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

Engines 120.982/983 as of Model Year 1996

Engine	120.982/983
Models	140.057/076, 129.076
ME-SFI system designation	1.0
Closed throttle (idle) position, check, adjust (07-2053 or 07-2056) [15]	
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.

[15] Time Guide operation no. and/or SMS job no.

Engines 120.982/983 as of Model Year 1996

Engine			120.982/983
Models			140.057/076, 129.076
ME-SFI system designation			1.0
Engine, check, adjust	**(**07-1100) [15]	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	12 – 18
MAF voltage (increasing rpm = increasing voltage		V	0.6 – 0.9
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**
WOT recognition		HHT display	**OFF**

[1] In case of complaint, check ignition timing at full load.
[15] Time Guide operation no. and/or SMS job no.

Engines 120.982/983 as of Model Year 1996

Engine		120.982/983
Models		140.057/076, 129.076
ME-SFI system designation		1.0
Engine, check, adjust 07-1100	Page 2	
Torque	Nm	–
Throttle vale 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)	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.

Engines 120.982/983 as of Model Year 1996

Engine	120.982/983
Models	140.057/076, 129.076
ME-SFI system designation	1.0
Cold start 07-2321	
Engine rpm while cranking . . . . . rpm	> 200
Battery voltage V	10
Safety fuel shut off . . . . . HHT display	**OFF**
Engine oil level . . . . . HHT display	OK
Fuel tank level . . . . . HHT display	OK
ECT . . . . . ° C	7)
IAT . . . . . ° C	7)
ECT at starting . . . . . ° C	7)
CTP recognition (accelerator pedal not depressed) . . . . . HHT display	**ON**

7) Proceed complaint related or temperature related.

Engines 120.982/983 as of Model Year 1996

Engine			120.982/983
Models			140.057/076, 129.076
ME-SFI system designation			1.0
Warmup	07-2023		
Warmup speed [12] ECT < 40 °C	rpm		approx. 1000 – 1300
Warmup speed [12] ECT > 40 °C	rpm		approx. 800
Engine rpm (raised idle speed temperature dependent)			
ECT approx. –10 °C	rpm		P/N: 800 ± 50 D: 700 ± 50
ECT approx. +15 °C	rpm		P/N: 700 ± 50 D: 650 ± 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 25 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 120.982/983 as of Model Year 1996

Engine			120.982/983
Models			140.057/076, 129.076
ME-SFI system designation			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	360 – 460
MAF sensor voltage		V	–
Ignition timing with premium unleaded gasoline (91 posted/95 RON)		°CKA	18 – 22
Injection duration, right		ms	11 – 14
Injection duration, left		ms	11 – 14
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	237
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 120.982/983 as of Model Year 1996

Engine			120.982/983
Models			140.057/076, 129.076
ME-SFI system designation			1.0
Engine performance [7]	07-1203 or 1206	Page 2	
Actuator	Actual value potentiometer r1	V	–
	Actual value potentiometer r2	V	–
Pedal value sensor	Nominal value potentiometer r1	V	–
	Nominal value potentiometer r2	V	–
Throttle valve angle		°	–
CTP recognition		HHT display	**OFF**
WOT recognition		HHT display	**ON**
Torque		Nm	–
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		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 120.982/983 as of Model Year 1996

Engine			120.982/983
Models			140.057/076, 129.076
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 120.982/983 as of Model Year 1996

Engine		120.982/983
Models		140.057/076, 129.076
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.

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 vale 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.

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
Cold start 07-2321		
Engine rpm while cranking	rpm	> 200
Battery voltage	V	10
Safety fuel shut off	HHT display	**OFF**
Engine oil level	HHT display	OK
Fuel tank level	HHT display	OK
ECT	° C	7)
IAT	° C	7)
ECT at starting	° C	7)
CTP recognition (accelerator pedal not depressed)	HHT display	**ON**

7) Proceed complaint related or temperature related.

