wheel for changing front tyres and before rear wheel as shown.

Wheel alignment

If uneven tyre wear is noticed, get the vehicle examine and

attended by Tata Motors authorised workshop. Periodically check and maintain correct tyre pressure to obtain longer tyre life.

Recommended tyre pressures: (with cold tyres) For 185/85 R16 Tyres

At	Unladen	Laden At rated GVW
Front	38 psi (2.6 bar)	38 psi (2.6 bar)
Rear	38 psi (2.6 bar)	45 psi (3.2 bar)

The weight distribution:

Kerb Weight = 1810 kg (FAW-990 kg RAW-820 kg)- For Non AC Kerb Weight= 1830 kg (FAW-1010 kg RAW-820 kg) - For AC/HVAC Check tyres for damage from time to time and remove any foreign bodies (nails/stones, metal chips etc.) embedded in treads.

While fitting wheels on the vehicle make sure that wheel bolts are free from dust, scratches, dirt, dents, etc.

Do not oil wheel bolts and nuts. Wipe off any adhering oil on bolts/nuts

Tightening torque of wheel nuts :12-15 mkg. Retighten wheel nuts after 100 km of every wheel change.

New tyres do not give maximum grip straightway and should therefore be run-in at moderate speed for the first 100 km. This will help to make the tyres last long.

To avoid damage to tyres and wheels, drive slowly over speed breakers / bumps / rough roads.

Wheel balancing

Wheels of your vehicle are balanced. The same should be maintained when repairing a tyre or tube and replacing the tyre or rim.

Repairing a tyre / tube

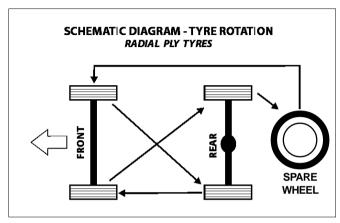
Mark suitably the tyre position (If original colour dot mark is not visible) with respect to valve stem hole to ensure that tyre is refitted in original location. Ensure that the balancing weights are not disturbed during removal of tyres. Check the balance weight prior to removal of tyre, if found loose, mark its location on the rim and refit properly.

Replacing a tyre / rim.

When the tyre or rim is changed the wheel should be properly balanced on a machine after inflating to the specified value as per the following norms.

- Permissible imbalance for tyre with rim = 250 gm-cm max.
- 2. Permissible balance weight for tyre with rim = 140 gm max.
- 3. Relocate the tyre if the weight required to balance is more than 140 gm.
- 4. Balance weights are available from 10 gm to 90 gm in steps of 10 gm and from 80 to 140 gm in steps of 20 gm.
- 5. Do not use more than one balance weight on side.

WHEELS AND TYRES, ELECTRICAL SYSTEM VEHICLEMAINTENANCE



Tyre rotation

Tyre rotation is recommended for achieving identical wear on each tyre. It is also advisable to change rotating direction to relieve tyres of continual one way rotation. Regular rotation of tyres also will prevent abnormal wear. The sketch indicates a suggested sequence of tyre rotation. Rotate tyres first at 12,000 km. then at every 8,000 km. or earlier depending on operation.

Headlamps

The head lamp provides two types of light beams; a high beam to give maximum light well ahead of vehicle, and a low beam which is shorter and lower so that it will not dazzle the oncoming drivers and can be use in low visibility area.

The head lamp also incorporates a parking lights.

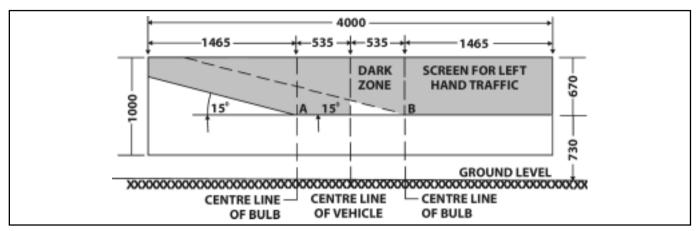
The head lamps must be properly aligned in order to obtain maximum road safety, proper road illumination and reduced glare to oncoming traffic.

It is recommended to check alignment of headlamp beams periodically and whenever headlamp bulbs are replaced, by means of a headlamp aligner or with the help of a screen as shown in figure on the following page.

