Energy saving mode status: Active

ECE emissions warning lamp:

The diagnostic function monitors whether the transport module's fault memory reduction: off

CC message: none

No PP necessary

Potential problem source(s):

Throttle valve moves stiffly, sticking, contaminated

This fault is logged in the control module's fault memory reduction: on

Breakdown notice:

Reduced power

Possible apparent symptoms:

Ability to continue driving is restricted because engine speed is limited to roughly 1300 rpm. None

Throttle valve, throttle-valve potentiometer 1, electric:

Defective throttle-valve actuator motor

Defective throttle-valve actuator motor

Defective throttle-valve actuator motor

Replace throttle valve

Move throttle valve by hand, checking for resistance

Check wiring harness between DME and throttle valve

Defective throttle-valve actuator motor and DME

AD converter input in DME defective

AD converter input in DME defective

Throttle-valve potentiometers

Replace DME

Throttle valve, function: sluggish, too slow

Throttle valve moves stiffly, sticking, contaminated

Film Air Mass Meter (Bank 1) Throttle Position Sensor / Air Mass Meter

Throttle-valve actuator, position monitoring: positional

Throttle Valve Position Control, Control Deviation Value Comparison Throttle Position Sensor 1 / Hot

Throttle-valve actuator sensor 1 for electrical faults. P0123 Throttle/Pedal Position Sensor/Switch 'A' Circuit High

Throttle Position Sensor 1

Throttle valve (L4: 10404, 10405, 10406, 10408, 14.9%).

The diagnostic fault code is entered together with the remaining sensor. The deviation in the sensor signal is implausible for air mass path at one or both throttle-valve potentiometers.

Move throttle valve by hand, checking for resistance

Check wiring harness between DME and throttle valve

Defective throttle-valve actuator motor and DME

Defective throttle-valve actuator motor

Replace DME

Replace DME

Defective throttle-valve actuator motor

Replacing the throttle valve actuator 1 for electrical faults. P0123 Throttle/Pedal Position Sensor/Switch 'A' Circuit High

Throttle Position Sensor 1

Throttle valve (L4: 10404, 10405, 10406, 10408, 14.9%).

The diagnostic fault code is entered together with the remaining sensor. The deviation in the sensor signal is implausible for air mass path at one or both throttle-valve potentiometers.

Move throttle valve by hand, checking for resistance

Check wiring harness between DME and throttle valve

Defective throttle-valve actuator motor and DME

Defective throttle-valve actuator motor

Replace DME

Replace DME

Defective throttle-valve actuator motor

Replacing the throttle valve actuator 1 for electrical faults. P0123 Throttle/Pedal Position Sensor/Switch 'A' Circuit High

Throttle Position Sensor 1

Throttle valve (L4: 10404, 10405, 10406, 10408, 14.9%).

The diagnostic fault code is entered together with the remaining sensor. The deviation in the sensor signal is implausible for air mass path at one or both throttle-valve potentiometers.

Move throttle valve by hand, checking for resistance

Check wiring harness between DME and throttle valve

Defective throttle-valve actuator motor and DME

Defective throttle-valve actuator motor

Replace DME

Replace DME

Defective throttle-valve actuator motor

Replacing the throttle valve actuator 1 for electrical faults. P0123 Throttle/Pedal Position Sensor/Switch 'A' Circuit High

Throttle Position Sensor 1

Throttle valve (L4: 10404, 10405, 10406, 10408, 14.9%).

The diagnostic fault code is entered together with the remaining sensor. The deviation in the sensor signal is implausible for air mass path at one or both throttle-valve potentiometers.

Move throttle valve by hand, checking for resistance

Check wiring harness between DME and throttle valve

Defective throttle-valve actuator motor and DME

Defective throttle-valve actuator motor

Replace DME

Replace DME

Defective throttle-valve actuator motor

Replacing the throttle valve actuator 1 for electrical faults. P0123 Throttle/Pedal Position Sensor/Switch 'A' Circuit High

Throttle Position Sensor 1

Throttle valve (L4: 10404, 10405, 10406, 10408, 14.9%).

The diagnostic fault code is entered together with the remaining sensor. The deviation in the sensor signal is implausible for air mass path at one or both throttle-valve potentiometers.

Move throttle valve by hand, checking for resistance

Check wiring harness between DME and throttle valve

Defective throttle-valve actuator motor and DME

Defective throttle-valve actuator motor

Replace DME

Replace DME

Defective throttle-valve actuator motor

Replacing the throttle valve actuator 1 for electrical faults. P0123 Throttle/Pedal Position Sensor/Switch 'A' Circuit High

Throttle Position Sensor 1
<table>
<thead>
<tr>
<th>Bank 1</th>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Throttle Valve</td>
<td>Adaptation Limp-Home Position</td>
</tr>
<tr>
<td>1</td>
<td>Throttle Valve</td>
<td>Adaptation Conditions Not Met</td>
</tr>
<tr>
<td>1</td>
<td>Pedal Data</td>
<td>Sensor 1 Voltage (0x584 N)</td>
</tr>
</tbody>
</table>

**Potential problem source(s):**
- Defective throttle-valve actuator motor
- Defect in wiring harness between throttle valve
- Foreign object/matter in the intake manifold or within the throttle stop range violation
- Defective plug(s) or wiring harness
- HFM defective

**Breakdown notice:**
- Reduced power ability to continue driving is restricted because engine system for contamination
- Breakage notice: simultaneous operation of both sensor 1 and 2 voltage is applied, check measured data in tester
- CC message: on none
- US emissions warning lamp: on

**Other symptoms:**
- Increased idle speed and no processing of acceleration pedal data
- Fuel consumption changes in open position (accompanied by low boost pressure malfunction)
- It is possible to continue driving the vehicle, but ability to continue driving is restricted because engine system for contamination
- Possible apparent symptoms:
  - Foreign object/matter

**Diagnosis function:**
- Monitors the throttle valve to determine whether it reaches the lower mechanical travel
- Monitors the mutual deviation of the sum voltage of sensors 1 and 2

**Fault during initial initialization:**
- Potential problem source(s):
  - Defective HFM, problem with airflow to HFM, clean air tube plenum chamber, open oil filler cap
  - Malfunction in components

**Module's fault memory:**
- HFM defective
- Defective HFM, problem with airflow to HFM, clean air tube plenum chamber, open oil filler cap

**Potential problem source(s):**
- Defective plug(s) or wiring harness
- HFM defective
- Defective plug(s) or wiring harness
- Foreign object/matter in the intake manifold or within the throttle stop range violation

**Challenger:**
- Mass-airflow sensor, signal: implausible period duration, signal is zero.
- Mass-airflow sensor, plausibility: air mass too low in absolute value (34.5% pedal)
- Air-mass sensor, signal: implausible period duration, signal is zero.
- Air-mass sensor, plausibility: air mass too low in absolute value (34.5% pedal)

**Check:**
- Check throttle valve (contamination, carbon deposits, faults)
Potential problem source(s):
- ECE electronic engine power
- Check wiring harness between DME and accelerator

Possible apparent symptoms:
- Limit on pedal value variation and on maximum
- Accelerator pedal module sensor 1
- Replace accelerator pedal module's fault memory
- US emissions warning lamp: on
- US electronic engine power
- Defective accelerator pedal module's pedal-reduction: on
- CC message: on
- US emissions warning lamp: on
- Accelerator pedal module defective
- CC message: on
- US emissions warning lamp: off
- Accelerator pedal module defective
- CC message: on
- US emissions warning lamp: on
- Accelerator pedal module defective
- CC message: on
- US emissions warning lamp: on
- Accelerator pedal module defective
- CC message: on
- US emissions warning lamp: on
- ECE emissions warning lamp: on
- ECE electronic engine power
- Check wiring harness between intake-manifold pressure sensor and DME
- Replace intake-manifold pressure sensor

The fault is recognized when the voltage of sensor 1 and sensor 2 exceeds a certain value. This fault is logged in the control module's fault memory.

The diagnostic function monitors the voltage of sensor 1 and sensor 2 and checks if it exceeds a certain limit. If it does, the fault is recognized and logged in the control module's fault memory.

The response to the fault is to replace the accelerator pedal module and check the wiring harness between DME and accelerator.

Multiple fault
- Defective DME
- Defective wiring harness
- Sensor has been tampered with

Breakdown notice:
- Replace the DME if the fault code is currently present.
- Replace DME if the fault code is currently present.

