



human energy®

Pricing Support Deck

February 2022



Factors Affecting Finished Lubricant Cost

To understand the reasons for the rise in cost of finished lubricants, it's first important to understand the components that make up a finished lubricant product.

A finished lubricant product is made up of the following raw materials and components:



BASE OILS

"Basic lubricant building block."

Factors Affecting Cost of Bases Oils

- Crude oil prices which determine the feedstock costs for base oils
- Competition for feedstock availability for other uses
- Supply/demand balance or capacity versus consumption

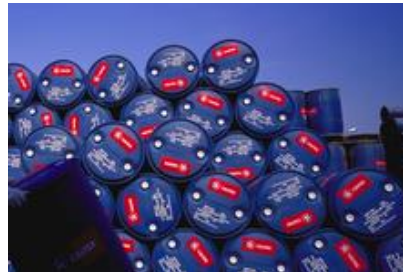


ADDITIVES

"Used to enhance the performance of an oil"

Factors Affecting Cost of Additives

- Crude oil prices, as many additives are derivatives of petrochemicals
- Base oil prices, as most additives contain base oil
- Supply/demand balance or capacity versus consumption



PACKAGING

"Ensures safe handling and consumer convenience"

Factors Affecting Cost of Packaging

- Crude oil prices, as plastics are derivatives of petrochemicals
- Steel costs driven by ore costs and milling capacity
- Supply/demand balance or capacity versus consumption



OTHER COMPONENTS

- Import Duties
- Freight Cost
- Manufacturing Cost



Single Biggest Finished Lubricant Cost Driver

Base Oil

- The biggest component affecting the price of a finished lubricant is the cost of base oil.
- Base oil makes up 80-99% of the total finished lubricant by volume.
- Base oil is also used in the manufacture of lubricant additives and quite often an increase in the cost of base oil will also lead to an increase in the cost of additives.



What is Driving Feedstock Prices?

Feedstock costs:

- “Two base oil producers nominated posted price increases with effective dates this week. The increases did not come as a complete surprise, as margins have been pressured by the escalating costs of crude oil, feedstocks, transportation, labor and other factors.” ([Lubes’n’Greases – U.S. Base Oil Price Report – February 16, 2022](#))
- “ Rising crude prices were squeezing margins and suppliers appeared more reluctant to make price concessions.” ([Lubes’n’Greases – U.S. Base Oil Price Report – February 9, 2022](#))
- “Oil contracts had touched seven-year highs in previous sessions, supported by strong global demand, ongoing tensions in Eastern Europe and potential supply disruptions due to cold U.S. weather conditions, CNBC.com reported..” ([Lubes’n’Greases – U.S. Base Oil Price Report – February 9, 2022](#))

Demand:

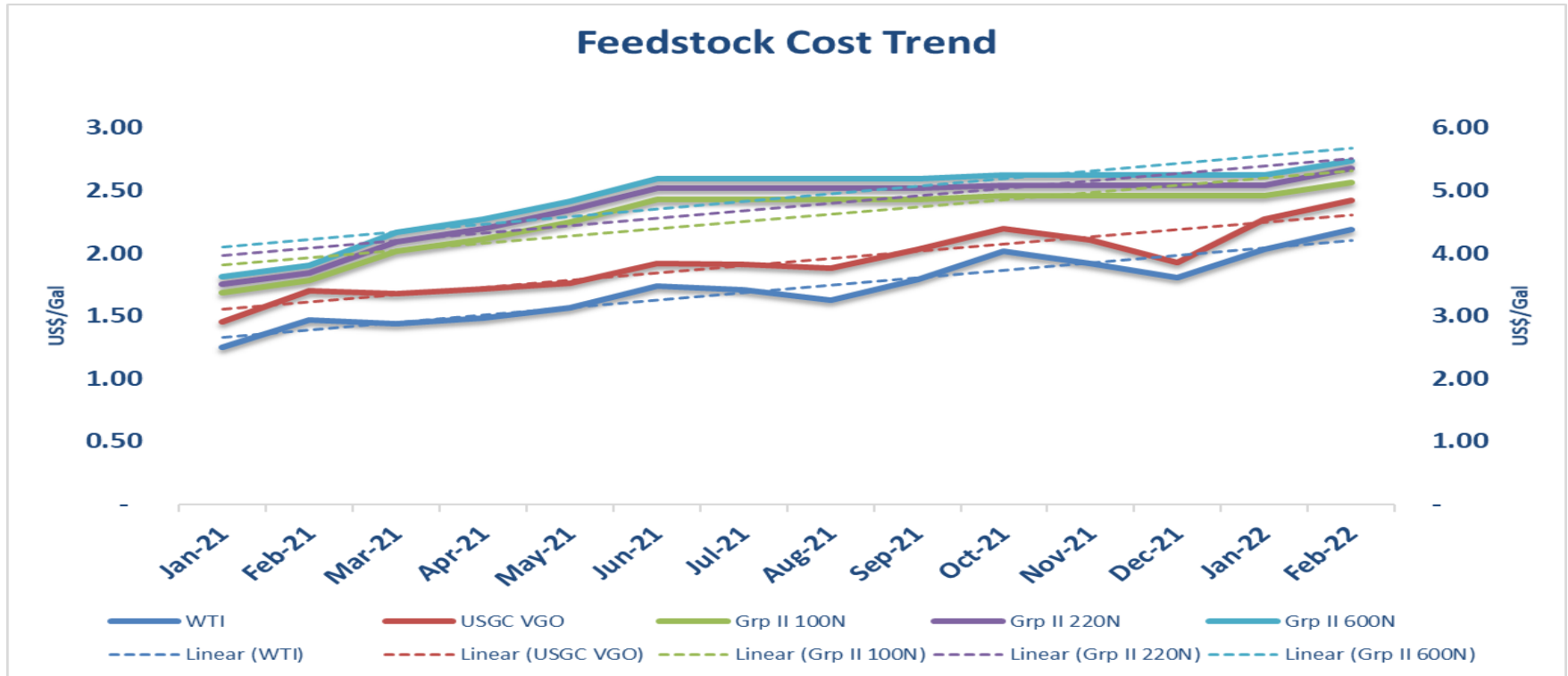
- The base oil increases on both sides of the market were fueled by the relentless climb in feedstock prices and other costs, coupled with a fairly tight supply and demand scenario, due partly to plant turnarounds.”([Lubes’n’Greases – U.S. Base Oil Price Report – February 16, 2022](#))
- “Demand in general was described as steady with some pockets of the market seeing more activity than others.” ([Lubes’n’Greases– U.S. Base Oil Price Report February 9, 2022](#))

Supply:

- “Raw material supply shortages and climbing costs continued to plague downstream finished lubricants and grease manufacturing.”([Lubes’n’Greases – U.S. Base Oil Price Report – February 16, 2022](#))
- “Two major additive producers had also announced that they would be increasing prices by 15% on Jan. 31 and Feb. 21, respectively. Additive shortages continued to be reported by a number of blenders and the situation was not expected to improve much until at least the middle of the second quarter.” ([Lubes’n’Greases– U.S. Base Oil Price Report – February 16, 2022](#))
- “The maintenance programs were likely to contribute to a further tightening of supply. Producers have been building inventories ahead of the turnarounds, which has led to a reduction in spot availability. .” ([Lubes’n’Greases– U.S. Base Oil Price Report – February 2, 2022](#))
- “Transportation and logistics problems persisted, with suppliers expressing concern at the rising freight costs and the inability to meet delivery deadlines due to a lack of truck drivers and other staffing issues.” ([Lubes’n’Greases Special Report – Vol 28 Issue 2, 2022](#))



