VEHICLE IDENTIFICATION & RECORD

OWNER'S MANUAL

ADDRESS

SELLING DEALER CODE

DATE OF DELIVERY

DATE OF REGISTRATION

REGISTRATION NO.

CHASSIS NO.

ENGINE NO.

GEAR BOX NO.

REAR AXLE NO.

BATTERY MAKE

BATTERY SR. NO.

BATTERY CODE

Following items are provided with your TATA SAFARI STORME

1. Owner’s Manual
2. First Aid Kit
3. Advance Warning Triangle
4. Jack & Handle
5. Spare Fuses (Provided in fuse box)
6. Tool Kit
   (if fitted)

THE WARRANTY ON THIS VEHICLE IS VALID ONLY IF THE DETAILS ARE FILLED AND STAMPED BY THE SELLING DEALER

DEALER'S SIGNATURE & STAMP
This owner's manual is advised to be kept in the vehicle at all the times.
INTRODUCTION

• Should any question or query exist regarding any aspect of your vehicle, please contact the nearest TATA MOTORS dealer, who will be pleased to assist you.

• The recommended routine maintenance servicing along with any running repairs that may be required, should be entrusted to TATA MOTORS dealership or to TATA MOTORS Authorised Service Centres (TASCs) to ensure that only latest methods and genuine TATA MOTORS replacement parts are used for the continued reliability, safety and performance of the vehicle.

• Some of the items / accessories / features shown / given in this book may not be fitted on your vehicle, but they are applicable for other variants of TATA SAFARI STORME.

• All rights reserved. The material in this manual may not be reproduced or copied, in whole or in part, in any form without written permission from TATA MOTORS.

• In the event of the vehicle being sold, please ensure that this manual is left in the vehicle for the reference of the new owner.

• Copyright (C) 2016 TATA MOTORS

VERSION : SAFARI STORME/OSB/FEB,2017/Ver. 1.20

This owner's manual & service book includes information on the operation and maintenance of various equipment installed on the different variants of TATA SAFARI STORME. Please note that this manual applies to all the models and explains all equipment including options not installed on your vehicle.
Dear Customer,

Thank you for choosing TATA SAFARI STORME.

For enhanced safety of occupants, the TATA SAFARI STORME has SRS (Air bag) and ABS (Anti lock Braking System), in addition to having disc brakes on all its four wheels.

Advanced electronics are employed in the TATA SAFARI STORME to control its various functions. Music System provides entertainment to the passengers.

Reverse Guide System helps in directing the vehicle safely. The interiors of this vehicle are luxury personified with the soft touch dashboard having matching trim colour.

Powering this vehicle is TATA MOTORS proven TATA VariCOR Engine that aids drivability, especially while tackling rough hard-hitting roads.

This book gives you all the information necessary for making your drive a wonderful experience.

We wish you a safe and wonderful driving experience.
## INTRODUCTION

### VALUE ADDED SERVICE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24X7 On Road Assistance</td>
</tr>
<tr>
<td>2</td>
<td>Extended Warranty</td>
</tr>
<tr>
<td>3</td>
<td>Anti-rust, Sound Deadening &amp; Engine Waxing</td>
</tr>
<tr>
<td>4</td>
<td>Exterior &amp; Interior Enrichment Program</td>
</tr>
</tbody>
</table>

### ENVIRONMENT PROTECTION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### WARRANTY-TERMS & CONDITIONS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### GETTING STARTED

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-Key and Remote Keyless Entry</td>
</tr>
<tr>
<td>2</td>
<td>Door Locking / Unlocking</td>
</tr>
<tr>
<td>3</td>
<td>Steering Lock cum Ignition Switch</td>
</tr>
<tr>
<td>4</td>
<td>Seat &amp; Seat Adjustments</td>
</tr>
<tr>
<td>5</td>
<td>Head Restraint</td>
</tr>
<tr>
<td>6</td>
<td>Seat Belt</td>
</tr>
<tr>
<td>7</td>
<td>Child Restraint System</td>
</tr>
<tr>
<td>8</td>
<td>Rear View Mirrors - Inner &amp; Outer</td>
</tr>
<tr>
<td>9</td>
<td>Steering Wheel Position Adjustment</td>
</tr>
<tr>
<td>10</td>
<td>Transfercase Electric Shift Switch</td>
</tr>
<tr>
<td>11</td>
<td>Master Light Switch</td>
</tr>
<tr>
<td>12</td>
<td>Power Windows</td>
</tr>
<tr>
<td>11</td>
<td>Dashboard</td>
</tr>
</tbody>
</table>
INTRODUCTION

DRIVING CONTROLS
- 1. Gear Shift Lever & Shifting Pattern 43
- 2. Parking Brake 43
- 3. Combi-Switch 44
- 4. Instrument Cluster- Gauges & Indicators 47
- 5. Hazard Warning Switch 57
- 6. Heating, Ventilation & Air Conditioning 60

INTERIORS
- 1. Sunvisors, Vanity Mirror & Grab Handles 66
- 2. Cup Holders 67
- 3. Utility Pockets on Door Trims 68
- 4. Glove Box 69
- 5. Power Socket 69
- 6. Interior Lights - Roof Lamps 70
- 7. Music System 72

EXTERIORS
- 1. Head lamp 74
- 2. Fog Lamp 74
- 3. Tail Lamp 74
- 4. Registration Number Plate Lamp 75
- 5. High Mounted Stop Lamp 75
- 6. Puddle Lamp / Door Lamp 75

7. Reflex Reflectors 76
8. Fuel Flap Opening / Closing by Switch 76
9. Bonnet Opening / Closing 77

SPECIAL FEATURES
- 1. Air Bags (SRS) 78
- 2. Anti-lock Braking System (ABS) 82
- 3. Reverse Guide System 84

DRIVING
- 1. Safety Checks Before Driving 86
- 2. Driving Safety 87
- 3. Tips To Improve Fuel Economy 88
- 4. Proper Driving Practices 88
- 4. Running-In Instructions 88
- 5. Starting / Stopping & Parking 89
- 6. Preparing To Drive 89
- 7. Gear Shifting Speeds 90
- 7. Brakes & Braking 91
- 8. 4 X 4 Operation 92
- 8. Driving In Adverse Condition 93
## CONTENTS

### INTRODUCTION

### IN CASE OF EMERGENCY

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Emergency Parking Of The Vehicle</td>
</tr>
<tr>
<td>2</td>
<td>Emergency Aids</td>
</tr>
<tr>
<td>3</td>
<td>Emergency Towing</td>
</tr>
<tr>
<td>4</td>
<td>Inertia Switch</td>
</tr>
<tr>
<td>4</td>
<td>Starting The Engine With Jump Leads</td>
</tr>
<tr>
<td>5</td>
<td>If You Have Flat Tyre</td>
</tr>
<tr>
<td>6</td>
<td>Jacking Points</td>
</tr>
<tr>
<td>7</td>
<td>Fuses &amp; Relay Box</td>
</tr>
<tr>
<td>7</td>
<td>Bulb Specification</td>
</tr>
<tr>
<td>9</td>
<td>Head Lamp Bulb Replacement</td>
</tr>
<tr>
<td>8</td>
<td>Tail Lamp Bulb Replacement</td>
</tr>
<tr>
<td>9</td>
<td>Preliminary Trouble Shooting</td>
</tr>
</tbody>
</table>

### MAINTENANCE & VEHICLE CARE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engine Compartment</td>
</tr>
<tr>
<td>2</td>
<td>Air Filter</td>
</tr>
<tr>
<td>3</td>
<td>Engine Oil Level</td>
</tr>
<tr>
<td>4</td>
<td>Engine Coolant Level</td>
</tr>
<tr>
<td>5</td>
<td>Brake Fluid Level</td>
</tr>
<tr>
<td>6</td>
<td>Power Steering Fluid Level</td>
</tr>
<tr>
<td>7</td>
<td>Windshield Washer Fluid Level</td>
</tr>
<tr>
<td>8</td>
<td>Fuel Filter</td>
</tr>
<tr>
<td>9</td>
<td>Water drain from fuel pre-filter cum sedimenter</td>
</tr>
<tr>
<td>10</td>
<td>Turbocharger</td>
</tr>
<tr>
<td>11</td>
<td>Intercooler</td>
</tr>
<tr>
<td>12</td>
<td>Catalytic Converter</td>
</tr>
<tr>
<td>13</td>
<td>Wheels &amp; Tyres</td>
</tr>
<tr>
<td>14</td>
<td>Battery</td>
</tr>
<tr>
<td>15</td>
<td>Vehicle Care</td>
</tr>
</tbody>
</table>

### TECHNICAL INFORMATION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fuel</td>
</tr>
<tr>
<td>2</td>
<td>Lubricants &amp; Coolant</td>
</tr>
<tr>
<td>3</td>
<td>Co-Branded Lubricants &amp; Coolant</td>
</tr>
<tr>
<td>5</td>
<td>Technical Specification</td>
</tr>
<tr>
<td>4</td>
<td>Vehicle Dimensions</td>
</tr>
<tr>
<td>5</td>
<td>Chassis &amp; Aggregate Numbering Locations</td>
</tr>
</tbody>
</table>

### VEHICLE SERVICE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Service Instructions</td>
</tr>
<tr>
<td>2</td>
<td>Service Schedule</td>
</tr>
<tr>
<td>3</td>
<td>Vehicle Record</td>
</tr>
<tr>
<td>4</td>
<td>Record of Warranty Repairs Carried Out</td>
</tr>
<tr>
<td>5</td>
<td>Record of Service Performed</td>
</tr>
<tr>
<td>6</td>
<td>Service Coupons</td>
</tr>
</tbody>
</table>

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VII
SAFETY AND VEHICLE DAMAGE WARNINGS

In this manual, you will see CAUTION, NOTE and WARNING.

CAUTION

This is a warning. May cause injury to people if the warning is ignored. You are informed what you must or must not do in order to avoid or reduce the risk to yourself and other people.

NOTE

This is a warning. May cause damage to the vehicle or its equipment if the warning is ignored. You are informed what you must or must not do in order to avoid or reduce the risk of damage to your vehicle and its equipment.

WARNING

Indicates a strong possibility of severe personal injury or death if the instructions are not followed.

SAFETY SYMBOL

In this manual, you will also see a circle with a slash. This means "Do not", "Do not do this", or "Do not let this happen".
Dear Customer,

It is our never ending responsibility and endeavor to ensure that our customer’s expectations are fulfilled comprehensively. To fulfill your vehicle service needs, we recommend the following:

1) **Extended Warranty**
2) **Anti Rust / Sound Deadening / Engine waxing treatment**
3) **Vehicle detailing programming : Exterior Enrichment and Interior Enrichment Program**

These products shall help maintain optimum vehicle performance and shall enhance vehicle life.

We have tied up with best in the Class companies, who would bring you the above world class products at affordable prices. The above products are available with all our Dealers, TASCs and TASPs.

Our Dealer Service marketing executive shall explain to you the benefits of the above mentioned products.
Dear Customer,

It is our responsibility and our endeavour to ensure that you have our complete service backup if ever, wherever and whenever you need the same. When you have a road network that spans wide area, the probability of a breakdown happening within hailing distance of a TATA MOTORS Authorized Workshop is very low. It is Precisely for this reason, we have tied up with TVS AA, who will provide breakdown assistance including towing to the nearest TATA MOTORS Authorized Workshop through their Authorized Service Providers (ASP)

The 24X7 On Road Assistance Program shall be automatically available to your vehicle for the duration of Warranty period. The program shall also be available, if you avail the same post warranty.

**Response Time** for the On Road Assistance Program

<table>
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<tr>
<th></th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within City Limits</td>
<td>60 minutes</td>
</tr>
<tr>
<td>On State or National Highways</td>
<td>90 minutes</td>
</tr>
<tr>
<td>Ghat Roads and other places</td>
<td>120 minutes +/-</td>
</tr>
</tbody>
</table>

**(The response time will depend on the location, terrain, traffic density and the time of the day.)

**Standard procedure when calling for On Road Assistance in case of a breakdown:**

- Dial the toll free help line number – 1 800 209 7979
- Identify your vehicle with the Vehicle chassis number that is available in the Owners Service manual.
- Explain your exact location with landmarks and tell us about the problem you face with the vehicle.
- Park your vehicle on the edge of the road, open the bonnet and put on the hazard warning signal.
- Place the advance warning triangle supplied with the vehicle approx. 3 m from the vehicle in the direction of on coming traffic.
24 x 7 ON ROAD ASSISTANCE

COVERAGE UNDER THE 24 X 7 ON ROAD ASSISTANCE PROGRAM

I. The 24x7 On Road Assistance Program Service covers the following services on your vehicle during warranty period.

- Wheel change through spare wheel.
- Arrangement of fuel. (Fuel cost will be chargeable at actual cost)
- Re-opening the vehicle in cases of key lock out.
- Rectification of electrical problems related to battery, fuses etc.
- On spot repairs for complaints repairable at site.
- Vehicle to vehicle towing or winching & towing for non accident cases up to the nearest TATA MOTORS authorized workshop. Towing charges at actual cost beyond the same to be paid to the ASP in cash. (Any ferry or toll charges levied in relation to the vehicle being towed to be paid by the customers in actuals in cash).

For accident cases, towing charges to be borne by the customer.

II. The 24x7 On Road Assistance Program coverage on availing the 24X7 policy, post warranty, i.e. upto maximum of 6 instance of assistance in one year for both the plans- Basic and Premium. In the premium plan, this includes 1 instance of towing upto the nearest TATA MOTORS authorised workshop.
EXCLUSIONS

24x7 On Road Assistance Program does not apply to

- Cost of parts consumables and labour for such repairs not covered under warranty*. These charges are to be settled with ASP in cash.
- Toll or ferry charges paid by ASP in reaching to the breakdown site to be settled with ASP in actuals in cash.
- Cases involving accident, fire, theft, vandalism, riots, lightning, earthquake, windstorm, hail, tsunami, unusual weather conditions, other acts of God, flood, etc.
- Vehicles that are unattended, un-registered, impounded or abandoned.
- Breakdown/defects caused by misuse, abuse, negligence, alterations or modifications made to the vehicle.
- Lack of maintenance as per the maintenance schedule as detailed in the owner’s manual.
- Cases involving racing, rallies, vehicle testing or practice for such events.

DISCLAIMER:

- **The reach time is indicative & the actual reach time will be conveyed by the call centre at the time of breakdown call.
- The reach time can vary depending on the traffic density & time of the day.
- The reach time indicated does not account for delays due to but not limited to acts of God, laws, rules & regulations for time being in force, orders of statutory or Govt. authorities, industrial disputes, inclement weather, heavy down pour, floods, storms, natural calamities, road blocks due to accidents, general strife and law & order conditions viz. fire, arson, riots, strikes, terrorist attacks, war etc.
- ^ On spot repairs at breakdown site shall depend on nature of complaints & will be as per the discretion of the ASP.
- *The decision for free of charge repairs will be as per the warranty policy & procedures of TATA MOTORS LTD. and as per the interpretation of the same by ASP. You will be duly informed by the ASP & call centre for the change applicable if any.
- All charges wherever applicable need to be settled directly with the ASP.
EXCLUSION OF LIABILITIES:

- It is understood that TATA MOTORS shall be under no liability whatsoever in respect of any loss or damage arising directly or indirectly out of any delay in or non-delivery of, defect/deficiency in service/parts provided by ASP.

- In case vehicle cannot be repaired on-site, customers are advised to use the towing facility for taking their vehicle to the nearest TATA MOTORS authorized workshop only. In no condition will the vehicle be towed to any unauthorized workshop. TATA MOTORS will not be responsible for any repairs carried out in such unauthorized workshop.

- Customer are advised to take acknowledgment from the ASP for the list of accessories/extra fittings and other belongings in the vehicle as well as the current condition related to dents/scratches breakages of parts/fitments of the vehicle at the time of ASP taking possession of the vehicle & to verify these items when delivery is taken back by them, Claim for loss of or damage to items, if any should be taken up with ASP directly. TATA MOTORS shall not be responsible for any such claims, damages/loss or any deficiency of service of the ASP.

- Vehicles will be handled, repaired & towed as per the customer’s risk & TATA MOTORS shall not be liable for any damages / claims as a result of the same.

- Services entitled to the customers can be refused or cancelled on account of abusive behaviour, fraudulent representation, malicious intent and refusal to pay the charges for any charges related services and spare parts during service or on previous occasion on part of the customer.

- On site repairs may be temporary in nature. The completion of repairs does not certify the road worthiness of the vehicle. The customer is advised to ensure temporary repairs carried out onsite is followed by permanent repairs at TATA MOTORS Authorized Workshop at the earliest.

- Terms and conditions and service coverage, exclusions etc. are subject to change without notice.
TATA MOTORS recommends the purchase of Extended its warranty program.

**Coverage**: Mechanical + Electrical

**Benefits**:
- Insures you against unforeseen break down repair bills.
- Documentation is simple and hassle free.
- Near cashless & speedy claim settlement.

**Term**:
- 36 + 12 months or 150000 kms whichever occurs first

Extended Warranty available in the dealership from where you have purchased your vehicle. We strongly recommend purchase of Extended Warranty at time of purchase of your vehicle. Surcharge applicable on purchase of Extended Warranty after 90 days of purchase of vehicle. **Extended Warranty can be availed till 421 days from date of purchase of vehicle.**

The Dealer Service Marketing Executive shall explain to you the Terms and conditions, Coverage and Owner’s responsibility.

**Extended Warranty Booklet & Cover Note**:

The Extended Warranty booklet and cover note is the basis of the contract between TATA MOTORS LIMITED and the Owner of the vehicle shown on the Extended Warranty booklet. The Customer to retain this booklet and the same to be produced to the dealer while claiming benefits under Extended Warranty.
EXTENDED WARRANTY

I / We have been explained the Terms and conditions, Coverage and Owner’s responsibility by the Dealer Service Marketing Executive.

☐ I wish to avail / ☐ Do not wish to avail extended warranty policy.

Customer’s Sign  Dealer’s Sign

Note:
- The 12 month extended warranty does not follow the 36 month Manufacturer's warranty.
- The extended warranty comes into force once the manufacturer’s warranty expires e.g. after 36 Months.
- It is more restrictive as by the time it comes into force the vehicle is already 36 months old.

What is covered?
- Mechanical / Electrical break down as defined in this warranty and confirmed by the dealer within the stipulated terms and conditions.
- Tata Motors dealer shall either repair or replace any part found to be defective with a new part or an equivalent at no cost to the owner for parts or labour.
- Such defective parts which have been replaced will become property of TATA MOTORS LIMITED.
- Comprehensive list of parts covered is mentioned in the page 9-12 of the Extended Warranty Booklet.

What is not covered?
Please refer the Extended Warranty Booklet for details of the exclusion list.

Owner’s Responsibility:
- Proper use, maintenance and care of the vehicle in accordance with the instructions contained in the Owner’s Manual and Service Booklet. The records of the same to be ensured in Owner’s Manual.
- Retention of maintenance service bills.
VALUE ADDED SERVICES

ANTI-RUST, SOUND DEADENING & ENGINE WAXING

Why are Corrosion Protection Waxes necessary?

Corrosion is caused by:
Water / salt water acid rain & atmospheric fallouts.

Critical areas are:
Cavities: joints, crevices, spot welds, underbody

- Corrosion is the most important factor when we talk about the vehicle life. If you treat your car you can prolong the life.
- It is very dangerous to drive around in a corroded car.
- The corrosion creeps onto the car from the inside and from the outside. The most dangerous kind of corrosion is often not discovered until it is too late.

Benefits of Anti-Rust treatment:

- A professionally applied range of world class products offering real value to the new and used car customer.
- The treatment has been developed to withstand the harshest environmental and climatic conditions (rust, pollutants, stone and gravel impact, etc)
- Insulate cabin space from external noises.
- Expensive tin work and Denting / Painting avoided.
- Higher resale value for the car.
- Higher safety – uncorroded vehicle
- Upto 60 months warranty & 10 free checkups available
ANTI-RUST, SOUND DEADENING & ENGINE WAXING

Engine Wax Treatment:
Engine Wax is a beige coloured transparent lacquer coating on the engine compartment.

- Corrosion Prevention for the Engine compartment
- Neat, clean and New Look to Engine compartment
- No effect on MPFI vehicles
- Engine wax can withstand upto 200 degrees temp
- No need of cleaning the engine compartment with diesel once engine wax is sprayed
- Life of over a year

Sound Deadening System:
Door vibration deadeners - These pads when stuck on the insides of the sheet metal increase sheet metal rigidity, reduce vibrations and increase riding comfort.

- Used for reducing the sheet metal vibration in a vehicle.
- Product to be used once in the life of the vehicle - Life Time Warranty
- Effect is Life long i.e. until & unless pads are physically removed.
- Negligible increase in Weight & hence no effect on fuel consumption.
- Areas covered - four doors, rear quarter panels & dicky. In case of diesel vehicles, can be used in the bonnet.

TATA MOTORS has tied up with M/s Wurth, M/s Autokrom, M/s 3M India Ltd & M/s Bardahl for these world class treatment at affordable prices. These treatments are available in all authorized workshops. The Dealer Service Marketing Executive will explain to you the benefits and terms and conditions of this treatment.

I / We have been explained the Benefits, Terms and conditions and the prices of these treatments by the Dealer Service Marketing Executive

☐ I wish to avail / ☐ Do not wish to avail these treatment

Customer Signature

Dealer Signature
VALUE ADDED SERVICES

Vehicle Exterior Enrichment:

**Why vehicles are painted?**
- For Corrosion protection of the metal surfaces.
- Ease of application from other corrosion protection treatments.
- Cheaper than other corrosion protection methods eg. galvanizing, anodizing.
- For decoration and identification.

**Various Environmental Hazards affecting paints:**
- Environmental hazards: destroy your vehicle’s finish.
- Even as your new vehicle rolls off the assembly line, the paint is not protected.

**The enemy:**
Ultraviolet Rays, Pollution, Tree Sap, Bird Droppings, Car Wash Chemicals, Road Salt, Acid Rain.

**Benefits:** Vehicle Exterior Enrichment
- Removal of medium scratches, orange peel, oxidation, dust nibs etc & swirl marks from painted surface.
- Restoration of original gloss levels UV protection after gloss is restored.
- Cleaning & dressing of tyres, Bumpers & all exterior plastic moldings/trims.

**Tata Motors** has tied up with **M/s Autokrom, M/s 3M & M/s Wurth** for this world class treatment at affordable prices. This treatment is available in all authorized workshops. The Dealer Service Marketing Executive will explain to you the benefits and terms and conditions of this treatment.
EXTERIOR & INTERIOR ENRICHMENT PROGRAM

VALUE ADDED SERVICES

Vehicle Interior Enrichment

*Why protect your new car's fabric interior?*

- Someone will soil your vehicle's fabric carpet or seats.
- A significant detractor from your vehicle's resale value.
- A permanent stain on your vehicle's interior fabric.

**The enemy:**

Drink Spills - Food Stains - Mud - Ultraviolet Rays Pets - Traffic

**Benefits:** Vehicle Interior Enrichment

- Removal of medium stains and dirt from all interior parts of the car i.e carpet, upholstery and roof lining.
- Cleaning of windshield and all windows (inside and outside)
- Dressing of all internal plastics (eg: door pad trims) and rubber parts.
- The treatment involves cleaning and dressing of all parts of the exposed interiors.
- Specialised protection for seat fabric from liquid spills.

Tata Motors has tied up with M/s Wurth, M/s Autokrom & M/s 3M India Ltd for this world class treatment at affordable prices. This treatment is available in all authorized workshops. The Dealer Service Marketing Executive will explain to you the benefits and terms and conditions of this treatment.

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I / We have been explained the Terms and conditions, Coverage and Owner's responsibility by the Dealer Service Marketing Executive.

☐ I wish to avail / ☐ Do not wish to avail extended warranty

__________________________  __________________________
Customer's Sign                                              Dealer's Sign
TATA MOTORS is committed to produce the vehicles using environmentally sustainable technology. A number of features have been incorporated in Tata Motors passenger 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 manufacturing stages.

