

Camshaft timing adjustment (Intake camshafts)

Both camshaft adjustment solenoids are initially actuated with a current of 1.5 amps for about 1 second from the CIS-E control unit.

Subsequently the current falls to a holding current of 1 amp. When the solenoids are energized, the intake camshaft timing positions are advanced. The adjustment is dependent on the coolant temperature (below a temperature of 20°C the camshaft adjustment is not in operation) and on the engine load and engine rpm map. There are only two positions, advanced and retarded.

Adjustment range when increasing engine speed, selector lever in driving position with light load:

| | |
|------------------------|------------|
| Idle speed to 2000 rpm | → retarded |
| 2000 – 4700 rpm | → advanced |
| Above 4700 rpm | → retarded |

Adjustment range when reducing engine speed, drive gear engaged and light load:

| | |
|-------------------------------|------------|
| Max. engine speed to 4400 rpm | → retarded |
| 4400 – 1700 rpm | → advanced |
| Above 1700 rpm | → retarded |

Monitoring control of the idle speed air valve

Should there be an open or short circuit of the idle speed air valve circuit, or an interruption in the data exchange circuit between the CIS-E and ignition control unit, the power to the idle speed air valve is shut off. At that point the ignition timing is extremely retarded, so the idle speed increases only insignificantly.