



Indigo

**MANZA**

*QUADRAJET<sup>90</sup> / SAFIRE<sup>90</sup>*

**OWNER'S MANUAL & SERVICE BOOK**

**TATA MOTORS**

# CAR IDENTIFICATION AND RECORD

OWNER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

SELLING DEALER CODE \_\_\_\_\_

DATE OF DELIVERY \_\_\_\_\_

DATE OF REGISTRATION \_\_\_\_\_

REGISTRATION NO. \_\_\_\_\_

CHASSIS NO. \_\_\_\_\_

ENGINE NO. \_\_\_\_\_

TRANSAXLE NO. \_\_\_\_\_

BATTERY MAKE \_\_\_\_\_

BATTERY SR. NO. \_\_\_\_\_

BATTERY CODE \_\_\_\_\_

THE WARRANTY ON THIS CAR IS VALID ONLY IF THE DETAILS ARE FILLED, SIGNED & STAMPED BY THE SELLING DEALER.

**DEALER'S SIGNATURE  
AND STAMP**



## Following items are provided with your TATA INDIGO MANZA :

1. Owner's Manual & Service Book
2. Battery Warranty Card
3. First Aid Kit
4. Advance Warning Triangle
5. Jack & Handle
6. Spare Headlamp Bulbs - 2 Nos.
7. Spare Fuses (Provided in fuse box)
8. Tool Kit
  - a. Spanner C8X10
  - b. Screw Driver 1.0X6.5X150
  - c. Screw Driver A1X75
  - d. Wheel Spanner 18 A/F
  - e. Slip Joint Plier
  - f. Box Spanner (for Spark Plug)- Petrol
  - g. Handle for Box Spanner - Petrol
9. Manufacturer's Manual for Music System  
(If fitted)

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Indigo  
**MANZA**  
● *QUADRAJET<sup>90</sup>* ● *SAFIRE<sup>90</sup>* ●  
**Owner's Manual & Service Book**

The contents given in this book are not binding & are subject to change without notice & images shown are for illustration purpose only.

**TATA MOTORS**  
Passenger Car Business Unit (PCBU)  
Mumbai, Pune

- 
- Please read this Owner's Manual carefully before you start using your car and keep it safely in the car's glove box at all times.
  - The recommended routine maintenance servicing along with any running repairs that may be required, should be entrusted to **TATA Authorised Workshop** 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 versions of **Tata Indigo Manza**.
  - **(C) Copyright 2012 TATA MOTORS**
  - All rights reserved. The material in this manual shall not be reproduced or copied, in whole or in part, in any form without written permission from **TATA MOTORS**.
  - The information and specifications given in this book are valid as on the date of printing. **TATA MOTORS** Limited reserves the right to make changes in design and specifications and/or to make additions to or improvements in this product without obligation to install them on products previously sold.
  - 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.



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**Dear Customer,**

Thank you for choosing **Tata Indigo Manza**.

Built on the new car platform from Tata Motors, your **Tata Indigo Manza** is the perfect blend of form and functionality.

This owner's manual provides you with all the information you need to fully understand your **Tata Indigo Manza** and make your ownership of **Tata Indigo Manza** a delightful experience. We would recommend that you go through the owner's manual in order to get the most out of your car.

Regular servicing of your car ensures its road worthiness & trouble-free operation, hence we request you to get your vehicle checked as per service schedule at any of our authorised service outlets.

We are privileged to have you as our valued customer.

Drive the **Tata Indigo Manza**. Discover how it changes everything.

**We wish you Happy Motoring**

**TATA MOTORS LIMITED**

## Safety and vehicle damage warnings

In this manual, you will see WARNING, CAUTION and NOTICE warnings.

### WARNING

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

### ⚠ CAUTION

This is an indicator which may cause injury to people if it 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.

### NOTICE

This is an indicator which may cause damage to the car or its equipment if it is ignored. You are informed what you must or must not do in order to avoid or reduce the risk of damage to your car and its equipment.



### 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**".

**TATA MOTORS**

*Rely on us... always.*

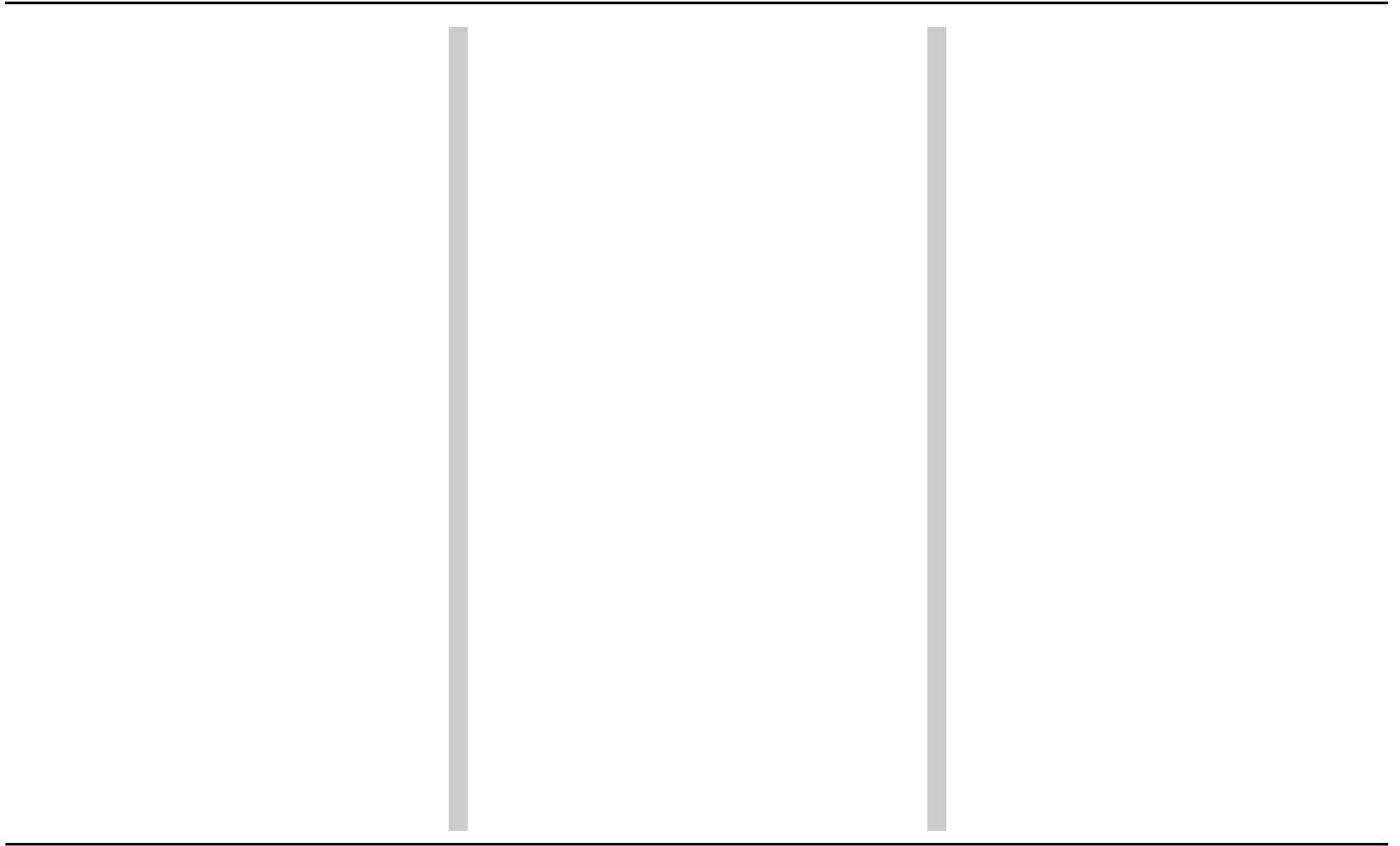
**Call Us : 1 800 209 7979**

**Mail Us : [customercare@tatamotors.com](mailto:customercare@tatamotors.com)**

**Visit Us : [www.customercare.tatamotors.com](http://www.customercare.tatamotors.com)**



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## KNOW YOUR TATA INDIGO MANZA

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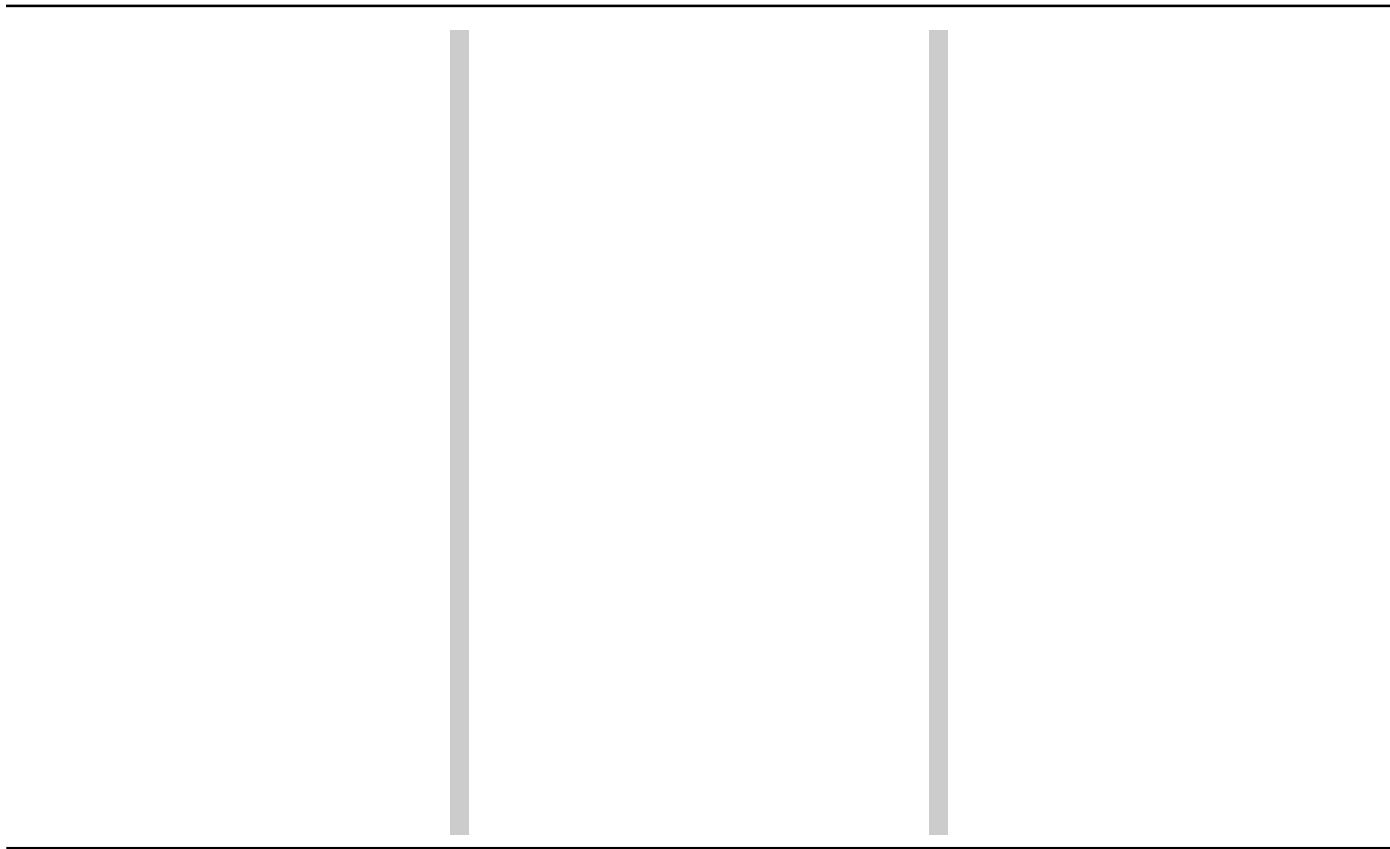
Your **Tata Indigo Manza** is the perfect blend of form and functionality.

Built on the new car platform from **TATA MOTORS**, the **Tata Indigo Manza** is bigger in size and interior space, but its contemporary styling and sharp lines give it a compact sporty look. The new petal-shaped headlamps add a dash of panache to the front and the all enveloping tail lamps are unique in its class.

The contemporary styling continues in the refreshed interiors, with the stylish Two-tone Dashboard, Bright chrome pack, Leather seats, Touch Screen Music & Navigation System (For few variants) and FATC-Fully Automatic Temperature Control (For few variants). The adjustable driver's seat and the tilt adjust steering wheel enable better driving posture while the best in class interior space results in unmatched comfort. The all new floor console comes with well-designed utility spaces.

The **Tata Indigo Manza** is also a leap in terms of technology. It is powered by new generation engines; the globally acclaimed advanced **QUADRAJET Diesel Engine** and **SAFIRE Petrol Engine** with new synchromesh power train that will change the way you drive. Its improved rear suspension and its bigger and wider tubeless tyres with new style alloy wheels increase ride comfort.





## 24X7 ON ROAD ASSISTANCE



**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 MyTVS, 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**

Within City Limits	60 minutes
On State or National Highways	90 minutes
Ghat Roads and other places	120 minutes +/-

\*\* (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.

## 24X7 ON ROAD ASSISTANCE

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### 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 is 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, lightening, 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



## 24X7 ON ROAD ASSISTANCE

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- Cases involving racing, rallies, vehicle testing or practice for such events..

### Disclaimer

- The service is not available in the some part of J&K and in Union Territories of Andaman & Nicobar Islands and Lakshwadeep.
- \*\*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.

## 24X7 ON ROAD ASSISTANCE

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### 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.

***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) Car 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.*



## VALUE ADDED SERVICE

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**TATA MOTORS** recommends the purchase of Extended its warranty program.

**Coverage** : Mechanical + Electrical + Emission

**Benifits** :

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

**Term** :

- **24 + 12 or 150000 kms** whichever occurs first
- **24 + 24 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.



**Note :**

- The 12 / 24 month extended warranty does not follow the 24 month Manufacturer's warranty.
- The extended warranty comes into force once the manufacturer's warranty expires e.g. after 24 Months.
- It is more restrictive as by the time it comes into force the vehicle is already 24 months old.

**What is covered ?**

- Mechanical / Emission / 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.

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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 policy.

---

**Customer's Sign**

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**Dealer's Sign**

# VALUE ADDED SERVICE

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## IFTEX / BG / BARDAHL Fuel Additive :

### *Fuel Additive with multiple benefits*

- For diesel cars: Iftex System D
- For Petrol cars: Iftex System G

### **Benefits:**

- Cleans injector and fuel system.
- Maintains peak engine performance.
- Saves diesel / petrol and maintenance cost.
- Reduces smoke and harmful emission.
- Helps Smooth running of the engine
- Reduces deposit on intake manifold and combustion chamber.
- Reduces deposit on injector tips.



**Approved for use in TATA VEHICLES. NOT RECOMMENDED FOR ON DICOR / QUADRAJET.**

**TREAT YOUR CAR TO EXPERIENCE, THE ULTIMATE PERFORMANCE**

### **Directions of use :**

- a) For Iftex, Use every 7000 kms for System G Extra / System D Extra. b) For System D / System G - Remove cap, squeeze lightly till dispenser fills to 10 ml mark. Add before filling up the tank. Use at the rate of 1 ml per litre of fuel. For best results, regular use is recommended.
- For BG, add one bottle to full fuel tank every 10000 kms. For Bardahl, add one bottle to full fuel tank every 3000 kms

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I / We have been explained the Benefits of the Iftex Fuel additive by the Dealer Service Marketing Executive

I wish to buy /  Do not wish to buy the Iftex Fuel Aditive

---

**Customer Signature**

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**Dealer Signature**

### 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



# VALUE ADDED SERVICE

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## 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 Wuerth** , **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.

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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

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**Customer Signature**

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**Dealer Signature**



### 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 Wuerth** 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.



# VALUE ADDED SERVICE

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## 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 and M/s M/s Autokrom** 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**

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**Dealer's Sign**

## Why de-carbonisation is required?

Carbon deposits accumulate over time in the entire fuel system, including the fuel lines, injector pump, fuel injectors, combustion chambers & intake valves. This causes rough idle, vibration at idle, loss of power, hesitation, misfire, decreased mileage, increased smoke, slowed throttle response.

Decarbonisation process is designed to remove these deposits

- Clean fuel injectors
- Clean throttle body
- Clean plenum and air-intake
- Clean intake valves and ports
- Remove combustion chamber deposits
- In maintaining correct balance of fuel and air in system



## Resulting in

- Comprehensive clean-up of combustion chamber, induction system & fuel injector deposits
- Better fuel economy
- Increased engine performance and response
- Smooth Starts, idles and quieter run
- Better combustion & increased power
- Faster starting & warm-up
- Reduced emissions
- Reduced injector & pump wear, thereby resulting in savings in maintenance costs

It is approved for low sulphur diesel fuel and EGR equipped diesel engines

**Please note:** These are symptomatic treatments to be avoided beyond 20000 kms and only when you have problems in your car as mentioned in first paragraph and are to be done only after **you give your consent** for carrying out these treatments

# VALUE ADDED SERVICE

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## Engine Flush treatment helps in

- Safely and effectively cleaning and removing oxidised particles and fluid contamination left behind from previous oil changes
- Preventing further deposits
- Freeing sticky lifters and rings
- Chemically “tuning” the engine during driving
- Restoring pep and power
- Removing sludge from valve train
- Promoting fuel economy and improving overall engine operation

## Special Products used for improving Compression

To fortify new oil and seal rings for optimum performance, special products from BG (RF7) and Bardhal (Special Duty) are added to new engine oil. This makes it suitable for petrol and diesel engine applications

### Resulting in:

- Improved engine compression
- Increased power and increased fuel economy
- Reduced start-up wear
- Increased engine life, especially under severe service conditions
- Reduced emissions and oil consumption
- Improved power & performance of older engines
- Prevention of sludge, gum and varnish formation on engine parts both petrol & diesel engines

**Please note:** These are symptomatic treatments to be availed beyond 20000 kms and only when you have problems in your car as mentioned in first paragraph and are to be done only after you give your consent for carrying out these treatments

Tata Motors has tied up with **M/s HOEC Bardahl India Ltd and M/s BG** 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.

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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

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Customer's Sign

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Dealer's Sign

**TATA MOTORS LTD.** is committed to produce vehicles using environmentally sustainable technologies. 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. Please note that your car 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 car in a proactive manner. A lot depends on your driving style and the way you maintain your car. We provide a few tips for your guidance.

### DRIVING

- Avoid frequent and violent acceleration.

- Do not carry any unnecessary weight in the car as it overloads the engine. Avoid using devices requiring high power consumption during slow city traffic condition.
- Monitor the car's fuel consumption regularly and if showing rising trend get the car 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 fuel.
- Shift to higher gears as soon as it is possible. Use each gear upto 2/3<sup>rd</sup> of it's maximum

engine speed. A chart indicating gear shifting speeds is given in this book.

### MAINTENANCE

- Ensure that recommended maintenance is carried out on the car regularly at the Authorised Service Outlets.
- If you notice any leakages of oil or fuel in the car we recommend to get it attended immediately.
- Use only specified quantity and grade of lubricants.
- Get your car checked for emission periodically through an authorised dealer
- Ensure that fuel filter, oil filter and breather is checked periodically and replaced, if required, as recommended by Tata Motors.

## ENVIRONMENTAL CARE

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- Do not pour used oils or coolants into the sewage drains, garden soil or open streams. Dispose the used filters and batteries in compliance with the current legislation.
- Do not allow unauthorised person to tamper with engine settings or to carry modifications on the car.
- Never allow the car to run out of fuel.
- Parts like brake liners, clutch discs should be vacuum cleaned. Do not use compressed air for cleaning these parts which may spread dust in the atmosphere.
- **While carrying out servicing or repairs of your car, 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, Injectors.**
- 2. Air Intake & Exhaust system, especially for leakages.**
- 3. Cylinder head for valve leakage.**
- 4. All filters such as air, oil and fuel filters (check periodically).**
- 5. Turbocharger**
- 6. Electrical connections**
- 7. If the 'MIL' lamp contineously glows, please take the car to a TATA MOTORS authorised Service Station.**
- 8. Catalytic Convertor**
- 9. EMS wiring harness i.e. electrical connections to all sensors and actuators.**

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

## WARRANTY TERMS & CONDITIONS

We **WARRANT** each **Tata Indigo Manza** car and parts thereof manufactured by us to be free from defect in material and workmanship subject to the following terms and conditions -

1. This warranty shall be for 24 months from the date of sale of the car or 75000 km whichever occurs earlier. However, for the cars with yellow number plates used for commercial applications (including those used for hire or reward viz those operating with a yellow number plate), the warranty shall be limited to 24 months or 50,000 kms, whichever occurs earlier.
  2. Our obligation under this warranty shall be limited to repairing or replacing, free of charge, such parts of the car which, in our opinion, are defective, on the car being brought to us or to our dealers within the period. The parts so repaired or replaced shall also be warranted for
- quality and workmanship but such warranty shall be co-terminus with this original warranty.
  3. Any part which is found to be defective and is replaced by us under the warranty shall be our property.
  4. As for such parts as tyres, batteries, electrical equipment, Audio and / or Video equipment (if any) fuel injection equipment, etc. not manufactured by us but supplied by other parties, this warranty shall not apply, but buyers of the car 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.
  5. This warranty shall not apply if the car or any part thereof is repaired or altered otherwise than in accordance with our standard repair procedure or by any person other than from our sales or service establishments, our authorised dealers, ser-

vice centres or service points in any way so as, in our judgement which shall be final and binding, to affect its reliability, nor shall it apply if, in our opinion which shall be final and binding, the car is subjected to misuse, negligence, improper or inadequate maintenance or accident or loading in excess of such carrying capacity as certified by us, or such services as prescribed in our Owner's Manual and Service Book are not carried out by the buyer through our sales or service establishments, our authorised dealers, service centres or service points.

6. This warranty shall not cover normal wear and tear or any inherent normal deterioration of the car or any of its parts arising from the actual use of the car or any damage due to negligent or improper operation or storage of the car.

## WARRANTY TERMS & CONDITIONS

---

This warranty shall not apply to normal maintenance services like oils & fluid changes, head lamps focussing, fastener retightening, wheel balancing and alignment, tyre rotation, adjustment of valve clearance, fuel timing, ignition timing and consumables like bulbs, fuel filters & oil filters, etc. This warranty shall not apply to any damage or deterioration caused by environmental pollution or bird droppings. This warranty shall not apply to V-belts, hoses and gas leaks in case of air conditioned cars. Slight irregularities not recognised as affecting the function or quality of the vehicle or parts, such as slight noise or vibration, defects appearing only under particular or irregular operations are items considered characteristics of the vehicle.

7. This warranty shall be null and void if the car is subjected to abnormal use such as rallying, racing or

participation in any other competitive sport. This warranty shall not apply to any repair or replacements 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 car or any agreement in relation thereto.

9. The buyer shall have no other rights except those set out above and have, in particular, no right to repudiate the sale, or any agreement or to claim any reduction in the purchase price of the car, or to demand any damages or compensation for losses, incidental or indirect, or inconvenience or consequential damages, loss of car, or loss of time, or 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 authorised dealer without any delay soon after such defects as covered & ascertained under this warranty.

11. This warranty shall stand terminated if the car 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 design of the car or its parts or to introduce any improvement therein or to incorporate in the car any additional part or accessory at any time without incurring any obligation to incorporate the same in the cars previously sold.

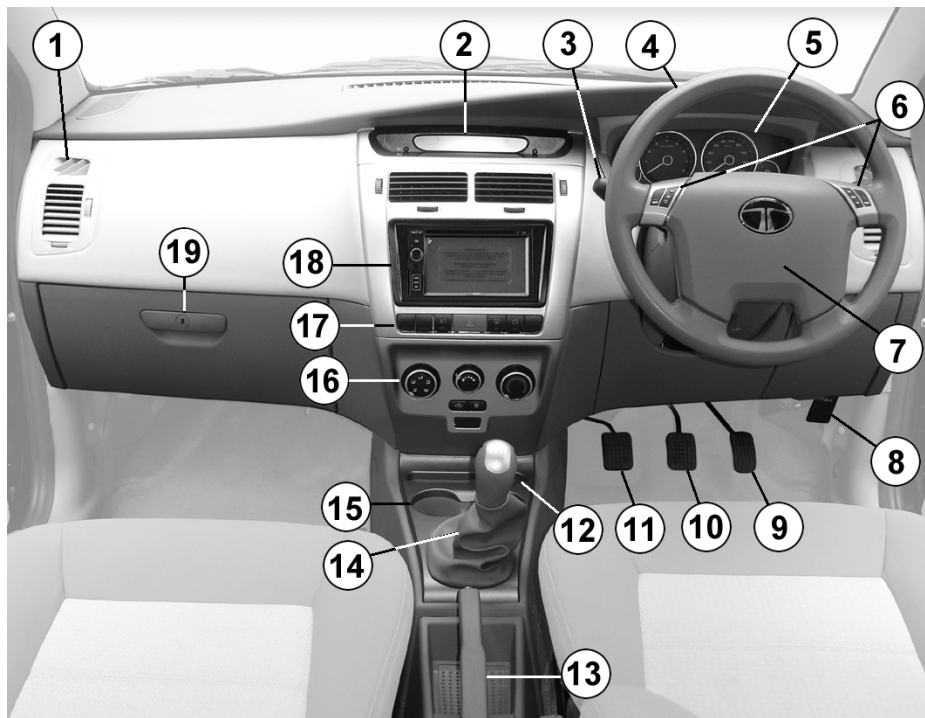
**TATA MOTORS**





## INDIGO MANZA AT A GLANCE

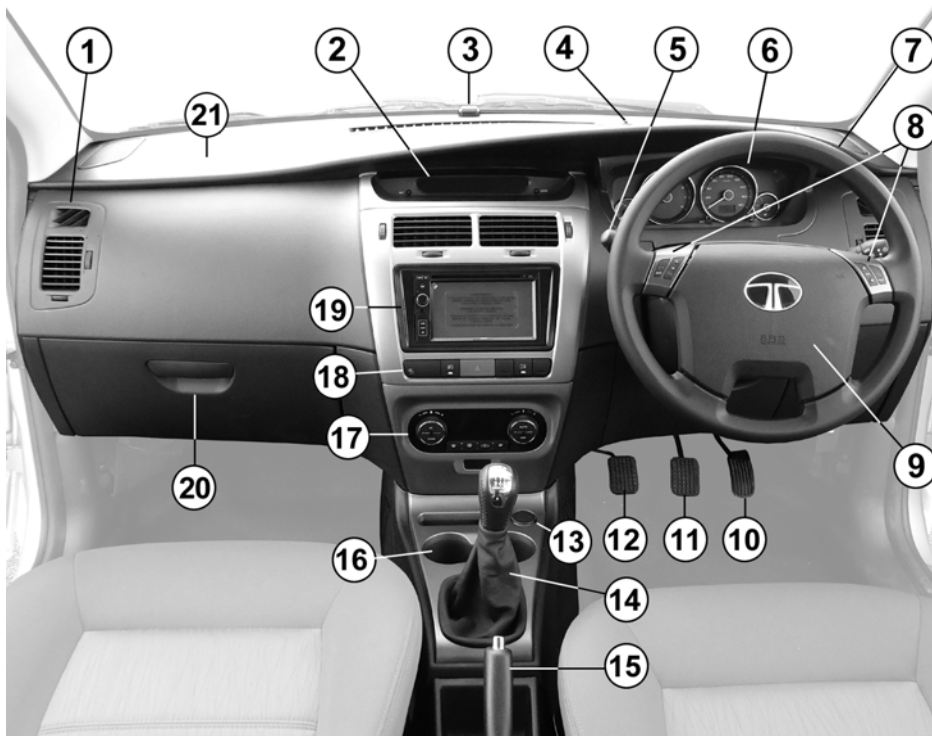
- Driving Controls
- Instrument Cluster
- Driver Information System
- Facia Switches
- Combination Switch
- Music System and Antenna
- Heating, Ventilation & Air Conditioning
- Lamps
- Sunvisors and Grab Handle
- Rear View Mirrors
- Glove Box
- Power Socket
- Cup Holder
- Utility Pocket / Box
- Power Windows
- Manual Window Winding
- Steering Wheel Position Adjustment
- Fuel Flap & Tail Gate Opening / Closing
- Gear Shifting Lever & Shifting Pattern
- Parking Brake
- Anti-Theft Device: Immobiliser
- Reverse Park Assistant System (RPAS)- if fitted



### DRIVING CONTROLS

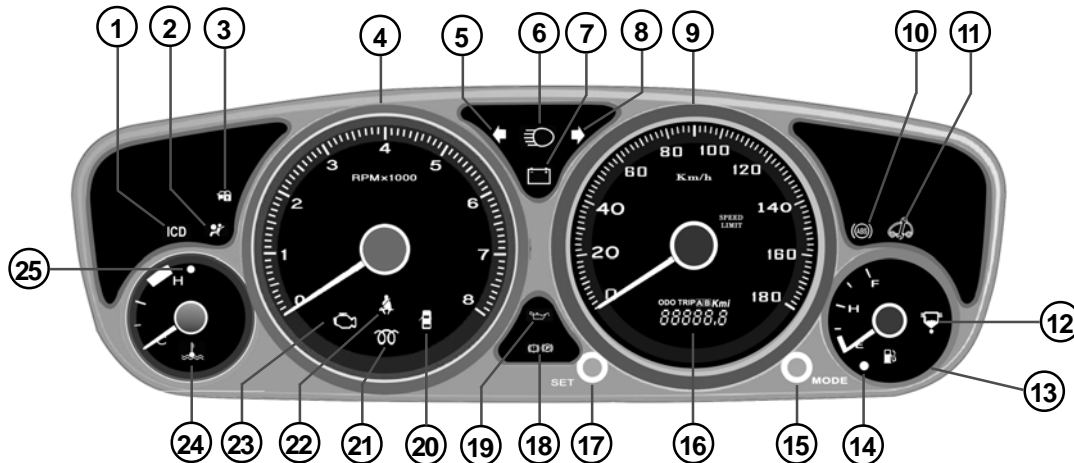
1. A.C. Air vent (Side)
2. Driver Information System
3. Combi-switch
4. Steering Wheel
5. Instrument Cluster
6. Audio Controls on Steering Wheel
7. Horn pad
8. Bonnet Opening lever
9. Accelerator pedal
10. Brake pedal
11. Clutch pedal
12. Plug Socket
13. Parking Brake lever
14. Gear lever
15. Cup Holder
16. A.C. Controls
17. Facia Switches
18. Music System
19. Glove Box

DRIVING CONTROLS



1. A.C. Air vent (Side)
2. Driver Information System
3. Navigation Sensor
4. Solar Load Sensor
5. Combi-switch
6. Instrument Cluster
7. Steering Wheel
8. Audio Controls on Steering Wheel
9. Horn pad / Air Bag (DAB)
10. Accelerator pedal
11. Brake pedal
12. Clutch pedal
13. Plug Socket
14. Gear lever
15. Parking Brake lever
16. Cup Holder
17. FATC Control Panel
18. Facia Switches
19. Music System
20. Glove Box
21. Air Bag (Co-driver side) PAB

## INSTRUMENT CLUSTER



- |  |   |   |
|--|---|---|
| 1. ICD Indicator (Instrument Cluster Diagnostic) | 9. Speedometer                              | 18. Parking Brake & Low Brake Fluid Indicator |
| 2. Air Bag Indicator                             | 10. ABS Indicator (if provided)             | 19. Low Engine Oil Pressure Indicator         |
| 3. Immobiliser Indicator                         | 11. Service Indicator Lamp (SIL)            | 20. Door Open Indicator                       |
| 4. Tachometer                                    | 12. Water In Fuel Indicator                 | 21. Glow Plug Indicator                       |
| 5. Turn Signal (Left)                            | 13. Fuel Gauge                              | 22. Seat Belt Indicator                       |
| 6. High Beam Indicator                           | 14. Low Fuel Indicator                      | 23. Malfunction Indicator Lamp (MIL)          |
| 7. Battery Charging Indicator                    | 15. "Mode" knob                             | 24. Temperature Gauge                         |
| 8. Turn Signal (Right)                           | 16. Multi functional LCD (Digital Display ) | 25. High Temperature Warning Indicator        |
|  | 17. "Set" knob                              |   |

**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)
- Tell tales
- Mode & Set knobs

SR. NO.	FEATURES	DESCRIPTION
1	Speedometer	Vehicle speed (in kmph)
2	Tachometer / RPM Meter	Engine speed (in rpm)
3	Fuel Gauge	Fuel level in tank (Empty to Full)
4	Temperature Gauge	Engine temperature
5	Odometer	Total distance travelled
6	Trip meter "A & B"	Distance travelled on each trip or between fuel fillings
7	Dimmer for cluster & LCD backlighting	4 levels (25%, 50%, 75% & 100%)
8	Over Temperature Warning	External Buzzer audio alarm (if fitted)

## TELL TALES

### 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.

### NOTICE

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.