As a user you too can protect the environment by operating your vehicle in a proactive manner. A lot depends on your driving style and the way you maintain your vehicle. We have given a few tips below 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 city traffic condition.
- Monitor the vehicle's fuel consumption regularly and if showing rising trend get the vehicle immediately attended at the Company's Authorised Service Outlets.
- Switch off the engine during long stops at traffic jams or signals. If you need to keep the engine running, avoid unnecessary revving it up or stopping and starting.
- 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 it is possible. Use each gear upto 2/3rd of its maximum engine speed. A chart indicating gear shifting speeds is given in this book.

MAINTENANCE
- Ensure that recommended maintenance is carried out on the vehicle regularly at the Authorised Service Outlets.
- As soon as you see any leakages of oil or fuel in the vehicle we recommend to get it attended immediately.
- Use only recommended grades and quantity of lubricants and clean/uncontaminated and correct fuels.
- Get your vehicle checked for emission periodically by authorised dealer.
- Ensure that fuel filter, oil filter and breather are checked periodically and replaced, if required, as recommended by TATA MOTORS.
- Do not pour the 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.
ENVIRONMENTAL PROTECTION

- Do not allow 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 of your vehicle you should pay keen attention to some of the important engine aggregates and wiring harness which greatly affect emission. These components are:

1. Fuel injection equipments: pump, rail, Injectors, Nozzles and high pressure pipes.
2. Air Intake & Exhaust system especially for leakages.
3. Cylinder head for valve leakage.
4. All filters such as air, oil & fuel filters (check periodically).
5. Turbocharger & Vacuum Modulator OR it’s vacuum hoses.
6. EGR System & components.
7. Electrical connections.
8. ‘Service’ lamp continuously glows, please take the vehicle to Service Station.
10. EMS wiring harness i.e. electrical connections to all sensors and actuators.

This Owner’s Manual & Service Book contains further information on driving precautions and maintenance care leading to environment protection. Please familiarise yourself with these aspects before driving.
We **WARRANT** each **TATA SAFARI Storme** vehicle & parts thereof manufactured by us to be free from defect in material and workmanship, subject to the following terms & conditions:

1. This warranty for **engine (Varicor)** fitted in the vehicle shall be for a **period of 36 months OR 1,50,000 kms**, whichever is earlier from the date of sale of the vehicle.

   The warranty for the **rest of the vehicle** shall be for a **period of 36 months OR 1,00,000 kms**, whichever is earlier from the date of sale of the vehicle.

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, infotainment system, electrical equipment and fuel injection equipment, not manufactured by us but supplied by other parties, this warranty shall not apply. However, 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.

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
apply to V-belts, rubber parts, 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 and defects appearing only under particular or irregular operations or 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.

8. 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.

9. 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, 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 observed 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.
**REMOTE KEYLESS ENTRY (RKE)**

**FEATURES:**

1. **Remote Operated Central Door Locking**
   Pressing the Lock push - button of remote once locks all the doors of the vehicle.

2. **Unlocking through Remote**
   Pressing the unlock push-button of remote will unlock all the Doors.

3. **Manual Operation of Central Door Locking / Unlocking:**
   All doors can be locked/unlocked from the driver door using a key from outside or driver’s door knob from inside.

4. **Approach Light**
   Press and release approach button, Red LED will be flashed on the remote. To switch ‘OFF’ the approach lights, press and release the same button.

5. **Automatic activation of Immobiliser**
   If key is removed from ignition, the engine will be immobilised automatically even if you forget to lock the vehicle.

6. **Theft Detection & Perimeter Alarm:**
   Once the vehicle is locked with the remote key, theft detection is triggered and alarm gets activated when any of the door is opened or if the ignition is made ‘ON’ with any other key. Perimeter alarm will also switch ‘ON’ if the vehicle is locked with the remote key and ignition is made ‘ON’ with authorised key without unlocking the vehicle with remote key.

7. **Visual Indication by flashing of Turn Indicators during Locking / Unlocking**
   When the vehicle is completely locked, turn indicators flash twice and...
when the vehicle is unlocked, turn indicators flash once.

8. **Auto Locking / Unlocking of Doors**
   Vehicle doors get automatically locked when the vehicle speed crosses 10 kmph.
   Also, when ignition key is taken out all the doors get automatically unlocked.

9. **Anti-grab/Anti-scan coding**
   The remote control set of this security system is protected against the use of devices called ‘scanners’ and grabbers’ which can record and reproduce some types of remote codes.

10. **Force Panic Alarm :**
    Press the LOCK and UNLOCK button simultaneously to activate panic alarm. Press either the LOCK or UNLOCK button to deactivate panic alarm.

**OPERATING INSTRUCTIONS :**

1. **Locking, Unlocking & Vehicle Search through Remote Unit**

   1.1. **Locking all doors**
   To activate door locks, press Lock - push button of the remote. Locking will be confirmed by two flash of turn indicators.
   If vehicle lock button is pressed on the remote key with the driver open, then doors won't be successfully locked with an audible warning.
   While if any other door is open, the vehicle gets locked but indicators do not flash.

   1.2. **Unlocking all doors**
   To disarm the immobiliser, alarm and unlock all Doors, press Unlock push-button of the remote. Unlocking will be confirmed by single flash of turn indicators.

1.3 **Vehicle Search**
   In vehicle lock condition if lock button on remote key is pressed the turn indicators of vehicle flashes 4 times.

2. **Manual Operation of Central Door Locking / Unlocking**
   All doors can be locked / unlocked from driver door lock without using remote.

**NOTE**
In case any push button of the remote is accidentally pressed for more than 25 seconds, the remote stops functioning till the time the push-button is pressed. The LED on the Remote also stops glowing.

The function of the remote gets reinstated immediately when the user stops pressing the push-button of remote.
GETTING STARTED

REMOTE KEYLESS ENTRY

BATTERY CHANGING PROCEDURE:
Battery changing procedure for Remote Key:
Remote control key contains a battery which is housed under the cover.

If red LED remote flashes for 5 times after placing and releasing any button on remote. It is recommended to replace battery at a TATA MOTORS authorized workshop.

You should, however, proceed as follows if you wish to replace the discharged battery yourself:

1. Open the key.
2. Press off the battery cover with your thumb or using a flat screwdriver.
3. Remove the discharged battery from the key by pressing the battery downwards at the point of the arrow.
4. Insert the new battery.
5. Ensure that the “+” symbol on the battery is facing upwards.
6. The correct polarity is shown on the battery cover.
   Position the battery cover on the key and press on it until it is heard to lock in place.

NOTE
Use CR 2016 battery only.
## CHECK POINTS FOR TROUBLESHOOTING

In case of such problem try using the suggestions given below. If the problem still persist, consult the nearest dealer or authorized service centre of TATA MOTORS.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE REASON</th>
<th>SUGGESTED SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant change in range of remote (even in an open space)</td>
<td>Remote battery is low again</td>
<td>Change the remote battery and try</td>
</tr>
<tr>
<td>No locking / unlocking by space</td>
<td>1. Remote battery is discharged / low</td>
<td>1. Change the remote battery.</td>
</tr>
<tr>
<td></td>
<td>2. Vehicle battery is discharged / low</td>
<td>2. Charge / Change the vehicle battery as required</td>
</tr>
<tr>
<td></td>
<td>3. Central door locking fuse has blown</td>
<td>3. Fit fuse properly. Change fuse (if it has blown)</td>
</tr>
<tr>
<td>No locking by remote</td>
<td>Key is in ignition switch</td>
<td>Remove the key from ignition switch and then try</td>
</tr>
<tr>
<td>After turning the ignition switch the vehicle still does not start</td>
<td>The system is in the automatic arming mode of engine immobilizer.</td>
<td>Press the Unlock push-button of remote once</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check the LED status</td>
</tr>
<tr>
<td>Audio alarm and turn indicators continue to blink even after pressing Unlock push-button.</td>
<td>Remote is not working</td>
<td>1. Check for the remote batteries, if required change it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Try disarming the system through emergency disarming procedure.</td>
</tr>
</tbody>
</table>
Your vehicle is equipped with a Remote Keyless Entry (RKE) function.

**The three buttons on ignition key are:**
1) Unlock (To unlock the vehicle)
2) Approach / vehicle search Light
3) Lock (To lock the vehicle)

**Unlock:**
Press once to unlock driver door. To open all doors including tailgate, press twice.

**Lock:**
Press once to lock all doors including tailgate.

**Approach light:**
When you want to search your vehicle, press approach light button on the key.
The dip / Low beam, parking lamp of your vehicle will be switched ON.
To switch ‘OFF’ these lights, press the approach button again or these will switch ‘OFF’ if the IGN is switched ‘ON’ immediately.

If the approach lights are not turned ‘OFF’, they will go ‘OFF’ after approximately 30 seconds.

**NOTE**
- Do not leave your key inside the vehicle while leaving / coming out of it.
- The LED on the transmitter will flash to show that the E-Key is working.
- The operating of the E-Key’s transmitter will vary due to environmental conditions.

If any of the E-Keys are lost, contact an authorized TATA MOTORS dealer as soon as possible to de-activate the lost key.

**Changing E-key battery:**

Please note that spare original E-Key is required when making an additional E-Key.
If both the E-Keys are lost, please contact an authorized dealer.

**Low Battery Voltage status can be observed by User:**

a) Considerable reduction in the range of Remote
b) LED on the Remote start to blink at faster rate when a button is pressed.
DOORS LOCKING AND UNLOCKING:

Front Doors (Driver and Co-driver):

Locking / unlocking doors with key from outside:

Both front doors (drivers and co-driver) have separate locking facility. Front doors can be locked or unlocked from outside using the E-key.

Insert the E-key and turn it anti-clockwise to unlock or clockwise to lock the door. Pull the door handle to open an unlocked door.

1. Locking knob  2. Door opening lever

All the doors can also be locked or unlocked independently from inside by pressing or pulling the knob (1). Press to lock and Pull to unlock.

To open the door, pull the door opening lever (2) outward.

CAUTION
Do not leave the key inside the vehicle, when locking the doors this way.

Child lock:

Your vehicle has child safety locking facility for rear doors and tail gate. This prevents rear seat passengers from opening the doors from inside both during transit and while the vehicle is stationary.

Engage the child lock via sliding the lever downwards, which is on the edge of the door and is only accessible when the door is open.

When the child lock is engaged, the inner handle is deactivated. In this case, passenger are not able to open the door.
DOOR LOCKING / UNLOCKING

from inside and are effectively ‘locked in’. It can be opened only from the outside.

CAUTION
Deactivate the child lock when not required.

Tailgate locking / unlocking:

The tailgate can be opened from outside once the vehicle is unlocked. To unlock the tailgate, press the “UNLOCK” button twice on the RKE (Remote Keyless Entry) key twice.

Once the vehicle is unlocked, pull the tailgate outer handle (2) below the chrome garnish on the tailgate. For locking the tail gate, press the “LOCK” button on the RKE key.

The tailgate assembly has a separate lock (1); this can be locked / unlocked manually by E-key.

NOTE
Arrow shaped emboss mark is given on chrome garnish to show the location of tailgate outer handle.

1. Location of tailgate lock
2. Location of door handle
GETTING STARTED

STEERING LOCK CUM IGNITION SWITCH:

Steering lock cum ignition switch is located on the right hand side of the steering column.

The key of ignition switch is common for door lock, steering lock and glove box lock. It has four positions. Turn the key clockwise to operate the below functions:

- **LOCK** - Steering Locked
- **ACC** - Accessories ‘ON’
- **ON** - All electricals ‘ON’
- **START** - Engine crank

Illuminated key ring

To assist you to locate your vehicle’s ignition switch in the dark, the steering lock cum ignition switch comes with an illuminated key ring. When you open the driver’s door, the illuminated key ring comes ‘ON’ for 60 seconds.

**NOTE**

- After inserting the key in the ignition switch, this ring remains ‘ON’ for 60 seconds.
- When the key is removed from ignition lock then all the doors will get unlocked.
- When engine is started and vehicle is reached to speed of 15 kmph then all the doors will lock automatically.

**LOCK:**

You can insert or remove the key only in this position. The steering column is locked when the key is removed.

**WARNING**

Do not remove the key while driving. It will lock the steering and can cause loss of control. Remove the key only when the vehicle is parked.

**ACC (Accessories ‘ON’):**

When ignition key is turned to ‘ACC’ position, accessories like music system are switched ‘ON’.

The engine can be turned ‘OFF’ without locking steering wheel by turning to ‘ACC’ position from ‘ON’ position.

**ON:**

In this position, all the electricals and accessories come ‘ON’.

**START:**

Turn the key further clockwise to the ‘START’ position (spring loaded) to start the engine. As soon as the engine starts, release the ignition key. While cranking, some of the accessories will be momentarily ‘OFF’.
NOTE

- Do not crank the engine for more than 10 seconds continuously. If the engine does not start, wait for approximately 30 seconds before cranking it again.
- Release the key immediately after starting the engine or else, it may damage the starter motor / flywheel components, if the key is not released.

SEATS & SEAT ADJUSTMENTS :
Front seats:

1. Seat back recliner lever
2. Seat height adjustment lever (Only on Driver’s seat)
3. Lever for forward and backward movement

Bucket type seats are provided with multiple adjustments.

WARNING

- Do not adjust the seat when driving. Any sudden or unexpected movement of the seat could cause you to lose control of the vehicle resulting in an accident. Adjust the seat only when the vehicle is stationary.
- After adjusting the seat, always check that it is securely locked into its place by attempting to move the seat forward or backward without using the lock release lever.
1. Lumbar support (if fitted):

Lumbar support is provided on Driver and Co-driver’s seats to give you comfort while driving. It is adjusted by the lever provided on the side of the seat backrest.

2. Seat back recliner:

To change the seat back angle, lean forward slightly and raise the smaller lever. Keeping lever in raised position, lean back to the position you want and release the lever. Make sure that lever returns to it’s original position.

3. Seat height adjustment (Only for driver’s seat):

Driver’s seat height can be adjusted by a lever located on the seat base on the right hand side, just ahead of the seat back recliner lever. You can raise the seat height by pumping / pulling the lever upwards until appropriate seat height is reached and lower it by pumping / pushing the lever downwards.
SEATS & SEAT ADJUSTMENTS

4. Moving the seat forward and backward:

To adjust the seat position, lift the lever under the seat cushion front, slide the seat to the desired position and release the lever. Once the desired position is achieved, release the lever to lock the seat. Make sure the seat is locked firmly in position.

Front seat armrest (if fitted):

Front seats are provided with armrest. For folding the armrest, lift the armrest upward.

NOTE

If you feel inconvenience while driving, always keep the armrest in foldable position.

Second row seat:

Second row seat is split in 2 parts (60:40). Space for two occupants is provided at RH side and space for single occupant is provided at the LH side.
Foldable armrest cum cup holder (if provided):

1. Foldable armrest  2. Knob

A foldable armrest cum cup holder is provided at the centre of middle passenger seat backrest.

**To use as an armrest** - Pull out the strap at the top end and rest it on the seat in horizontal position.

**To open cup holder** - Press the knob to open the arm rest lid and swing out the cup holders.

Place back the cup holder into the arm rest box and close the lid, when it is not in use.

**NOTE**
- Never use armrest as a support.
- Never allow children to sit on armrest.

Second row seat somersault:
The second row seats can be independently folded as and when required for carrying long objects. These seats are provided with folding arrangement so that you can fold the rear seat forward.

**To somersault the second row seat, following steps to be carried out:**

To fold the rear seat, first delatch seat back by pulling lever (1) and rest on the seat base.
After rear seat backs are folded pull the lever (2) provided at the seat base sides and take the respective seat base up so that it is vertical.

2. Lever for folding seat from base.

To keep seat base horizontal, simply push back the seat base.

This folding feature gives additional space for keeping luggage.

**Side facing third row seat:**

The side facing seats are provided at the rear of the vehicle behind second row seat. These can be folded independently to get extra luggage space.

To fold the seat, lift the seat base upward and buckle the clamp to lock the seat. To release the seat, unbuckle the clamp and push the seat base / cushion downwards.

Luggage space after folding the rear jump seats

Luggage space after folding the second row seats and rear jump seats
GETTING STARTED

HEAD RESTRAINT:
Head restraints in your vehicle are ergonomically designed for providing better neck support to the occupants. Whether for a long distance or short distance journey, head restraint provides comfort to the head and shoulder and acts as a safety device in the vehicle. The head restraint restricts the head movement during a rear impact collision, they reduce the chance of neck and shoulder injury.

Every time you get in your vehicle, buckle up and make sure your head restraint is raised high enough to cushion the back of your head. For best protection, adjust the top of the head restraint as shown in the figure above.

SEAT BELTS:
Occupants safety is utmost important
Your vehicle is equipped with seat belts, for front and rear seats as a part of occupant restraint system.

Wearing seat belts properly can protect you from being thrown against the insides of the vehicle or against other occupants in case of an accident or sudden braking. It will reduce the chances of severe injury.

This vehicle has three point inertia reel type front and rear seat belts in the out board positions and a lap belt for middle passenger on second row rear seat. In normal driving, the belt lets you move freely in your seat. In case of an accident or sudden braking, inertia reel automatically tightens the belt to help restrain your body.

The anchor end of the shoulder belt is adjustable to suit the height of the passenger wearing it. The lap belt has one manually adjusted belt that fits across the hip bone. Make sure that your

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**WARNING**

Do not set it lower than your ears. If your head restraint is too low, you could get serious injuries in a rear end collision, even at slower speed.

Do not attempt to adjust the head restraint, while driving the vehicle.

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1. Head restraint
2. Notch button

To increase the height, lift up and leave at desired click position. To reduce the height press the notch button and push the head restraint downwards.

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SEAT BELTS

Seat belt height adjustment:
The anchor end of the shoulder belt is adjustable to suit the height of the passenger wearing it. Make sure that your seat is adjusted to a good driving position and the back of the seat is upright.

For adjusting the seat belt height, press the button on the upper anchor of the belt and slide it upwards or downwards to suitable height.

NOTE
- Adjust the shoulder belt height when you sit well back in the seat.
- When adjusting the shoulder belt height, grip the height adjuster button securely and slide the height adjuster up or down.

WARNING
- Verify the shoulder belt anchor is locked into position at the appropriate height. Never position the shoulder belt across your neck or face. Improperly positioned seat belts can cause serious injuries in an accident.
- Failure to replace seat belts after an accident could leave you with damaged seat belts that will not provide protection in the event of another collision leading to personal injury or death. Replace your seat belts after being in an accident as soon as possible.

Retractor pre-tensioner load limiter belts (RPLL):
The main function of RPLL belt is to remove slack from the belt in the event of an accident to restrict forward movement of the occupant. The RPLL belts are triggered in situations where the front or side airbags deploy. Do not disconnect RPLL belts electrical connection.

NOTE
RPLL seat belts are fitted only on the vehicle which has air bags.
GETTING STARTED

How to use shoulder / lap belts:

- Enter the vehicle and close the door. Sit back and adjust the front seat. Make sure that your seat is adjusted to a good driving position and the back of the seat is upright.
- The tongue is located above the back of your seat. Grasp the tongue and pull out the belt over the shoulder and across the chest. When the belt is long enough to fit, insert the tongue into the lock buckle until you hear a "CLICK" which indicates that the belt is securely locked.
- Position the lap belt across your thighs, below your abdomen. To remove slack in the lap belt portion, pull up a bit on the shoulder belt. To loosen the lap belt if it is too tight, tilt the tongue and pull on the lap belt. A snug belt reduces the risk of sliding under the belt in a collision.
- To release the belt, push the red button on the lock buckle. The belt will automatically retract to its stowed position. If necessary, slide the tongue down the webbing to allow the belt to retract fully.

Seat belt safety:

- Wearing a seat belt incorrectly is dangerous. Seat belts are designed to bear upon the bony structure of the body and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable. Wearing the lap section of the belt across the abdominal area must be avoided.
- Each belt assembly must only be used by one occupant. It is dangerous to put a belt around a child being carried on the occupant’s lap.
- A belt that is buckled into the wrong buckle will not protect you properly. Always buckle your belt into the buckle nearest you.
- A belt that is too loose will not protect you as well. In a sudden stop, you could move too far forward, increasing the possibility of injury.
- A belt that is worn under your arm is very dangerous. Your body could strike the inside surfaces of the vehicle in a collision. Wear the belt over your shoulder.
- Be sure the belt is straight. If you can’t straighten a belt, take it to your nearest TATA authorized dealer.
- A frayed or torn belt could rip apart in a collision and leave you with no protection. Inspect the belt system.
SEAT BELTS

periodically, checking for cuts, frays, or loose parts. Do not disassemble or modify the system.

• If possible, use the seat belts to secure heavy luggage that are to be carried on the seats.
• Do not wear seat belts over hard, sharp or fragile items in clothing, such as pens, keys, spectacles etc.
• Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals especially battery acid. Cleaning may safely be carried out using mild soap and water.

Seat belt warning indicator:

Seat belt warning indicator switches ‘ON’ for 3 seconds followed by blinking with buzzer for 6 seconds, when ignition is turned ‘ON’.

Further if you have not worn seat belt and vehicle speed exceeds above 16 kmph, the lamp will continue to flash with intermittent audio alarm. After fastening the seat belt, the buzzer and warning indicator goes ‘OFF’.

Use of seatbelts for expectant mother:

TATA MOTORS recommended the use of a seat belt. Expectant mother must wear a correctly positioned seat belt. It is safer for mother as well as unborn child. Doctor’s advice is recommended.

Expectant mother should wear the lap part of the belt across the thighs and as snug across the hips as possible. Keep the belt low so that it does not come across the abdomen. That way the strong bones of the hips will take the force if there is a collision.
Child Restraint System (CRS):

**TATA MOTORS** strongly recommends the use of Child Restraint Systems (CRS) for all children up to age of 12 years.

Children kept unrestrained while travelling, may face serious injuries in case of an accident.

**Selection and Installation of CRS:**

Always select the child restraint system that complies with latest safety standards (**AIS 072, ECE R44**). The CRS are classified according to the child’s size, height and weight. Select the appropriate CRS for your child. Ensure that the child fits properly in the CRS and CRS is securely installed in the vehicle.

For installation, please refer CRS manufacturer’s instruction manual.

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**Recommended CRS position:**

The suitability of seat position for carriage of children and recommended category of child restraint system is shown in the table below.

<table>
<thead>
<tr>
<th>Group</th>
<th>Mass group</th>
<th>Age Group</th>
<th>Front Passenger</th>
<th>2nd Row Outboard LH</th>
<th>2nd Row Outboard RH</th>
<th>2nd Row Center</th>
<th>3rd Row RH</th>
<th>3rd Row LH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Up to 10 kg</td>
<td>Up to 9 months</td>
<td>X</td>
<td>U</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>0+</td>
<td>Up to 13 kg</td>
<td>Up to 24 months</td>
<td>X</td>
<td>U</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>I</td>
<td>9 to 18 kg</td>
<td>9 - 48 months</td>
<td>X</td>
<td>U</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>II</td>
<td>15 to 25 kg</td>
<td>Approx 3-7 years</td>
<td>X</td>
<td>U</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>III</td>
<td>22 to 36 kg</td>
<td>Approx 6-12 years</td>
<td>X</td>
<td>U</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**X:** Seat Position not suitable for children in this age group.

**U:** Suitable for “universal” category restraints approved for use in this age group.

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**NOTE**

*Universal is a category in the **AIS072 / ECE R44** norm.*

**NOTE**

*When installing CRS in rear seat, push the front seat fully forward so that child’s feet do not touch the front seat back.*
NOTE
If a child is to be seated in the front seat (if recommended only), push the vehicle seat fully rearward and keep the child in an approved forward facing CRS. Adjust the seat backrest to an upright position. While installing in rear seat, push the front seat fully forward so that child’s feet do not contact the front seat back.