Potential problem source(s):
- Internal DME fault, because barometric-pressure sensor is defective
- Defective wiring harness between DME and Intake-manifold pressure sensor
- Replace DME

Possible apparent symptoms:
- Internal DME fault, because barometric-pressure sensor is defective
- Defective wiring harness between DME and Intake-manifold pressure sensor
- Replace DME

The diagnostic function monitors the DME's internal calculation algorithms. If the calculation algorithms are defective, the fault is recognized and logged in the control module's fault memory.

The response to the fault is to replace the DME.
No electrical fault in barometric-module's fault memory.

Potential problem source(s):

- Check cutoff relay (when Terminal 15 is off then 0 V should be present at both screw connections (M6).)

- Replace the DME if the fault code is currently present or has been logged more than three times.

- A terminal status switch must be conducted before this fault can be deleted.

- It is possible to continue driving the vehicle, but passing maneuvers should not be attempted owing to the reduction in engine output.

- The diagnostic function monitors variations in the throttle-valve actuator motor and DME actuator motor, throttle-valve potentiometer 2: signal 0x107A73 1079923 disconnection controlling operation of the throttle valve.

- When a single fault occurs at the throttle valve, the diagnostic function monitors the operation of the throttle-valve sensor defective.

- Defective wiring harness, STEUERN_DK, STEUERN_ENDE none Y - DME defective present or has been logged more than three times.

- The diagnostic function monitors the plausibility of the ambient-pressure sensor, plausibility: pressure too low.

- Check wiring harness between DME and throttle valve.

- Replace throttle valve.
Potential problem source(s):
- Defective throttle-valve actuator
- Defective throttle-valve sensor
- Defect in wiring harness between throttle-valve actuator and DME
- Defect in wiring harness between throttle-valve sensor and DME
- Defective potential amplifier
- Defective wiring harness
- Defective throttle valve
- Defective intake-air temperature sensor
- Defective Chalfe-air temperature sensor
- Defective control module EML
- Defective control module DME

Breakdown notice:
- During the spring test the diagnostic function monitors the throttle valve to determine whether it reaches the specified position within the specified period.
- It is possible to continue driving the vehicle, but reduced power will be activated.

Possible apparent symptoms:
- Throttle-valve actuator, closing spring check: abort immediately.
- Throttle-valve actuator, opening spring check: abort immediately.

P0113 Intake Air Temperature Sensor 1 Circuit High (Bank 1)
- Intake-Air temperature sensor defective
- Charge-air temperature sensor defective
- Charge-air temperature sensor, electrical : Signal not released
- Charge Air Cooler Temperature Sensor Signal Stuck

P007C (Bank 1)
- Charge-Air Temperature Sensor Signal Stuck

P10B8 (Bank 1)
- Charge Air Temperature Sensor Signal Stuck

Engine runs roughly
- Replace throttle valve
- Replace intake-air temperature sensor
- Replace DME

Intake-air temperature sensor defective
- Check wiring harness between DME and intake-air temperature sensor
- Replace intake-air temperature sensor

Throttle valve, adaptation: Re-teach, lower limit
- Replace throttle valve
- Replace throttle-valve actuator

Throttle-valve actuator, closing spring check: abort immediately.
- Throttle-valve actuator, opening spring check: abort immediately.

Potential problem source(s):
- Stiction in throttle valve
- Defective throttle-valve actuator
- Defective throttle-valve sensor
- Defect in wiring harness between throttle valve and DME

Intake-Air temperature sensor, electric: short circuit to objects
- Replace intake-air temperature sensor
- Replace control module EML
- Replace control module DME

Charge-air temperature sensor, electric: short circuit to objects
- Replace charge-air temperature sensor
- Replace control module EML
- Replace control module DME

Potential problem source(s):
- Defective intake-air temperature sensor
- Defective Chalfe-air temperature sensor
- Defective control module EML
- Defective control module DME

Breakdown notice:
- During the spring test the diagnostic function monitors the voltage of the intake-air temperature sensor to detect jumps that violate the specified upper and lower voltage.
- It is possible to continue driving the vehicle, but reduced power will be activated.

Possible apparent symptoms:
- Replace intake-air temperature sensor
- Replace DME

Throttle-valve actuator, closing spring check: abort immediately.
- Throttle-valve actuator, opening spring check: abort immediately.

P007C (Bank 1)
- Intake-Air temperature sensor defective
- Charge-air temperature sensor defective
- Charge-air temperature sensor, electrical : Signal not released
- Charge Air Cooler Temperature Sensor Signal Stuck

P10B8 (Bank 1)
- Charge Air Temperature Sensor Signal Stuck

Engine runs roughly
- Replace throttle valve
- Replace intake-air temperature sensor
- Replace DME

Intake-air temperature sensor defective
- Check wiring harness between DME and intake-air temperature sensor
- Replace intake-air temperature sensor

Throttle valve, adaptation: Re-teach, lower limit
- Replace throttle valve
- Replace throttle-valve actuator

Throttle-valve actuator, closing spring check: abort immediately.
- Throttle-valve actuator, opening spring check: abort immediately.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Potential Problem Source(s)</th>
<th>Response to the Fault</th>
<th>Breakdown Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>P0122</td>
<td>Engine Coolant Temperature Sensor 1 Circuit High Engine Coolant Temperature Sensor Electrical</td>
<td>Defect in wiring harness to intake manifold, Defect in wiring harness to engine block heater or auxiliary heater</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>P0118</td>
<td>Engine Coolant Temperature Sensor 1 Circuit Low Engine Coolant Temperature Sensor Electrical</td>
<td>Coolant temperature sensor defective, Coolant temperature sensor's wires</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>P0073</td>
<td>Ambient Air Temperature Sensor Circuit 'A' High Ambient Air Temperature Sensor Electrical</td>
<td>Engine block heater or auxiliary heater may be installed, Defect in wiring harness to sensor</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>P110D</td>
<td>Ambient Air Temperature Sensor Faulty CAN Signal Ambient Air Temperature Sensor Signal</td>
<td>Outside temperature sensor defective, Outside temperature sensor's wires</td>
<td>Off</td>
<td>On</td>
</tr>
</tbody>
</table>

Possible apparent symptoms:
- Coolant temperature jumps of 30°C
- ECE emissions warning lamp: on
- US emissions warning lamp: off
- US electronic engine power reduction: off
- ECE electronic engine power reduction: off
- Fan at maximum rotation speed

Possible power reduction and plausibility:
- Collective fault: Outside temperature
The following conditions can lead to an incorrect battery change or defective battery:

- Check outside temperature sensor
- Auxiliary heater

Possible apparent symptoms:

- Engine heated by secondary source, such as MEVD17.2-

Breakdown notice:

- Charge-air temperature sensor, cold start: charge-air temperature sensor has been tampered with
- Charge-air temperature sensor, gradient: Rise too high temperature for excessively rapid rises
- Charge-air temperature sensor

Collective fault: Charge-air temperature sensor at cold starts.

Potential problem source(s):

- ECE electronic engine power
- US electronic engine power

Charge air temperature sensor, bank 1:

- Ambient Air Temperature Too Low
- Cold Start Intake Air Temperature Too Low (Bank 1)
- Intake Air Temperature 1 Cold Start

Potential problem source(s):

- Defective DME
- Defective wiring harness

Oxygen sensors, bank 1:

- Injector fault, bank 1:

Potential problem source(s):

- Defective DME
- Defective wiring harness

Oxygen sensors, bank 2:

- Fuel cut-off circuit to ground the injector's high-voltage side

Potential problem source(s):

- Defective DME
- Defective wiring harness
The diagnostic fault code is MEVD17.2- Injector, cylinder 1, activation: low-voltage side; short circuit to ground is present. The fault is recognized when a short circuit to ground is present.

Potential problem source(s):
- Defective injector
- Defective wiring harness

Breakdown notice:
- CC message: on
- US emissions warning lamp: on

Engine fault DME driver circuit that only activates one injector! Injectors 1 and 6, and 3 and 4, are connected to shared DME driver circuits. This means that diagnostic fault codes are always logged for both injectors, although usually only one is defective. When interchanging positions use injectors operated by a DME driver circuit that only activates one injector!
Breakdown notice:

- ECE emissions warning lamp: on
- ECE electronic engine power
- US emissions warning lamp: off
- US electronic engine power

Possible apparent symptoms:
- Engine runs roughly and can stall in extreme cases
- Engine fault although usually only one is defective.