### NOTICE

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.

### Immobiliser Warning:



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 car. Refer to Immobiliser section on page 60 for details.

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

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

**Lamp ON:** Problem with key/system. Take your car to TATA MOTORS Authorised service centre.

### Water in fuel (in Quadrajel):



This symbol indicates excess water accumulation in the sedimenter. It will come ON when ignition is turned ON and will go OFF in approximately three seconds. When this lamp remains ON, water needs to be drained from sedimenter immediately.

### CAUTION

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

### Glow Plug :

(For Diesel engines only)



This symbol comes ON when the ignition key is in the ON position.

Engine should be started only after this indicator goes off.

### Turn Signal:



One of these symbols come 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.

#### Low Oil Pressure:



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

If the low oil pressure indicator does not glow or remains ON with the IGN ON and engine is running, it indicates a fault in the electrical circuit / lubrication system. Take your car to a TATA Authorised Service centre.

#### Battery Charging Indicator:



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

#### NOTICE

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

#### Parking Brake cum Low Brake Fluid Warning:



This indicator comes ON:

1. When key is turned to IGN position, it lights up for three seconds and goes off.
2. When brake fluid level is low.
3. When parking brake is applied and goes OFF when it is released.
4. When ABS/EBD system has a fault.

#### Seat Belt :



This symbol initially flashes when the ignition is ON and seat belt is not fastened. It will continue to flash until the car exceeds a speed of 20 kmph. After that, it will remain continuously ON along with a buzzer that will be audible for approximately for 100 seconds. After that, the buzzer goes OFF but the indicator continues to remain ON until seat belts are fastened.

#### WARNING

Always wear Seat Belts.

#### ABS (if provided):



When key is turned to IGN position this symbol comes ON for two seconds and goes OFF.

This symbol will come ON if there is a problem in the ABS working or if the system has failed.

#### High Coolant Temperature Indicator (Red Colour):



This symbol lights up when the

ignition is turned ON. If the engine is overheating, this indicator blinks along with a audible buzzer. At this stage, take the car to the nearest Authorised Service outlet. This symbol blinks and audible buzzer sounds simultaneously when engine coolant temperature is more than normal.

### WARNING

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

### Low Fuel (Amber Colour) :



It comes ON when fuel level is low and needs refilling at the earliest.

### Airbag:



The air bag warning symbol comes on for approximately three seconds when the ignition is turned ON and goes OFF. If it remain ON or blinks, take your car to the nearest Tata Authorised Service Centre.

### ICD Lamp:



This symbol comes ON for approximately three seconds when key is turned to IGN position and goes OFF. If it remains ON or blinks, it indicates trouble in instrument cluster. Take your car to a TATA Authorised Service Centre.

### Door Open Indicator:



This symbol comes ON when the doors are open or when the doors are not completely closed. If the driver's side door is not closed properly, a beep will sound for a few seconds when the ignition is ON.

### 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.

To access the diagnostic connector (Fig.1), open the fuse box cover (Fig.2)

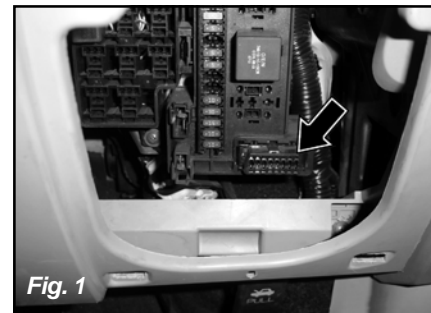


Fig. 1





which is located on the cockpit at RHS of the steering wheel.

### NOTICE

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.

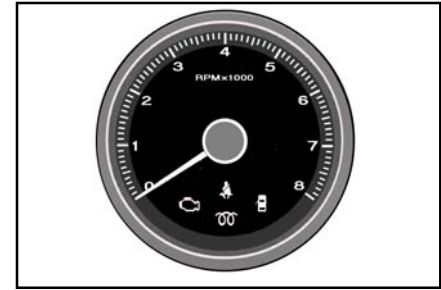
### Speedometer:



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

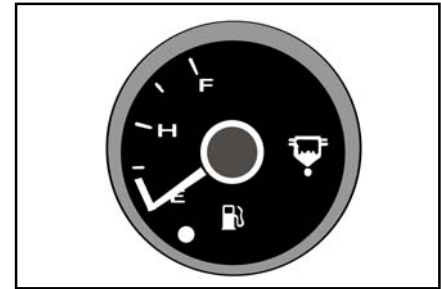
### RPM meter / Tachometer (if provided):

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.



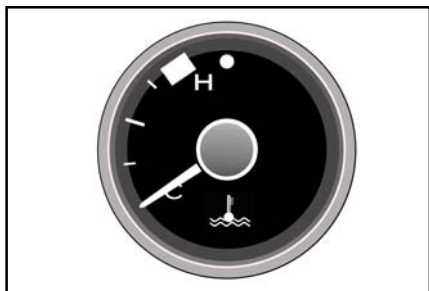
When engine RPM crosses 5000 RPM (Quadrajets) & 6000 RPM (Safire), the needle colour changes to RED. Avoid over-revving the engine.

### 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.

### Engine Coolant Temperature Gauge:



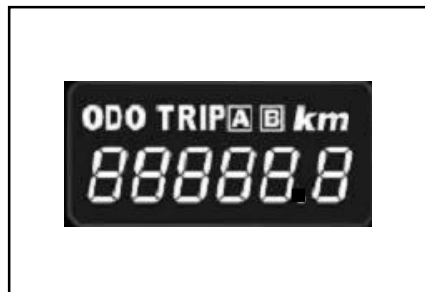
The engine coolant temperature gauge indicates the approximate coolant temperature. If the coolant temperature reading is very high or if the high coolant temperature indicator comes ON, reduce the car's speed and switch OFF the AC.

Take the car to an authorised service station at the earliest.

### ⚠ CAUTION

Overheating of engine can cause severe damage to the engine parts and can lead to seizure of engine parts.

### Multifunctional LCD, Odometer, Dimmer and Tripmeter (A and B):



The instrument cluster's LCD has a two line display. The first line displays ODO, TRIP A, B (in Kms). The second line displays odometer reading, TRIP A, B reading as well as brightness

intensity levels. The LCD also displays Tripmeter A, Tripmeter B and intensity level when the MODE knob is pressed. The selection and control of functions are done through 'MODE' and 'SET' knobs provided on either side of the gauge. Refer to table on page 37.

### *Odometer and Trip meter (on LCD):*

The odometer records the total distance the car 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.

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

Please note that each knob has to be pressed and released to change the function.

**Display selection by “MODE” and “SET” knobs :**

Sr. No.	Indication on LCD	With “MODE” knob pressed	With “SET” knob pressed
1	Main Odometer	Display changes to Trip A	-----
2	Trip meter “A”	Display changes to Trip B	Resets Trip A distance (Ref. to A on page 38)
3	Trip meter “B”	Display changes to Dimmer, if cluster Illumination is ON, else changes to Main Odometer	Resets Trip B distance (Ref. to B on page 38)
4	Dimmer	Display changes to Main Odometer	Adjusts Dimming level (Ref. to C on page 38)

### LCD FEATURES :

#### A. Multifunction LCD (as applicable)



**Colour :** White Text with Black background.

#### B. Trip meter (A and B)

**Type:** 7 segments, 4 1/2 digits

**Range:** 0 to 1999.9

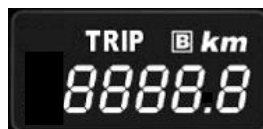
**Resolution :** 0.1 km

Trip meter reading shall over flow to "0.0" after it crosses 1999.9 kms.

##### TRIP- A (as applicable)



##### TRIP- B (as applicable)



#### 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,

- 1 2 Dashes => 25 %
- 2 4 Dashes => 50 %
- 3 6 Dashes => 75 %
- 4 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.

**D. Odometer (as applicable)**

**Type:** 7 segments, 6 digits.

**Range:** 0 to 99999.9

**Resolution :** 1 km

The Odometer reading will not overflow to "0.0" when the maximum value is accumulated, the display will freeze to maximum value.



### DRIVER INFORMATION SYSTEM (as applicable):

The Driver Information System (DIS) is located at centre of the vehicle cockpit and has the following features:

#### 1. Fuel Computer :

- a. Average Fuel Consumption ( For Trip 'A' & 'B'),
- b. Range (Distance to Empty) and
- c. Instantaneous Fuel Consumption

#### 2. Digital Clock

#### 3. Outside Ambient Temperature

### DIS FUNCTIONS

Sr. No.	Features	Description
1	Fuel Computer	Average Fuel Consumption (AVG) - For Trip 'A' & 'B'
		Range - Distance to Empty (DTE)
		Instantaneous Fuel Consumption (INST)
2	Digital Clock	12 Hour and 24 Hour Format
3	Outside Ambient Temperature	Outside Ambient Temperature display with °C and °F

## Quadrajel, Safire



## Default Settings (Factory Set)

Sr. No.	DIS Features	Default Display	
		Functions	Unit
1	Fuel Computer	AVG For Trip -A	km/l
2	Digital Clock	12 Hours	AM
3	Outside Ambient Temperature	OAT	C

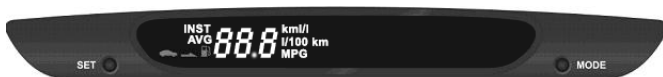
**NOTICE**

Whenever battery terminals are removed, unit returns to factory setting.

### Fuel Computer

Fuel Computer information is available on DIS, as can be seen from figure below. Three types of information are available, which can be user selected through "MODE" and "SET" knobs provided.

Refer to "Knob Function" on page 48.



Sr. No.	Function	Text on Display	Distance Unit as km		Distance Unit as Mile
			Option - 1	Option - 2	Option
1	Average Fuel Consumption For Trip 'A'	AVG	km/l	l/100km	MPG
	Average Fuel Consumption For Trip 'B'	AVG	km/l	l/100km	MPG
2	Distance to Empty (Range)		km	-	Miles
3	Instantaneous Fuel Consumption	INST	km/l	l/100km	MPG



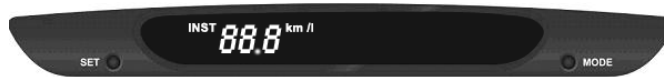
### **Instantaneous Fuel Consumption (INST):**

Updates display "Instantaneous Fuel Consumption" at regular time intervals.

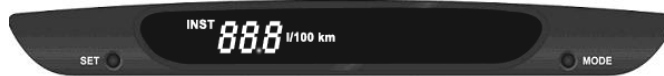
Instantaneous Fuel Consumption display is available in "km / l" or "l / 100 km" which can be user selected through "MODE" and "SET" knobs provided.

Refer to "Knob Function" on page 48.

### **Instantaneous Fuel Consumption display in km / l**



### **Instantaneous Fuel Consumption display in l/100 km**



DIS displays "Instantaneous Fuel Consumption data" only when the following conditions are met -

DIS displays "- - km/l" when ign on & engine is off

DIS displays "0.0 km/l" when ign on & engine is on

DIS displays "Instantaneous Fuel consumption data" only when the below conditions are met:

A. Vehicle speed should be more than 10kmph.

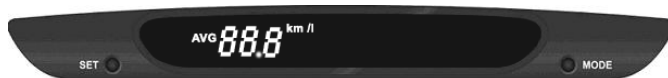
B. Vehicle travelled distance should be more than 20meters.

Display Range: 0.0 to 99.9 (km/l or l/100km)

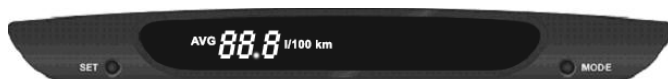
Resolution: 0.1 (km/l or l/100km)

### Average Fuel Consumption (AVG):

#### Average Fuel Consumption display in km / l



#### Average Fuel Consumption display in l/100 km



The display will show the value of average fuel consumption since the last reset.

Average Fuel Consumption display is available in “km/l” or “l/100km” which can be selected by user by using “Mode & Set” switches.

Average Fuel consumption will get updated for every 10secs interval.

The Average Fuel Consumption data can be reset manually through “Set” switch provided in the cluster

After resetting the Average fuel consumption the display will indicate 0.0 and then will show a new average fuel consumption value after driving for some distance.

If previous data exist DIS will update the display once engine speed is >0rpm.

Display Range: 0.0 to 99.9 (km/l or l/100km)

Resolution: 0.1 (km/l or l/100km)

Refer to “Switch Function” on page 47.

**Distance to Empty (DTE):****Distance To Empty (Km)**

This feature shows the estimated distance user can drive with the remaining fuel in the tank. The value is calculated based on fuel economy user have achieved over few hundred kilometres or miles.

DIS displays actual DTE at every Ignition on cycle.

DTE is calculating using a running average fuel economy which is based on recent driving history for few hundred km. This running average fuel economy value is not same as average fuel economy display.

This value tends to vary with change in drive pattern, vehicle speed, Traffic condition and different road conditions.

Display Range: 0 to 999 km

Resolution: 1 km

**NOTE**

To get actual DTE value after fuel filling customer has do the ignition OFF to ON

Whenever battery terminals are removed, units return to default factory setting. (All data's will get reset). Again it shows the data on display after some distance travelled and data's will get stabilized after some few km depending upon the driving pattern.

### Digital Clock

This feature has 24 hour or 12 hour display format, AM/PM indication is applicable for 12 hour clock function only, as can be seen from the adjoining figure, which can be user selected through "MODE" & "SET" knobs provided.

Digital Clock Display



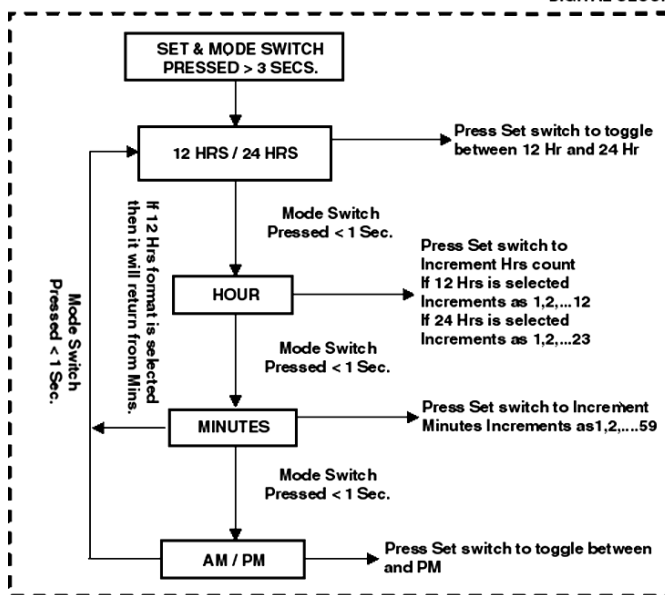
Digital Clock AM Setting



Digital Clock PM Setting



DIGITAL CLOCK



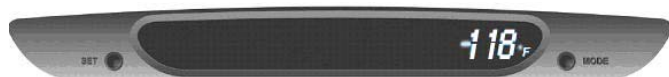
**Outside Ambient Temperature Display:**

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

Resolution: 1°C or °F

**NOTE**

The displayed “Outside Ambient Temperature” value may not be accurate when Vehicle speed is  $\leq 30$  km/h due to engine heat, exhaust from surrounding vehicles and heat reflection from road. The IC delays the OAT display update until it reaches the correct outside temperature. This may take several minutes.

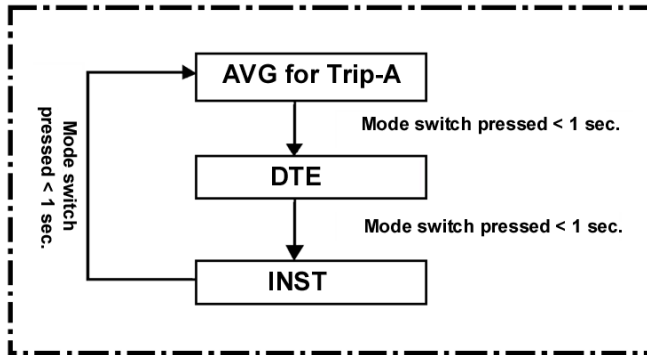
**Outside Ambient Temperature (Display in °C)****Outside Ambient Temperature (Display in °F)**

## SWITCH FUNCTIONS :

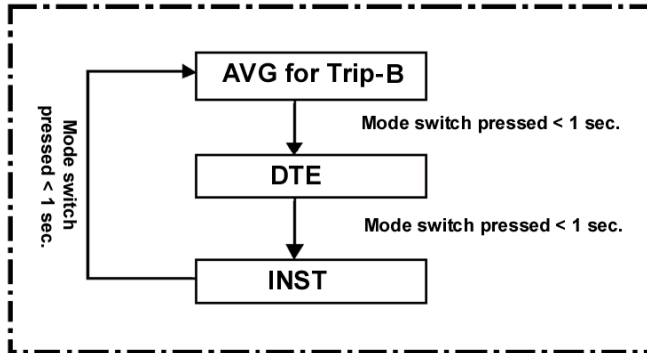
User can select required function, using switches available on DIS, as indicated below. Please note that each switch has to be released & pressed to change the function.

## DISPLAY SELECTION BY “MODE & SET” SWITCHES :

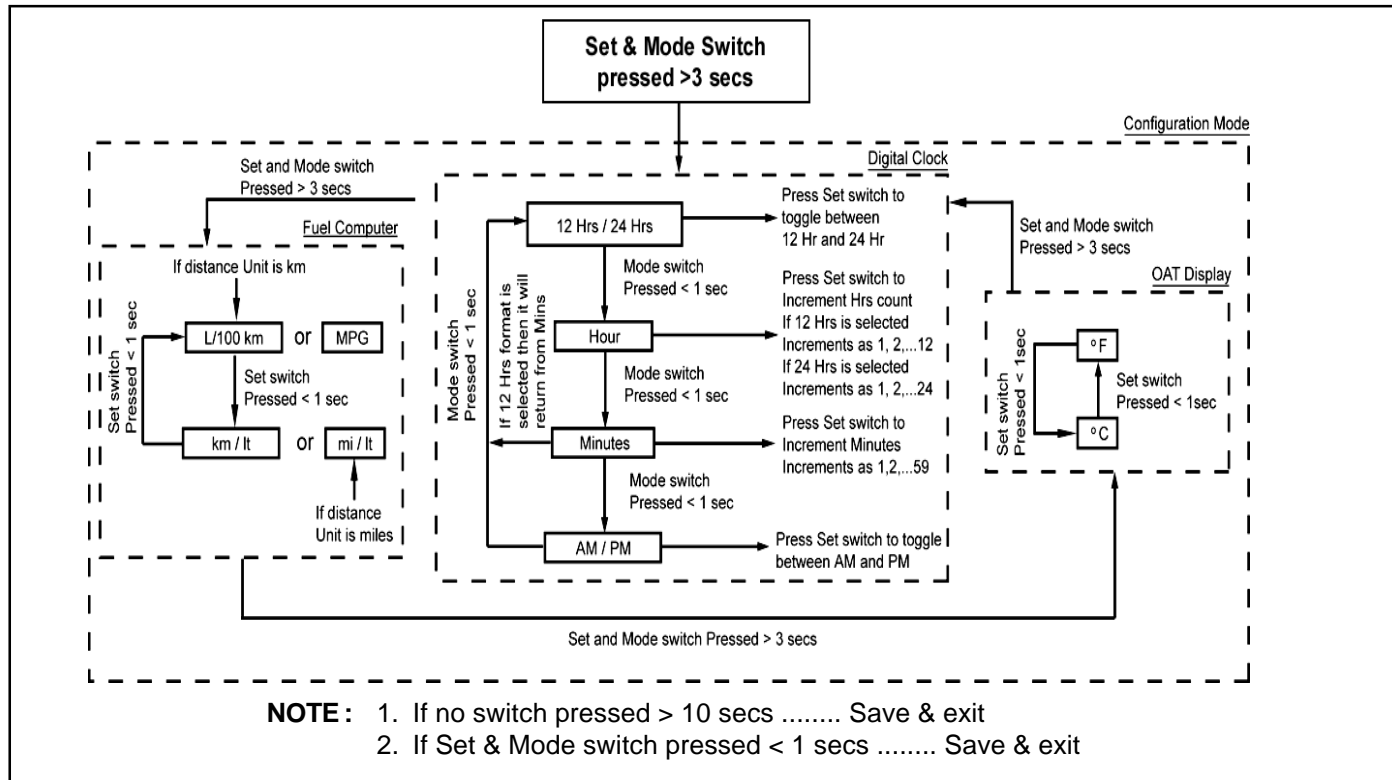
Sr. No.	Indication On instrument cluster LCD	Indication on DIS LCD	With “Mode” switch pressed on DIS	With “Set” switch pressed on cluster
1	Odo meter	Average Fuel Consumption A	Changes display to Range (Distance to Empty)	-
2	Trip meter A	Average Fuel Consumption A	Changes display to Range (Distance to Empty)	Resets Average Fuel Consumption data for Trip A
3	Trip meter B	Average Fuel Consumption B	Changes display to Range (Distance to Empty)	Resets Average Fuel Consumption data for Trip B
4	-	Range Distance to Empty	Changes display to Instantaneous Fuel Consumption	-
5	-	Instantaneous Fuel Consumption	Changes display to Average fuel consumption for trip A or Trip B based on Instrument cluster display.	

**A. Instrument Cluster Display on Odo OR Trip-A :**

**NOTE :** Use of 'MODE & SET' switches - Recognized as single key press, until it is released.

**B. Instrument Cluster Display on Trip-B :**

## Flow chart for using “MODE” and “SET” knobs





### FACIA SWITCHES/INDICATORS :

Five operating switches are provided on the facia.



1. Passenger Airbag Indicator
2. Front Fog Lamp Switch
3. Hazard Warning Switch
4. Rear Fog Lamp Switch

### Passenger Airbag Indicator:



The Passenger Airbag Indicator, indicates whether the passenger airbag is activated or de-activated.

The Passenger Airbag Indicator comes ON when the Ignition is turned ON.

### WARNING

Ensure that the passenger airbag indicator is always ON when there is a passenger travelling.

Ensure that the passenger is always using the seatbelt.

### Passenger Airbag (PAB) Switch :



Passenger Air Bag (PAB) switch is provided on the left side of dashboard and it should always be ACTIVE. If in case the front passenger seat is unoccupied, the PAB may be prevented from deploying by turning the PAB switch to INACTIVE by using the ignition key.

### Hazard Warning Switch:



Hazard warning is used in case of a breakdown especially during night and the car has to be parked at the side of the road. This switch can also be used when the car is operated in adverse conditions.

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

#### CAUTION

Ensure that all turn signal indicators are working properly. Replace the bulb if found fused.

### Front Fog Lamps : (Unlatched switch)



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

### Rear Fog Lamps : (Unlatched switch)



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

#### NOTICE

Use only during foggy conditions or heavy rains if required.

### Steering Lock cum Ignition Switch:

Key of ignition switch is common for door lock, steering lock and glove box lock.

The ignition switch is on the right side of the steering column. It has four positions. Turn the key clockwise for further functions.



- LOCK - Steering Locked
- OFF - 'KEY IN' position.
- IGN - All electricals ON
- START - Engine crank

### LOCK :

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

### CAUTION

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

### OFF (key IN) :

By turning key to OFF (key in) position, 'KEY IN' driven load like music system will be ON.

### IGN :

All electricals and accessories ON.

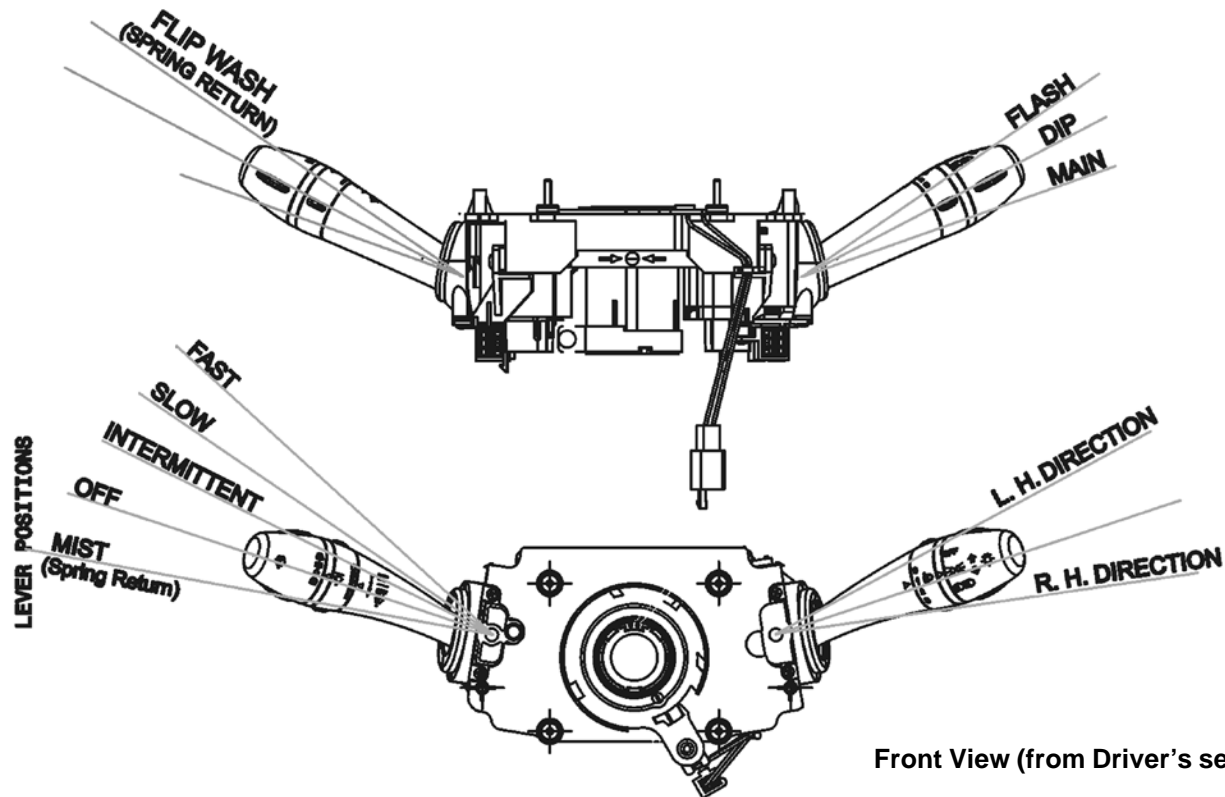
### START :

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 to ON position. While cranking, all accessories will be momentarily OFF.