Adjusting head lamps focus with the help of screen

The vehicle should be parked 10 meters away from screen with its centre in line with central vertical line on screen, and screen at right angle to longitudinal axis of the vehicle. The vehicle should be in unloaded condition with no sag in suspension springs and all tyres equally inflated.

On the marked up screen as shown in figure, area above horizontal and inclined lines (shaded) is called 'Dark zone' and the area below it is called 'The illuminated zone'.



Each headlamp is aligned individually by masking the other headlamp. Headlamp is first adjusted for proper height of low beam by adjusting knob at its top. Light from low beam should fall below horizontal and inclined lines.

No light should fall above these lines i.e. in 'Dark zone'. Thereafter lateral adjustment is done by adjusting knob at bottom of headlamp so that contour of low beam coincides with contour formed by horizontal and inclined lines below 'Dark zone'.

When properly adjusted, most brightly illuminated area will be just below the intersection point 'A' of these two lines.

The Second head lamp is adjusted in a similar manner

without disturbing the position of the vehicle and the screen.

Now switch 'ON' high beam. They will be symmetrical above points. 'A' and 'B' of intersection of vehicle lines and horizontal lines. It is possible that high beams may not be exactly symmetrical but for this reason headlamps should not be realigned.

Preferably, the alignment should be done in the dark.

No masking of headlamps with black paint is required. If done, this will reduce the intensity of light.

Head lamp focusing should be carried out in the level 'O' position (where head lamp leveling switch provided) of the switch only.

V E H I C L E M A I N T E N A N C E

Head lamp bulb replacement

Raise the bonnet of the vehicle. Remove the rear protective cover. Pull out cable socket from bulb. Remove lock ring holding the bulb and remove the bulb.

Install new bulb, properly locating it in the housing. Fit back locking ring, cable socket and protective cover.

Realign headlamp beam after replacing bulb.

Do not clean the reflector as it will cause damage to mirror-finished surface. Do not replace bulb with dirty or oily hands, since oil will evaporate due to bulb heat and stain the reflector.

BULB SPECIFICATION

Description	Location	Type	Specific	ations	Qty.
<u>Headlights</u>	Headlamp	Halogen P43t	12V	60 / 55 W	2
Turn indicator light	Front	BAU15 S	12V	21 W	2
	Tail lamp	BAU15 S	12V	21 W	2
Stop lights / Tail lights	Tail lamp	BAY 15 S	12V	21 / 5 W	2
Parking lights	Head lamp	W 5W	12 V	4W	2
Registration number plate lights	Near number light	W 5W	12 V	5W	2
Reverse indicator lights	Tail lamp	BA15 S	12 V	21W	2
Side Repeater	Side Panels	W 5 W	12 V	5 W	2
Front Fog Lamps	Front Bumper	H 3	12 V	55 W	2
Rear Fog Lamps	Tail lamp	BA 15 S	12 V	21 W	2
Roof Lamp	Cab Roof	12 V	10 W	2	
Engine Compartment Lamp	Engine Compartment	BA 15 S	12 V	21 W	1
Tell Tale Symbols					
Turn indicators	Instrument Panel	T 5	12 V	1.4 W	2
Oil Pressure	и	T 5	12 V	1.4 W	1
Battery	и	T 10	12 V	3 W	1
Low Brake fluidl/Parking brake	и	T 5	12 V	1.4 W	1
Seat Belt Fasten	и	T 5	12 V	1.4 W	1
Door Ajar	и	T 5	12 V	1.4 W	1
High Beam	и	T 5	12 V	1.4 W	1
Diesel Preheat	и	T 5	12 V	1.4 W	1
Position Lamps	и	T 5	12 V	1.4 W	1
Immobiliser	и	High Intensity LED	12 V	1	
Fuel Reserve Indicator	И	T 5	12 V	1.4 W	1

V E H I C L E M A I N T E N A N C E

FUSES

Francisco Deal

Fuses

In order to protect the cable harness and other equipments from damage in case of short circuit and overloads, fuse links are provided in the fuse box.

