Base Oils Beyond the Crisis: Lasting Impacts of the Middle East Geopolitical Un-Certainty

A Webinar Discussion for Subscribers to:

LUBES'N'GREASES



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Even After the Strait of Hormuz Reopens: Group III/III+ Base Oil Supply Faces Permanent, Structural Transformation….



Reopening the strait does not undo the long-term damage…

- **Long-term physical infrastructure damage:** The Middle East accounts for ~20% of the global Group III base oil capacity but 40% to 45% of Group III supply to North America. Even if the Strait of Hormuz is re-opened it will take time for the physical infrastructure to come back up

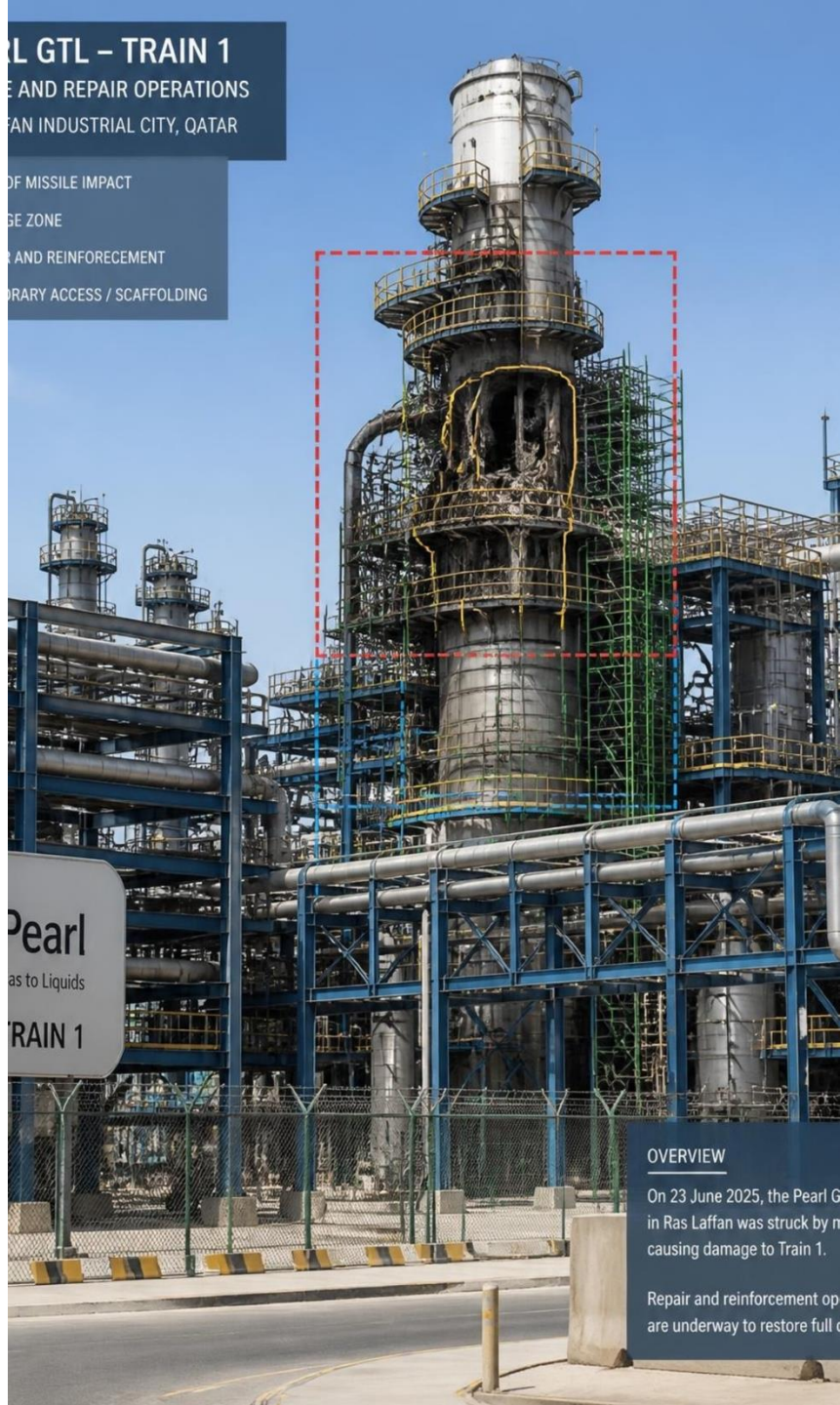
- **A paradigm shift in sourcing strategies:** Changing crude slate by S Korean refiners has impacted the output of refined products - Indirect Reliance**:** An additional 30% of the U.S. Group III supply comes from South Korea, which itself historically relies on the Middle East for up to 70**%** of the crude oil feedstock needed to refine those base oils