Storage for CRS:
Always secure CRS safely in the vehicle or stow it in the luggage compartment if not being used.

While the vehicle is in motion an unrestrained CRS could flung through the vehicle interior in the event of a sudden braking, maneuver or an accident. This could cause injuries to the travelling occupants.

WARNING
Replace CRS that has withstood any force during an accident as it could have sustained damage which may not be visible.

Check list:
1. Never carry children on somebody’s lap when vehicle is in motion.
2. Always secure children in the vehicle in a CRS. The CRS must be suitable for the child’s height, weight and build.
3. Observe the instructions from the manufacturer of the CRS and always keep the instruction manual in the vehicle.
4. Always make sure that the seat belt routing is correct for children and they are sitting in the correct position.
5. Do not leave any toys or other objects loose in the CRS or on the seat while the vehicle is in motion.

WARNING
Each CRS should be used for one child only.
Care of seat belts:
Never disassemble or modify the seat belt systems. Take care to assure that seat hinges, doors or other abuse does not damage seat belts and belt hardware.

WARNING
In case of rear seats, when you return the seat back to its upright position after it was folded down, be careful not to damage the seat belt webbing or buckle. Be sure that the webbing or buckle does not get caught or pinched in the rear seat. A seat belt with damaged webbing or buckle will not be as strong and could possibly fail during a collision or sudden stop, resulting in serious injury.

Periodic Inspection:
Periodically inspect the seat belts for damage of any kind. Replace the damaged parts as early as possible.

Keep belts clean and dry:
Keep the seat belts clean and dry. If belts become dirty, clean them by using a mild soap solution and warm water.

CAUTION
Do not use bleach, dye, strong detergents or because they may damage and weaken the fabric.

When to replace seat belts:
Replace the entire in use seat belt assembly or assemblies if the vehicle has been involved in an accident. Do this even if no damage is visible.
SEAT BELTS

GETTING STARTED

REAR VIEW MIRRORS:
Inner rear view mirror (IRVM):

1. Inner rear view mirror
2. Anti-glare knob (if fitted)

Inner rear view mirror is mounted inside the cabin near the front cabin lamp. It has two positions:
a. Normal position
b. Antiglare position (For normal IRVM only)

NOTE
Use Antiglare position only when necessary, as it reduces rear view clarity.

Power fold & motorised outer rear view mirror (if fitted):

Your vehicle has motorised rear view mirrors on front doors. You can adjust the mirror to the desired position with the help of a switch provided on the driver door.

Motorised Rear View Mirrors allow the driver to adjust the mirrors without lowering the glasses and without moving from his position.

- Rotate the main switch to left for adjusting left side rear view mirror and to right to adjust the right side rear view mirror.

Folding outer rear view mirror:
You can fold both ORVM using the main switch. This allows you to park your vehicle in the limited parking space. For folding the ORVM assembly, bring the main switch to centre position and slide the knob downwards this will fold / close the ORVM assembly inwards. Slide the knob downwards again to open / unfold the ORVM assembly.
GETTING STARTED

STEERING WHEEL POSITION ADJUSTMENT:

1. Lock Position  2. Unlock Position

You can adjust the steering wheel position to suit your convenience.

Adjust the steering wheel position as follows before you start driving.

1. Adjust the seat to the comfortable position.
2. The lever to tilt the steering wheel is under steering column. Push the lever down to unlock the steering column.

3. Move the steering wheel up or down to the desire position. Position the wheel such a way that all the instrument panel gauges and warning lights are visible.
4. Pull the lever upward to lock the steering column once steering column position is fixed. Make sure that steering wheel is securely locked by moving up and down.

CAUTION

Steering wheel should be adjusted only when the vehicle is stationary.

TRANSFER CASE ELECTRIC SHIFT SWITCH (Only for 4X4 vehicle):

Your vehicle has the transfer case selector switch on the central console below music system. This is electrically operated switch, it helps in shifting from 4X2 to 4X4 mode or vice-versa.

This switch has three selector positions:

2H - Only two rear wheels are driven.
4H - All four wheels are driven.
4L - All four wheels are driven (vehicle runs at a speed reduction ratio to deliver higher torque)

NOTE

- Use 4L mode to negotiate sharp gradients or when driving through loose soil / sand.
- For more details, refer driving section of this book.
MASTER LIGHT SWITCH:

The Master Light Switch is located on the right of the steering wheel on the dashboard.

**Knob functions:**

1. **OFF**: In this position, all functions are ‘OFF’.
2. **Parking**: In this position, only Parking lamps are switched ‘ON’.
3. **Headlamp**: In this position, Head lamps and Parking lamp are switched ‘ON’.
4. **Fog Lamp**: For switching ‘ON’ the Fog lamps, either the Head Lamp or Parking lamp must be ‘ON’. Therefore turn the knob to position 2 or 3.

The knob can be pulled / pushed in two positions to turn ‘ON’ / turn ‘OFF’ the fog lamps. First pull will turn ‘ON’ the front fog lamps and second pull switches ‘ON’ the rear fog lamps. Similarly the first push will switch ‘OFF’ the rear fog lamps and next push will switch ‘OFF’ front fog lamps.

**NOTE**

Use fog lamps in foggy / misty conditions to improve visibility.

5. **Headlamp leveling**:

The master light switch also has headlamp leveling function. You can adjust the headlamp beam depending on load (passengers / goods) in your vehicle. This can be operated by a scroll type switch located near the master light switch knob.
NOTE

Adjust the headlamp beam as per occupants, when vehicle is stationary.

Depending upon the number of occupants and luggage in the vehicle Headlamp focus may change. This can be adjusted by rotating the switch to one of the three level positions.

POWER WINDOWS:

Main window winding switch location (on driver’s door)

You can operate all the four window glasses using the switches on driver’s door. They work only when the key is in the ‘ACC’ position. In addition, other doors have a separate switch for its glass on the door.

Glasses are wound up by pulling up the switch and lowered by pressing it down.

Your vehicle also has the ‘EXPRESS DOWN’ feature (Driver side only) by

| 1. Rear power window lock / unlock button |
| 2. RH front window winding switch |
| 3. LH front window winding switch |
| 4. RH rear window winding switch |
| 5. LH rear window winding switch |
Window winding switch on rear doors

which if you prefer to have the glass at its lower most position, press the switch down a little longer and the glass glides down automatically.

Lock / unlock switch:

You can deactivate the power window switches at the rear doors by using the lock / unlock switch on the driver’s door. It has two positions:

1. Rear power window lock / unlock switch pressed
2. Rear power window lock / unlock switch released.

Lock / unlock switch pressed:

To activate the power window switch at rear doors, the driver has to press the lock / unlock switch once. The red indicator on the lock / unlock switch will turn ‘ON’. In this condition, the driver and the rear passengers can independently control the opening and closing of rear windows.

Lock / unlock switch released:

To deactivate the power window switch at rear doors, again press the safety switch this will bring the safety switch in release condition and the red indicator on the lock / unlock switch will go ‘OFF’. In this condition, only driver can control the opening and closing of rear windows.

**WARNING**

- Deactivate the rear door power window switches when carrying children on the rear seat.
- Take care not to trap your fingers / hands between the glass and the frame, while raising the glass.
### GETTING STARTED

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Side Window Demisting Vent</td>
</tr>
<tr>
<td>02</td>
<td>Top Stowage Box or Passenger Air Bag - PAB (if fitted)</td>
</tr>
<tr>
<td>03</td>
<td>Top Utility Bin (if provided)</td>
</tr>
<tr>
<td>04</td>
<td>Steering Wheel</td>
</tr>
<tr>
<td>05</td>
<td>Instrument Cluster</td>
</tr>
<tr>
<td>06</td>
<td>Side Air Vent</td>
</tr>
<tr>
<td>07</td>
<td>Horn Pad and Driver Air Bag-DAB (if fitted)</td>
</tr>
<tr>
<td>08</td>
<td>Accelerator Pedal</td>
</tr>
<tr>
<td>09</td>
<td>Brake Pedal</td>
</tr>
<tr>
<td>10</td>
<td>Clutch Pedal</td>
</tr>
<tr>
<td>11</td>
<td>Steering Wheel Switches (if fitted)</td>
</tr>
<tr>
<td>12</td>
<td>Hazard Warning Switch</td>
</tr>
<tr>
<td>13</td>
<td>Music System (if provided)</td>
</tr>
<tr>
<td>14</td>
<td>4X4 Selector Switch (if fitted)</td>
</tr>
<tr>
<td>15</td>
<td>Parking Brake</td>
</tr>
<tr>
<td>16</td>
<td>Gear Shift Lever</td>
</tr>
<tr>
<td>17</td>
<td>AUX/USB Ports</td>
</tr>
<tr>
<td>18</td>
<td>Power Socket</td>
</tr>
<tr>
<td>19</td>
<td>AC / HVAC Controls</td>
</tr>
<tr>
<td>20</td>
<td>Central Air Vents</td>
</tr>
<tr>
<td>21</td>
<td>Glow Box</td>
</tr>
</tbody>
</table>
GEAR SHIFTING LEVER & PARKING BRAKE

GEARSHIFT LEVER & SHIFTING PATTERN:

The gearshift lever is mounted on the central console between front seats. The gear shift pattern is shown on the gear lever knob.

CAUTION
The reverse gear should be engaged only when the vehicle is stationary. Wait for 5 seconds after declutching to ensure smooth engagement of the reverse gear.

PARKING BRAKE:

A mechanical parking brake acting only on the rear wheel is provided on your vehicle. The parking brake lever is located behind the gearshift lever. To apply the parking brake, pull the lever up fully. The indicator light (1) (2) on the instrument panel will come 'ON'.

To release it, pull the lever up slightly, press the release button and push the lever down. The parking brake indicator

NOTE
After the vehicle has come to stop, first apply the parking brake and then additionally engage a gear.

CAUTION
Apply the parking brake properly before leaving the vehicle & release it before moving. Use the parking brake for holding the vehicle on a gradient.
1. **Front windshield wash and wipe**

   To spray the washer fluid on the windshield.
   1. When you pull the lever little longer, washer fluid will be sprayed on the windshield.
   2. The windshield wipers operate for three cycles after the lever is released and one more cycle after five seconds.
   3. When you crank the engine, the supply to washer motor is momentarily cut off.

   **CAUTION**
   If you operate wash and wipe function for more than 30 seconds, the controller cuts off the supply to washer motors to avoid overheating.

2. **Rear windshield wash and wipe**

   Turn and hold the rotary knob to operate rear windshield wash and wipe. It will return to ‘OFF’ position as soon as released.

3. **OFF position**

   Wiper does not work in this position.

4. **Rear intermittent wipe**

   Turn the rotary knob and align position with arrow mark to operate rear intermittent wiper. Rear wiper will start wiping intermittently.

5. **Rear wiper continuous ‘ON’**

   Turn the rotary knob and align position with arrow mark to operate rear continuous wiper. Rear wiper will start wiping continuously.

6. **Front windshield wipe and wash**

   A) **Flick / Mist**
   
   To operate front windshield wiper in case of light-rain or mist, move the lever downward slightly and release the wiper stalk. It will return to ‘OFF’ position. The wiper will operate once.

   B) **Intermittent wipe**
   
   To operate intermittent wipe, lift the lever to position ‘B’.
COMBI-SWITCH

By rotating rotary switch, you can select desired wiper speed.

C) Slow wipe : To select ‘SLOW’ continuous wipe, lift the lever to position ‘C’.

D) Fast wipe : To select ‘FAST’ continuous wipe, lift the lever to position ‘D’.

NOTE

Turn the ignition switch to ‘ON’ position, to operate all wash and wipe functions.

All functions pauses temporarily, when the engine is being cranked and resumes it’s function once cranking is complete.

CAUTION

• Do not operate the windshield wipers, when the windshield is dry or obstructed.
• Always check and top up the windshield washer fluid in the container.

Get the front and rear washer nozzles cleaned periodically.
DRIVING CONTROLS

RH STALK :

1. Right turn signal :
Right indicator lamps and instrument cluster tell tale will come ‘ON’ if ignition is ‘ON’ and indicator stalk is moved downward. For changing lanes, lightly flip the stalk downwards; indicator lamps will blink three times and then turn ‘OFF’.

2. Left turn signal :
Left indicator lamps and instrument cluster tell tale will come ‘ON’ if ignition is ‘ON’ and indicator stalk is moved upward. For changing lanes, lightly flip the stalk upwards; indicator lamps will blink three times and then turn ‘OFF’.

3. Flash function :
Pull the lever towards steering wheel to flash the hi-beam head lamps and it will remain ‘ON’ till lever is in pulled position. The lever will return to it’s original position after releasing the lever.

4. Hi-Beam :
To switch over head lamps to hi-beam :

- Master light switch to head lamp position.
- Push the lever towards instrument cluster.
- Hi-beam headlamps and instrument cluster tell tale will come ‘ON’.

To switch over from high beam to low beam, pull the lever back.
The Instrument Cluster has the following features:

- **Analogue Gauge**: Speedometer, Tachometer / RPM meter, Fuel gauge and Temperature Gauge
- **LCD display**: Odometer, Trip meter (A & B), Dimming, Digital Clock.
- **Tell Tales**
- **MODE & SET Knobs**

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>FEATURES</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Speedometer</td>
<td>Vehicle Speed (in km/h)</td>
</tr>
<tr>
<td>2</td>
<td>Tachometer / RPM Meter</td>
<td>Engine Speed (in rpm)</td>
</tr>
<tr>
<td>3</td>
<td>Fuel Gauge</td>
<td>Fuel Level (Empty to Full)</td>
</tr>
<tr>
<td>4</td>
<td>Temperature Gauge</td>
<td>Engine Temperature</td>
</tr>
<tr>
<td>5</td>
<td>Odometer</td>
<td>Total Distance Covered</td>
</tr>
<tr>
<td>6</td>
<td>Trip ‘A’ &amp; ‘B’</td>
<td>Distance travelled on each trip or between fuel fillings</td>
</tr>
<tr>
<td>7</td>
<td>Dimmer for cluster &amp; LCD backlighting</td>
<td>4 Levels (25%, 50%, 75% &amp; 100%)</td>
</tr>
<tr>
<td>8</td>
<td>Digital Clock</td>
<td>24 Hours Clock</td>
</tr>
</tbody>
</table>
# INSTRUMENT CLUSTER - Indicators

<table>
<thead>
<tr>
<th>TELL TALES</th>
<th>LEGEND</th>
<th>COLOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn Left</td>
<td>![Left Arrow]</td>
<td>Green</td>
</tr>
<tr>
<td>Turn Right</td>
<td>![Right Arrow]</td>
<td>Green</td>
</tr>
<tr>
<td>High Beam</td>
<td>![High Beam]</td>
<td>Blue</td>
</tr>
<tr>
<td>Battery Charging</td>
<td>![Battery]</td>
<td>Red</td>
</tr>
<tr>
<td>Park Brake Applied and Brake Fluid Oil level low</td>
<td>![Brakes]</td>
<td>Red</td>
</tr>
<tr>
<td>Glow plug indicator</td>
<td>![Glow Plug]</td>
<td>Amber</td>
</tr>
<tr>
<td>Malfunction Indication Lamp</td>
<td>![Malfunction]</td>
<td>Amber</td>
</tr>
<tr>
<td>Low Engine Oil Pressure</td>
<td>![Oil Pressure]</td>
<td>Red</td>
</tr>
<tr>
<td>Water in Fuel</td>
<td>![Water]</td>
<td>Amber</td>
</tr>
<tr>
<td>ABS</td>
<td>![ABS]</td>
<td>Amber</td>
</tr>
<tr>
<td>Air Bag</td>
<td>![Air Bag]</td>
<td>Red</td>
</tr>
<tr>
<td>Seat Belt</td>
<td>![Seat Belt]</td>
<td>Red</td>
</tr>
<tr>
<td>Immobilizer</td>
<td>![Immobilizer]</td>
<td>Red</td>
</tr>
<tr>
<td>Front Fog</td>
<td>![Front Fog]</td>
<td>Green</td>
</tr>
<tr>
<td>Rear Fog</td>
<td>![Rear Fog]</td>
<td>Amber</td>
</tr>
<tr>
<td>Door Open</td>
<td>![Door Open]</td>
<td>Red</td>
</tr>
<tr>
<td>4H Indicator</td>
<td>![4H]</td>
<td>Green</td>
</tr>
<tr>
<td>4L Indicator</td>
<td>![4L]</td>
<td>Green</td>
</tr>
<tr>
<td>Service Lamp</td>
<td>![Service Lamp]</td>
<td>Amber</td>
</tr>
</tbody>
</table>
DRIVING CONTROLS

TELL TALES DESCRIPTION

Turn signal:
One of these symbol comes ‘ON’ when the turn indicators is switched ‘ON’. 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.

If one of the external indicator bulbs gets fused, it is indicated by high frequency flashing of the bulb of the same side.

High beam:
This symbol comes ‘ON’ when the headlamp high beam is switched ‘ON’.

Battery charging:
This symbol lights up when the ‘IGN’ is turned ‘ON’ and should go ‘OFF’ after the engine starts.

NOTE
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 TATA Authorised Service outlet.

Park brake / brake fluid oil level indicator:
This indicator comes ‘ON’ for approximately 3 seconds when ignition is turned ‘ON’ and goes ‘OFF’. If it remains ‘ON’, it may indicate:
1. Brake fluid level is low.
2. Parking brake is applied. It will go ‘OFF’ when it is released.
3. Fault in ABS/EBD system

Diesel pre-heat indicator / Glow plug indicator:
This symbol comes ‘ON’ when the ignition key is in the ‘ON’ position.

NOTE
Engine should be started only after this indicator goes ‘OFF’.

Low engine oil pressure indicator:
When the ignition is turned ‘ON’, this symbol lights up and goes ‘OFF’ as soon as the required engine oil pressure is developed after starting the engine.

WARNING
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. Take your vehicle to a TATA Authorised Service centre.

Water in fuel indicator:
This symbol indicates excess water accumulation in the fuel pre-filter cum sedimenter. It will come ‘ON’ when ignition is turned ‘ON’ and will go ‘OFF’ in approx. 3 seconds. When this lamp remains ‘ON’ and a buzzer is sounded, water needs to be drained from fuel pre-filter cum sedimenter immediately.
INSTRUMENT CLUSTER- INDICATORS

CAUTION
If water is not drained from the sedimentor, it can cause serious damage to the fuel injection system.

ABS indicator:
When ignition is turned ‘ON’, this symbol comes ‘ON’ for few seconds and goes ‘OFF’.
This symbol will continue to remain 'ON' or will come 'ON' after Ignition ‘ON’ precheck if there is a problem in the ABS system.

Airbag indicator:
The air bag warning symbol comes on for approximately 3 seconds when the ignition is turned ‘ON’ and goes ‘OFF’.

WARNING
If it remain ‘ON’ or blinks, take your vehicle to the nearest TATA Authorised Service Centre.

Seat belt indicator:
Seat belt warning indicator comes ‘ON’ for 3 seconds followed by blinking with buzzer for 6 seconds, when ignition is turned ‘ON’.
If seat belt is not fastened, the lamp will be ‘ON’ continuously without audio alarm till vehicle speed reaches 16 km/h.
When vehicle speed exceeds above 16 km/h, the lamp will continue to flash with intermittent audio alarm.
Once the seat belt is fastened, the buzzer and warning indicator will go ‘OFF’.

Lamp Blink: Vehicle is in immobilized condition when key is not inserted.
Lamp OFF: Normal condition (Authenticated user) and engine will start.
Lamp ON: Problem with key/system. Take your vehicle to TATA Authorised service centre.

Front fog lamp :
This symbol comes ON when the Front Fog lamp is ‘ON’.

Rear fog lamp :
This symbol comes ‘ON’ when the Rear Fog lamp is ‘ON’.

Door open warning indicator :
If any of the door is open or not properly closed, this symbol turns ‘ON’ once the ignition key is inserted. Please ensure all the doors are properly closed before you start driving.

Immobilizer warning indicator :
This symbol is of a system that disables engine starting if you do not use the original key. The user has to use original key for authentication and unlocking the vehicle. Refer to Immobilizer section for details.

CAUTION
If water is not drained from the sedimentor, it can cause serious damage to the fuel injection system.

ABS indicator:
When ignition is turned ‘ON’, this symbol comes ‘ON’ for few seconds and goes ‘OFF’.
This symbol will continue to remain 'ON' or will come 'ON' after Ignition ‘ON’ precheck if there is a problem in the ABS system.

Airbag indicator:
The air bag warning symbol comes on for approximately 3 seconds when the ignition is turned ‘ON’ and goes ‘OFF’.

WARNING
If it remain ‘ON’ or blinks, take your vehicle to the nearest TATA Authorised Service Centre.

Seat belt indicator:
Seat belt warning indicator comes ‘ON’ for 3 seconds followed by blinking with buzzer for 6 seconds, when ignition is turned ‘ON’.
If seat belt is not fastened, the lamp will be ‘ON’ continuously without audio alarm till vehicle speed reaches 16 km/h.
When vehicle speed exceeds above 16 km/h, the lamp will continue to flash with intermittent audio alarm.
Once the seat belt is fastened, the buzzer and warning indicator will go ‘OFF’.

Lamp Blink: Vehicle is in immobilized condition when key is not inserted.
Lamp OFF: Normal condition (Authenticated user) and engine will start.
Lamp ON: Problem with key/system. Take your vehicle to TATA Authorised service centre.

Front fog lamp :
This symbol comes ON when the Front Fog lamp is ‘ON’.

Rear fog lamp :
This symbol comes ‘ON’ when the Rear Fog lamp is ‘ON’.

Door open warning indicator :
If any of the door is open or not properly closed, this symbol turns ‘ON’ once the ignition key is inserted. Please ensure all the doors are properly closed before you start driving.

CAUTION
If water is not drained from the sedimentor, it can cause serious damage to the fuel injection system.

ABS indicator:
When ignition is turned ‘ON’, this symbol comes ‘ON’ for few seconds and goes ‘OFF’.
This symbol will continue to remain 'ON' or will come 'ON' after Ignition ‘ON’ precheck if there is a problem in the ABS system.

Airbag indicator:
The air bag warning symbol comes on for approximately 3 seconds when the ignition is turned ‘ON’ and goes ‘OFF’.

WARNING
If it remain ‘ON’ or blinks, take your vehicle to the nearest TATA Authorised Service Centre.

Seat belt indicator:
Seat belt warning indicator comes ‘ON’ for 3 seconds followed by blinking with buzzer for 6 seconds, when ignition is turned ‘ON’.
If seat belt is not fastened, the lamp will be ‘ON’ continuously without audio alarm till vehicle speed reaches 16 km/h.
When vehicle speed exceeds above 16 km/h, the lamp will continue to flash with intermittent audio alarm.
Once the seat belt is fastened, the buzzer and warning indicator will go ‘OFF’.

Lamp Blink: Vehicle is in immobilized condition when key is not inserted.
Lamp OFF: Normal condition (Authenticated user) and engine will start.
Lamp ON: Problem with key/system. Take your vehicle to TATA Authorised service centre.

Front fog lamp :
This symbol comes ON when the Front Fog lamp is ‘ON’.

Rear fog lamp :
This symbol comes ‘ON’ when the Rear Fog lamp is ‘ON’.

Door open warning indicator :
If any of the door is open or not properly closed, this symbol turns ‘ON’ once the ignition key is inserted. Please ensure all the doors are properly closed before you start driving.

CAUTION
If water is not drained from the sedimentor, it can cause serious damage to the fuel injection system.

ABS indicator:
When ignition is turned ‘ON’, this symbol comes ‘ON’ for few seconds and goes ‘OFF’.
This symbol will continue to remain 'ON' or will come 'ON' after Ignition ‘ON’ precheck if there is a problem in the ABS system.

Airbag indicator:
The air bag warning symbol comes on for approximately 3 seconds when the ignition is turned ‘ON’ and goes ‘OFF’.