### NOTICE

Do not crank the engine for more than 10 secs. continuously. If the engine does not start, wait for 30 secs. before cranking it again. Release the key immediately after starting the engine. If the key is not released, the starter motor/flywheel ring gear may get damaged.

By turning the ignition key from IGN position to OFF position, engine can be stopped.



**A) RIGHT HAND STALK****1. Head lamp leveling rotary switch:**

Inner rotary switch on right hand stalk is provided for head lamp leveling. Setting is done by rotating the knob to select one of the three level positions depending upon the loading of the car. Head lamp leveling can be done with head lamp in Low Beam and in ON position.

**NOTICE**

Setting should be done only when car is stationary.  
Since the leveling switch takes care of headlamp focus pattern under

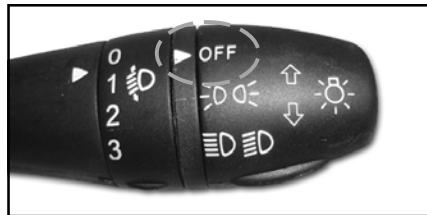
varying load conditions, it is advisable to select the correct position before starting a trip (depending on load).

**2. Light stalk:**

Outer rotary switch on right hand stalk is provided for selecting Position or Head lamp High/Low beam. It operates with Ignition switch in IGN position.

**a) Head / Position lamp OFF.**

Head lamp, Position (Parking) lamp and tail lamp will be OFF in this position.

**b) Position lamp in ON.**

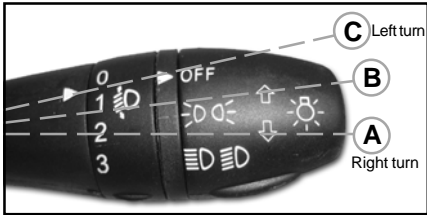
Position (Parking) lamp and tail lamp will be ON in this position.

**c) Head / Position lamp ON.**

Head lamp, Position (Parking) lamp and tail lamp will be ON in this position. Toggling the lever (Stalk) in upward direction changes the Low beam to High beam and vice versa.

For High beam flash, pull the lever halfway. For keeping in High beam position pull up the lever further up to latch.

### 3. Light stalk (Turn Indicator):

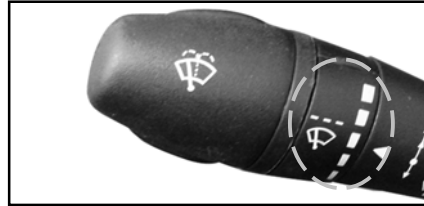


Push the stalk upwards for changing lane or turning to Left and downwards for changing lane or turning to Right according to requirement. It has three positions.

- A) Right turn indicator
- B) Neutral position
- C) Left Turn (Self cancellation / Manual return type)

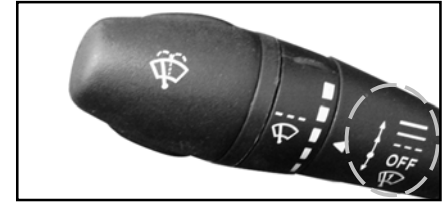
**Lane change option -**  
When changing lanes, hold the stalk half way towards A or C (right of left). By doing so, the turn indicators flash to give lane change indication. once released, the stalk returns to its original position.

### 2. Intermittent front wiper delay:



Inner rotary switch on left hand stalk is provided for intermittent front wiper delay. The switch has five delay timers for intermittent function.

### 3. Front windshield-Wipe and Wash rotary switch:



Pull the stalk upwards to operate intermittent wipe (- - -), Slow wipe (—) or fast wipe (→). Pull the stalk down for wipe and wash. Pull towards driver for Flick Wipe (spring return).

After wash function is activated, there will be three wipes of wiper. There will be one more wipe after five seconds to clean traces of water on wind screen.

### Touch screen Music and Navigation System :



A touch screen music system and navigation system is provided on the centre console above FATC panel.

To operate this system, please refer operator's handbook, which is provided alongwith the Owner's Manual.

#### NOTICE

Do not cover navigation sensor, this may lead to improper functioning of navigation system.

### USB/AUX PORT:



USB and AUX Ports are provided on the Music System on the centre console.

#### Functions :

**USB port** : You can attach external memory devices like memory sticks / Pen Drives, I-Pods for playing music tracks stored in these devices through the car's music system.

**AUX port** : The AUX port is provided to connect Audio input devices for playing music tracks stored in the devices through car's speakers.

#### NOTICE

The video input can also be connected to AUX port (For specific variants only) for playing video files.

### Steering Wheel Switches (RHS): (As applicable)



**SEEK** – To change radio channels or to select a song from a CD.

**MODE** – To pick up an in-coming phone call as well as to change the audio source (USB, AM, FM, CD).

### Steering Wheel Switches (LHS): (As applicable)



**VOL (Volume):** To increase / decrease volume of music system / radio.

**MUTE:** To reject or hang up a phone call. It is also used to silent the volume of music system / radio.

#### NOTICE

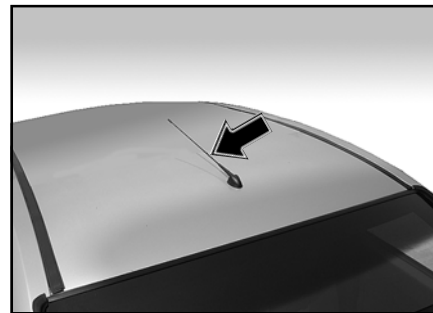
For more information, please refer to the Music System Manual provided.



Speaker Location on doors

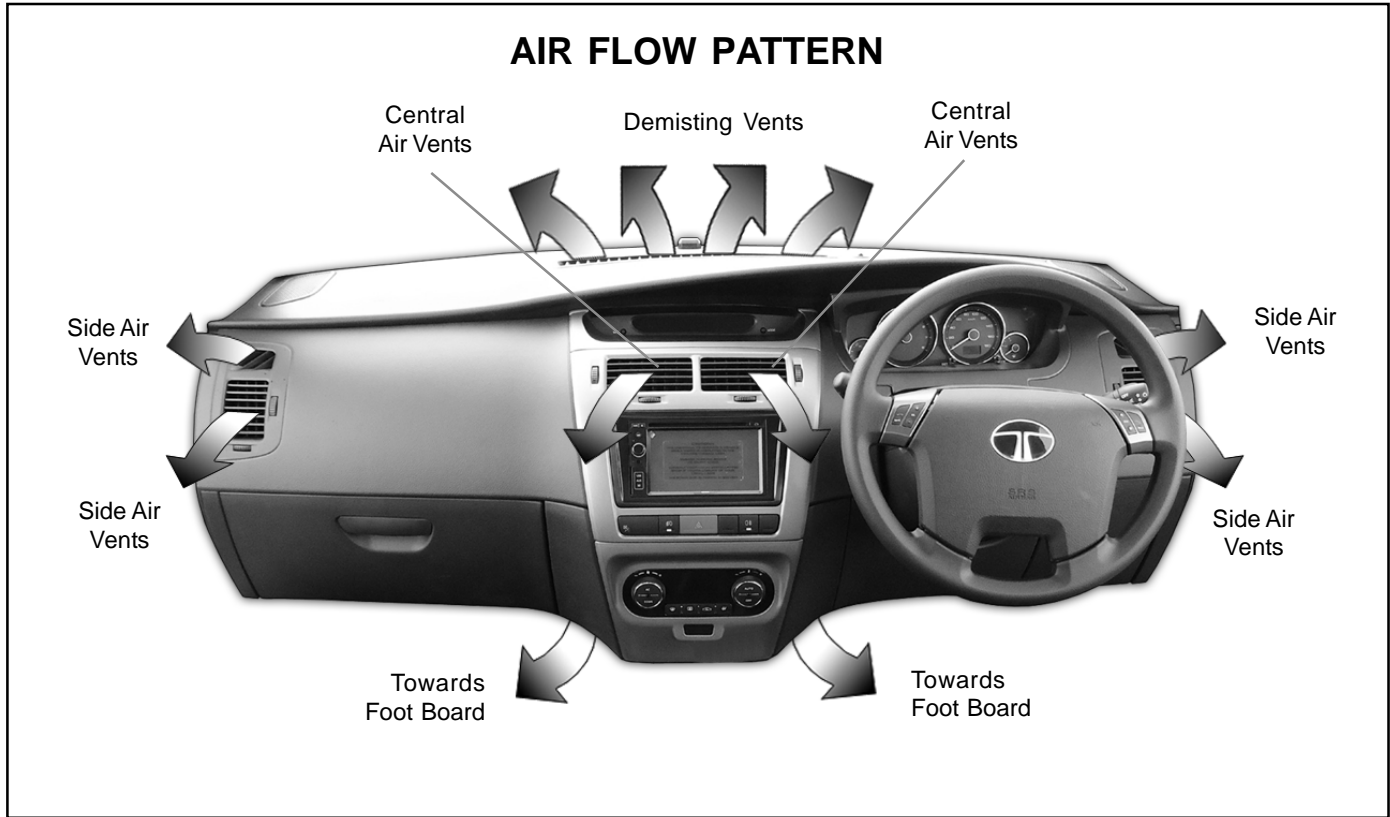
For operation and more information of music system please refer manufacturer's manual.

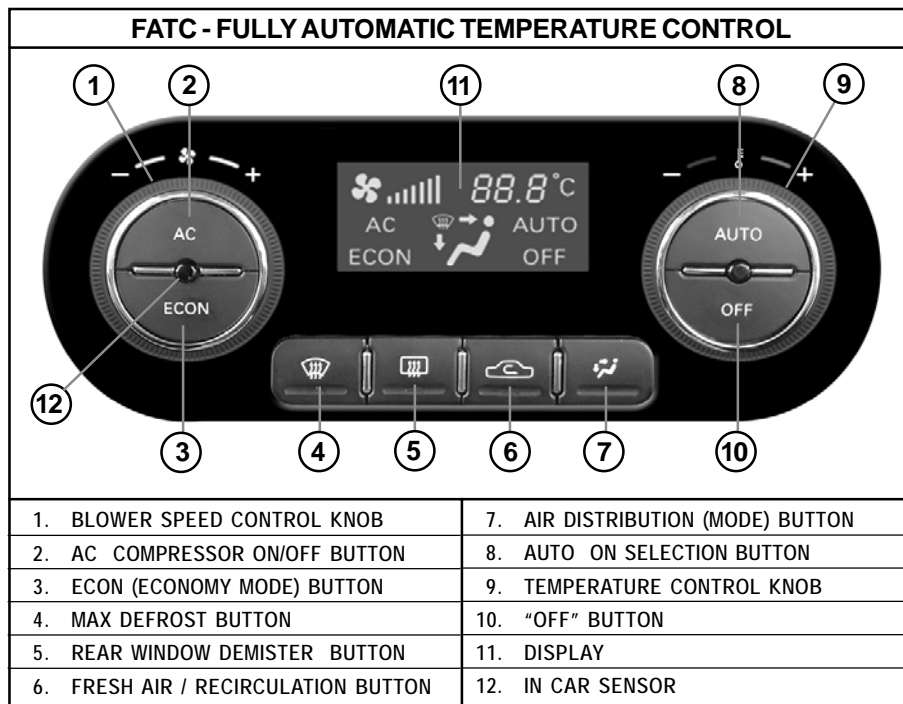
**Antenna:** Antenna is located on the roof, above the front windshield glass.



Antenna







## FATC - FULLY AUTOMATIC TEMPERATURE CONTROL : (IF PROVIDED)

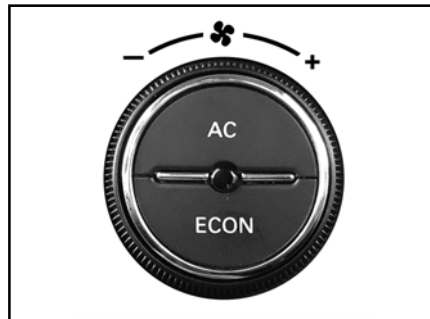
### GENERAL DESCRIPTION :

FATC system controls the in-cabin Temperature of the vehicle automatically and provides maximum passenger convenience regardless of outside weather conditions.

### **CAUTION**

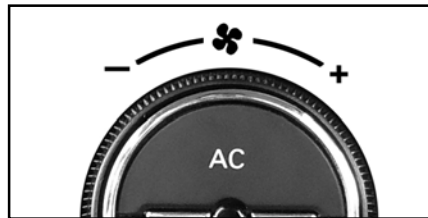
If the display flashes 'ERR' in periodic pattern (Display will show 'ERR' for 5 sec. and set temperature for 30 sec.), It indicates FATC malfunctioning. Switch over to manual mode and contact **TATA MOTORS** authorized service station.

## 1. BLOWER SPEED CONTROL KNOB :



- A. Rotate the knob clockwise to increase the blower speed up to MAX 7 speed, where as anti-clockwise would reduce the speed up to 'SPEED 1'.
- B. In 'AUTO' mode, the FATC system will regulate the blower speed automatically.

## 2. AC COMPRESSOR ON / OFF BUTTON :



Press the AC compressor ON/OFF button to turn the air conditioning ON or OFF. You will see AC text on the display, when AC is ON.

## 3. ECON A.C. :



During ECON AC operation, the system automatically cuts off

compressor at a higher temperature than normal AC. The operation can be used during mild weather conditions for better fuel efficiency. Comfort level may be compromised during this operation. By pressing ECON button text will be displayed on display.

## 4. MAX DEFROST BUTTON :



- A. This button directs the main airflow towards windscreen for faster defrosting.(It also overrides any mode selection you may have made.)
- B. When you turn off the button, the system returns to its former settings.



### CAUTION

For your safety make sure you have a clear view through all the windows before driving.

## 5. REAR WINDOW DEMISTER BUTTON:



A. This button turns the rear window demister ON or OFF.

The system automatically deactivates after 15 min of continuous operation.

## 6. FRESH AIR / RECIRCULATION BUTTON:



A. When the recirculation Button or LED is switched 'ON', air from the vehicle's interior is sent through out the system.

B. When the recirculation button is switched off, air is brought in from outside of the vehicle (fresh mode). Whenever discomfort is felt, switch to fresh air mode.

### NOTICE

The out side air intakes for the climate control system are at the

base of windscreen. Keep this area clear from 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 AC OFF, can cause the windows fog up.


### CAUTION


It is recommended to run the vehicle in re-circulation mode to avoid clogging of air filter

## 7. AIR DISTRIBUTION (MODE) BUTTON :





A. In AUTO mode, the FATC system will regulate the mode automatically. However user override is possible with the use of MODE button to select the desired airflow mode. Each time you press the MODE button, the display shows the mode selected.

 Towards face

 Towards face and leg

 Towards leg

 Towards leg & windshield - demist or defrost (Recommended for clearing mist on windshield ) - front air demist.

 Towards windshield (defrost) (Recommended for clearing heavy fog or snow)

## 8. AUTOMATIC OPERATION :



To put the automatic climate control in fully-automatic mode:

- A. Press the 'AUTO' button.
- B. Set the desired temperature by turning temperature control knob.

The display will show all the functions during 'AUTO' mode.

- C. The system automatically selects the proper mix of conditioned and/ or heated air that will , as quickly as possible, raise or lower the interior temperature to your preference.
- D. When you set the temperature to its lower limit (Lo) or its upper limit (Hi), the system runs at full cooling or heating only. It doesn't regulate the interior temperature.

#### Semi-automatic Operation :

You can manually select various functions of the climate control system when it is in fully automatic mode. All other features remain automatically controlled .Making any manual selection causes the word 'AUTO' in the display to go OFF and overridden setting is displayed. System will remain in semiautomatic mode till 'AUTO' is re-pressed.

#### 9. TEMPERATURE CONTROL KNOB:



Turning the temperature control knob clockwise increases the temperature of the air. The desired temperature will be increased by steps of 0.5°C. User can select temperature range from 18°C to 30°C. Where as the anti-clockwise direction decreases the temperature.

When you set the temperature to its lower limit (Lo) or its upper limit (Hi), the system runs at full cooling or heating only. It doesn't regulate the interior temperature.

#### 10. "OFF" BUTTON:



Press the OFF button to switch OFF The system. OFF will be displayed on the display.

#### 11. DISPLAY :



Settings done by user or AUTO mode functions are displayed on screen.

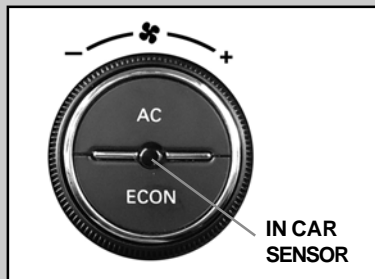
#### NOTICE

HVAC system is fitted with three Sensors .

1. A solar sensor on top of the dashboard on the right side of defroster grill.



2. In-car sensor on control panel.



3. Outside Ambient Temperature (OAT) sensor located under the front grill / front bumper.

## CAUTION

1. Do not cover or spill any liquid on sensors.
2. Do not cover sensor, this may cause the sensor to malfunction. This may lead to FATC not functioning to desired level.

**If you parked your car under sun , you can cool it down fast by following the steps given below :**

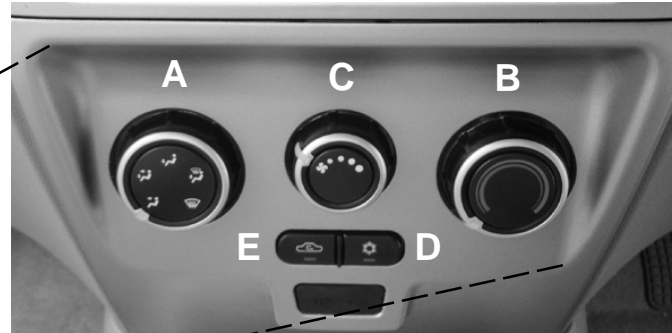
- A. Start the engine
- B. Turn on A/C by pressing the button. Make sure the temperature control is set to maximum cool. In case of FATC set temperature to 'Lo' mode.
- C. Set the fan to maximum speed. (for ETC ,manual HVAC variants)
- D. Open windows half , set air direction towards face and fresh air mode.

- E. When the interior has cooled down to a more comfortable level, close windows and set the controls as required in normal cooling, with recirculation mode ON.

HEATING, VENTILATION & AIR CONDITIONING (IF PROVIDED)



Centre Console








- A - Air flow Direction Control Knob
- B - Temperature Control Knob
- C - Blower Speed Regulation Knob
- D - A.C. ON/OFF Switch
- E - Air Recirculation / Fresh Air Switch

## (A) Air flow Direction Control Knob:

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



-  Towards face
-  Towards face and feet
-  Towards feet
-  Towards feet and windshield  
(Recommended for clearing mist on windshield)
-  Air demist/defrost windshield  
(Recommended for clearing heavy fog or snow)

## (B) Temperature-Control Knob:



The air temperature in the car can be controlled by operating the temperature control knob (B) on the control panel. The temperature can be increased by rotating the knob towards the red segment and decreased by rotating it towards the blue segment.

## (C) Blower Speed Regulation Knob:

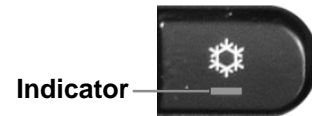
The HVAC system has a four speed blower. The blower speeds can be

regulated by operating the blower knob (C) at the centre of the control panel.



## (D) A.C. ON/OFF Knob:

The A.C. can be switched ON by pressing the switch (D) on the A.C. control panel provided the blower is ON and the engine is running. The indicator lamp will show that the A.C. is ON.



Indicator



**(E) Recirculation / Fresh Air Switch:**



Indicator

- If HVAC is to be put into air recirculation mode, press switch 'E'. The indicator lamp will show air in recirculation.
- To put car in Fresh air mode release switch 'E'. Indicator lamp will be OFF.
- In recirculation mode, air inside the car is circulated again and again. In Fresh air mode, air is taken from outside and circulated in the car.

**Recirculation mode can be used**

- While driving in dusty condition
- To avoid traffic pollution
- To get quick cooling/heating as required.

Whenever discomfort is felt switch air circulation mode to fresh.

The A.C. can be switched ON only if the blower is ON and engine is running. When A.C. is switched ON engine idling RPM increases marginally, to adjust to the A.C. compressor load. When desired temperature is achieved A.C. trips OFF automatically.

The A.C. compressor gets switched OFF automatically when engine gets overheated. The A.C. is automatically switched ON when the engine gets cooled.

**Normal Heating:**

Knob 'A' - Towards face and feet

Knob 'B' - Suitable temperature position

Knob 'C' - Suitable blower speed

A.C. - OFF

Air Circulation - Fresh switch

**Quick Heating:**

All settings as explained above except air circulation switch to recirculation. Once the car is heated, switch back to fresh mode.

**Normal Cooling:**

Knob 'A' - towards face

Knob 'B' - Cool position.

Knob 'C' - desired speed position

A.C. - ON

Switch 'E' - suitably as explained

**NOTICE**

To achieve quick cooling effect, open the windows slightly while you operate the air conditioner, with air circulation switch in fresh mode, fan at 4th speed and air direction toward "FACE". Side Air vents and central Air vents to be opened completely. Once temperature inside has come down sufficiently, close the windows and change air circulation suitably to fresh/recirculation and reduce blower speed suitably.

### Demisting:

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

The position of control knobs should be adjusted as follows:

A.C. - ON

Knob 'A' - Towards windshield (for demisting)

Knob 'B' - at suitable temperature

Air circulation - at desired position

Knob 'C' - Desired speed position

### NOTICE

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

### Defrosting:

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

First start the engine and warm it by pressing on the accelerator pedal.

Knob 'A' -Towards windshield

Knob 'B' - Maximum hot position

Knob 'C' - Very High

Switch 'E' - Fresh air mode condition,  
AC - OFF

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

A Plastic scraper can be used to clear windshield glass, once the ice starts melting

### NOTICE

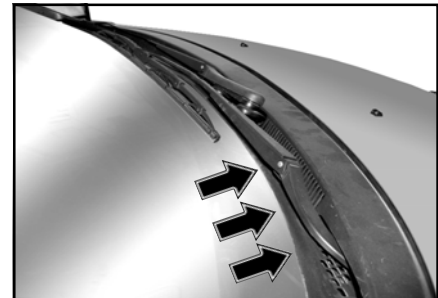
- Refrigerant charged in the air conditioning circuit has been identified on the label over

bonnet. Use only refrigerant as given in the label for topping up or re-charging.

- AC Gas charging Quantity should be as per the above label.

### NOTICE

Fresh air is taken from the grill opening provided at base of windshield glass outside the car. Keep these openings clear and free from fallen leaves etc.



**Operating the AC after a gap of more than a month of non use :**

Start engine & let it warm up for at least 2 min. for idling speed to drop below 1000 rpm. Switch ON A.C. system with following settings :

- a) Blower switch:ON
- b) Blower speed:High
- c) Engine speed:Below 1000 rpm
- d) A.C. switch : ON

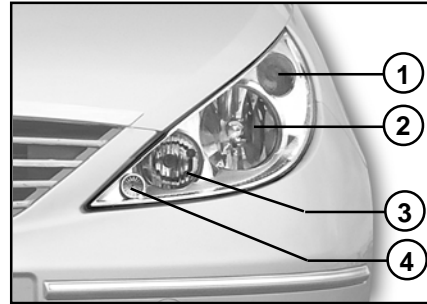
A.C. should be operated for at least 5 minutes before switching it off.

Following the above procedure once a month ensures proper lubrication of compressor parts. Avoid switching ON the A.C. at high engine speed as this may damage A.C. compressor.

Get your A.C. system serviced at regular intervals ensures its optimum performance and prolong its life.

**Head Lamp:**

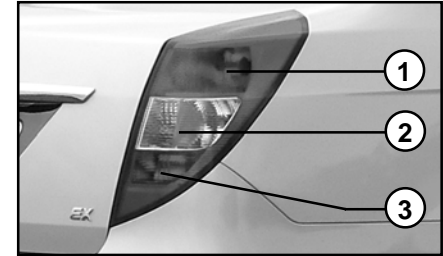
Head lamps are clear lens type having multi focal reflector and are provided with two H7 halogen lamps for straight ahead illumination of the road over a long distance or dip beam for short distance visibility. It also contains side indicator lamp and a parking lamp.



- 1. Turn Indicator
- 2. Head Lamp (High Beam)
- 3. Head Lamp (Low Beam)
- 4. Parking Lamp

**Tail Lamp:**

The tail lamp assembly incorporates the following



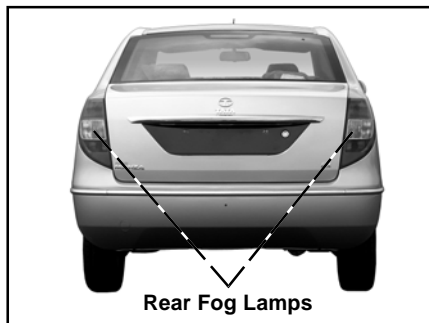
- 1. Brake/Parking Lamp
- 2. Direction Indicator
- 3. Reverse Lamp

**Side Repeater Lamp:**



### Fog Lamp (if fitted):

Front and rear fog lamps are provided for your convenience and they can be operated via the Facia switches that are located above the HVAC controls.

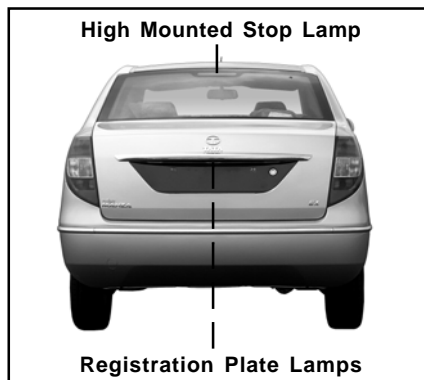


### High Mounted Stop Lamp:

High mounted stop lamp is provided at the top of the rear windshield and glows whenever brakes are applied.

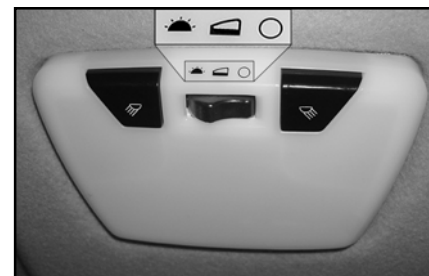
### Registration Plate Lamps:

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





### Front interior light with reading lamps:

Interior roof lighting and reading lamps with inbuilt switches are provided on the roof near the rear view mirror.



The central rectangular switch has three positions:

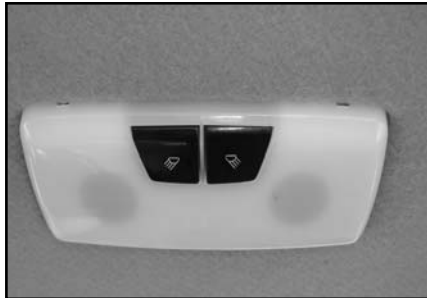
 **ON** - The lamp will come ON as long as switch is in this position.

 **DOOR** - In this position the lamp comes ON when any of the doors are opened. When the door is closed, the lamp will not go OFF immediately, but remain ON for 5-8 sec and goes OFF with dimming. This can also be called the "Theatre effect".

This helps the driver to settle himself in his seat and insert the key in the ignition switch. When the key is turned to the 'IGN' position, the lamp goes OFF immediately.

**OFF** - In this position the lamp will not come ON at all. Two rectangular shaped push type ON / OFF switches are provided separately for the right and left reading lamps.

### Passenger interior light with reading lamps:



Two interior roof reading lamps with inbuilt switches are provided on the

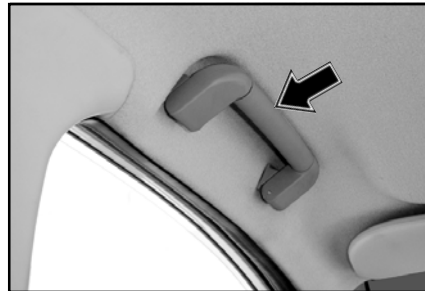
roof in the passenger area. Two push type ON / OFF switches are provided separately for the right and left reading lamps.

