

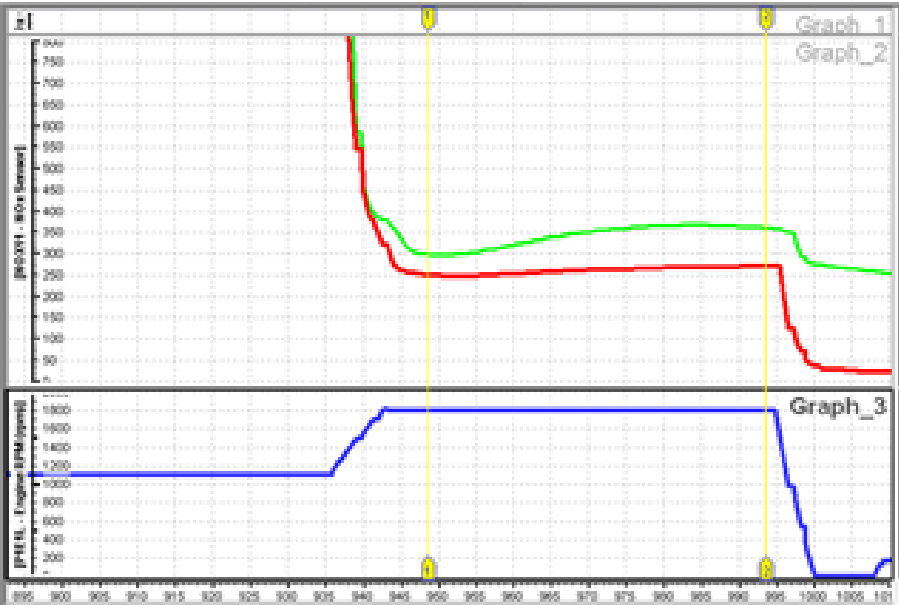
Premium Tech Tool Operation 2549-08-03-03 NOx Conversion Test - Additional Information For Vehicles Built After 01 January 2019



The NOx Conversion Test 2589-08-03-03 is designed to evaluate the NOx sensors by comparing them against each other at high engine speeds with no urea (DEF) remaining in the system. In an ideal scenario, both the inlet NOx sensor (NOx1) and the outlet NOx sensor (NOx2) will be very close to each other, and both should register levels of approximately 300 parts per million (ppm).

In vehicles built with US17+OBD18 emissions and newer products, a NOx2 sensor reading similar to the one in the picture below is normal. The example shown resulted in a diagnosis of a failed NOx2 sensor, when neither sensor is experiencing issues.

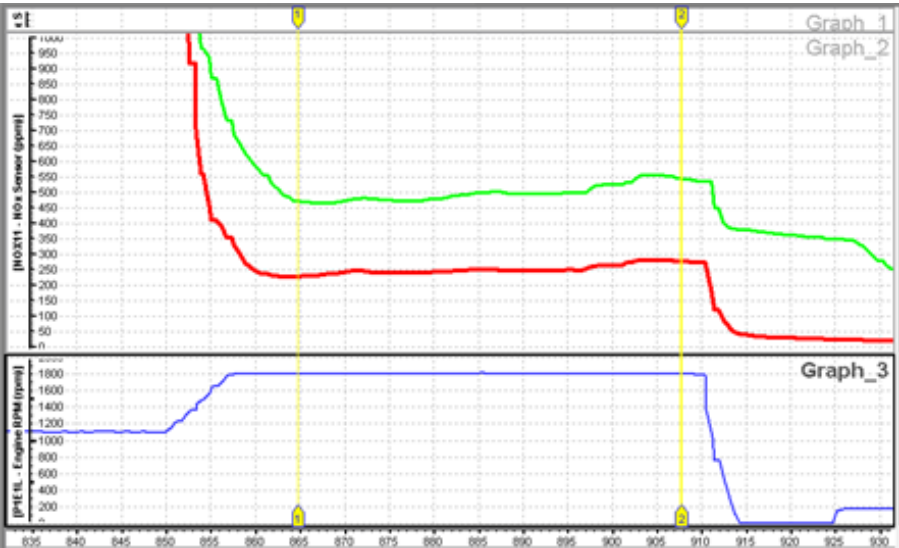
Marker 1	Marker 2
NOx1 (red) - 250 ppm	NOx1 (red) - 275 ppm
NOx2 (green) - 299 ppm	NOx2 (green) - 365 ppm



In instances of repeated occurrences of P20EE with no DEF crystallization buildup found in the system, results such as those shown below have been encountered. In this example, the NOx2 sensor is reading significantly higher than NOx1—by 100 ppm or more—for the full 60 seconds of the test when the engine is running at 1800 rpm. The NOx2 sensor is also reading significantly higher than the nominal expected

Live UI f ~300ppm NOx.

Marker 1	Marker 2
NOx1 (red) - 250 ppm	NOx1 (red) - 250 ppm
NOx2 (green) - 500 ppm	NOx2 (green) - 500 ppm



Because of the instances highlighted above, the NOx conversion test should only be used in situations where a failed NOx sensor is the primary suspected component—mainly P20EE and P2201.

DO NOT use a NOx Conversion test to diagnose P225C00 for vehicles with the following emissions levels:

- US17+OBD2019
- US17+OBD2020
- US21+OBD2020



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Live UI

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