MID 128 Fault codes

Freeze frames: For further information see Freeze frames.

MID: Message Identification Description (identification of ECU).

PID Parameter Identification Description (identification of parameter (value)).

PPID: Proprietary Parameter Identification Description (Volvo unique identification of parameter (value)).

SID: Subsystem Identification Description (identification of component).

PSID: Proprietary Subsystem Identification Description (Volvo unique identification of component).

FMI: Failure Mode Identifier (identification of fault type).
See also FMI table.

For more detailed information concerning these designations, see service information group 300 Vehicle Electronics '98 in the Information binder.

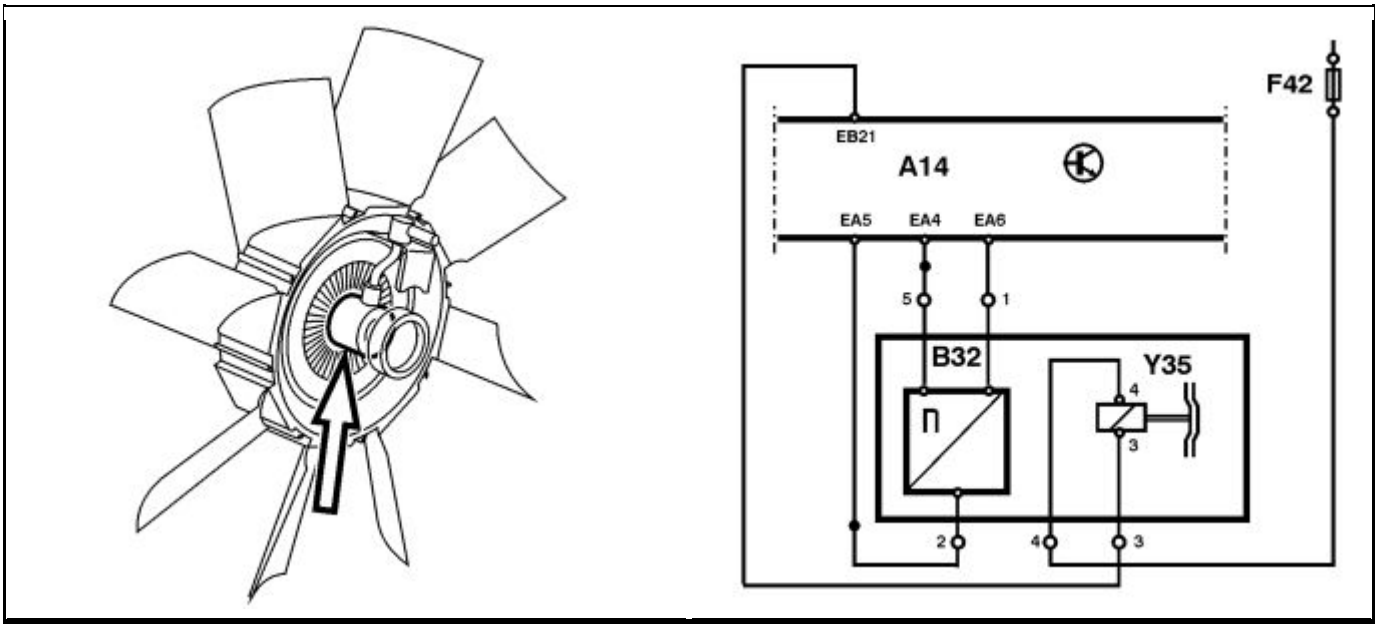
Fault code	Component/Function	FMI	Section
MID 128 PID 26	Fan speed percent	3, 8	MID 128 PID 26 Fan speed percent
MID 128 PID 45	Preheater, status	3, 4, 5	MID 128 PID 45 Preheater status
MID 128 PID 49	ABS control status	9	MID 128 PID 49 ABS control status
MID 128 PID 84	Road speed	9, 11	MID 128 PID 84 Road speed
MID 128 PID 85	Cruise control status	9	MID 128 PID 85 Cruise control status
MID 128 PID 91	Accelerator pedal position	9, 11	MID 128 PID 91 Accelerator pedal position
MID 128 PID 94	Fuel delivery pressure	3, 4, 7	MID 128 PID 94 Fuel delivery pressure