The switch has two positions:

**ON** - The lamp will be ON as long as switch is in this position.

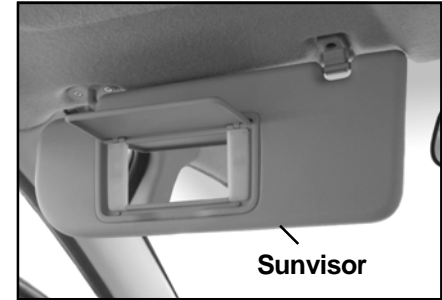
**OFF** - In this position the lamp will remain OFF.

### Roof Grab Handle :



These are provided on all seats except driver seat. This helps in comfortable positioning of passengers.

### Sun visors:



Two adjustable 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.

A vanity mirror has been provided on the back of the passenger's sunvisor.

### NOTICE

When not in use, keep the sunvisors in their original position or else, they may block driver's vision.

### Vanity Light on passenger side (if applicable):

Vanity lights are provided on the sides of the vanity mirror on passenger side sunvisor. The lights come ON when the vanity mirror cover is opened and go OFF when the cover is closed.

### Passenger side Sun Visor closed



### Passenger side Sun Visor opened with Vanity Mirror cover closed



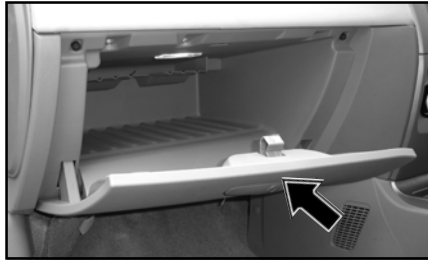
### Passenger side Sun Visor opened with Vanity Mirror cover open:



### Vanity Mirror Light

Passenger side sunvisor opens with vanity mirror cover. In this condition, lights on sides of vanity mirror come ON. They remain ON as long as the vanity mirror cover is open. When the vanity mirror cover is closed, the lights go OFF.

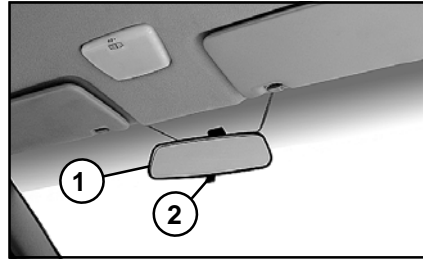
### Glove Box:



**Glove Box**

The glove box is located on the dash board in front of the co-driver's seat. It can be locked with the ignition key. It is also illuminated.

### Inner Rear View Mirror :



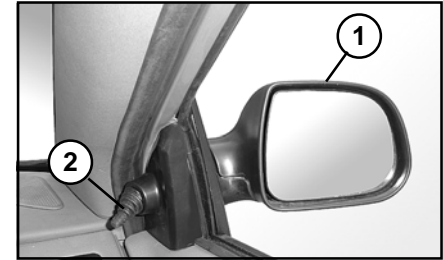
1. Inner Rear View Mirror
2. Antiglare Position Lever

An antiglare mirror is fitted inside the car. Provision has been made for two positions:

- Normal position
- Antiglare position

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

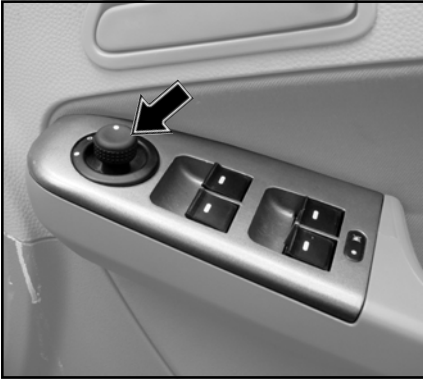
### Outer Rear View Mirror :



1. Outer Rear View Mirror
2. Lever for adjustment

The outer rear view mirror is fitted on the door from outside and can be adjusted by the lever provided inside the door. In some versions the mirrors are provided on both the doors.

### Motorised Outer Rear View Mirrors: (if fitted)



**Operating knob - Motorised Outer Rear View Mirror**

Your car is equipped with motorised outer rear view mirrors fitted on both front doors and can be adjusted to the desired position with the help of a switch / knob mounted on the driver's side along with the window winding switches.

Using this switch / knob, the driver can adjust the car's outer rear view mirrors without lowering the glasses and shifting from his / her position.

### Steps to operate the Rear View Mirrors :

1. Move the main switch to the left "**dot**" to adjust the left side rear view mirror and to the right "**dot**" to adjust the right side rear view mirror.
2. Use the 4 positions of the knob (marked by a triangle) to adjust the rear view mirrors to correct angles.



**FLOOR CONSOLE :**

**A) Power Socket :**



**Power Socket for front passengers**

A power socket is provided on floor console at the front.

Power socket can be used to tap 12V supply (10A Max.) for operating external gadgets.

**B) Cup holder :**



**Cup holder**

Two cup holders are provided for your convenience in the centre console ahead of the gear shift lever.

**C) Utility pocket / box :**



**Front utility pocket / box**



**Rear utility pocket / box**

Utility pocket is provided on all the doors to keep magazines / books etc.

### Power Windows :

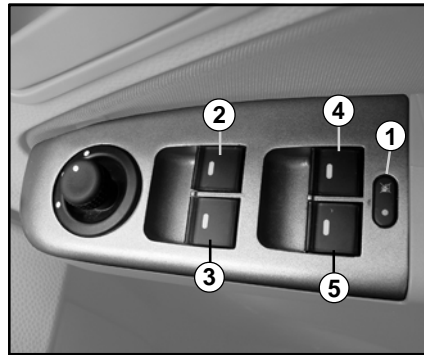
Glasses on all four windows of the car can be operated by switches provided on the main control panel located on the driver's arm rest. They work only when the key is in the IGN position.

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

A safety locking arrangement has also been provided and can be activated by a push type switch located at the centre, below the window switches. It has two positions:

**LOCK** – When switch is pressed and red light comes ON.

**UNLOCK** – When switch is released  
When the switch is in LOCK position, the rear window switches (located on rear doors) do not function. The rear window glasses can still be operated by using the switches on the driver's arm rest. Illumination on the rear window switch goes off when the



Window winding switch on driver's door

1. Lock / Unlock Button
2. Front Right Window Winding Switch
3. Front Left Window Winding Switch
4. Rear Right Window Winding Switch
5. Rear Left Window Winding Switch

switch is in locked condition. Press down the lock button to unlock.

Individual window winding switches have been provided on co-driver's door also.

**Express Down** - This facility is provided for the driver's door only. This function allows you to roll down the driver's window glass faster by pressing the respective switch a little longer.

*Note* - This function is cancelled if the up or down switch is pressed anywhere during the Express Down operation.

**Power window switch (On Rear Doors):** Individual window winding switches have been provided on the rear doors.

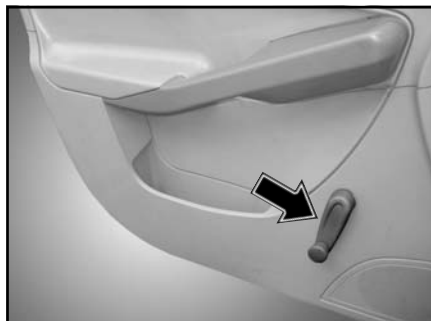


Window winding switch on Rear Door

To close the door window glass, pull the knob up and to open, push the knob down.

### Manual Window Winding :

In some versions, power windows are not provided. In such cars, use winder handle manually for lowering or raising up window glasses manually.



### WARNING

While raising the glass, take care to avoid fingers / hands getting trapped between glass and the frame.

### Steering Wheel Position Adjustment:



### Steering Adjustment Lever

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

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

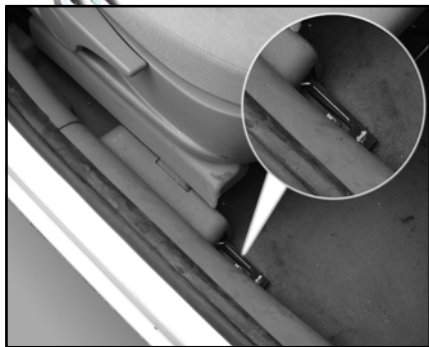
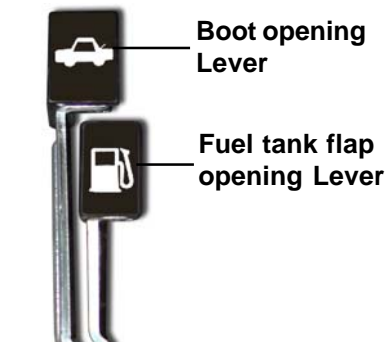
1. Adjust the seat to a comfortable position.
2. To adjust steering wheel position, push down the tilt lever as shown in figure to unlock steering column.

3. Move the steering wheel up or down to the desired position.
4. Lock tilt lever by pulling it up to the lock position. Make sure that steering wheel is securely locked by checking up and down direction.

### CAUTION

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

### Fuel Tank flap and Boot Opening:



Fuel Flap / Tail Gate Opening Lever

The fuel flap is located on the left rear side of the car. The fuel flap can be opened by pulling the opening lever located at the right hand side of the driver's side. located at the right hand side of the driver's side **on the floor**

For closing, simply push the fuel flap till it gets locked.

### WARNING

Fuel vapour is extremely hazardous. Always stop the engine before refueling and never refill near sparks or open flames. Please do not use your cell phones when you are at a petrol station.

### CAUTION

- Remove the fuel filler cap slowly, and wait for any hissing to stop. If the cap is opened suddenly, the fuel may be under pressure and may spray out, causing injury.
- Always use only original specification fuel cap or an approved equivalent available at Authorised Dealers. A wrong cap can result in serious malfunctioning of the fuel system and the emission control system.

### Boot opening :

To open the boot, pull the lever "Boot opening Lever" located at the right hand side of the driver's side.

It can also be opened by using door key. The lock is located on the tail gate.

For closing, simply push the boot downwards till it gets locked.

### Gearshift lever and shifting pattern:

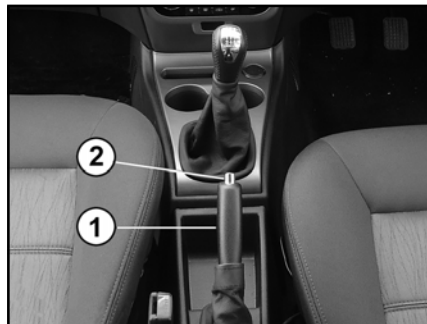
The gearshift lever is mounted on the center console between the two front seats. The gearshift pattern is as shown on the gear lever knob.



#### NOTICE

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

### Parking brake :



1. Parking Brake Lever
2. Release Button

A mechanical parking brake acting only on the rear wheels is provided on your car. The parking brake lever is located behind the gearshift lever. To apply the parking brake, pull the lever up fully. The indicator lights on the instrument panel. To release it, pull the lever up slightly, press the release button and push the lever down. The parking brake indicator on the instrument panel will go OFF when the parking brake lever is fully released.

#### NOTICE

- Apply the parking brake properly before leaving the car and release it before moving.
- When parking on a steep slope, do not rely on the hand brake alone to hold the car. Engage the car in low forward gear when facing uphill and reverse gear when facing downhill.

### Immobilizer system:



Immobilizer system is designed to prevent car theft by electronically disabling the engine starting system. The engine can be started only with car's original Immobilizer ignition key which has an electronic identification programmed code.

Immobilizer system consists of following components,

1. Immobilizer unit (ICU) – A add-on part on the ignition switch fitted on steering column.
2. Two Electronic keys (E-key) - To start the car.

### CAUTION

1. E-key of other cars will not start the engine.
2. Customer should,
  - a. Use only one E-key .
  - b. The other E-key should be kept at safe location.
  - c. Note “key Tag no.” information (and keep it safe) which is required while getting new/spare keys. Please note that It is not possible to prepare new/ spare keys without “key Tag no.”
  - d. Take precaution about E-keys, as without it car cannot be started.

**Immobilizer system :**

The behavior of Immobilizer and car under "Ignition OFF and ON" conditions, is explained in table below with immobilizer status lamp ("lock" symbol on the instrument cluster)

<b>CAR CONDITION</b>	<b>STATUS LAMP</b>	<b>CAR STATE</b>	<b>MEANING/ FUNCTION OF THE STATE</b>
Ignition OFF	Blinking	Locked	Car Immobilized and Awaiting Electronic key
Ignition ON	OFF	Unlocked	Normal Condition Ready to start the car
	ON	Locked	<ul style="list-style-type: none"> <li>- Problem with key ( Wrong E-key used to start car)</li> <li>- Problem with Immobilizer system contact Tata dealer to inspect the system</li> </ul>

### Central Locking System:

### E-Keys :



### Unlocking Principle :

The E-keys are learned for a specific immobilizer and are unique to the car. The transponder inbuilt into the ignition E-key carries a unique identification code. The Engine management system (EMS) and Immobilizer has common secret code. Both these codes are used

while unlocking the car.

When key is inserted and the ignition is switched ON, all the codes are communicated within concerned components (E-key, Immobilizer and EMS). The engine starts only if all codes match. In case of a mismatch of the codes, system prevents the engine from starting.

### Loss of E- Keys :

If any one of the E-key is lost, **contact TATA dealer as soon as possible** to have the lost key deactivated and to have the new E-key. Please note that Second original E-key is required for making additional E-keys.

If both the E-keys are lost, contact the authorised TATA dealer.

### NOTICE

#### Do's and Don'ts of immobilizer system

- Do not turn ON ignition switch by using electronic key with any type of metal wound around its grip or in contact with it. This may be detected as abnormal condition by immobilizer and prevent engine from starting.
- Do not leave electronic key in areas of high temperature. The transponder in E-Key will behave abnormally when reused.
- Do not try to start the car when the Immobiliser indicator lamp on the instrument cluster is glowing. In this condition the car will not start and the car's battery will also be drained due to frequent cranking.



**Central Locking System:****ANTI THEFT / KEYLESS ENTRY SYSTEM (RKE) :**

This is an Anti-Theft security system, which has a Remote Keyless operation for door lock / unlock.

**The system consists of following:**

1. Key with integrated switches for Lock / Unlock
2. Body control module

**Features:**

- Locking / Unlocking the vehicle from distant place.
- Finding the vehicle (Refer Car Seek)
- Manual Central door Locking / Unlocking (Ref. centrdoor locking feature)
- Auto lock and unlock optional feature on some vehicle to Lock / Unlock

**Car Seek:**

Used to find the vehicle.

Press 'LOCK' on User Remote when the vehicle is locked (Range 7.5 meters max)

Gives three flashes on turn indicators.

**Central Door Locking Feature:**

All door can be locked / unlocked by manually locking / unlocking the driver's door (using mechanical key / knob)

**Learning Process:****Steps:**

1. The driver's door should be unlocked.
2. Insert the key in the car's ignition switch.
3. Turn the ignition ON-OFF, ON-OFF four times quickly (in 6 seconds). Two flashes by the external indicator lamps will be given after this step (Note: If you try starting the car during the learning process, the process will be cancelled).
4. After the two flashes, quickly press the LOCK and UNLOCK button on the remote simultaneously (within 10 seconds). By doing so, the Remote will learn with your car's BCM.

- Two flashes by the indicator lamps will be given after this step also. At the same time, the doors will LOCK and UNLOCK.

This is a confirmation the Remote has been learn.

- If you wish to learn the next Remote (duplicate key) at the same time, repeat steps 4 and 5 within 10 seconds.
- The remote key learning will end with a single long flash if the ignition is switched ON as soon as the above process is complete.
- To learn the next remote after completing one remote learning cycle, repeat all above steps.

Li Coin battery Battery 2 nos  
(CR2016 type)



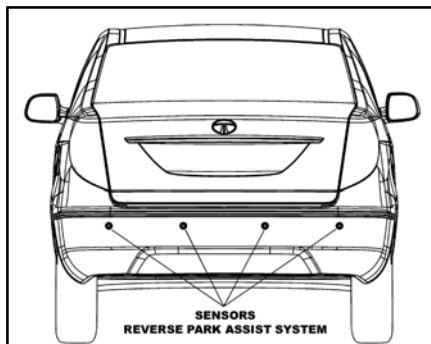
Remote Key After Opening up of back screw

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

- Considerable reduction in the range of Remote
- LED on the Remote start to blink at faster rate when a button is pressed.

**REVERSE PARK ASSIST SYSTEM (RPAS) WITH AUDIO : (IF FITTED)**

An ultrasonic sensor based reverse guiding system is equipped on your vehicle to aid safe driving while reversing the vehicle.



The system alerts you of obstacles while reversing the vehicle at low speed. This system consists of four reverse park assist ultrasonic sensors, a controller & a buzzer. The RPAS system gives only an audible signal, when the rear bumper of your

vehicle comes closer to an object. The buzzer operates with different audible signals as per the distance between rear bumper and obstacles to alert the driver.

The system is automatically activated when the reverse gear is engaged.

**Operating Instructions:**

Switch 'ON' the ignition. On engaging the reverse gear, the RPAS system will get activated automatically. When the obstacle enters the sensing zone, the system starts giving an audio indication (initially for 0.8 second).

The buzzer beep frequency and buzzer sound time duration depends on the obstacle distance as given below:

**Zone 1 :** This zone is nearest to the rear bumper (up to 50cm). Sensors detect obstacles and give an audio signal (Continuous beep).

**Zone 2 :** This zone is the middle zone (up to 80 cm). Sensors detect

obstacles and give an audio signal (Fast beep).

**Zone 3 :** This is the most distant zone (up to 120 cm). Sensors detect obstacles and give an audio signal (Slow beep).

Stop the vehicle immediately once the continuous beep starts as the vehicle is very close to the obstacle.

**CAUTION**

1. The RPAS system performance is dependent on the reflection of ultrasonic waves from the obstacle.
2. System cannot sense the following;
  - a) Wire mesh, hand rail, small objects & some obstacles which are well above and well below the bumper level.
  - b) Obstacles like cotton, wool, foam, textiles or spongy surfaces

which will absorb ultrasonic waves easily.

- c) Pot holes, trenches or drainages which are below the ground level.
- 3. System may give wrong signal on reversing in the following situations:
  - a) When the vehicle on grasslands & bumpy roads.
  - b) While vehicle is 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 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  $-30^{\circ}$  Celsius or above  $80^{\circ}$  Celsius.
- 4. System may give false alarm during heavy rain conditions, during snow conditions or heavy wind conditions.

## WARNING

1. This system is strictly a driver assistance device. It is not a substitute for the 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 meter from the rear bumper.
6. Never use high pressure water to clean the sensors and also never use hammer on it.
7. Never fit any "buzzers" which are locally available in the market for Reverse parking.



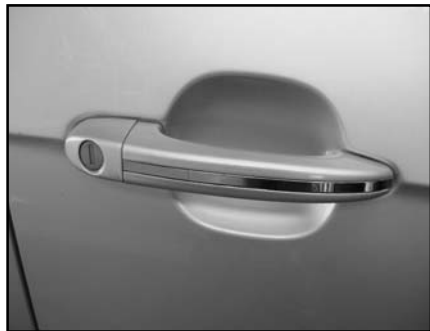
## GETTING STARTED

- Door- Locking / Unlocking
- Child Lock
- Tail Gate - Locking / Unlocking
- Front Seat
- Front Seat Adjustments
- Head Restraints
- Utility Tray
- Rear Seat
- Rear View Mirrors
- Rear Seat Adjustment
- Seat Belts

### Front Doors (Driver and Co-driver)

#### Locking / unlocking doors with key from outside:

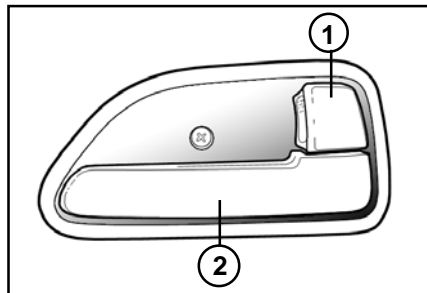
Both front doors (drivers and co-driver) have separate locking facility. Front doors can be locked or unlocked from outside using the E-key.



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

#### Locking without a key from inside:

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.

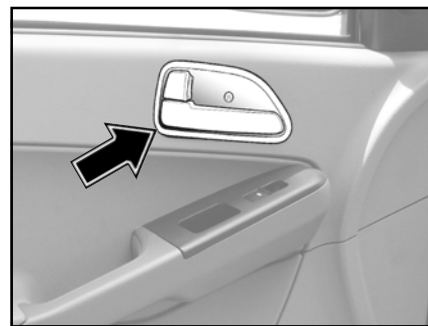


#### **⚠ CAUTION**

When locking doors this way, do not leave the key inside the car.

#### Opening the doors from inside:

All doors can be opened from inside. To open, pull the door opening lever (2). Location of door opening / locking lever.



### Childproof lock:

Both the rear doors of the car are provided with a child proof lock. Push the lock lever located on vertical face of the door near the lock downward before closing the door. The door which has been locked by activating the child lock cannot be opened from inside, it can be opened only from the outside.

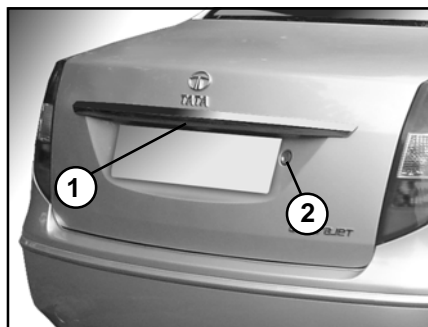


### **CAUTION**

Deactivate the childproof lock when not required.

### Boot Locking / Unlocking:

Insert the key and turn it anti-clockwise to open or clockwise to lock the boot. Pull the door handle to open the boot. The boot is automatically locked once it is shut. The boot can also be opened by a lever located near the fuel flap opening lever. This is located on the right hand side of the driver's side on the floor.



1. Boot Handle 2. Boot Lock

### Front Seats :

Bucket type seats are provided with multiple adjustments.

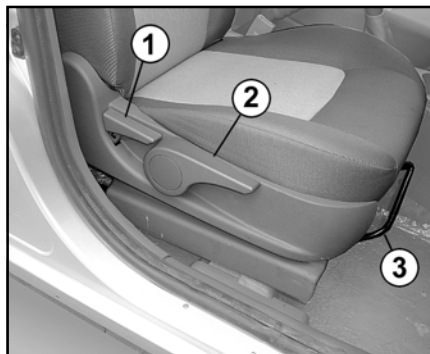
### Lumbar Support :

Lumbar support is provided on Driver and Co-driver's seats to give you driving comfort. It is adjusted by the lever (1) provided on the side of the seat backrest.



Lumbar Support

### Front Seat Adjustments:



1. Seat Back Recliner Lever

2. Height Adjustment Lever

3. Lever for Forward and Backward movement

#### 1. Seat Back Recliner:

To change the seat back angle, lean forward slightly and raise the smaller lever. Lean back to the position you want and release it. Make sure that lever returns to its original position.

#### 2. Height Adjustment (Only for Driver's Seat):

Driver's seat height can be adjusted by a big lever located on the seat base on the right hand side, just ahead of the seat back adjustment 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.

#### 3. 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.

#### WARNING

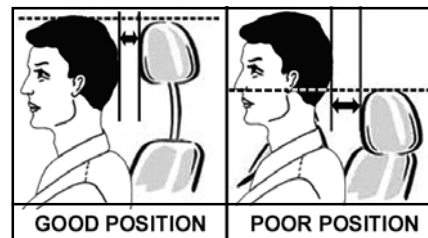
Do not adjust the seat when driving. Adjust the seat only when the car is stationary.

#### Head restraint :

Adjustable head restraints are provided for bucket seats in front. To increase their height, lift up and leave at desired click position. To reduce the height, press the unlock button and push the head restraint down wards.

#### WARNING

Avoid driving the car with the head-restraint removed as it is a safety item. Do not attempt to adjust the head-restraint while driving the car.





### Utility Tray (Co-driver Seat):

A Sliding tray is provided below co-driver's seat. Important papers/ documents can be kept here.

To open the tray, lift the tray and pull out. Push for closing back the tray.



Utility Tray

### Foldable Armrest:

A foldable arm rest has been provided in the rear seat. This can be used by the occupants for resting their hands. It also has two cup holders. When not required, this armrest can be folded back into the seat.



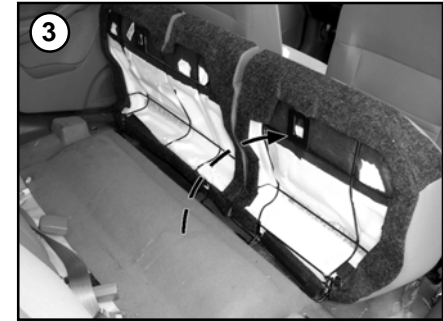
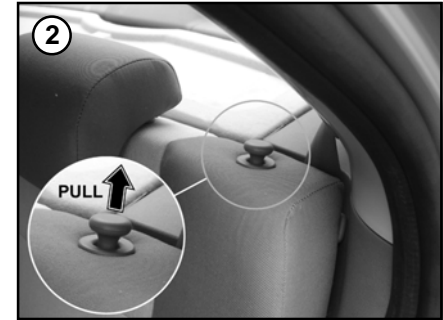
### Rear Seat Adjustments :

Rear seat is in two parts i.e. 60 / 40 split. Two built-in head restraints are provided on the rear seat.

These head restraints have to be lowered (if raised) before folding the seat. These seats can be independently folded as and when required or for carrying extra luggage.

### Steps to fold the rear seat (if applicable):

1. Lift the seat base from the back and place it vertically (Fig.2).
2. To fold the seat back-rest, pull the



knobs near the headrest. (Fig.3)

3. The seat back-rest folds down to create a completely flat luggage area.

## Seat Belts

Occupants safety is of utmost importance. Your car is equipped with seat belts, both front and rear as a part of occupant restraint system.

### Why Seat Belts

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

### How to use seat belts

This car has three point inertia reel type front and rear seat belts in the out board positions and a lap belt for middle passenger on 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.



1. Seat Belt  
2. Tongue

3. Lock Buckle  
4. Lap Belt

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 seat is adjusted to a good driving position and the back of the seat is upright.

1. Pull the tongue across your body and insert it into the buckle.
2. Check and ensure that the belt is not twisted.

## WARNING

Twisted seat belts can cause injury in a collision as the full width of the belt isn't available to absorb the impact. This puts more force on the bones beneath the belt, leading to injury. Don't wear twisted seat belts.

3. Position the lap portion of the belt as low as possible across your hip bone.
4. Pull up the shoulder part of the belt to remove the slack. Make sure that the belt goes over your collar bones and across chest.
5. To unlatch the belt, press the red button on the buckle. Guide the belt to the pillar as it retracts.

**WARNING**

Improper positioning of the belt on shoulder is dangerous. An improperly positioned belt will provide little or no protection in a collision. Always make sure the seat belt is positioned across your shoulder and near your neck, but never under your arm, on your neck, or on your upper arm.

6. The belts are meant (intended) for adult occupants only.
7. Each belt should be used by one occupant only. The belt must not be put round a child, seated on passengers lap.
8. When the belt has been in use in a serious accident or shows signs of severe fraying / damage or of having been cut, replace with an approved belt kit.
9. The belt must not be altered or modified during use.

**WARNING**

Using one seat belt for more than one person at a time is dangerous. A seat belt used in this way cannot spread the impact forces properly and the two passengers could be crushed together and seriously injured. Never use one belt for more than one person at a time.

10. The belts if required should be replaced, by Authorised personnel only.
11. The belt should not be disassembled. If required, authorised personnel only should carry out disassembly and assembly.
12. Clean the webbing with a mild soap solution recommended for upholstery. Bleaching or dyeing the webbing may weaken it.

**Lap belt**

Pull the tongue to the desired length. Insert it into the buckle until you hear a click.

Adjust the belt length. To lengthen the belt, hold the tongue at a right angle to the webbing and pull. To shorten, pull the loose end of the webbing.

To unfasten, depress the button in the buckle.

**WARNING**

Positioning the lap portion of the Seat Belt too high can be dangerous as in a collision, this would concentrate the impact force directly on the abdominal area, causing serious injury. Wear the lap portion of the belt snugly and as low as possible.

**TATA MOTORS** strongly urges that the driver and passengers in the car be properly restrained at all times with seat-belts. Failure to do so could increase the chance of injury and / or the severity of injury in accidents.

### Baby or Small Child:



Use a child restraint system appropriate for the child until he / she is old enough to wear the car's seat belt properly. If the child is too big for

a child restraint system, he / she should be seated on the car's back seat restrained using the car's seat-belt.

Use the seat-belt when the child is in the rear seat also. According to accident statistics, a child is safer when properly restrained in the rear seat than in the front seat.

### For Airbag Equipped Cars:

- Rear Seat is the SAFEST for children.
- Never put rearward facing child restraints on front seat unless the passenger airbag is deactivated. This is very important and if not followed, it can lead to a serious injury or even death.
- Do not use a forward facing child restraint system in the front seat of the car, unless the passenger airbag is deactivated.

### General Guidelines:

- Children below 12 years are always safe in child restraints.
- Refer child restraint manufacturer's instructions for installation.
- Select the child restraint based on the weight of the child. Age should be used as a reference.
- Rearward facing child restraints are preferred for children with weight less than 9kg or until they can sit themselves without any aid.

### Expectant Mothers:



**TATA MOTORS** recommends the use of a seat-belt. Kindly consult your doctor for specific recommendation. The lap belt should be worn securely and as low as possible over the hips and the waist.

