

B5234T/T5 - 2319cc 20 valve turbo. Motronic 4.3 engine management system

Whats here:

A1 Transmission

A2 Fuel System

A3 ABS

A5 Transmission Control

A6 Ignition System

A7 Combined Instrument

B1 Climate Control

B2 Cruise Control

B5 SRS

B6 Power Seat

Instructions on how to read and reset codes.

Automatic Transmission Fault Codes A1

CODE	MEANING
1-1-1	No fault detected
1-1-2	Solenoid S1 circuit shorted to 12 volts
1-1-3	Fault in ECU
1-1-4	Break in driving mode selector circuit
1-2-1	Solenoid S1 circuit shorted to earth
1-2-2	Break in solenoid S1 circuit
1-2-3	Solenoid STH circuit shorted to 12 volts
1-2-4	driving mode selector circuit shorted to earth
1-3-1	Break or short circuit to earth in solenoid STH circuit
1-3-2	Fault in ECU
1-3-4	Incorrect load signal
1-4-1	Oil temperature sensor circuit shorted to earth
1-4-2	Break in oil temperature sensor circuit
1-4-3	Kickdown switch circuit shorted to earth
2-1-1	Fault in ECU
2-1-2	Solenoid S2 circuit shorted to 12 volts
2-1-3	Throttle position signal too high
2-2-1	Solenoid S2 circuit shorted to earth
2-2-2	Break in solenoid S2 circuit
2-2-3	Throttle position signal too low
2-3-1	Irregular throttle position signal
2-3-2	Vehicle speed sensor signal absent
2-3-3	Incorrect speedometer signal
2-3-5	Oil temperature too high
2-4-5	Break or short circuit to earth in torque limiting circuit
3-1-1	Transmission RPM sensor signal absent
3-1-2	Transmission RPM sensor signal faulty
3-1-3	incorrect signal from gear position sensor
3-2-2	Incorrect gear ratio for given road speed
3-2-3	lock up slips or not engaged
3-3-1	Solenoid SL circuit shorted to 12 volts

- 3-3-2 Break in solenoid SL circuit
- 3-3-3 Solenoid SL circuit shorted to earth

Motronic 4.3 System A2

CODE	PROBABLE CAUSE (for Volvo vehicles)
1-1-2	ECU faulty
1-1-5	faulty signal to No. 1 cylinder injector
1-2-1	MAF sensor signal absent or faulty
1-2-3	Coolant temperature sensor signal absent or faulty
1-2-5	faulty signal to No. 2 cylinder injector
1-3-1	Engine RPM sensor signal absent or faulty
1-3-2	Battery voltage too low or too high
1-3-5	faulty signal to No. 3 cylinder injector
1-4-3	Front knock sensor signal absent or faulty
1-4-4	load signal absent or faulty (fuel system)
1-4-5	faulty signal to No. 4 cylinder injector
1-5-2	air pump valve signal absent or faulty
1-5-4	Leak in EGR system (leakage or excessive flow)
1-5-5	faulty signal to No. 5 cylinder injector
2-1-2	heated oxygen Sensor Signal absent or faulty
2-1-4	Engine RPM sensor signal absent intermittently
2-2-3	Idle air control valve signal absent or faulty
2-2-5	A/C pressure sensor signal absent or faulty
2-3-1	Long term fuel mixture too lean or too rich in part load stage
2-3-2	long term fuel mixture too lean or rich at idle
2-3-3	long term idle air trim outside control range
2-3-5	EGR controller signal absent or faulty
2-4-1	EGR system flow fault
2-4-3	throttle position sensor signal outside of voltage range
2-4-4	Knock control at limit
2-4-5	idle air control valve closing signal faulty/absent
3-1-1	Vehicle speed sensor signal absent
3-1-3	EVAP valve signal absent or faulty
3-1-4	Camshaft position sensor signal absent or faulty
3-1-5	EVAP emission control system fault
3-2-3	Malfunction indicator lamp signal faulty
3-2-5	ECU memory loss
3-3-5	request for Malfunction indicator lamp signal from auto transmission ECU
3-4-2	air conditioning system relay control signal fault
3-4-3	fuel pump relay control signal faulty
4-1-1	Throttle position sensor signal outside of voltage range
4-1-3	EGR temperature sensor signal absent or faulty
4-1-4	Turbo boost pressure too high
4-1-6	Turbo boost reduced by auto transmission ECU
4-3-2	High temperature inside ECU module box
4-3-3	rear knock sensor signal absent/faulty
4-3-5	heated oxygen sensor response too slow
4-4-2	air pump relay signal absent or faulty
5-1-1	long term fuel mixture too rich at idle
5-1-2	short term fuel mixture too rich
5-1-3	Excessively High temperature in ECU module box
5-1-4	Engine cooling fan faulty at half speed
5-1-5	Engine cooling fan faulty at full speed
5-2-1	Oxygen sensor heating faulty

