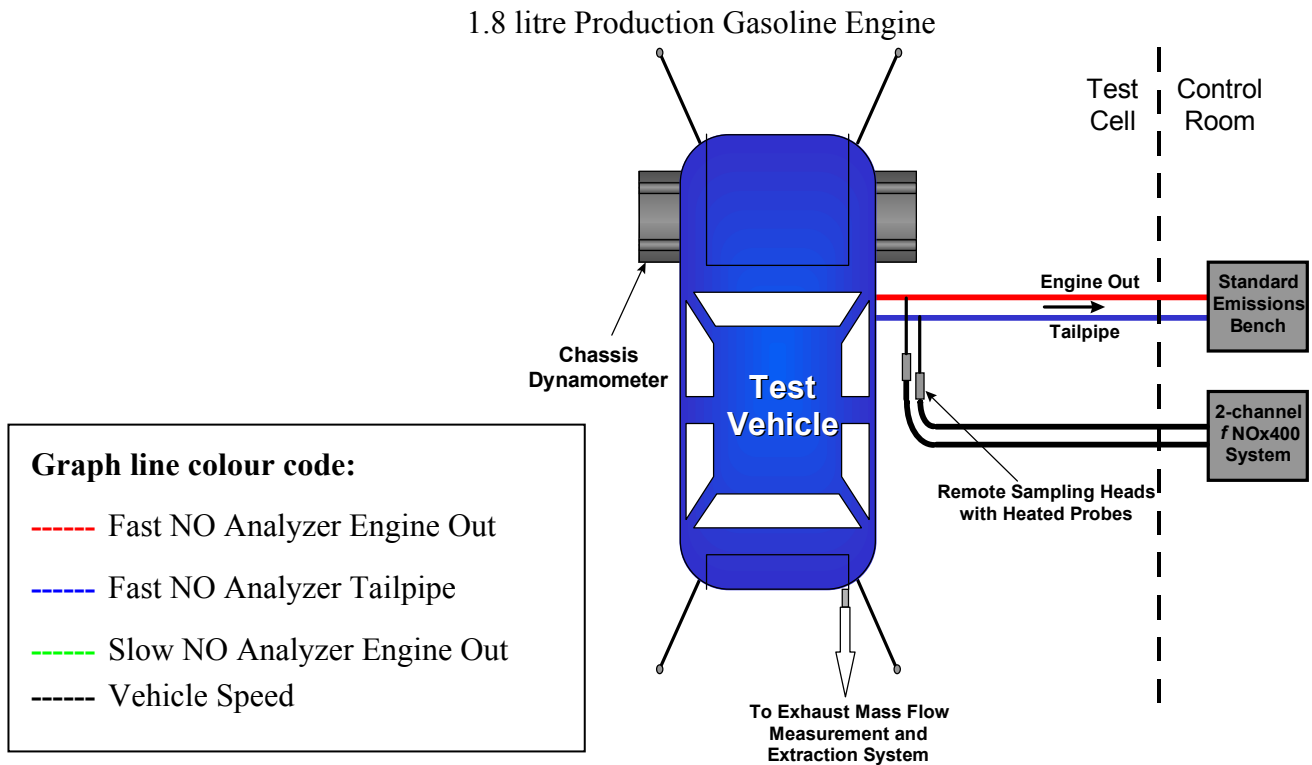


Suggested Application: Transient catalyst performance, transient EGR and fuelling calibration, general vehicle emissions

Fast response measurement of pre- and post-catalyst NO concentrations



Explanatory Notes for data

The benefits of using fast response analyzers for measuring transient emissions is evident when compared with the measurements from a slow response analyzer. The effects of gear changes, accels/decels can easily be seen in real time and instantaneous catalyst efficiency can be calculated.

The breakthrough of NO through the catalyst can also be seen at around 220 to 280s. This correlates well with lean excursions as indicated by the exhaust gas oxygen sensor and results in significant tailpipe emissions.

The restarting of the engine at around 317s (following a decel fuel cut-off) causes a sharp spike in NO. During the cut-off period when the engine is motoring, residual gas has been purged from the engine. This causes the first firing cycle to produce an excess of NO.