Potential problem source(s):
- Defective wiring harness
- Defective injector
- Replace DME only if the fault remains continuously present
- Check wiring harness between DME and injectors 4
- CC message: on
- Check wiring harness between DME and injectors 1
- Check wiring harness between DME and injectors 3
- Check wiring harness between DME and injectors 6
- Replace DME only if the fault remains continuously present

The diagnostic function monitors control-activation of the injectors' high-voltage side.
- New injector to cylinder 4
- New injector to cylinder 1

Short circuit to ground is present.

Potential problem source(s):
- Defective wiring harness
- Defective injector
- Replace DME only if the fault remains continuously present
- Check wiring harness between DME and injectors 4
- Check wiring harness between DME and injectors 1
- Check wiring harness between DME and injectors 3
- Replace DME only if the fault remains continuously present

The fault is recognized when the current rises too slowly.

Potential problem source(s):
- Defective wiring harness
- Defective injector
- Replace DME only if the fault remains continuously present
- Check wiring harness between DME and injectors 4
- Check wiring harness between DME and injectors 1
- Check wiring harness between DME and injectors 3
- Replace DME only if the fault remains continuously present

The diagnostic function monitors control-activation of the injectors' high-voltage side.
- New injector to cylinder 1

Contact 3 times in an uninterrupted sequence, plus the injector's low-voltage side.
P3108 Open Injector Low Side Open Circuit - Defective...
Defective DME continues or if the fault frequency is greater than 3.

Possible apparent symptoms: Breakdown notice: on

Potential problem source(s): Defective wiring harness

Replace DME only if the fault remains continuously

The diagnostic fault code is P3120 Open Terminal 15 Voltage condition:

Onboard electrical system operating normally.

The fault is recognized when voltage is present at the DME input (E_U_INJ) although the relay has switched on.

Potential problem source(s): Defect at plug or in wiring harness between relay and DME.

Check plug and wiring harness between relay and DME.

Fuse defective

Check fuse

Defect at plug or in wiring harness between relay and DME.

Oxygen sensor before catalytic converter, fine mixture falls below a fault threshold every 500 km, if the fault remains for longer than 10 min.

Breakdown notice: on

Possible apparent symptoms: Breakdown notice: on

The diagnostic function monitors the wire for the injector's low-voltage side.

The diagnostic function monitors the oxygen sensor in the engine before catalytic converter, fine mixture (positive). This means that substantial amounts of exhaust gases in the catalytic converter will be oxygen before catalytic converter, fine mixture.

Breakdown notice: on

Possible apparent symptoms: Breakdown notice: on

The diagnostic function monitors the oxygen sensor in the engine before catalytic converter, fine mixture (positive) exceeds a level of positive 4%.

Breakdown notice: on

Possible apparent symptoms: Breakdown notice: on

The diagnostic function monitors the oxygen sensor in the engine before catalytic converter, fine mixture (negative) exceeds a level of negative 4%.
### Potential problem source(s):

- HFM system (positive crankcase ventilation, oil cap, oil dipstick, intake-manifold pressure sensor)
- Intake-manifold pressure sensor

### Breakdown notice:

- CC message:
  - ECE emissions warning lamp: off
  - US emissions warning lamp: off
  - US electronic engine power reduction: off

### Possible apparent symptoms:

- Engine runs poorly with power loss
  - Engine speed > 1600 rpm
  - Diagnostic fault code logged
  - Oxygen sensor (pre-catalyst)

### Mixture adaptation, idle: mixture too rich

##### At idle

- BN2020 0x118E02 1150466

- Voltage condition:
  - Onboard electrical system

- Active in EU and Japan

### Mixture adaptation, lower speed range: mixture too rich

- BN2020 0x119301 1151745

- Terminal 15 Voltage condition:
  - Onboard electrical system

- Active in US only

- Reduced power

### Mixture adaptation, idle: mixture too rich

- BN2020 0x119404 1152004

- Rail pressure sensor, plausibility: Signal frozen

- Active in US only

- Reduced power

- Standard EML Text

### Potential problem source(s):

- Poor-quality gasoline
- Defective injectors
- Camshaft position sensor
- Defective rail-pressure sensor
- Defect in high-pressure system
- Defect in wiring harness between DME and rail-pressure sensor
- Defect in wiring harness between DME and rail-pressure sensor
- Intake-air temperature sensor defective
- Oxygen sensor before catalytic converter defective
- Defect in low-pressure fuel system
- Fuel pre-supply pump

### Diagnosis:

- Because this is a secondary fault, start by repairing the problem source!
<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>System/Component</th>
<th>Condition</th>
<th>Description</th>
<th>Potential Problem Source(s)</th>
<th>Possible Apparent Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN2020 0x11A002 1155074</td>
<td>CAN</td>
<td>Rail-pressure sensor</td>
<td>Voltage</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>BN2020 0x11A701 1156865</td>
<td>CAN</td>
<td>Fuel Volume Regulator System</td>
<td>Deviation Too High</td>
<td>Fuel Volume Regulator</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>BN2020 0x11AC02 1158146</td>
<td>CAN</td>
<td>Fuel high-pressure system, cold start:</td>
<td>Pressure too low</td>
<td>Fuel high-pressure system</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>BN2020 0x11AE01 1158657</td>
<td>CAN</td>
<td>Fuel system</td>
<td>Leak</td>
<td>Fuel system</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Potential problem source(s):
- Fuel tank empty
- Pressure sensor
- Leak in fuel system
- US emissions warning lamp: off
- Reduced power
- US electronic engine power
- ECE emissions warning lamp:
- CC message: on
- Boost-pressure sensor defective
- Charge-air pressure sensor, electric: short circuit to bar, or the absolute boost pressure too low
- Charge-air pressure control, deactivation: charge-air pressure too low
- Defective flow-control valve
- Defective electropneumatic pressure converter in wastegate
- Defect in wiring harness between DME and boost-pressure sensor
- Defect in boost-pressure system
- Defective flow-control valve's control-activation wire for shorts to ground.
- Defective DME
- Boost-pressure control is deactivated to protect the sensor and DME
- Pressure limiter valve in EKP electric fuel pump
- Defect in wiring harness to fuel flow-control valve
- Defect in wiring harness to low-pressure sensor
- Inspect wiring harness to low-pressure sensor
- Replace DME
- Replace flow-control valve
- Boost-pressure sensor defective
- Charge-air pressure sensor, electric: short circuit to bar, or the absolute boost pressure too low
- Boost-pressure sensor defective
- Replace flow-control valve
- Defective DME
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- Defective DME
- Boost-pressure sensor defective
- Charge-air pressure sensor, electric: short circuit to bar, or the absolute boost pressure too low
- Boost-pressure sensor defective
- Replace flow-control valve
- Defective DME
- Boost-pressure sensor defective
- Charge-air pressure sensor, electric: short circuit to bar, or the absolute boost pressure too low
- Boost-pressure sensor defective
- Replace flow-control valve
- Defective DME
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- Defective DME
- Boost-pressure sensor defective
- Charge-air pressure sensor, electric: short circuit to bar, or the absolute boost pressure too low
- Boost-pressure sensor defective
- Replace flow-control valve
- Defective DME
- Boost-pressure sensor defective
- Charge-air pressure sensor, electric: short circuit to bar, or the absolute boost pressure too low
- Boost-pressure sensor defect
The fault is recognized when the ECE emissions warning lamp:
- Off
- ECE electronic engine power CC message: on
- Defect in wiring harness

Possible apparent symptoms:
- Defective DME
- Replace DME

Potential problem source(s):
- DME defective
- MY10 US:
- Boost-pressure sensor defective
- Replace sensor
- MY10 ECE:
- Boost-pressure sensor deviates from the average for the pressure sensors (barometric pressure, boost pressure, intake-manifold pressure) by more than 70 mbar.
- MY10 ECE:
- MY11 ECE:
- Boost Sensor 'A' Afterrunning Diagnosis Pressure Too High
- Low Supercharger Boost Sensor Afterrunning Diagnosis Pressure Too Low
- Charge-air pressure sensor: pressure too high
- P0234 Turbocharger/Supercharger 'A' Overboost Condition

