



Refer to Parts Microfiche Gr. 54 to identify control modules.

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/981/982/985		
Models	140.043/051/070, 129.067, 210.072		
ME-SFI system designation	1.0		
Closed throttle (idle) position, check, adjust 07-2053 or 07-2056			
Engine oil temperature	° C	>60	
Selector lever position		P/N	
Engine speed	rpm	P/N: 600 – 750	D: <650
CTP recognition (accelerator pedal not depressed)	HHT display	ON	
On-off ratio before right TWC	%	0±25 ¹⁾	
On-off ratio before left TWC	%	0±25 ¹⁾	
Engine coolant temperature	° C approx.	>80	

¹⁾ In case of complaint, on-off ratio must be measured at idle speed and at 2500 rpm with purge line to engine disconnected and plugged.

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/981/982/985	
Models	140.043/051/070, 129.067, 210.072	
ME-SFI system designation	1.0	
Engine, check, adjust	07-1100	Page 1
Engine oil level	HHT display	OK
Fuel tank level	HHT display	OK
Engine oil temperature	° C	>60
Engine speed (selector lever in P/N position)	rpm	600 – 750
Air mass	kg/h	14 – 24
MAF voltage (increasing rpm = increasing voltage)	V	0.7 – 1.0
Ignition timing with premium unleaded gasoline (91 posted/95 RON) ¹⁾	° CKA	5 – 20
Injection duration right	ms	3 – 5
Injection duration left	ms	3 – 5
Adjustable camshaft timing solenoid	HHT display	OFF
Camshaft Hall-effect sensor, value jumps	HHT display	55-AA
ECT	° C	>80
Intake air temperature (IAT)	° C	>20
Purge valve on-off ratio	%	10 ± 5
Battery voltage	V	10
Actuator Actual value potentiometer r1	V	4.0 – 4.6
Actual value potentiometer r2	V	0.3 – 0.9
Pedal value sensor Nominal value potentiometer r1	V	0.2 – 0.5
Nominal value potentiometer r2	V	0.1 – 0.4
CTP recognition (accelerator pedal not depressed)	HHT display	ON

¹⁾ In case of complaint, check ignition timing at full load.

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/981/982/985	
Models	140.043/051/070, 129.067, 210.072	
ME-SFI system designation	1.0	
Engine, check, adjust	07-1100	Page 2
WOT recognition	HHT display	OFF
Torque	Nm	70 – 80
Throttle valve angle	°	0.3 – 2
Throttle valve stop learned	HHT display	YES
On-off ratio before right or left TWC ECT >70°C	%	0 ± 25 ²⁾ oscillates
Right O2S 1 voltage before TWC	mV	– 200 to + 1000 ¹²⁾
Left O2S 1 voltage before TWC	mV	– 200 to + 1000 ¹²⁾
Self adaptation at partial load, right	Factor	0.77 – 1.28 ⁵⁾
Self adaptation at partial load, left	Factor	0.77 – 1.28 ⁵⁾
Self adaptation at idle speed, right	ms	– 1 to + 1 ⁴⁾
Self adaptation at idle speed, left	ms	– 1 to + 1 ⁴⁾
Driving range (selector lever position P/N)	HHT display	P/N
A/C compressor, EC pushbutton depressed	HHT display	OFF
Purge system	HHT display	OFF/ON
Safety fuel shut off	HHT display	OFF

- 2) In case of complaint, on-off ratio must be measured at idle speed and at 2500 rpm with purge line to engine disconnected and plugged.
- 4) Base setting at idle, 0.0 kg/h (Bosch) or 0.0% (VDO). Mixture tendency "**rich**" < 0.0 kg/h or 0.0%. Mixture tendency "**lean**" > 0.0 kg/h or 0.0%.
- 5) Base setting partial load = 1.0. Mixture tendency **rich** < 1.0, mixture tendency **lean** = > 1.0.
- 12) Oscillates around 300 mV after 2 minutes at idle.

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Engine	119.980/981/982/985		
Models	140.043/051/070, 129.067, 210.072		
ME-SFI system designation	1.0		
Warmup	07-2023		
Warmup speed ¹²⁾ ECT < 40 °C	.....	rpm	P/N: approx. 1200 – 1500
Warmup speed ¹²⁾ ECT > 40 °C	.....	rpm	P/N: approx. 800
Engine rpm (raised idle speed temperature dependent)			
ECT approx. -10 °C	.....	rpm	P/N: 800 ± 50 D: 800 ± 50
ECT approx. +15 °C	.....	rpm	P/N: 750 ± 50 D: 700 ± 50
ECT approx. > 50 °C	.....	rpm	P/N: 600 – 750 D: < 650
CTP recognition (accelerator pedal not depressed)	.....	HHT display	ON
After start enrichment < 70 °C maximum 50 seconds	.....	HHT display	ON
TWC heating at idle < 30 °C maximum 50 seconds	.....	HHT display	ON
O2S 1 heater before TWC	.....	V	-
A/C compressor	.....	HHT display	OFF

¹²⁾ Raised idle speed for max. approx. 50 seconds after starting.

