

## Fuel System\_Electronic Injection

### Test values

#### Engine Type M 44.43/44

Test operation	Test values		Special remarks
Electric fuel pump Min. feed	rate 850 cc/30 s		
Fuel pressure (Engine standstill) DME relay jumpered	3.8 ± 0.2 bar		
Check value at idle	3.3 ± 0.2 bar		
Leak test Min. pressure after 20 min.	2.0 bar		
Idle speed, rpm Engine type M 44.43 (Manual transmission)	without cat. conv. 840 ± 40**	with cat. converter 840 ± 40**	**Idle speed can only be checked. Idle adjustment is no longer performed.
Engine type M 44.44 (Tiptronic)	880 ± 40**	880 ± 40**	
CO values %	0.5...1.5	0.4...1.2*	* Measured ahead of catalytic converter, oxygen sensor connector not disconnected
HC values ppm	≤ 300	≤ 300*	CO adjustment is no longer performed

## Checking idle and CO level of vehicles without catalytic converter

### Engine Type M 44.43/44

#### Note

No provisions for idle speed adjustment are made any more. Adjustment at the throttle body is therefore no longer performed.

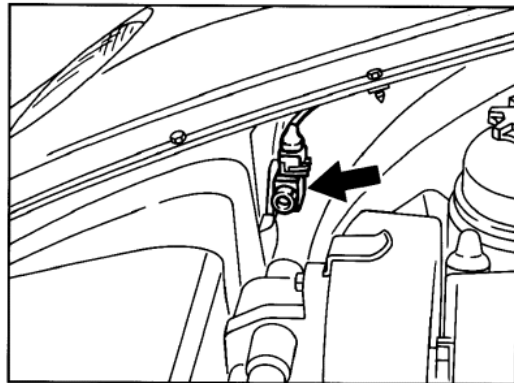
#### Adjusting the idle CO level

##### Adjustment requirements

Perfect condition of the mechanical engine components. Loads must be turned off while adjustments are made. Perform adjustments as rapidly as possible to avoid excessive heat buildup in the inlet ducts as this would give faulty CO level readings. Ambient temperature 15 to 35 deg. C.

1. Warm up engine to operating temperature. (Oil temperature 70 to 90 deg. C), check with oil temperature tester (Special Tool 9122 and 9122/2).
2. Check CO level. If the CO level is not within the specified adjustment range, correct adjustment at CO potentiometer. Remove plug from inlet bore to CO level adjuster screw.

3. The CO potentiometer is located behind the right-hand pop-up headlight.



CO level setting: 0.5...1.5%

Turning clockwise - richer mixture

Turning counterclockwise - leaner mixture

Check idle speed.

Connect separate tachometer according to manufacturer's instructions.

Idle speed:

Engine Type M 44.43      840 ± 40 rpm

Engine Type M 44.44      880 ± 40 rpm

## Checking idle speed and CO level on vehicles with catalytic converter

### Engine Type M 44.43/44

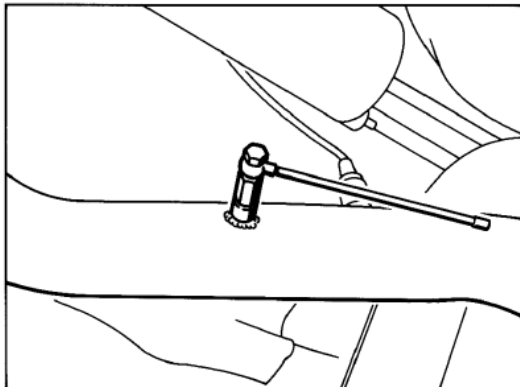
#### Note

Idle and CO level adjustment is no longer possible on vehicles fitted with catalytic converter. When checking the idle CO level, the oxygen sensor is not disconnected.

#### Check requirements

Perfect condition of the mechanical engine components. Loads must be turned off while checks are made. Perform checks as rapidly as possible to avoid excessive heat buildup in the inlet ducts as this would give faulty CO level readings. Ambient temperature 15 - 35 deg. C.

1. Connect commercially available exhaust gas adapter to test connector of catalytic converter.



2. Warm up engine to operating temperature. (Oil temperature 70 to 90°C), check with oil temperature tester (Special Tool 9122 and 9122/2).

3. Do not disconnect oxygen sensor connector. Connect CO level measuring instrument and separate tachometer according to manufacturer's instructions.

