

# PLANTERRA ENERGY

A Division of Planterra Construction LLC | Dallas, Texas

## Service Contracts & Overhaul

### Long-Term Reliability, Field Mobilization, and Major Engine Overhauls

Returning a CAT G3600 or G3500 engine to service after a forced outage is the beginning of a reliability conversation, not the end of one. Operators who have spent the last several years running compression and power-generation fleets reactively — emergency parts sourcing, repeat failures on the same units, cannibalization between engines, deferred overhauls under production pressure — typically find that the next forced outage is not a question of whether but of when. Sustained production uptime requires a different posture.

Planterra Energy provides ongoing service contracts, emergency field response, scheduled preventive maintenance programs, and full-scope engine overhauls for operators who need their CAT G3600, G3500, G3608, G3612, G3616, and related gas compression and power-generation engines running reliably for the long term. Our technical team mobilizes to the field, executes work to original equipment manufacturer (OEM) standards, trains and supervises local technicians, and operates under the demanding sour-gas and heavy-oil conditions that define Venezuelan and broader Latin American oilfield operations.

### Service Lines

- **Major engine overhauls.** In-frame and full top-end overhauls on CAT G3600 and G3500 engines — cylinder head reconditioning, liner and piston replacement, valve and seat work, turbocharger overhaul, ignition system rebuild, ADEM/ESS calibration, dyno-equivalent run-up, and full QA/QC documentation packages traceable to OEM specifications.
- **Top-end and component-level rebuilds.** Targeted overhaul scopes addressing specific failure-mode evidence — cylinder head replacement, turbocharger rebuilds, aftercooler restoration, ignition harness and coil renewal, and oil-cooler servicing executed without committing to a full major overhaul.
- **Preventive maintenance contracts.** Scheduled service intervals built around evidence — operating hours, oil sample trending, methane-number variability, and condition-based triggers — rather than calendar reflex. Designed to extend overhaul intervals and reduce forced-outage frequency.
- **Emergency field response.** Rapid mobilization for forced outages, post-trip diagnostics, root-cause field investigation, and return-to-service support. Available to operators with active service contracts and on a project-by-project basis.
- **Local technician training and supervision.** On-site coaching for operator-side mechanics, planners, and supervisors — covering condition-based maintenance practices, sour-gas safety discipline, oil

sampling protocol, alarm-history review, and root-cause documentation. Standards-based, evidence-driven, transferable.

- **Critical spares and parts strategy.** Prioritized parts inventory build-out, lead-time risk management, core management on rebuild components, and procurement-sequence planning aligned with planned maintenance windows.

### How We Mobilize

Our operating model is built for the realities of Venezuelan and Latin American field conditions:

- U.S. corporate governance: Planterra Construction LLC, Dallas, Texas. Engineering work product, QA/QC documentation, and reporting are produced under U.S. company standards.
- Senior technical leadership: U.S.-based CAT G3600 and G3500 specialist with over a decade of in-country experience and direct field history at PetroPiar, PetroBoscan, Boquerón, and Quiriquire.
- In-country execution: senior Venezuelan technicians personally trained and supervised by our lead specialist, drawn from the talent pool that built the operational history on these specific engine populations.
- Compliance discipline: engagements are structured under applicable U.S. Treasury Department Office of Foreign Assets Control (OFAC) general license frameworks for upstream oil and gas services in Venezuela, with specialized U.S. sanctions counsel engaged on contracting structure.
- HSE standard: H<sub>2</sub>S work permits, gas testing, detector coverage, rescue readiness, and SCBA / supplied-air protocols calibrated to U.S. NIOSH exposure limits, regardless of host-country variance.

### Why a Service Contract Pays for Itself

Industry data on CAT G3600 reliability is unambiguous. Caterpillar's published case studies — including the long-running Repsol fleet, where 80+ G3500 and G3600 engines have logged service hours into the six figures — document that operators running disciplined reliability programs achieve engine life extensions of 15–20% versus reactive operation, alongside dramatic reductions in unscheduled downtime and emergency parts spend. Industry benchmarking guidance places acceptable rotating-equipment availability in the 90–95% range, with best-in-class operations targeting 95%+ and the most disciplined programs achieving 97%+.

On a single CAT G3612 driving gas compression in a typical heavy-oil duty cycle, each percentage point of engine availability translates into the equivalent of more than 90,000 protected barrels per year. The arithmetic of a service contract — preventive maintenance, oil sample trending, planned overhaul windows, and structured root-cause analysis on every forced outage — is straightforward against that arithmetic.

## Why Planterra Energy

Three characteristics define how we work — and why operators who have used both U.S. and Venezuelan service vendors choose us when uptime is the constraint:

U.S. Governance	Venezuelan Field Reach	Industry-Standard Discipline
Texas-domiciled U.S. company. Engineering, QA/QC, and reporting produced under U.S. corporate standards. Suitable for shareholder, lender, and counterparty review.	Lead technical specialist with 10+ years living and working in Venezuela, with direct field history at PetroPiar, PetroBoscan, Boquerón, and Quiriquire. Senior in-country technician base trained personally.	Methodology aligned with ISO 14224 reliability data discipline, OEM service standards, and U.S. NIOSH H <sub>2</sub> S exposure limits. Documentation traceable; outcomes measurable.

*We do not position as the largest service organization in this segment. We position as the most field-credible — the team that has actually worked on the engines in question, in the fields in question, under the operating conditions in question.*

## Start a Conversation

If you operate a CAT G3600, G3500, G3608, G3612, G3616, or related gas compression or power-generation fleet — and engine reliability is the constraint between you and the next leg of production — Planterra Energy is built to talk.

A typical first engagement is a 60-minute working session to align on your fleet, your operating constraints, and the production outcomes you most need to protect. From there, we propose a focused field assessment scope or a service-contract framework calibrated to your contracting preferences.

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*Planterra Energy is a division of Planterra Construction LLC, a Texas-domiciled U.S. company. Engagements involving Venezuelan operations are structured under applicable U.S. Treasury Department OFAC general license frameworks for upstream oil and gas services. Specialized U.S. sanctions counsel engaged on contracting structure. © 2026 Planterra Construction LLC. All rights reserved.*

*Service Areas: CAT G3600 audit, CAT G3500 overhaul, gas compression engine reliability, Caterpillar engine field service, sour-gas engine maintenance, oil & gas reliability audit Venezuela, gas-lift compression service, ADEM ESS controls support, methane-number management, predictive maintenance oil & gas, engine condition monitoring, in-frame and top-end overhaul, turbocharger rebuild, cylinder head reconditioning, H<sub>2</sub>S sour-service operations, Orinoco Belt operations, Maracaibo basin compression, mature-field gas compression. Field references: PetroPiar, PetroBoscan, Boquerón, Quiriquire.*