Breakdown notice:
- Charge Air Pressure in Comparison to Barometric Pressure
- P12DB
- Charge-air pressure sensor: pressure too high
- P0234 Turbocharger/Supercharger 'A' Overboost Condition

Reduced power

Potential problem source(s):
- Compressor bypass valve defective
- Replace compressor bypass valve
- Defective wiring harness
- Check wiring harness between compressor bypass valve and DME
- Defective wiring harness between compressor bypass valve and DME
- Electropneumatic pressure converter is defective
- Replace electropneumatic pressure converter

Breakdown notice:
- Increased pumping noise from turbocharger
- Customer proceeds to service facility, loss of power
- Customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power
- CC message, customer proceeds to service facility, loss of power

Boost pressure is higher than the ECE:
- Between boost-pressure sensor and DME
- This fault is logged in the control module's fault memory
- Driver circuit's diagnostic function monitors the barometric-pressure sensor.
- Diagnostic function monitors the wire to the DME.
- The diagnostic function monitors the wire to the DME.
- The diagnostic function monitors the wire to the DME.
ECE emissions warning lamp: catalyst oxygen sensor deviates too much from the lambda

US emissions warning lamp: off

Possible apparent symptoms:
- MIL lights up when fault is detected in two of exhaust gases in the catalytic converter
- MIL lamp lights up after 2nd driving cycle
- Higher exhaust emissions
- Higher fuel consumption
- Surge
- Breakdown notice:
- None

Continued driving is possible, but because the oxygen sensor before catalytic converter is defective:
- Defective wiring harness
- Defective DME
- Oxygen sensor behind catalytic converter: initialization fault
- DME, internal fault, oxygen sensor before catalytic converter, signal lines:
  - Short circuit to earth
  - Open circuit
  - Mixture too rich
  - Mixture too lean
  - Short to battery
  - Open to battery

Oxygen sensor after catalytic converter, system check:
- Check the connection between the DME and the sensor for leaks
- Inspect wiring harness between oxygen sensor after catalytic converter and DME

Oxygen sensor after catalytic converter, electrical:
- Voltage condition:- Onboard electronics
  - None
  - Surge
  - None

Oxygen sensor before catalytic converter, signal lines:
- Signal Check
  - Active heater activation more than 0.125 second
  - Can Bus Frame Error
  - Cannot read out from tester service

ECE electronic engine power
- Reduction: off
- Reduction: on

Possible apparent symptoms:
- Breakdown notice:
- None

US electronic engine power
- Reduction: off
- Reduction: on

Possible apparent symptoms:
- Breakdown notice:
- None

Engine start: 10 seconds after engine start

**STEUERN_LSH2, STEUERN_EN None**

Electrical defect is present.

**Breakdown notice:**
- MIL lamp lights up after 2nd driving cycle
- Continued driving is possible, but because the oxygen sensor is not ready for closed-loop control, conversion reduction: off
- Higher fuel consumption

**Possible problem source(s):**
- Defective wiring harness
- Defective DME
- Replace pre-catalyst oxygen sensor
- Replace oxygen sensor behind catalytic converter
- Replace DME

**Potential problem source(s):**
- Oxygen-sensor heater before catalytic converter, heater for the oxygen sensor before the catalytic converter.
- Defective wiring harness
- Replace oxygen sensor behind catalytic converter

**Breakdown notice:**
- ECE emissions warning lamp:
  - CC message: none
- US emissions warning lamp: off

**Possible apparent symptoms:**
- MIL lamp on after second driving cycle
- Higher exhaust emissions
- Surge
The fault is recognized when the ECE emissions warning lamp:

- Catalyst converter fails to light up.

The diagnostic function monitors the temperature of the sensor and DME.

BN2020 0x12BD70 1228144

- Engine warmed to normal temperature.

Possible apparent symptoms:

- US emissions warning lamp: off

Continued driving is possible, but because the oxygen signal from the oxygen sensor deviates from the expected range.

Potential problem source(s):

- Oxygen sensor before catalytic converter (at lambda = 1).

The diagnostic function monitors whether the voltage condition on the module's fault memory present for longer than 2 min.

This fault is logged in the control module's fault memory immediately.

MY11 ECE:

- ECE emissions warning lamp:
- ECE electronic engine power reduction: off
- CC message: on
- MY10 ECE:
- ECE emissions warning lamp:
- ECE electronic engine power reduction: on
- CC message: off
- MY10 US:
- US emissions warning lamp: on
- CC message: off

If faults related to mixture control are present, repair them first.

Continued driving is possible, but because the oxygen sensor before catalytic converter (at lambda = 1) is not ready for closed-loop control, conversion of exhaust gases in the catalytic converter will be seriously impaired.

Breakdown notice:

- Defective wires or plug terminals on VANOS solenoid valve.
- VANOS solenoid valve defective
- Leak in exhaust system on engine-side of catalytic converter
- VANOS solenoid valve seized
- Oil pressure too low
- Contaminated oil passage at turbine side of turbocharger
- VANOS solenoid valve defective
- VANOS solenoid valve, inlet, activation: short circuit
- Camshaft Position Actuator Control Circuit Low Voltage Condition

Perform system test and check wiring harness between DME and VANOS solenoid valve.

Replace VANOS solenoid valve.

Check wiring harness between DME and VANOS solenoid valve.

Check camshaft and VANOS unit for freedom of movement.

Replace VANOS solenoid valve.

Check wiring harness between DME and VANOS solenoid valve.

Check camshaft and VANOS unit for freedom of movement.

Replace VANOS solenoid valve.
Dual fault (see individual fault)

Check wiring harness between VANOS solenoid and camshaft sensor reluctor ring.

Potential problem source(s):
- Defective wires or plug terminals on VANOS solenoid
- Defect in wiring harness between DME and camshaft position sensor

Possible apparent symptoms:
- Sensor contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Oil pressure too low
- Sensor contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Check camshaft and VANOS unit for freedom of movement

The diagnostic function monitors adjustment of the camshaft position sensor and camshaft's reference position. If the 'crankshaft revolutions' fault is present.

Potential problem source(s):
- Camshaft Position Sensor 'A' Faulty Phase Position
- Camshaft Position Sensor 'B' Faulty Phase Position

Possible apparent symptoms:
- Sensor contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Oil pressure too low
- Check camshaft and VANOS unit for freedom of movement
- Check oil level, change engine oil and filter as necessary
- Defective wiring harness
- Defective Valvetronic relay

Dual fault

Breakdown notice:

Fault leads to ATLCTLmax (FC Text L6/L4: ?Boost-pressure control, deactivation: Boost-pressure control deactivation disabled?; FC (Dec./Hex) L6: 1180680 / 0x120408; FC (Dec./Hex) L4: 11352 / 0x2C58)

Potential problem source(s):
- Sensor contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Engine oil dirty, old or not to specification
- Loose center bolt

Possible apparent symptoms:
- Sensors contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Defective wiring harness
- Defective Valvetronic relay
- Defective Reluctor ring
- Engine oil dirty, old or not to specification
- Loose center bolt


Potential problem source(s):
- Defective camshaft position sensor
- Defective sensor

Possible apparent symptoms:
- Sensors contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Defective wiring harness
- Defective Valvetronic relay
- Defective Reluctor ring
- Engine oil dirty, old or not to specification
- Loose center bolt

Dual fault

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Dual fault

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Dual fault

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Potential problem source(s):
- Sensor contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Engine oil dirty, old or not to specification
- Loose center bolt