In case of a fault in the electrical system check the respective fuse. The particulars of the consumers served by each fuse and amperage are printed on the fuse box cover. The fuse link can be identified for amperage by color codes :

Ι.	Fuse link - Rea	-	10 Amps
2.	Fuse link - Blue	-	15 Amps
3.	Fuse link - light brown	-	5 Amps
4.	Fuse link - Yellow	-	20 Amps
5.	Fuse link - White	-	25 Amps
6.	Fuse link - Green	-	30 Amps
7.	Fuse link - Orange	-	40 Amps

While fitting fuse box cover ensure that cover knob rests in the slot provided inside the fuse box.

Spare fuse links are provided inside the fuse box.

Always use fuses of correct rating. Do not use wire in place of fuse.

Flasher with short circuit protection

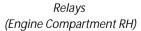
If flasher circuit is short circuited or overloaded (more than 110 W) flasher will shut off. It can be reset by momentarily centering the indicator arm of combi switch. If flasher is shutting off or fuse is blowing off repeatedly the flasher circuit should be checked for short circuit. Check the flasher separately for its functioning.





Fuse box below dash board







Relays (Engine Compartment LH)

<u>VEHICLE MAINTENANCE</u>

CARE AND CLEANING OF VEHICLE

Care and cleaning of the vehicle

/!\ CAUTION

When cleaning the interior / exterior of the vehicle, NEVER USE volatile solvents such as thinner, petrol or any other cleaning materials such as bleaches or strong household detergents. These materials may be poisonous or flammable and their improper use may cause personal injury or damage to the vehicle.

Cleaning of vehicle interior

Floor mat

Dirt can be removed from the mat with water and mild soap. Use a brush to help loosen dirt. After dirt is loosened, wash the mat thoroughly with water and dry it in the shade.

Seat belt

Clean the seat belts with a mild soap and water only. No bleach or dye should be used as this may weaken the belt fabric. The belts should be allowed to dry in the shade.

Upholstery

Prepare a solution of soap or neutral detergent mixed with warm water. Apply solution with a sponge or soft cloth and let it soak for a few minutes to loosen dirt. Wipe the surface with a clean, damp cloth to remove dirt and soap solution. If some dirt still remains on the surface, repeat the procedure

Carpets

Remove dirt as much as possible by using a vacuum cleaner. Rub the stained area with clean cloth made damp with soap to absorb the stain and remove the soap. Repeat until the stain is removed.

You can use commercially available carpet cleaner. In this case, carefully follow the manufacturer's instructions and precautions.

Cleaning exterior of the vehicle

Dirt or any other foreign material on the painted surface may result in:

- Faded paint.
- Rust on body due to deteriorated paint film.
- Rust due to scratches
- Body rust due to contact with damp dirt trapped in the body.

Therefore it is important that your vehicle is always kept clean and free from dirt in order to maintain the paint in a good condition and to protect the entire body against corrosion.

Washing

When washing the vehicle, follow the instructions given below.

 Flush underside of body and wheel housing with pressurised water to remove mud and debris. Use plenty of water to loosen and remove dirt.

V E H I C L E M A I N T E N A N C E

- Remove dirt and mud from body exterior with running water. Use a soft sponge, brush with water. Do not use hard material which can scratch the paint.
- Wash the exterior with water, lightly rubbing with sponge or soft cloth. The sponge or cloth should frequently soaked in water.

⚠ CAUTION

When using commercial wash products precautions specified by the manufacturer should be observed. Do not use strong household detergents or soaps.

- Once dirt has been completely removed, wash off with running hose water.
- After rinsing, wipe the body lightly with wet chamois or cloth and allow the body to dry it in the shade.

Warning

After washing, check that the brakes are dry. If brakes are not dry, dry them by gently, repeatedly applying while driving at low speeds.

Washing the vehicle exterior

After washing the vehicle, waxing and polishing are recommended to protect and beautify the paint.

- Use only good quality waxes and polishes.
- When using waxes and polishes, the precautions specified by the manufacturers should be observed.

• Chrome plated parts should also be waxed.

Protection against corrosion:

The following cause corrosion:

- Moisture trapped in body cavities.
- Dirt and salts collected in hollows on the underside of the vehicle.
- Removal of paint and protective coatings from the exterior and underside of the vehicle.

