



KEEPING THE POWER INDUSTRY COMPETITIVE WITH EFFECTIVE LUBRICATION

INDUSTRY DEMANDS ON TRUNK PISTON ENGINES ARE INCREASING



- 1 Lower end user demand
- 2 Higher operating costs
- 3 New engine designs

Operators are demanding best-ever fuel efficiency so **new generation engines** are being designed to provide enhanced efficiency and overall emissions performance, granting better and better **fuel economy**

DID YOU KNOW?



The **Wärtsilä 31** engine was awarded a **Guinness World Record** for being the world's most efficient 4-stroke diesel engine



The latest engines can deliver fuel economy of up to **160g/kWh**

HIGH BMEP ENGINES DELIVER GREATER EFFICIENCY BUT PLACE INCREASED DEMANDS ON LUBRICANTS CAUSING RAPID BN DEPLETION AND VISCOSITY INCREASE



Higher temperatures



Higher pressures



Lower oil consumption



A wider range of fuels and fuel quality

SHELL ARGINA OILS ARE DESIGNED TO WITHSTAND HIGHER OIL STRESS



IMPROVED ENGINE PROTECTION¹

Improved cleanliness and better deposit control increase filter life, lacquer control and provide less fuel pump sticking



REDUCED OPERATING COSTS¹

Excellent BN retention and viscosity control reduce the need for maintenance and sweetening



INCREASED OPERATIONAL EFFICIENCY¹

Longer oil life and outstanding extreme temperature performance reduce downtime

¹ Compared to market representative products