



# PIONEER IN LOCOMOTIVES - From steam to Diesel

## Some key dates



**1835**

The first steam locomotive rolls out of John Cockerill's workshops. It is dubbed "le Belge".

**1950**

The Cockerill plants produce a new locomotive equipped with a Diesel engine. At the same time, Cockerill enters into the refitting business by converting steam locomotives to Diesel.

**1989**

CMI continues to innovate by developing a hydrostatic transmission shunting locomotive, the NH 500 B model.

**2000**

The NH 500 C model is designed.

**2004**

The NH 300 B and NH 700 BB enlarge further the CMI's range of hydrostatic transmission shunting locomotives.

**2010**

The new NH 700 BB is designed



## Nowadays

### A specialist in shunting

As a brand of the Services sector of CMI Group, CMI Locos Diesel is active in rail traction with a range of hydrostatic shunting locomotives that are particularly suited to haul heavy loads on :

- industrial sites such as steel plants, heavy mechanical industries, chemical and petrochemical plants, mines and quarries, cement works and glassworks, plantations, paper manufactures, etc.
- national and private railways
- urban transports (underground)

In addition to building new locomotives, CMI Locos Diesel supplies a broad range of services from leasing of shunting locomotives to complete outsourced traction, including modernization and maintenance of customer's locomotives fleet, after-sales services and spare parts supply.



## The assets of CMI Locos Diesel

Taking advantage of more than 170 years of expertise in the field of shunting locomotives, the assets of CMI Locos Diesel are :

- Creativity and use of state-of-the-art technologies
- Flexible and interactive teams allowing short reaction times
- Large capacity workshops fully equipped with pits, fitting tools and cranes
- Intervention teams composed of qualified and experienced specialists, 24 hours a day, 7 days a week
- Innovative experience in undertaking all types of delegated traction services on customer's site
- Versatility in financing solutions

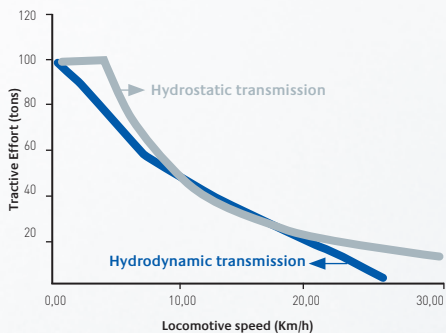




# The range

## Shunting solutions for every needs

### General characteristics



- Power up to 750 hp
- Weight up to 100 tons
- Tractive effort up to 270 Kn
- Max speed up to 65 km/h
- 2, 3 or 4 axles

### The best transmission for shunting

The main advantages of the hydrostatic transmission in comparison with the classical hydrodynamic transmission, are the following ones:

- Higher performances due to an improved global efficiency
- No minimum continuous speed
- Dynamic brake



NH 700 BB



NH 500 C



NH 500 B



NH 300 B

### Comfort



- Ergonomical driver desk
- Comfortable seat
- Large visibility
- Noise insulation
- Flexible use

### Environmental-friendly

- Low fuel consumption
- Low noise pollution
- Biodegradable oil
- Tier II and Tier III compliant Diesel engines

### Maintenance



- Modular construction
- Easy access to sub-assemblies
- Easy and low cost maintenance
- High availability ratio
- Simplified design guaranteeing the perfect accessibility to all parts
- Easy and low cost maintenance
- Reliability and optimal longevity

### Optional equipment

On customer's request, these high performances locomotives can be fitted with the following optional equipment :

- Remote control
- Automatic coupler
- Double traction
- Dead man device
- Antislip/antiskid device
- Wheel flange lubrication
- Air conditioning system
- Events recorder
- On specific requests : GSM-R, train safety system, etc.

# Locomotive modernization

## A second life for your equipment

Besides the manufacturing of new locomotives, CMI Locos Diesel both designs and undertakes the modernization, the upgrading and the refurbishing of elderly locomotives:

- » By implementing the **hydrostatic transmission** on locomotives built by CMI or others manufacturers

**BEFORE**



**AFTER**

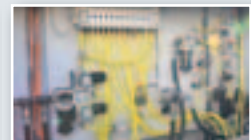


- » By replacing the obsolete **main components** of the locomotives such as Diesel engine (complying with environmental norms), cooling system, reducing gears and wheels, driving cab (ergonomical) and hoods, braking systems, and electrical and electrical components with following resultant benefits:

- Higher performance
- Easier availability of spare parts
- Reduction in fuel consumption
- Respect for the environment



Repowering



Pneumatic Panel



Driver Friendly touch panel

- » By setting up the **CMI remote control** on locomotives, regardless of their type and age:

- Fully reliable
- Improved safety during shunting operations
- Efficiency of personnel staff
- Considerable time saving
- Possibility of controlling several locomotives on one single frequency
- Uniformity of driving controls
- Less mechanical wear



CMI Remote Control

## References

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