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
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	OK
Fuel tank level		HHT display	OK	OK
Engine speed		rpm	4000	4000
Air mass		kg/h	540 – 640	540 – 640
MAF voltage		V	–	3.4 – 3.7
Ignition timing with premium unleaded gasoline (91 posted/95 RON)		°CKA	20 – 30	20 – 30
Injection duration, right		ms	12 – 17	12 – 17
Injection duration, left		ms	12 – 17	12 – 17
Camshaft timing adjustment 4000 rpm		HHT display	**ON**	**ON**
Camshaft timing adjustment > 4300 rpm		HHT display	**OFF**	**OFF**
Camshaft Hall-effect sensor, value jumps		HHT display	55–AA	55–AA
ECT		°C	80 – 100	80 – 100
IAT		°C	< 30	< 30
Purge valve on-off ratio		%	–	100
Battery voltage		V	10	10
Driving range 3		hp	196	165
Altitude (correction value)		Factor	–	–
Exhaust gas back pressure		mbar	< 200	< 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.

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

Engine 111.973 as of 09/96

Engine	111.973
Models	170.447
ME-SFI system designation	2.1
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: 680 – 850 D: <650
CTP recognition (accelerator pedal not depressed) . . . . . HHT display	**ON**
On-off ratio before 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.

Engine 111.973 as of 09/96

Engine			111.973
Models			170.447
ME-SFI system designation			2.1
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	650 – 850
Air mass		kg/h	8 – 13
MAF voltage (increasing rpm = increasing voltage)		V	1.1 – 1.7
Ignition timing with premium unleaded gasoline (91 posted/95 RON) [1]		° CKA	5 – 20
Injection duration		ms	2 – 4
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		%	0 – 15
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**
WOT recognition		HHT display	**OFF**

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

Engine 111.973 as of 09/96

Engine		111.973
Models		170.447
ME-SFI system designation		2.1
Engine, check, adjust 07-1100	Page 2	
Torque	Nm	–
Throttle vale angle	°	1.8 – 3.0
Throttle valve stop learned	HHT display	**YES**
On-off ratio before TWC, ECT >70°C	%	0 ± 25 [2)] oscillates
O2S 1 voltage before TWC	mV	– 200 to + 1000 [12)]
Self adaptation at partial load	Factor	0.68 – 1.32 [5)]
Self adaptation at idle	ms	– 1 to + 1 [4)]
Driving range (selector lever position)	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**
Engine/climate control electric cooling fan		
Fan output requirement		
Climate control system	%	0 – 95
Engine	%	0 – 95
Effective fan output, on-off ratio	%	0 – 95

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.

Engine 111.973 as of 09/96

Engine			111.973
Models			170.447
ME-SFI system designation			2.1
Cold start	07-2321		
Engine oil level		HHT Display	OK
Fuel tank level		HHT Display	OK
Engine rpm while cranking		rpm	> 200
Battery voltage		V	10
Safety fuel shut off		HHT display	**OFF**
ECT		° C	7)
IAT		° C	7)
ECT at starting		° C	7)
CTP recognition (accelerator pedal not depressed)		HHT display	**ON**

7) Proceed complaint related or temperature related.

Engine 111.973 as of 09/96

Engine			111.973
Models			170.447
ME-SFI system designation			2.1
Warmup	07-2023		
Warmup speed [12] ECT < 40 °C	rpm		approx. 1150 ± 100
Warmup speed [12] ECT > 40 °C	rpm		approx. 800
Engine rpm (raised idle speed temperature dependent)			
ECT approx. <0 °C	rpm		P/N: 1000 ± 100 D: 800 ± 100
ECT approx. 0 to +30 °C	rpm		P/N: 800 ± 100 D: 700 ± 100
ECT approx. +30 ° to 40 °C	rpm		P/N: 750 ± 100 D: 650 ± 100
ECT approx. >40 °C	rpm		P/N: 750 ± 100 D: 600 ± 100
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.

Engine 111.973 as of 09/96

Engine			111.973
Models			170.447
ME-SFI system designation			2.1
Engine performance [7]	07-1203 or 07-1206		
Engine oil level		HHT display	OK
Fuel tank level		HHT display	OK
Engine speed		rpm	5200
Air mass		kg/h	440 – 540
MAF sensor voltage		V	4.1 – 4.5
Ignition timing with premium unleaded gasoline (91 posted/95 RON)		°CKA	9 – 13
Injection duration		ms	14 – 17
Adjustable camshaft timing solenoid 4000 rpm		HHT display	**ON**
Adjustable camshaft timing solenoid >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	147
Altitude (correction value)		Factor	–