Fault code	Component/Function	FMI	Section
MID 128 PID 97	Water in fuel indicator	3, 4, 14	MID 128 PID 97 Water in fuel indicator
MID 128 PID 98	Engine oil level	1, 4, 5	MID 128 PID 98 Engine oil level
MID 128 PID 100	Engine oil pressure	1, 3, 4	MID 128 PID 100 Engine oil pressure
MID 128 PID 102	Boost pressure	3, 4	MID 128 PID 102 Boost pressure
MID 128 PID 105	Boost air temperature	3, 4	MID 128 PID 105 Boost air temperature
MID 128 PID 107	Air filter differential pressure	0, 3, 4, 5	MID 128 PID 107 Air filter differential pressure
MID 128 PID 108	Atmospheric pressure	3, 4	MID 128 PID 108 Atmospheric pressure
MID 128 PID 110	Engine coolant temperature	0, 3, 4	MID 128 PID 110 Engine coolant temperature
MID 128 PID 111	Coolant level:	1, 3, 4	MID 128 PID 111 Coolant level
MID 128 PID 153	Crankcase pressure	0, 3, 4	MID 128 PID 153 Crankcase pressure
MID 128 PID 158	Battery voltage	3, 4	MID 128 PID 158 Battery voltage
MID 128 PID 172	Air inlet temperature	3, 4	MID 128 PID 172 Air inlet temperature
MID 128 PID 175	Engine oil temperature	0, 3, 4	MID 128 PID 175 Engine oil temperature
MID 128 PID 190	Engine rpm	0	MID 128 PID 190 Engine rpm
MID 128 PID	Electronic Immobilizer	2, 12	MID 128 PID 224 Electronic immobilizer

Fault code	Component/Function	FMI	Section
224			
MID 128 PID 228	Road speed sensor calibration	11	MID 128 PID 228 Road speed sensor calibration
MID 128 PPID 119	Engine coolant temperature	0	MID 128 PPID 119 High coolant temperature
MID 128 PPID 122	VCB Engine compression brake	1, 3, 4, 5	MID 128 PPID 122 VCB Engine compression brake
MID 128 PPID 123	Buffer air, TC	3, 4, 5	MID 128 PPID 123 Buffer air TC
MID 128 PPID 124	EPG 1, check	3, 4, 5	MID 128 PPID 124 Exhaust pressure governor
MID 128 SID 1-6	1/2/3/4/5/6 Unit injectors	2, 3, 4, 5, 7, 11	MID 128 SID 1/2/3/4/5/6 Injector
MID 128 SID 18	Drainage valve, water separator	3, 4, 5	MID 128 SID 18 Drain valve, water separator
MID 128 SID 21	Engine position timing sensor	3, 8	MID 128 SID 21 Engine position timing sensor
MID 128 SID 22	Engine speed sensor	2, 3, 8	MID 128 SID 22 Engine speed sensor
MID 128 SID 33	Fan control	3, 4, 5	MID 128 SID 33 Fan control
MID 128 SID 70	Preheater element 1	3, 4, 5	MID 128 SID 70 Preheater element 1
MID 128 SID 78	Fuel priming pump	4, 5	MID 128 SID 78 Fuel priming pump
MID 128 SID 230	Idle validation switch	3, 4	MID 128 SID 230 Idle validation switch 1
MID 128 SID 231	SAE J1939 Control link	2, 11	MID 128 SID 231 SAE J1939 Control link