CO check value: 0.4...1.2%

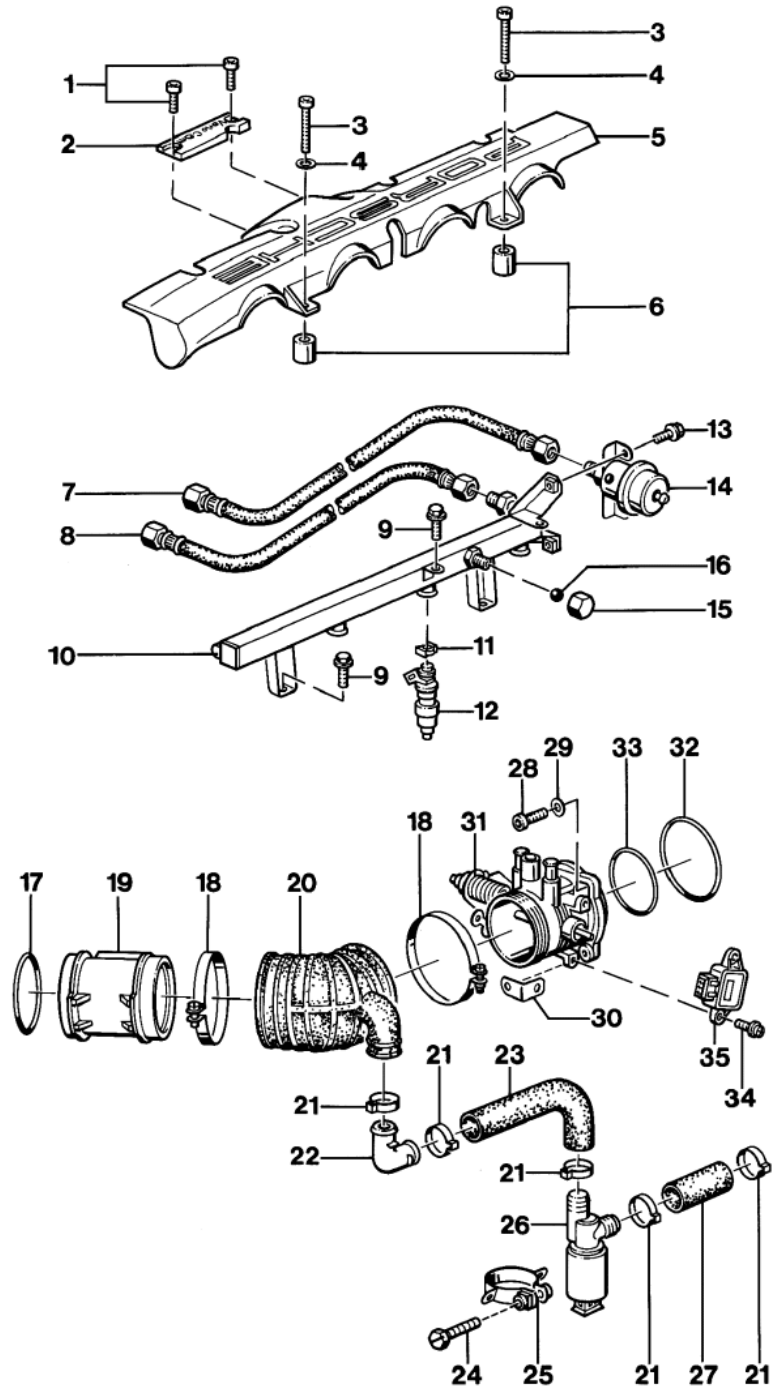
#### Idle speed:

Engine Type M 44.43      840 ± 40 rpm

Engine Type M 44.44      880 ± 40 rpm

## Removing and installing DME injection system components

Removing and installing DME injection system components



No.	Designation	Qty.	Note:	
			Removal	Installation
1	Pan head screw M 5 x 10	2		
2	VarioCam script	1		
3	Pan head screw M 5 x 35	2		
4	Washer	2		
5	Cover	1		
6	Spacer bushing	2		
7	Fuel return line	1	use a second wrench to lock when removing	use a second wrench to lock when removing
8	Fuel supply line	1	use a second wrench to lock when installing	use a second wrench to lock when installing
9	Hexagon head bolt M 6 x 12	4		
10	Fuel distributor pipe	1		
11	Retaining clip	4		
12	Injection valve	4		Replace seals. Apply a light coat of oil to the seating bore
13	Hexagon head bolt M 6 x 12	2		
14	Pressure regulator	1		Replace seal. Apply a light coat of oil to the seating bore
15	Cap nut	1	use a second wrench to lock when removing	Tightening torque 12 Nm (9 ftlb). Use a second wrench to lock
16	Ball	1		
17	O-ring	1		
18	Hose clamp	2		
19	Air mass meter	1		
20	Shroud	1		
21	Hose clip	5		

No.	Designation	Qty.	Note:	
			Removal	Installation
22	Union	1		
23	Hose	1		
24	Hexagon head bolt M 8 x 40	1		
25	Clamp	1		
26	Idle speed positioner	1		
27	Hose	1		
28	Pan head screw M 6 x 25	4		
29	Washer	3		
30	Retaining bracket	1		
31	Throttle body	1		
32	Round seal 82 x 2.5	1		always to be replaced
33	Round seal 65 x 3	1		always to be replaced
34	Philips screw M 4 x 10	2		
35	Throttle switch	1		

## Removing and installing injection valves

### Removing

1. Detach and remove cover for injection valves and plug leads. Unclip plastic cover and leave suspended at plug leads.
2. Pull off vacuum hose at pressure regulator and electric connector at oil temperature sensor (cylinder head).
3. Undo fuel distributor pipe at intake distributor and take out from above. Pull off electrical connector and retaining clamp at injection valve. Take out injection valve and catch overflowing fuel in a suitable container.

### Installation

1. Replace injection valve seals. Oil seating bore of seals lightly.
2. Check visually for leaks.