[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 111.973 as of 09/96

Engine				111.973
Models				170.447
ME-SFI system designation				2.1
Engine performance [7]		07-1203 or 1206	Page 2	
Exhaust gas back pressure at 5300 rpm			mbar	< 200
Actuator	Actual value potentiometer r1		V	0.5 – 1.1
	Actual value potentiometer r2		V	3.9 – 4.5
Pedal value sensor	Nominal value potentiometer r1		V	4.1 – 4.7
	Nominal value potentiometer r2		V	4.1 – 4.7
Throttle valve angle			°	80 – 83
CTP recognition			HHT display	**OFF**
WOT recognition			HHT display	**ON**
Torque			Nm	280 – 300
Knock control approved			HHT display	**OFF/ON** [14]
Knock ignition angle/cylinder			°CKA	0
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 111.973 as of 09/96

Engine		111.973
Models		170.447
ME-SFI system designation		2.1
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
Supercharger		
Air flap/air filter angle	°	> 85
Magnetic supercharger clutch	HHT display	ON
Supercharger output efficiency	Factor	> 1.3

Engines 111.973 as of 09/96

Engine		111.973
Models		170.447
ME-SFI system designation		2.1
Idle Quality		
Rpm deviation/cylinder	revolution/s^2	[1]
Rpm deviation cut out threshold	revolution/s^2	0.5 [2]
Idle quality failure counter as of 02/96	Number	0
On-off ratio		
Idle speed	rpm	650 – 850
Engine speed	rpm	3500
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.

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

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine	112.920/940/941
Models	202.029 208.365 210.065/082/265/282
ME-SFI system designation	2.0
Closed throttle (idle) position, check, adjust (07-2053 or 07-2056) 15)	
Engine oil temperature . . . . . ° C	>60
Selector lever position	P/N
Engine speed . . . . . rpm	P/N: 650 – 800 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.

15) Time Guide operation no. and/or SMS job no.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine			112.920/940/941
Models			202.029 208.365 210.065/082/265/282
ME-SFI system designation			2.0
Engine, check, adjust	**(**07-1100) [15]	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	650 – 800
Air mass		kg/h	10 – 20
MAF voltage (increasing rpm = increasing voltage		V	1.3 – 1.7
Ignition timing with premium unleaded gasoline (91 posted/95 RON) [1]		° CKA	5 – 25
Injection duration right		ms	3 – 5
Injection duration left		ms	3 – 5
Camshaft Hall-effect sensor, value jumps		HHT display	55-AA
ECT		° C	>80
Intake air temperature (IAT)		° C	<30
Purge valve on-off ratio		%	–
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.
[15] Time Guide operation no. and/or SMS job no.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine			112.920/940/941
Models			202.029 208.365 210.065/082/265/282
ME-SFI system designation			2.0
Engine, check, adjust	07-1100	Page 2	
WOT Recognition		HHT display	**OFF**
Torque		Nm	30 – 50
Throttle vale angle		°	0.3 – 2.5
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	0.68 – 1.32 [5]
Self adaptation at partial load, left		Factor	0.68 – 1.32 [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)		HHT display	**P/N**
A/C compressor, EC pushbutton depressed		HHT display	**OFF**
Purge system		HHT display	**OFF**
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.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine			112.920/940/941
Models			202.029 208.365 210.065/082/265/282
ME-SFI system designation			2.0
Cold start	07-2321		
Engine oil level		HHT Display	OK
Fuel tank level		HHT Display	OK
Engine rpm while cranking		rpm	> 100
Battery voltage		V	10
Safety fuel shut off		HHT display	**OFF**
ECT		° C	7)
IAT		° C	7)
ECT at starting		° C	7)
CTP recognition (accelerator pedal not depressed)		HHT display	**ON**