Fault code	Component/Function	FMI	Section
MID 128 SID 232	5V DC supply	3, 4	MID 128 SID 232 5 Volt DC supply
MID 128 SID 250	Information link SAE J1587/J1708	12	MID 128 SID 250 J1587/1708 Information link
MID 128 SID 253	Data set memory EEPROM	2, 12	MID 128 SID 253 Data set memory EEPROM
MID 128 SID 254	Engine electronic control unit (EECU)	2, 8, 9, 11, 12, 13	MID 128 SID 254 Engine electronic control unit (EECU)
MID 128 PSID 161	VIN	12	MID 128 PSID 161 VIN
MID 128 PSID 162	VIN	2	MID 128 PSID 162 VIN
MID 128 PSID 201	SAE J1939 Data link interruption	9	MID 128 PSID 201 SAE J1939 Data link interruption

MID 128 PID 26 Fan speed percent



General information

Component: (B32) Fan speed sensor

Fault code

FMI 3

Short circuit to battery voltage or break.

Condition for fault code:

- Engine running.
- Voltage on EA6 greater than 65% of battery voltage (0.65 * Ubat).

Possible cause:

- Short circuit to battery voltage, signal cable.
- Short circuit to battery voltage, supply cable.
- Break, signal cable.
- Break, supply cable.
- Break, earth cable.
- Fault in sensor.

Reaction from the control unit:

- Fault code is set.
- Yellow light requested.

Noticeable external symptoms:

- Yellow lamp lights.
- 100% fan speed
- High fuel consumption

Appropriate check:

- Active FMI
  28415–3 MID 128 PID 26 Fan speed percent, check.
- Inactive FMI
  This FMI is only active when the engine is running. The fault code will be shown as inactive (when the fault code is read out) when the engine is turned off.

VCADS Pro: 17004–3 Fault codes, test mode

If the fault code becomes active during test Fault codes, test mode, fault trace according to Active FMI
If the fault code does not become active, try activating it during a test drive. In order to fault trace, the fault code must be active.

FMI 8

Abnormal frequency.

Condition for fault code:

- The engine control unit detects extra pulses on the fan speed signal.

Possible cause:

- Poor insulation or faulty cable harness.
- Fault in sensor.
- Damaged fan.

Reaction from the control unit:

- Fault code is set.
- Yellow light requested.

Noticeable external symptoms:

- Yellow lamp lights.
- 100% fan speed
- High fuel consumption

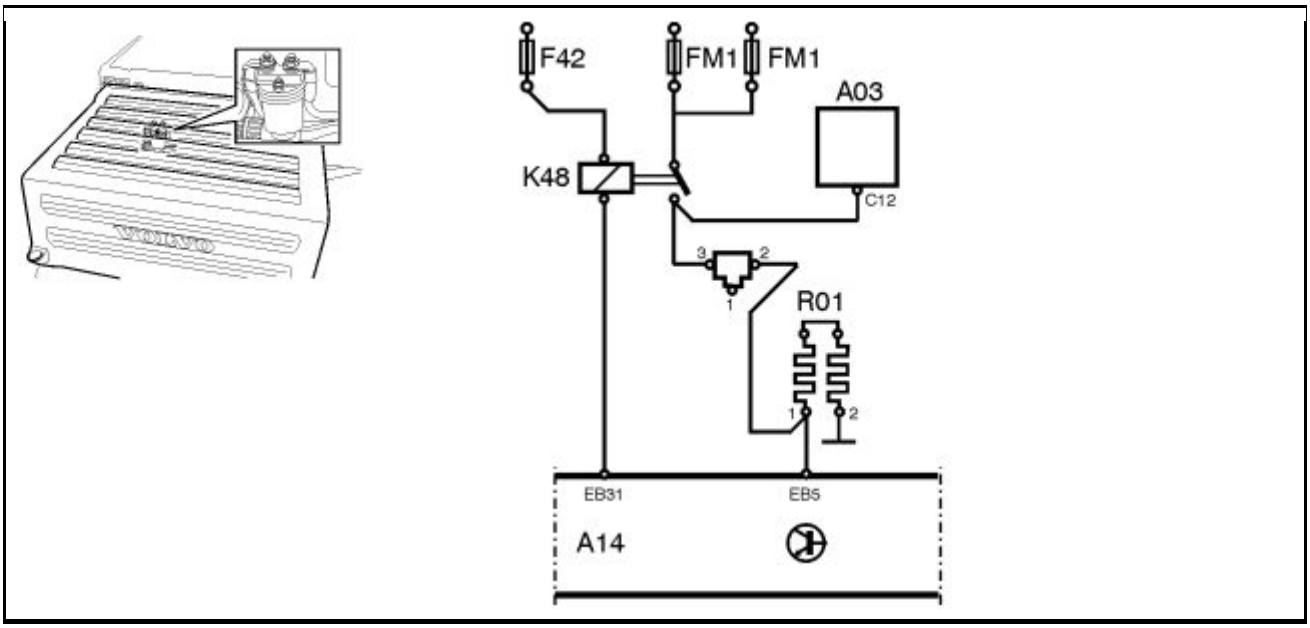
Appropriate check:

- Active FMI
  28415–3 MID 128 PID 26 Fan speed percent, check.
- Inactive FMI
  This FMI is only active when the engine is running. The fault code will be shown as inactive (when the fault code is read out) when the engine is turned off.

VCADS Pro: 17004–3 Fault codes, test mode

If the fault code becomes active during test Fault codes, test mode, fault trace according to Active FMI
If the fault code does not become active, try activating it during a test drive. In order to fault trace, the fault code must be active

MID 128 PID 45 Preheater status



General information

Component: (K48) Relay

Fault code

FMI 3

Short circuit to battery voltage.

Condition for fault code:

- Output activated.
- Short circuit to battery voltage on EB31.

Possible cause:

- Short circuit to battery voltage on cable between pre-heating relay and engine control unit.

- Short circuit in pre-heating relay.

Reaction from the control unit:

- Fault code is set.
- Yellow light requested.
- The engine control unit switches off the output.

Noticeable external symptoms:

- Yellow lamp lights.
- Pre-heating relay never activated.
- White smoke during cold start.
- Difficult to start in extreme cold.

Appropriate check:

- Inactive/Active FMI
  This fault code is only active for a short time, while the starter key is in the pre-heater position.
  28450–3 MID 128 PID 45 Preheater status, check.

FMI 4

Short circuit to ground.

Condition for fault code:

- Output closed.
- Short circuit to ground on EB31.

Possible cause:

- Short circuit to ground on cable between pre-heating relay and engine control unit.
- Fault in pre-heater relay.

Reaction from the control unit:

- Fault code is set.
- Yellow light requested.

Noticeable external symptoms:

- Yellow lamp lights.
- Induction air too hot since pre-heating relay constantly active.

Appropriate check:

- Active FMI
  28450–3 MID 128 PID 45 Preheater status, check.
- Inactive FMI
  VCADS Pro: 17004–3 Fault codes, test mode
  If the fault code becomes active during test Fault codes, test mode, fault trace according to Active FMI
  If the fault code does not become active, try activating it during a test drive. In order to fault trace, the fault code must be active.

FMI 5

Break.

Condition for fault code:

- Output closed.
- Circuit interruption.

Possible cause:

- Blown fuse to the supply for pre-heating relay.
- Break in the cables between the engine control unit and the pre-heater relay.
- Open circuit in pre-heating relay.
- Break in feed cable to pre-heater relay.

Reaction from the control unit:

- Fault code is set.
- Yellow light requested.
- The engine control unit switches off the output.

Noticeable external symptoms:

- Yellow lamp lights.
- Pre-heating relay never activated.
- White smoke during cold start.
- Difficult to start in extreme cold.

Appropriate check:

- Active FMI

  28450–3 MID 128 PID 45 Preheater status, check.
- Inactive FMI

  This FMI is only active when the relay is activated. The fault code will be shown as inactive (when the fault code is read out) when the relay is not activated.

MID 128 PID 49 ABS control status