### Injured person :

**TATA MOTORS** recommends the use of a seat-belt for injured person. Depending on the injury, consult your doctor for specific recommendations.

### Driver Air Bag and Passenger Air Bag: (Supplementary Restraint Systems-If Applicable)



Your vehicle is fitted with an air bag for the driver, located in the steering wheel, and a passenger air bag is located above the glove box compartment. Vehicles fitted with an air bags can be identified by the "AIR BAG" label on the steering wheel.

The air bag is supplementary restraint system. It is designed to be used in

addition to seat belts to help protect against head and chest injuries in certain moderate and severe frontal and front angular collisions.

The air bag system is not visible until it is activated. Because the system senses crash severity, some frontal/ angular collisions will not inflate the Air bags. Airbags are not designed to inflate in rollover, rear side or slow speed frontal/ angular crashes because the necessary protection can be achieved by the seat belt alone.

### Operation :

Sensors in the ECU detect the degree of severity of frontal/ angular impact. The air bag(s) are designed to deploy if the collision suits the criteria for deployment.

- The sensor switches close the circuit and nitrogen gas is produced that fills the air bag by burning the propellant.

- The inflating air bag deploys out of the steering wheel in the front of the driver and passenger air bag of the dash board in front of the passenger. This action takes place in a fraction of second.
- The bag(s) deflate as the gas escapes through the vents.
- Airbag(s) may only deploy with the ignition switch in ON position. The system will however work for about 30 seconds immediately after switching OFF of ignition. You may hear a noise along with some smoke, dust and smell of burnt propellant immediately after the air bag has inflated. **DO NOT PANIC** as this is normal.
- Passenger Air Bag (PAB) switch provided on the left side of the dashboard should always be ACTIVE. If in case the front passenger seat is unoccupied, the PAB may be prevented from deploying by turning the PAB

switch to INACTIVE by using the ignition key.



### **⚠ CAUTION**

- Air bag systems components get hot after inflation, Do not touch after inflation.
- For persons suffering from breathing problems or asthma, get out of the car promptly for some fresh air as the smoke may cause breathing problems.
- Always turn the PAB switch to “PAB” in case the front passenger seat is occupied.
- Always wear seat belts. The wearing of seat belts is required even when the air bag is fitted. Air bags do not replace the seat belts.
- Do not allow a front seat passenger to obstruct the operation of the passenger airbag by placing feet, knees of any other part of the person, or any other objects in contact with, or in close proximity to, an air bag module.

- Always wear your car's seat belts correctly as they can prevent you from accidental injury when the air bags inflate. In addition, both driver and front seat passenger (If a passenger air bag is fitted), should adjust their seats to provide maximum practical distance from the air bag.
- An air bag, when it inflates may cause injury. Minimise the risk of injury by ensuring that front seat occupants are wearing their seat belts and are seated correctly, with the seat as far back as is practical.
- DO NOT service, repair, replace, modify or tamper with part of the air bag SRS, or wiring in the vicinity of an air bag SRS component; this could cause the system to activate, resulting in personal injury.

### **The importance of wearing seat belts :**

- It will help to keep you in the proper position when the air bag inflates.
- Reduce the risk of harm in rollover, side or rear impact collisions.
- Reduce the risk of harm in frontal/ angular collisions that are not enough to activate the air bag.
- Reduce the risk of being thrown from your vehicle in a collision.

### **The importance of being properly seated:**

To protect occupants in a collision, the air bag inflates at a rate that is faster than you can blink your eye.

- If you are too close to an inflating air bag, it could seriously injure you, Move your seat as far back as practical to allow room for air bag inflation. **Never install any rearward facing child seat**

**restraint in the front seat when the passenger air bag is active, as serious injury or death may result from the force of the inflating front passenger air bag. The rear seat is the safest place for children.**

- Never place any object in front of you while you are seated in the front seat as it may result an injury from the object when it is forced towards you by the inflating air bag. Do not cover the steering wheel or instrument panel with an object which may prevent the proper deployment of the air bag.
- Where a passenger air bag is fitted, front passenger should never sit on the edge of the seat, stand near the glove box compartment, rest feet or other parts of the body on the dash board or lean over near the glove compartment when the vehicle is moving.

## Air Bag Warning Light:



The diagnostic system continually monitors the readiness of the SRS AIR BAG while the vehicle is being driven. The air bag warning light on the instrument panel will illuminate for approximately 5 seconds when the ignition is switched on. This is normal and indicates the system is performing a self check. The following components are monitored by the indicator :

- Airbag control module - ECU
- Driver airbag
- Passenger air bag
- Retractor Pretensioners.
- All related wiring.

If the warning light does not illuminate when ignition is switched on, or remains illuminated after the initial check period & during driving, or flashes, a fault may exist with air bag & seat belt pre-tensioner and it should be checked by an authorized dealer immediately.

## Air bag maintenance & servicing :

If any of the following occur, see your Authorized dealer without any delay for corrective action.

- The air bag warning light does not operate briefly when the ignition key is turned on.
- The air bag warning light illuminates while driving.

Though your car's air bag system does not require regular maintenance, you should always check when a warning about malfunction is flashed on the instrument cluster. If this is not attended to, the air bag system may malfunction in the event of a collision. Conversely, it may deploy even if there is no collision.

### NOTICE

- Any maintenance performed on or near the components of the SRS must be performed only by an authorized dealer. Do not

permit anyone else to do service, inspection, maintenance or repair on any SRS components or wiring.

- Similarly, no part of the SRS system should ever be handled or disposed of by anyone except an authorized dealer. Improper work on the SRS system will result in inadvertent deployment of the air bag or could render the SRS system inoperative. This could also lead to personal injury.
- Do not modify your steering wheel or any other SRS components, For example replacement of steering wheel or modifications to the steering column, front bumper, body or frame structure can adversely affect the SRS performance and lead to possible injury.
- If your vehicle has received any front end damage, you should have the SRS system inspected by an authorized dealer to ensure it is in proper working order.

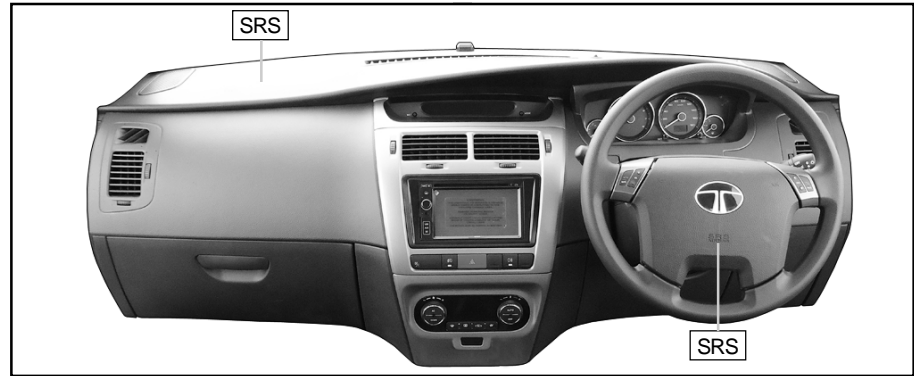


The air bag will inflate only once.

**The inflated air bag system will not function again and steering wheel with air bag module, steering column (if collapsed), seat belts and control module must be replaced immediately. If passenger air bag gets deployed, air bag assembly, air bag cover, seat belts and dash panel must be replaced.**

If they are not replaced, it may increase the risk of injury in a collision.

- Do not attempt to service, repair, or modify the air bag system, any tampering will result in activation of the system and increase the risk of personal injury. For Servicing the air bag system, see your authorized dealer.
- Do not use chemical solvents or strong detergents when cleaning the steering wheel or instrument panel to avoid contamination of the air bag system. Wiping with a damp cloth only is recommended.



#### **⚠ CAUTION**

- When you transfer ownership of the vehicle to some other person, we urge you to alert the new owner that the vehicle is equipped with SRS system and read the applicable sections in the owners manual.
- If you wish to junk or scrap the vehicle, we urge you to first take the vehicle to an authorized dealer so that the SRS system can be rendered safe.

## ABS (Anti-Lock Braking System) (if provided):

The purpose of the anti-lock braking system (ABS) is to prevent the wheels from locking when braking, thereby enabling the driver to retain steering control of the car.

Under normal braking conditions (where sufficient road surface friction exists to reliably bring the car to a stop without the wheels locking), ABS will not be activated. However, if the braking force exceeds the available adhesion between the tyres and the road surface causing the wheels to lock (for example, on slippery roads), then ABS will automatically get activated.

This will be felt by a rapid pulsation felt through the brake pedal.

### WARNING

- ABS cannot overcome the physical limitations of stopping the car in too a short distance, cornering at too high a speed, or the danger of aquaplaning, i.e when a layer of water prevents adequate contact of the tyres and the road surface.
- The fact that a car is fitted with ABS must never tempt the driver into taking risks that could affect his/her safety or that of other road users. In all cases, it remains the driver's responsibility to drive within normal safety margins, having due consideration for prevailing weather and traffic conditions.

## Braking in an Emergency:

In an emergency situation, the driver should apply full braking effort even when the road surface is slippery. The ABS will constantly monitor the rotational speed of the wheels and will vary the braking pressure to each wheel according to the amount of traction available. This will ensure that the wheels do not lock and the car is brought to a stop in the shortest possible distance for the prevailing road surface conditions.

### CAUTION

DO NOT pump the brake pedal when driving, this will interrupt operation of the ABS and may increase the braking distance

### NOTICE

On soft surfaces, such as powdery snow, sand or gravel, the braking distance required by the ABS may be greater than for non-ABS braking, even though improved steering would be experienced. This is because the natural action of locking wheels on soft surfaces is to build up a wedge of surface material in front which assists the car to stop.

No matter how hard you brake, you should be able to continue steering the vehicle as NORMAL.

However, always remember that the ABS operates only AFTER the driver has already lost control. ABS cannot reliably compensate for driver error or inexperience.

### ABS Warning Light:



The ABS incorporates a monitoring system, which checks that all the electrical components are in working order as soon as the starter switch is turned ON, and also at frequent intervals during a journey.

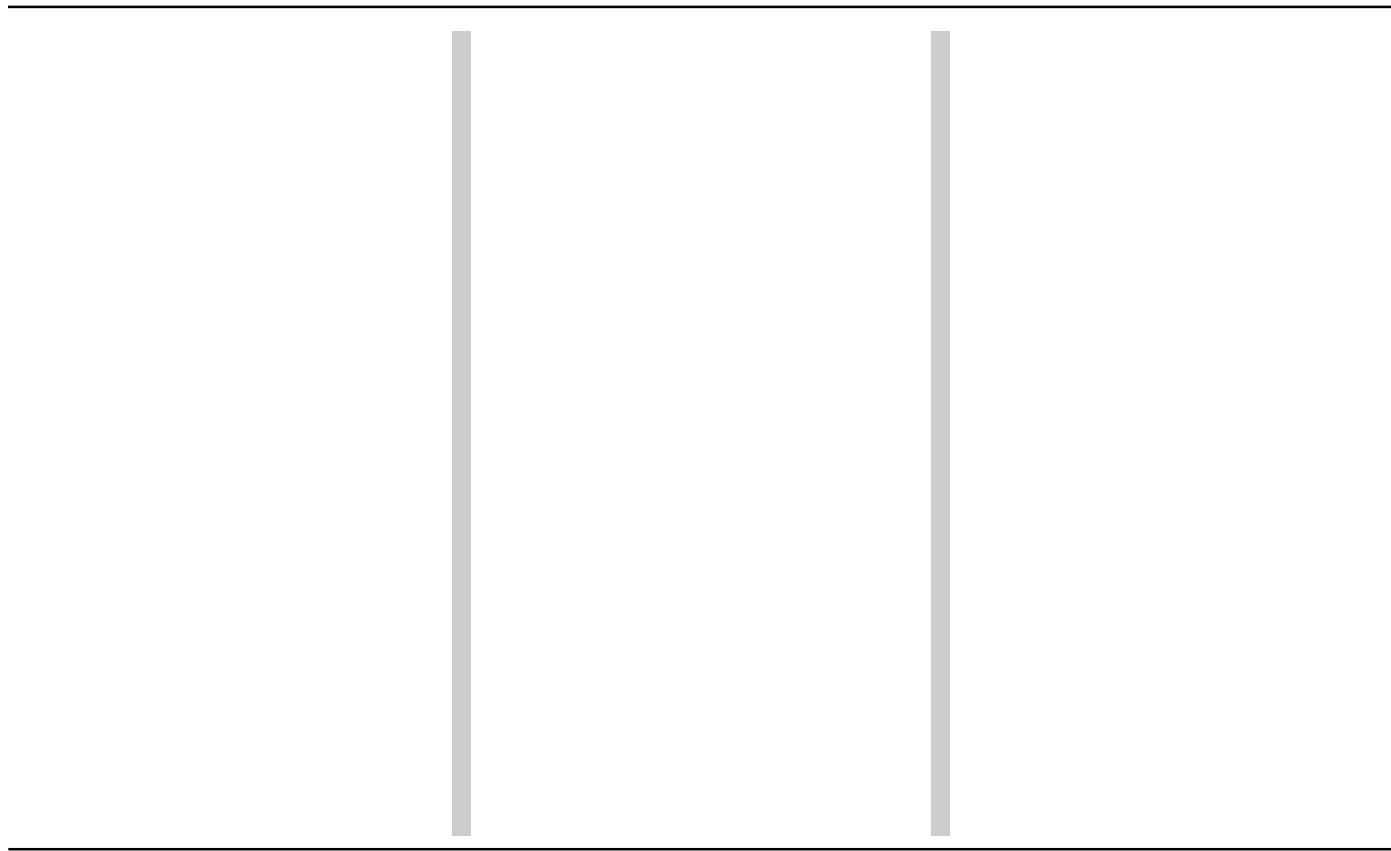
The warning light on the instrument panel is an important part of this system. The light should come ON for approximately two seconds when the starter switch is turned to the 'IGN' position and then should go OFF.

If the warning light fails to go OFF or come ON when driving, a fault has been detected by the self-monitoring system and complete ABS control may not be available. If this occurs, get your car checked by a **TATA** Authorised service centre.

In addition, when starting the engine, a single 'knock' may be heard coming from the engine compartment. Very slight movement may also be felt at the brake pedal. Both are normal and are due to the ABS self checking process.

### NOTICE

The non-ABS braking system remains fully operational and is not affected by partial or complete loss of the ABS. However, braking distance may increase.





## DRIVING

- Safety Checks
- Driving Safety
- Fuel Saving Tips
- Starting & Stopping The Engine
- Running-In Period
- Brakes
- Driving In Adverse Conditions

## **Before Driving, check (Refer maintenance):**

1. Tyre pressure and condition of tyres.
2. Coolant level.
3. Engine oil level.
4. Brake fluid level .
5. Water in windshield washer reservoir. Top up if required.
6. Power steering oil level.
7. Battery electrolyte level.
8. Fuel level. Ensure sufficient Fuel.

## **Adjust:**

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

## **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 stowed properly or fastened securely.
4. Seat belts are fastened
5. Ensure 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. Check and ensure that all the gauges and indicators in the instrument cluster are working.
8. Gear shift lever is in neutral position
9. Parking brake is released.

**SAFETY CHECKS****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 would 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 car, thus causing an accident.

**Side indicators / Hazard warning**

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

**Horn:**

Ensure 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 car 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 car. This is for use in case of minor injuries. It should be regularly checked and updated.

**Documents:**

Always carry car registration papers, insurance, valid PUC certificate and driving licence 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 car occupants always wear seat-belts when car 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 car and increase the risk of injury to yourself and others.

### Mobile phones:



Avoid using mobile phones while driving a car. 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:

Due care should be exercised while applying parking brakes on steep slopes. It is advisable to switch off the engine and shift gear lever in Low Forward Gear before parking the car facing uphill steep slope and in reverse gear when facing down hill.



### TIPS TO IMPROVE FUEL ECONOMY:

Your car's fuel economy is mainly dependent on your style of driving.

To operate your car as economically as possible, use the following driving suggestions.

#### **Avoid Excessive Idling :**

Stop the engine and start it again, if you have to wait for more than a minute. e.g. at Traffic Signals.

#### **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-filter:**

The amount of air supplied will reduce due to clogged air-filter, resulting in

wastage of fuel due to incomplete combustion.

Have your car's air filter cleaned during every service. In case the car is used in dusty conditions, get the air filter cleaned more frequently at a Tata authorised service station.

#### **Avoid incorrect tyre pressure :**

If your car's tyres are under - inflated, it results in increased rolling resistance, leading to wastage of fuel. (Refer tyre maintenance section)

#### **Proper Driving Practices :**

Keep a safe distance from other cars to avoid braking suddenly.

#### **NOTICE**

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

#### **Running in Speed:**

Gear	Speed (kmph)	
	Safire	Quadrajets
1st	20	20
2nd	30	30
3rd	50	50
4th	70	70
5th	80	80

#### **Fuel Economy Speeds:**

Gear	Speed (kmph)	
	Safire	Quadrajets
1st	20	20
2nd	30	30
3rd	40	30
4th	50	50
5th	70	70

### Starting the Engine :

1. On a horizontal surface.
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.

#### NOTICE

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 (in case of diesel cars).

### Stopping the Engine (Specially for Diesel engines):

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 :

- Release the parking brake.
- Before you enter the car, check and clear any obstructions that may not be visible from the driver's seat.
- Before driving off check in the rear view mirror, for oncoming traffic. Switch on side indicator signal when getting into main stream of traffic.

### Parking :

- Park the car 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 on a slope.

#### CAUTION

Do not leave the key inside the car. Do not leave children unsupervised inside the car.

When parking on a level ground, you may place the gear lever in "Neutral" position. When parking on a downhill gradient, place the gear lever in 'Reverse' position. When parking on uphill gradient, place the gear lever in the '1st' position.

**Running-in Period:**

Avoid rapid acceleration and prolonged high speed running of the engine while using the new car for the first 1500-1800 km of operation.

Do not exceed the following road speeds during running in period.

Gear	(kmph)	
	Safire	Quadrajjet
1st	20	20
2nd	30	30
3rd	50	50
4th	70	70
5th	80	80

Before you shift to reverse gear, bring your car to a complete stop and depress the clutch pedal fully.

Do not shift into reverse gear when the car is moving forward.

While shifting the gears, it is

recommended to shift at the speeds given in the table.

You can get extra braking from the engine when slowing down by shifting to a lower gear.

This can help you to maintain a safe speed and prevent your brakes from overheating while going down a steep hill.

**⚠ CAUTION**

Avoid excessive revving up of engine rpm.

Idling the engine for long duration must be avoided.

## Brakes :

The brake system on your car is an advanced dual circuit, diagonal 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.
- Single pot calipers, for efficient energy absorption.
- Auto adjusted rear brakes which are designed for trouble free performance.

The system is designed with diagonal split type, which has an advantage of providing maximum braking even if one circuit fails. However, in such a situation, the pedal will be lighter to press, pedal travel will be higher and stopping distance will increase. At the

same time brake indication light would glow on dash board.

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 car can still be stopped with a higher pedal effort. In case of vacuum failure or brake circuit failure, slow down the car by shifting to lower gear and lifting your foot from the accelerator pedal. Pull the side of the road as soon as it is safe.

### CAUTION

Brake system failure is hazardous and needs immediate attention. In the event of brake system failure,  
a) Have your car towed OR  
b) Be extremely cautious in case you have to drive the car.

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.

### Driving Through Water :



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

Your car'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 car in low gear.
- After driving through water apply brakes several times to dry liners and to regain original braking.

Do not attempt to start the engine if car gets flooded due to water. Tow the car to a safe place.

Take the car to nearest **TATA** authorised workshop to check entry of water in cylinders.

If water has entered the engine or transaxle, the lubricants will have to be replaced.

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 :



Dip the head lamp for oncoming traffic during night driving.

Maintain a speed such that you can stop within illuminated distance of head lamps.

Use head lamp main/dip beam to alert other road users on turns/cross roads etc.

Use side indicators for lane change or turning.

Put ON hazard warning switch in case of hazardous parking or if your car is disabled to warn the passing traffic.

### **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 car 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 car 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 car stalls or losses headway while climbing a steep hill, make a quick shift to reverse and allow the car 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.



## IN CASE OF EMERGENCY

- Hazard Warning Switch
- If You Have A Flat Tyre
- Starting The Engine With Jump Lead
- Towing The Car

### Hazard Warning Switch :



Use Hazard Warning lights besides advance warning triangle in case of breakdown specially during night time and car has to be parked at the side of the road or if the car is being operated in adverse conditions.

This can be operated without ignition ON. Press the hazard warning switch (red knob) in the center of the dash board, all side indicator lights will flash simultaneously to warn the other road users about any hazardous condition of the car. Press the knob

again to switch OFF the hazard function.

### **⚠ CAUTION**

If lights do not blink or blink rapidly, it is an indication of problem in the blinker electrical system or the indicator bulb at front or rear has fused. Get it rectified immediately.



### IF YOU HAVE A FLAT TYRE

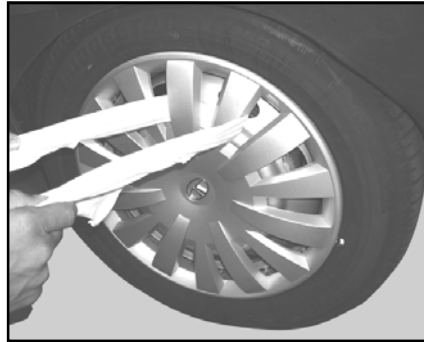
Reduce car speed gradually keeping it is a straight line. Move cautiously off the road to safe place away from traffic. Park the car on a level and firm ground. Apply parking brake and engage 1st gear.

Turn on Hazard warning switch. Keep advance-warning triangle at least 50 meters behind the car as an indication of breakdown.

Take out the tool kit, jack and handle from the car which is kept in the luggage compartment.

#### **Removal and refitment of wheel cap:**

Insert a piece of cloth between the spokes of the wheel cover and pull cover outward. Take out detached wheel cover from the wheel rim. For installation, first match the slot at the wheel cover with the air feeling nozzle of the wheel. Apply equal pressure at



the circumference of the wheel cover to fix it in the wheel rim.

#### **Removal of Spare wheel:**

Spare wheel is located in the luggage compartment.

Open the tail door to take out the spare wheel, first fold in and lift up the floor cover. Unscrew and remove retaining bolt at the centre. Lift and take out the spare wheel.



## Changing flat tyre:

Block the wheel which is diagonally opposite to the flat tyre

Take out wheel cover if fitted (Refer: Wheel cover removal in TYRE INSPECTION) and loosen the wheel mounting nuts of flat tyre. (Do not remove the flat tyre at this stage).



Set the jack properly at correct jack point as shown for front or rear wheel. The jacking points are located approximately 185 mm behind the front wheel and 260 mm ahead of the

rear wheel. Slowly lift the car with the help of jack handle.



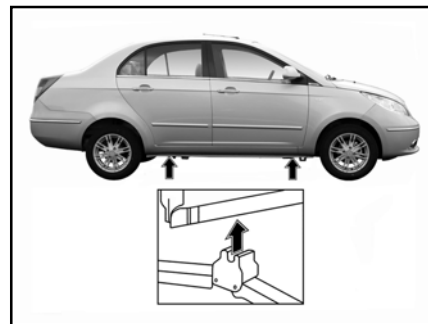
Jacking point - Rear



Jacking point - Front

## CAUTION

- Do not lift the car with occupants inside.
- Raise the car only high enough to remove and change the flat tyre.
- Do not carry any other work under a car that is supported by a jack. This may cause a personnel injury.
- Do not start or run the car while supported by a jack.



Jacking point location

Remove wheel-mounting nuts and take out flat tyre.

Roll the spare wheel into position and align the holes in the wheel with studs. Reinstall the wheel nuts (taper end inward) and tighten them as much as you can by hand.

***Before using the jack, please read the instructions on the sticker provided on the jack.***

Lower the jack completely and tighten the wheel nuts one by one using wheel spanner. Press fit the wheel cover back (if fitted).

Restore all the tools and jack at their respective location.

Place the flat tyre at spare wheel location as described.

### CAUTION

Check and correct the tyre pressure and nut tightness of the changed wheel as per recommendation at nearest service station. Get the punctured tyre repaired at the earliest.

### Starting the Engine with Jump Leads:

The engine with a discharged battery can be started by transferring electrical power from the battery of another car.

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 cars.

### CAUTION

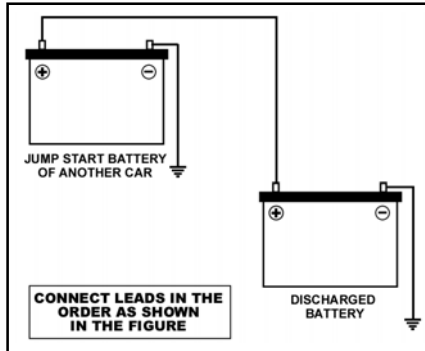
Do not allow battery electrolyte to come in contact with eyes, skin, fabrics or painted surfaces. The fluid contains sulphuric acid which can cause injury and severe damage. Wear rubber gloves, to avoid risk of contact.

To lessen the risk of injury, 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 car (12V). Its capacity must be approximately the same as the original battery capacity. The voltage and capacity are given on the batteries.
- Do not disconnect the discharged battery from the car.
- 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.
- Apply hand brake. Keep the gearshift lever in neutral.
- 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 on engine/transaxle.
- Route the leads so that they do not get caught by the rotating parts in the engine compartment.
- The engine of the car providing the jump start can be allowed to run during starting.

**Connect leads in the order as shown in the sketch**



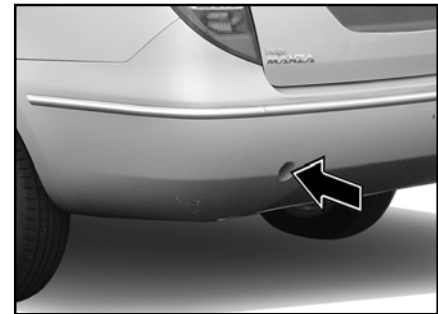
Attempts to start the engine of the car with the discharged battery should be made at intervals of one minute and should not last more than 15 seconds. After starting, allow both engines to idle for approximately 3 minutes with the leads still connected.

### Towing the Car :

- For towing a car, the best way is to use a wrecker.
- Alternatively, use a rigid tow bar.
- Avoid using a flexible cable or rope as your car may crash into the car towing your car when it stops suddenly.
- Switch ON the hazard warning signals of both the cars 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 car.

### Location of Tow Hooks :



This manual will help you to understand your car. Inspection, maintenance of the car should be handled by professionals only.

Please be careful while personally inspecting / maintaining the car as it may cause damage to the car and may be unsafe.

The ignition and fuel systems are extremely important in view of emission control and efficient engine operation. Similarly the brake system for safety. Do not tamper with them.

All inspections and adjustments must be made by a qualified technician. We strongly recommend that all servicing related to these systems be done by a **TATA** authorised dealer/ TASC.

### CAR MAINTENANCE FOR OWNER

#### Routine:

We highly recommend that these items be inspected at least once a week.

Engine Oil Level, Engine coolant Level, Brake Fluid Level, Washer Fluid Level, Battery, Tyre inflation pressure, Power steering fluid level.

#### Do it Yourself Service:

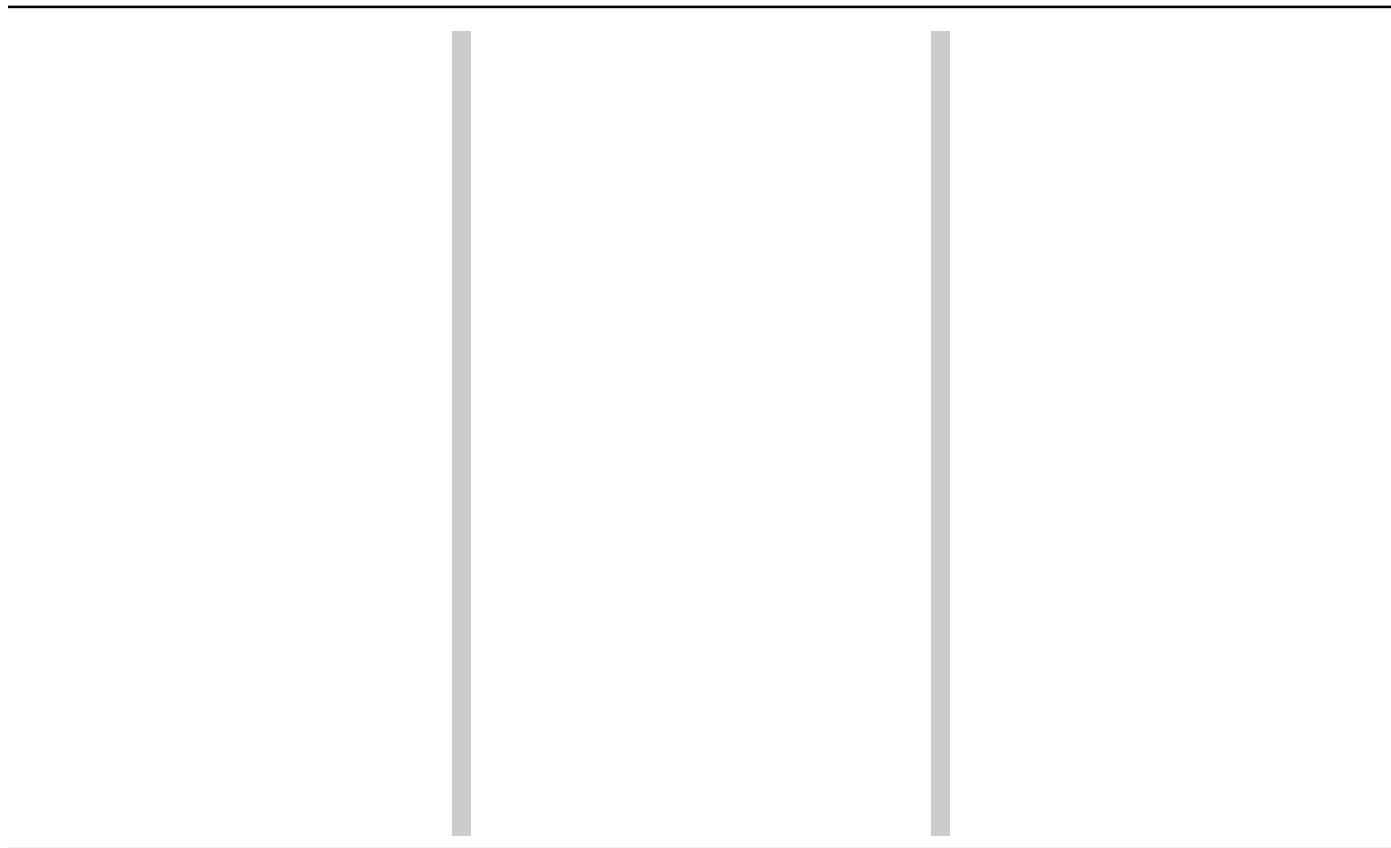
Improper or incomplete service may result in problems.