Corrosion preventive measures have been incorporated in your vehicle. You can avoid corrosion of your vehicle by performing some simple periodic maintenance :

- Repair chips and scratches in the paint as soon as you discover them.
- Inspect and clean the drain holes in the bottom of the doors and body.
- Check the floor coverings for dampness. Carpets and floor mats remain damp for a long time, especially in winter.
 This can eventually cause the floor panels to corrode.
- Use a high pressure spray to clean the underside of your vehicle. This is especially important in areas near chemical and other industries.
- Have corrosion preventive coatings done on the underside of your vehicle using Tata Motors cobranded anti corrosive treatment.

FUEL, LUBRICANTS & COOLANTS

FUEL, LUBRICANTS

Fuel

High speed diesel conforming to IS 1460 (2000) or DIN 51601 or equivalent is recommended to be used as fuel.

At very low temperature fluidity of diesel may become insufficient due to paraffin separation. It is therefore, necessary to mix supplementary fuel with summer or winter grade diesel. The supplementary fuel to be used is kerosene or aviation turbine fuel.

Ratios for mixing of supplementary fuel and diesel are shown in table :

Ambient	Percentage					
temperature upto °C	Summer grade diesel	Supplementary fuel				
upto 0	100	0				
0 to -10	70	30				
-10 to -15	50	50				

Ambient	Percentage					
temperature upto °C	Winter grade diesel	Supplementary fuel				
upto -15	100	0				
-15 to -20	70	30				
-20 and below	50	50				

Care should be taken that diesel and supplementary fuel are thoroughly mixed before filling.

Lubricants

Recommended lubricants conform to the following specifications :

- 1. SAE 15W40 to API CF4+ Engine oil
- 2. 75W90 Synthetic GL-4 Gearbox oils
- 3. APIGL 5 Rear axle and mechanical steering gear box oils

Please use only recommended brands for good performance.

LUBRICANTS & COOLANTS FUEL, LUBRICANTS & COOLANTS

The oil change periods recommended in maintenance schedule should be adhered to.

Use of reclaimed oil is not recommended.

Engine oil

Recommended grades of engine oil conforming to SAE API CF4+ specifications and range of ambient temperature at which these can be used are given below:

Ambient temperature ° C	Engine oil grade
-10 and above -20 TO above	SAE 15W/40 SAE 10W/30 or SAE 5W/20

Gear box oil

Use recommended gear oil conforming to General Motors, Type A, Suffix A specifications.

Rear axle, live front axle and mechanical steering gear box oil (Not applicable for power steering)

Use oils conforming to APIGL 5 specification. SAE 90 oil should be used upto -9 C and SAE 75 between - 9 C and -40 C.

Hub bearing grease (Tata Motors axles & front hub).

Use Lithium base multipurpose grease.

Quantity 25 gms per hub. (Rear)

Brake and clutch fluid

Brake fluid conforming to IS: 8654/DOT 3 is recommended.

Spicer propeller shaft (where applicable)

Lubricate slip joint with Multipurpose grease - 2 grade grease.

Lubrication of steering spindle ball joint

Lubricate steering spindle ball joint with Moly Kote - BR 2 grease at every 10,000 km of operation.

Sliding spindle on steering column not be pulled beyond the stopper as it may damage the splines.

Coolants

Presence of dirt in coolant chokes up passages in radiator, cylinder head and crankcase, thereby causing overheating of engine.

To prevent rust formation and freezing of coolant inside the passages of radiator, crankcase and cylinder head use only branded premixed coolant.

Coolant should be drained and fresh premixed coolant filled every two years or 50,000 km., whichever is earlier.