5-2-3	signal to ECU module box cooling fan shorted to 12 volts
5-2-4	transmission torque control signal faulty
5-3-5	turbo regulator valve fault
5-4-1	EVAP valve signal fault

ABS and TRACS fault codes A3

CODE	MEANING
1-1-1	No Fault Detected
1-2-1	LH Front Wheel Sensor – faulty signal at speeds less than 25 mph (40 km/h)
1-2-2	RH Front Wheel Sensor – faulty signal at speeds less than 25 mph (40 km/h)
1-2-3	LH Rear Wheel Sensor – faulty signal at speeds less than 25 mph (40 km/h)
1-2-4	RH Rear Wheel Sensor – faulty signal at speeds less than 25 mph (40 km/h)
1-4-1	Faulty Brake Pedal position sensor, shorted to earth or supply
1-4-2	Faulty stop light switch, open circuit or short circuit
1-4-3	ECU memory fault
1-4-4	Brake discs overheated (cars with TRACS only)
2-1-1	LH Front Wheel Sensor – no signal when moving off
2-1-2	RH Front Wheel Sensor – no signal when moving off
2-1-3	LH Rear Wheel Sensor – no signal when moving off
2-1-4	RH Rear Wheel Sensor – no signal when moving off
2-2-1	LH Front Wheel Sensor – no signal from ABS system
2-2-2	RH Front Wheel Sensor – no signal from ABS system
2-2-3	LH Rear Wheel Sensor – no signal from ABS system
2-2-4	RH Rear Wheel Sensor – no signal from ABS system
3-1-1	LH Front Wheel Sensor – open circuit or short circuit
3-1-2	RH Front Wheel Sensor – open circuit or short circuit
3-1-3	LH Rear Wheel Sensor – open circuit or short circuit
3-1-4	RH Rear Wheel Sensor – open circuit or short circuit
3-2-1	LH Front Wheel Sensor - intermittent signal at speed over 25 mph (40 km/h)
3-2-2	RH Front Wheel Sensor - intermittent signal at speed over 25 mph (40 km/h)
3-2-3	LH Rear Wheel Sensor - intermittent signal at speed over 25 mph (40 km/h)
3-2-4	RH Rear Wheel Sensor - intermittent signal at speed over 25 mph (40 km/h)
4-1-1	Inlet valve for LH front brake, open circuit or short circuit
4-1-2	Return valve for LH front brake, open circuit or short circuit
4-1-3	Inlet valve for RH front brake, open circuit or short circuit
4-1-4	Return valve for RH front brake, open circuit or short circuit
4-2-1	Inlet valve for rear brakes, open circuit or short circuit
4-2-2	Return valve for rear brakes, open circuit or short circuit
4-2-3	TRACS valve, open circuit or short circuit
4-2-4	TRACS pressure sensor, faulty or short circuit
4-4-1	ECU processing fault
4-4-2	Hydraulic modulator pump pressure low
4-4-3	Electrical or mechanical fault in hydraulic modulator pump motor
4-4-4	No power supply to hydraulic modulator valves

Transmission Control Codes A5

CODE	MEANING
2-4-2	Turbocharger control valve signal absent or faulty
3-1-2	No knock signal from ignition control module
3-4-2	A/C blocking relay signal absent or faulty
4-2-1	Boost pressure signal in control module faulty
4-2-3	Throttle position sensor signal outside voltage range
4-2-4	Fuel control module load signal absent or faulty