- **Freight Costs and Risk Volatility**

- **Lasting regulatory precedents:** ILMA getting approval for Emergency Provisional Licensing, Escalating OEM and Fleet Emission Mandates, Mandates Supporting Re-Refined Base Oils (RRBOs), Fast-tracked regulatory and environmental permitting adjustments to ensure fast start of domestic Group III/III+ production

Physical capacity stays offline into 2027…

- Shell's Pearl GTL Train 2 in Qatar, a key high-purity Group III/III+ source, was hit by missile strikes; repairs expected to keep the affected train offline well into 2027
- BAPCO (Bahrain) and ADNOC (UAE) declared force majeure
- Compromised catalytic hydrocrackers and contract backlogs of unfulfilled global contracts will take many months after ships move



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South Korean refiners are abandoning single-source Gulf supply…

Korea's Middle Eastern crude share fell (KNOC)

About 70%
Before March 2, 2026

Under ~50%
Today

- Re-sourcing means months of re-engineering, complex negotiations, & building relationships with new suppliers - Once done, it sticks, diversification will remain
- S Korea emerged as a major “swing” supplier preventing the complete depletion of global synthetic oil stockpile, but these expensive alternative procurement routes directly caused Group III prices to **skyrocket by nearly 100%** in European and North American markets
- In May 2026, Seoul implemented **mandatory export caps** on refined petroleum products to protect its domestic industrial and automotive sectors



S Korean refiners move to US crudes will shrink base oil feedstock *and* yields…

- Lighter U.S. grades shift yields more towards naphtha and gasoline; less VGO for Group III feedstock
- Lower base oil yields across hydrocracking and hydrodewaxing due to less paraffinic crude vs Arab Light
- Record fuel margins pull VGO into the diesel pool, keeping posted prices elevated

Even after a peace deal, insurance and freight will keep a permanent risk premium

15 days

Red Sea route transit time

30+ days

- War-risk premiums: 0.15% to 0.25% of hull value before, 1% to 3% after reopening
- Adds $1.5M to $4.5M per VLCC or chemical tanker voyage
- Cape of Good Hope detour adds 10 to 15 days
- Tanker capacity shrinks 20% to 30%; Yanbu and Fujairah queues add 3 to 7 days
- Near-shoring wins: Korean, U.S. Gulf, and European Group IIIs beat Middle Eastern Persian Gulf product on landed cost



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How is the industry reacting…Fast tracking of conversions and grass root projects

- Shell's Wesseling conversion to 300,000 tonnes of Group III is being fast-tracked in Europe
- ILMA is lobbying the US Federal authorities to fast track the home-based Chevron and ExxonMobil Group III/III+ projects
- New Group II and III capacity coming from IOCL and CPCL in India
- New Group II+/III capacity coming from CNOOC, Hengli Dalian, Hainan Handi Sunshine, and Hebei Feitian in China
- Speculated Group II/III capacity coming up by Dangote Refinery (Phase II), and Bua Petrochemicals in Nigeria

Good news for Group III Re-refiners, re-refined base oils have become a strategic commodity…

50% to 85% fewer greenhouse gas emissions

50% to 80% less energy

- Advanced processing reaches API specs with performance matching virgin base oils in higher API groups
- EU targets 70% to 85% waste-oil regeneration by 2031
- As higher-sulfur Group I base oils get phased out of majority automotive applications in the US and EU, automotive used oils collected are Group II and higher

Lubricant blenders in a rush to qualify multiple sources…

- Switching Group III without read-across means millions in OEM and API testing costs
- In the USA, ILMA-backed emergency provisional licensing eased the shortage (API 1509 Section 6.9), OEMs providing flexibility to implement temporary oil viscosity substitutions
- Blenders will keep the validated alternate formulations – divergent supply as opposed to single source plus near sourcing. Moving from “lowest cost” to “security of supply.”



Not all doom & gloom for base oil buyers: Demand is locked in, but oversupply arrives by 2028…

- Euro 7, API SP and ILSAC GF-6/7 need 0W-20, 0W-16 and 0W-12 etc. grades; Group I, II cannot meet them
- Group III spot prices spiked over 220% at the blockade's peak
- PCMO prices stay high into 2027
- However, new/upgraded refineries in China, India, and the U.S. point to regional oversupply by 2028, which should depress Group III prices from its current high

Action for blenders: diversify sources, qualify alternates, secure re-refined offtake, near source – assurance of supply important!



in the Room…EV penetration!

- As electric vehicle (EV) penetration increases and structurally displaces millions of barrels of transportation fuel demand per day, oil refiners cannot simply "turn off" gasoline and diesel production
- Refining of crude oil in modern *high conversion* refineries yields a fixed spectrum of products—roughly **70% of which traditionally goes toward gasoline and diesel**
- Refineries will reconvert their HCU and FCC operations to make less gasoline and diesel; simpler *hydroskimming* refineries face permanent closure
- Accelerating EV adoption could prompt the closure of roughly **~ 40 major global refineries by 2040 – but we don't believe base oils will be significantly impacted**



Thank you!

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