Feedstock Price Trends



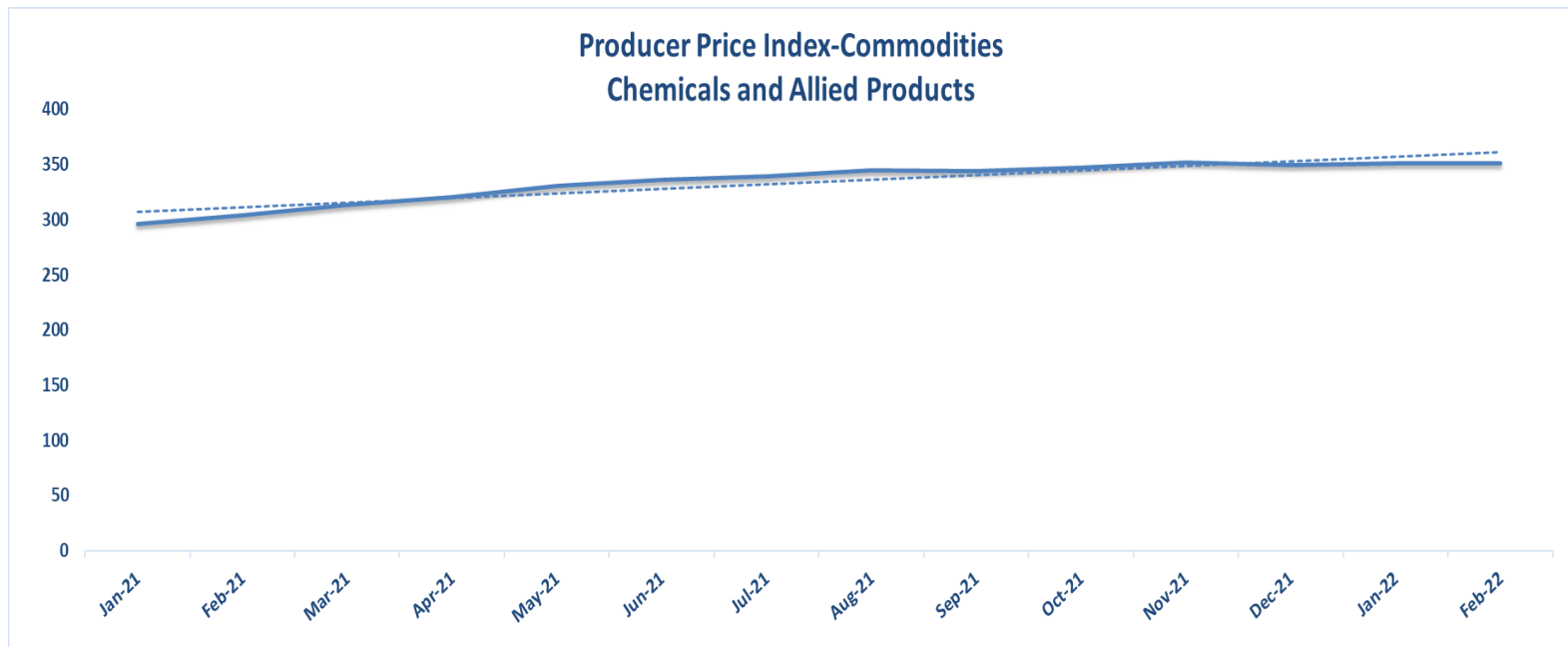
- USGC G2 average postings (Motiva, Excel Paralubes and Chevron)
- WTI crude increased by 26% since June 2021 and by 21% since year-end 2021.
- VGO rose by 25% since mid-2021.
- Continued higher trend in Group II base oil cost (up 5%) driven by higher crude oil and feedstock prices, squeezed margins, tight base oil supply, and rising transportation, labor and energy costs were some of the factors thought to be driving the increase.



Other Finished Lubricant Cost Component

Additives

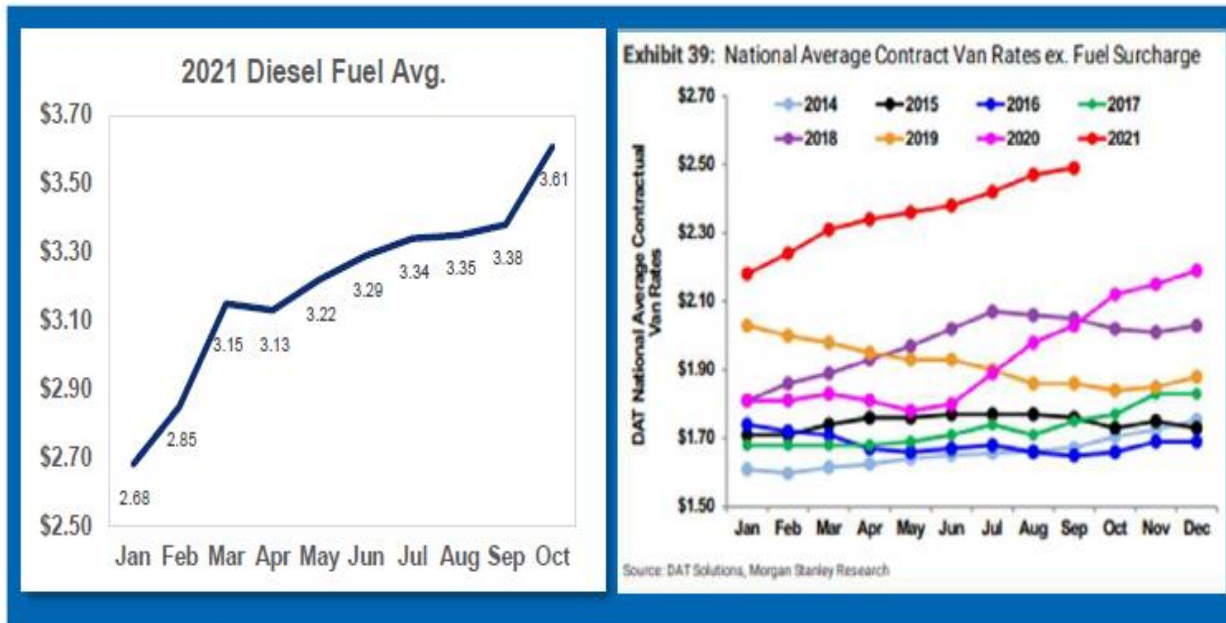
- The index below (PPI for Chemicals and Allied Products) was used as a representation for additives components.
- Many additive producers announced price increases up to 15% since the beginning of 2022 driven by raw materials shortages.
- Capacity constraints drove higher inbound logistics costs also impacted total additives cost.