7) Proceed complaint related or temperature related.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine			112.920/940/941
Models			202.029 208.365 210.065/082/265/282
ME-SFI system designation			2.0
Warmup 07-2023			
Warmup speed [12] ECT < 40 °C	rpm		approx. 1200 – 1500
Warmup speed [12] ECT > 40 °C	rpm		approx. 800
Engine rpm (raised idle speed temperature dependent)			
ECT approx. –10 °C	rpm		P/N: 850 – 1000 D: 750 – 900
ECT approx. +15 °C	rpm		P/N: 800 – 950 D: 700 – 850
ECT approx. > 50 °C	rpm		P/N: 700 – 850 D: 650 – 800
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.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine			112.920
Models			202.029
ME-SFI system designation			2.0
Engine performance [7]	07-1203 or 1206	Page 1	
Engine oil level		HHT display	OK
Fuel tank level		HHT display	OK
Engine speed		rpm	5300
Air mass		kg/h	480 – 580
MAF sensor voltage		V	3.8 – 4.8
Ignition timing with premium unleaded gasoline (91 posted/95 RON)		°CKA	23 – 31
Injection duration, right		ms	14 – 19
Injection duration, left		ms	14 – 19
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	–
Altitude (correction value)		Factor	–
Exhaust gas back pressure		mbar	< 300

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.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine			112.940	112.941
Models			208.365	210.065/082/265/282
ME-SFI system designation			2.0	2.0
Engine performance 7)	07-1203 or 1206	Page 1		
Engine oil level		HHT display	OK	OK
Fuel tank level		HHT display	OK	OK
Engine speed		rpm	5300	5300
Air mass		kg/h	480 – 580 1)	480 – 580 1)
MAF sensor voltage		V	3.8 – 4.8	3.8 – 4.8
Ignition timing with premium unleaded gasoline (91 posted/95 RON)		°CKA	23 – 31	23 – 31
Injection duration, right		ms	14 – 19	14 – 19
Injection duration, left		ms	14 – 19	14 – 19
Camshaft Hall-effect sensor, value jumps		HHT display	55 – AA	55 – AA
ECT		°C	80 – 100	80 – 100
IAT		°C	< 30	< 30
Purge valve on-off ratio		%	–	–
Battery voltage		V	10	10
Driving range 3		hp	153	158
Altitude (correction value)		Factor	–	–
Exhaust gas back pressure		mbar	< 300	< 300

1) Preliminary test value

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.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine				112.920/940/941
Models				202.029 208.365 210.065/082/265/282
ME-SFI system designation				2.0
Engine performance 7)		07-1203 or 1206	Page 2	
Actuator	Actual value potentiometer r1		V	<4.0
	Actual value potentiometer r2		V	>0.9
Pedal value sensor	Nominal value potentiometer r1		V	–
	Nominal value potentiometer r2		V	–
Throttle valve angle			°	80 – 83
CTP recognition			HHT display	**OFF**
WOT recognition			HHT display	**ON**
Torque			Nm	250 – 350
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			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)	>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.

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine		112.920/940/941
Models		202.029 208.365 210.065/082/265/282
ME-SFI system designation		2.0
Cruise control		
Brake switch, brake pedal not depressed	HHT display	**ON**
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

Engine 112.941 as of 02/97
Engine 112.920/940 as of 06/97

Engine		112.920/940/941
Models		202.029 208.365 210.065/082/265/282
ME-SFI system designation		2.0
Idle Quality		
Rpm deviation/cylinder	revolution/s^2	[1]
Rpm deviation cut out threshold	revolution/s^2	–
Acceleration sensor up to 06/96	V	–
Idle quality failure counter as of 02/96	Number	0
On-off ratio		
Idle speed	rpm	650 – 800
Engine speed	rpm	3200
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	<180

[1] Entry if value is larger than cut out threshold.

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

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine	104.941/991/994/995
Models	129.063 140.032 202.028 210.055
ME-SFI system designation	2.1
Closed throttle (idle) position, check, adjust	
Engine oil temperature . . . . . ° C	>60
Selector lever position	P/N
Engine speed . . . . . rpm	600 – 800
CTP recognition (accelerator pedal not depressed) . . . . . HHT display	**ON**
On-off ratio before 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.

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine			104.941/991/994/995
Models			129.063 140.032 202.028 210.055
ME-SFI system designation			2.1
Engine, check, adjust			
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 – 800
Air mass		kg/h	10 – 18
MAF voltage (increasing rpm = increasing voltage		V	1.1 – 1.7
Ignition timing with premium unleaded gasoline (91 posted/95 RON) [1]		° CKA	5 – 20
Injection duration		ms	2 – 4
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		%	0 – 20
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**
WOT recognition		HHT display	**OFF**

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

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine			104.941/991/994/995
Models			129.063 140.032 202.028 210.055
ME-SFI system designation			2.1
Engine, check, adjust			
Torque		Nm	–
Throttle vale angle		°	0.8 – 2.5
Throttle valve stop learned		HHT display	**YES**
On-off ratio before TWC, ECT >70°C		%	0 ± 25 [2] oscillates
O2S 1 voltage before TWC		mV	– 200 to + 1000 [12]
Self adaptation at partial load		Factor	0.68 – 1.32 [5]
Self adaptation at idle		ms	– 1 to + 1 [4]
Driving range (selector lever position)		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.