4-3-1 Radiator temp sensor signal absent or faulty

Ignition Codes A6

CODE	MEANING
1-1-1	No DTC set
1-1-2	Control Module fault
1-2-3	Engine Coolant Temperature Sensor from Control module missing or faulty
1-3-1	Engine speed (RPM) sensor signal missing
1-4-2	Control Module Fault
1-4-3	Knock sensor missing or faulty
1-4-4	Ignition control module load signal missing
1-5-4	EGR system flow too high in system
2-1-4	Engine speed (RPM) sensor signal missing sporadically
2-2-4	Engine Coolant Temperature sensor signal missing or faulty
2-3-4	Throttle Position sensor signal missing at idle
2-4-1	EGR system flow too low in system
2-4-3	Throttle Position sensor signal missing at idle
3-1-1	Vehicle speed signal missing or faulty
3-1-4	Camshaft Position sensor signal missing or faulty
3-2-4	Camshaft Position sensor signal missing sporadically
4-1-1	Throttle position sensor signal from fuel injection system missing or faulty
4-1-3	EGR temperature sensor signal faulty
4-3-2	Control module box temperature too high level 1
4-3-3	Knock sensor signal missing or faulty
5-1-3	Control module box temperature too high, level 2

Instrument Cluster Codes A7

CODE	MEANING
1-1-1	No fault detected
1-1-2	Fuel gauge sender unit short circuit
1-1-3	Fuel gauge sender unit open circuit
1-2-1	Temperature signal interval too short
1-2-2	Temperature signal interval too long
1-2-3	Digital output 48 pulse short circuit to supply
1-3-1	Digital output 12 pulse short circuit to supply
1-3-2	No RPM sensor signal
1-3-3	Fuel level signal to trip computer short circuit to supply

Electronic Climate Control System B1

CODE	MEANING
1-1-1	No fault detected
1-2-1	outside temperature sensor shorted to earth
1-2-2	outside temperature sensor open circuit or shorted to 12 volts
1-2-3	Driver side Interior temperature sensor shorted to earth
1-2-4	Driver side interior temperature sensor open circuit or shorted to 12 volts
1-2-5	Passenger side Interior temperature sensor shorted to earth
1-2-6	Passenger side Interior temperature sensor open circuit/shorted to 12 volts
1-3-1	Driver side air duct temperature sensor shorted to earth
1-3-2	Driver side air duct temperature sensor open circuit or shorted to 12 volts
1-3-3	Passenger side air duct temperature sensor shorted to earth
1-3-4	Passenger side air duct temperature sensor open circuit/shorted to 12 volts

1-3-5	No signal from engine coolant temperature sensor
1-4-1	Faulty signal from driver side temperature selector switch
1-4-3	Faulty signal from passenger side temperature selector switch
1-4-5	Faulty signal from function selector switch
1-5-1	Signal from fan speed sensor missing or too high
1-5-2	Signal from fan speed sensor shorted to earth
2-1-1	Driver side damper motor position sensor open circuit/shorted to 12 volts
2-1-2	Driver side damper motor position sensor shorted to earth
2-2-1	Pass. side damper motor position sensor open circuit/shorted to 12 volts
2-2-2	Pass. side damper motor position sensor Shorted to earth
2-3-1	Ventilation damper motor position sensor open circuit/shorted to 12 volts
2-3-2	Ventilation damper motor position sensor shorted to earth
2-3-3	Floor/defrost damper motor position sensor open circuit/shorted to 12 volts
2-4-4	Floor/defrost damper motor position sensor shorted to earth
2-3-5	Recirculation damper motor position sensor open circuit/shorted to 12 volts
2-3-6	Recirculation damper motor position sensor shorted to earth
3-1-1	Driver side damper motor shorted to earth or 12 volts
3-1-2	Passenger side damper motor shorted to earth or 12 volts
3-1-3	Ventilation damper motor shorted to earth or 12 volts
3-1-4	floor/defrost damper motor shorted to earth or 12 volts
3-1-5	Recirculation damper motor shorted to earth or 12 volts
3-2-1	Driver side damper motor active too long
3-2-2	Passenger side damper motor active too long
3-2-3	Ventilation damper motor active too long
3-2-4	Floor/defrost side damper motor active too long
3-2-5	Recirculation damper motor active too long
4-1-1	Blower fan seized or drawing excessive current
4-1-2	Driver side interior temperature sensor inlet fan shorted to earth
4-1-3	No control voltage at driver's side interior temperature sensor inlet fan
4-1-4	Driver side interior temperature sensor inlet fan seized
4-1-5	Passenger's side interior temperature sensor inlet fan shorted to earth
4-1-6	No control voltage at passenger side interior temperature sensor inlet fan
4-1-7	Passenger side interior temperature sensor inlet fan seized
4-1-8	No control signal to blower fan power stage
4-1-9	Faulty diagnostic signal from blower fan power stage
4-2-0	ECU fault in program memory
5-1-1	Damper motor limit position self adjustment not carried out

