

Buying an automatic car

I've put this page on my website because many of my pupils ask for advice about buying a car. Some have bought a car with a different type of gearbox to my car and found it harder to drive, ruining their confidence to drive on their own. If you are buying an electric car then there is no need to read this. Although electric cars drive like automatic cars, they don't have a gearbox, they only have one gear.

What do I need to consider when buying an automatic car?

The first thing to understand when looking for an automatic car is that there are four different types of automatic gearboxes. You can't tell which type of gearbox a car has by looking at the gearstick. Neither can you base your selection on a manufacturer's name, because most manufacturers use more than one type of automatic gearbox.

The way to tell them apart is to test-drive them. Test number one: on a flat road in drive with the handbrake off and your foot off the footbrake, the car should move forward on its own without pressing the accelerator. This is called creep. This ensures that the car will not roll backwards on hills or at junctions, making it an easier car to drive. Test number two: on a flat road in reverse with the handbrake off and your foot off the footbrake, the car should move backwards on its own without pressing the accelerator. This is called creep. This ensures that the car will not roll the wrong way when parking or reversing on a hill, making it an easier car to park. If the car has an automatic handbrake or electric parking brake, they will both need to be off to allow it to creep forward and backward.

There are four types of automatic gearbox. Each one will behave differently when you drive it. Some are easier to drive than others are. Some have lower fuel consumption than others. Some are quieter than others. You may have heard the phrase semi-automatic gearbox. This is a feature of a gearbox not a type of gearbox. This feature allows the driver to decide when the car changes gear or to override the car's choice of gear. It is popular with drivers, who learned to drive in a manual car, but now drive an automatic car. Any of the four types of gearbox may have this feature.

Double clutch gearbox

This is the best type of automatic gearbox and is a modern design, so you will not find it on older second hand cars. It creeps forward on hills, it is easy to drive, easy to park and it has the lowest fuel consumption. Manufacturers that fit this type of gearbox to their cars are Audi, Ford, Peugeot, Seat, Skoda, Volkswagen and Volvo.

It works like this. There are two halves to the gearbox. The odd gears 1 3 5 7 in one-half and the even gears 2 4 6 8 in the other half. Each half of the gearbox has its own clutch. Before the car moves, the cogs are moved in both halves of the gearbox to select two gears, 1 and 2. When the car moves off, the car brings the clutch up for gear 1 so that it can start to move forward. As the car picks up speed, the clutch for gear 1 goes down and the clutch for gear 2 goes up, without the cogs in either half of the gearbox being moved. After the gear change, the half of the gearbox not being used will move the cogs to select gear 3 ready for the next gear change. As the car picks up speed, the clutch for gear 2 goes down and the clutch for gear 3 goes up, without the cogs in either half of the gearbox being moved. The process continues as the car picks up speed or slows down. The cogs are not moved during the gear changes just the two clutches. This gives a fast, smooth, quiet and efficient gear change.

Torque converter gearbox

This is an old design of gearbox that has been around for a long time. It used to be the most common type of automatic gearbox, so you will find it on a lot of older second hand cars. It creeps forward on hills and it's easy to drive and park. Gear changes are smooth, but inefficient. It has the highest fuel consumption of the four types.

It works like this. The gearbox has a torque converter instead of a clutch. The gearbox has only one torque converter. Each time it changes gear, it moves the cogs during the gear change. The torque converter allows the car to maintain its momentum when it moves the cogs during a gear change.

Constantly variable transmission (CVT) Gearbox

This is an old design of gearbox that has been around for a long time. This type of automatic gearbox is quite rare. Only a few car manufacturers have ever fitted this type of gearbox to their cars. This may be due to the noise that the gearbox makes. Some versions of this gearbox creep forward on hills and are easy to drive and park. Some versions of this gearbox roll backward on hills making them difficult to drive and park. You will have to test drive the car to find out, which version of CVT gearbox it has. This type of gearbox is very smooth due to it not having any cogs to move. It has low fuel consumption. Toyota fit this to some of their cars including their hybrid cars.

It works like this. The gearbox doesn't have cogs, but has a system of belts and pulleys. The belts and pulleys provide one gear, that constantly varies as the car goes faster or slower while the engine revs stay the same.

Automated manual gearbox

This is a modern design, so you will not find it on older second hand cars. The design is based on a manual gearbox, so a car with this type of gearbox may drive and behave like a car with a manual gearbox. They may roll backwards on hills making them difficult to drive and park. They also slow down during gear changes causing problems when you move off at junctions and roundabouts. This type of gearbox is not suitable for people, who learnt to drive in an automatic car. Gear changes are not smooth. It has low fuel consumption.

It works like this. This is a manual gearbox fitted with electric motors. The motors move the clutch plates and the cogs when the car changes gear. Even though it is based on a manual gearbox, it is an automatic without a clutch pedal.

Extras things to consider when buying a car

If you will be fitting adaptations to the car after you buy it, you need to know whether they will fit any car or whether they are specific to one car. If they are specific one car then consider buying a decent car and keeping it for a long time. Buying an 'old banger' keeping for a year, then replacing it for something newer when you have gained more driving experience, may turn out to be a more expensive option if you have to replace your adaptations with new ones. Check this with your fitter before you buy a car.

Adaptations that may be specific to one car would be:

- Combined accelerator/brake/signal lever
- Lodgesons infrared system
- Left foot gas pedal
- Pedal extensions

If you will be fitting a Lodgesons infrared keypad to your car, remember to keep a spare battery and the appropriate screwdriver in the car. Practice swapping the battery, so that you know how to do this. The battery is a rare one that you may only find in camera and computer shops. If the battery goes flat when you are in the middle of the countryside, the chances of you being able to buy a replacement one are slim. The battery usually lasts a long time, though.

Automatic handbrake. Cars with this type of handbrake put the handbrake on automatically for you when they stop and release it automatically when you press the gas pedal to move off. If you drive a car with any sort of steering ball or lollipop grip steering ball or have a weak left arm, then it is a good idea to have this on your car.

Automatic wipers. Automatic wipers work by using an infrared beam to detect when there is rain on the windscreen. When the car detects rain it will then automatically switch the wipers on or off as necessary, or change the speed of the wipers as necessary. If you drive a car with any sort of steering ball or lollipop grip steering ball, then it is a good idea to have this on your car.

Automatic lights. Automatic lights work by detecting low light levels and switching the sidelights and headlights on and off automatically. The sidelights and headlights would then work automatically when it becomes dark, cloudy or foggy. If you drive a car with any sort of steering ball or lollipop grip steering ball, then it is a good idea to have this on your car.

Cruise control. This device keeps the speed of the car constant without you having to use the brake or the gas. It is usually used on motorways and fast dual carriageways and is helpful on long journeys. If you drive a car with a combined accelerator/brake/signal lever or hand controls, then it is a good idea to have this on your car.

My car has all four of the extras listed above.

My driving school car is a Volkswagen Golf GT

- Gearbox: double clutch 7 speed (DSG)
- Engine: 1.5 litre Evo TSI fuel injected and turbocharged petrol engine (130PS)

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