WARNING
If it remain ‘ON’ or blinks, take your vehicle to the nearest TATA Authorised Service Centre.

Seat belt indicator:
Seat belt warning indicator comes ‘ON’ for 3 seconds followed by blinking with buzzer for 6 seconds, when ignition is turned ‘ON’.
If seat belt is not fastened, the lamp will be ‘ON’ continuously without audio alarm till vehicle speed reaches 16 km/h.
When vehicle speed exceeds above 16 km/h, the lamp will continue to flash with intermittent audio alarm.
Once the seat belt is fastened, the buzzer and warning indicator will go ‘OFF’.

Lamp Blink: Vehicle is in immobilized condition when key is not inserted.
Lamp OFF: Normal condition (Authenticated user) and engine will start.
Lamp ON: Problem with key/system. Take your vehicle to TATA Authorised service centre.

Front fog lamp :
This symbol comes ON when the Front Fog lamp is ‘ON’.

Rear fog lamp :
This symbol comes ‘ON’ when the Rear Fog lamp is ‘ON’.

Door open warning indicator :
If any of the door is open or not properly closed, this symbol turns ‘ON’ once the ignition key is inserted. Please ensure all the doors are properly closed before you start driving.
DRIVING CONTROLS

Service Indicator Lamp:
This symbol indicates the car’s engine condition.
1. It comes “ON” when ignition is switched “ON” and once engine is cranked, it goes “OFF”.
2. It remains “ON” if there is a problem in any of the EMS related/ engine components.

NOTE
If the Service indicator lamp remains “ON” when the engine is running, the engine’s performance deteriorates marginally & sometimes significantly. Take your car to a TATA Authorized service centre.

Malfunction Indication Lamp (MIL):
This symbol comes ON when the ignition is turned “ON” and goes “OFF” once the engine is cranked.

NOTE
This symbol will remain “ON” for any engine related fault, which may cause increase in emission levels of the car beyond the regulatory limit. Take your car to a TATA Authorized service centre.

On Board Diagnostic (OBD) System:
On board Diagnostics or OBD is an automotive term referring to a vehicle’s self Diagnostic and reporting capability. The OBD system allows continuous diagnosis of the components of the vehicle correlated with emissions. This system warns the driver, by turning “ON” the Malfunction Indication lamp (MIL) on the instrument cluster, when a fault causes emission levels to increase.
The OBD system also has a diagnostic connector that can be interfaced with appropriate diagnostic tools, which makes it possible to read the fault codes stored in the Electronic Control Unit, together with a series of specific parameters for Engine operation and Diagnosis. This check can also be carried out by the traffic police.

The diagnostic connector is located under the dashboard (Above the Brake and Accelerator pedal) as shown in the image.
INSTRUMENT CLUSTER - INDICATORS & GAUGES

4H & 4L indicator : (Only on 4WD vehicle)

With ignition ‘ON’ and transfer case switch in 2H mode both 4H and 4L indicator lamps on instrument cluster should glow for a few seconds only and go ‘OFF’.

Continuous illumination indicates an electrical fault. Do not run the vehicle if both 4H and 4L lamps are ON.

The 4H and 4L lamps will glow only when the transfer case is either in 4H or 4L mode.

NOTE

In case the fault occurs and MIL comes ON, contact nearest TATA MOTORS authorized service center. After eliminating the inconvenience, to check the system completely, TATA MOTORS authorized service centers are obliged to run a bench test and if necessary, road tests which may also call for a long journey. The functioning of MIL lamp may also be checked by the traffic police using specific devices.

Speedometer :

The speedometer indicates the vehicle speed in km/hr. Driving your vehicle as per the recommended speeds will help you get optimum fuel economy and enhanced engine life.

Engine coolant temperature gauge:

The engine coolant temperature gauge indicates the approximate coolant temperature. If the coolant temperature reading is very high or if the high coolant temperature indicator comes ON, reduce the vehicle's speed and switch OFF the AC. Take the vehicle to an authorised service station at the earliest.

RPM meter / Tachometer :

This meter indicates the engine rpm. Change the gears at appropriate engine rpm and speed to get good fuel economy and driving pleasure.
Do not increase the engine rpm unnecessarily.

**Fuel gauge:**
The fuel gauge indicates the approximate fuel level in the tank.

Refill the fuel tank before the needle touches the coloured band on the gauge. At this point, fuel level in tank is low and it is advised to get fuel filled immediately.

**Multifunctional LCD, Odometer, Dimmer and Trip meter (A and B), Digital clock, ambient temperature:**

LCD has two line displays. The first line displays the Odometer count. The second line displays either of Trip meter A, Trip meter B, Dimmer and Intensity level of panel illumination, Ambient temperature and Digital clock display. 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 Trip meter A, Trip meter B, Ambient temperature, Digital clock display and Intensity level of panel illumination.

**Odometer and trip meter (on LCD):**
The odometer record the total distance the vehicle has been driven. The trip meter can be used to measure the distance travelled on each trip or between fuel fillings. Keep track of the odometer reading and follow the maintenance schedule regularly for meeting service requirements.

**Ambient temperature:**
Ambient Temperature is measured and displayed in the units °C or °F, which you can select by pressing the MODE and SET switch.

You can select required function on LCD by using MODE and SET knobs available on cluster, as indicated in the table further.

Please note that each knob has to be pressed and released to change the function.
INSTRUMENT CLUSTER - GAUGES

<table>
<thead>
<tr>
<th>SR.NO.</th>
<th>DISPLAY</th>
<th>WITH MODE KNOB PRESSED</th>
<th>WITH SET KNOB PRESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main odometer</td>
<td>Display changes to Trip A</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Trip A</td>
<td>To change the display to trip B</td>
<td>Knob to reset trip A</td>
</tr>
<tr>
<td>3</td>
<td>Trip B</td>
<td>To change the display to dimmer</td>
<td>Knob to reset trip B</td>
</tr>
<tr>
<td>4</td>
<td>Dimmer</td>
<td>To change the display to ambient temperature</td>
<td>Adjust illumination brightness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25%, 50%, 75%, 100%, 75%, 50%, 25%</td>
</tr>
<tr>
<td>5</td>
<td>Ambient temperature</td>
<td>To change the display to clock</td>
<td>Toggle between °C to °F conversion</td>
</tr>
<tr>
<td>6</td>
<td>Clock</td>
<td>To change the display to trip A</td>
<td>To set the clock (hrs. &amp; secs.)</td>
</tr>
</tbody>
</table>

Trip odometer count can be reset by pressing ‘SET’ knob for over 10 secs when display indicates Trip ‘A’ or Trip ‘B’.

LCD FEATURES:

A. Multifunction LCD

- Type: 7 Segments, indication by 4 digits and 1 decimal
- Range: 0.0 to 1999.9
- Resolution: 0.1 km or miles

Trip meter reading shall over flow to “0.0” after it crosses 1999.9 km.

Colour: Black Text with background.
**Trip meter reset**

Trip meter (A and B) can be reset by pressing the “SET” knob slightly longer when particular Trip meter is selected.

**C. Dimmer for cluster, LCD and Instrument panel illumination (as applicable)**

You can adjust the LCD brightness that is best suited to you and it is shown by the number of Dashes on the display,

- A. 2 Dashes => 25 %
- B. 4 Dashes => 50 %
- C. 6 Dashes => 75 %
- D. 8 Dashes => 100 %

After selecting the dimming level, the display will show the next information (e.g. Main Odometer) after 20 secs. Press the “MODE” knob earlier to see the next information.

**Digital clock :**

Type: 7 segments, 4 digits
Range: 00:00 hrs.
Resolution: 24 hours clock

This feature has 24 hour display format, which can be user selected through "MODE" & "SET" knobs provided.

**Procedure for digital clock setting:**

1. The clock can be set using both the ‘SET’ and ‘MODE’ keys.
2. Pressing the ‘SET’ knob for 5 secs. will cause the displayed time to flash i.e. clock setting mode.
3. At entry into clock setting mode, Hours digit will flash first.
4. While the Hours data is flashing, pressing and releasing the SET key will toggle between minutes and hours.

5. While the numbers flashing, pressing the MODE the key will advance the displayed number.

6. While the numbers are flashing, if no keys are pressed for 5 secs. Then the current value displayed are stored and the display stops flashing.

**Ambient temperature:**

![Image of temperature display]

**Type:** 7 segments, 2 digits

**Range:** -10°C to +60 °C or +14 °F to +140 °F

Ambient Temperature can be seen with °C or °F unit, which can be selected by user by using “MODE” and “SET” knobs.

**E. Odometer (as applicable)**

**Type:** 7 segments, 6 digits. Range: 0 to 999999

**Resolution:** 1 km

The Odometer reading will not over flow to “0.0” when the maximum value is accumulated, the display will freeze to maximum value.

**HAZARD WARNING SWITCH:**

![Image of hazard warning switch]

When hazard warning switch is pressed, the right and left direction indicators along with tell tales on the instrument cluster and hazard warning LED start flashing simultaneously. To switch off the function, press the Hazard warning switch again.

When pressed, the Hazard function overrides the turn indicator (right, left) function.

**NOTE**

Hazard warning function remains ‘ON’ even though key is taken out.
### STEERING WHEEL SWITCHES: (LHS) (If fitted):

- **VOLUME**: To increase (+) / decrease (-) volume of music system / radio.
- **MUTE / PHONE REJECT**: To reject or hang up a phone call. It is also used to silent the volume of music system / radio.
- **SEEK FORWARD / BACKWARD**: To change radio channels.
- **SOURCE**: To select the required source in the infotainment (USB, AUX, AM, FM).

### STEERING WHEEL SWITCHES: (RHS) (If fitted):

- **PHONE RECEIVE**: This button is also used to accept incoming call when a cell phone is connected via Bluetooth.

### NOTE
For more information, please refer to the Infotainment Manual provided.
DRIVING CONTROLS

HEATING, VENTILATION & AIR CONDITIONING

A.C. air vents on floor
Console for second row seat

Suction grill for Rear A.C. Unit

A.C. air vents on central Console for front seat

A.C. air vents on roof for Second and Third row seats

Towards windscreen (Defrost)

To Front door glass

To Front door glass

Side A.C. vents

To foot board

To foot board

Side A.C. vents

To foot board
HEATING, VENTILATION & AIR CONDITIONING:

Your vehicle is fitted with heating and air conditioning system. HVAC system controls temperature, humidity and air flow to enhance comfort level inside the vehicle. It also helps to keep windscreen and window glasses clear for better visibility.

The engine must be running for the heater and air conditioning to generate hot and cold air.

The system is also equipped with front heating system for clearing the front windscreen, side glasses of fog or frost and to heat the cabin in cold weather.

The system has a separate rear cooling system along with adjustable vents on roof.

**Vent controls:**

The direction of air flow from the vents can be adjusted manually by revolving thumb wheels / knobs.

---

### Controls:

- **A. Air flow direction control knob**
- **B. Blower speed control knob**
- **C. Temperature control knob**
- **D. Air recirculation / fresh air button**
- **E. A.C. (Normal mode) and ECON (Economy mode) ON /OFF button**
- **F. Rear defogger / demister button**
- **G. Rear A.C. ON/OFF button**
A. Air flow direction control knob:

The air flow can be changed by turning the air direction control knob (A) to the desired direction.

<table>
<thead>
<tr>
<th>MODE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>👆</td>
<td>Towards face</td>
</tr>
<tr>
<td>➡️</td>
<td>Towards face and feet</td>
</tr>
<tr>
<td>➡️</td>
<td>Towards feet</td>
</tr>
<tr>
<td>➡️</td>
<td>Towards feet and windshield (Recommended for clearing mist on windshield)</td>
</tr>
<tr>
<td>🎆</td>
<td>Air demist/defrost windshield (Recommended for clearing heavy fog or snow)</td>
</tr>
</tbody>
</table>

B. Blower speed control knob

The HVAC system has a four speed blower. The blower speeds can be regulated by operating the blower knob (B) at the centre of the control panel.
The temperature of the cabin can be controlled by operating the temperature control knob (C). The temperature can be increased by rotating the knob towards the red segment (clockwise) and decreased by rotating it towards the blue segment (anti-clockwise).

When the recirculation indicator is ‘ON’, the air within the cabin recirculates.

When the indicator is ‘OFF’, air is being used in from outside of the vehicle (Fresh air mode).

**NOTE**

Continuous operation in Recirculation mode depletes the oxygen inside cabin and user may feel dizzy. Whenever discomfort is felt switch to fresh air circulation mode.

The outside air intakes for the heating and cooling system are at the base of the windscreen. Keep this area clear of leaves and other debris.

The system should be used with recirculation air mode for faster heat up and cool down, however keeping the system in recirculation mode, particularly with A/C ‘OFF’, can cause the windows fog up.

Always switch to recirculation mode when driving through dusty or smoky conditions.
E. A.C. And Econ (Economy mode) ON/OFF button

First Press: A.C. (Normal mode) ‘ON’. (Blue indicator ON)

Second Press: ECON mode turns ‘ON’ (Green indicator ON)

Third Press: Both A.C (Normal mode) and ECON functions are switched ‘OFF’.

Econ A.C.: During ECON A.C. operation the system automatically cuts off at a higher temperature than normal A.C. The operation can be used during mild weather conditions for better fuel efficiency. Comfort level may be compromised during this operation.

F. Rear defogger / demister button

Press the button (F) to turn ON the rear windshield and outside rear view mirror demister. This clears the fog / mist formation on the rear windshield and outside rear view mirror. The indicator on the button turns ON when the rear demister is ON. The demister turns OFF automatically after 15 minutes.

NOTE
Keep the engine ON, while using rear windshield and ORVM demister.

Roof A.C. (IF FITTED):

1. Rear A.C. air vents
2. Rear A.C. blower

Speed control switch

Rear A.C. blower speed control switch
Roof AC is provided for second and third row seats passengers. Roof AC blower control switch is provided on roof for second row passengers. It has four positions to control the blower speed.

The sliding movement of the knob is provided to select minimum to maximum air delivery.

The roof AC can only be switched on if the front AC is ‘ON’. However the blower of the roof unit can be operated independently. Roof AC unit ON/OFF button is provided with the AC control panel. The indicator on the button turns ‘ON’ when the rear AC is ‘ON’.

*Rear A.C. ON / OFF switch*
INTERIORS

SUN VISORS :

Two sun visors are provided inside the cab above the windshield to prevent sun glare. Lower the sun visors to protect the eyes from bright sunlight. The sun visors can also be moved sideways towards the door.

NOTE

When not in use, keep the sun visors in their original position or else, they may block driver’s vision.

VANITY MIRROR (if applicable):

1. Sun visor (Co-driver side)
2. Vanity mirror

The vanity mirror is provided in the co-driver side sun visor. It has a cover flap for protection.

NOTE

When not in use, keep the vanity mirror cover in closed condition.

GRAB HANDLES :

1. Grab handle for front passenger
2. Grab handle for middle passenger

For comfortable positioning of passengers during journey, grab handles are provided in the vehicle at various locations.

A coat hook is also provided along with the grab handle for second row passengers.

NOTE

Avoid hanging of heavy goods on to the coat hook.
GRAB HANDLES & CUP HOLDERS

CUP HOLDERS:
For rear seat occupants, a cup holder is provided above rear AC vent on floor console.

Cup holders on the Floor console
The other cup holders are provided in the second row seat armrest for rear seat passengers.

Pull out the strap at the top end and rest it on the seat in horizontal position. To open cup holder, press the knob to open the arm rest lid and swing out the cup holders.

Grab handle for third row seat

Cup holders for in the armrest
UTILITY POCKETS ON DOOR TRIMS:
Utility pockets are provided on all door trims as well as tailgate door trim. This gives you extra space to keep magazines / papers / drinking water bottles etc.

Top Utility Bin (if fitted):
To keep small things such as coins, papers etc, a top utility bin is provided on the upper side of the dashboard centre. To open the bin, just press the upper lid once, then it comes out slowly. To close the bin lid, press it again to its original position. It gets locked automatically.

NOTE
After its use, keep it closed.
GLOVE BOX:
Glove box is located on the dashboard (in front of co-driver’s seat). The glove box can be locked by the key, which is also common for ignition and door.

The lamp is provided in the glove box for illumination (if applicable). This lamp will remain ‘ON’ till glove box cover is open.

POWER SOCKETS:
Three power sockets are provided in the vehicle.

These all three sockets can be used to tap 12V supply (10A Max.) for operating external gadgets such as Car fridge, Vacuum cleaner etc.

1. Power socket on the floor console for middle passengers (if applicable):
This power socket is located on the floor console below AC vents for middle passengers.

2. Power socket for rear passenger near jump seat (LHS (if applicable):
Third power socket is located behind LHS rear jump seat.

Push the cover gently and pull out the socket cover to open and access the power socket.

CAUTION
Do not use the Power Sockets for Cigarette Lighter
3. POWER SOCKET (On the Central console for front passengers)

INTERIOR LIGHTS - ROOF LAMPS:
The Interior roof lamps are mounted in the roof liner at the following two different locations:

Front roof lamp with spot / reading lamp:

- **Near Inner rear view mirror**

The middle switch has three positions - **ON, OFF and DOOR**.

- **ON**: In this position, the lamp remains continuously ON irrespective of whether the doors are opened or closed.
- **OFF**: In this position, the lamp remains continuously OFF irrespective of whether the doors are opened or closed.
- **DOOR**: In this position, the lamp comes ON when any of the doors are opened and dims out when the door/s are closed.

Spot lamp / reading lamp:
The front row interior lamp has two separate switches to operate the spot / reading lamps on either side.

These lamps are not provided in the second roof lamp.

NOTE

Function of second row roof lamp and its switches are same as front roof lamp.
INTERIOR LIGHTS

1. Roof lamp
2. Roof lamp switch
3. Spot / reading lamp
4. Spot / reading lamp switch

Roof lamp for second row seat passengers
(Mounted above 2nd row seat)
A music system is provided in your vehicle in the center console. Tweeters are fitted in the inner cover of ORVM on both the front doors and speakers are provided on all the doors excluding tailgate. A separate operator’s manual of the music system is provided along with the Owner’s Manual of this vehicle.

USB / AUX ports:

1. USB Port: You can attach external memory device like memory sticks/pen drives, I-pods for playing music tracks stored in this devices through the vehicle music system.

2. Aux Port: The AUX port is provided to connect Audio input devices for playing music tracks stored in the devices through vehicle speakers.
MUSIC SYSTEM

MIC (if fitted):

The MIC can be used, for communication once the occupant pair his mobile along with the music system. For pairing refer music system manual.

Antenna:

Antenna located on the roof

The antenna is mounted on the roof above front windshield glass.
Head Lamps:

Your vehicle has clear lens type head lamps with multi focal reflector and halogen bulb. This gives better illumination on the road for long distances. Low / Dip beam illuminates the road immediately ahead for short distance visibility. It also contains side indicator lamp and parking lamp.

1. High beam
2. Side indicator
3. Low beam
4. Parking

Front and rear fog lamps are provided for your convenience and they can be operated via master light switch located on the dashboard near steering column (RH side).

These are provided for additional illumination and to be used during rainy or foggy conditions.

Tail Lamps:

1. Stop & rear position lamp
2. Turn Indicator
3. Reverse lamp

Turn Indicator on ORVM

Rear fog lamps
REGISTRATION PLATE LAMPS, HIGH MOUNTED STOP LAMP, PUDDLE/DOOR LAMPS

REGISTRATION NUMBER PLATE LAMPS:

1. Registration / Number plate lamps
2. High mounted stop lamp

Two concealed lamps are provided for illumination of the rear registration / number plate, which turns ‘ON’ along with the parking lamp.

HIGH MOUNTED STOP LAMP:

High mounted stop lamp is provided on the tailgate, and it glows whenever the brakes are applied.

PUDDLE / DOOR LAMPS:

Puddle lamp on front door trim bottom

Puddle / door lamps are provided on all four door trim at the bottom. It has two parts, one is white at bottom and other is red on the side. It illuminates as you open the door. The white light at the bottom helps you to visualize the ground clearly. This assist the user for easy entry and exit during night.

Puddle lamp on rear door trim bottom

The red light on the side helps others to recognize that your door is open and it also warns the traffic coming from the rear that door is open.
REFLEX REFLECTORS:

Two reflex reflectors are provided at both corners of the rear bumper. They glow by light of the vehicle coming from behind, which helps to recognize presence of your vehicle on the road.

FUEL FLAP OPENING / CLOSING BY SWITCH:

**Opening:**
- "UNLOCK" your vehicle, using the central locking system (by switching "OFF" the ignition or unlocking the driver’s door or using the Remote).
- Now by gently pushing, open the fuel flap (fitted at left hand side of the vehicle).

**Closing:**
- Push the fuel flap back to it’s position till it gets locked.

MANUAL FUEL FLAP OPENING:

You can open your vehicle’s fuel flap manually, if there is a problem in the fuel flap switch. For this just follow the below steps;
- Open the tailgate
- Open the trim cover fitted to the left hand side near third row seat.
- Once this cover is opened, you will find a cable with a knob.
- Slightly pull this knob to open the fuel flap.
BONNET OPENING & CLOSING

NOTE
The emergency fuel flap opening cable should be used only in case of emergency / failure of electrical system.

WARNING
Fuel vapour is extremely hazardous. Always stop the engine before refueling. Never refill near sparks or open flames.
Do not use your cell phones when you are at filling station.

BONNET OPENING AND CLOSING:

Opening:
1. Ensure that the vehicle is in neutral gear with the parking brake applied.
2. Pull the bonnet release lever located under the right hand corner of the dashboard. The bonnet will pop up slightly.
3. Raise the bonnet slightly and with your finger lift the secondary lock lever located under the bonnet centre.
4. Lift the bonnet up. Balancers will hold the bonnet.

Closing:
1. To close the bonnet, hold the bonnet and push down it slowly.
2. Drop it from a short height to shut. It will lock automatically. Ensure that the bonnet is locked properly.

CAUTION
Ensure that the bonnet is properly locked before driving. Do not press the bonnet onto the bonnet lock.
AIRBAG (SRS) : (If fitted)

The vehicle has front airbags for both the driver and front passenger as a supplement to the seat belt restraint systems. The driver’s airbag is mounted in the center of the steering wheel. The front passenger’s airbag is located in front of front passenger seat inside the dashboard, above the glove box.

The vehicle fitted with the airbags has suitable indications on steering wheel and on dashboard. The word ‘AIR BAG’ is embossed on the airbag covers.

Provided that the occupants are correctly seated with seat belts properly worn, front airbags will provide additional protection to the chest and facial area of the front seat occupants in the event of severe frontal collision.

WARNING

- The airbag is a supplementary restraint system that provides ADDITIONAL protection in a severe collision only. It does NOT replace the need to wear a seat belt. Relying on the airbags alone could lead to severe injuries in a collision. The airbags work with your seat belt to restrain you properly. Always wear your seat belts even though you have airbags.
- To ensure correct deployment of the airbags, it is essential that obstructions are not allowed to intervene between airbag and the occupant. Do not put anything on or around the front airbag covers or attempt to open them. Occupants may damage the airbags and they could be injured because the airbags are no longer functional. These protective covers for the airbag cushions are designed to open only when the airbags are inflating.
• Seating position plays an important role in minimizing the risk of accidental injury. In addition to properly worn seat belts, both driver and front passenger should adjust their seat to provide the maximum practical distance from the front airbags. Airbags need room to inflate. Being too close to the steering wheel or dashboard during airbag deployment could cause serious injury.

Airbag warning label:

Airbag warning information is printed on the co-driver’s sun visors.

Airbag SRS warning indicator:

The airbag warning symbol comes on for approximately 3 seconds when the ignition is turned ‘ON’ and goes ‘OFF’.

WARNING
If it remain ‘ON’ or blinks, take your vehicle to the nearest TATA Authorised Service Centre.

