

Car Modification And All You Need To Know About It

While the number of cars on Indian roads is increasing constantly, more and more people are also inclining towards car modification. The primary reason being the urge to get noticed while hitting the tarmac. Car modification helps in making your ride stand apart from the rest of the vehicles. It makes your vehicle vary, both in terms of appearance and performance, from the generic stock vehicles manufactured by the same manufacturers.

What Is Car Modification Or A Modified Car?

Modification, as the term suggests, are changes that are made to a vehicle. These changes are introduced to a stock vehicle to alter its appearance or performance or both.

What Are The Different Types Of Car Modifications?

Car modification can be divided into three broad categories. They are: Performance modification, Functional modification, and Aesthetic or cosmetic modification.

- **Performance modification:** Modifications made to upgrade the performance of the car are termed as performance modification. Performance modifications are generally made to boost the power, handling, and/or fuel efficiency of the car. Modifications made to the engine, exhaust system, air filters, brakes, suspensions, tyres, etc. fall under this category.
- **Functional modification:** Functional modifications are those which change or add certain functions to the vehicle. Installation of sunroofs, air conditioning, car phone, roof rack, navigation system, etc. come under this category. Functionalities added to a vehicle which were not there earlier are called functional mods.
- **Aesthetic modification:** This kind of modification is generally done to make the vehicle look better and unique. All changes made to the external or internal appearance of the vehicle are termed as aesthetic modifications. However, aesthetic modification or cosmetic modification is not always meant to make visual differences. Sometimes, they also bring significant changes in the performance by tweaking the body work. For example, certain body kits provide more stability and better aerodynamics to a car than the stock body.

What Are The Most Sought-After Modifications?

Listed below are some of the most common modifications that are often opted by automobile enthusiasts to enhance their rides.

Performance Modifications:

- **Turbocharger or Supercharger:** The performance of engines can be altered by turbo charging or supercharging them. They basically help in increasing the overall performance of the engines by improvising their peak power and torque delivery.
- **ECU remapping:** An Engine Control Unit (ECU) is responsible for controlling the fuel-air mixture in the engine. Most manufacturers map the ECUs well below the vehicle's potential to maintain a safety net. An ECU remapping can help you unleash the car's full potential and better performance.
- **Nitrous:** Nitrous injection kit installation is a very popular modification but still not a very common one. Installing nitrous injection kits on street cars is illegal - not only in India, but all across the globe as well. A nitrous injection can multiply the power of an engine to a great extent for a limited period of time.
- **Transmission upgrade:** Another common upgrade that car owners often opt for is the transmission upgrade. A change in the gearbox can bring in significant changes in the performance of the car.
- **Brakes upgrade:** Brakes are one of the most vital characters of the handling act. The handling of a car is largely dependent on the brakes. Thus, the brake shoes or master cylinders of a braking system are often upgraded for better braking performance.
- **Suspension upgrades:** Suspension is yet another important factor behind handling and stability of the car. Although most automobile makers carry out ample tests before putting up a car on the production line, vehicle owners often consider a suspension upgrade to meet their driving style or to change the stance of the vehicle.
- **Exhaust system:** This is perhaps one of the most popular performance upgrades that vehicle owners consider buying for their cars. A free flow exhaust system not only improves the performance of the car but also adds a signature grunt to the car's exhaust note. In many cases, even a muffler change or air filter change is considered just for altering the exhaust note of a car.

Functional Modifications:

- **Satellite navigation system:** A satellite navigation system is a very useful upgrade if you do not already have it in your car. Most automobile manufacturers offer this feature in their cars these days. A navigation system uses Global Positioning System (GPS) to chalk out the best route from point A to point B. It provides information regarding the traffic conditions and thus saves time and makes the journey as hasslefree as possible.
- **Air conditioning:** Air conditioning is a very common functional modification.
- **Car phone:** The car phone offers the driver, the liberty of using his/her phone while driving. The driver can make or receive phone calls without even touching the phone. It has become even easier to use a car phone these days as most of the modern infotainment systems in cars now offer bluetooth compatibility which helps them connect their phones to the car's media system directly.

- **Parking sensors:** Parking a car can be a tricky job, especially in tight corners. Parking sensors make the whole process easier. Parking sensors can guide the driver while parking by providing information regarding obstacles that are in the way. Many cars offer parking sensors as a standard in-built feature these days. But, if your car doesn't have one, it is definitely a good modification to be considered.
- **Other functional accessories:** There are a number of other additional accessories that are installed on the basis of their functionality. The most common accessories are roof racks, hand controls, additional lights, etc.

Aesthetic Or Cosmetic Modifications:

- **Body kits:** Body kits are extra body panels that are installed on a vehicle. It changes the shape, size, and appearance of the vehicle. Body kits might consist of wheel fenders, hoods, side skirts, front and rear bumpers, grilles, roof top vents, and spoilers. Although body kits usually change the physical appearance of the cars, they might also affect the performance by making alterations to the aerodynamics and the weight of the car.
- **Paint job:** Paint jobs are usually referred to the single stage enamel painting done on cars. But "paint job" has a diverse meaning. With different painting processes available in the market, paint jobs can mean anything from a single tone paint scheme to a matte finish paint job to pearlescent paint schemes to airbrushing.
- **Decal works:** Decal work is gaining popularity at a massive rate. Be it a full body wrap or just some minor bits of ornamental changes, more people are considering decals over traditional paint jobs. Pepping up a vehicle with body wraps and decals is considered as a better option as it is hasslefree. It is very easy to install, remove, and replace decals and body wraps, and that makes it a popular choice.
- **Lights:** Installing a new headlamp cluster or tail lamp cluster can make your vehicle look much more appealing. Installing underbody neon lights had been in vogue for quite some time although it has faded out in the past decade.
- **Other cosmetic mods:** Tinted windows and windscreen, smoked headlamps and tail lamps, and upholstery or dashboard mods are quite popular as well.

Advantages And Disadvantages Of Modifying Your Car:

On one hand, well-chosen modifications can enhance the overall performance of your vehicle but on the other hand, improper installation of mod parts or using poor quality mods can have an adverse effect on the vehicle's health as well as your safety.

Modifications should be chosen wisely and should be compatible to each other. It is very important to take help from professionals to make modifications in a car.

Many performance modifications might make your engine warranty void and might also be illegal (like nitrous injection kits). A particular performance modification can cause the vehicle to malfunction. It is also possible that the mod part can damage other parts. It is important to have clear and complete knowledge about the modifications and their effects before installing them.

Modifications made to a vehicle will also affect your vehicle insurance policy. It is highly likely that the premium amounts will be higher because of the changes made in the car.

Hence, it is advisable to check all the pros and cons before modifying a vehicle. Because, once the modification is done, in most cases there is no going back. So, choose your mods wisely and always remember to drive safe and be safe on the roads because "With great power comes great responsibility".

GST Update: GST of 18% is applicable on car insurance effective from the 1st of July, 2017