

# Optimization of Fuel Consumption for M 32 C Engines

## Parts Product Solution



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Parts Product Solution

**MaK**

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## System Description

A system conversion is available that will optimize fuel consumption. The primary component is a turbocharger that increases the charging pressure in the part load range.

The main function of this system conversion is to change the configuration of the engine so that the efficiency of the engine in the part load range will be significantly improved. This will lead to a substantial reduction in fuel consumption.

The exhaust mass flow of turbocharged engines often declines as engine speed drops and consequently, the air ratio (lambda) becomes too small. The combustion ratio deteriorates and the fuel is not burned completely. This may lead to increased stress of components due to vibration and in the long term, possible damage and failure of components.

## System Requirements

This system is available for in-line M 32 C engines equipped with Napier turbocharger.

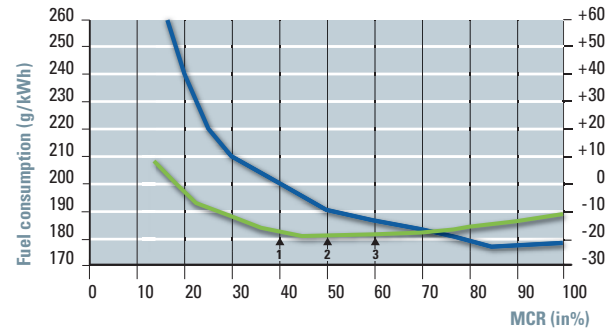
For more detailed specifications and information contact your authorized Caterpillar dealer.

## Benefits

- Lower fuel consumption at part load, resulting in reduced OPEX
- Conversion to IMO II which significantly decreases
  - NO<sub>x</sub> emissions
  - CO<sub>2</sub> emissions
- Third party benefits
  - Lower harbor fees and port dues
  - Government aid or subsidies

## Expected Fuel Savings

Expected fuel savings	1	18 g/KWh	Expected decrease in CO <sub>2</sub> emissions	1	57 g/KWh
	2	9 g/KWh		2	29 g/KWh
	3	5 g/KWh		3	16 g/KWh



**Expected Fuel Savings**  
 — OEM engine set up  
 — Optimized engine

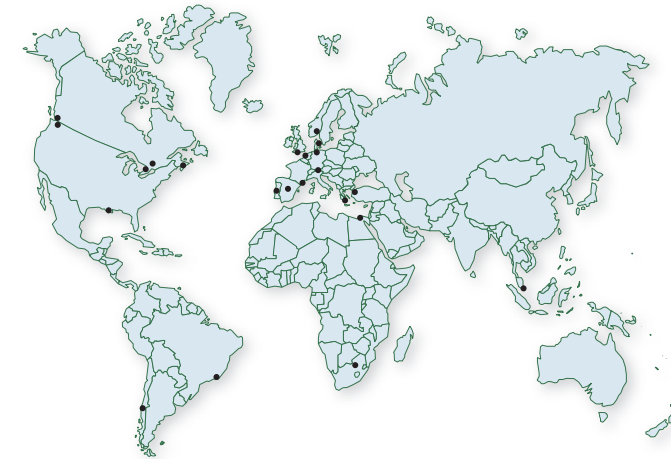
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In the event a part is not immediately available in dealer inventory, it will be dispatched from the distribution center within 24 hours.

Parts are packaged to ensure optimal protection from damage. Close contact is maintained with logistic partners worldwide who specialize in ground, air, and sea transport, so that each shipment is collected and dispatched as efficiently as possible.



**The dealer network.**