

The Use of Automatic Gearboxes (Advice from the IAM)

This article is a summary of an article produced by the IAM on automatic gearboxes.

The majority of gear selector positions are marked:

P - Park - Must never be engaged while the vehicle is in motion as it locks the transmission and prevents the car from moving.

R - Reverse

N - Neutral

DRIVE - AUTOMATIC USE of First, Second, Third and Fourth gears.

3 - AUTOMATIC USE of First, Second and Third gears.

2 - AUTOMATIC USE of First and Second gears only.

1 - First gear HOLD.

For normal driving the lever may be placed in DRIVE and the transmission will automatically change up or down according to road speed and accelerator position. If it is necessary to manually change down to a lower gear, this may be done by moving the gear lever to the required position but only if the vehicle is travelling at a speed which is within the range of the gear chosen. (This facility must not be used excessively.)

When maximum acceleration is required the accelerator should be pushed to the full throttle position, overcoming the built-in resistance. This brings into operation the kickdown, which causes an immediate downshift into the correct gear for maximum acceleration, provided that the road speed is within the speed range of the lower gear. When the accelerator pedal is released the gearbox will automatically change up again. Some gearboxes have a kickdown system which also works at part throttle.

Whilst guidance may be given regarding the correct actions in certain circumstances, not all eventualities can be covered. Any gear change made by the driver should always be made at feature "GEAR" in the System of Car Control.

Here are some recommendations as to the correct action to be taken in some common sets of circumstances:

At Roundabouts: Leave in D unless very large or in exceptional circumstances.

On Bends: Normally leave in D. (Unless car is likely to change gear itself when driver does not want it to - only then should manual selection of a gear be made.)

Overtaking: Normally use kickdown if a quick overtake is needed. (If progressing along a line of vehicles where quick acceleration is needed, followed by deceleration to fit into a gap, the manual selection of a lower gear may be beneficial.)

Steep Hills: Going downhill when retardation is required the manual selection of a lower gear may be beneficial. When ascending steep hills if the gearbox is continually

changing between two gears, the manual selection of the lower of these two gears may be beneficial.

General: In unusual circumstances when the gearbox is continually changing up and down between two gears, the manual selection of the lower of these two gears may prevent undue wear of the gearbox components. It is not necessary to either kickdown or change down manually to engage a lower gear for a hazard simply because one would change down if driving with a manual gearbox.

On certain gearboxes the manual engagement of '2' eliminates the kickdown facility. Therefore, the gearbox may be prevented from getting the car out of a potentially dangerous low speed situation by rapid acceleration.

Disclaimer: Driving is never a black and white activity, but full of grey areas, therefore neither I nor my fellow Observers in the St Helens & District Group of Advanced Motorists are liable for any consequences you may experience as a result of reading our advice. **You** are the driver. **You** should be in control of **your** vehicle at **all** times.