

# PETRONAS GENRAIL 5

## High Performance Railroad Generation 5 Diesel Engine Oil

PETRONAS Genrail 5 are high performance railroad diesel engine oils specially developed for high output railroad engines, Generation 5, fitted with silver bearings, requiring a zinc-free lubricant. Formulated with selected mineral base oils enhanced with detergent/dispersant, anti-wear and anti-oxidant additives, PETRONAS Genrail 5 oils provide good dispersant technology which will extend oil and filter life, maintain engine cleanliness, high thermal and oxidation stability, excellent corrosion protection for engines containing yellow metals and silver parts burning high sulphur fuels.

### Applications

PETRONAS Genrail 5 Series are recommended for use in:

- General Electric and General Motors-EMD locomotive and marine diesel engines requiring a LMOA Generation 5 lubricant

### Features & Benefits

Features	Benefits
Zinc free Based formula	Protects engine silver parts against corrosion
High detergent and dispersant performance	Combination of detergency and dispersancy ensuring high soot handling and engine cleanliness
High thermal and oxidation stability	High protection against oxidation, sludge formation and viscosity control
High anti-wear protection	Protects engines from excessive wear, providing long engine life
High multi metal compatibility	Compatible with most metal alloys ensuring trouble free performance of the engine
Very good compatibility with most seal and elastomers	Compatible with most seals and elastomers, which prevents oil leaks and contamination due to seal erosion

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### Typical Properties

Characteristic	Method	Specification	SAE 40	SAE 20W-40
Specific Gravity @15°C	ASTM D4052	(1)	0,866	0,864
Kinematic Viscosity at 40°C, cSt	ASTM D445	(1)	138,1	135,0
Kinematic Viscosity at 100°C, cSt	ASTM D445	(1)	14,49	15,50
Viscosity Index	ASTM D 2270	(1)	104	119
Flash Point, °C	ASTM D92	(1)	250	240
Pour Point, °C	ASTM D97	(1)	-24	-24
TBN, mgKOH/g	ASTM D2896	(1)	13	13
Sulfated Ash, %wt	ASTM D874	(1)	1,4	1,4

All technical data is provided for reference only / (1): not required in specification / SS is available upon request including quality control limits

### Performance Levels

- GE Generation 4 Long Life
- GM EMD
- LMOA Generation 5

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### Health, Safety and Environment

This product is unlikely to present any significant health and safety hazards when used in the recommended application. Avoid contact with skin. Wash immediately with soap and water after skin contact. Do not discharge into drains, soil or water.

For further detail regarding storage, safe handling, and disposal of product, please refer to product SDS or contact us at: [www.pli-petronas.com](http://www.pli-petronas.com)

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