

# Audi

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# Automatic Shift Lock

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The issue of unintended acceleration, or UA, has been studied, discussed, and analyzed like few other safety issues in the automobile industry. You can expect to see more and more manufacturers respond to this issue by factory-installing interlock devices on cars equipped with automatic transmissions.

And before you assume that this is someone else's problem, consider that you are going to see cars in your shop equipped with interlock systems. The very last thing in the world that you want to do is to make a repair of a related part on one of these cars and inadvertently disable an interlock system.

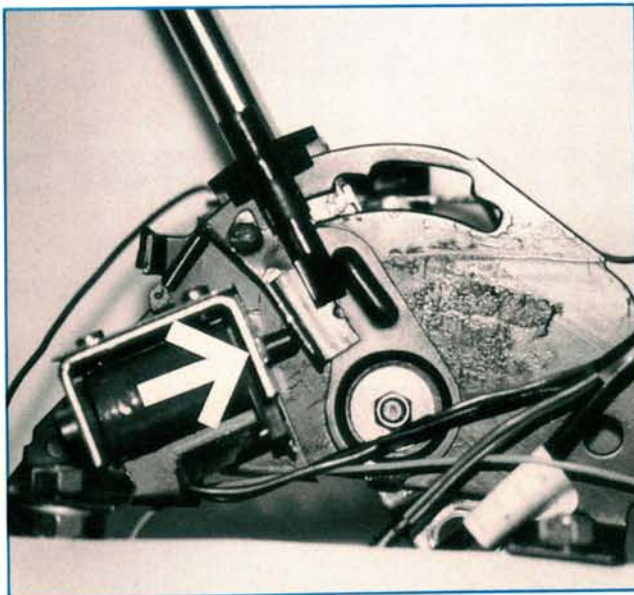
By related repairs, we mean the repair of a shift mechanism, repair or replacement of console parts, or perhaps the replacement of something as simple as an illumination bulb. You'll want to be able to identify one of these systems when you see it and familiarize yourself with its principles of operation.

It's also a good idea to check the operation of the interlock system before returning the car to its owner.

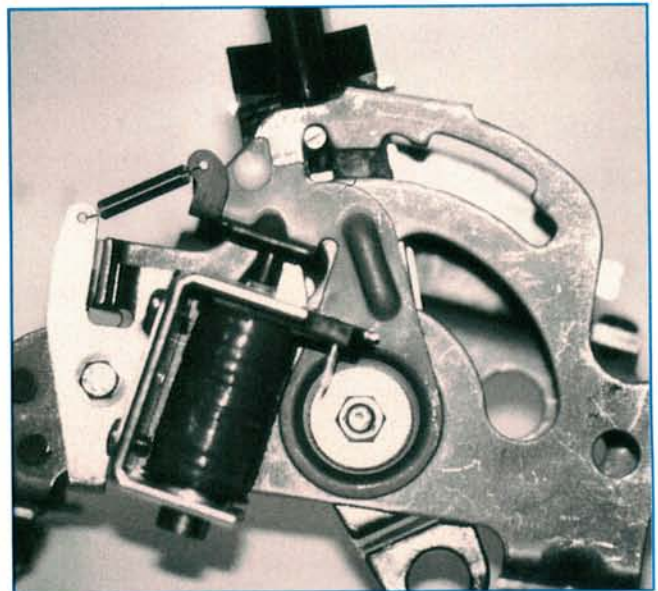
We're going to start with the automatic shift lock, or ASL, that has been retroactively installed on many 1978 through 1986 model Audi 5000 cars equipped with automatic transmissions. You'll note we said most of these cars. The recall was voluntary, and not all customers returned their vehicles for modification. The important thing to be aware of is that there are cars out there right now with interlock systems.

### What ASL Does

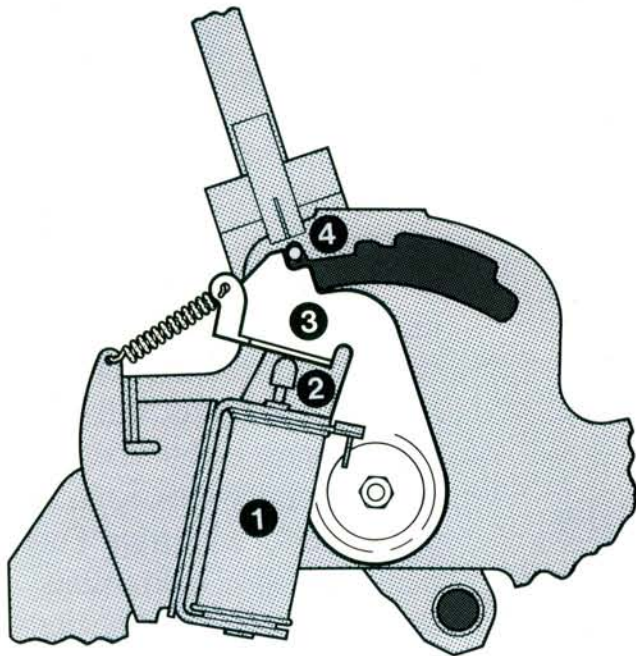
ASL has one job in life. It prevents the driver of the vehicle from moving the gear selector lever out of the park position unless someone is standing on the brake pedal. Pretty simple. Two similar interlock systems are in use. One style fits 1978-83 models. The other fits the different shift mechanism used on 1984-88 models.



