

Exceptions to manual operation:

- Upshifts will occur automatically without lever movement when the engine approaches the maximum safe rpm
- Built-in protection prevents manual downshifts that would result in an overrev condition
- In 2nd you cannot return to 1st unless you are under 3 mph.

### Automatic Shift Lock

The gearshift lever cannot be moved from PARK or NEUTRAL with the ignition turned on unless the brake pedal is depressed. A time delay permits moving the lever through the NEUTRAL position from REVERSE to DRIVE without depressing the brake pedal. The lever must be in PARK before the ignition can be turned off.

[For further information on any of these topics, please consult your Owner's Manual.](#)

# Automatic Transmission Operation



## Electronic Transmission Operation

If you've had experience with yesterday's automatic transmissions, you may have noticed that they always shifted the same way, every time. We say that they operated according to a fixed logic. But because road conditions change, and the transmission's operation didn't, it was up to you to adjust your driving style accordingly - heavy throttle application for downshifts, backing off the throttle to induce upshifts in slow traffic.



Modern electronic control of today's Volkswagen - we call it fuzzy logic - allows the automatic transmission to match its shift strategy to constantly changing driving conditions, literally by the second.

The controller is constantly watching how you operate the throttle - how often and how quickly you move it, how far you push it. It also notes the load the engine is dealing with, whether from climbing a hill, from headwinds, or from extra passengers or cargo.

Heavy acceleration and frequent speed changes result in a sporty shift program, with delayed upshifts and early downshifts for superior performance. Shifts are more deliberate and crisp. Steady speeds or mild acceleration call up a fuel economy program, with early upshifts and delayed downshifts. Shifts are softer, subtler, and smoother. Uphill climbs may call for holding a lower gear for added pulling power. Long stretches of highway call for maintaining the highest gear for reduced engine noise and improved fuel economy.

Once you become accustomed to your new transmission's shift patterns, you're likely to be sensitive to variations from the normal routine. When you suddenly change your driving

pattern, it adjusts quickly to the new requirements. It's supposed to feel different on a twisting two-lane than it does in heavy city traffic.

To help the engine and catalyst warm up quickly for reduced emissions, the transmission may delay upshifts somewhat, resulting in momentarily higher engine speeds. This is not an operating problem, it's simply an intelligent system doing its job to manage emissions and fuel economy.

Another intelligent feature of the electronic control is its ability to modify the shift pattern according to the grade of the road. This minimizes its tendency to "hunt" unnecessarily up and down through the gears.

## Tiptronic® Operation

A Tiptronic transmission (available on Passat) permits you to choose automatic or manual shifting. In the automatic mode, it behaves like a conventional automatic. To shift manually, move the lever to DRIVE, then move it to the right into the Tiptronic slot. You may do this while stopped or at any forward speed.



The instrument cluster PRNDL changes to a 54321 readout that highlights the selected gear. Move the lever toward + to upshift, and toward - to downshift. No need to depress the shift lever button. And it is not necessary to release the throttle during an upshift.

In Tiptronic driving, you must manually upshift; as the vehicle slows, downshifts are automatic. At a complete stop, the transmission shifts into 1st. It's normal to feel these downshifts.