Airbag SRS system components:

The airbag ‘SRS’ system consists of the following:

• Airbag ‘SRS’ ECU (Electronic Control Unit)
• ‘SRS’ Indicator
• Driver Airbag
• Front Passenger Airbag
• Front Impact Sensors
• Driver and Front Passenger Seat Belt Pretensioners with load limiters
• Electrical Wiring Harness

Airbag ‘SRS’ working:

In the event of a collision, airbag SRS ECU monitors the rate of deceleration induced by the collision, through impact sensors, to determine whether the airbags should be deployed.
The airbag ‘SRS’ is not designed to operate as a result of roll-over, rear collisions, minor frontal or side impacts nor will it operate as a result of heavy braking or driving over bumps and pot holes.

Airbag inflation is virtually instantaneous and occurs with considerable force, accompanied by loud noise. The inflated airbag, together with seat belts restraint system, limit the movement of an occupant, thereby reducing the risk of injury.

When an airbag inflates, you may see some smoke-like particles. The particles are a normal by-product of the process that generates the nontoxic gas used for airbag inflation. These airborne particles may irritate the skin, eyes, nose, or throat. If you have skin or eye irritation, rinse the area with cool water. For nose or throat irritation, move to fresh air. If the irritation continues, see your doctor. Also sometimes the smoke can cause breathing problems for people with a history of asthma or other breathing trouble. In such cases get fresh air promptly.

After inflation airbags deflate immediately thus providing a gradual cushioning effect for the occupant. It is not advisable to drive your vehicle after the airbags have been deployed. If you are involved in another collision, the airbags will not be in place to protect you.

WARNING

After inflation, some airbag components are hot. DO NOT touch them.

Airbag SRS fitted in your vehicle does not require any regular maintenance, however ALWAYS contact your TATA authorised dealer if:

- The warning indicator fails to illuminate for 3 seconds when ignition switch is turned ON.
- The warning indicator remains ON beyond 3 seconds after ignition switch is turned ON.
- The warning indicator illuminates after the engine is started or while the vehicle is running.
- An airbag inflates
- The front or side of the vehicle is damaged, even if airbag has not inflated.
- Any part of airbag module cover shows sign of cracking or damage.
WARNING

• Do not fit any bull bars or other after market accessories at front side of the vehicle. This may affect the proper deployment of the airbag.

• Never place any loose object on the dashboard in front of co-driver seat. It may result an injury from the object when it is forced towards you by the inflating airbag.

• Do not cover the steering wheel or dashboard with an object, which may prevent the proper deployment of the airbag.

• Never try to repair any component or part of the SRS yourself. Any interference in the system could cause malfunction and serious injury. All work on SRS should be performed by TATA authorised dealership.
ANTI-LOCK BRAKING SYSTEM (ABS) (if equipped):

In addition to the conventional hydraulic brake system, an Anti-lock Braking System (ABS) incorporating Electronic Brake Distribution (EBD) is provided on this vehicle (ABS version).

During normal braking the Electronic Brake Distribution (EBD) limits the level of braking force transmitted to the rear wheels. ‘EBD’ moderates the braking forces at the rear axle depending upon the load condition and available traction at the rear wheels.

During emergency braking the Anti-lock Braking System (ABS) regulates the braking force for each individual wheel. In doing so the system optimizes the level of braking being achieved while maintaining a stable, controllable vehicle. Where ‘EBD’ only acts on the rear wheels the ABS is able to control each wheel individually. Both the ‘EBD’ and the ‘ABS’ functions work by continuously monitoring and comparing the four individual wheel speeds and reacts when a wheel is detected as loosing traction with the road surface, which happens when a wheel tends to lock during braking.

To avoid the wheels from locking and prevent the vehicle from skidding ABS is provided. It prevents the wheels from locking and maintains the steerability of the vehicle thereby helping the driver to maintain stability of the vehicle while bringing it to a stop in the safest possible way.

NOTE

During cranking ABS, EBD warning lamps might glow for a few seconds. In order to obtain the maximum benefit from your ‘ABS’ system in an emergency situation, do not attempt to modulate the brake pressure by pumping the brake pedal. Press brake pedal continuously as hard as possible or as the situation demands. When ABS intervention is necessary the warning lamp will not illuminate but the driver will feel the brake pedal pulsating and may hear an audible sound from the modulator indicating that ABS control is taking place.

ABS and EBD warning lights:
The ABS and EBD warning lamps will illuminate for a system check for approximately few seconds, when the ignition is switched ‘ON’. Both lamps will then go ‘OFF’ to indicate the system is healthy. As the EBD lamp is shared with the park brake lamp & brake fluid level warning, so this will not go ‘OFF’ until the park brake is released and fluid level in reservoir is approximately at MAX. level.

CAUTION

In case of an ‘ABS’ or ‘EBD’ failure the warning lamp will illuminate in instrument cluster. In that case please pullover the vehicle to the side of road and switch off the ignition and restart.
If the fault persists, your brake system may not be working properly hence it is dangerous to drive the vehicle. However if you feel and judge that it is safe to drive, then take the vehicle carefully to the nearest TATA authorised service station for repair. Otherwise get your vehicle towed as driving the vehicle with this fault could be dangerous.

**WARNING**

- ‘ABS’ is an aid to retain steering control and stability while braking.
- ‘ABS’ will not prevent accidents resulting from excessive cornering speeds, following another vehicle too closely or aquaplaning, i.e. where a layer of water prevents adequate contact between tire and road surface.
- ‘ABS’ will not improve braking performance or stopping distance beyond that which is physically possible which is constrained by the road conditions, vehicle’s tyres and brakes.
- The additional control provided by ‘ABS’ must never be exploited in a dangerous or reckless manner which could jeopardise the safety of driver, other road users or pedestrians.
REVERSE GUIDE SYSTEM (PARK ASSIST) (if fitted):

Ultrasonic sensors based reverse guide system (park assist) is provided to aid safety while reversing the vehicle. Sensors are provided on rear bumper of the vehicle.

Operating Instructions:

Switch ‘ON’ the ignition. On engaging the reverse gear a short beep sound is audible and graphic display in music system is seen. In case of an obstacle behind the vehicle and in the sensing zone of the ultrasonic parking sensors, the system would give audio visual warnings via buzzer and Infotainment system’s display respectively.

NOTE

- The Park assist system can sense objects in the range of 30 cm to 120 cm from the vehicle rear bumper. The system’s performance is not guaranteed for distances less than 30 cm.

- Objects less than one meter in height and 20 mm width/diameter may not be detected by the sensors.

For more details, please refer ‘Park Assist’ section of Infotainment manual.
SPECIAL FEATURES

REVERSE GUIDING SYSTEM

**CAUTION**

1. **System cannot sense**
   a) Wire mesh, handrail, small objects & some obstacles which are coming too much below or too much above the bumper level.
   b) Obstacles like cotton, wool, foam, textile or spongy surface which will absorb ultrasonic waves easily.
   c) Pot holes or the trenches or drainages which are below the ground level.

2. **System may give wrong signal:**
   a) When the vehicle on grasslands & bumpy roads.
   b) While vehicle moving from plain ground to slope like backing up downhill or vice versa.
   c) When the bumper is tilted more than the normal position or when the vehicle is heavily overloaded.
   d) When the temperature of the obstacle is high as hot surfaces reflect fewer sound waves less than cold surfaces.
   e) If there is an excessive increase in humidity as it increases the sound speed (max. by 2%) as compared to dry air.
   f) When the vehicle is equipped with high power radio antenna on rear side.
   g) If sensor is at extreme temperatures: below -30°Celsius or above 80°Celsius.

3. **System may give false alarm during the heavy rain conditions, during the snow conditions or heavy wind conditions.**

**WARNING**

1. This system is strictly a driver assistance device. It is not a substitute of driver’s responsibility while driving. Under no circumstances will the manufacturer accept any responsibility or can be held liable for any direct or indirect, incidental or consequential damage caused by negligent use of this system.

2. Clean the sensors properly and keep them free from ice, dust, mud, water, chewing gum etc. for proper working of the system.

3. Please practice reverse parking using different obstacles to grasp the system performance.

4. Pressing the sensor on active region may damage the sensors & may hamper its sensing range causing the system to malfunction.

5. Always STOP your vehicle when a continuous beep is heard. As it indicates an object at dangerous distance not more than 1.2 M from the rear bumper.

6. Never use high pressure water to clean the sensors and also never use hammer on it.
SAFETY CHECKS BEFORE DRIVING:

Check:
1. Tyre pressure and condition of tyres.
2. Coolant level.
3. Engine oil level.
4. Brake fluid level.
5. Water in windshield washer reservoir.
6. Power steering oil level.
7. Battery electrolyte level.

Adjust:
1. Adjust your seat position.
2. Check adjustment of all rear view mirrors.
3. Check and adjust steering height.

Ensure:
1. Bonnet is properly closed and locked.
2. All doors are properly closed and locked.
3. Check that the items you may be carrying inside with you are stored properly or fastened securely.
4. Seat belts are fastened.
5. All mirrors, windows and outside lights are clean and unobstructed. Remove dust, frost, snow or ice if any, on these.
6. All switches and lamps are working.
7. All the gauges and indicators in the instrument cluster are working.
8. Gear shift lever is in neutral position.
9. Parking brake is released.

Windshield/wiper/windshield washer:
Always keep windshield glass clean to avoid any distortion 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 may damage the windshield.

Headlights:
Keep headlight lenses clean. Check for operation of headlamps 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, as its dazzle may glare the driver of an oncoming vehicle, thus causing an accident.

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

Horn:
Ensure the horn is working properly. Horn provides safety to other road users by alerting your presence.

Brakes:
Ensure brakes are working properly. Do not drive the vehicle when brake warning lamp is ‘ON’.

Tyres:
Check the condition of tyres for any abnormalities. Maintain correct tyre pressure. Do not use worn or bald tyres, especially on the front wheels.
First aid kit:
A first aid kit is provided in your vehicle. This is for use in case of minor injuries. It should be regularly checked and updated.

Documents:
Always carry vehicle registration papers, insurance, valid PUC certificate and driving license with you.

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 vehicle occupants always wear seat-belts when vehicle is in motion.

Influence of alcohol / drugs:
Avoid driving under the influence of alcohol or drugs. Alcohol and drugs will severely affect your reflex actions. This will impair your control of the vehicle and increase the risk of injury to yourself and others.

Mobile phones:
Avoid using mobile phones while driving a vehicle. This could divert your attention from the road and result in 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 rest and get refreshed at regular intervals.

Parking on slopes:
While parking, if your vehicle facing uphill, it is advisable to switch off the engine and engage lower forward gear.

While parking, if your vehicle facing downhill, it is advisable to switch off the engine and engage reverse gear.
TIPS TO IMPROVE FUEL ECONOMY:
Your vehicle’s fuel economy is mainly dependent on your style of driving. To operate your vehicle as economically as possible, use the following driving suggestions.

Avoid excessive Idling:
Switch off the engine, if you have to stop for more than a minute.

Avoid fast starts and unnecessary stops:
Start off slowly from traffic lights or stop signs to prevent increased fuel consumption and shortening of engine life. Avoid unnecessary deceleration (stopping or slowing down) and then acceleration which uses more fuel.

Always maintain clean air-cleaner:
The amount of air supplied will reduce due to clogged air-cleaner, resulting in waste of fuel due to incomplete combustion.

Replace the air filter element as per the servicing instructions label on air filter body. We do not recommend to clean the air filter element before the replacement period, however if filter element is to be cleaned (in case of vehicle operation in dusty condition) procedure indicated on servicing label to be followed. Get the air filter element replaced/cleaned at a TATA MOTORS Authorised Service Center.

Avoid incorrect tyre pressures:
Ensure proper tyre inflation. If your vehicle tyres are under-inflated, it results in increased rolling resistance of the tyres, leading to wastage of fuel. Check tyre pressure and inflate the tyres accordingly once a week.

PROPER DRIVING PRACTICES:
Keep a safe distance from other vehicles to avoid braking suddenly. Anticipate stops and avoid abrupt stops, this will decrease fuel consumption and increase the life of vehicle’s brake and tyres.

Do not rest your foot on the clutch pedal. It does not allow full engine power to be transmitted to the vehicle and reduces clutch life.

RUNNING-IN INSTRUCTIONS:
During running-in period i.e. first 1500-1800 km. follow the running-in instructions given below:

1. After starting the engine do not rev it up. Warm up gradually at idling speed.
2. Avoid sudden acceleration and full throttle.
3. It is always preferred not to rev up a cold engine lest engine bearings get affected.
4. Recommended speeds during the running-in period is given below:

<table>
<thead>
<tr>
<th>Gear</th>
<th>Running-in speeds (Kmph)</th>
<th>Fuel Economy speeds (Kmph)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2H / 4H</td>
<td>4L</td>
</tr>
<tr>
<td>1st</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>2nd</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>3rd</td>
<td>65</td>
<td>-</td>
</tr>
<tr>
<td>4th</td>
<td>90</td>
<td>-</td>
</tr>
<tr>
<td>5th</td>
<td>110</td>
<td>-</td>
</tr>
<tr>
<td>6th</td>
<td>120</td>
<td>-</td>
</tr>
</tbody>
</table>
STARTING / STOPPING THE ENGINE & PREPARING TO DRIVE

STARTING THE ENGINE:
1. On a horizontal surface apply parking brake.
2. Ensure gear lever is in neutral.
3. Insert the key in steering cum ignition lock and turn it to ‘ON’ position.
4. Press the clutch pedal fully.
5. Now crank the engine.
6. If the engine does not start turn the key to off position and try after 30 seconds.

STOPPING THE ENGINE:
Before switching OFF the engine, run the engine in idle condition for at least 30 seconds and then switch OFF. This will allow the engine oil to lubricate the turbocharger, till its speed is fully reduced and also allow the unit to cool down.

The above precautions will ensure satisfactory life and performance from the turbocharger.

PREPARING TO DRIVE:
The following checks and adjustments should be done before you start driving the vehicle.
- Before you enter the vehicle, check and clear any obstructions that may not be visible from the driver’s seat.
- Ensure all mirrors, windows and outside lights are clean and unobstructed. Remove dust, frost, snow or ice if any, on these.
- Ensure bonnet is fully closed.
- Check that any items you may be carrying inside with you are stored properly or fastened down securely.
- Check adjustment of seat. If required adjust to your convenience.
- Check adjustment of all rear view mirrors.
- Check adjustment of steering wheel.
- If the doors are not properly closed you will get an audio warning/indicator light as soon as you insert the ignition key in the switch. Make sure all doors are properly closed and locked.
- If the seat belts of driver & co-driver are not fastened you will get an audio warning as soon as you turn the key to ignition position. Fasten your seat belt, ensure co-driver seat passenger has also fastened the seat belt (see Your Safety).
- Check and ensure that all the gauges and indicator lights in the instrument panel are working.

NOTE
After starting, run the engine in idle speed for at least 30 seconds. Do not press accelerator pedal while starting the engine to avoid damage to turbocharger.
DRIVING

- Release the parking brake.
- Before moving the vehicle, check the oncoming traffic through the rear view mirrors. While getting into main stream of traffic, proper signal should be given by using side indicator.

PARKING:

- Park the vehicle in a safe place.
- Apply the parking brake.
- Ensure that all window glasses are closed and all lamps are turned OFF.
- At night, put ‘ON’ the parking lights if required.
- Remove the key from the ignition switch.
- Place wheel chocks at the wheels if parked your vehicle on a slope.

**CAUTION**

- Do not leave the key inside the vehicle.
- Do not leave children unsupervised inside the vehicle.

**GEAR SHIFTING SPEED RANGE:**

<table>
<thead>
<tr>
<th>GEAR</th>
<th>SPEED RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>10-30 kmph</td>
</tr>
<tr>
<td>2nd</td>
<td>20-60 kmph</td>
</tr>
<tr>
<td>3rd</td>
<td>30-90 kmph</td>
</tr>
<tr>
<td>4th</td>
<td>40-100 kmph</td>
</tr>
<tr>
<td>5th</td>
<td>50-100 kmph</td>
</tr>
<tr>
<td>6th</td>
<td>60-120 kmph</td>
</tr>
</tbody>
</table>

**Vehicle Speeds during up shifts:**

<table>
<thead>
<tr>
<th>GEAR</th>
<th>2H / 4H</th>
<th>4L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st - 2nd</td>
<td>20 kmph</td>
<td>10 kmph</td>
</tr>
<tr>
<td>2nd - 3rd</td>
<td>45 kmph</td>
<td>18 kmph</td>
</tr>
<tr>
<td>3rd - 4th</td>
<td>70 kmph</td>
<td>-</td>
</tr>
<tr>
<td>4th - 5th</td>
<td>90 kmph</td>
<td>-</td>
</tr>
</tbody>
</table>

**Vehicle Speeds during down shifts:**

<table>
<thead>
<tr>
<th>GEAR</th>
<th>2H / 4H</th>
<th>4L</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd - 1st</td>
<td>15 kmph</td>
<td>6 kmph</td>
</tr>
<tr>
<td>3rd - 2nd</td>
<td>25 kmph</td>
<td>-</td>
</tr>
<tr>
<td>4th - 3rd</td>
<td>45 kmph</td>
<td>-</td>
</tr>
<tr>
<td>5th - 4th</td>
<td>60 kmph</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTE**

While driving at higher gears, if the engine speed suddenly drops, the engine may stall and will be switched ‘OFF’. This is done to safe guard the transmission system.
BRAKES & BRAKING

BRAKES AND BRAKING:

The brake system on your vehicle is an advanced dual circuit, vertical split vacuum assisted hydraulic brake system.

It is equipped with:

- Brake booster: This assists the driver in braking with an ergonomic pedal force on brake pedal.
- Tandem Master Cylinder, for fail safe braking.
- Twin pot calipers in front and single pot callipers in rear, for efficient energy absorption.

If one circuit fails then the pedal effort will be lesser, pedal travel will be longer and stopping distance will be more. At the same time, brake indication light would glow on dashboard.

If you observe any abnormality in brake system, contact your nearest **TATA Authorized Service Centre**. In case of failure of vacuum supply to the brake booster the vehicle can still be stopped with a higher pedal effort. In case of vacuum failure or brake circuit failure, slow down the vehicle by shifting to lower gear and lifting your foot from the accelerator pedal. Pull to the side of the road as soon as it is safe. Put your foot on brake pedal to apply brake. Do not ride with brakes applied as they may overheat and the performance may be impaired. The brake lights may confuse the other road users behind you. Use engine to assist the brakes by shifting to a lower gear and lifting your foot from accelerator pedal.

Constant application of brakes while going down the hill builds heat and reduces braking efficiency.

Check your brakes after driving through deep water. Apply the brakes moderately to feel that they are normal. If not, apply them gently and frequently until they do.

With wet brakes you should be extra cautious and alert while driving.

**WARNING**

Brake system failure is hazardous and needs immediate attention. In the event of brake system failure,

a) Have your vehicle towed OR
b) Be extremely cautious in case you have to drive the vehicle.
4 X 4 OPERATION: (If applicable)

On four wheel drive vehicles, the transfer case is fitted after the gear box for driving front live axle along with rear axle.

The electrical switch is provided on the center console to select the mode.

The following three selector positions are provided on the knob:

- **2H**: Only two rear wheels are driven and transfer case operates at 1:1 ratio.
- **4H**: All four wheels are driven and transfer case operates at 1:1 ratio.
- **4L**: All four wheels are driven and transfer case operates at 2.48:1 speed reduction ratio.

**Four wheel drive operation**:

In **2H** mode, engine powers the rear two wheels of the vehicle and front wheels are merely pushed. It will provide optimal smoothness and fuel economy at high speeds.

In four wheel drive mode (**4H** or **4L**), the rear as well as the front axles get geared to the engine through the transfer case and transmit the engine power to all four wheels. This provides increased traction to the vehicle.

In **4H** mode, the transmitted engine torque and vehicle speed remain the same as in **2H**.

However, when you shift to **4L** mode, engine torque is multiplied and vehicle moves at low speed in the same gears with increased traction. **4L** mode is provided for negotiating sharp gradients or driving through loose soil/sand.

**Mode Selection**:

- **2H Mode**:
  For driving in **2H** mode, shift the transfer case switch shifter knob to **2H** switch position.

- **4H Mode**:
  For driving in **4H** mode, shift the selector switch to **4H** position.

  The **4H** indicator on the instrument cluster will blink for some second and will remain illuminated after successful shifting to **4H** mode.

- **4L Mode**:
  For driving in **4L** mode, shift the selector switch to **4L** position.

  The **4L** indicator on the instrument cluster will blink for some second and will remain illuminated after successful shifting to **4H** mode.
Shifting to various modes:

**From 2H to 4H:** Turn the selector knob from 2H to 4H position. 4H indicator on instrument panel will light up. Changing from 2H to 4H can be done up to 80kmph. No pressing of clutch pedal is required.

**From 4H to 2H:** Turn the selector knob from 4H to 2H position. 4H indicator on instrument panel will go off. Changing from 4H to 2H can be done at 8 kmph. No pressing of clutch pedal is required.

**From 4H to 4L**

Stop the vehicle. Press clutch pedal. Turn the selector knob from 4H to 4L position. 4L indicator light on instrument panel will blink few times and remain on.

**From 4L to 4H:** Stop the vehicle. Press clutch pedal. Turn the selector knob from 4L to 4H position. 4H indicator light on instrument panel will blink few times and will remain on.

### NOTE

Do not engage four wheel drive mode (4H or 4L) continuously on dry and hard road surface. It can cause extensive damage to the vehicle transmission and the tyres.

Four wheel drive facility is a powerful tool which enables the vehicle to traverse terrain which is otherwise inaccessible to two wheel drive vehicles. However it must be used judiciously and carefully. Do not take unnecessary risks and attempt the impossible. Familiarise yourself thoroughly with the vehicle and its abilities before attempting serious off road driving.

With ignition ‘ON’ 4H & 4L indicator lamp on panel should glow for a few seconds only & then go off. Continuous illumination of 4L & 4H lamps indicates electrical fault.

**DRIVING IN ADVERSE CONDITION:**

**Driving Through Water:**

Never venture to drive through water when it flows over stone guard on a bridge.

Your vehicle’s engine may get seriously damaged if attempted to drive 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.
DRIVING

- 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 TATA authorised workshop to check entry of water in cylinders.

If water has entered the engine or gear box, transfer case etc., replace the lubricant.

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 head lights ON if visibility is poor.

Night driving:

Refer to some important instructions given below which are important from road safety point of view especially for night driving.

Given instructions are related to the usage of head lights for night driving. Because of decreased vision at night and the glare of oncoming headlights, night driving is more demanding and requires greater concentration than daytime driving. Unfamiliar roads and unexpected situations are more likely to cause hazardous driving conditions.
Ensure safe driving in several ways:

- Keep the windshield clean.
- Make sure the headlights are working properly and the lenses are kept clean.
- Check regularly for correct aim/alignment.
- Maintain a speed such that you can stop within illuminated distance of head lamps.
- Slow down when oncoming traffic approaches or when vehicle is close to a curve. Dip the head lamp for oncoming traffic during night driving.
- If visibility is greatly reduced, use the edge line as a guide to maintain the lane of travel. If there is no edge line, use the centerline to guide the vehicle.
- 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.

1. **Headlights**

   Switch ‘ON’ the headlights when driving between sunset and sunrise or any other time when there is not enough daylight to see a person wearing dark clothing at a distance of 100 meters. Do not drive with head lamp ‘ON’ during the day.

2. **High Beam**

   High-beam headlights are stronger and have to be used in dark areas which require more lighting. One can use high beam lights on any road, even if there are streetlights. **High beam headlights are only designed to be used when other vehicles are not around.** Always dim the high beam headlights to low beam for oncoming vehicles as well overtaking vehicles.

   Dim the headlights to low beam when vehicles approach within 200 meters and while driving 200 meters or less behind other vehicles.

3. **Fog Lights**

   Front fog lights are designed to illuminate the road in fog, snowfall, rainstorms, or dust clouds. They can be identified by the narrow pattern of light emitted, which shines low and wide to see the road close to vehicle in fog. The rear fog lights help to alert the vehicles behind.