Several maintenance procedures can be done only by a qualified service technician with special tools. Improperly done 'do-it- yourself' maintenance during the warranty period may affect warranty coverage. If you're unsure about any servicing or maintenance procedure, have it done by a **TATA** Authorized Dealer / TASC.

### WARNING

#### Maintenance procedures:

Performing maintenance work on a car can be dangerous. You can be seriously injured while performing some maintenance procedures. If you lack sufficient knowledge and experience or the proper tools and equipment to do the work, have it done by qualified technician.





## PRELIMINARY TROUBLE SHOOTING

- Engine
- Clutch
- Transaxle
- Brakes
- Steering
- Suspension
- Electrical
- Air Conditioning
- Wipers

(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)

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
<b>ENGINE</b>			
1.	<b>Engine not cranking</b>	Dead battery, loose or dirty battery connections	<ul style="list-style-type: none"> <li>• Get battery checked and/or changed</li> <li>• Clean and tighten battery connections</li> </ul>
2.	<b>Engine cranks but does not start (DIESEL)</b>	Air in the fuel system	<ul style="list-style-type: none"> <li>• Crank Engine for 10 sec.(Diesel)</li> <li>• Check leakages</li> </ul>
		Service lamp glowing EMS fuse blown In-Tank pump not working	<ul style="list-style-type: none"> <li>• Get defect rectified</li> <li>• Replace the fuse</li> <li>• Check power supply to pump</li> <li>• Check pump delivery flow and pressure</li> </ul>
	<b>Engine cranks but does not start (PETROL)</b>	No fuel Fuel filter choked	<ul style="list-style-type: none"> <li>• Get fuel filled</li> <li>• Get the fuel filter replaced</li> <li>• Check fuse for fuel pump &amp; EMS</li> </ul>
		Inertia switch tripped	<ul style="list-style-type: none"> <li>• Reset inertia switch</li> <li>• Remove air from air bleeding valve on fuel rail</li> </ul>
3.	<b>Engine overheats</b>	Coolant level low	<ul style="list-style-type: none"> <li>• Top up coolant, check and correct leakages</li> </ul>
		Hose collapse / torn Low engine oil level Radiator cap not sealing properly	<ul style="list-style-type: none"> <li>• Get the hose replaced</li> <li>• Add oil</li> <li>• Fit the radiator cap correctly</li> </ul>



SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
3.	<b>Engine overheats (contd.)</b>	A.C. condensers fans not working Brakes binding Electric fan not working High delivery pressure in A.C. refrigerant circuit Radiator fins clogged Radiator water passage clogged Thermostat defective	<ul style="list-style-type: none"> <li>• Get defect rectified</li> <li>• Get defect rectified</li> <li>• Get defect rectified</li> <li>• Get defect rectified</li> <li>• Clean it</li> <li>• Get it rectified</li> <li>• Get it rectified</li> </ul>
4.	<b>Charging indicator continuously remains 'ON'</b>	Battery not getting charged due to loose belt drive	<ul style="list-style-type: none"> <li>• Check for Belt Failure</li> <li>• Replace if broken</li> </ul>
5.	<b>Poor pickup (DIESEL)</b>	Loose contact of connectors Blocked fuel filter Clogged air filter EGR malfunctioning  In-Tank Pump not working (Diesel)	<ul style="list-style-type: none"> <li>• Get defect rectified.</li> <li>• Clean/replace fuel filter element</li> <li>• Clean / replace the element</li> <li>• Get checked and corrected</li> <li>• Check for loose pipes and connections.</li> <li>• Check power supply to pump</li> <li>• Check pump delivery flow and pressure</li> <li>• Check for Inertia switch and keep it ON</li> </ul>
	<b>Poor pickup (PETROL)</b>	Air in the fuel system Clogged fuel filter Clogged air filter Clutch slipping / out of adjustment Brake grabbing	<ul style="list-style-type: none"> <li>• Check accelerator pedal module</li> <li>• Remove the air</li> <li>• Clean/replace fuel filter element</li> <li>• Clean / replace the element</li> <li>• Get it rectified</li> <li>• Get it rectified</li> </ul>
6.	<b>Does not accelerate</b>	Accelerator pedal module defective	<ul style="list-style-type: none"> <li>• Get defect rectified</li> </ul>
7.	<b>Belt squeal (for Quadrajel)</b>	Loose belt Belt glazed	<ul style="list-style-type: none"> <li>• Get belt tension adjusted</li> <li>• Get belt replaced</li> </ul>

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
8.	<b>Low engine oil pressure indicator 'ON' when engine is running even though engine oil level is within max. / min.marking.</b>	Oil pressure transducer faulty	<ul style="list-style-type: none"> <li>Do not run the engine extensively. Take the car to the nearest Authorised Service outlet and get the fault rectified</li> </ul>
<b>CLUTCH</b>			
1.	<b>Clutch does not get disengaged (Quadrajel)</b>	Less clutch pedal height Air in the hydraulic system Less fluid in the master cylinder	<ul style="list-style-type: none"> <li>Set clutch pedal height inline with brake pedal</li> <li>Bleed the system</li> <li>Get clutch fluid filled</li> </ul>
2.	<b>Clutch pedal goes too low</b>	Less clutch pedal height Air in the hydraulic system Less fluid in the master cylinder	<ul style="list-style-type: none"> <li>Set clutch pedal height inline with brake pedal</li> <li>Bleed the system</li> <li>Get clutch fluid filled</li> </ul>
3.	<b>Clutch pedal return sluggish</b>	Less clutch pedal height Blocking of vent in brake fluid bottle Improper cable routing	<ul style="list-style-type: none"> <li>Set clutch pedal height inline with brake pedal</li> <li>Open the cap from the bottle and clean the breather hole, if clogged</li> <li>Check cable routing.</li> </ul>
<b>TRANSAXLE</b>			
1.	<b>Gears slipping out of mesh</b>	Worn/damaged grooves on shifter shaft Worn shift fork or synchroniser sleeve Weak or damaged detent springs Worn bearings on input shaft or layshaft Worn dog teeth on sleeve and gear	<ul style="list-style-type: none"> <li>Replace</li> <li>Replace</li> <li>Replace</li> <li>Replace</li> <li>Replace sleeve and gear</li> </ul>
2.	<b>Hard shifting</b>	Inadequate lubricant Inadequate clutch pedal travel Distorted or broken clutch disc	<ul style="list-style-type: none"> <li>Replenish</li> <li>Adjust</li> <li>Replace</li> </ul>

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
2.	Hard shifting (contd.)	Damaged clutch pressure plate Worn synchrocones Worn dog teeth on sleeve or gear Distorted shift shaft/linkages	<ul style="list-style-type: none"> <li>• Replace clutch cover/disc</li> <li>• Replace</li> <li>• Replace sleeve or gear</li> <li>• Replace</li> </ul>
3.	Noise	Inadequate or insufficient lubricant Damaged or worn bearing(s) Damaged or worn gear(s) Damaged or worn synchroniser parts	<ul style="list-style-type: none"> <li>• Replenish</li> <li>• Replace</li> <li>• Replace</li> <li>• Replace</li> </ul>

## BRAKES

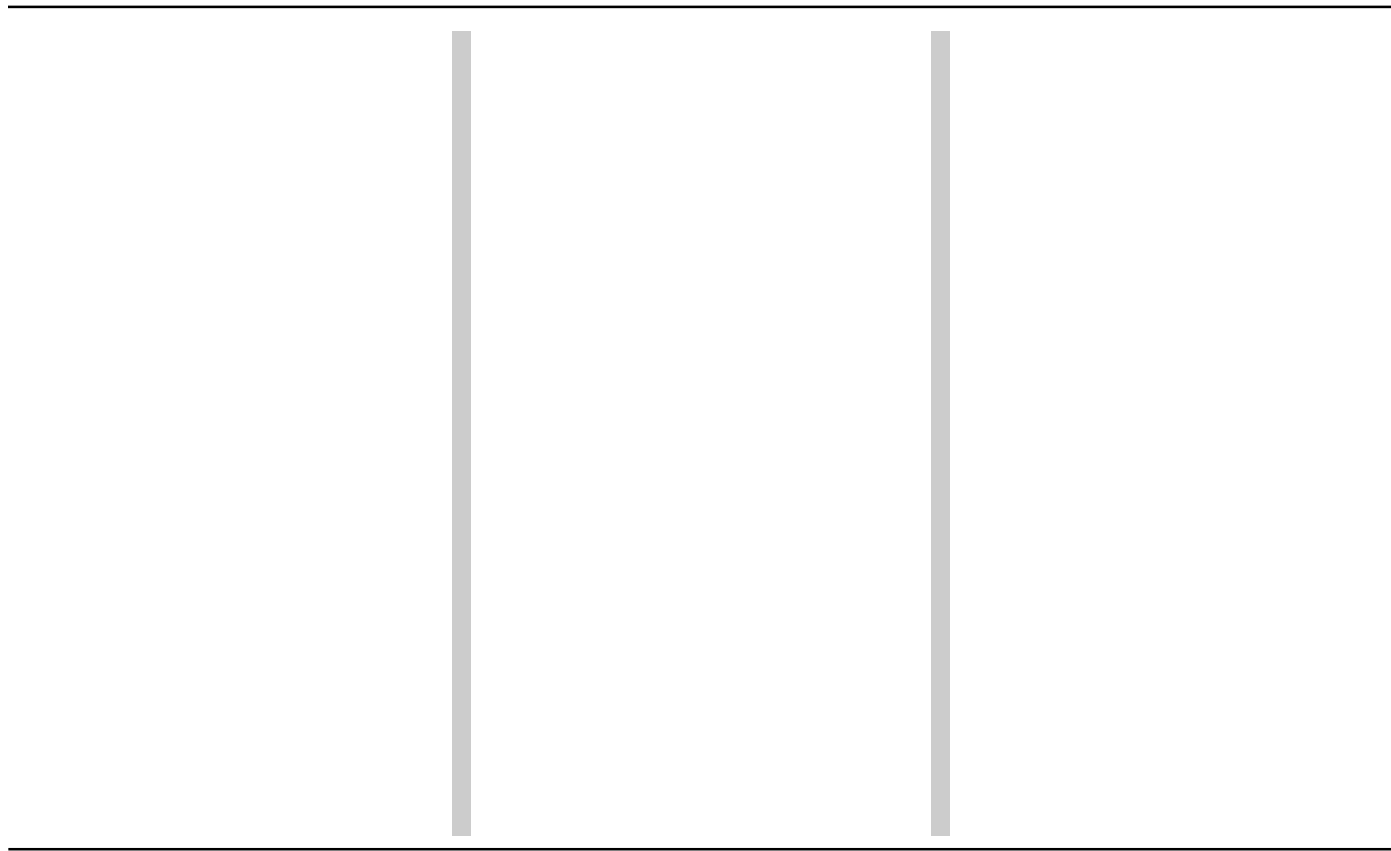
1.	Poor brakes	Insufficient brake fluid. Air in the system Malfunction of automatic adjuster  Vacuum leakage Brake fluid contamination Brake fluid, grease, oil or water on pad /drum  Worn brake lining/pad Excessive worn drums at rear soft or weak hose	<ul style="list-style-type: none"> <li>• Get the brake fluid filled</li> <li>• Bleed the system</li> <li>• Check and rectify auto adjuster mechanism or replace</li> <li>• Rectify the leakage</li> <li>• Replace the brake fluid</li> <li>• Replace the leaking line, bleed the system. Clean pad/lining. replace seals if leaking</li> <li>• Get the liners/pad replaced</li> <li>• Replace rear drums</li> <li>• Check and replace</li> </ul>
2.	Spongy pedal	Air in the system	<ul style="list-style-type: none"> <li>• Bleed the system</li> </ul>

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
3.	<b>Brake pulling to one side</b>	Oil on the lining/pad One side shoe (pad) worn Loose brake anchor plate Wheel adjustment disturbed Unequal tyre pressure One side brake pipe clogged	<ul style="list-style-type: none"> <li>• Clean the pad lining</li> <li>• Get the shoe pad replaced</li> <li>• Tighten the bolts</li> <li>• Adjust</li> <li>• Adjust</li> <li>• Get the brake line cleaned and bleed the system</li> </ul>
4.	<b>Brake grab</b>	Improperly adjusted parking brake Brake fluid container breather hole clogged No brake pedal free play/brake pedal not returning fully Defective tandem master cylinder Brake light switch over tightened	<ul style="list-style-type: none"> <li>• Get correctly adjusted</li> <li>• Clean the hole on the container</li> <li>• Adjust brake pedal Check clevis pin</li> <li>• Replace/rectify tandem master cylinder.</li> <li>• Set brake light switch.</li> </ul>
5.	<b>Brake Squeal</b>	Defective brake lining/pad Glazed lining/pad Wrong lining/pad Shoe return spring broken Front pads /Antisqueal shims rubbing on the disc	<ul style="list-style-type: none"> <li>• Replace</li> <li>• Clean or replace lining/pad</li> <li>• Install correct lining/pad</li> <li>• Replace</li> <li>• Get corrected</li> </ul>
<b>STEERING</b>			
1.	<b>Hard steering</b>	For power steering - Less fluid in the power steering reservoir. Air in the system	<ul style="list-style-type: none"> <li>• Get the recommended fluid topped up to correct level</li> <li>• Get the air removed by bleeding the system</li> </ul>

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
1.	Hard steering (contd.)	Loose pump belt	<ul style="list-style-type: none"> <li>• Get the belt correctly adjusted</li> </ul>
<b>SUSPENSION</b>			
1.	Abnormal or excessive tyre wear	Tyre out of balance Steering geometry disturbed Tyres not adequately inflated Wobbly wheel or tyre Defective tyre Hub play not proper Brake grabbing Excessive braking	<ul style="list-style-type: none"> <li>• Check balance and/or adjust if required.</li> <li>• Adjust steering geometry</li> <li>• Adjust tyre pressure</li> <li>• Replace wheel or tyre</li> <li>• Replace tyre</li> <li>• Adjust hub play</li> <li>• Check and rectify</li> <li>• Modify driving habit</li> </ul>
2.	Abnormal noise from front end	Worn, sticky or loose tie rod ends, lower ball joints, tie rod in side ball joints or drive shaft joints Warning noise for pad wear Damaged struts or mounting Worn suspension arm bushings Loose wheel nuts Loose suspension bolts or nuts Broken or damaged wheel bearing Poorly lubricated or worn strut bearings Excessive hub play Loose caliper housing bolts	<ul style="list-style-type: none"> <li>• Replace tie rod end, suspension arm, tie rod or drive shaft joints</li> <li>• Replace pad</li> <li>• Repair mounting or replace struts</li> <li>• Replace</li> <li>• Tighten wheel nuts</li> <li>• Tighten suspension bolts or nuts</li> <li>• Replace</li> <li>• Lubricate or replace strut bearings</li> <li>• Adjust</li> <li>• Check &amp; tighten</li> </ul>
3.	Ride too soft / bumpy	Faulty struts	<ul style="list-style-type: none"> <li>• Replace strut</li> </ul>

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
4.	<b>Suspension bottoms</b>	Over loaded Faulty struts	<ul style="list-style-type: none"> <li>• Check loading</li> <li>• Replace struts</li> </ul>
<b>ELECTRICAL</b>			
1.	<b>No lights on the dash board after turning on the ignition key</b>	Battery terminal disconnected Battery completely dead	<ul style="list-style-type: none"> <li>• Get the battery properly connected</li> <li>• Get the battery charged</li> <li>• Get the alternator and charging circuit checked</li> <li>• Check for parking lamp fuse</li> </ul>
2.	<b>Non functioning electrical accessories such as power windows, head lamps, fuel tank flap, wiper and washer etc. in the mounting</b>	Blown fuse in the circuit Loose connectors Circuit relay loose Defective components	<ul style="list-style-type: none"> <li>• Replace the fuse if blown</li> <li>• Get the connection properly tightened</li> <li>• Tighten the relay correctly</li> <li>• Get the defective component replaced from Authorised Workshop</li> </ul>
<b>AIR CONDITIONING</b>			
1.	<b>Fan motor does not operate</b>	Blown fuse  Faulty connection Faulty motor Faulty resistor  Faulty fan switch	<ul style="list-style-type: none"> <li>• Replace fuse and correct any wiring short</li> <li>• Properly connect poor connections</li> <li>• Replace motor if no conductance</li> <li>• Replace resistor block if defective connection at resistor</li> <li>• Replace switch</li> </ul>
2.	<b>Motor operates but air flow</b>	Obstruction at evaporator inlet	<ul style="list-style-type: none"> <li>• Clean evaporator</li> </ul>

SR. NO.	PROBLEM OBSERVED	CAUSE	ACTION TO BE TAKEN
	is minimum	Air leak Faulty thermostat	<ul style="list-style-type: none"> <li>• Correctly seal</li> <li>• Adjust or replace thermostat</li> </ul>
3.	<b>Insufficient cooling, Air flow normal and compressor operating</b>	Incorrect refrigerant quantity or defect in system aggregates	<ul style="list-style-type: none"> <li>• Get the defect rectified at nearest authorised service centre</li> </ul>
<b>WIPERS</b>			
1.	<b>Narrow streaks are left on the wind shield making it hard to see.</b>	Foreign matter has attached to the blade or	<ul style="list-style-type: none"> <li>• Clean the edge of the blade. If streaks still appear, replace it. blade edge of the blade is worn out.</li> </ul>
2.	<b>The wiper blade jumps across the windshield and makes a lot of noise across the surface but vibrates, noisily and bounces.</b>	No proper contact of wiper blade with wind shield glass and wiper blade does not move smoothly	<ul style="list-style-type: none"> <li>• Clean the wind shield. If jumping persists replace the blade.</li> </ul>
3.	<b>The wipe leaves large un-wiped spots.</b>	Rubber deformed	<ul style="list-style-type: none"> <li>• Replace the blade</li> </ul>
4.	<b>The blade does not contact with the wind shield surface evenly, leaving a large un-wiped surface.</b>	Deformed wiper blade / arm	<ul style="list-style-type: none"> <li>• Replace wiper blade / arm</li> </ul>







## ELECTRICAL MAINTENANCE

- Bulb Specification
- Fuses & Relays
- Bulb Replacement

### BULB SPECIFICATION :

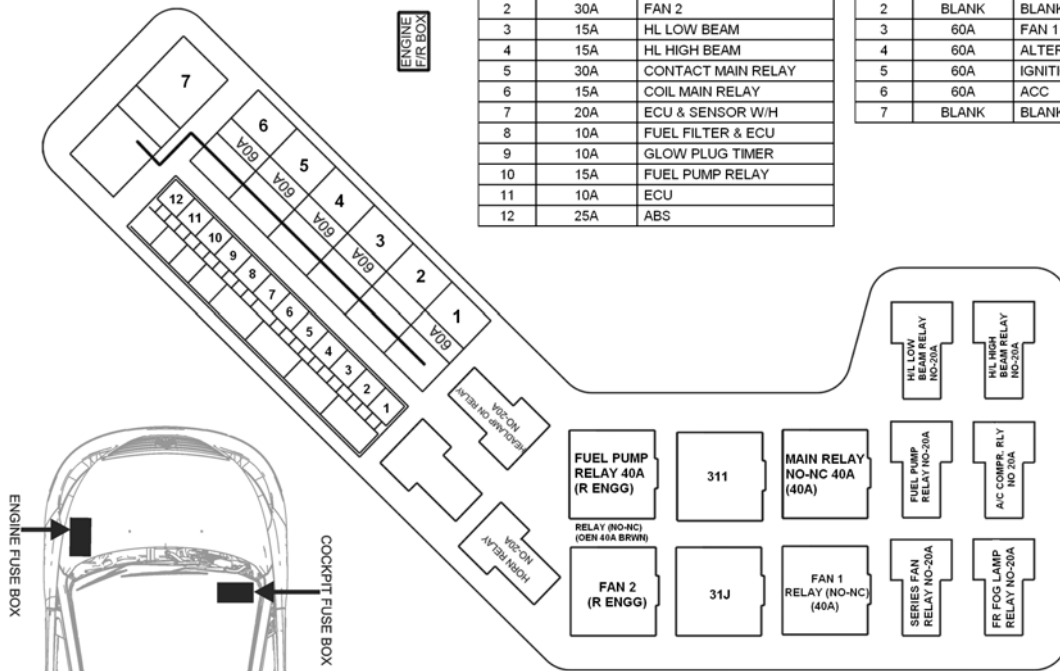
Sr.No	Description	Rating	Type	Quantity
1	High Beam	12V , 55W	H7	2
2	Low Beam	12V , 55W	H7	2
3	Parking Lamp	12V , 5W	W5W	2
4	Front Turn Signal	12V , 21W	PY21	2
5	Front Fog Lamp	12V , 55W	H3	2
6	Position Lamp	12V , 5W	W5W	2
7	Stop + Position Lamp	12V , 21/5W	BA 15d Dual	2
8	Rear Turn Signal	12V , 21W	WY21W	2
9	Reverse Lamp	12V , 21W	W21W	2
10	Rear Fog Lamp	12V , 21W	BA15S	2
11	Rear Registration Plate Lamp	12V , 5W	W5W	2
12	Side Repeater Lamp	12V , 5W	W5W	2
13	Roof Lamp	12V , 10W	Festoon Bulb	1
14	Roof Spot Lamp (Front, Rear)	12V , 5W	W5W	2
15	High Mounted Stop Lamp	---	LED	1
16	Load Area Lamp	12V , 5W	W5W	1

**ENGINE FUSEBOX VIEW OF QUADRAJET**

NOTE: LOCATION "ALONG LH WHEEL ARCH"

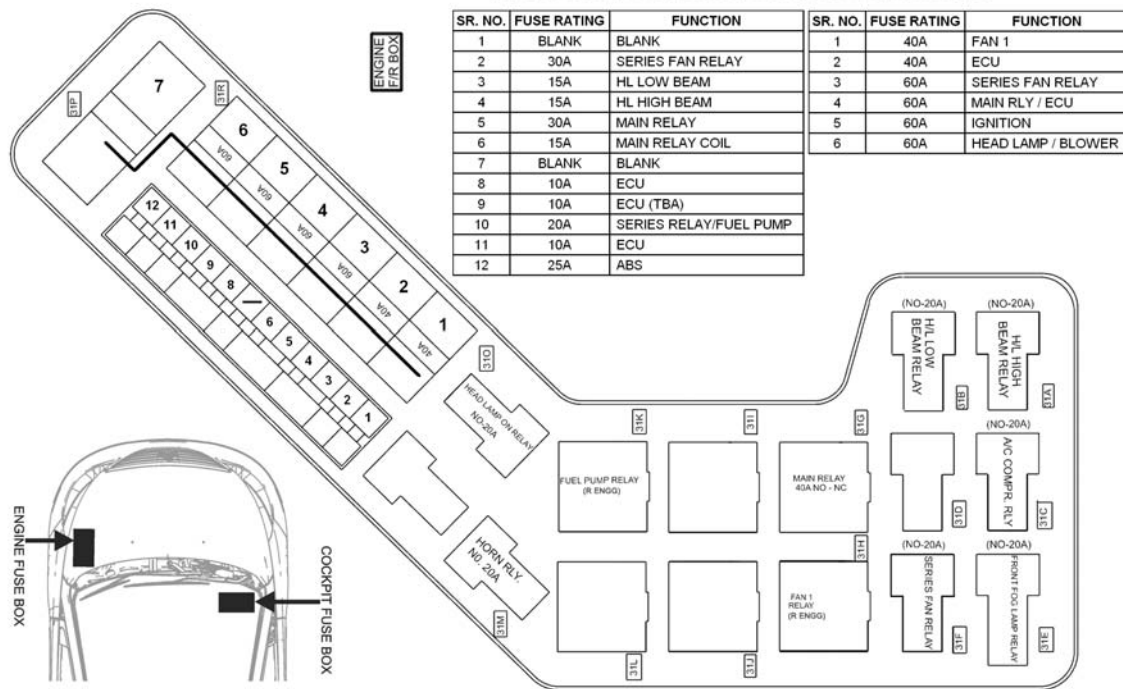
SR. NO.	FUSE RATING	FUNCTION
1	30A	FAN 1
2	30A	FAN 2
3	15A	HL LOW BEAM
4	15A	HL HIGH BEAM
5	30A	CONTACT MAIN RELAY
6	15A	COIL MAIN RELAY
7	20A	ECU & SENSOR W/H
8	10A	FUEL FILTER & ECU
9	10A	GLOW PLUG TIMER
10	15A	FUEL PUMP RELAY
11	10A	ECU
12	25A	ABS

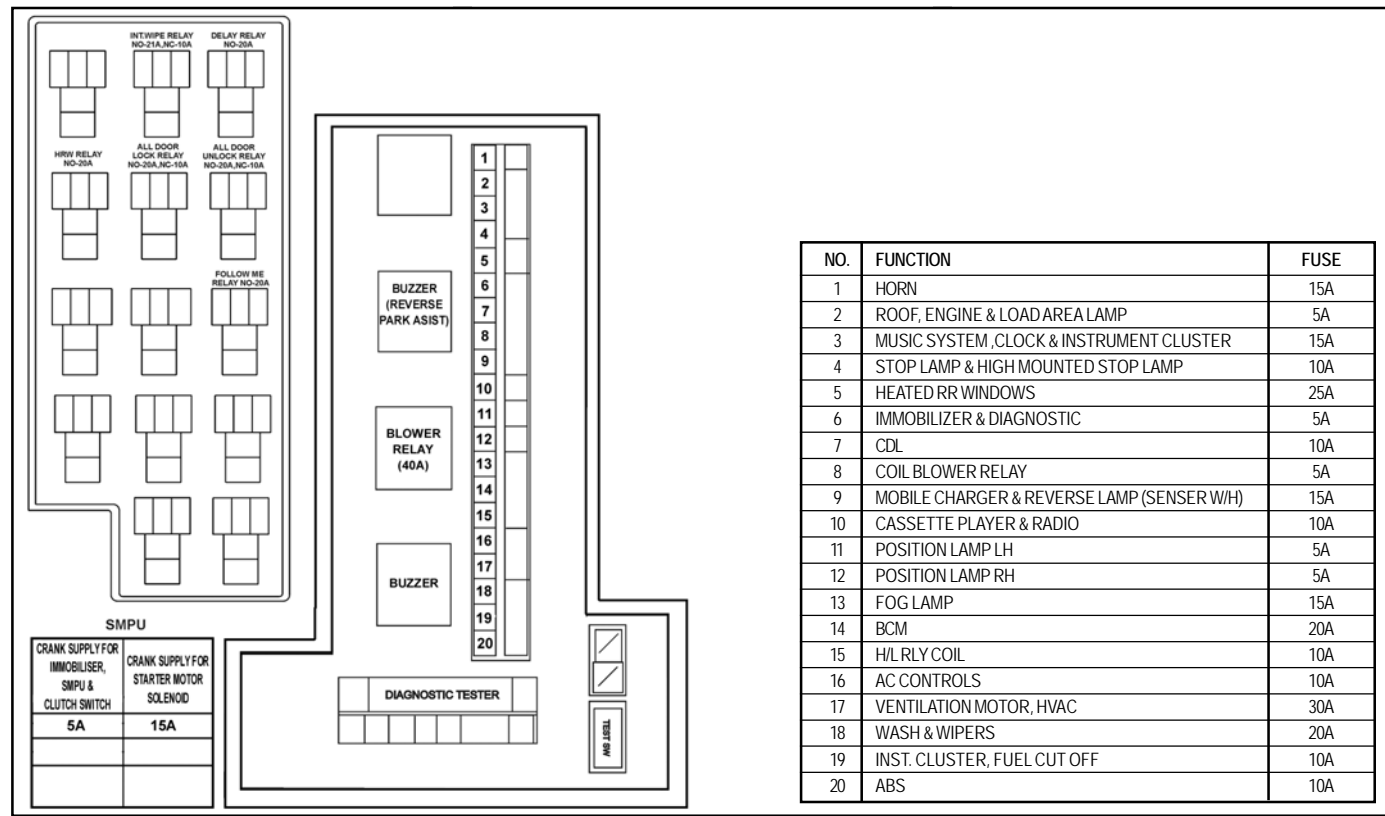
SR. NO.	FUSE RATING	FUNCTION
1	60A	FAN 1
2	BLANK	BLANK
3	60A	FAN 1 & FAN 2
4	60A	ALTERNATOR, GPT
5	60A	IGNITION
6	60A	ACC
7	BLANK	BLANK



## ENGINE FUSEBOX VIEW OF SAFIRE

NOTE: LOCATION OF THIS FUSEBOX IS ALONG LH WHEEL ARCH





### Bulb Replacement :

#### Replacing the Headlight Bulb :

Your car's headlights have replaceable halogen bulbs. Headlight bulb can be replaced without disturbing or removing the entire headlight unit.