FUEL, LUBRICA RECOMMENDED OILS, LUBRICANTS AND FILLING CAPACITIES

PLEASE USE ONLY FOLLOWING GENUINE OILS, COOLANTS, LUBRICANTS, ANTI RUST & SOUND DEADENING COATS, WINDSCREEN SEALANT, ADHESIVES & FUEL ADDITIVES BRANDED BY TATA MOTORS FOR OPTIMUM PERFORMANCE

ITEM	COMPANY	BRAND	QTY		
ENGINE OIL	CASTROL HPCL	Castrol GTD 15W/40 HP Milcy Power 15 W/40	5.5 Litres		
COOLANT (Premixed)	SUNSTAR HPCL	Golden Cruiser Premium 1400 M HP Thanda Raja P	12 Litres (Approx)		
GEAR BOX (G-76)	HPCL CASTROL	HP Gear EP 75W90 (T) CASTROL Syntro 75W90 GL4 Exxon Mobil - MobiLube 1 SHC 75W90	1.6 Litres		
POWER STEERING OIL	HPCL CASTROL				
REAR AXLE	HPCL CASTROL	HP Gear Oil XP 85W140 GL5 CASTROL Extreme Pressure 85W140	1.9 Litres		
BRAKE / CLUTCH FLUID	HP CL CASTROL	HP Super Duty Brake Fluid DOT - 3 CASTROL Universal Brake Fluid DOT - 3	As required		
WHEEL BEARING & CHASSIS Propeller shaft joints, Sliding Yokes, Vacuum Booster	HPCL	HP Multipurpose Grease-2	As required		
ANTI RUST TREATMENT & SOUND DEADENING	DINITROL WUERTH	Dinitrol Wuerth	_		
DIESEL ADDITIVE	IFTEX	Iftex Clean System D	250 ml pack *		

^{*} Add to Diesel as per the dosage recommended by M/s IFTEX

TECHNICAL SPECIFICATIONS

Engine

Model : TATA 497 SP TC 42 (BS-II)

TATA 497 SP TC 43 (BS-III)

Type : Turbo-charged, Water cooled, Direct

injection diesel engine.

No. of cylinders : 4-inline

Bore / Stroke : 97 mm x 100 mm

Capacity : 2956 cc

Max. engine output : 51.5 kw at 3000 rpm as per MOST/

CMVR/TAP-115/116

Max. torque : 223 N-m at 1600-2200 rpm as per

MOST/CMVR/TAP-115/116

Compression ratio : 19:1 Firing order : 1-3-4-2

Air filter : Dry (Paper) type

Oil filter : Spin - on full flow paper type
Fuel filter : Two stage, fine filtration
Fuel injection pump : Mechanical Rotary type with

automatic advance.

Governor : Centrifugal type variable speed.

Engine oil capacity : Min. 5.5 litres Weight of engine : 315 kg (Dry) Radiator frontal area : 2260 sq. cm. Clutch

Type : Single plate dry friction

diaphragm type

Outside diameter of : 240 mm

Clutch lining

Friction area : 527 sq. cm. (approximately)

Gear Box

Type : G-76-5/4.10 with overdrive

Synchromesh on all gears

No of gears : 5 forward, 1 Reverse

Gear ratios : Gear Ratio

1 st 4.10 2nd 2.22 3 rd 1.37 4 th 1.00 5 th 0.82

Rev. 3.75

Rear Axle

Type : Single reduction, salisbury type with

hypoid gears and Semi - floating axle shafts.

Ratio : 3.73

Front Axle: Independently suspended

T E C H N I C A L S P E C I F I C A T I O N S

Steering:

Ratio : 18.2 : 1

Steering wheel : 420 mm dia. / 380 mm dia.

Brakes:

Service brakes : Vacuum assisted independent

hydraulic brakes on front and rear.

Vacuum pump mounted on alternator.

Front : 262 dia. disc brake

Rear : 282 dia. auto adjusted drum Brake

Parking brake : Cable operated Mechanical

linkages acting on rear wheels.

Frame

Type : Ladder type cranked frame with

boxed section long members and

welded cross members

Depth : 110 mm (maximum)

Width : 60 mm

Suspension

Front : Double wishbone type with

coil springs.

Rear : Semi elliptical leaf springs.

Shock Absorber : Hydraulic double acting

telescopic type at front and

rear.

Antiroll bar : At both front and rear.