Sources: [United States Department of Labor, Bureau of Labor Statistics](#); [Lube Report](#)



What is Driving Higher Logistics Freight Rates?



Container Freight Rate Index (40 ft Container)*		
Month/Year	Weighted Spot Rate	YoY Change
Oct-20	\$2,900	111% 
Oct-21	\$9,900	224% 

- Transportation cost are driven by demand, carrier utilization and leveraging the market, as well as fuel cost.
- Drivers are favoring shorter length of hauls in order to be home with their families. As a result, they are gravitating towards carriers and shippers with favorable driver experiences. Suppliers are needing to be more flexible by optimizing the operations and route guides, introducing relay model for mid and longer hauls, ensuring product availability and minimizing wait times at plants, all in efforts to improve the attractiveness as a Shipper of Choice.
- The container shipping market is currently extremely under-supplied as a result, this has allowed carriers to charge radically high freight rates.
- Trucking industry faces significant headwinds in restoring driver capacity and productivity that it did not face in 2018/2019.
- A shortage of diesel technicians is currently impacting the carriers on their ability to keep their units up and running.
- Long lead times for tractors and trailers – carriers won't see equipment ordered in 2021 until third quarter of 2022 at the earliest.

* Source: Drewry Container Freight Rate Insight World Container Index



General Overview

Data show a continued upward trend in all cost components. The increases are driven by tight supply conditions, healthy demand, firm feedstock and crude oil prices, and rising production costs. Lubricant producers continue to be impacted by growing additives and packaging costs due to a climbing trend in raw materials cost and higher logistics rates. Tight capacity, lack of drivers and higher driver diesel prices drove higher logistics freight rates.



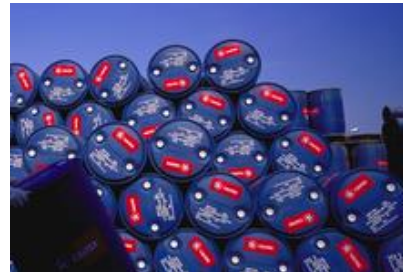
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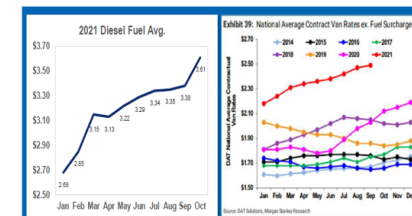
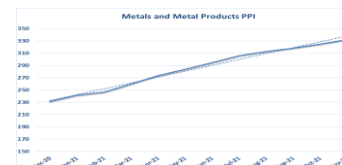
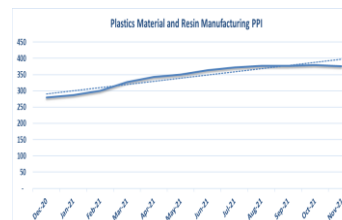
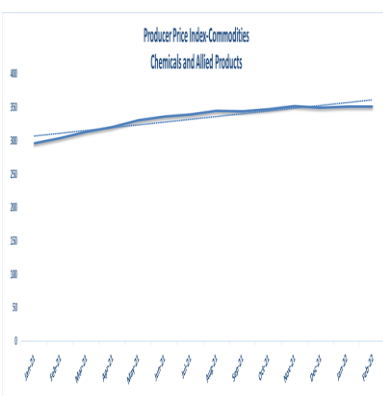
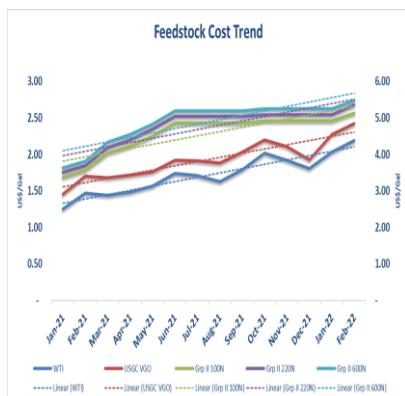
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