



Rolls-Royce

NOx control upgrade

Improve combustion and reduce NOx emissions



Improve your engine's intelligence

With increasingly stringent environmental legislation, previous generations of gas engines may not meet modern emissions requirements. But this does not mean that your equipment needs to be entirely replaced.

Simply upgrading to an intelligent NOx management system will enable your Rolls-Royce Bergen engine to automatically adjust its NOx emissions levels and meet current requirements.

The upgrade consists of a new PLC unit combined with a NOx sensor that is installed in the exhaust pipe to continuously measure NOx levels. If a reduction in NOx output becomes necessary, the governor automatically adjusts engine settings to achieve the necessary level without compromising engine power or increasing fuel consumption. You will get a more efficient and up-to-date engine that generates power in line with modern regulations. Our flexible upgrade solution ensures compatibility with your system and a quick installation and testing on-site. The complete upgrade normally requires 3-4 days.

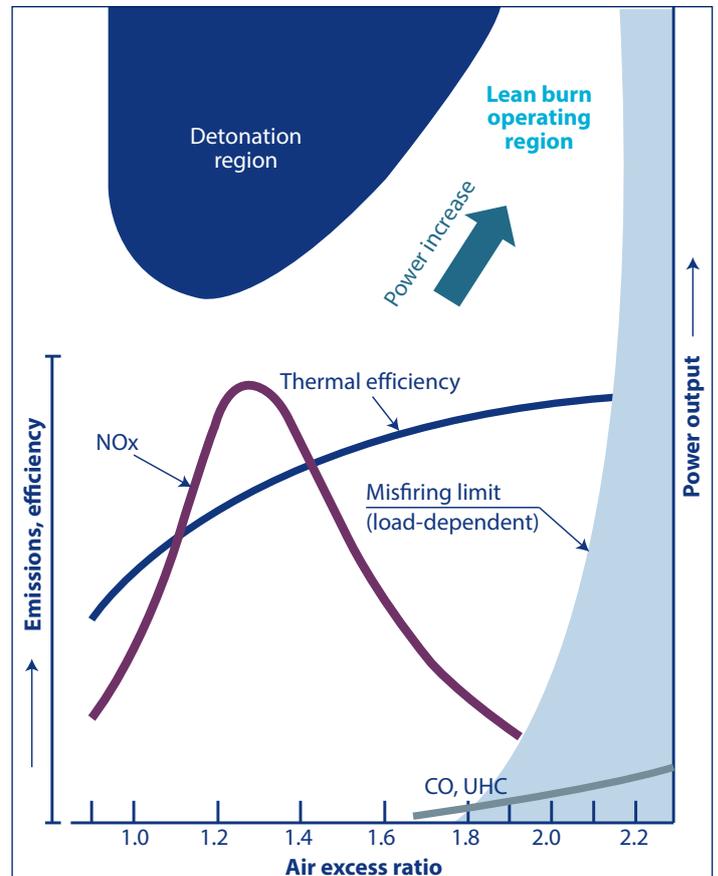
Applicable installations

Engine type	Fuel type
KV	Gas
BV	Gas

Benefits from the upgrade

- Improved air excess ratio optimizes fuel consumption and reduces NOx emissions
- Improved operational stability as the engine will adapt its fuel/air mixture to changes in temperature and humidity, optimizing the lean burning process
- Less knocking problems caused by bad fuel quality or changes in ambient conditions
- Less wear on ignition system

Operational principle



Engine performance is a function of air excess ratio – lean burn engines run with high air excess ratio characterized by high power, high efficiency and low NOx emissions.

Without NOx control, engine settings are pre-determined with sufficient margin to the misfire zone in order to accommodate variations in ambient conditions and fuel. With the NOx reduction upgrade, engine settings are automatically adjusted according to continuous feedback from the NOx sensor. Enabling the engine to operate closer to the misfiring limit while ensuring a lean and perfect combustion without misfiring.

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