#### WARNING

##### Handling Halogen Bulbs:

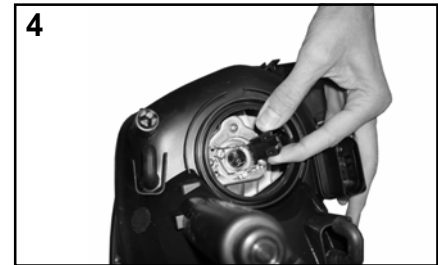
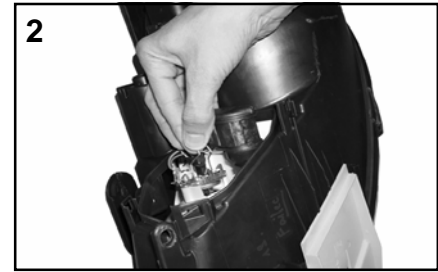
It is dangerous if a halogen bulb breaks. These bulbs contain pressurized gas and if broken, will explode causing serious injury by the flying glass. Halogen bulbs can break if the glass portion is touched with bare hands, body oil could cause the bulb to heat unevenly and explode when lit. Never touch the glass portion of the bulb with your bare hands and always wear eye protection when handling or working around halogen bulbs. Always keep halogen bulbs out of reach of children.



#### Procedure :

Make sure light stalk is in OFF position.

1. Lift the engine bonnet to access the headlight bulb. Ensure that the bulb is not hot.
2. Remove the dust cover at the back of Headlamp **Fig.1.**



3. Disconnect the electrical connector **Fig.2.**
4. Press and release the bulb retaining spring **Fig.3.**
5. Swing the retaining spring out to free the headlight bulb from

the socket by pulling it straight back.

7. Carefully remove the headlight bulb from the socket **Fig. 4**.
8. Replace the bulb.
9. Install in the reverse order of removal.

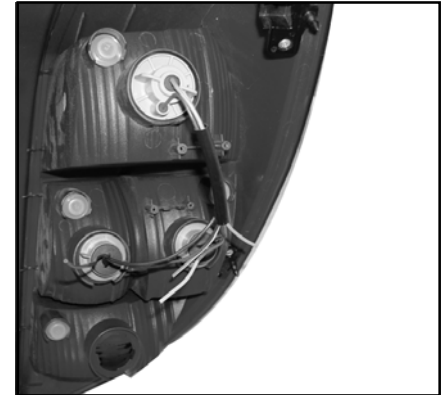
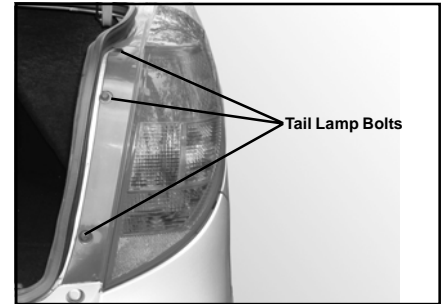
### Replacing the Parking Bulb :

1. Make sure lighting stalk is in OFF position.
2. Lift the engine bonnet. The parking bulb is located below the Headlamp bulb on the assembly.
3. Pull the bulb holder from the socket.
4. Carefully remove the parking bulb from the socket by pulling it straight back.
5. Replace the bulb.
6. Install in the reverse order of removal.

### Replacing Tail Lamp Bulb:

To replace a damaged / fused bulb from your car's tail lamp cluster, follow these simple steps –

1. Open your car's boot
2. Remove the bolts holding the tail lamp
3. Disconnect the bulb holder sockets
4. Remove the defective bulb by turning the bulb holders anticlockwise.
5. Replace the damaged / fused bulb with a bulb of the same wattage
6. Re-connect all the bulb holder sockets and refit the tail lamp.
7. Align the tail lamp according to the bolt points and refit the bolts.
8. Tighten all bolts using appropriate size spanner.









## CAR CARE

- Washing & Cleaning
- Polishes
- Wiper Care
- General Precautions
- Proper Parking
- Washing Your Car
- Waxing
- Tips - Paint Care

## CAR CARE :

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

## Washing :

Do not wash the Car in direct sunlight, wash in shade. Spray the Car thoroughly with a cold water jet (Car on a washing pit or hoist). Mix Car shampoo in the wash water. No solvent (fuel, thinners) need to be used.

## WARNING

Do not direct high pressure washer fluid/ water jets (Pressure above 0.5 Bar) at electrical devices and connector during washing. This is to prevent malfunction / failure of electrical system due to water ingress.

Use a soft bristle brush, sponge or soft cloth and rinse it frequently while washing. When you have washed the exterior, dry it with a chamois or soft cloth. After drying the Car, inspect it for chips and scratches that could allow corrosion to start. Apply touch up paint where necessary.

## Polishes :

Polishes and cleaners can restore shine to the painted surface that has oxidised and become dull. They normally contain mild abrasives and solvents that remove the top layer of the finish coat. Polish your Car, if the finish does not regain its original shine after using wax.

## 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.

## NOTICE

Avoid wiping of painted surface in dry condition as it may leave scratches on the painted surface.

## Cleaning of Windows, Front and Rear Glasses :

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  
VENUS WINDSHIELD MOUNT AVI TAG

## NOTICE

Do not attempt to rip or tamper the tag. It will disable the functionality of the tag.

Clean the windows inside and outside with commercially available glass cleaners.

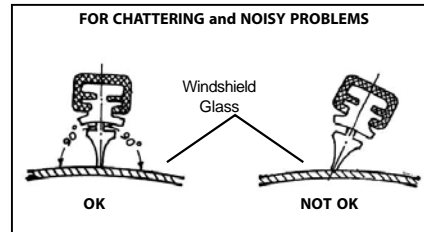
This will remove the haze that builds up on the inside of windows. Use a soft cloth or paper towels to clean all glass and plastic surfaces.

### Non use maintenances :

1. Park the Car in covered, dry and if possible well-ventilated premises. Engage a gear.
2. Remove the battery terminal cables (first remove the cable from the negative terminal).
3. Make sure the hand brake is not engaged.
4. Clean and protect the painted parts using protective wax.
5. Clean and protect the shiny metal parts using commercially available special compounds.
6. Sprinkle talcum powder on the rubber windscreen wiper and lift them off the glass.

7. Slightly open the windows.
8. Cover the Car with a cloth or perforated plastic sheet. Do not use sheets of imperforated plastic as they do not allow moisture on the Car body to evaporate.
9. Inflate the tyres to 0.5 bar above the normal specified pressure and check it at regular intervals.
10. Check the battery charge every six weeks.
11. Do not drain the engine cooling system.

### 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.

**FOLLOWING GUIDELINES WILL HELP YOU TO PROTECT YOUR CAR FROM CORROSION EFFECTIVELY.**

### PROPER CLEANING :

In order to protect your car from corrosion it is recommended that you wash your car thoroughly and frequently in case :

1. There is an heavy accumulation of dirt and mud especially on the underbody.
2. It is driven in areas having high atmosphere pollution due to smoke, soot, dust, iron dust and other chemical pollutants.
3. It is driven around coastal areas.
4. The underbody must be thoroughly pressure washed after every three months.

In addition to regularly washing your car, the following precautions need to be taken.

### PERIODIC INSPECTION:

1. Regularly inspect your car for any damage in the paint film such as deep scratches and immediately get them repaired from an authorised service outlet, as these defects tend to accelerate corrosion.
2. Inspect mud liners for damages.
3. Keep all drain holes clear from clogging.

### PROPER PARKING:

Always park your car in shade to protect it from harsh sunlight or in a well-ventilated garage so that there is no dampness on any part of the car.

### WASHING YOUR CAR:

*Following these tips while washing your car.*

### HAND WASH:

1. Always wash your car 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 car 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.

### NOTICE

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 car.
2. Re-wax your car when the water does not slip off the surface and collects over the surface in patches.

### **Further tips for the care of your new car finish :**

If your car 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 car 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.

### **Please take the following precautions :**

1. Always wash your car in shade, avoiding direct exposure to sunlight during washing.
2. Dry wiping your car may lead to the formation of scratches and hence always use a soft cloth and clean water while wiping your car.
3. Always keep your car 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. If you are driving on freshly tarred road, check immediately afterwards for any stains and clean them.
5. External contamination in the form of sap or industrial fall-out may mar or develop spots on a new finish. Hence avoid parking your car near trees, which are known to drop sap, or near factories, which give out heavy smoke.

## CAR CARE

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6. The acid content in bird droppings may damage the newly painted finish and hence any bird dropping must be immediately washed off.
7. The paint finish is susceptible to damage in case petrol, brake fluid, liquid from car 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, however if wiping is required, ensure that you wipe the area gently with soft cotton cloth.
8. Avoid using sharp objects to scrap off tar or mud from a painted surface as it may develop scratches.

### **Various Environmental Hazards affecting paints :**

- Environmental hazards destroy your car's finish.

### **The enemy :**

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

### **Benefits of Car Exterior 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.



## MAINTENANCE

- Opening & Closing the bonnet
- Engine Compartment
- Air Filter
- Engine Oil
- Engine Coolant
- Transaxle Oil
- Brake Oil
- Power Steering Oil
- Fuel Filter
- Windshield Washer
- Carbon Canister
- Catalytic Converter
- Spark Plug
- Tyres
- Battery
- Belt Tension

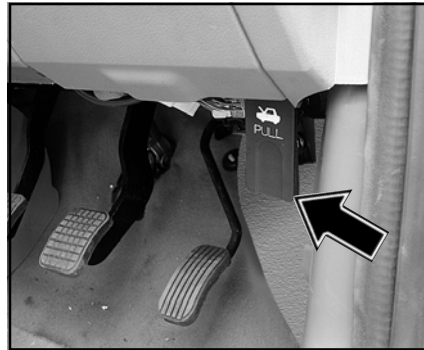
### Opening and Closing the Bonnet

#### Opening:

1. Ensure that the car is in neutral gear with the parking brake applied.
2. Pull the bonnet release lever located under the right hand corner of the dash board. 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. Pull the bonnet stay rod from its clip and insert the free end into the slot in the bonnet, slide stay rod outward to secure.

#### **CAUTION**

Ensure bonnet stay rod is in position before working in Engine bay. If not secured, it could fall on you causing injury.



Location of Bonnet release lever



Bonnet release Lever

#### Closing :

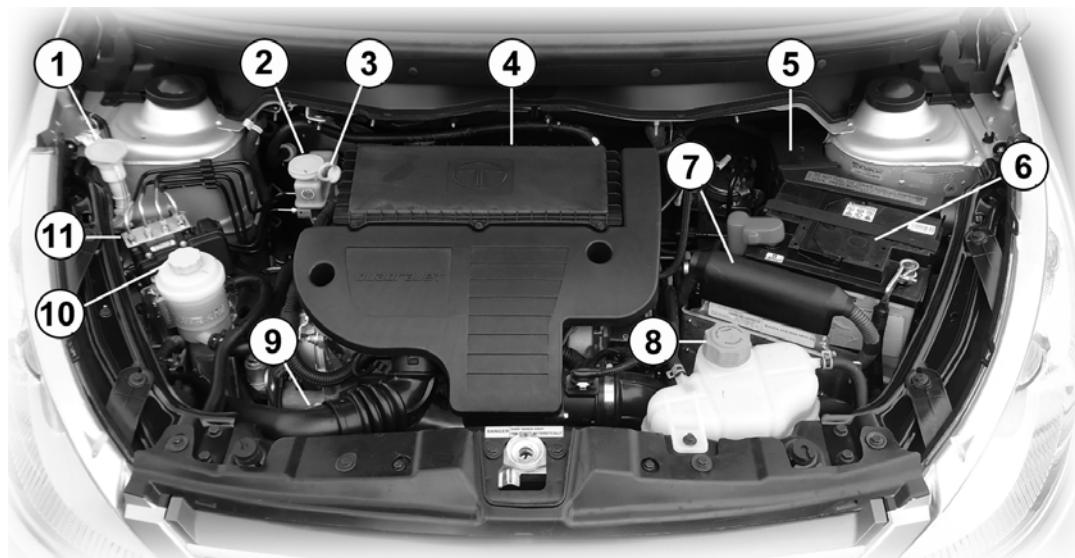
1. To close the bonnet disengage the stay rod and clamp it properly.
2. Lower the bonnet and drop it from a short height to shut.

#### **CAUTION**

Ensure that the bonnet is properly locked before driving. Do not press the bonnet onto the bonnet lock.

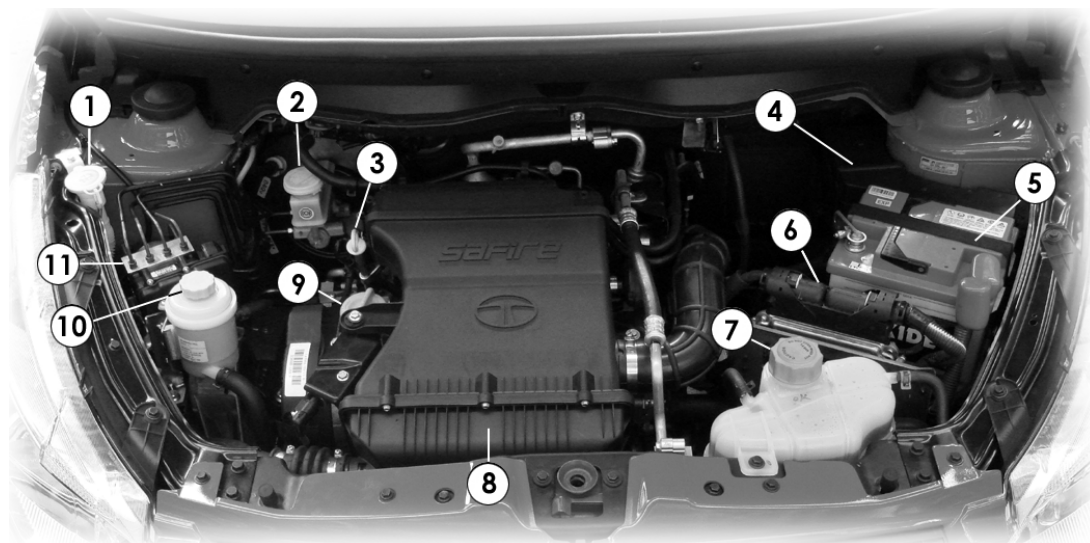


ENGINE COMPARTMENT (QUADRAJET)



- |                                |                          |                           |
|--------------------------------|--------------------------|---------------------------|
| 1. Windshield Washer Container | 2. Brake Fluid Reservoir | 3. Engine Dipstick        |
| 4. Air Filter                  | 5. Fuse & Relay Box      | 6. Battery                |
| 7. ECU                         | 8. Auxiliary Tank        | 9. Engine Oil Filling Cap |
| 10. Power Steering Reservoir   | 11. ABS ECU/HCU          |                           |

## ENGINE COMPARTMENT (SAFIRE)



- |                                |                          |                           |
|--------------------------------|--------------------------|---------------------------|
| 1. Windshield washer container | 2. Brake fluid reservoir | 3. Dipstick               |
| 4. Fuse Box                    | 5. Battery               | 6. ECU                    |
| 7. Auxiliary tank              | 8. Air Filter            | 9. Engine Oil Filling Cap |
| 10. Power steering reservoir   | 11. ABS ECU/HCU          |                           |

**Air Filter :**

The air filter element should be periodically cleaned. Replace the air filter element with a new one when air cleaner gets too clogged and cannot be cleaned easily. This is necessary if the car is driven in dusty conditions.

***Always use a genuine air filter element.***

**NOTICE**

- When a car 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.

*For location of air filter, please refer respective Engine compartment pages.*

**Engine oil level checking :**

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 Car 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.

*For location of Engine oil filling cap & dip stick, please refer respective Engine compartment pages.*

**Engine coolant level :**

Check the coolant level in the radiator auxiliary tank.

It should be in between maximum and minimum lines.

If the auxiliary tank is completely empty, please check the coolant level.

**NOTICE**

Topping of the coolant should be done in the auxiliary tank only.

*For location of Engine coolant container & filler cap, please refer respective Engine compartment pages.*

### 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 chapter - Fuels, coolants and lubricants)

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

#### CAUTION

1. 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.
2. 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.

*For location of Brake Fluid Container & filling cap , please refer respective Engine compartment pages.*

### Power steering reservoir :

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 chapter - Fuels, coolants and lubricants)

In case of leakage or hard steering, please contact the nearest 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.

*For location of Power Steering Fluid Container & filling cap , please refer respective Engine compartment pages.*

### Windshield Washer :

Windshield washer fluid container is located behind the front right hand side panel and its filler neck is provided near auxiliary tank in the engine compartment.

#### NOTICE

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

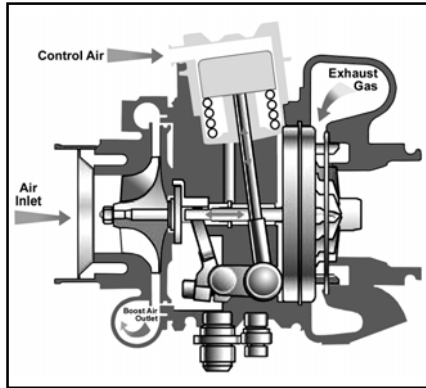
*For location of Windshield Washer Container & filling cap , please refer respective Engine compartment pages.*

### 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.***

### Variable Nozzle Turbocharger - VNT : (DIESEL)



**Turbocharger**

Your car is fitted with a VARIABLE NOZZLE TURBOCHARGER (VNT) type and is connected to the exhaust manifold. It is designed to increase the volumetric efficiency of the engine.

Variable Nozzle turbochargers are composed of:

- (a) a centrifugal compressor
- (b) a turbine
- (c) a series of moving vanes
- (d) a pneumatic actuator controlling the moving vanes.

The management of the operation of the turbocharger variable geometry is controlled by the control unit through the operation of the VNT solenoid valve.

#### **Lubrication of Turbocharger :**

The turbocharger rotor assembly is supported by two fully floating bearing bushes in the bearing housing. These bearing bushes are lubricated with finely filtered engine oil from the lubrication system of the engine.

Idle the engine for a while (30 seconds) after starting the engine and before stopping the engine to ensure adequate lubricating oil supply to the turbocharger.

#### **Turbocharger Connections :**

All turbocharger connections must be leak-proof. Check air inlet, air outlet, exhaust gas inlet and exhaust outlet connections as well as oil inlet and outlet connections to the turbocharger and tighten the connections where required.

Proper maintenance of air filter, oil filter as well as use of correct grade of oil and adherence to oil change intervals is essential for proper functioning of the turbocharger.

If you suspect any malfunctioning of the turbocharger, take the vehicle to the nearest dealer. Do not remove the turbocharger yourself.

### Intercooler :

Hot air coming out of turbocharger flows through the intercooler and gets cooled before entering the intake manifold. The intercooler is mounted on top of the cylinder head cover.

As such it does not require any maintenance however it can be cleaned externally (when it is not hot) by blowing compressed air through its fins.

#### CAUTION

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

### Maintenance recommendations :

- a) Check the boost pressure pipe for its proper fitment, damage etc.
- b) Specified engine oil and the oil filter should be used and should be changed regularly in accordance with Service Schedule.
- c) Check oil feed pipes, return pipes, air intake and exhaust piping for leakages and restrictions.
- d) Check the engine breathing system and oil separator.
- e) Fill the oil inlet hole of the turbocharger with clean engine oil, when the engine is started after long storage.

### Care & Maintenance of catalytic converter (SAFIRE) :

- Use Unleaded Petrol only, since use of Leaded Petrol will damage (poison) the Catalytic Converter permanently.
- Consult an Authorised Service Outlet at the earliest when,
- Engine misfires or runs irregularly, following a cold start,
- A significant loss of Power is noticed.
- In the event of above symptoms, drive the car at slow speed without rapid acceleration. If the vehicle is continuously run with misfiring, it may cause overheating of body, carpet etc. resulting into fire.

### Avoid :

- Push start or tow-starting the vehicle. (Use jump leads).
- Long (not more than 10 sec.) repeat (not more than 3 times) starting of the Vehicle. Investigate the cause for difficulty in starting & rectify the same.
- Long idling (to warm-up). If the engine is running rough, after a cold start.
- Switching "off" the ignition when driving down the hill. (This will not save fuel).
- Fuel tank getting almost empty.
- Idling the engine with any of the Spark Plug Cable disconnected, manually, during diagnostic test. (Use appropriate test equipment).
- Pre-Coating / Painting of Catalytic Converter.

### Care & Maintenance of Catalytic Converter (QUADRAJET):

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.

#### CAUTION

Avoid parking the car over inflammable materials such as dry leaves, grass etc., as the exhaust system is hot enough to ignite dry grass.

### SPARK PLUG (SAFIRE) :

Spark Plug :NGK

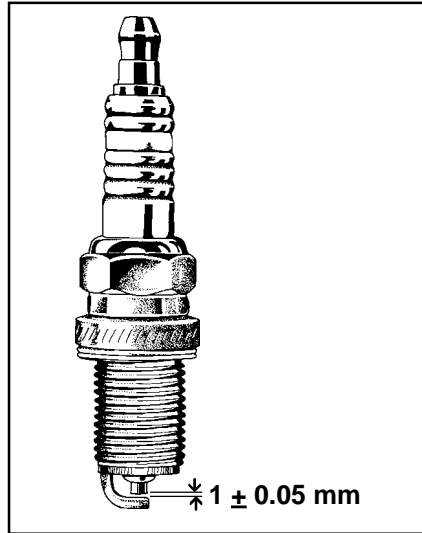
Spark Plug No.: ZKR7A-10

Spark Plug Gap :  $1 \pm 0.05$  mm

You should inspect the spark plugs periodically for carbon deposits. When carbon accumulates on the spark plug, a strong spark will not be produced. Remove carbon deposits using a spark plug cleaner.

### Spark Plug Replacement :

1. Clean up any dirt or oil that is collected around the spark plug caps.
2. Pull out the spark plug cables by gripping at the connector.
3. Remove the spark plug with the help of a special socket.
4. Check and adjust the gap, it should be 0.7 mm to 0.8 mm.
5. Replace the spark plug if the gap is more than 1.2 mm.









6. Fix the spark plug and tighten it to the torque of 25 Nm (dry).
  7. Fit the spark plug cable, until a "click" sound is heard.
- Repeat the procedure for the other spark plugs.

### ⚠ CAUTION

Tighten the spark plug carefully. Overtightening can damage the threads in the cylinder head. A loose spark plug or loose spark plug cable can affect combustion and cause damage to engine and catalytic converter.



**Tyres :**

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

Check for inflation and condition of your car tyres periodically.

**Inflation :**

Check the pressure in the tyres when they are cold.

You should have your own tyre pressure gauge and use it at all times. This makes it easier for you to tell if pressure loss is caused by a tyre problem and not by variation between gauges.

Keeping the tyres properly inflated gives you the best combination of riding comfort, handling, tyre life and better fuel efficiency.

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

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

**Recommended Tyre Pressures**

Veh. condition	Wheels	PSI	Bar
UNLADEN	FRONT	32	2.2
	REAR	32	2.2

**CAUTION**

Every time you check inflation pressure, you should also examine tyres for damage, trapping of foreign objects in the treads and wear.

**NOTICE**

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

## ⚠ CAUTION

1. If you notice bumps or bulges in the tread or the side of the tyre, replace the tyre.
2. If there are cuts, splits or cracks in the side of the tyre, replace the tyre.
3. Replace tyre if excessive tread wear or non uniform tyre wear is noticed.

## Recommended Tyre Size:

Model	Tyre Size
Quadrajel	185 / 60 R15 82T
Safire	185 / 60 R15 82T

## Repairing a Tyre:

Mark the tyre position suitably (if original colour dot mark is not visible) with respect to valve stem hole to ensure that the tyre is refitted in the original location on the wheel rim.

Ensure that balancing weights are not disturbed during removal of tyres.

Check the balance weight prior to the removal of the tyre. If found loose, mark its location on the rim and refit properly.

Balance the wheel after every dismantling and assembly of tyre on the wheel rim.

## NOTICE

Do not apply any oil on the wheel pins. Wipe off the oil if present.

## Wheel Cover Removal:

Insert a piece of cloth between the spokes of the wheel cover and pull cover outward. Take out detached wheel cover from the wheel rim. For installation, first match the slot at the wheel cover with the air feeling nozzle of the wheel. Apply equal pressure at the circumference of the wheel cover to fix it in the wheel rim.



## ⚠ CAUTION

Attempting to remove wheel cover with bare fingers may cause injury.

### Special care for tubeless tyres

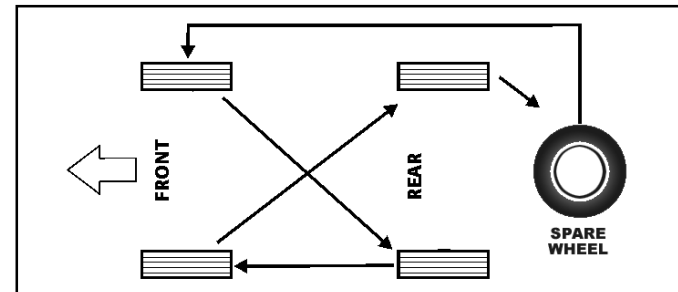
1. While removing tyre from wheel rim and mounting it back on wheel rim, take precautions not to damage tyre bead. Use tyre removal and assembly machines. Damage or cut on tyre bead may cause gradual loss of air and deflation of tyre.
2. Do not scratch inside of tubeless tyre with metallic or sharp object. Tubeless tyres are coated with impermeable layer of rubber from inside which holds the air inside the tyre. Removal of this layer due to scratching may cause gradual loss of air and deflation.
3. If wheel rim gets damaged in service, get the wheel rim repaired/replaced immediately. Running the car with damaged rim may cause deflation of tyre and subsequent dislodging of tyre from rim.
4. Maintain recommended inflation pressure. Over-inflation, in particular, may cause puncture or bursting of tyre.

### NOTICE

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 car speed, load carried, usage, driving habits, road conditions, tyre quality, etc. In case fault is suspected to be due to poor quality of tyres, the same may be taken up with concerned tyre manufacturer.

### Tyre Rotation :

To help increase tyre life and distribute wear more evenly you should have tyres rotated at specified intervals or earlier depending on the operation of car. The illustrations shows how to rotate tyres when normal spare wheel is included in 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 :

	Front	Rear
<b>Caster</b>	$2.6^{\circ} \pm 45'$	---
<b>Camber</b>	$30' \pm 30'$	$-52' \pm 1^{\circ}$
<b>Toe Out</b>	0 - 13'	---
<b>Toe In</b>	---	$12' \pm 15'$

Check and maintain tyre pressure periodically to obtain longer tyre life.

## Wheel Balancing :

Wheels of your car are balanced for better ride comfort and longer tyre life. Balancing needs to be done whenever tyre is removed from rim.

1. Permissible imbalance for tyre with rim = 102 gm-cm max.
2. Total balance weight should be within 140 gm on each side.
3. Relocate the tyre if the weight required to balance is more than 140 gm.
4. Balance weights are available from 10 gm to 140 gm in steps of every 10 gm and from 5 gm to 135 gm in steps of every 10 gm.
5. Do not use more than one balance weight on one side.

### **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.

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 both cables to prevent damage to the car's electrical system.

### **NOTICE**

- 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.
- 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.

*For location of Battery, please refer respective Engine compartment pages.*

### **Belt Condition :**

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

***If the belt tension is not proper or if you find that belt slackness has increased or the belt has broken, get it attended at the nearest Authorised Service Outlet. Never attempt to adjust the belt tension on your own.***

Two belts are present on front drive for SAFIRE -

1. For Alternator and AC compressor.
2. Power steering belt.

One belt is present on front drive for Quadrajet - For Alternator, AC compressor and Power Steering.



