What is the point of preparing vehicles?

The answer to this question can be expressed in two simple words: improved performance. Preparation covers all things relating to the tuning and settings of cars, helping to enhance power, traction and handling. In a nutshell, a properly prepared vehicle will be far more competitive than an unprepared vehicle in the same category.

What are the most important modifications for a beginner?

When you start the game, your resources are limited. Without the luxury of a healthy credit balance to spend on desirable upgrades, you will need to use your funds prudently to improve your car’s performance. Below is a list of inexpensive yet effective modifications that you can make in your first few hours of gameplay.

1: Perform an oil change in the GT Auto maintenance shop. This will gain you additional power at little expense. If you’ve bought a second-hand car, this is a vital step.

2: Buy a racing chip (found in the Engine menu of your dealership’s tuning shop). This will give you a few extra BHP without breaking the bank.

3: Reduce the weight of your car (in the Other menu of the dealership’s tuning shop). This will enable you to take bends faster and reduce braking distances considerably.

4: Install a sports or semi-racing exhaust/air filter kit according to your resources (visit the Turbo menu of your dealership’s tuning shop) to gain additional power.

5: Finally, equipping your car with a sports or racing intercooler (Turbo menu of your dealership’s tuning shop) will give you yet more power.

As you can see, for less than 10,000 credits, you can improve the capabilities of your car considerably, gaining a vital edge over other racing cars in your category. The natural progression from this point is to enhance your engine (NA tuning or fitting a turbo), change your tyres (Sports/Soft or, even better, Racing tyres) and to install a sports suspension. If you feel inclined to go even further, this chapter is tailor-made for you!

How do you achieve balanced tuning?

If you make modifications at random, you run the risk of creating cars with unpredictable or even unmanageable behaviour. For example, an excessive increase in power can result in a loss of handling. To avoid unpleasant surprises, always keep in mind that the engine and chassis benefit from being improved in parallel. An over-powerful engine can be a handicap without a properly modified chassis: the extra BHP you gain will be of little benefit if soft suspension and hard tyres lead to you hurting from the track on every corner. Likewise, optimal chassis, suspension and tyres will yield only limited results when fitted on a car lacking in raw power. Consider the consequences of each modification before you make it: a balanced approach is strongly advised.

How far do you have to go in preparing your car?

The amount of preparation you can make is limited only by your imagination. Obviously, a small production car stands little chance against a lea, mean racing machine, no matter how much you tune, tweak or upgrade it. On the other hand, if you start out with a relatively competitive model, the right preparation can transform it into a veritable monster on the track, capable of matching almost any opponent. The most important thing is that you take the time to adjust settings for every situation (circum, weather conditions, and so forth). You will soon realise that tuning is more an affair of the heart than the head, and your attachment to a vehicle will often lead you to favour it over models that are clearly superior on paper. If that is the case, set yourself objectives: select the vehicle that conforms to your expectations and racing style, and prepare it as you wish. By sticking with one car until it is clearly outdated, you can also accumulate a healthy stack of credits.

For most of us in day-to-day life, a car is principally a means of transportation. We only ask that it starts, perform reasonably well and remain cost-effective, and that we travel to our destinations in relative comfort. However, beneath the simplicity of these journeys lies a world of enormous complexity, in which even the tiniest components on our cars have an effect on their performance and handling. Every burst of acceleration, tap on the brakes, or turn of the wheel triggers a chain of events where components interact, the speed and line of our vehicles guided by the laws of a vast mathematical equation that is constantly recalculated.

When we take the car to go shopping or return home after work, these subtleties are of little consequence. We’re generally oblivious to the deep underlying complexity that driving truly involves; all we care about is that we arrive at our destination. In the motor racing world, by contrast, an intimate knowledge of every aspect of a competitive vehicle is essential. For a driver, mechanic or racing manager, the slightest alteration could lead to a potential loss of several tenths of a second per lap, but it could also result in an increased tendency for the car to understeer, for example, leading to a driver struggling to handle the vehicle during complex turns.

Fitting a turbo, reducing the weight of the chassis, adjusting suspension, changing the exhaust... there are a multitude of ways in which you can customise a vehicle. But where do you start? How do you arrive at a point when you can say: this car is perfect? Well, a good start is to forget any ideas you might have about “perfect settings”: they don’t exist. Preparing a vehicle means adapting it to your specific purpose in mind: a course, a cup or a record attempt, for example. Each challenge occurs under certain conditions (track, weather, type of car, style of driver, etc.) and is, therefore, unique. It may not be the most catchy axiom, but it’s well worth remembering this golden rule: different event, different preparation.

When preparing a vehicle, a tweak or adjustment of setting X often has a direct influence on component Y, which in turn influences the behaviour of Z. In other words, settings are interdependent, and modifying one will often create secondary effects which may need to be addressed by adjusting another. This direct correlation between settings and the way their effects interact means that only repeated testing on the track will enable you to judge whether all upgrades or adjustments (and the expenditure in terms of both time and credits) will be worthwhile.

In summary, the combination of external conditions (weather, surface, car type and driver) and internal conditions (interdependence between components) makes the idea of a mobile file collection of "perfect settings" for all circumstances an impossibility. If you choose to race with cars that are similar (or even less powerful) than those of your competitors, attempting to match rival drivers with skill rather than the raw power of a superior vehicle, you really will need to find the optimal configuration for every new track. This search for the best balance of settings may at times try your patience, requiring attention to detail, perseverance, and frequent trips back and forth to the pits.

To assist you as you undertake to tune your cars for peak performance, this chapter invites you to delve into the minutiae of preparation. You will find a detailed analysis of every component and setting as well as, more importantly, a description of how they work in practice.