

## Bolivia – Remanufactured Engine

Engine model: Waukesha 12V-AT27GL			
<b>Power</b>	3,140 Horsepower	<b>Length</b>	14' (4.26 Meters)
<b>Speed</b>	750 – 1000 RPM	<b>Width</b>	6' (1.82 Meters)
<b>Height</b>	10.6" (3.23 Meters)	<b>Weight</b>	52,000 lbs. (23,665 kg)

### Facts in Brief

- Customer: ORVANA Mineral Corporation, Bolivia
- Customer failed engine
- Customer wanted to have same engine model but was unable to replace it with new engine (discontinued)
- Very critical piece of equipment
- Customer was looking at custom shop overhaul or field fix
- HOERBIGER Canada offered Remanufactured engine with same warranty as new engine
- Only two other solutions were offered to customer:
  - CAT engine retrofit
  - Other options for similar engines in Asia but without/very short term warranty

### Core Engine – Removal & Transportation

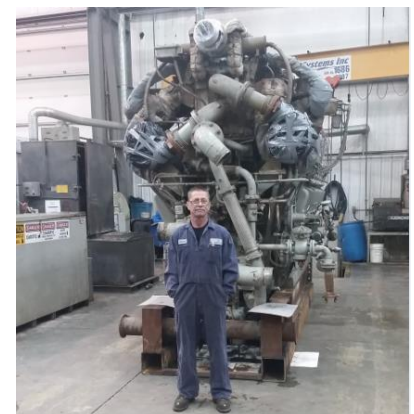
- Roof removed from compressor building
- Engine prepped to dismantle from skid and compressor
- Crane used to lift engine out of compressor station
- Approximate weight of 12V AT27GL engine 51,000 lbs (23,000 kg)
- Outside temperature -40°C
- Engine loaded onto shipping skid and truck
- 9 hour transportation journey by road to Spruce Grove



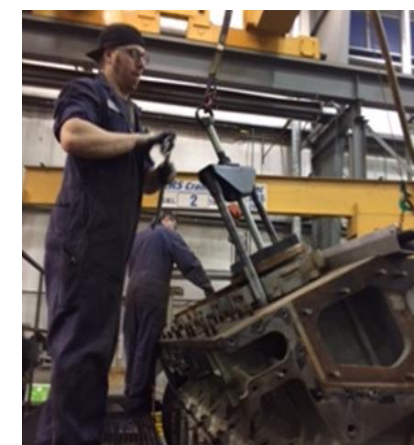
Core Engine Removal



Core Engine Transportation



Arrival in Spruce Grove



Tear Down Process begins...

## Results

- Customer got a reliable engine with same warranty duration
- Fast engine exchange, short downtime
- Perfect match with generator
- Instrumentation upgrade, TCM II
- Altronic Panel

## Why did HOERBIGER's solution win over all the other solutions offered?

Because HOERBIGER focused on fulfilling all customer requirements:

- First part of project was critical since customer had many questions/requests
  - HOERBIGER Canada held video conference in order to clarify questions/discuss requirements
  - HOERBIGER Canada sent personnel down to Bolivia for assuring a "plug and play" solution as possible
- HOERBIGER Canada provided performance evaluation using Windrock testing
- HOERBIGER Canada invited end-customer to visit HOE location in Spruce Grove for Dyno testing of Engine



*Tear Down Process*



*Before Process – Work in Progress*