Possible apparent symptoms:
- Sensors contaminated or dirty
- Contaminated oil passage at VANOS solenoid valve
- Defective wiring harness
- Defective Valvetronic relay
- Defective Reluctor ring
- Engine oil dirty, old or not to specification
- Loose center bolt
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<th>Repair note</th>
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<td>Valvetronic relay for open circuits. P10D6 VVT-Relay Circuit</td>
<td>Reduction: on</td>
<td>Defective wiring harness, module's fault memory</td>
<td>The diagnostic function determines whether a valid measured diagnosis voltage is exceeded: on</td>
<td>None</td>
<td>Diagnostics</td>
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<tr>
<td>ECE emissions warning lamp</td>
<td>ECE emissions warning lamp: on</td>
<td>Potential problem source(s):</td>
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<td>Possible apparent symptoms:</td>
<td>None</td>
<td>Diagnostics</td>
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<tr>
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<td>US emissions warning lamp: on</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness</td>
<td>Possible apparent symptoms:</td>
<td>None</td>
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<tr>
<td>Breakdown notice</td>
<td>Breakdown notice:</td>
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<td>None</td>
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<tr>
<td>Valvetronic system</td>
<td>Valvetronic system consumes excessive energy owing to:</td>
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<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Engine warmed to normal temperature</td>
<td>Engine warmed to normal temperature</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Valvetronic actuator</td>
<td>Valvetronic actuator defective</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Check electrical system voltage</td>
<td>Check electrical system voltage</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Check Valvetronic mechanism for freedom of movement</td>
<td>Check Valvetronic mechanism for freedom of movement</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Stiction and high resistance in the Valvetronic</td>
<td>Stiction and high resistance in the Valvetronic</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
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</tr>
<tr>
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<td>VVT-Self-Learning Function, Stops Not Learned</td>
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<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Valvetronic system: control deviation too great</td>
<td>Valvetronic system: control deviation too great</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Valvetronic system: no movement detected</td>
<td>Valvetronic system: no movement detected</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>VVT-Overload Protection Control Motor</td>
<td>VVT-Overload Protection Control Motor Overload</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>VVT-Control Circuit</td>
<td>VVT-Control Circuit Low (Bank 1)</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>US electronic engine power</td>
<td>US electronic engine power</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>CC message: on</td>
<td>CC message: on</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Check wiring harness between Valvetronic actuator</td>
<td>Check wiring harness between Valvetronic actuator</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
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<tr>
<td>VVT-Relay Circuit</td>
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<td>Engine warmed to normal temperature</td>
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<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Valvetronic system consumed excessive energy owing to:</td>
<td>Valvetronic system consumed excessive energy owing to:</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Stiction in the Valvetronic</td>
<td>Stiction in the Valvetronic</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
<tr>
<td>Wear in the Valvetronic mechanism</td>
<td>Wear in the Valvetronic mechanism</td>
<td>Potential problem source(s):</td>
<td>Defective wiring harness, module's fault memory, Frequent open-loop operation</td>
<td>Frequent open-loop operation (limp-home mode/learning routines)</td>
<td>None</td>
<td>Diagnostics</td>
<td>Repair note</td>
</tr>
</tbody>
</table>

**Note:** The table contains information on potential root causes, possible symptoms, and diagnostic notes related to various components and systems within a vehicle. The data is structured to help diagnose and repair issues efficiently.
<table>
<thead>
<tr>
<th>Potential problem source(s):</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Mechanical defect in radiator vent slat mechanism (for instance: broken control linkage,...)</td>
<td>The radiator vent slat mechanism is not able to close the radiator slats. When vehicle speed exceeds 150 km/h, it is possible for the system to misinterpret slat movement (perform system test), repair mechanical components as required.</td>
</tr>
<tr>
<td>Defective DME</td>
<td>DME is not able to monitor the status of the valve, actuator or sensors.</td>
</tr>
<tr>
<td>Defective wiring harness</td>
<td>Wiring harness is not able to supply the necessary power or signal to the actuator or sensors.</td>
</tr>
<tr>
<td>Defective Valvetronic actuator motor</td>
<td>Actuator motor is defective, unable to move the valve or sensor.</td>
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</table>
The diagnostic fault code is:
- Defect in wiring harness between radiator vent slats
- Radiator vent slat assembly is defective

Engine overheating is possible

Potential problem source(s):
- Defect in wiring harness
- ECE emissions warning lamp:
  - ECE electronic engine power combustion miss is present on at least one cylinder during a driving cycle

Breakdown notice:
- CC message: on
- ECE emissions warning lamp: on
- US emissions warning lamp: off
- Reduced engine power reduction: on
- US electronic engine power combustion strokes and compares them with the expected values
- Combustion miss may be noticed.

Possible apparent symptoms:
- Reduced engine power
- US emissions warning lamp: on
- US electronic engine power combustion strokes and compares them with the expected values

Breakdown notice:
- CC message: on
- ECE emissions warning lamp: on
- US emissions warning lamp: off
- Reduced engine power reduction: on
- US electronic engine power combustion strokes and compares them with the expected values
- Combustion miss may be noticed.

Breakdown notice:
- CC message: none
- ECE emissions warning lamp: off
- Reduced engine power reduction: on
- US electronic engine power combustion strokes and compares them with the expected values
- Combustion miss may be noticed.

Breakdown notice:
- CC message: off
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- Combustion miss may be noticed.
Defect in mixture formation of combustion miss events, with reduction: off

Defective DME

1000 crankshaft revolutions.

Defective DME

Potential problem source(s):

The diagnostic fault code is logged when a specific number of combustion strokes and compares them with the remaining cylinders by assessing the rpm signals.

Voltage condition: - Onboard electronics

Breakdown notice:

Continued driving possible if only the one cylinder is affected. The ignition miss detection should recognize the affected cylinder and deactivate the injection to probably will never occur.

Checking:

- Check ignition coil
- Inspect wiring harness between overload-protection relay for ignition and injection
- Replace DME if the fault code remains logged continuously

Possible apparent symptoms:

- Poor fuel quality
- Defect in wiring harness between DME and spark plug
- Defective DME
- Defective spark plug
- Defective ignition coil

The engine reverts to its limp-home program, remaining cylinders by assessing the rpm signals. P0306 Cylinder 6 Misfire Detected Misfire Cyl 6

Potential problem source(s):

Because this is a secondary fault, start by repairing the primary faults. None

Breakdown notice:

Possible apparent symptoms:

- Mechanical defect
- Check ignition coil
- Check wiring harness between ignition coil and DME
- Replace DME if the fault code remains logged continuously

The diagnostic function monitors the ignition angle outside the tolerance range.

Ignition Monitoring Cylinder 1 Spark Duration Too Short

None

- Defective DME

Breakdown notice:

Possible apparent symptoms:

- Defective DME
- Defective spark plug
- Defective ignition coil

None

- Defective DME

Breakdown notice:

Possible apparent symptoms:

- Defective DME
- Defective spark plug
- Defective ignition coil

Voltage condition: - Onboard electronics

Breakdown notice:

Possible apparent symptoms:

- Defective DME
- Defective spark plug
- Defective ignition coil

Voltage condition: - Onboard electronics

Breakdown notice:

Possible apparent symptoms:

- Defective DME
- Defective spark plug
- Defective ignition coil

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Possible apparent symptoms:

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- Defective spark plug
- Defective ignition coil

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- Defective spark plug
- Defective ignition coil

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- Defective ignition coil

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- Defective ignition coil

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Breakdown notice:

Possible apparent symptoms:

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- Defective spark plug
- Defective ignition coil

Voltage condition: - Onboard electronics

Breakdown notice:

Possible apparent symptoms:

- Defective DME
- Defective spark plug
- Defective ignition coil

Voltage condition: - Onboard electronics

Breakdown notice:

Possible apparent symptoms:
<table>
<thead>
<tr>
<th>Engine Cycle</th>
<th>Cylinder Number</th>
<th>Cylinder</th>
<th>P-codes</th>
<th>Description</th>
<th>Time Duration</th>
<th>Severity</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Cylinder</td>
<td>1st Cylinder</td>
<td>1</td>
<td>P13A0</td>
<td>Knock Control Fuel Cut-Off due to Super Knocking</td>
<td>3rd cylinder. P13A2</td>
<td>4</td>
<td>None</td>
</tr>
<tr>
<td>2nd Cylinder</td>
<td>2nd Cylinder</td>
<td>2</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>3rd Cylinder</td>
<td>3rd Cylinder</td>
<td>3</td>
<td>P13A1</td>
<td>Knock Control Fuel Cut-Off due to Super Knocking</td>
<td>4th cylinder. P13A3</td>
<td>4</td>
<td>None</td>
</tr>
<tr>
<td>4th Cylinder</td>
<td>4th Cylinder</td>
<td>4</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>5th Cylinder</td>
<td>5th Cylinder</td>
<td>5</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Possible apparent symptoms:**

- Engine runs poorly with power loss
- Temporary contamination in combustion chamber or intake passages
- Misuse, terminal status switch during vehicle operation
- Knock Control Fuel Cut-Off due to Super Knocking

**Breakdown notice:**

- The diagnostic fault code is logged when the fault remains during vehicle operation.
- If the diagnostic fault code has been logged once, clear the ECU fault memory.
- If the fault has been logged multiple times, check the spark plug, injector and ignition coil on the cylinder.

