

PPC Spark Plugs on Gas Compressor Driver

APPLICATION:

Natural Gas Compression

ENGINE:

Caterpillar 3512LE

ALTRONIC PRODUCTS:

PPC (Passive Prechamber) Spark Plugs (P1863IP-1)

OVERVIEW:

Before PPC installation, this engine experienced cylinder miss-fire due to load conditions. It would normally run at approximately 75% load and then spike to 100% load briefly after the blow cases dumped and equalized.

After installing a set of P1863IP-1 sparkplugs the results were as follows:

- Unit is running at 1175RPM and 95% loaded
- Boost Press. = 42.8"HG (CAT published max. press is 43.5")
- Intake Manifold Pressure = 32.5"HG (CAT published max. press is 34.5")
- Intake Manifold Temp. = 123°F
- Ambient Air Temp. = 73°F
- Cylinder head temperatures averaged between 550°C and 580°C (down approx. 50°C)
- Timing = 33° BTDC (CAT published max. timing for this model)
- Engine exhaust = 8.7% O₂, 45ppm NO_x

At these settings, temperatures held steady with absolutely no detonation levels. Plugs have been in the engine for more than a year with no issues.