Wheels and tyres

Tyre : 185 /85 R 16

Wheel rims : 5.5 J x 16

No. of wheels : Front - 2, Rear - 2, Spare -1

Fuel Tank Capacity : 65 litres

Electrical System

System voltage : 12 volts (-ve earth)

Alternator Capacity : 75 Amps for HVAC version

40 Amps for Non AC version

Battery : 12V, MF 70 Z

TECHNICAL SPECIFICATIONS

Performance

Max. speed at rated GVW 120 km / hr

Max gradeability at rated GVW 32 % Grade Restartability 26 %

Main Chassis Dimensions; As per ISO: 612 in mm (Nominal)(Tolerances as per INTEREUROPE STVZO)

Wheel base : 2425
Track front : 1496
Track rear : 1461
Overall Length : 4258
Max. width : 1700
Front Overhang : 827

Rear Overhang : 1006 over rear foot step

Overall height : 2010 / 1925

(Unladen / laden)

Min. turning circle dia. : 10.0 m Min. turning clearance : 11.1 m

circle dia.

Ground clearance (laden): 190

Weight (kg): (Tolerances as per INTEREUROPE STVZO)

Complete vehicle kerb

weight as per ISO : 1176 : 1875(FAW-1030,RAW-845) LX (With spare wheel & tool) : 1855(FAW-1010,RAW-845) CX

Gross Vehicle weight : 2600 (FAW 1080 + RAW 1520)

Max. Permissible FAW : 1100
Max. Permissible RAW : 1560

Passenger Capacity: Option I: Driver + 6

Option II: Driver + 8

SPECIALINSTRUCTIONS

- The vehicle has been built to give you thousands of kilometers of economical and trouble-free performance. This is however, possible only if this vehicle is systematically maintained and operated strictly according to the instructions contained in this book.
- 2. The free services should be availed of, at the following km range within 18 months.

1st Free Service At 1000 - 1,500 km

or 1 month whichever is earlier

2nd Free Service At 15,000 - 15,500 km

or 12 months whichever is earlier

3rd Free Service At 30,000 - 30,500 km

or 24 months whichever is earlier

4th Free Service At 45,000 - 45,500 km

or 36 months whichever is earlier

3. Besides the service schedule chart detailing the service operations to be performed Service Coupons (perforated) are incorporated. These coupons should be detached and sent to Customer Support, Passenger Car Division, Tata Motors, Pune - 411 018 by the servicing dealer after the service is performed. The selling dealer should fill up details of chassis particulars on the inside cover page.

4. These services can be satisfactorily performed only by one of our Authorised Dealers'/TASC's/TASP's Workshops in India, irrespective of the dealer who sold the vehicle, provided the vehicle is sent to them at the kilometerages specified and that this service book is produced before them.

The vehicle is entitled to pre-delivery service with free labour. After the delivery of the vehicle, in the subsequent '4 free services' labour would be free but materials, if any would be charged for.

All services, other than the above, must be paid for both for materials and labours; material at prevailing rates for the quantity consumed and labour at our scheduled rates available with our Authorised Dealers/TASCs/TASPs.

- 5. In the event of a schedule Service not performed within specified kilometers the respective coupons will be detached by the Authorised Dealer's Workshop when the vehicle is sent to them next. Should a major service have been missed, all the works listed for such service must be performed when the vehicle is taken next to one of our Authorised Dealer's/ TASC's/TASP's Workshop.
- It is an important condition of our sales policy that no warranty claims shall be entertained by us unless all services upto time of the claim arising have been performed on the vehicle by one of our Authorised Dealer's / TASC's/TASP's Workshops.

S P E C I A L I N S T R U C T I O N S

Failure to carry out the services listed in this book can cause considerable damage to the vehicle and inconvenience to you. It is, therefore, in your own interest to take your vehicle to one of our Authorised Dealer's, TASC's, TASP's, Workshop for servicing.

- 7. All our Authorised Dealer's/TASC's Workshops have been equipped with special tools and are manned by technical personnel trained by us. Besides, they have adequate stocks of genuine spare parts for replacement purposes, should the need arise. Our Authorised Workshops are therefore in a position to render you any expert advice and service your vehicle may need. Please give them an opportunity to serve you, so that you may obtain economical and trouble free performance from your vehicle.
- 8. For any technical advice concerning your vehicle, please contact the nearest Authorised Dealer.