   **Drivers must not use front or rear fog lights unless driving in fog or other hazardous weather conditions causing reduced visibility. Switch ‘OFF’ the fog lights once visibility is clear as they can blind other drivers.**

4. **Extreme Conditions**

   In extreme conditions, such as heavy rain, fog etc. put the headlights to low beam. High beam in fog will reflect the light, making it difficult to see. In poor visibility, turn ‘ON’ the hazard lights to alert other vehicles on road.
Climbing sharp gradients on loose surfaces:

Start off smoothly in any suitable gear. Apply power smoothly so that 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 a lower gear has to be done cautiously to avoid loss of traction.

Never move the vehicle 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:

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.
EMERGENCY PARKING OF THE VEHICLE ON THE ROAD:

In case of emergency, if you want to park your vehicle on the road for long a time, follow the instructions given below:

1. Try to park your vehicle at the extreme left side of the road and switch ‘ON’ the hazard warning lights.

2. Place wheel chocks at the wheels if your vehicle is parked on a slope, otherwise engage the parking brake.

3. Place the advance warning triangle on the road (50 meters behind your vehicle where it is stranded) in the same lane of traffic.

The advance warning triangle, scissor jack, foldable jack handle and tool kit are provided with your vehicle, which are kept below the second row seat and easily accessible.
IN CASE OF EMERGENCY

EMERGENCY AIDS

First Aid Kit:

First aid kit is provided with your vehicle and kept in the glove box, which is easily accessible and can be used in case of emergency.

While using the first aid kit, always use it as per the instructions given in the instruction sheet. Please check for contents and its expiry date.

Advance Warning Triangle:

A foldable advance warning triangle is kept in the pocket below the second row seat.

After using an advance warning triangle, fold the same and keep it in its original place, so that it will be easily available in the case of emergency.

Jack & Tool Kit:

A scissor type jack, foldable handle and tool kit are provided with your vehicle.

A pocket is provided at the RH side of the second row seat base to keep all these materials.

Always keep all these materials to its original place, when it is not in use.
EMERGENCY TOWING

In case of emergency, where there is a need to tow the vehicle, follow the instructions given below:

• Instead of using rope, chain or belt, always use a wrecker or rigid tow bar for towing a vehicle.

• Avoid using a flexible cable or rope as your vehicle might get damaged, when any of the vehicle stops suddenly.

• Switch ‘ON’ the hazard warning lights of both the vehicles to warn other road users.

• Where possible, keep the engine idling so that power steering assistance and brake vacuum are available.

• Limit the speed to 20-30 kmph.

• In case of brake failure, use the parking brake to control the vehicle.

NOTE

• If the vehicle needs to be towed, call professional towing service

• If it is not possible to shift the gear to neutral, then disconnect the propeller shaft and remove it before towing.

• If it is not possible to shift the transmission or start the engine or if the wheels are jammed, the vehicle must be transported on flat bed truck, where the vehicle is loaded into the back of a truck.

CAUTION

Trying to lift or tow the vehicle by bumpers will cause serious damage. The bumpers are not designed to support the vehicle’s weight.
IN CASE OF EMERGENCY

INERTIA SWITCH:

Your TATA SAFARI STORME is fitted with an inertia switch. This switch will trigger if the vehicle is brought to an abrupt halt, normally during a collision. Normal driving and even sudden braking will not trigger the inertia switch.

When the inertia switch is triggered the following will happen:

- **All doors will be unlocked.**
- **All turn indicators will flash (both left and right side).**
- **All roof lamps will be turned ON**.

To undo the above affects, you have to reset the inertia switch.

**WARNING**

After resetting the switch and before resuming driving, check for any damage to the body or check if any part is hanging loose. Also after turning ON the ignition, ensure that no faults are displayed in the instrument cluster.

**Resetting the inertia switch:**

- Open the co-driver door and remove the trim cover below the glove box.

- Access the inertia switch and press the switch to reset.
STARTING THE ENGINE WITH JUMP START LEADS:

The engine with a discharged battery can be started by transferring electrical power from the battery of another vehicle. This may be dangerous as any deviation from the following instructions could lead to personal injury resulting from any battery explosion, as well as damage to the electrical systems in both vehicles.

**WARNING**

Do not allow battery electrolyte to come in contact with eyes, skin, fabrics or painted surfaces. The fluid contains sulphuric acid which can cause injury and severe damage. Wear rubber gloves, to avoid risk of contact.

- Wear eye protection when working near any battery.
- Make sure that the battery providing the jump start has the same voltage as the battery in your vehicle (12V).
- The voltage and capacity are given on the batteries.
- Do not disconnect the discharged battery from the vehicle.
- Switch off all unnecessary electrical loads.
- Do not lean over the battery during jump starting.
- Do not allow the terminals of one lead to touch those of the other lead.
- Do not connect the lead to the negative terminal of the discharged battery.
- The connection of the -ve lead point should be as far away from the discharged battery as possible and close to the starter motor.
- Route the leads so that they do not get caught by the rotating parts in the engine compartment.
- Attempts to start the engine of the vehicle with the discharged battery should be made at intervals of one minute and should not last more than 15 seconds. After starting, allow both engines to idle for approximately 3 minutes with the leads still connected.

**CAUTION**

Do not push start the vehicle, this may damage flywheel.
IN CASE OF EMERGENCY

IF YOU HAVE A FLAT TYRE

If a tyre goes flat while you are driving, reduce vehicle speed gradually keeping your vehicle in a straight line. Move cautiously off the road to a safe place and away from traffic, where you can park your vehicle on a levelled and firm ground.

While jacking the vehicle, following precautions are to be taken:

1. Park the vehicle on a firm, levelled and non-slippery surface.
2. Turn ON hazard warning switch.
3. Apply parking brake and engage 1st gear.
4. Keep advance-warning triangle at least 50 meters behind the vehicle as an indication of breakdown.
5. Ensure that all passengers get down from the vehicle.
6. Block the wheel which diagonally opposite to the flat tyre by using chocks.

Procedure for replacing flat tyre:

1. Open the tailgate and remove the plastic cap by pressing on its edge. The spanner can be inserted through this hole.
2. Rotate the spanner anti-clockwise to lower the spare wheel till it rests on the ground.
3. Remove the holding bracket from the spare wheel and get it separated.
4. Loosen the wheels nuts slightly before lifting up the vehicle.

IF YOU HAVE FLAT TYRES
IF YOU HAVE FLAT TYRE & JACKING POINTS

5. Place the jack below the jacking points and lift the vehicle slowly. These points are located approx. 920 mm behind the front wheel and 700 mm ahead of the rear wheel.

6. Remove wheel mounting nuts, which were loosened earlier and take out the flat tyre.

7. Roll the spare wheel into position and align the holes of the wheel rim with studs fixed on hub.

8. Reinstall the wheel nuts (tapper end inward) and tighten all the nuts properly by hand.

9. Lower the jack completely, so that tyre rests on the ground and retighten the nuts by using wheel spanner.

10. Press fit the wheel cover back (if fitted)

11. Fix the flat tyre in the place of spare wheel by following reverse steps of removing the spare wheel.

11. Keep all the tools and jack to its original place.
IN CASE OF EMERGENCY

FUSE AND RELAY BOX:
The fuses & relays are located in three fuse boxes:
1. Battery mounted fuse box is mounted in the battery in the engine compartment.
2. Engine compartment fuse box and relay box is located in engine compartment.
3. Cabin wiring harness fuse and relay box are located under the dashboard on driver side and co-driver side.

Location of the Four fuse boxes in your vehicle:

1. Battery Mounted
2. Engine Compartment Fuse Box
3. Cabin Fuse Box - Driver Side
4. Cabin Fuse Box - Co-driver Side
NOTE: The fuse box layout is for reference purpose only. Please refer the sticker provided.
2. BATTERY MOUNTED FUSE AND RELAY BOX

<table>
<thead>
<tr>
<th>NO</th>
<th>RATING</th>
<th>POWER CONSUMER</th>
<th>NO</th>
<th>RATING</th>
<th>POWER CONSUMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>MEGAVAL CAL5</td>
<td>STARTER MOTOR</td>
<td>F6</td>
<td>MIDIVAL 60</td>
<td>IGNITION</td>
</tr>
<tr>
<td>F2</td>
<td>MEGAVAL 150</td>
<td>ALTERNATOR</td>
<td>F7</td>
<td>MIDIVAL 60</td>
<td>BATTERY FEED-CABIN</td>
</tr>
<tr>
<td>F4</td>
<td>MIDIVAL 40</td>
<td>ABS/ESP/COOL. FAN-2</td>
<td>F8</td>
<td>MIDIVAL 30</td>
<td>COOLING FAN1</td>
</tr>
</tbody>
</table>

**NOTE:** The fuse box layout is for reference purpose only. Please refer the sticker provided.
3. CABIN WIRING HARNESS FUSE & RELAY BOX UNDER THE DASHBOARD

**DRIVER SIDE**

<table>
<thead>
<tr>
<th>Component</th>
<th>Ampere</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARK RH</td>
<td>5A</td>
</tr>
<tr>
<td>MASTER LIGHT SW.</td>
<td>15A</td>
</tr>
<tr>
<td>IMMOB. BATT.</td>
<td>10A</td>
</tr>
<tr>
<td>CLUST BATT.</td>
<td>10A</td>
</tr>
<tr>
<td>AT ACC (AT)</td>
<td>5A</td>
</tr>
<tr>
<td>REAR FOG LAMP</td>
<td>10A</td>
</tr>
<tr>
<td>EMS DIAGNOSTIC</td>
<td>5A</td>
</tr>
<tr>
<td>RADIO BATT.</td>
<td>15A</td>
</tr>
<tr>
<td>CDL BATT.</td>
<td>20A</td>
</tr>
<tr>
<td>FUEL FLAP</td>
<td>10A</td>
</tr>
</tbody>
</table>

**NOTE:** Use the designated fuses only.

---

**CO-DRIVER SIDE**

Fuse box sticker locations

**Driver Side:**
It is located inside fuse box flap.

**Co-driver Side:**
It is located on the back side of the glove box.

---

**NOTE:** The fuse box layout is for reference purpose only. Please refer the sticker provided.
### BULB SPECIFICATION

<table>
<thead>
<tr>
<th>SR.NO</th>
<th>DESCRIPTION</th>
<th>CAP TYPE</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Head Lamp - High Beam</td>
<td>H7</td>
<td>12 V 55W</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Head Lamp - Low Beam</td>
<td>H7</td>
<td>12 V 55W</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Head Lamp - Turn Indicator</td>
<td>PY 24 W</td>
<td>12 V 24W</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Head Lamp - Position Lamp</td>
<td>W5W</td>
<td>12 V 5W</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Tail Lamp - Stop/Tail</td>
<td>P 21 / 5W</td>
<td>12 V 21/5W</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Tail Lamp - Turn Indicator</td>
<td>PY 21 W</td>
<td>12 V 21W</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Tail Lamp - Reverse</td>
<td>P 21 W</td>
<td>12 V 21W</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Front Fog Lamp</td>
<td>H3</td>
<td>12V 55W</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Rear Fog Lamp</td>
<td>P 21 W</td>
<td>12 V 21W</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>High Mounted - Stop Lamp</td>
<td>LED MODULE</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Registration Plate Lamp</td>
<td>W5W</td>
<td>12 V 5W</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Roof Lamp - First</td>
<td>LED MODULE</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Roof Lamp - Second &amp; Third</td>
<td>LED MODULE</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Puddle Lamps</td>
<td>W5W</td>
<td>12 V 5W</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>ORVM Indicator</td>
<td>LED MODULE</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Glove Box Lamp</td>
<td>W 5 W</td>
<td>12V 5W</td>
<td>1</td>
</tr>
</tbody>
</table>
HEAD LAMP BULB REPLACEMENT

Procedure:

**WARNING**
- Bulbs can be very hot. You should therefore allow them to cool down before you change them.
- Keep bulbs out of reach of children.
- Never use a bulb which has been dropped. Such a bulb may explode and injure you.
- Do not touch or handle bulbs with bare hand.

Before you change the bulb:
- Only fit bulbs of the same type and wattage.
- Switch the lights OFF before changing a bulb to prevent short circuit.
- Always hold the bulb with a clean, lint free cloth.
- Do not work with wet or greasy fingers.
- If the new bulb does not come ON, contact the nearest TATA authorized service centre.

**High beam bulb replacement:**
1. Open the bonnet.
2. Remove the rubber cap / socket cover on the backside of the headlamp.
3. Disconnect the electrical connector by pulling it out firmly.
4. Loosen the screw to release the bulb retainer spring, which holds the bulb. Release bulb by pressing and moving it upward.
5. Remove the defective headlamp bulb carefully.
6. Fit the bulb by following the above steps in reverse order.
Low beam bulb replacement:
1. Open the bonnet.
2. Remove the rubber cap / socket cover on the backside of the headlamp.
3. Release the bulb retainer spring, which holds the bulb. Release bulb by pressing and moving it upward.
2. Disconnect the electrical connector by pulling it out firmly.
4. Remove the defective headlamp bulb carefully.

Fitment procedure:
1. Place the bulb properly by matching the rectangular notch in the bulb housing and the bulb seat.
2. Lock the headlamp bulb in place, by using the retainer spring. Confirm if the bulb is seated properly by looking through the front lens in case of high beam only.
3. Fix the connector.
4. Put back the socket cover.
TAIL LAMP BULB REPLACEMENT

TAIL LAMP BULB REPLACEMENT:
1. Open the tailgate.
2. Remove the bulb access cut out.
3. Disconnect the connector by pulling it out firmly.
4. You can now replace any of the damaged / fused bulb from the tail lamp cluster.
5. Rotate the bulb holder in anticlockwise direction and remove the bulb from the holder.
6. Replace the bulb with new one.
7. Rotate the bulb holder in clockwise direction for fitment and connect the connector.
8. Fit the bulb access cut out.

NOTE
Same procedure is applicable for all the bulbs of tail lamp.

WARNING
- Allow bulbs to cool down before you change them.
- Keep bulbs out of reach of children.
- Never use a bulb, which has been dropped. Such a bulb may explode and injure you.
PRELIMINARY TROUBLESHOOTING

(These tips are given for your guidance and preliminary jobs to be done in an emergency situation. In normal case, the problems should be attended in an Authorised Workshop by following the repair procedures given in Workshop Manual)

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>PROBLEM OBSERVED</th>
<th>CAUSE</th>
<th>ACTION TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Engine not cranking</td>
<td>Dead battery, loose, dirty connections</td>
<td>Charge / change the battery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Battery not getting charged from the alternator connections</td>
<td>Clean and tighten battery and alternator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Starter motor relay damaged</td>
<td>Check battery to alternator connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Starter motor fuse blown off</td>
<td>Loose starter motor connections</td>
</tr>
<tr>
<td>1.</td>
<td>Engine cranks but does not fire</td>
<td>Air in the fuel system</td>
<td>Prime the fuel system using priming pump</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIL glowing</td>
<td>Check and rectify the fault code</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incorrect Immobilizer pairing</td>
<td>Do immobilizer pairing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unlearnt vehicle Key</td>
<td>Do immobilizer learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged vehicle Key</td>
<td>Use new key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose cam sensor connections</td>
<td>Rectify the connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose crank sensor connections</td>
<td>Rectify the connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose rail pressure connector</td>
<td>Rectify the connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose EMS ECU connector</td>
<td>Rectify the connections</td>
</tr>
<tr>
<td>2.</td>
<td>Engine Overheat</td>
<td>Coolant level low</td>
<td>Top up the coolant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coolant leakage from radiator cap</td>
<td>Retighten radiator cap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coolant leakage from the circuit</td>
<td>Rectify the leakage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coolant hose punctured</td>
<td>Replace the hose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Radiator fans not working</td>
<td>Check the fan connector, loose or disconnected</td>
</tr>
</tbody>
</table>
## PRELIMINARY TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>PROBLEM OBSERVED</th>
<th>CAUSE</th>
<th>ACTION TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brakes binding</td>
<td>Get defect rectified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High delivery pressure in AC circuit</td>
<td>Get defect rectified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radiator fins clogged</td>
<td>Get defect rectified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radiator coolant passage blocked</td>
<td>Get defect rectified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thermostat defective</td>
<td>Get defect rectified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Battery charging</td>
<td>Loose battery to alternator connections</td>
<td>Retighten the connections</td>
</tr>
<tr>
<td></td>
<td>indicator glowing continuously</td>
<td>Loose battery connections</td>
<td>Retighten the connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective alternator</td>
<td>Replace the alternator</td>
</tr>
<tr>
<td></td>
<td>Battery charging</td>
<td>MIL ON</td>
<td>Check for fault code and get it rectified</td>
</tr>
<tr>
<td></td>
<td>indicator glowing continuously</td>
<td>Air filter element choked</td>
<td>Clean air filter as per recommendations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fuel filter choked</td>
<td>Replace the fuel filter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low tyre pressure</td>
<td>Properly inflate the tyres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brake binding</td>
<td>Re-set the brakes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engine overheat</td>
<td>Top up coolant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Water in fuel’ lamp glowing</td>
<td>Drain water from fuel pre-filter cum sedimenter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘ABS’ lamp ON</td>
<td>Rectify the ABS unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for Diesel leakage</td>
<td>Rectify the leakage</td>
</tr>
<tr>
<td>5.</td>
<td>Poor pick up</td>
<td>MIL ON</td>
<td>Check for fault code and get it rectified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air filter element choked</td>
<td>Clean air filter as per recommendations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fuel filter choked</td>
<td>Replace the fuel filter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low tyre pressure</td>
<td>Properly inflate the tyres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brake binding</td>
<td>Re-set the brakes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engine overheat</td>
<td>Top up coolant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Water in fuel’ lamp glowing</td>
<td>Drain water from fuel pre-filter cum sedimenter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘ABS’ lamp ON</td>
<td>Rectify the ABS unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for Diesel leakage</td>
<td>Rectify the leakage</td>
</tr>
<tr>
<td>6.</td>
<td>Low engine oil</td>
<td>Low engine oil level</td>
<td>Top up engine oil</td>
</tr>
<tr>
<td></td>
<td>pressure indicator ON</td>
<td>Faulty pressure switch</td>
<td>Rectify the pressure switch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty inst. cluster lamp connections</td>
<td>Rectify the instrument cluster</td>
</tr>
<tr>
<td>7.</td>
<td>Raised engine idle speed</td>
<td>Water in fuel lamp ON</td>
<td>Drain water from fuel pre-filter cum sedimenter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accelerator pedal connections loose</td>
<td>Get it rectified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engine Overheat</td>
<td>Top up coolant and refer Point no.3</td>
</tr>
<tr>
<td>SR. NO.</td>
<td>PROBLEM OBSERVED</td>
<td>CAUSE</td>
<td>ACTION TO BE TAKEN</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------</td>
<td>------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>8.</td>
<td>Radiator fans running continuously even with AC in OFF condition</td>
<td>Defective refrigerant pressure switch</td>
<td>Rectify the refrigerant pressure switch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIL ON</td>
<td>Check for the fault code and get it rectified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective coolant temperature sensor</td>
<td>Rectify coolant temperature sensor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engine running hotter than normal</td>
<td>Refer point no. 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty fan relay</td>
<td>Get the relay rectified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty EMS ECU</td>
<td>Re-tension the belts</td>
</tr>
<tr>
<td>9.</td>
<td>Accessory belt noise</td>
<td>Low belt tensions</td>
<td>Re-tension the belts</td>
</tr>
<tr>
<td>10.</td>
<td>Water in fuel lamp ‘ON’</td>
<td>Water accumulated in water sediment</td>
<td>Drain water from fuel pre-filter cum sediment</td>
</tr>
</tbody>
</table>

**CLUTCH**

| 1.     | Clutch does not get disengaged                       | Less clutch pedal height           | Set clutch pedal height inline with brake pedal |
|        |                                                      | Air in the hydraulic system        | Bleed the system                           |
|        |                                                      | Less fluid in the master cylinder  | Get clutch fluid filled                    |
| 2.     | Clutch pedal goes too low                            | Less clutch pedal height           | Set clutch pedal height inline with brake pedal |
|        |                                                      | Air in the hydraulic system        | Bleed the system                           |
|        |                                                      | Less fluid in the master cylinder  | Get clutch fluid filled                    |
| 3.     | Clutch pedal return sluggish                         | Less clutch pedal height           | Set clutch pedal height inline with brake pedal |
|        |                                                      | Blocking of vent in brake fluid    | Open the cap from the bottle and clean bottle the breather hole, if clogged |

**GEAR BOX**

<p>| 1.     | Gears slipping out of mesh                          | Worn/damaged grooves on shifter shaft | Replace |
|        |                                                      | Worn shift fork or synchroniser sleeve | Replace |
|        |                                                      | Weak or damaged detent springs      | Replace |
|        |                                                      | Worn bearings on input shaft or layshaft | Replace |
|        |                                                      | Worn dog teeth on sleeve and gear   | Replace sleeve and gear                    |</p>
<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>PROBLEM OBSERVED</th>
<th>CAUSE</th>
<th>ACTION TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Hard shifting</td>
<td>Inadequate lubricant</td>
<td>Replenish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate clutch pedal travel</td>
<td>Adjust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distorted or broken clutch disc</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged clutch pressure plate</td>
<td>Replace clutch cover/disc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worn synchrocones</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worn dog teeth on sleeve or gear</td>
<td>Replace sleeve or gear</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distorted shift shaft/linkages</td>
<td>Replace</td>
</tr>
<tr>
<td>3.</td>
<td>Noise</td>
<td>Inadequate or insufficient lubricant</td>
<td>Replenish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged or worn bearing(s)</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged or worn gear(s)</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged or worn synchroniser parts</td>
<td>Replace</td>
</tr>
</tbody>
</table>

**BRAKES**

| 1.     | Poor brakes      | Insufficient brake fluid.                 | Get the brake fluid filled            |
|        |                   | Air in the system                          | Bleed the system                      |
|        |                   | Vacuum leakage                             | Rectify the leakage                    |
|        |                   | Brake fluid contamination                  | Replace the brake fluid               |
|        |                   | Brake fluid, grease, oil or water on pad /drum | Replace the leaking line, bleed the system. |
|        |                   | Worn brake lining/pad                      | Get the liners/pad replaced            |
|        |                   | Soft or weak hose                          | Check and replace                      |
| 2.     | Spongy pedal      | Air in the system                          | Bleed the system                      |
## PRELIMINARY TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>PROBLEM OBSERVED</th>
<th>CAUSE</th>
<th>ACTION TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Brake pulling to one side</td>
<td>Oil on the lining/pad</td>
<td>Clean the pad lining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One side shoe (pad) worn</td>
<td>Get the shoe pad replaced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wheel adjustment disturbed</td>
<td>Adjust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unequal tyre pressure</td>
<td>Adjust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One side brake pipe clogged</td>
<td>Get the brake line cleaned and bleed the system</td>
</tr>
<tr>
<td>4.</td>
<td>Brake grab</td>
<td>Improperly adjusted parking brake</td>
<td>Get correctly adjusted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brake fluid container breather hole clogged</td>
<td>Clean the hole on the container</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No brake pedal free play/brake pedal not returning fully</td>
<td>Adjust brake pedal Check clevis pin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective tandem master cylinder</td>
<td>Replace/rectify tandem master cylinder.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brake light switch over tightened</td>
<td>Set brake light switch.</td>
</tr>
<tr>
<td>5.</td>
<td>Brake Squeal</td>
<td>Defective brake lining/pad</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glazed lining/pad</td>
<td>Clean or replace lining/pad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wrong lining/pad</td>
<td>Install correct lining/pad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Front pads /Antisqueal shims rubbing on the disc</td>
<td>Get corrected</td>
</tr>
</tbody>
</table>

