



Commercial Vehicle Lubricants: The Saudi Case

Agenda

Overview: commercial vehicle market

Heavy duty engine oil lubricants

Harsh operating conditions

Lubricant market drivers

Summary

Afton Chemical

Saudi Arabia commercial vehicle market

Rise of Sinotruck the biggest change in a stable Mainstream HDEO market



STABLE PARC SIZE



Market Impact

Older vehicles being taken out of circulation at a similar rate to new vehicle sales, infrastructure investment may change this



CHANGING OEM LANDSCAPE

HCV market is currently dominated by European OEMs (Scania, MAN, Daimler, Volvo) but Sinotruck expected to grow to 20% by 2035



HIGH AGE OF PARC

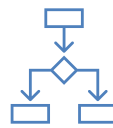
Average age of CV currently 9 years, economic uncertainty and improvements in hardware leading owners to retain vehicles for longer



EMISSIONS COMPLIANCE

Penetration of DPF is approximately 10% of the market

Reduced SAPS demand a fast growing niche – growth of API CK-4



CHANGING CHANNELS

Servicing dominated by customer owned workshops for large fleets with some shift towards independent workshops

Value proposition needs to target fleet owners



Impact for Lubricants

Increasingly competitive landscape with differentiation needed for growth

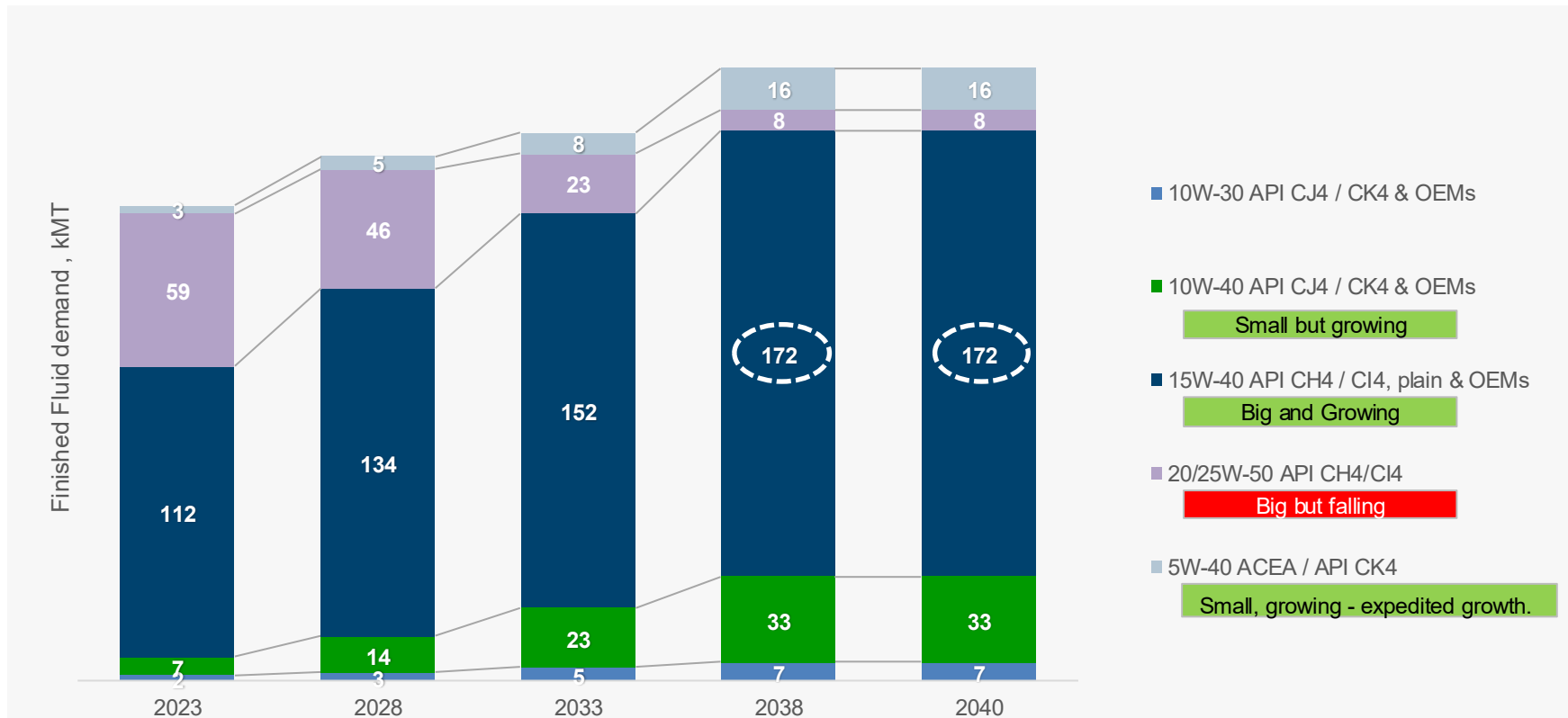
OEM approved products still valued, potential for targeted solutions