SERVICESCHEDULE

SR. NO.	OPERATION	FREQUENCY IN km	PDI	1500	15000	30000	45000	00009	75000	00006	105000
	GENERAL										
1.	Wash the vehicle & Clean the condenser with compressed air.	Every Service	•	•	•	•	•	•	•	•	•
2.	Check & Top up Fluids if required: Coolant, Brake/Clutch Fluid, Battery Electrolyte, Power Steering Oil, Gear Box Oil, Transfer Case & Front Axle (4X4) / Rear Axle Oil	Every Service	•	•	•	•	•	•	•	•	•
3.	Check Engine Compartment for loose Fasteners, Low pressure fuel lines, Coolant hoses, air hoses, Vacuum hoses, hydraulic line connections for leakages if any, Attend if necessary.	Every Service	•	•	•	•	•	•	•	•	
4.	Check Underbody for loose Fasteners, hydraulic line connections, Exhaust system / Fuel Pipes for Damages / Leakages if any. Attend if necessary	Every Service	•	•	•	•	•	•	•	•	
5.	Apply grease on door latches, door lock, door check stop, striker, bonnet opening lever & lock plate, tailgate hinges & door lock inner ratchet.					•	•	•	•	•	•
	ENGINE (4 SP TURBO)										
1.	Clean air cleaner filter element, Change if red band appears on service indicator even after cleaning	Every Service		•	•	•	•	•	•	•	•
2.	Change engine Oil and Oil filter. Use APICH4+MB228.3 or Higher grade Engine Oil.	Every 15000 km			•	•	•	•	•	•	lacksquare
					OR	1Yearv	vhichev	er is ea	rlier		
3.	Check All accessory Drive belts, adjust tension if required, change if damaged	Every Service		•	•	•	•	•	•	•	•
			Rej	olace ev	ery 2 y	ear OR	40000	kms wh	nichever	is earli	er
4.	Drainwater from fuel ilter	Every Service			•	•	•	•	•	•	•
5.	Change fuel filter 1st	Every 15000 km			•	•	•	•	•	•	•
6.	Change fuel filter 1st & 2nd	Every 30000 km				•		•		•	
7.	Lubricate water pump with grease	Every Service			•	•	•	•	•	•	•
8.	Check&adjustvalveclearance	Every 15000 km			•	•	•	•	•	•	•
9.	Replace air filter element (OR if RED band appears on Service Indicator)	45000km					•			•	П

SERVICESCHEDULE

SR. NO.	OPERATION	FREQUENCY	IOA	1500	15000	30000	45000	00009	75000	00006	105000
10.	Check All accessory Drive belts, adjust tension if required, change if damaged	75000km							•		
					(OR 2 Yea	ars whic	cheveri	searlier		
11.	Clean breather	30000km				•		•		•	Ш
12.	Change vacuum hoses fotr Vacuum Modulator, Turbocharger, EGR valve & throttle valve	60000km						•			Ш
					(OR 4 Yea	ars whic	cheveri	searlier		
	GEAR BOX										
1.	Change oil in gear box (every 30,000 KM)	Every 30000 km				•		•		•	
2.	Clean breather in gear box	Every Oil Change				•		•		•	
	PROPELLER SHAFT										
1.	Grease propeller shaft with grease gun (at slip joint-splines end) & Check Centre bracket mounting bolts for looseness. Tighten if necessary	15000km			•	•	•	•	•	•	•
	AXLE										
1.	Change oil in axle (First at 15,000 KM, there after every 75,000 KM)	75000 km							•		П
2.	Change grease in rear hubs& adjust bearing play (only for TML axle)	45000 km					•			•	
3.	Clean breather in Axle	Every Service			•	•	•	•	•	•	•
	SUSPENSION & STEERING										
1.	Grease idler arm (seal type idler arm)	15000km			•	•	•	•	•	•	lacksquare
2.	Checkwheel alignment & balancing, adjust if necessary	15000km			•	•	•	•	•	•	•
3.	Check condition of rubber bushes in the following & replace if necessary: 1) Top wishbone 2) Lower wishbone 3) Antiroll bars 4) Rear links 5) Panhard rod	45000km					•			•	