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/982	119.981/985
Models	140.051/070, 129.067	140.043, 210.072
ME-SFI system designation	1.0	1.0
Engine performance ⁷⁾	07-1203 or 1206	Page 1
Engine oil level	HHT display	OK
Fuel tank level	HHT display	OK
Engine speed	rpm	4000
Air mass	kg/h	540 – 640
MAF voltage	V	–
Ignition timing with premium unleaded gasoline (91 posted/95 RON)	°CKA	20 – 30
Injection duration, right	ms	12 – 17
Injection duration, left	ms	12 – 17
Camshaft timing adjustment 4000 rpm	HHT display	ON
Camshaft timing adjustment > 4300 rpm	HHT display	OFF
Camshaft Hall-effect sensor, value jumps	HHT display	55-AA
ECT	°C	80 – 100
IAT	°C	< 30
Purge valve on-off ratio	%	–
Battery voltage	V	10
Driving range 3	hp	196
Altitude (correction value)	Factor	–
Exhaust gas back pressure	mbar	< 200

⁷⁾ These are minimum performance values. Do not exceed speed of 80 mph. Simulating engine coolant temperature and intake air temperature is not possible with ME-SFI. When testing WOT position be sure to use an external cooling fan to ensure adequate engine cooling.

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/981/982/985		
Models	140.043/051/070, 129.067, 210.072		
ME-SFI system designation	1.0		
Engine performance ⁷⁾	07-1203 or 1206	Page 2	
Actuator	Actual value potentiometer r1	V	1.8 – 2.4
	Actual value potentiometer r2	V	3.1 – 3.7
Pedal value sensor	Nominal value potentiometer r1	V	3.8 – 4.4
	Nominal value potentiometer r2	V	4.0 – 4.6
Throttle valve angle		°	80 – 83
CTP recognition		HHT display	OFF
WOT recognition		HHT display	ON
Torque		Nm	380 – 400
Knock control approved		HHT display	OFF/ON ¹⁴⁾
Knock ignition angle/cylinder		°CKA	0
Right knock sensor		V	> 0.5
Left knock sensor		V	> 0.5
Driving range (selector lever position)		HHT display	R, D – 1
A/C compressor, EC pushbutton depressed		HHT display	OFF
Transmission overload protection		HHT display	OFF
Deceleration shut-off		HHT display	OFF
Front axle VSS		mph (km/h)	–
Rear axle VSS		mph (km/h)	> 62 (100)

⁷⁾ These are minimum performance values. Do not exceed speed of 80 mph. Simulating engine coolant temperature and intake air temperature is not possible with ME-SFI. When testing WOT position be sure to use an external cooling fan to ensure adequate engine cooling.

¹⁴⁾ HHT display ON if knock control is required.

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/981/982/985	
Models	140.043/051/070, 129.067, 210.072	
ME-SFI system designation	1.0	
Cruise control		
Brake switch, brake pedal not depressed	HHT display	OFF
Stop lamp switch, brake pedal not depressed	HHT display	OFF
Move CC switch to corresponding position	HHT display	V/SP/B/A
Safety contact, CC switch actuated	HHT display	ON
Safety contact, CC switch not actuated	HHT display	OFF
Cruise control	HHT display	–
Maintain transmission range	HHT display	–
Cruise control shut-off, function	HHT display	–
Cruise control shut-off, safety	HHT display	–
Drive authorization system (DAS)		
DAS and ME-SFI control modules compatible	HHT display	YES
Engine control module identified	HHT display	YES
Engine control module locked	HHT display	YES
Drive authorization activated	HHT display	YES
Vehicle locked with RCL	HHT display	NO
Number of starts with not locked control module	Number	0

Engines 119.980/981/982 as of 07/95 and 119.985 as of 01/96

Engine	119.980/981/982/985
Models	140.043/051/070, 129.067, 210.072
ME-SFI system designation	1.0
Idle Quality	
Rpm deviation/cylinder	revolution/s ² 1)
Rpm deviation cut out threshold	revolution/s ² 0.5 2)
Acceleration sensor up to 01/96	V 2.35 – 2.65
Idle quality failure counter as of 02/96	Number 0
On-off ratio	
Idle speed	rpm 600 – 750
Engine speed	rpm 2500
On-off ratio at WOT and transmission selector lever position 3	% 0±25 constant
On-off ratio at upper partial load and transmission selector lever position “D”, 75 mph (120 km/h), 32 hp (24 kW)	% 0±25 oscillating
On-off ratio at lower partial load and transmission selector lever position “D”, 31 mph (50 km/h), 9 hp (7 kW),	% 0±25 oscillating
Exhaust gas back pressure	mbar <200

1) Entry if value is larger than cut out threshold.
 2) Temporary test value.