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine		104.941/991/994/995
Models		129.063 140.032 202.028 210.055
ME-SFI system designation		2.1
Cold start		
Engine oil level	HHT Display	OK
Fuel tank level	HHT Display	OK
Engine rpm while cranking	rpm	> 200
Battery voltage	V	10
Safety fuel shut off	HHT display	**OFF**
ECT	° C	7)
IAT	° C	7)
ECT at starting	° C	7)
CTP recognition (accelerator pedal not depressed)	HHT display	**ON**

7) Proceed complaint related or temperature related.

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine		104.941/991/994/995	
Models		129.063 140.032 202.028 210.055	
ME-SFI system designation		2.1	
Warmup			
Warmup speed [12] ECT < 40 °C	rpm	P/N: approx. 1300 ± 100	
Warmup speed [12] ECT > 40 °C	rpm	P/N: approx. 800	
Engine rpm (raised idle speed temperature dependent)			
ECT approx. <0 °C	rpm	P/N: 940 ± 100	D: 850 ± 100
ECT approx. 0 to +30 °C	rpm	P/N: 880 ± 100	D: 830 ± 100
ECT approx. +30 ° to 40 °C	rpm	P/N: 840 ± 100	D: 770 ± 100
ECT approx. < 40 °C	rpm	P/N: 700 ± 100	D: 600 ± 100
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.

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine		104.941	104.991/994/995
Models		202.028	129.063 140.032 210.055
ME-SFI system designation		2.1	2.1
Engine performance [7]			
Engine oil level	HHT display	OK	OK
Fuel tank level	HHT display	OK	OK
Engine speed	rpm	5300	5300
Air mass	kg/h	440 – 540	440 – 540
MAF sensor voltage	V	4.1 – 4.5	4.1 – 4.5
Ignition timing with premium unleaded gasoline (91 posted/95 RON)	°CKA	9 – 13	9 – 13
Injection duration	ms	14 – 17	14 – 17
Adjustable camshaft timing solenoid 4000 rpm	HHT display	**ON**	**ON**
Adjustable camshaft timing solenoid > 4300 rpm	HHT display	**OFF**	**OFF**
Camshaft Hall-effect sensor, value jumps	HHT display	55 – AA	55 – AA
ECT	°C	80 – 100	80 – 100
IAT	°C	< 30	< 30
Purge valve on-off ratio	%	–	–
Battery voltage	V	10	10
Driving range 3	hp	135	161
Altitude (correction value)	Factor	–	–

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.

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine				104.941/991/994/995
Models				129.063 140.032 202.028 210.055
ME-SFI system designation				2.1
Engine performance [7]	07-1203 or 1206		Page 2	
Exhaust gas back pressure at 5300 rpm			mbar	<200
Actuator	Actual value potentiometer r1		V	–
	Actual value potentiometer r2		V	–
Pedal value sensor	Nominal value potentiometer r1		V	–
	Nominal value potentiometer r2		V	–
Throttle valve angle			°	80 – 83
CTP recognition			HHT display	**OFF**
WOT recognition			HHT display	**ON**
Torque			Nm	–
Knock control approved			HHT display	**OFF/ON** [14]
Knock ignition angle/cylinder			°CKA	0
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.

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine			104.941/991/994/995
Models			129.063 140.032 202.028 210.055
ME-SFI system designation			2.1
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

Engine 104.991/994/995 as of 06/96
Engine 104.941 as of 08/96

Engine		104.941/991/994/995
Models		129.063 140.032 202.028 210.055
ME-SFI system designation		2.1
Idle Quality		
Rpm deviation/cylinder	revolution/s^2	1)
Rpm deviation cut out threshold	revolution/s^2	0.5 2)
Idle quality failure counter as of 02/96	Number	0
On-off ratio		
Idle speed	rpm	600 – 800
Engine speed	rpm	3200
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.