## IMPORTANT TECHNICAL INFORMATION

- Lubricants & Coolants
- Fuel, Lubricants & Coolants - Specifications
- Technical Specifications
- Vehicle Dimensions

<b>ITEM</b>	<b>SPECIFICATION</b>	<b>COMPANY &amp; BRANDS</b>	<b>QUANTITY</b>
<b>ENGINE OIL 90PS Quadrajel (DIESEL)</b>	<b>SYNTHETIC 5W 40</b>	<b>EXXON MOBIL - Super 3000 Formula-1/ 5W40 PETRONAS - Synth Diesel 5W40 CASTROL - Edge 5W40</b>	<b>3.2 LITRES</b>
<b>ENGINE OIL 90 PS Safire (PETROL) Option - 1</b>	<b>SYNTHETIC 0W 40</b>	<b>EXXON MOBIL-1 - 0W40 CASTROL - Edge 0W40</b>	<b>3.2 LITRES</b>
<b>ENGINE OIL 90 PS Safire (PETROL) Option - 2</b>	<b>SAE 15W40 API - CH4 + MB228.3 OR HIGHER GRADE</b>	<b>CASTROL GTX DIESEL HPCL - HP MILCY TURBO PLUS Exxon Mobil – Mobil Super 1000 TM</b>	<b>3.2 LITRES</b>
<b>COOLANT</b>	<b>50:50 RATIO PREMIXED</b>	<b>CASTROL RADICOOOL HP THANDA RAJA TGO SCCI GOLDEN CRUISER 1400M</b>	<b>5.4 LITRES</b>
<b>TRANSAXLE</b>	<b>Semi-synthetic SAE 75W85</b>	<b>PETRONAS - Tutela ZC 75FF</b>	<b>2.2 LITERS</b>
<b>POWER STEERING OIL</b>	<b>ATF DEXTRON III -210</b>	<b>HP ATF DEX III CASTROL-TQ DEX III EXXON- Multipurpose ATF</b>	<b>1.0 LITRES</b>
<b>BRAKE FLUID</b>	<b>SAE J 1703, DOT 3</b>	<b>CASTROL UNIVERSAL BRAKE FLUID (DOT 3) HP SDBF DOT 3 GOLDEN CRUISER TGBF DOT 3</b>	<b>AS REQUIRED</b>



**Fuel (PETROL) :** Unleaded regular grade petrol conforming to IS2796-1994/DIN 51607 (or equivalent) and RON not less than 87 is recommended to be used as fuel.

### ⚠ CAUTION

Do not use petrol with lead in a car fitted with catalytic converter. Even single fill of leaded petrol will seriously damage the catalytic converter.

5W40 synthetic oil can be used in QUADRAJET (DIESEL) and SAFIRE (PETROL) engine for ambient temperature ranging from -30°C to 40°C

**Fuel (DIESEL) :** 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.

Outside Ambient temp. upto Deg. C	Percentage	
	Summer grade diesel	Supplementary fuel
Upto 0°C	100	0
0°C to -10°C	70	30
-10°C to -15°C	50	50

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

Outside Ambient temp. upto Deg. C	Percentage	
	Winter grade diesel	Supplementary fuel
Upto -15°C	100	0
-15°C to -20°C	70	30
-20°C & Above	50	50

### WARNING

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

### NOTICE

Where oxidation catalytic converter is fitted, it is mandatory to use Diesel fuel with sulphur contents less than 0.050%. Use of any other diesel fuel can increase the pollutants.

## Lubricants :

**Engine oil :** Recommended grade of engine oil confirming to Synthetic 5W40 (For Quadrajel) and Synthetic 0W40 (For Safire). SAE 15W40 - API - CHJ-4 + MB 228.3 specification can be used with reduced change interval in Safire. Range of ambient temperature at which these can be used are given in the table below :

Ambient temp. in °C	Engine oil grade
-10 deg. & above	SAE 20W/40 or SAE 20W/50
-15 deg. to 40 deg.	SAE 15W/40 or SAE 15W/50
-20 deg. to 40 deg.	SAE 10W/40 or SAE 10W/50
-35 deg. to 40 deg.	SAE 5W/30

**Transaxle :** Semi Synthetic 75W85.

**Grease for axle bearings :** Lithium base grease IPOL IPLEX LC Grease 2

**Brake fluid :** SAE J 1703, DOT 3

**Power Steering :** ATF Dextron III - 210

## Coolants

**Qty : Approx. 5.4 Litres**

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.

Engine coolant antifreeze coolant as per class II, JIS K2234

## Windscreen Washer Antifrost

Concentration - 1:5 For 0°C

1:1 For 10°C

2: 5 For 16°C

1: 0 For 37°C

## NOTICE

**We strongly recommend to refill your car's engine coolant only at a TATA Authorised service centre.**

**ENGINE**

<b>ENGINE</b>	<b>90PS 1.4 SAFIRE</b>	<b>90PS 1.3 QUADRAJET</b>
<b>Model / Type</b>	Water cooled Petrol Engine	Turbo-Intercooled Diesel Engine
<b>No. Of Cylinders</b>	4 Inline	
<b>Bore / Stroke</b>	72 mm X 84 mm	69.6 mm X 82 mm
<b>Capacity</b>	1368 cc	1248 cc
<b>Max. Engine Output</b>	90 PS @ 6000 rpm	90 PS @ 4000 rpm
<b>Max. Torque</b>	116 Nm @ 4750 rpm	200 Nm @ 1750 - 3000 rpm
<b>Compression Ratio</b>	10 : 1	17.6 : 1
<b>Firing Order</b>	1 - 3 - 4 - 2	

**CLUTCH**

<b>CLUTCH</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Model / Type</b>	Single Plate Dry Friction Diaphragm type	
<b>Outside dia. (Lining)</b>	200 mm	215 mm
<b>Friction Area</b>	324 sq cm	386 sq cm

**TRANSAXLE**

<b>TRANSAXLE</b>		<b>SAFIRE</b>	<b>QUADRAJET</b>
		Front Wheel Drive Through Constant Velocity Joints	
<b>Model / Type</b>		Synchromesh with over drive	
<b>No. of gears</b>		5 Forward and 1 Reverse	
<b>Gear Ratios</b>	1st	4.273	3.909
	2nd	2.238	2.238
	3rd	1.520	1.444
	4th	1.156	1.029
	5th	0.872	0.767
	Rev.	3.909	3.909
<b>Final drive ratio</b>		4.4	3.563
<b>Gear shift</b>		Floor mounted with international 'H' pattern with Fifth and Reverse inline	

**REAR AXLE**

<b>REAR AXLE</b>		<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Model / Type</b>		Non driven type Twist Beam Suspension	

**SUSPENSION**

<b>SUSPENSION</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Front</b>	Independentl lower link, McPherson Strut with coil spring	
<b>Rear</b>	Semi-independent, Twist Beam with coil Springs and Hydraulic Shock Absorbers	
<b>Anti-roll bar</b>	At Front	

**STEERING**

<b>STEERING</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Type</b>	Tilttable & Hydraulic Power assisted Rack & Pinion with collapsible steering column.	
<b>Steering Wheel</b>	380 mm	

**BRAKES**

<b>BRAKES</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Service brake</b>	Vacuum Assisted independent dual circuit; Diagonal split Hydraulic Brake on Front and Rear through tandem master cylinder acting on all 4 wheels with Automatic wear adjusters.	
	Lux, High +,High: with ABS; Mid,Base: without ABS	
<b>Front brakes</b>	240 mm Dia. Disc Brake	
<b>Rear brakes</b>	200 mm Dia. Drum Brake	
<b>Parking brakes</b>	Lever type,Console mounted,Cable operated mechanical linkage acting on rear wheels	

**WHEELS & TYRES**

<b>WHEELS &amp; TYRES</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Tyres</b>	Radial Tubeless 185/60 R15 82T	
<b>Wheel rims</b>	5.5J X 15"	
<b>No. of wheels</b>	Front - 2, Rear - 2, Spare -1	

**FUEL TANK**

<b>FUEL TANK</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Capacity</b>	44 Litres	

**BODY**

<b>BODY</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Model / Type</b>	Sedan, Four Door, Steel Monocoque Passenger Car	

**ELECTRICAL SYSTEMS**

<b>ELECTRICAL</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>System voltage</b>	12V; 44AH	12V;60AH
<b>Battery</b>	DIN44R TYPE-ONE	MF50Z-One
<b>Alternator</b>	12V 110A	12V 105A with vaccum pump

PERFORMANCE

PERFORMANCE	SAFIRE	QUADRAJET
Max. Speed	Max. Speed 170Kmph at Rated GVW	Max. Speed 150Kmph at Rated GVW

MAIN CHASSIS DIMENSION (IN MM NOMINAL)

MAIN CHASSIS DIMENSION	SAFIRE	QUADRAJET
Wheel Base	2520	
Track Front	1450	
Track Rear	1440	
Front Overhang	843	
Rear Overhang	1050	
Overall Length	4413	
Max. Width	1703	
Overall Height (Unladen/Laden)	1550 (Unladen)	
Min. Turning Circle Dia.	10.2 m	
Min. Turning Clearance Circle	10.8 m	
Ground Clearance	165 (Unladen)	

**WEIGHT (KG)**

<b>WEIGHT</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Complete vehicle kerb weight</b>	Lux:1140, High:1125, Mid:1115, Base: 1105	Lux:1225; High:1210; Mid:1200
<b>Gross vehicle weight</b>	Lux:1590, High:1575, Mid:1565, Base: 1555	Lux:1675; High:1660; Mid:1650
<b>Payload</b>	450	

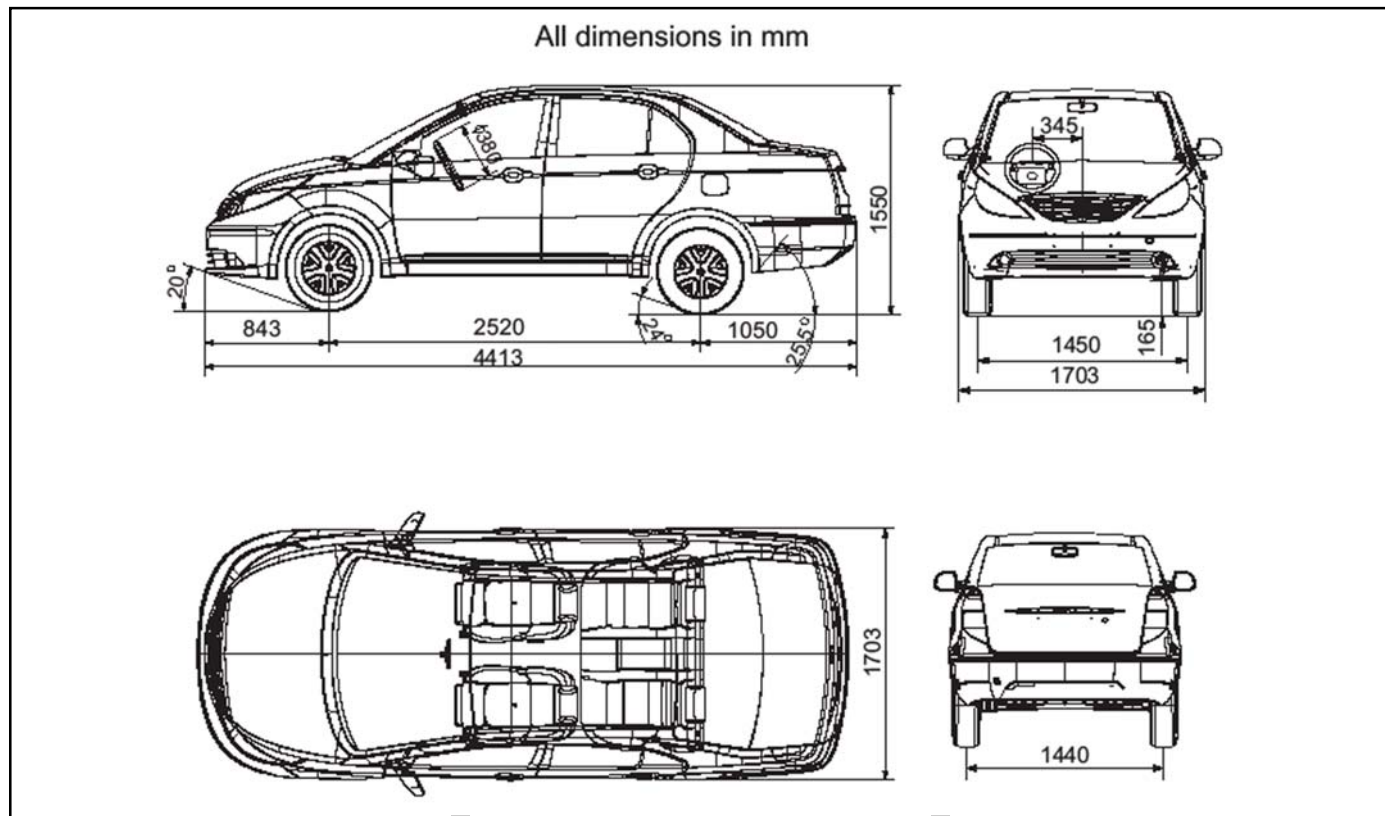
**PASSENGER CAPACITY**

<b>PASSENGER CAPACITY</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Capacity</b>	2 Front + 3 Rear	

**LUGGAGE SPACE**

<b>LUGGAGE SPACE</b>	<b>SAFIRE</b>	<b>QUADRAJET</b>
<b>Net inside loading space</b>	460 Litres	





**LOCATIONS OF CHASSIS NUMBERING**

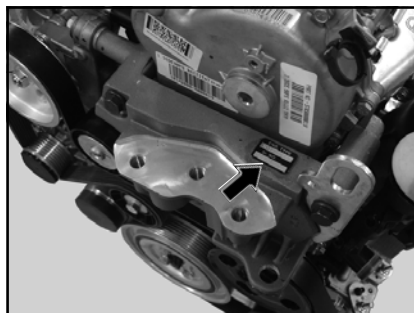


**CHASSIS NUMBER ON RH 'B' PILLAR**

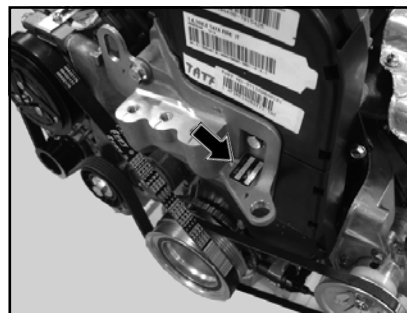


**CHASSIS NUMBER ON LH 'B' PILLAR**

**LOCATIONS OF ENGINE NUMBERING**



**QUADRAJET ENGINE NUMBER  
(ON ENGINE 'A' MOUNT)**



**SAFIRE ENGINE NUMBER  
(ON ENGINE 'A' MOUNT)**



**TRANSAXLE NUMBER (NUMBER  
PUNCHED)**



## VEHICLE SERVICE

- PDI Service

***Pre-Delivery Inspection***

Following jobs are to be performed at PDI.

1. Wash and Clean the car thoroughly.
2. Road test the car. Check for proper functioning of Engine, Clutch, Transmission, Steering, Brakes etc.
3. Check car behavior : Pulling to LH/ RH, Wobbling, Self centering, Acceleration etc.
4. Static test : Start engine and check for idling rpm and Maximum rpm (look for any abnormal noise), Water temperature etc.
5. Check Engine oil level. Level is acceptable if found between mid and max mark.
6. Check for any leakages of engine oil.
7. Check for any leakages in the fuel system.
8. Check Coolant level in transparent auxiliary tank. Acceptable if level found between mid and max.
9. Check for any Leakages of coolant.
10. Drain water from fuel water separator.
11. Check hose, clamps and pipes at all locations in cooling system.
12. Check hose, clamps and pipes at all locations in air intake system.
13. Check for leakages of gear box oil.
14. Check for Proper fitment of gear shift level rubber boot.
15. Check level of Clutch and brake fluid. Acceptable if found between mid and max.
16. Check for oil leakages in clutch/ brake circuit.
17. Check clutch/brake pedal free play.
18. Check for fitment of split pins at Tie rod ball joints, Stub axles.
19. Check for fitment of grease nipples at all locations.
20. Check Power steering oil level in reservoir. Acceptable if found between min and max marks.
21. Check for oil leakages in power steering circuit.
22. Check for Steering wheel free play and adjustment.
23. Check functioning of all bulbs.
24. Check for proper functioning of blinkers, horn, head lamp, parking light, reverse light, wiper system, washer system etc.
25. Check headlamp alignment and adjust if necessary.
26. Check tightness of electrical connection at battery, Starter Motor, Alternator and Starter relay.
27. Check all fuses.

28. Check all the earth points for looseness.
29. Check for functioning of all gauges/ meters/warning lamps.
30. Check connectors in all electrical circuits.
31. Check for proper opening and closing of doors.
32. Check functioning of door locks, latches and windows.
33. Check for any complaints on cab fittings, instrument panel, glove box etc.
34. Check and tighten hand loose fasteners.
35. Check for any breakages, bends, failure of any component/ assembly/unit.
36. Check for any fouling between two components which may lead to leakages or other complaints.

Check for fouling of fuel lines, brake pipes, clutch pipes, air intake pipe, power steering hydraulic pipe, clutch/brake linkages, accelerator rod etc.

37. Grease with grease gun : All locations appearing in lubrication chart.

#### NOTICE

While delivering a car that is stored for more than 6 months from production month, service/ maintenance operations as prescribed by **TATA** Motors for long storage should be carried out before delivery.

### Service Instructions

The **Tata Indigo Manza** has been manufactured to give you economical and trouble free performance. To achieve this please follow the instructions as stated.

**Your Car is entitled to four free services (labour only). The free service coupons are attached to the sales invoice. Please present these coupons to the servicing dealer while availing free services.**

#### QUADRAJET :

- 1st free service** - At 1000-1500 km. OR 1 month whichever is earlier
- 2nd free service** - At 5000-5500 km. OR 6 months whichever is earlier
- 3rd free service** - At 15000-15500 km. OR 12 months whichever is earlier
- 4th free service** - At 30000-30500 km. OR 24 months whichever is earlier

#### SAFIRE :

- 1st free service** - At 1000-1500 km. OR 1 month whichever is earlier
- 2nd free service** - At 5000-5500 km. OR 6 months whichever is earlier
- 3rd free service** - At 10000-10500 km. OR 12 months whichever is earlier
- 4th free service** - At 20000-20500 km. OR 24 months whichever is earlier

All services other than free services are chargeable.

Servicing of the car can be done at any **TATA MOTORS** Authorised Dealer Workshop, **TATA MOTORS** Authorised Service Centre (TASC) or **TATA MOTORS** Authorised Service Point (TASP). 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. TASPs will not handle warranty repairs.

SR. NO.	MAINTENANCE SCHEDULE OPERATIONS	FREQUENCY (in KM)	1000-1500	5000-5500	15000-15500	30000-30500	45000-45500	60000-60500	75000-75500	90000-90500	105000-105500
			1	6	12	24	36	48	60	72	84
	<b>GENERAL</b>	Period in months	1	6	12	24	36	48	60	72	84
1	Wash the vehicle & clean condenser fins	Every Service	•	•	•	•	•	•	•	•	•
2	Drain water accumulated in fuel filter bowl	Whenever indicator comes 'ON'									
3	Check and top up fluids (If required):Coolant, Brake Fluid, Battery Electrolyte, Wind Screen washer fluid, Power Steering Oil (If fitted)	Every Service	•	•	•	•	•	•	•	•	•
4	Check fuel lines for leakage	Every Service	•	•	•	•	•	•	•	•	•
5	Check hydraulic clutch circuit for leakage	Every Service	•	•	•	•	•	•	•	•	•
6	All standard checks as per DQCTC manual	Every Service	•	•	•	•	•	•	•	•	•
7	Check rubber boots & bushes for damages	30,000			•		•			•	
	<b>ENGINE (QUADRAJET 90 PS)</b>										
1	Clean air filter element (more frequently for vehicle operating in dusty condition or as TAXI)	5000 & thereafter every service		•	•	•	•	•	•	•	•
2	Change engine oil (synthetic) and oil filter <b>(15,000 km Or 12 Months whichever is earlier)</b>	15,000			•	•	•	•	•	•	•
3	Check for the DTCs in the "Engine Control Unit". Take corrective action if necessary. Clear the DTCs after recording	5000 & thereafter every service		•	•	•	•	•	•	•	•
4	Replace fuel filter	15,000			•	•	•	•	•	•	•
5	Check all auxiliary drive belts and auto tensioners.	5000 & thereafter every service		•	•	•	•	•	•	•	•
6	Replace air filter element (more frequently for vehicle operating in dusty condition or as TAXI)	45,000					•			•	
7	Change coolant <b>(60,000 km or two years whichever is earlier)</b>	60,000						•			

# VEHICLE SERVICE

## Service Schedule - Quadrajel

SR. NO.	MAINTENANCE SCHEDULE OPERATIONS	FREQUENCY (in KM)	1000-1500	5000-5500	15000-15500	30000-30500	45000-45500	60000-60500	75000-75500	90000-90500	105000-105500
			1	6	12	24	36	48	60	72	84
	<b>TRANSAXLE</b>	Period in months	1	6	12	24	36	48	60	72	84
1	Check oil level and top up if necessary	90,000								•	
	<b>BRAKES</b>										
1	Check front brake pads & rear brake linings. Replace if necessary	30,000				•		•		•	
2	Replace brake fluid ( <b>45,000 kms or 2 years whichever is earlier</b> ) Check brake system components for Leakages	45,000					•			•	
	<b>WHEELS &amp; TYRES</b>										
1	Rotate tyres	15,000			•	•	•	•	•	•	•
	<b>FRONT &amp; REAR SUSPENSION</b>										
1	Check & Adjust Wheel alignment & Balancing if required	15,000			•	•	•	•	•	•	•
	<b>STEERING</b>										
1	Replace power steering oil	105,000									•
	<b>ELECTRICAL</b>										
1	Check headlamp focusing, check headlamp bulbs if blackened replace (every two years)	30,000				•		•		•	
2	Visually check battery cables and their connections	15,000			•	•	•	•	•	•	•
	<b>A.C. SYSTEM</b>										
1	Check Airconditioning / HVAC System for satisfactory performance, Clean A/C Filter	Every Service	•	•	•	•	•	•	•	•	•

Precautions to be taken while cleaning Engine Compartment: It is recommended to use Dry Low pressure Compressed Air & NOT Pressurised WATER



# VEHICLE SERVICE

# Service Schedule - Safire

SR. NO.	MAINTENANCE SCHEDULE OPERATIONS	FREQUENCY	1000-1500	5000-5500	10000-10500	20000-20500	30000-30500	40000-40500	50000-50500	60000-60500	70000-70500	80000-80500	90000-90500	100000-100500
			1	6	12	24	36	48	60	72	84	96	108	120
	<b>GENERAL</b>	Period in months	1	6	12	24	36	48	60	72	84	96	108	120
1	Wash the vehicle and Clean Condenser Fins	Every Service	•	•	•	•	•	•	•	•	•	•	•	•
2	Check and top up fluids (If required):Coolant, Brake Fluid, Battery Electrolyte, Wind Screen washer fluid, Power steering oil. (If fitted)	Every Service	•	•	•	•	•	•	•	•	•	•	•	•
3	Check fuel lines for leakage,	Every Service	•	•	•	•	•	•	•	•	•	•	•	•
4	Check clutch pedal height and cable	Every Service	•	•	•	•	•	•	•	•	•	•	•	•
5	All standard checks as per DQCTC manual	Every Service	•	•	•	•	•	•	•	•	•	•	•	•
6	Check rubber boots and bushes for damages	30,000					•		•				•	
	<b>ENGINE</b>													
1	Clean air filter element (more frequently for vehicle operating in dusty condition or as TAXI)	5000 & thereafter every Service		•	•	•	•	•	•	•	•	•	•	•
2	Change engine oil and oil filter Option 1 - If 15W40 CH4 then replace at 10,000 km Or 12 months, whichever is early Option 2 - If Synthetic 0W40 then replace at 20,000 km Or 12 months whichever is early	10,000 20,000			•	•	•	•	•	•	•	•	•	•
3	Replace fuel filter	10,000			•	•	•	•	•	•	•	•	•	•
4	Check all auxiliary drive belts and auto tensioners	5000 & thereafter every Service		•	•	•	•	•	•	•	•	•	•	•
5	Replace Spark Plugs and Check Ignition Cable	30,000					•		•				•	
6	Check for the DTCs in the "Engine Control Unit". Take corrective action if necessary. Clear DTCs after recording	5000 & thereafter every Service		•	•	•	•	•	•	•	•	•	•	•
7	Replace air filter element (more frequently for vehicle operating in dusty condition or as taxi)	40,000						•				•		

# VEHICLE SERVICE

# Service Schedule - SAFIRE

SR. NO.	MAINTENANCE SCHEDULE OPERATIONS	FREQUENCY	1000-1500	5000-5500	10000-10500	20000-20500	30000-30500	40000-40500	50000-50500	60000-60500	70000-70500	80000-80500	90000-90500	100000-100500
			Period in months	1	6	12	24	36	48	60	72	84	96	108
8	Change coolant (40,000 km or two years whichever is earlier)	40,000						•				•		
9	Replace timing belt ( 1,20,000 km or 5 years, whichever is earlier )													
<b>TRANSAXLE</b>														
1	Check oil level and top up if necessary	80,000										•		
<b>BRAKES</b>														
1	Check front brake pads and rear brake linings. Replace if necessary	20,000				•		•		•		•		•
2	Change brake fluid (40,000 kms or 2 years whichever is earlier) Check brake system components for leakages	40,000						•				•		
<b>WHEELS and TYRES</b>														
1	Rotate tyres	20,000				•		•		•		•		•
<b>FRONT &amp; REAR SUSPENSION</b>														
1	Check and Adjust Wheel alignment and Balancing if required	20,000				•		•		•		•		•
1	Replace power steering oil	100,000												•
<b>ELECTRICAL</b>														
1	Check headlamp focusing, check headlamp bulbs if blackened replace (every two years)	30,000					•			•			•	
2	Visually check battery cables and their connections	20,000				•		•		•		•		•
<b>A.C. SYSTEM</b>														
1	Check Airconditioning / HVAC System for satisfactory performance, Clean A/C Filter	Every Service	•	•	•	•	•	•	•	•	•	•	•	•

Precautions to be taken while cleaning Engine Compartment: It is recommended to use Dry Low pressure Compressed Air & NOT Pressurised WATER

## Record of Service Performed

## VEHICLE SERVICE

Recommended Service	Date	Odometer reading Kms.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km				
PDI				
1000-1500*				
5000-5500*				
10000-10500*				
20000-20500*				
30000-30500				
40,000				
50,000				
60,000				
70,000				
80,000				

Recommended Service	Date	Odometer reading Kms.	Repair Order No.	
At km				
90,000				
1,00,000				
1,10,000				
1,20,000				
1,30,000				
1,40,000				
1,50,000				
1,60,000				
1,70,000				
1,80,000				
1,90,000				

\* Free Service (Free Labour)

# VEHICLE SERVICE

# Record of Service Performed

Recommended Service	Date	Odometer reading Kms.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km				
2,00,000				
2,10,000				
2,20,000				
2,30,000				
2,40,000				
2,50,000				
2,60,000				
2,70,000				
2,80,000				
2,90,000				
3,00,000				

Recommended Service	Date	Odometer reading Kms.	Repair Order No.	Servicing Dealer's Signature and Stamp
At km				
3,10,000				
3,20,000				
3,30,000				
3,40,000				
3,50,000				
3,60,000				
3,70,000				
3,80,000				
3,90,000				
4,00,000				
4,10,000				

Chassis No. -

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

**Chassis No. -**

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



# TATA MOTORS | SERVICE

RESPONSIVE • RELIABLE • BEST VALUE



TATA MOTORS | SERVICE  
RESPONSIVE



## 24x7

ON-ROAD ASSISTANCE  
1800 209 7979



TATA MOTORS | SERVICE  
RESPONSIVE



## DOORSTEP SERVICE

MOBILE SERVICE



TATA MOTORS | SERVICE  
RESPONSIVE



## ONLINE SERVICE

APPOINTMENT  
AT A CLICK



TATA MOTORS | SERVICE  
RESPONSIVE



## QUICK REPAIR

REPAIR IN MINUTES



TATA MOTORS | SERVICE  
RESPONSIVE



## SPEED-0-SERVICE

FASTER SERVICE  
DELIVERY



TATA MOTORS | SERVICE  
BEST VALUE



## EXTENDED WARRANTY

UP TO 4 YEARS



TATA MOTORS | SERVICE  
BEST VALUE



## RAPID REPAIR

MINOR BODY REPAIRS



TATA MOTORS | SERVICE  
BEST VALUE

## TOP

ORIGINAL PARTS  
UNMATCHED QUALITY



TATA MOTORS | SERVICE  
BEST VALUE



## VALUE CARE

MAINTENANCE PLANS



TATA MOTORS | SERVICE  
RELIABLE



## DIAGNOSTIC EXPERT

HIGH SKILLED TECHNICIAN



TATA MOTORS | SERVICE  
RELIABLE



## QUALITY SERVICE

SERVICE QUALITY  
ASSURANCE

# HORIZONEXT



**2874 5840 99 01**



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