Strong demand for high viscosity, Full SAPS (API CI-4 and CH-4) expected to continue

Sources: Frost & Sullivan; Kline; Knibb, Gormezano Limited

HDEO lubricants – future

Emergence of premium products, shift to lower viscosity grades



Source: Kline data and customer validation (Saudi)

Harsh operating conditions



Vehicles operating in these regions need excellent protection against wear, sludge build up, and oil oxidation



Severe
Environmental
Impacts



Challenging
Driving
Conditions



Demanding
Fuel
Quality



Bore
Polishing



Piston
Wear



Oil
Oxidation



Piston
Deposits



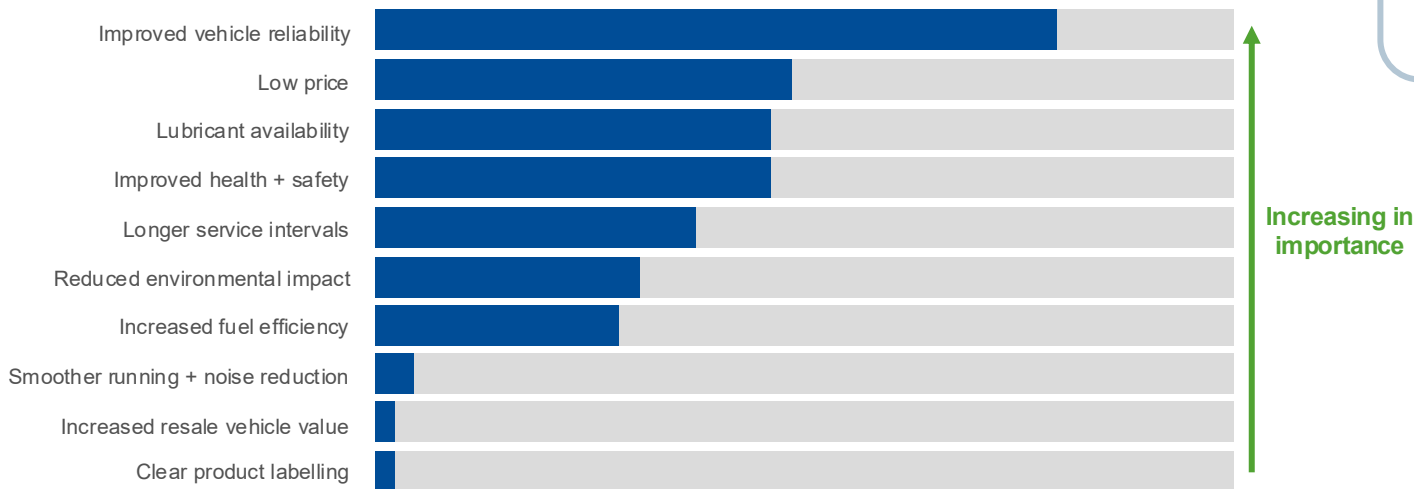
Engine
Sludge



Bearing
Corrosion

End-user lubricant purchase drivers

Vehicle reliability is the most important purchase driver across all sectors



"So for me vehicle reliability is the most important thing, because I don't want my equipment to break down because each breakdown directly relates to the cost"

Construction, Saudi Arabia

"Reliability - because the truck should stay with the company as long as possible. We are dealing with the trucks as if they are human. So, the trucks should be with the company for more than 8 to 10 years. If you are maintaining the trucks well, you will have high reliability. And if you are using good lubricant and original parts you will not be afraid of the truck breaking down."

Construction, Saudi Arabia

Vehicle reliability is the primary consideration for end-users but TCO improvement through extended drain and improved fuel economy are of importance

Source: B2B International

Summary



A lot has changed since API CI-4 was introduced in 2002



End users expect robust performance in every operating environment



Oil Marketers face an increasingly challenging market from cost pressures to regulatory restrictions



Afton Chemical heavy duty engine oil additive offers protection against extreme environments whilst maintaining extensive base oil coverage and performance benefits



Afton Chemical - Our purpose: We keep things moving™

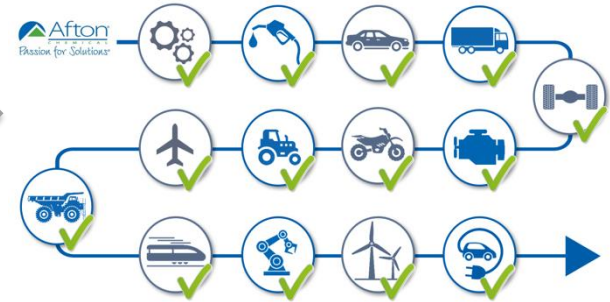
One consistent vision...

to address consistent industry needs...

and develop solutions for evolving segments



Afton provides performance additive solutions **that reduce emissions, make vehicles more efficient and machines last longer**



AFTON

- A **global, independent and focused** supplier of lubricant and fuel additive solutions
- A key player in the industry for **100 years**
- Committed to delivering the **solutions its stakeholders' value**
- Committed to its **future**