Cruise Control Codes B2

CODE	MEANING
1-1-1	No faults detected
1-1-2	Abnormal speed signal
1-2-2	Speed has not exceeded 22mph or no speed signal
2-1-1	Control module malfunction
2-1-2	Malfunction in the circuit to the vacuum pump or regulator

Airbag Codes (SRS) B5

CODE	MEANING
1-1-1	No fault detected
1-1-2	Sensor module fault
1-2-7	SRS lamp open/short circuit
2-1-1	Drivers airbag short circuit
2-1-2	Drivers airbag open circuit

2-1-3	Drivers airbag short circuit to ground
2-1-4	Drivers airbag short circuit to supply
2-2-1	Passenger airbag short circuit
2-2-2	Passenger airbag open circuit
2-2-3	Passenger airbag short circuit to ground
2-2-4	Passenger airbag short circuit to supply
2-3-1	Left belt tensioner short circuit
2-3-2	Left belt tensioner open circuit
2-3-3	Left belt tensioner short circuit to ground
2-3-4	Left belt tensioner short circuit to supply
2-4-1	Right belt tensioner short circuit
2-4-2	Right belt tensioner open circuit
2-4-3	Right belt tensioner short circuit to ground
2-4-4	Right belt tensioner short circuit to supply

Electronic Seats B6

CODE	MEANING
1-1-1	No Faults detected
1-1-2	Signal position sensor, motor 1, absent or faulty
1-2-1	Signal position sensor, motor 2, absent or faulty
1-2-2	Signal position sensor, motor 3, absent or faulty
2-1-1	Signal position sensor, motor 4, absent or faulty
1-2-3	Motor 1 functions although equivalent button not activated
1-3-1	Motor 2 functions although equivalent button not activated
1-3-2	Motor 3 functions although equivalent button not activated
1-3-3	Motor 4 functions although equivalent button not activated
3-2-3	Fault in stored memory position 1
3-2-2	Fault in stored memory position 2
3-3-3	Fault in stored memory position 3
3-3-1	Lead disconnected, motor 1*
3-3-2	Lead disconnected, motor 2*
3-3-3	Lead disconnected, motor 3*
1-1-4	Lead disconnected, motor 4*
1-4-3	Motor 1 turns in wrong direction
1-4-4	Motor 2 turns in wrong direction
2-1-4	Motor 3 turns in wrong direction
2-2-4	Motor 4 turns in wrong direction
4-1-4	Faulty end position calibration

*These codes may also be displayed if the motors are not allowed to reach their limit stops i.e. the backrest contacting the rear seat before maximum tilt is reached.

Gather Codes:

- Ignition off.
- Stick the flylead attached to the cover into appropriate socket. (A1, A2, etc.)
- Ignition on.
- Press the button next to the led once.
- Codes appear as blinks, copy down the code onto paper.
- Press button again after code displayed to see next code.
- After all codes displayed, codes repeat. (continue copying down codes until first code repeats)
- 1-1-1 means nothing's there (hopefully, all OK).
- Switch off ignition.

Fault codes can't be deleted until you have read them all at least once.

Reset System:

- Ignition off.
- Stick the flylead attached to the cover into appropriate socket. (A1, A2, etc.)
- Ignition on.
- Press the button next to the led once for about five seconds.
- Release.
- Red LED will light.
- When lit, press the button next to the led again for about five seconds.
- Red LED goes out.
- Ignition off, keep the flylead attached to the cover into appropriate socket. (A1, A2, etc.)
- Ignition on.
- Press button once for a second, ensure codes are cleared or write down code(s) repeat code gathering procedure.

Clearing Service Light for OBD-I:

- Turn the ignition switch to the 2nd detent (ON?).
- Insert test lead at the OBD-I terminal to socket A7.
- Press the test button for 4 times. The LED should light and stay on.
- Press the test button once and release, wait for the LED to light.
- Press the test button for 5 times and release, wait for the LED to light.
- Press the test button for once and release.
- The LED should flash, which indicates the Service Light has been cleared.