**Potential problem source(s):**

- Defect in wiring harness between DME and camshaft position sensor.
- Oscillation in reluctor ring (for instance, when starter engages).
- Engine warmed to normal temperature.

**Interference factor affecting the sensor:**

- Voltage condition: Onboard electronics: none
- Automatic engine start/stop: none

**ECU emissions warning lamp:**

- ECE emissions warning lamp: on
- US emissions warning lamp: off

**Electronic engine output:**

- ECE electronic engine power: on
- US electronic engine power: off

**CC message:**

- CC message: none

**Temporary contamination in combustion chamber or intake passages:**

- ECE emissions warning lamp: on
- US emissions warning lamp: off
<table>
<thead>
<tr>
<th>Component</th>
<th>Issue</th>
<th>Possible Problem Source(s)</th>
<th>Potential Appearance Symptoms</th>
<th>Breakdown Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camshaft sensor</td>
<td>Defective</td>
<td>Wiring harness defective</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Camshaft sensor</td>
<td>Defective</td>
<td>Engine too loud owing to mechanical defect</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Knock sensor 1</td>
<td>Circuit 'B' Low (Bank 1)</td>
<td>Low-quality fuel &lt; RON 91</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Knock sensor 2, signal: electrical fault</td>
<td>KS (loose contact) or KS loose</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Knock/Combustion Vibration Sensor</td>
<td>1 Circuit High</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Exhaust camshaft</td>
<td>Incorrect Assembly</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Intake camshaft</td>
<td>Incorrect Assembly</td>
<td>None</td>
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</tr>
</tbody>
</table>

*Note: The table is part of a larger document that describes fault diagnosis and potential problem sources for various vehicle components.*
If the fault is continuously present or has multiple log entries, then clear the ECU fault memory. Should it prove impossible to reproduce the fault using the DMTL, system fault: pump current reaches limit value, system fault: pump current exceeds the limit value, system fault: pump current dips below the limit value. Tank Leakage) can only be carried out provided that the vehicle is warmed to normal temperature and there are no faults related to the DMTL. The diagnostic function monitors the leakage diagnosis pump's current draw within a time window. Potential problem source(s): Defective wiring harness. Possible apparent symptoms: Engine warmed to normal temperature. Catalytic converter defective. Leak in exhaust system module's fault memory. None. Breakdown notice: MIL on, customer proceeds to service facility. None None. Tank venting valve, activation: open circuit. None None. None. None. None None. None. None None. None None. None. None None. None None. None. None None. None None. None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None. None None. None None. None None. None.
The diagnostic function monitors the flow through the tank cutoff valve. P149C fault
The fault is recognized when

- Obstruction in line between sensor for a valid output signal within specified limits.

Possible problem source(s):
- Problem with CAN module's fault memory
- Problem with CAN module's fault memory

Breakdown notice:
Probable cause(s) for this fault include:
- Tank evaporative emissions valve seizes in closed position
- Tank evaporative emissions valve seizes in closed position

To check:
- Read out and work through diagnostic fault codes in instrument cluster.

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- Tank evaporative emissions valve seizes in closed position

To check:
- Read out and work through diagnostic fault codes in instrument cluster.
### Electric fan, self-diagnosis, stage 2: fan fault with module's fault memory

<table>
<thead>
<tr>
<th>Diagnostic Code</th>
<th>Description</th>
<th>Action 1</th>
<th>Action 2</th>
<th>Action 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEVD17.2-</td>
<td>Electric fan is defective</td>
<td>None</td>
<td>None</td>
<td>Replace fan electric module</td>
</tr>
<tr>
<td></td>
<td>Possible apparent symptoms:</td>
<td>- Electric fan is defective (electronics)</td>
<td>- Fan shows resistance to rotation</td>
<td>- CC message: on</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Engine warmed to normal temperature</td>
<td>- Check freedom of movement of fan. Remove any foreign matter/objects that may be present. Allow engine to run roughly 6 minutes, until it warms out</td>
<td>- US emissions warning lamp: off</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- ECE emissions warning lamp: off</td>
</tr>
</tbody>
</table>

### Electric fan, self-diagnosis, stage 3: fan fault with module's fault memory

<table>
<thead>
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<th>Action 2</th>
<th>Action 3</th>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- ECE emissions warning lamp: off</td>
</tr>
</tbody>
</table>

### Breakdown notice:

- The diagnostic function monitors the electric fan's cutoff relay and the DME. P144E Fan Safety Relay Circuit High
- The diagnostic function monitors the plausibility of the speed signal. P1518 Rough Road Detection Wheel Speed Too High
- The diagnostic function monitors the wire between the electric fan cutoff relay and the DME. P144C Fan Safety Relay Circuit
- Breakdown notice:
  - US emissions warning lamp: on
  - ECE emissions warning lamp: on
  - CC message: on

#### Potential problem source(s):

- Defect in wiring harness
- Defect in DME
- Defect in fan electric module
- Defect in vehicle operating conditions.

#### Possible apparent symptoms:

- Fan shows resistance to rotation
- Foreign matter/objects present
- Check wiring harness between DME and electric fan
- Check freedom of movement of fan
- Engine can overheat, breakdown in extreme cases

#### Further action required:

- Replace cutoff relay
- Replace fan electric module
- Diagnose DME
- Diagnose vehicle operating conditions.
### Vehicle Speed Signal Implausible - Continue Fault Diagnosis with DSC

#### Possible Apparent Symptoms:

- Breakdown notice: Off
- CC message: None

#### Potential Problem Source(s):

- Defective Wiring Harness
- Main Relay Defective

#### Detailed Description:

The fault is registered when no start values of CAS and DME do not agree.

#### Steps to Diagnose:

1. Check fuse: 30 A

#### Diagnosis Notes:

- Defect in wiring harness between CAS and DME.
- Check main relay.

#### Future Actions:

- Replace CAS
- Replace DME

#### Other Relevant Information:

- MEVD17.2-
- EWS anti-tampering protection: No starting value programmed.

---

### No Start Value Programmed - DME Defective

#### Possible Apparent Symptoms:

- Breakdown notice: Off
- CC message: None

#### Potential Problem Source(s):

- Defective DME
- Main Relay Defective

#### Detailed Description:

The diagnostic function determines whether a start module's fault memory and the start values of CAS and DME do not agree.

#### Steps to Diagnose:

1. Check fuse: 30 A

#### Diagnosis Notes:

- Defect in wiring harness between main relay and DME.
- Check main relay.

#### Future Actions:

- Replace CAS
- Replace DME

#### Other Relevant Information:

- MEVD17.2-
- EWS anti-tampering protection: No starting value programmed.
The original text is not legible due to the quality of the image. If you have access to a clearer version or the content needs to be transcribed, please let me know.
Potential problem source(s):
- Mechanical defect in oil pump
- Engine warmed to normal temperature

The fault is recognized when the signal remains constant, implausible signal jumps are present, and when the signal's mean value leaves the specified range.

Possible apparent symptoms:
- Oil condition sensor defective
- Oil-condition sensor, electrical: permittivity, conductivity: out of range

The diagnostic fault code is recognized 50 times.

Voltage condition:
- Onboard electrical voltage of the engine oil-pressure sensor and DME fault over the bus.
- CC message: none

Breakdown notice:
- When the engine is heated from external sources, the output of the interior heater may be reduced.

Possible apparent symptoms:
- Defective engine oil temperature sensor
- Defect in wiring harness between engine oil temperature sensor and DME

Adaptation (reduction) of engine oil service interval.

Quality-Level-Temperature unit, all other vehicles are not equipped with this function.
Electronic transmission control (EGS), signal evaluation (output speed): Invalid signal content
The diagnostic function monitors the message. Possible apparent symptoms:

- Engine warmed to normal temperature
- None
- idle speed

Breakdown notice:
Immediately.
None
Voltage condition:
Onboard electrical system

Potential problem source(s):
Driver revs engine while vehicle is stationary

Collateral fault from defective throttle valve

DME, internal fault, electric accelerator pedal

Engine rpm limitation

Replace DME

Possible apparent symptoms:

- It is possible to continue driving the vehicle, but passing maneuvers should not be attempted owing to
- Collateral fault from defective throttle valve

CC message:
On

ECE emissions warning lamp:
On

US emissions warning lamp:
On

Electronic engine power reduction:
on

US electronic engine power reduction:
off

Collateral fault from defective throttle valve

Replace DME

Possible apparent symptoms:

- It is possible to continue driving the vehicle, but passing maneuvers should not be attempted owing to
- Collateral fault from defective throttle valve

CC message:
Off

ECE emissions warning lamp:
Off

US emissions warning lamp:
Off

Electronic engine power reduction:
On

US electronic engine power reduction:
Off

Potential problem source(s):

- Abuse (driver revs engine while vehicle is stationary)
- Defect in wiring harness
- Defective DME
- Collateral fault from defective throttle valve
- A terminal status switch must be conducted before this fault can be deleted.