### STEERING

<p>| 1.      | Hard steering             | For power steering - Less fluid in the power steering reservoir. | Get the recommended fluid topped up to correct level |
|         |                           | Air in the system                                                      | Get the air removed by bleeding the system          |
|         |                           | Loose pump belt                                                        | Get the belt correctly adjusted                     |</p>
<table>
<thead>
<tr>
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<th>CAUSE</th>
<th>ACTION TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Abnormal or excessive tyre wear</strong></td>
<td>Tyre out of balance</td>
<td>Check balance and/or adjust if required.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steering geometry disturbed</td>
<td>Adjust steering geometry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tyres not adequately inflated</td>
<td>Adjust tyre pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wobbly wheel or tyre</td>
<td>Replace wheel or tyre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective tyre</td>
<td>Replace tyre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brake grabbing</td>
<td>Check and rectify</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Excessive braking</td>
<td>Modify driving habit</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Abnormal noise from front end</strong></td>
<td>Worn, sticky or loose tie rod ends, lower ball joints, tie rod in any of its joint</td>
<td>Replace tie rod end, suspension arm, tie rod or drive shaft joints</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warning noise for pad wear</td>
<td>Replace pad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged struts or mounting</td>
<td>Repair mounting or replace struts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worn suspension arm bushings</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose wheel nuts</td>
<td>Tighten wheel nuts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose suspension bolts or nuts</td>
<td>Tighten suspension bolts or nuts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broken or damaged wheel bearing</td>
<td>Replace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poorly lubricated or worn strut bearings</td>
<td>Lubricate or replace strut bearings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loose caliper housing bolts</td>
<td>Check &amp; tighten</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Ride too soft / bumpy</strong></td>
<td>Faulty struts</td>
<td>Replace strut</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Suspension bottoms</strong></td>
<td>Over loaded</td>
<td>Check loading</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty struts</td>
<td>Replace struts</td>
</tr>
<tr>
<td>SR. NO.</td>
<td>PROBLEM OBSERVED</td>
<td>CAUSE</td>
<td>ACTION TO BE TAKEN</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>No lights on the dash board after turning on the ignition key</td>
<td>Battery terminal disconnected</td>
<td>Get the battery properly connected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Battery completely dead</td>
<td>Get the battery charged</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Get the alternator and charging circuit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>checked</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for parking lamp fuse</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Non functioning elect. accessories such as power windows, head lamps, fuel tank</td>
<td>Blown fuse in the circuit</td>
<td>Replace the fuse if blown</td>
</tr>
<tr>
<td></td>
<td>flap, wiper and washer etc.</td>
<td>Loose connectors</td>
<td>Get the connection properly tightened</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Circuit relay loose</td>
<td>Tighten the relay correctly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective components</td>
<td>Get the defective component replaced from Authorised Workshop</td>
</tr>
<tr>
<td>3.</td>
<td>All turn indicator lights are flashing continuously, roof lamps are turned 'ON' &amp; door are unlocked</td>
<td>Inertia switch triggered</td>
<td>Reset inertia switch. Refer the procedure ‘Resetting the inertia switch’</td>
</tr>
<tr>
<td></td>
<td><strong>AIR CONDITIONING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Fan motor does not operate</td>
<td>Blown fuse</td>
<td>Replace fuse and correct any wiring short</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty connection</td>
<td>Properly connect poor connections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty motor</td>
<td>Replace motor if no conductance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty blower control module</td>
<td>Replace blower control module</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty fan switch</td>
<td>Replace switch</td>
</tr>
<tr>
<td>2.</td>
<td>Motor operates but air flow is minimum</td>
<td>Obstruction at evaporator inlet</td>
<td>Clean evaporator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air leak</td>
<td>Correctly seal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty thermostat</td>
<td>Adjust or replace thermostat</td>
</tr>
</tbody>
</table>
### PRELIMINARY TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>PROBLEM OBSERVED</th>
<th>CAUSE</th>
<th>ACTION TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Insufficient cooling, Air flow normal and compressor operating</td>
<td>Incorrect refrigerant quantity or defect in system aggregates</td>
<td>Get the defect rectified at nearest authorised service centre</td>
</tr>
</tbody>
</table>

### WIPERS

<table>
<thead>
<tr>
<th>1.</th>
<th>Narrow streaks are left on the wind shield making it hard to see.</th>
<th>Foreign matter has attached to the blade or blade edge of the blade is worn out</th>
<th>Clean the edge of the blade. If streaks still appear replace it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>The wiper blade jumps across the windshield &amp; makes a lot of noise across the surface.</td>
<td>No proper contact of wiper blade with wind shield glass and wiper blade does not move smoothly</td>
<td>Clean the wind shield. If jumping persists replace the blade.</td>
</tr>
<tr>
<td>3.</td>
<td>The wipe leaves large un-wiped spots.</td>
<td>Rubber deformed</td>
<td>Replace the blade</td>
</tr>
<tr>
<td>4.</td>
<td>The blade does not contact with the windshield surface evenly, leaving a large un-wiped surface.</td>
<td>Deformed wiper blade / arm</td>
<td>Replace wiper blade / arm</td>
</tr>
</tbody>
</table>
**ENGINE COMPARTMENT**

<table>
<thead>
<tr>
<th>Number</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>ABS ECU/HCU</td>
</tr>
<tr>
<td>02.</td>
<td>Brake Fluid Reservoir</td>
</tr>
<tr>
<td>03.</td>
<td>Power Steering Fluid Container</td>
</tr>
<tr>
<td>04.</td>
<td>Engine Oil Filling Cap</td>
</tr>
<tr>
<td>05.</td>
<td>Priming / Pear Pump</td>
</tr>
<tr>
<td>06.</td>
<td>Fuse Box</td>
</tr>
<tr>
<td>07.</td>
<td>Windshield Washer Fluid Reservoir</td>
</tr>
<tr>
<td>08.</td>
<td>ECU</td>
</tr>
<tr>
<td>09.</td>
<td>Battery</td>
</tr>
<tr>
<td>10.</td>
<td>Radiator Cap</td>
</tr>
<tr>
<td>11.</td>
<td>Auxiliary Tank</td>
</tr>
<tr>
<td>12.</td>
<td>Air Filter</td>
</tr>
<tr>
<td>13.</td>
<td>Engine Oil Dip Stick</td>
</tr>
</tbody>
</table>
AIR FILTER & ENGINE OIL LEVEL

AIR FILTER:

Replace air filter element as per the servicing instructions label on air filter body. We do not recommend to clean the air filter element before the replacement period, however if filter element is to be cleaned (in case of vehicle operation in dusty condition) procedure indicated on servicing label to be followed. Get the air filter element replaced at a TATA MOTORS Authorised Service Center.

Always use a genuine air filter element.

NOTE

- When a vehicle is driven under dusty conditions, frequent cleaning and replacement of the air-cleaner element is necessary.
- Clogged air-cleaners lead to increased resistance to air intake which increases fuel consumption. Using low pressure compressed air, blow off dust on the air cleaner element. If the air cleaner element appears to be choked, replace it with a new one.

ENGINE OIL LEVEL:

Warm up the engine to normal operating temperature.

Turn it off and wait for at least 30 minutes for the oil to return to the oil pan.

Be sure the vehicle is on a level surface.

Pull out the dipstick, wipe it clean, and reinsert if fully.

Pull it out again and examine the oil level. It should be between ‘Min’ and ‘Max’ level. If not, top up with recommended engine oil.
ENGINE COOLANT LEVEL:

1. Engine Coolant Tank
2. Radiator Cap

NOTE
If auxiliary tank is empty, fill it up to the ‘MAX’ level.

CAUTION
Engine coolant can damage the finish of your vehicle. If engine coolant spills on the vehicle, wash it off thoroughly with clean water.

WARNING
- Do not remove radiator cap when the engine is hot. The coolant is under pressure, it may erupt through the opening if the cap is removed. You may suffer with serious burning. Do not open the radiator cap until the radiator is cool to touch.
- Check the coolant level in the radiator auxiliary tank. It should be in between MAX and MIN level.

BRAKE FLUID LEVEL:

The level of the brake fluid must be between the MIN. and MAX. marks on the side of the brake fluid container. If the level falls below the min. mark, add recommended brake fluid. (Refer section - Fuels, coolants and lubricants)

In case of spongy or hard pedal or low brake efficiency, please contact the nearest TATA authorised Service outlet.

CAUTION
- Do not allow brake fluid to make contact with the skin or eyes. In case of accidental contact, wash eyes with cool water immediately and consult a doctor.
- Do not allow brake fluid to splash or spill on the paint surface as it will damage the paint. In case of spillage, wipe it off immediately.

NOTE
If auxiliary tank is empty, fill it up to the ‘MAX’ level.
**POWER STEERING RESERVOIR FLUID:**

The level of the power steering fluid must be between the MIN. and MAX. marks on the side of the power steering fluid container. If the level falls below the MIN. mark, add recommended fluid. (Refer section - Fuels, coolants and lubricants)

In case of leakage or hard steering, please contact the nearest TATA Authorised Service outlet.

---

**CAUTION**

- Do not start the engine without oil in the power steering system.
- Do not allow dirt into power steering fluid reservoir during refilling or top up.

**WINDSHIELD WASHER FLUID:**

Windshield washer fluid container filler neck is provided on the left hand side behind the fuse box in the engine compartment.

---

**NOTE**

- Do not add detergent or any solvent in the windshield washing water.

**FUEL FILTER:**

Fuel filter separates dust particles from the fuel and allows clean fuel in to the fuel injection system. It also separates and stores water.

*Get it replaced with genuine fuel filter and at specified intervals.*
WATER DRAINING FROM FUEL PRE-FILTER CUM SEDIMENTER:

1. Stop the engine and wait until pressure stabilize.
2. Disconnect the sensor pigtail and also disconnect one of the fuel lines, either inlet or outlet.
3. Keep a suitable container to collect the drained water.
4. Rotate the fuel pre-filter cum sediment sensor in the anti-clockwise direction for about 2 turns and allow approximately 120cc of contaminated diesel (diesel + water) to drain. As soon as the flow is free of water, tighten the sensor.
5. Connect the fuel line and refill the fuel line using pear pump.

NOTE
Whenever water draining from fuel pre-filter is done, it should be carried out for main filter also.
TURBOCHARGER:

Your vehicle has a variable nozzle turbocharger (VNT) and is connected to the exhaust manifold. Turbocharger is used to increase the volumetric efficiency of the engine.

Lubrication of Turbocharger:

Idle the engine for a while (one minute) after starting the engine and before stopping the engine to ensure adequate lubricating oil supply to the turbocharger.

If you suspect any malfunction of the turbocharger, take the vehicle to the nearest TATA MOTORS authorised dealership.

INTERCOOLER:

Intercooler cools the hot air coming from the turbocharger before entering the intake manifold. It does not require any maintenance, however it can be cleaned externally by blowing compressed air.

CAUTION

While cleaning, ensure that intercooler fins are not damaged. If the fins get damaged, it could lead to loss of performance and subsequent failure.

CATALYTIC CONVERTER:

The catalytic converter is fitted on your vehicle to reduce exhaust pollution. The catalytic converter will quickly heat up after starting to ensure that it operates correctly during the warm up phase of the engine.

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.

1. It is mandatory to use diesel fuel with low sulphur content (Refer recommended fuels). Use of any other diesel fuel can increase the pollutants.

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

Maintenance of Catalytic Converter

Flush the Catalytic Converter by giving full throttle (4 to 5 times) in standing condition of vehicle on daily basis.

In addition to this it is recommended to run the vehicle at high speed (80 to 100 kmph) for few km as this will help to flush the carbon soot deposits from exhaust system and catalytic converter. High speed running of the vehicle may be done periodically to avoid chocking of catalytic converter.

CAUTION

- Avoid push start or tow-starting the vehicle. (Use jump leads).
- Avoid long (not more than ten sec.) repeat (not more than three times) starting of the Vehicle.

-
Avoid long idling (to warm-up). If the engine is running rough, after a cold start.

Avoid pre-coating / painting of catalytic converter.

WHEELS & TYRES:

1. Under inflation  Excessive Side Tread Wear
2. Correct Tyre Pressure  Uniform Tyre Wear
3. Over inflation  Excessive Centre Tread Wear

Check for inflation and condition of your vehicle tyres periodically.

Inflation:

Check the pressure in the tyres when they are cold.

Proper inflation of tyres gives you the best combination of riding comfort handling, tyre life and better fuel efficiency.

Recommended Tyre Pressures

<table>
<thead>
<tr>
<th></th>
<th>UNLADEN</th>
<th>LADEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT</td>
<td>2.2 bar (32 psi)</td>
<td>2.3 bar (34 psi)</td>
</tr>
<tr>
<td>REAR</td>
<td>2.2 bar (32 psi)</td>
<td>2.3 bar (34 psi)</td>
</tr>
</tbody>
</table>

Over inflation of tyres makes the vehicle ride bumpy and harsh. Tyres are more prone to uneven wear and damage from road hazards.

Under inflated tyres reduce your comfort in vehicle handling and are prone to failures due to high temperature. They also cause uneven wear and more fuel consumption.

NOTE

Tyre pressure should be checked in "cold" condition. Hot tyres tend to show a slightly higher value.

CAUTION

1. Every time you check inflation pressure, you should also examine tyres for damage, trapping of foreign objects in the treads and wear.
2. If you notice bumps or bulges in the tread or the side of the tyre, replace the tyre.
3. If there are cuts, splits or cracks in the side of the tyre, replace the tyre.
4. Replace tyre if excessive tread wear or non uniform tyre wear is noticed.

*For Tyre Size and Rim Size, please refer Technical Information Chapter.*

**Tyre Rotation:**

To equalize wear on each tyre, rotate them periodically as shown in the figure. Regular tyre rotation will also prevent abnormal wear.

Tyre rotation must be carried out at specified intervals as per service schedule.

**Tyre Rotation (5 Tyre):**

![Tyre Rotation (5 Tyre)](image)

**Tyre Rotation (4 Tyre):**

![Tyre Rotation (4 Tyre)](image)

**NOTE**

Spare wheel with stylized wheel rim should not be used for tyre rotation.
Wheel alignment:
Incorrect wheel alignment causes excessive and uneven tyre wear. Check wheel alignment at specified intervals. Wheel alignment values are given below:

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caster</td>
<td>3° ± 30'</td>
<td>-</td>
</tr>
<tr>
<td>Camber</td>
<td>0° ± 30'</td>
<td>-</td>
</tr>
<tr>
<td>Toe Out</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Toe In</td>
<td>2 - 5 mm</td>
<td>-</td>
</tr>
</tbody>
</table>

Wheel Balancing:
Wheels of your vehicle are balanced for better ride comfort and longer tyre life. It is recommended to balance the wheel, whenever tyre is removed from the rim.

Radial tubeless tyres:
Radial tubeless tyres have following advantages over conventional tube tyres:
- Lesser heat generation.
- Improves dynamic stability.
- Lower rolling resistance and lesser weight, which improves fuel efficiency.
- Better safety

Special care for tubeless tyres:
- Tubeless tyres are coated with impermeable layer of rubber from inside which holds the air inside the tyre. Do not scratch inside of tubeless tyre with metallic or sharp object. This may cause gradual loss of air.
- If wheel rim gets damaged in the service, get the wheel rim repaired/replaced immediately. Running the vehicle with damaged rim may cause deflation of tyre and subsequent dislodging of tyre from rim.
- Maintain recommended tyre pressure. Over inflated tyre may cause puncture or bursting of tyre.

NOTE
Life and wear pattern of tyres depends on various parameters like tyre pressure, wheel alignment, wheel balancing, tyre rotation, etc. It also largely depends on vehicle speed, load carried, usage, driving habits, road conditions, etc.
BATTERY:

Check the battery for proper electrolyte level and corrosion on the terminals.

1. Check the battery for electrolyte level against the marking on the battery outer case.

2. Check the battery terminals for corrosion (a white or yellowish powder). To remove it, cover the terminals with a solution of baking soda. It will bubble up and turn brown.

3. When this stops, wash it off with plain water. Dry off the battery with a cloth or paper towel.

4. Coat the terminals with petroleum jelly to prevent future corrosion.

5. Use a proper wrench to loosen and remove cables from the terminals.

Always disconnect the negative (-ve) cable first and reconnect it last.

Clean the battery terminals with a terminal cleaning tool or wire brush.

Reconnect and tighten the cables, coat the terminals with petroleum jelly.

Ensure that the battery securely mounted.

If you need to connect the battery to a charger, disconnect the battery negative cable to prevent damage to your vehicle’s electrical system.

WARNING

- Keep all sparks and open flames and smoking materials away from the battery.
- Getting electrolyte in your eyes or on the skin can cause severe burns. Wear protective clothing and a face shield or have a skilled technician to do the battery maintenance.
- The battery contains sulphuric acid (electrolyte) which is poisonous and highly corrosive in nature.

- During normal operation, the battery generates gas which is explosive in nature. A spark or open flame can cause the battery to explode causing very serious injuries.

- Wear protective clothing and a face shield or have a skilled technician to do the battery maintenance.
VEHICLE CARE:

Your vehicle is subjected to many external influences such as climate, road conditions, industrial pollution and humidity. These conditions demand regular care of the vehicle body. Dirt, insects, bird droppings, oil, grease, fuel and stone chippings should be removed as soon as possible.

Washing your vehicle:

Following tips while washing your vehicle:

HAND WASH:

1. Always wash your vehicle in shade and where the surface is at room temperature.
2. Wash with mild car wash soap like ‘Car Shampoo’ and use a soft 100% cotton cloth to avoid scratches.
3. To avoid scratches, please wear soft gloves. Remove finger rings, nails, wrist watch while washing.
4. To remove stubborn stains and contaminants like tar, use turpentine or cleaners like ‘Stain remover’ which are safe for paint surfaces.
5. Avoid substances like petrol, diesel, kerosene, benzene or other solvents that cause damage to paint.
6. Dry your vehicle thoroughly to prevent any damp spots.
7. Rinse all surfaces thoroughly to prevent any traces of soap and other cleaners as this may lead to the formation of stains on the painted surface later.

NOTE

Do not direct high pressure washer fluid/water jets at electrical devices and their connectors during washing. This is to prevent malfunction/failure of electrical system due to water ingress.

Waxing:

Waxing and polishing is recommended to maintain the gloss and wet-look appearance of your paint finish.
1. Use a good quality polish and wax for your vehicle.
2. Re-wax your vehicle when the water does not slip off the surface and collects over the surface in patches.

Tips for the care of your new vehicle finish:

If your vehicle is washed in an automatic car wash, please remember that the paint can be scratched by type of brushes, unfiltered washing water or the washing process itself. Scratching reduces paint durability and gloss, especially on darker colours. It is suggested to wash the vehicle by hand with cool and clean water using a soft cloth or sponge. Please do not use soap but a car shampoo recommended by your dealer.
**Precautions:**

1. Always wash your vehicle in shade, avoiding direct exposure to sunlight during washing.
2. Dry wiping your vehicle may lead to the formation of scratches. Always use a soft cloth and clean water while wiping your vehicle.
3. Always keep your vehicle parked in a well ventilated shade. Exposure to heat with entrapped moisture promotes corrosion.
4. Avoid driving on gravel roads, as the possibility of paint chip off due to the impact of stones is high. Also avoid driving on freshly tarred road.
5. External contamination in the form of sap or industrial fall-out may spoil or develop spots on a new finish. Hence avoid parking your vehicle near trees, which are known to drop sap, or near factories.
6. Bird droppings may damage the paint finish, hence bird dropping must be immediately washed off.
7. The paint finish is susceptible to damage in case petrol, brake fluid, liquid from vehicle battery, oil, antifreeze, transmission fluid or windshield solvent spills onto the painted surface. In case of such a spillage immediately rinse the affected area with water. Avoid wiping the area as far as possible. If wiping is required, wipe the area gently with soft cotton cloth.
8. Avoid using sharp objects to scrap off tar / mud from a painted surface.

**Various environmental hazards affecting paints:**

**The enemy:**
- Ultraviolet Rays, Pollution, Tree Sap, Bird Droppings, Car Wash Chemicals, Road Salt, Acid Rain.

**Benefits of external enrichment:**
- Removal of medium scratches, orange peel, oxidation, dust nibs etc and swirl marks from painted surface.
- Restoration of original gloss levels UV protection after gloss is restored.
- Cleaning and dressing of tyres, Bumpers and all exterior plastic moldings / trims.

**Cleaning of carpets:**

Vacuum clean the carpet regularly to remove dirt. Dirt will make the carpet wear out faster. Periodically shampoo the carpet to keep it looking new.

Use carpet cleaners (preferably foam type). Follow the instructions that come with the cleaner. Apply it with a sponge or soft brush. Keep the carpeting as dry as possible by not adding water to the foam.

**NOTE**

Avoid wiping of painted surface in dry condition as it may leave scratches on the painted surface.
Cleaning of window glasses:
Clean the windows inside and outside with commercially available glass cleaners.
This will remove the haze that builds up on the inside of windows. Use a soft cloth or paper towels to clean all glass and plastic surfaces.

Cleaning of rear windshield glass (With printed circuit):
While cleaning rear windshield glass, avoid to wipe the glass from inside. If required, always wipe it with soft cotton cloth and inline with printed circuit.

NOTE
Do not rub the glass with a dry cloth across the printed circuit, this may damage the printed circuit.

RFID TAG
RFID TAG is pasted on front windshield from inside. It enables Electronic toll collection.

DO NOT TRY TO PEEL OFF RFID TAG
TML PART NO. 2816 5420 99 05

NOTE
Do not attempt to rip or tamper the tag. It will disable the functionality of the tag.
**VEHICLE CARE**

**Wiper care**:  
Wiper blade attack angle on windshield glass should be 90° i.e. perpendicular. Remove wiper blade and root wiper arm on windshield glass in the centre position. Check the gap between arm strip and glass.

![Wiper care diagram]

**Parking vehicle for long duration (Non-use maintenance)**:

- Park the vehicle in covered, dry and well ventilated premises. Engage gear.
- Remove the battery terminal cables (First remove the cable from the negative terminal)
- Make sure the hand brake is engaged.
- Clean and protect the painted parts using protective wax.
- Clean and protect the shiny metal parts using commercially available special compounds.
- Sprinkle talcum powder on the rubber of windscreen wiper and lift them off the glass.
- Cover the vehicle with a cloth or perforated plastic sheet. Do not use sheets of imperforated plastic as they do not allow moisture on the vehicle body to evaporate.
- Do not drain the engine cooling system.

**FOR CHATTERING and NOISY PROBLEMS**

Windshield Glass

OK

NOT OK
FUEL:

High speed diesel conforming to IS1460 or EN 590 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.

Ratio for mixing of supplementary fuel and diesel are shown in the table.

<table>
<thead>
<tr>
<th>Outside Ambient temp. upto Deg.C</th>
<th>Percentage</th>
<th>Winter Grade Diesel</th>
<th>Supplementary Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto 0°C</td>
<td>100</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0°C to -10°C</td>
<td>70</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>-10°C to -15°C</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

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

WARNING

Do not mix gasoline or alcohol with diesel. This mixture can cause explosion.

NOTE

Where oxidation catalytic converter is fitted, it is mandatory to use diesel fuel with sulphur contents less than 0.005 % (BS-IV). Use of any other diesel fuel can increase the pollutants.
LUBRICANTS AND COOLANTS:

Lubricants:

Engine oil: Recommended grade of engine oil confirming to API-CI4 SAE 15W40 or higher grade engine oil to be used. Specification and range of ambient temperature at which these can be used are given in the table below:

<table>
<thead>
<tr>
<th>Ambient temp. in deg.C</th>
<th>Engine oil grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>-5 and above</td>
<td>SAE 15W40</td>
</tr>
<tr>
<td>-20 to 0</td>
<td>SAE 5W30</td>
</tr>
</tbody>
</table>

Gearbox:
75W90 GL 4 Synthetic.

Brake fluid:
SAE J 1703, DOT 4

Rear Axle & Front Live Axle:
85W140 API-GL-5

Power Steering:
ATF - Dexron II-D

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 premixed coolant as recommended.

