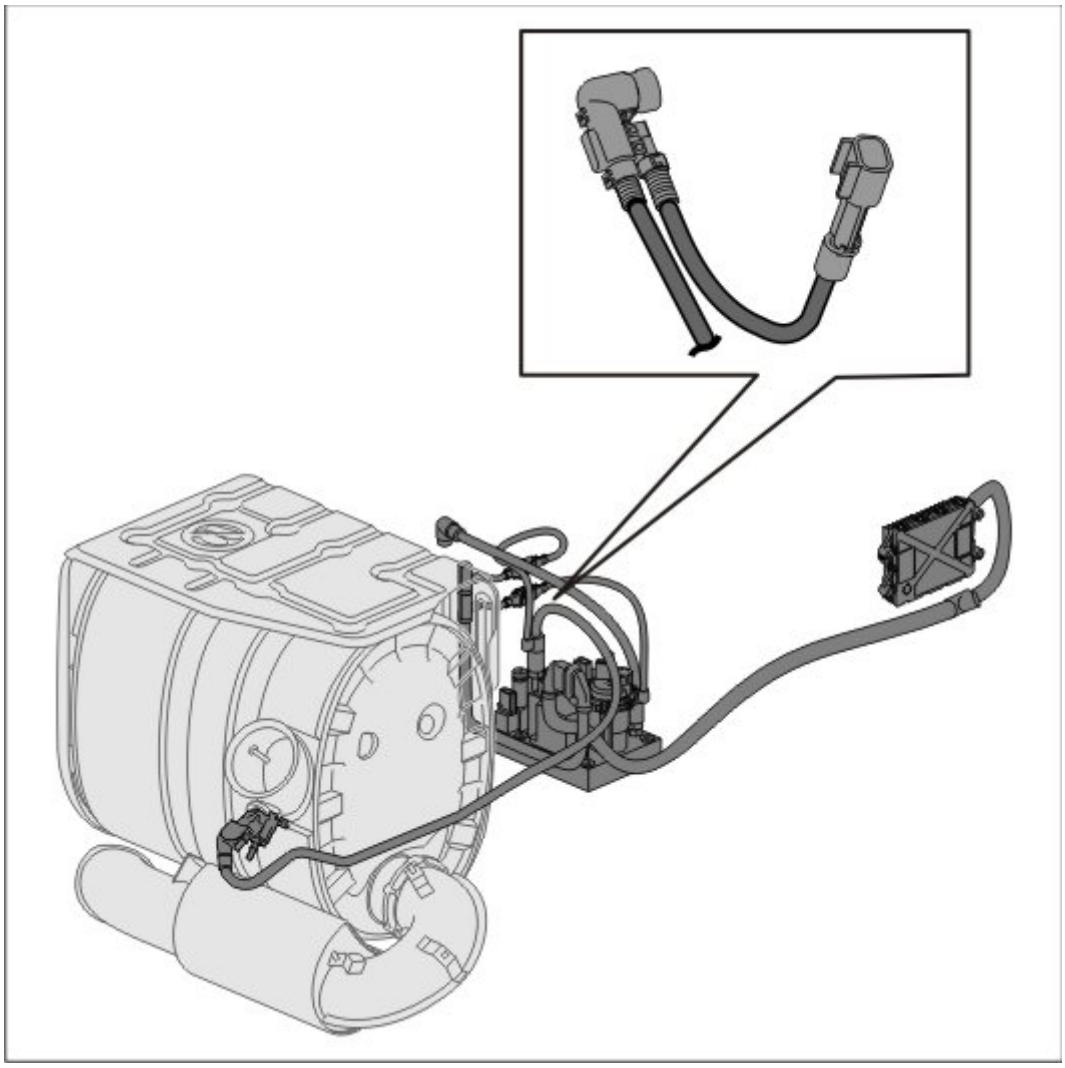


Fault type	Condition for Fault	Observable Symptoms	Possible cause
P20BA FTB 00	• Too high NOx emissions. • Dosing too low.	• Vehicle speed is less than 5 mph.	• Dosing too low. • Wrong liquid in the tank. • Dosing valve. • Restricted filter • SCR catalytic muffler.