Breakdown notice:
Immediately.
None
Voltage condition:
Onboard electrical system
The fault is recognized by the MY10 US:

**US emissions warning lamp:** on

**US electronic engine power reduction:** on

**Potential problem source(s):**
- Accelerator pedal module

**Breakdown notice:**
- ECE electronic engine power reduction: on

**Possible apparent symptoms:**
- Internal Control Module Accelerator Pedal Position monitoring: Speed sensor status. P325C
- DME defective
- Only replace the DME if the fault remains present
- Mixture-correction factors limitation, level 1
- Oxygen sensor defective
- Only replace the DME if the fault remains present

This fault is logged in the control module's fault memory immediately. Voltage condition:
- Onboard electrical system
- DME, internal fault: monitoring, injection-rate reduction: on
- CC message: on
- Speed limitation, level 1

The diagnostic function monitors the DME's internal fault: Plausibility monitoring, fuel mass metering: Stage ECM Output Stage Communication MEVD17.2-

**DME, internal fault, monitoring MSC communication BN2020 0x1F0904 2033924**

**DME, internal fault, activation Valvetronic:**
- Driver circuit is switched off. P10E5 Internal Control Module Error, Control Circuit VVT ECM Valvetronic (VVT) Control

The fault position indicates a defective D-flash, or the D-flash service life has elapsed (30,000 write/delete cycles).
The diagnostic function monitors the DME's internal fault memory.

Possible apparent symptoms:
- Loss of power
- Speed limitation
- Reduced performance
- Breakdown in extreme cases

Potential problem source(s):
- DME defective
- CAS defective
- Defect in wiring harness between CAS and DME
- Systematic fault, for instance, jump start with 24 V
- DME encoded incorrectly
- DME programming error
- Defective CAS
- Defective DME
- Overvoltage fault
- Voltage outside valid range
- Defect in wiring harness between CAS and DME
- CAS is missing.

Error ECM Watchdog MEVD17.2-
- Occurs when vehicle version message from CAS is not received.
- DME, internal fault, monitoring 5V sensor supply 2:
  - Voltage outside valid range
  - Defect in wiring harness between CAS and DME

Error ECM Watchdog MEVD17.2-
- Occurs when vehicle version message from CAS is not received.
- DME, internal fault, monitoring 5V sensor supply 3:
  - Voltage outside valid range
  - Defect in wiring harness between CAS and DME

Error ECM Watchdog MEVD17.2-
- Occurs when vehicle version message from CAS is not received.
- DME, internal fault, monitoring supply voltage G2. P16E9
  - Voltage outside valid range
  - Defect in wiring harness between CAS and DME

If an overvoltage fault is logged in the fault memories of multiple control modules then the source of this specific control module.

DME encoded incorrectly
- Code (upper/middle/lower performance class) for the CAS does not match the code in the dataset/the encoding is not correct.

BN2020 0x1F1A81 2038401 Error ECM Watchdog
- Potential problem source(s):
  - Check wiring harness between CAS and DME
  - Defective CAS
  - DME defective

BN2020 0x1F1A91 2038417 Error ECM Watchdog
- Potential problem source(s):
  - Check wiring harness between CAS and DME
  - Defective CAS
  - DME defective

BN2020 0x1F1A92 2038418 Error ECM Watchdog
- Potential problem source(s):
  - Check wiring harness between CAS and DME
  - Defective CAS
  - DME defective

BN2020 0x1F2604 2041348 Encoding: Vehicle identification number not coded
- The diagnostic function monitors the encoding.

BN2020 0x1F2701 2041601 Encoding: Error on writing variant
- The diagnostic function monitors the encoding.
Potential problem source(s):

- Secondary fault from mixture formation

Breakdown notice:

- Defective DME

Possible apparent symptoms:

- A terminal status switch must be conducted before this fault can be deleted.
Potential problem source(s):
- Secondary fault from mixture formation

This fault is logged in the control module’s fault memory immediately. None

Voltage condition:- Onboard electric system

Breakdown notice:
- US emissions warning lamp: off
- US electronic engine power reduction: off
- ECE emissions warning lamp:
- ECE electronic engine power
- US emissions warning lamp: off

Possible apparent symptoms:
- Loss of power
- DSC Failure
- Engine heated by secondary source, such as alternator

Internal DME fault, expanded signal monitoring:
- A terminal status switch must be conducted before self-diagnosis.
- Defective DME
- Only replace the DME if the fault remains present continuously or if the fault frequency is greater than 3

Start by repairing faults related to logged ECU fault memory entries for mixture formation

Status, assist system interface, implausible The diagnostic function monitors the DME.

Potential problem source(s):
- Secondary fault from mixture formation

The fault is recognized when a hardware fault is present in the FlexRay controller.

Internal DME error, expanded signal monitoring:
- Start by repairing faults related to logged ECU fault memory entries for mixture formation

This fault is logged in the control module’s fault memory immediately. None

Voltage condition:- Onboard electric system

Breakdown notice:
- US emissions warning lamp: off
- US electronic engine power reduction: off
- ECE emissions warning lamp:
- ECE electronic engine power
- US emissions warning lamp: off

Possible apparent symptoms:
- Loss of power
- DSC Failure
- Engine heated by secondary source, such as alternator

Internal DME fault, expanded signal monitoring:
- A terminal status switch must be conducted before self-diagnosis.
- Defective DME
- Only replace the DME if the fault remains present continuously or if the fault frequency is greater than 3

Start by repairing faults related to logged ECU fault memory entries for mixture formation

Status, assist system interface, implausible The diagnostic function monitors the DME.
The fault is recognized when the speeds of the electric water pump fail to match.

Breakdown notice:

BN2020 0x20A701 2139905 Coolant pump, speed deviation: outside tolerance present for longer than 1 min. Terminal 15 Voltage condition:

- Onboard electrical system is below the specified voltage.

Potential problem source(s):

- Coolant pump, deactivation: internal temperature too high
- Tmot<90°C

Observe sequence for fault rectification:

- If the diagnostic fault code continues to appear again if engine becomes too hot, breakdown in extreme cases

Possible apparent symptoms:

- CC message: on

If the pump is activated at Tmot>90 °C as tester job the diagnostic fault code 0x3792 or 0x20AD08 'Water pump fail to match.'

Observe sequence for fault rectification:

- Defective water pump
- Insufficient coolant

Refill and then bleed cooling system as indicated.

Possible apparent symptoms:

- US electronic engine power reduction: off
- ECE emissions warning lamp: on
- ECE electronic engine power reduction: off

If no other faults related to the alternator have been logged, do not replace the alternator.

Possible apparent symptoms:

- US emissions warning lamp: off

Possible apparent symptoms:

- CC message: on

Breakdown in extreme cases

Potential problem source(s):

- Electric fan defective
- Defective water pump
- Battery charge status or electrical system voltage is not OK
- Communications problem on BSD bus
- Positive wire not correctly connected to battery
- Ground not correctly connected
- Alternator dirty
- Alternator mechanical: malfunction
- Clutch switch defective
- Inspect alternator for unobstructed air current
- If no IMIB is available, delete stored fault codes from onboard electrical system and compare it with the calculated diode temperature.