SERVICESCHEDULE

SR. NO.	OPERATION	FREQUENCY	PDI	1500	15000	30000	45000	00009	75000	00006	105000
4.	Check shock absorber, its bushes & steering damper bushes, replace if necessary	30000km				•		•		•	
5	Grease steering spindle and sleeve	30000 km				•		•		•	
6.	Check & adjust front wheel bearing play & Change grease in front hubs	45000 km					•			•	
7.	Check steering gearbox oil level & top-up, if necessary (only for mechanical steering)	45000 km					•			•	
8.	Change oil in powersteering system & change filter element	75000 km							•		
	CLUTCH & BRAKES										
1.	Check parking brakes, adjust if necessary	15000 km			•	•	•	•	•	•	•
2.	Checkfront brake pads & rear brake linings. Replace if necessary	15000 km			•	•	•	•	•	•	$oldsymbol{\cdot}$
3.	Change Clutch & Brake Fluid (Or 2 years whichever is earlier)	30000 km				•		•		•	
	ELECTRICALS										
1.	Check headlamp focussing & functioning of other electrical equipment	15000 km			•	•	•	•	•	•	lacksquare
2.	Check specific gravity of battery electrolyte	30000 km				•		•		•	П
	HVAC										
1.	Check the HVAC System for Satisfactory Performance & attend if required	Every Service	•		•	•	•	•	•	•	•
	WHEELS & TYRES										
1.	Tyrerotation	15000 km			•	•	•	•	•	•	•

CHASSIS NO.

RECORD OF SERVICE PERFORMED

Recommended Service	Date	Odometer reading km.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km.				
PDI*				
5,000*				
10,000*				
15,000*				
20,000*				
25,000				
30,000				
35,000				
40,000				

Recommended Service	Date	Odometer reading km.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km.				
45,000				
50,000				
55,000				
60,000				
65,000				
70,000				
75,000				
80,000				
85,000				
90,000				

RECORDOFSERVICE PERHASSIS PNOMED

Recommended Service	Date	Odometer reading km.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km.				
95,000				
1,00,000				
1,05,000				
1,10,000				
1,15,000				
1,20,000				
1,25,000				
1,30,000				
1,35,000				
1,40,000				

Recommended Service	Date	Odometer reading km.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km.				
1,45,000				
1,50,000				
1,55,000				
1,60,000				
1,65,000				
1,70,000				
1,75,000				
1,80,000				
1,85,000				
1,90,000				

CHASSIS NO. RECORDOESERVICE PERFORMED

Date	Odometer	Repair reading (km)	Particulars of Repair Order No.	Servicing Dealer's Signature & Stamp

RECORDOF SERVICE PECHASSIS PNOM F.D.

Date	Odometer	Repair reading (km)	Particulars of Repair Order No.	Servicing Dealer's Signature & Stamp

ABBREVIATIONS

A/C	Air Conditioning	mkg	Meter per Kilogram
ACC	Accessories	mm	Millimeter
Amp	Ampere	Mtg	Mounting
Br	Branch	No	Number
Brg	Bearing	Nm	Newtonmeter
cc	Cubic Centimeters	PCBU	Passenger Car Business Unit
Cm	Centimeter	PDI	Pre-delivery Inspection
Dia	Diagonal	PSI	Pounds per Square Inch
EGR	Exhaust Gas Recirculation	PUC	Pollution Under Control
FAW	Front Axle Weight	RAW	Rear Axle Weight
Fig	Figure	RCSM	Regional Customer Support Manager
FIP	Fuel Injection Pump	RH	Right Hand
gm	Gram	RM	Regional Manager
GVW	Gross Vehicle Weight	RPM	Revolution Per Minute
IGN	Ignition	Sec	Seconds
Kg	Kilogram	Sq.cm.	Square Centimeter
Km	Kilometer	TASC	Tata Motors Authorised Service Centre
Km/h	Kilometer per hour	TASP	Tata Motors Authorised Service Point
LH	Left Hand	V	Volts
Max	Maximum	W	Watts
MD	Main Dealer	Wt	Weight
Min	Minimum		

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TATA MOTORS LIMITED

Mumbai ● Pune ●

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