AdBlue concentration in the fluid, Check

Special tool: 88890105.

Action:

- Remove the insertion in the tank inlet for better visibility and access to the fluid.
- Draw in a small amount of the liquid from the surface using the clean hose.
- Use a clean hose as extension if tank level is low.
- Rinse the test equipment carefully with distilled water before use.
- Apply a drop on the viewer of the instrument.

Evaluation:

- The level must be exactly as per specification for correct concentration.
- The SCR system is sensitive to diluted or contaminated aftertreatment diesel exhaust fluid (DEF).
- If no level is shown in the instrument it may indicate chemical residue, such as pure water or diesel.

Diesel or oil in the AdBlue solution, Check

Special tool: 88890110.

Action:

- Remove the insertion in the tank inlet for better visibility and access to the fluid.
- Attach the indicating paper to a suitable object in order to reach the fluid in the tank.
- Dip half of the indicating paper in the AdBlue solution.

Evaluation:

- If there is diesel or oil in the fluid, the dipped part of the paper will turn dark blue.
- As small amount of diesel as down to 0.5 % can be detected.
- The most of the diesel will stay on the surface of the AdBlue solution, but traces of diesel can be found throughout the entire tank.
- The SCR system is sensitive to diluted or contaminated aftertreatment diesel exhaust fluid (DEF).

SCR system pressure , Check

Purpose:

- Check that a newly installed, repaired, overhauled or replaced SCR system works correctly.
- Check the SCR system to find faults.

Description:

It will be necessary to remove the dosing valve from the inlet pipe in one of the tests.

Note: Only the highlighted part of the test will be performed.

1. System pressure build up - Check function/leakage of pump and hoses.
2. Dosing test:
   Check function/leakage of dosing valve
   Clear diagnostic trouble code (DTC) and get out of inducement due to clogged dosing valve

Action:

- Before starting the test, monitor the signals and make sure the AdBlue pressure is near 0 without a large deviation.
- Start the test.

Evaluation:

- In the test the system will be pressurized.
- Check for leakage.
- If a leakage is not detected, wiggle the hose or the connection with crystallized AdBlue solution.

Exhaust Back pressure, check

1. Check maximum back pressure:
   This test is used to verify that the back pressure is within correct interval.
   If test indicates fault free Exhaust system: Continue fault tracing other components.
   If test indicates faulty Exhaust system: Perform a service regeneration
5. Check maximum back pressure:
   This test is used to test if the regeneration corrected the too high back pressure.
   If test indicates fault free Exhaust system: Fault corrected.
   If the regeneration did not correct the fault : Continue fault tracing.

The tests found the fault causing too high exhaust back pressure:

- If the tests found the fault causing the too high back pressure : Fix the problem and verify that the back pressure is within allowed limits.
- If the tests didn’t find the fault causing the too high back pressure : The reason for the too high exhaust back pressure is a clogged catalytic converter.
- Replace the silencer.
- Perform a complete test drive.
- Note the highest measured back pressure.

Information:

- The test should be performed by driving the vehicle fully loaded, in a pre-determined gear and with the accelerator pedal pressed (100 %), allowing the engine speed to gradually increase from 1000 rpm. The test should be performed on level ground or on a gentle uphill slope. It is important that the selected gear (second or third highest gear) and the road conditions allow the engine speed to increase as described. The vehicle should accelerate from 1000 rpm to 1800 rpm in 30-50s..
- Obstructions in the exhaust system will cause higher exhaust back pressure than normal.
- The SCR catalytic muffler may become loaded with crystals (AdBlue deposits).
- Expected value: Less than 15 kPa (2.1 psi).

Purpose:

Check that the dosage valve supplies the correct amount.

Action:

Put the dosage valve in a graduated glass.

Expected value:

170 - 197 ml (5.7 - 6.7 oz).

Visual checks:

- Verify that the Dosage valve part number is correct.
- Check the fluid level in the AdBlue tank.
- Chek that the AdBlue air filter is free from faults.
- Verify that the Silencer part number is correct.