Routing conditions: 0x4614: Alternator LED illuminated.
<table>
<thead>
<tr>
<th>Breakdown notice:</th>
<th>BN2020 0x210801 2164737 Alternator, model incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power management:</td>
<td>Overvoltage</td>
</tr>
<tr>
<td>Power management:</td>
<td>Reduction or shutdown of</td>
</tr>
<tr>
<td>Power management:</td>
<td>Reduction or shutdown of</td>
</tr>
</tbody>
</table>

**Potential problem source(s):**

- Increased power consumption
- One component on BSD bus is
- Defective voltage regulator
- Defective BSD
- Defective battery
- Defective DME
- Defective voltage regulator
- Other defective components on LIN bus
- Defect in wiring harness (power supply wiring to DME/DDE)
- DME/DDE voltage
- None
- None
- None
- None
- None

**Possible apparent symptoms:**

- ECE emissions warning lamp: off
- US emissions warning lamp: off
- External charger/battery (jump-start from truck, 24 V)
- Defective battery
- Defect in wiring harness (power supply wiring to DME/DDE)
- Battery not connected correctly (loose contact).
- Battery not connected correctly
- Voltage measurement defective
- Voltage measurement defective
- None
- None
- None
- None
- None
- None
- None

**Breakdown notice:**

BN2020 0x213301 2175745 Power management: Overvoltage

**Potential problem source(s):**

- Excessive battery discharge in
- Battery not connected correctly
- Battery not connected correctly
- Battery damage, ?)
- Replace as indicated
- Defective battery
- Defective DME

**Possible apparent symptoms:**

- None
- None
- None
- None
- None
- None
- None
- None
- None

**Breakdown notice:**

BN2020 0x215001 2183169 Intelligent battery sensor, signal: bus fault

**Potential problem source(s):**

- Defective IBS
- Defective voltage regulator
- Defective BSD
- Defective DME/DDE
- Defective voltage regulator

**Possible apparent symptoms:**

- None
- None
- None
- None
- None
- None
- None
- None
- None

**Breakdown notice:**

BN2020 0x218401 2192860 Alternator, voltage sense wire not closed

**Potential problem source(s):**

- None
- None
- None
- None
- None
- None
- None
- None
- None

**Possible apparent symptoms:**

- None
- None
- None
- None
- None
- None
- None
- None
- None
The fault is recognized when a measurement is present. The diagnostic system plausibilizes the IBS frequency > 3 or is present continuously then replace the IBS undercharged battery. Possible apparent symptoms: Breakdown notice: None None

Potential problem source(s): DME/DDE and IBS are not compatible.

The diagnostic function monitors LIN bus. Potential problem source(s): Interference in communications between the DME and IBS. Possible apparent symptoms: Breakdown notice: None None

The diagnostic function monitors CAN, message (data, transmission train, 0x1AF) in MEVD17.2- BN2020 0x233004 2306052. Possible apparent symptoms: Transmission in emergency program

Check auxiliary battery wiring harness between DME and engine mount. Defective DME. Replace DME.

Potential problem source(s): Defective DME.

Check wiring harness between DME and engine mount for opens. P0A14 Engine Mount 'A' Control Circuit/Open in MEVD17.2- BN2020 0x231902 2300162. Possible apparent symptoms: Transmission in emergency program

Check LIN bus of other components, replace IBS. The diagnostic fault code has been entered with a frequency > 3 or is present continuously then replace the IBS.

Potential problem source(s): Defect in wiring harness shielding between the 'auxiliary battery charging unit' and the engine.

Potential problem source(s): Defect in wiring harness shielding between the 'auxiliary battery charging unit' and the 'steering itself has an internal open wire or short circuit'. Possible apparent symptoms: Breakdown notice: None None

Check fault memories of other devices on the LIN bus. Check LIN bus of other components, replace IBS as required. Voltage condition:- Onboard electronics voltage present for longer than 1 min. None
<table>
<thead>
<tr>
<th>Breakdown notice</th>
<th>Status</th>
<th>CC message</th>
<th>Radiator shutter, LIN communication: Timeout between DME and the radiator vent slats.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN2020 0xCD8C10 13470992</td>
<td></td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>ECE emissions warning lamp: off</td>
<td></td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>US electronic engine power reduction: off</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defect in wiring harness to radiator vent slat assembly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check wiring harness to radiator vent slat assembly</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Possible apparent symptoms:**

- Radiator vent slat assembly fails to respond.
- Interference from other devices occurs on the LIN bus.
- Radiator vent slat assembly IBS fails to respond.
- Defective wiring harness to radiator vent slat assembly.
- Auxiliary battery is defective.
- 'Auxiliary battery charging unit' defective.
- Check plug and wiring harness at battery separator.
- Replace battery separator.
- Continue test routine with test modules that deal with major loads. (mountain driving, full throttle, etc.)
- Replace IBS.
- Ignore this fault and delete it --> Carry out tester job at new for I-11-03-300.
None

Fault with transmitting control module
- Carry out system analysis.

ECE emissions warning lamp:
- the defined period, the keep-alive counter has not timed out. Potential problem source(s):
- module's fault memory message is not received in the specified time. The diagnostic function monitors reception of the message. U1117 Message Monitoring Speed Alive Check Communication Speed

Breakdown notice:
- Terminal 15 Voltage condition:- Onboard electronics stabilisation, 43.1.4), receiver DME/DDE, transmitter ICM
- Pedal progression cannot be switched.

Possible apparent symptoms:
- None None

DSC failure
- None None

Message (request, wheel torque, drive train, sum,
- Pedal progression cannot be switched.

Possible apparent symptoms:
- None None

ECE emissions warning lamp:
- off

CC message:  none

US emissions warning lamp: on

CC message:  on

BN2020 0xCD9902 13474050
- None None

BN2020 0xCD9A02 13474306
- None None
Potential problem source(s):

This fault is logged in the control module's fault memory immediately. Terminal 15 Voltage condition: - Onboard electrical circuit powered on.

The diagnostic fault code is BN2020 0xCD9A04 13474308 checksum error, receiver DME/DDE, transmitter DSC.

The fault is recognized when the specified time.

Possible apparent symptoms:

- No message (longitudinal acceleration, centre of gravity, 46.0.1) not current, reduction: off

The diagnostic function monitors reception of the message. U116D Lost Communication With Wheel Speed Communication Wheel Speed message.

Breakdown notice:

- CC message: none

Possible apparent symptoms:

- The oil pressure indicator lamp may light up during acceleration.

Possible apparent symptoms:

- Accelerator pedal progression failure

Breakdown notice:

- CC message: none

Possible apparent symptoms:

- Cruise control failure

Breakdown notice:

- CC message: none

Possible apparent symptoms:

- Cruise control deletion can be carried out only after clearing ECU fault memory/terminal status switch.
Possible apparent symptoms:

- Fault with transmitting control module - Carry out system analysis.

Potential problem source(s):

- Fault with transmitting control module - Carry out system analysis.

Possible apparent symptoms:

- If an error related to redundant information from the DMC occurs at the same time there will be no torque reduction: off.
<table>
<thead>
<tr>
<th>Message Code</th>
<th>Description</th>
<th>Potential Problem Source(s)</th>
<th>Breakdown Notice</th>
<th>Possible Apparent Symptoms</th>
</tr>
</thead>
</table>
| BN2020 0xCDAE04 13479428 | Loss Communication With Central Locking System | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDB404 13480964 | Message (terminals, 0x12F) checksum error, receiver DME/DDE, transmitter DKG, | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDB602 13481474 | | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDB804 13481988 | | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDB904 13482244 | | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDBC04 13483012 | | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDBD04 13483268 | | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
| BN2020 0xCDBE02 13483522 | | - ECE emissions warning lamp: off  
- US emissions warning lamp: off  
- ECE electronic engine power reduction: off  
- US electronic engine power reduction: off  
- CC message: none  
- DME/DDE, transmitter KOMBI | | |
NO CAN message - Fault with transmitting control module - Carry out system analysis.

Possible apparent symptoms:
- Potential problem source(s):
- Breakdown notice:
- Message (data, transmission line, 0x1AF) checksum error.
- Message (request, torque, crankshaft, EGS, 0x0B0) not current, receiver DME/DDE, transmitter DKG, EGS.
- Message Monitoring Torque Request Crankshaft Alive Check
- Message Monitoring Transmission Data via A-CAN
- Message Monitoring Transmission Data via A-CAN
- Message Monitoring Transmission Data via A-CAN
- U11AF
- U11AD
- U11A4
-BN2020 0xCDC204 13484548
- BN2020 0xCDC004 13484036
- BN2020 0xCDBF04 13483780
- BN2020 0xCDBE04 13483524

Potential problem source(s):
- US emissions warning lamp: off
- US electronic engine power reduction: off
- ECE emissions warning lamp: off
- ECE electronic engine power reduction: off
- CC message: none

BN2020 0xCDBE04 13483524
- None
- None