It is recommended that the entire cooling system should be drained and filled with fresh premixed coolant.

Windscreen Washer Antifrost
Concentration -
1:5 For 0°C
1:1 For 10°C
2: 5 For 16°C
1: 0 For 37°C

NOTE
We strongly recommend to refill your vehicle’s engine coolant only at a TATA MOTORS Authorised service centre.
## Technical Information

### Co-Branded Lubricants and Coolants

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
<th>Company</th>
<th>Brand</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engine Oil</strong></td>
<td>API-CI4 PLUS (SAE 15W40)</td>
<td>Castrol</td>
<td>Castrol RX Super Turbo 15W40 CI4 Plus</td>
<td>7.5 Litres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exxon Mobil</td>
<td>Mobile Delvac Tata Motors Genuine CI4 Plus</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HPCL</td>
<td>HP Milcy No.1 Plus Petronas Urania TM CI4 Plus 15W40</td>
<td></td>
</tr>
<tr>
<td><strong>Coolant</strong></td>
<td>50:50 ratio premixed</td>
<td>S-CCI</td>
<td>Golden Cruiser Premium 1400M Thanda Raja P TGO Radicoool SFO Premix</td>
<td>Approx. 9 Litres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HPCL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Castrol</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gearbox</strong></td>
<td>Synthetic Gear Oil 75W90 GL4</td>
<td>Castrol</td>
<td>Castrol Syntro 75W90 GL4</td>
<td>3.0 Litres (G-6450)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HPCL</td>
<td>HP GO XP 75W90 TGO</td>
<td>2.2 Litres (G-76)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exxon Mobil</td>
<td>MOBILUBE 1 SHC 75W90</td>
<td></td>
</tr>
<tr>
<td><strong>Transfercase</strong></td>
<td>ATF Type-A</td>
<td>Shell</td>
<td>Spirax S3 ATF MD3</td>
<td>1.2 - 1.4 Litres</td>
</tr>
<tr>
<td><strong>Power Steering Oil</strong></td>
<td>ATF DEXRON-IID</td>
<td>Castrol</td>
<td>Castrol ATF DEX II Mobil ATF 220</td>
<td>1.6 Litres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HPCL</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rear Axle</strong></td>
<td>85W140 API-GL5 (Limited Slip Differential)</td>
<td>HPCL</td>
<td>HP Gear Oil XP 85W140 T2 Extra Long Life Rear Axle Oil 85W140</td>
<td>1.8 Litres and 0.09 Litres (For friction modifier)</td>
</tr>
<tr>
<td></td>
<td>85W140 API-GL5 (Standard Differential)</td>
<td>HPCL</td>
<td>HP Gear Oil XP 85W140 T2 Extra Long Life Rear Axle Oil 85W140</td>
<td>1.8 Litres</td>
</tr>
<tr>
<td></td>
<td>85W140 API-GL5</td>
<td>HPCL</td>
<td>HP Gear Oil XP 85W140 T2 Extra Long Life Rear Axle Oil 85W140</td>
<td>1.50 Litres</td>
</tr>
<tr>
<td><strong>Live Front Axle</strong></td>
<td>85W140 API-GL5</td>
<td>HPCL</td>
<td>HP Gear Oil XP 85W140 T2 Extra Long Life Rear Axle Oil 85W140</td>
<td>1.50 Litres</td>
</tr>
<tr>
<td><strong>Brake / Clutch Fluid</strong></td>
<td>SAE J 1703, DOT 4</td>
<td>S-CCI</td>
<td>Tata Genuine Brake Fluid (DOT4) Castrol Brake Fluid DOT 4 Tutela TOP 4 TM</td>
<td>As Required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CASTROL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PETRONAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CASTROL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

136
### TECHNICAL SPECIFICATIONS

#### ENGINE

| Model | TATA 2.2 VariCOR LET (Opt-1)  
|       | TATA 2.2 VariCOR 400 (Opt-2) |
| Type | Direct injection, Common rail, Turbocharged, Intercooled Diesel Engine |
| No. Of Cylinders | 4 inline |
| Bore / Stroke | 85 mm x 96 mm |
| Capacity | 2179 cc |

| Max. Engine Output | 110 kW (150PS) @ 4000 rpm as per CMVR / 115 - (9) 1996 (Option-1)  
|                   | 115 kW (156PS) @ 4000 rpm as per CMVR / 115 - (9) 1996 (Option-2) |

| Max. Torque | 320 Nm @ 1500 - 3000 rpm as per CMVR 115 - (9) 1996 (Option-1)  
|            | 400 Nm @ 1750 - 2500 rpm as per CMVR 115 - (9) 1996 (Option-2) |

#### CLUTCH

| Type | Single plate dry friction diaphragm type |

#### GEAR BOX

| Model | GBS-76-5/4.1 MK-II with overdrive (Opt-1)  
|       | GBS-6450-6/4.3 with overdrive (Opt-2) |
| Type | Synchromesh on all gears |
| No. of gears | 5 Forward & 1 Reverse (Opt-1)  
|            | 6 Forward & 1 Reverse (Opt-2) |

#### TRANSFER CASE

| Type | LH Drop transfercase, ECU control Electrical shifting arrangement |

#### REAR AXLE

| Type | Single reduction Banjo type rear axle with hypoid gears & semi-floating axle shafts with limited slip differential for 4X4  
|      | Without limited slip differential for 4X2 |

#### FRONT AXLE

**For 4 X 4**

- Independently suspended with Axle Disconnect. **Ratio**: 4:1

**For 4 X 2**

- Independently suspended

#### STEERING

| Type | Rack and Pinion steering with power assistance. (Hydraulic) |

#### BRAKES

| Service Brake | Vacuum assisted independent hydraulic brakes on front & rear through tandem master cylinder. Vacuum pump camshaft driven |
| Front Brakes | Ventilated disc brakes (Twin pot caliper) |
| Rear Brake | Ventilated disc brakes (Single pot caliper) with DIH (Drum in hat), Drum Brake with auto adjuster (if applicable) |
### TECHNICAL INFORMATION

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load conscious pressure reducing valve</td>
<td>Load sensing pressure valve (LSPV) provided for non-ABS version</td>
</tr>
<tr>
<td>Parking Brake</td>
<td>Lever type, Console mounted, cable operated mechanical linkage acting on rear wheels through DIH.</td>
</tr>
<tr>
<td>Anti-lock Braking System (ABS)</td>
<td>4 channel, 4 sensors (For ABS)</td>
</tr>
<tr>
<td>Type</td>
<td>Ladder type cranked frame with boxed section members &amp; welded cross members. Tow hook at the front &amp; rear.</td>
</tr>
<tr>
<td>Front</td>
<td>Double wishbone type with coil springs over shock absorber.</td>
</tr>
<tr>
<td>Rear</td>
<td>Coil spring type 5 link rigid axle</td>
</tr>
<tr>
<td>Shock Absorber</td>
<td>Hydraulic double acting telescopic at Front &amp; Rear</td>
</tr>
<tr>
<td>Anti-roll Bar</td>
<td>At both front &amp; rear</td>
</tr>
<tr>
<td>Tyres</td>
<td>1. 235/75 R15 Passenger Radial Tubeless</td>
</tr>
<tr>
<td></td>
<td>2. 235/70 R16 Passenger Radial Tubeless</td>
</tr>
<tr>
<td>Wheel Rims</td>
<td>1. 6J X 15 Stylised Wheel Rims / 6.5J X 16 Stylised Wheel Rims</td>
</tr>
<tr>
<td></td>
<td>2. 6.5J X 16 Alloy Wheel Rims- Optional.</td>
</tr>
<tr>
<td>No. of Wheels</td>
<td>Front : 2, Rear : 2, Spare : 1</td>
</tr>
<tr>
<td>FUEL TANK</td>
<td>Capacity: 63 Litres</td>
</tr>
<tr>
<td>ELECTRICAL SYSTEM</td>
<td>System Voltage: 12 Volts (-ve earth)</td>
</tr>
<tr>
<td></td>
<td>Alternator Capacity: 120 amps</td>
</tr>
<tr>
<td></td>
<td>Battery: 12 V, MF 80 A/h (Opt-1), 75 A/h (Opt-2)</td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>Max. Speed with two occupants: 160 kmph</td>
</tr>
<tr>
<td></td>
<td>Grade Restartability at rated GVW: 4 X 4 : 78% @ 1000 rpm, 4 X 2 : 36% @ 1000 rpm</td>
</tr>
<tr>
<td></td>
<td>Max. Gradeability at rated GVW: 4 X 4 : 78%, 4 X 2 : 56% (Opt-1), 68% (Opt-2)</td>
</tr>
<tr>
<td>PASSENGER CAPACITY</td>
<td>Passenger Capacity Front Seat: Driver + 1, Middle Seat: 3, Rear Seat: 2 (Side Facing)</td>
</tr>
<tr>
<td>WEIGHTS (kg)</td>
<td>Complete Vehicle kerb weight (With Spare Wheel &amp; tools): 4X4 2110, 4X2 1950</td>
</tr>
<tr>
<td></td>
<td>Gross Vehicle Weight: 2665, 2505</td>
</tr>
<tr>
<td></td>
<td>Max. permissible FAW: 1280, 1200</td>
</tr>
<tr>
<td></td>
<td>Max. permissible RAW: 1470, 1470</td>
</tr>
</tbody>
</table>
### LUGGAGE SPACE

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net inside loading space</td>
<td>~ 1000 mm wide x ~ 800 mm long (with 4 passengers + Driver)</td>
</tr>
</tbody>
</table>

### MAIN CHASSIS DIMENSION AS PER ISO:612 in MM

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheel Base</td>
<td>2650 mm</td>
</tr>
<tr>
<td>Track Front</td>
<td>1580 mm</td>
</tr>
<tr>
<td>Track Rear</td>
<td>1550 mm</td>
</tr>
<tr>
<td>Front Overhang</td>
<td>950 mm</td>
</tr>
<tr>
<td>Rear Overhang</td>
<td>1055 mm - Over rear bumper</td>
</tr>
<tr>
<td>Overall Length</td>
<td>4655 mm - Over rear bumper</td>
</tr>
<tr>
<td>Maximum Width</td>
<td>1965 mm - With footstep</td>
</tr>
<tr>
<td>Overall Height</td>
<td>1922 (Unladen /Laden)</td>
</tr>
<tr>
<td>Min. Turning Circle dia.</td>
<td>10.8 m</td>
</tr>
<tr>
<td>Min. Turning Clearance Circle dia.</td>
<td>11.8 m</td>
</tr>
<tr>
<td>Ground Clearance</td>
<td>200 mm</td>
</tr>
</tbody>
</table>
VEHICLE DIMENSIONS

(All dimensions are in mm and in unladen condition)
CHASSIS & AGGREGATE NUMBERING LOCATIONS

- **Chassis No.** - Punched on RH Long member
- **VIN Number Plate**
- **CAB Number Plate**
- **Engine Number Plate**
CHASSIS & AGGREGATE NUMBERING LOCATIONS

- Gear Box Number (G-76)
- Gear Box Number (G-6450)
- Transfercase Number Plate
- Rear Axle Number - Punched
SERVICE INSTRUCTIONS

SERVICE INSTRUCTIONS:
To achieve economical and trouble free performance, please follow the instructions as stated.

YOUR CAR IS ENTITLED TO FOUR FREE SERVICES (LABOUR ONLY). PLEASE PRESENT THESE COUPONS TO THE SERVICING DEALER WHILE AVAILING FREE SERVICES.

1st free service - At 4500-5500 km. OR 3 month whichever is earlier
2nd free service - At 9500-10500 km. OR 6 months whichever is earlier
3rd free service - At 19500-20500 km. OR 12 months whichever is earlier
4th free service - At 39500-40500 km. OR 24 months whichever is earlier

All services other than free services are chargeable. Service at 30000 km OR 18 months, (whichever is earlier) is chargeable.

Servicing of your vehicle can be done only at TATA MOTORS Authorised Dealership Workshop. The details of their locations are given in this manual.

Warranty claims can be settled by any TATA MOTORS Authorised Dealer for all failures, while all warranty claims excluding the consideration on the replacement of major aggregates, can be settled by any TASC which is authorised for handling warranty claims.
## SERVICE SCHEDULE

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>OPERATION</th>
<th>FREQUENCY (in KM)</th>
<th>PDI</th>
<th>4500-5500</th>
<th>10000-10500</th>
<th>19500-20500</th>
<th>29500-30500</th>
<th>39500-40500</th>
<th>49500-50500</th>
<th>59500-60500</th>
<th>69500-70500</th>
<th>79500-80500</th>
<th>89500-90500</th>
<th>99500-100500</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
<td>MONTHS</td>
<td>3</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
<td>30</td>
<td>36</td>
<td>42</td>
<td>48</td>
<td>54</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Wash the vehicle &amp; clean the condenser with compressed air.</td>
<td>Every Service</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>2</td>
<td>Check &amp; Top up Fluids if required: Engine oil, Engine Coolant, Brake / Clutch Fluid, Power Steering Oil, Gear Box Oil, Battery Electrolyte, Transfer case and Front Axle 4X4 (if applicable) / Rear Axle Oil,</td>
<td>Every 10,000</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3</td>
<td>Drain water accumulated in Fuel Pre filter cum sedimenter and fuel filter (OR whenever the Warning lamp glows)</td>
<td>Every Service</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4</td>
<td>Check engine compartment for loose fasteners and for any leakages in fuel lines, coolant hoses, air hoses, vacuum hoses and hydraulic line connections. Attend if necessary.</td>
<td>Every Service</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>5</td>
<td>Check Underbody for loose fasteners and for any damage or leakage in fuel pipes, hydraulic line connections, rack &amp; pinion &amp; exhaust system including rubber hangers. Attend if necessary.</td>
<td>Every Service</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>6</td>
<td>Apply grease on door latches, locks, check straps, strikers, bonnet opening lever, bonnet hinges &amp; lock plate, tailgate hinges &amp; door lock inner ratchet.</td>
<td>Every 10000</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>7</td>
<td>Check for proper tightening of Door latch &amp; Striker screws, Tail gate latch and striker screws</td>
<td>Every 10000</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>8</td>
<td>Check &amp; ensure normal working of the vehicle using diagnostic equipment.</td>
<td>Every Service</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
# Service Schedule

## 2.2L Varicor Engine

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>Operation</th>
<th>Frequency (in KM)</th>
<th>PDI</th>
<th>4500-5500</th>
<th>5500-6500</th>
<th>6500-7500</th>
<th>7500-8500</th>
<th>8500-9500</th>
<th>9500-10500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Replace Engine Oil and Oil filter <em>(Every 20,000 Km OR 1 yr, whichever is earlier)</em></td>
<td>Every 20,000</td>
<td>3</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>2</td>
<td>Replace element/cartriage of Pre-filter cum Sedimentor <em>(Every 20,000 Km OR 1 year, whichever is earlier)</em></td>
<td>Every 20,000</td>
<td>24</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3</td>
<td>Replace Main Fuel filter <em>(Every 60,000 Km OR 3 year, whichever is earlier)</em></td>
<td>Every 60,000</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Replace Air filter element</td>
<td>Every 40,000</td>
<td>18</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Check accessory Drive belts (Alternator &amp; Compressor) adjust tension if required, change if damaged. <em>(Every 20,000 Km OR 1 yr, whichever is earlier)</em></td>
<td>Every 20,000</td>
<td>3</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>6</td>
<td>Check Timing Belt &amp; if found damaged, replace alongwith tensioner</td>
<td>Every 1,20,000</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Replace Timing Belt &amp; Timing Belt tensioner <em>(Every 1,50,000 Kms OR 5 years, whichever is earlier)</em></td>
<td>Every 1,50,000</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Change Engine Coolant <em>(Every 60,000 km OR 2 year, whichever is earlier)</em></td>
<td>Every 60,000</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Check Accessory drive for Power Steering Pump. Change if damaged <em>(Every 20,000 or 1 year, whichever is earlier)</em></td>
<td>Every 20,000</td>
<td>3</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

## Gear Box

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>Operation</th>
<th>Frequency (in KM)</th>
<th>PDI</th>
<th>4500-5500</th>
<th>5500-6500</th>
<th>6500-7500</th>
<th>7500-8500</th>
<th>8500-9500</th>
<th>9500-10500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Replace Gear box Oil and Clean Breather <em>(First at 40,000 km and thereafter every 90,000 km)</em></td>
<td>Every 90,000</td>
<td>3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Replace Transfer case Oil &amp; Clean Breather <em>(In 4x4 vehicles)</em></td>
<td>Every 40,000</td>
<td>12</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## VEHICLE SERVICE

### SERVICE SCHEDULE

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>OPERATION</th>
<th>FREQUENCY (in KM)</th>
<th>PDI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>MONTHS</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4500-5500</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10000-10500</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19500-20500</td>
<td>24</td>
</tr>
<tr>
<td></td>
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<td>29500-30500</td>
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<td>69500-70500</td>
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<td>99500-100500</td>
<td>120</td>
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</table>

#### PROPELLER SHAFT

1. Grease propeller shaft with grease gun (at slip joint - splines end) & check Centre bracket mounting bolts for looseness. Tighten if necessary. (Every 20000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

2. Check for rubber cracks on Torsional Vibration Damper (TVD), replace if necessary. (Every 20000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

3. Replace TVD (Every 60,000 km). (Every 60,000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

#### FRONT AXLE (FOR 4X4) / REAR AXLE

1. Replace Axle Oil (Front (For 4x4) (if applicable)/ Rear) (Every 70,000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

2. Clean Breather in front (FOR 4x4) (if applicable) and Rear axle (Every 70,000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

#### SUSPENSION & STEERING

1. Check wheel alignment/ Steering wheel spoke alignment/ wheel balancing & adjust if necessary. (Every 20,000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

2. Check shock absorber, bushes replace if necessary (First at 30,000 km and thereafter at every service). (Every 30,000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

3. Check condition of rubber bushes in Top & Lower wishbones, Anti roll bars, Rear links, Pan-hard rod, rubber boots/dust cover/ bellow in Rack & pinnion, steering ball joints & column. Replace if necessary. (Every 30,000 km every 3 months, after 6 months, after 12 months, after 18 months, after 24 months, after 30 months, after 36 months, after 42 months, after 48 months, after 54 months, after 60 months)

4. Replace Power steering Oil & filter element. (Every 1,00,000 km)

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146
<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>OPERATION</th>
<th>FREQUENCY (in KM)</th>
<th>PDI</th>
<th>4500-5500</th>
<th>10000-10500</th>
<th>19500-20500</th>
<th>29500-30500</th>
<th>49500-50500</th>
<th>59500-60500</th>
<th>69500-70500</th>
<th>79500-80500</th>
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<tr>
<td>1</td>
<td>Check parking brakes, adjust if necessary</td>
<td>Every Service</td>
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<td>2</td>
<td>Check front brake &amp; rear brake pads, re-grease DIH liner resting points.</td>
<td>Every 10,000</td>
<td>36</td>
<td>x</td>
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<td>Replace Brake Fluid (Every 40,000 km Or 2 years whichever is earlier)</td>
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<td><strong>ELECTRICALS</strong></td>
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<tr>
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<td>Check headlamp focusing &amp; functioning of all electrical equipments.</td>
<td>Every 20,000</td>
<td>36</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>2</td>
<td>Check for looseness of + Ve Terminals on Alternator and Starter motor</td>
<td>Every 30,000</td>
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<tr>
<td>1</td>
<td>Check HVAC System for satisfactory performance, attend if required.</td>
<td>Every Service</td>
<td>36</td>
<td>x</td>
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<td>x</td>
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<td><strong>WHEEL &amp; TYRES</strong></td>
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<td>1</td>
<td>Tyre Rotation</td>
<td>Every 20,000</td>
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</table>
* Under severe driving conditions, additional maintenance is required. Please Refer to “Additional Maintenance Schedule under severe driving conditions”:

Precautions to be taken while cleaning engine compartment: It is recommended to use dry low pressure air. Do not use pressurised water.

**ADDITIONAL MAINTENANCE SCHEDULE UNDER SEVERE DRIVING CONDITIONS:**

<table>
<thead>
<tr>
<th>SL NO</th>
<th>ITEM</th>
<th>INTERVAL</th>
<th>CONDITION</th>
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<td>A  B  C  D</td>
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<tr>
<td>1.</td>
<td>Engine oil &amp; oil filter</td>
<td>Change every 10000 kms</td>
<td>● ● ● ●</td>
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<tr>
<td>2.</td>
<td>Air filter element</td>
<td>Change at every 20000 km OR 18 monthsw whichever is earlier</td>
<td>● ●</td>
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<td>3.</td>
<td>Front (for 4x4) &amp; rear axle oil change</td>
<td>Change first at 20000kms &amp; thereafter at 50000 kms</td>
<td>● ● ●</td>
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<tr>
<td>Km. reading</td>
<td>Fuel filled</td>
<td>Fuel consumption</td>
<td>Remarks / complaints</td>
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<tr>
<td>Date</td>
<td>Odometer</td>
<td>Repair reading (km)</td>
<td>Particulars of Repair Order No.</td>
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## RECORD OF SERVICES PERFORMED

### CHASSIS NO....

<table>
<thead>
<tr>
<th>Recommended Service</th>
<th>Date</th>
<th>Odometer Reading</th>
<th>Repair Order No.</th>
<th>Servicing Dealer's Signature and Stamp</th>
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<tbody>
<tr>
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### VEHICLE SERVICE

#### CHASSIS NO.

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<th>Date</th>
<th>Odometer Reading</th>
<th>Repair Order No.</th>
<th>Servicing Dealer’s Signature and Stamp</th>
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<tbody>
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</tbody>
</table>
Chassis No. ......................................
Engine No. .......................................
Gear Box No. ...................................

At **9,500-10,500 km OR 6 months** whichever is earlier
please bring your vehicle for this service
as per details given in the **SERVICE SCHEDULE**.

**WORK DONE TO MY SATISFACTION**

Sign. of Customer ......................................
Speedo Reading ........................................ Km. seal O.K. / Broken
R.O. No. ..................................................... Date ............................
Dealer's / Authorised Service Centre's
Stamp & Signature ...........................................

Chassis No. ......................................
Engine No. ......................................

At **4,500-5,500 km OR 3 month** whichever is earlier
please bring your vehicle for this service
as per details given in the **SERVICE SCHEDULE**.

**WORK DONE TO MY SATISFACTION**

Sign. of Customer ......................................
Speedo Reading ........................................ Km. seal O.K. / Broken
R.O. No. ..................................................... Date ............................
Dealer's / Authorised Service Centre's
Stamp & Signature ...........................................

Chassis No. ......................................
Engine No. ...................................

At **19,500-20,500 km OR 12 months** whichever is earlier
please bring your vehicle for this service
as per details given in the **SERVICE SCHEDULE**.

**WORK DONE TO MY SATISFACTION**

Sign. of Customer ......................................
Speedo Reading ........................................ Km. seal O.K. / Broken
R.O. No. ..................................................... Date ............................
Dealer's / Authorised Service Centre's
Stamp & Signature ...........................................

Chassis No. ......................................
Engine No. ......................................

At **4,500-5,500 km OR 3 month** whichever is earlier
please bring your vehicle for this service
as per details given in the **SERVICE SCHEDULE**.

**WORK DONE TO MY SATISFACTION**

Sign. of Customer ......................................
Speedo Reading ........................................ Km. seal O.K. / Broken
R.O. No. ..................................................... Date ............................
Dealer's / Authorised Service Centre's
Stamp & Signature ...........................................
Chassis No. ......................................
Engine No. .......................................

At 39,500-40,500 km OR 24 month whichever is earlier
please bring your vehicle for this service
as per details given in the  SERVICE SCHEDULE.

WORK DONE TO MY SATISFACTION

Sign. of Customer ...............................  
Speedo Reading .................................. Km. seal O.K. / Broken  
R.O. No. ............................................... Date .........................
Dealer's / Authorised Service Centre's
Stamp & Signature .................................