

Engine 103.940/942 CFI

Engine	103.940/942 up to 08/88	103.940/942 from 09/88	103.940/942 from 09/89
CFI system designation	3.1	3.1	5.2
On-off ratio/DTC readout (CFI) On-off ratio readout with ignition: ON			
Engine coolant temperature >80°C	% 70	70	70 (Federal) 85 (California)
Engine coolant temperature <70°C	% -	-	-
Current at EHA			
Ignition: ON	mA 20	20	20
After start enrichment and warmup			
After start enrichment at +20 °C engine coolant temperature	mA 4 – 8	4 – 8; 20 sec. constant	8 – 12; 0 – 8 sec. after start
Warmup base value at +20°C engine coolant temperature	mA 0±1	-1 to -5; 60 sec. after start	0 – 1; 14 – 110 sec. after start
Engine coolant temperature +80°C	mA 0±3	readout oscillates	readout oscillates
Enrichment during acceleration and at +20°C engine coolant temperature	mA >15	>15	>15
Engine at operating temperature			
Part load mixture correction	mA readout oscillates	readout oscillates	-
Wide open throttle enrichment at 2000 rpm	mA 4 – 8	5 – 7	4 – 8
Deceleration fuel shut off	approx. mA -60 (Bosch control module)	-60 (Bosch control module)	-40
Deceleration fuel shut off	approx. mA -50 (VDO control module)	-50 (VDO control module)	

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Ignition timing and dwell	
Closed throttle (idle) speed	rpm 650 – 750
Ignition timing with vacuum	BTDC 7 – 11
Engine speed	rpm 3200
Ignition timing with vacuum	BTDC 40 – 44
Ignition timing without vacuum	BTDC 25 – 29
Dwell	∠° 24 – 53
Dwell	% 40 – 88

Reference Resistor (DI)

Engine	Model	MB Part No.	Ignition adjustment ° CA	Resistance Ω/kΩ
103.940/942	124/201	000 540 24 81	0	750 Ω

Note: If the reference resistor fails, then the ignition is retarded 3° at wide open throttle.

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Closed throttle (idle)		
Selector lever position/Transmission range	P/N	D
Engine oil temperature °C approx.	80	80
Closed throttle (idle) speed rpm	650 – 750	<650
Control range %	35 – 45	<35
Control range Δ°	21 – 27	
On-off ratio readout during deceleration fuel shut off %	95	
Engine coolant temperature °C	–30 to +25	
Closed throttle warm-up speed rpm	1100±30	
Engine coolant temperature °C	>+25 to +80	
Closed throttle warm-up speed rpm	declines continuously to 700±50	
Vacuum mbar	500 – 650	
Lambda control control range %	3)	

3) Check on-off ratio at 2500 rpm and read mean value with the purge line disconnected and plugged.
Compare this value with the closed throttle speed value. The mean value at closed throttle speed must not deviate from the value at 2500 rpm by more than ±10, after 1989 +10.

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Engine performance ⁴⁾		
Engine speed	rpm	5500
Output, manual transmission, 3rd gear	hp	119
Output, 4-speed AT, transmission range 3	hp	115



⁴⁾ These are minimum performance values. Do not exceed speed of 80 mph.

Check performance only at simulated engine coolant temperature of 80 °C (use 2 resistance substitution units)