This photo shows the gearshift level assembly, shift lock solenoid, and relay used on 1978-83 models.

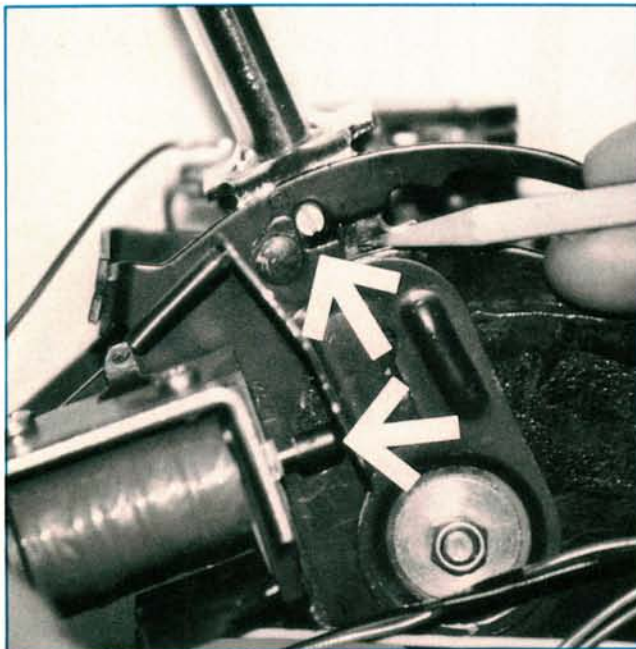


This set-up is used on 1984-88 models. Note that the solenoid is mounted in a more vertical position.

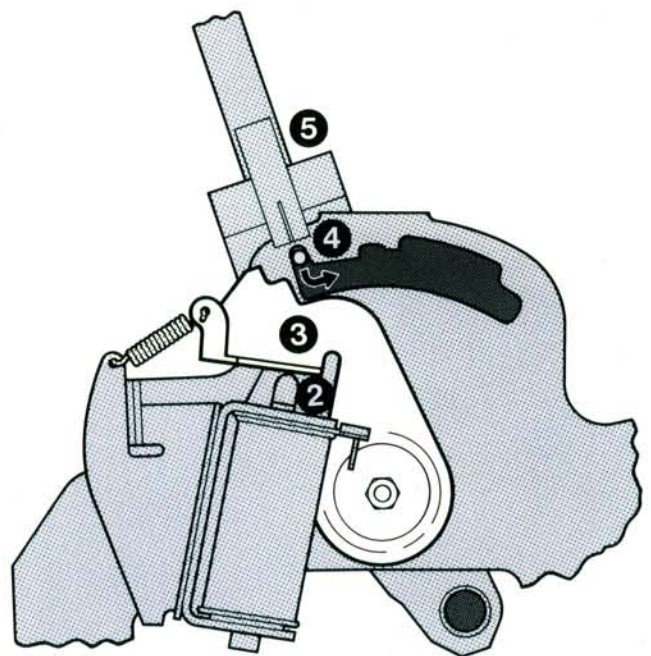


Here's how it works in the lockout mode:

- With the ignition turned on and your foot off the brake, solenoid (1) is energized.
- Solenoid plunger (2) extends against lockout bracket (3), extending it.
- The setscrew (4) is trapped between the lockout bracket and the "park" notch in the shifter bracket.



These photos show the mechanism in action. In this photo, the solenoid plunger is extended. The tab on the lockout mechanism is riding just below the selector lever screw, blocking its downward movement. In this position, the driver cannot select a drive gear because his foot isn't on the brake pedal.



To select a drive gear:

- Step on the brake pedal. This shuts off the power to the solenoid (2).
- The return spring on the lockout bracket pulls the lockout bracket (3) forward.
- With bracket clear of the setscrew (4), the driver can push the release button on the shifter (5) and select a drive gear.



In this photo, the driver has stepped on the brake pedal. The solenoid has been deenergized, and the return spring on the lockout bracket has pulled it away from the selector screw. Now the driver can push the selector screw downward and select a drive gear.