



human energy®

# Pricing Support Deck

June 2021



# 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.”*

*Makes up 80-99% of finished product*

### *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

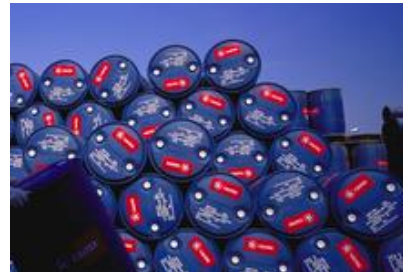


## ADDITIVES

*“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 Base Oil Prices?

## Feedstock costs:

- “The staccato of price announcements heard since the beginning of the year – with five rounds of increases and prices at all-time highs – reflects the persistently tight supply and demand conditions and firm production costs, including those of crude oil and raw materials that are currently impacting the market.” ([Lubes’n’Greases – U.S. Base Oil Price Report – May 26, 2021](#))
- “The increases were driven by the prevailing tight supply conditions, healthy demand, firm feedstock and crude oil prices and other increased production costs.” ([Lubes’n’Greases – U.S. Base Oil Price Report – June 23, 2021](#))
- “Another factor that was affecting base oil pricing was firm crude oil and feedstock values.” ([Lubes’n’Greases – U.S. Base Oil Price Report – June 30, 2021](#))

## Base Oil Demand:

- “Demand may be tempered by limited availability of additives, which could affect downstream run rates.” ([ICIS Pricing – Base Oil Report – April 27, 2021](#))
- “The strained supply and demand ratio has been plaguing the base oils market since the third quarter of last year, when a number of hurricanes forced plants along the United States Gulf Coast to shut down. More recently, freezing temperatures along a large swath of the U.S. caused power outages and structural damages at several refineries and petrochemical plants in mid-February. These unexpected shutdowns, together with concurrent turnarounds, exacerbated the already snug supply conditions.” ([Lubes’n’Greases– U.S. Base Oil Price Report – April 28, 2021](#))

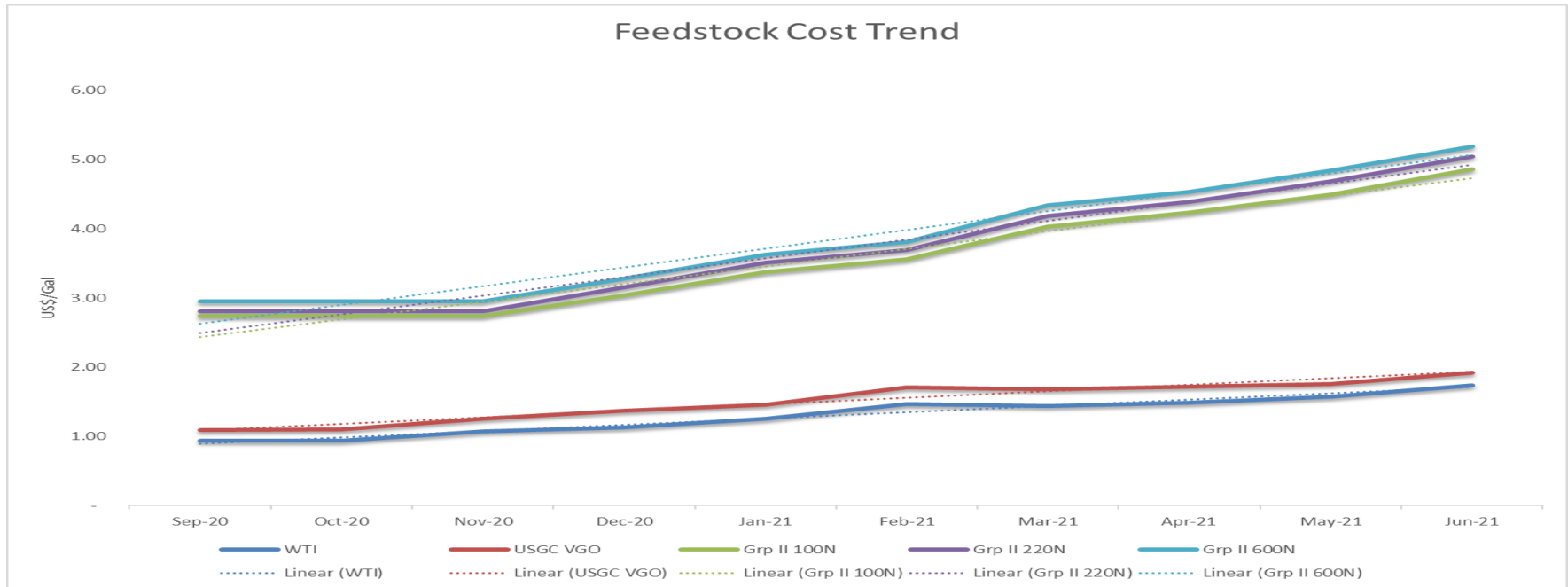
## Supply for Base Oil:

- “Base oil buyers reiterated that supply was still very strained, with availability of the mid- and heavy-viscosity grades particularly critical.” ([Lubes’n’Greases– U.S. Base Oil Price Report – May 26, 2021](#))
- “Additives and other chemicals have been in short supply since several plants were knocked off during a devastating winter storm in mid-February.” ([Lubes’n’Greases– U.S. Base Oil Price Report – May 26, 2021](#))
- “Not only was a lack of base oil availability and additives impacting downstream operations, but a scarcity of truck drivers, trucks and railcars was also impacting logistics, sources said. Another issue that many manufacturers were facing was a shortage of packaging material.” ([Lubes’n’Greases– U.S. Base Oil Price Report – June 2, 2021](#))
- “Base oil production at refineries had been restricted due to a lack of feedstocks given the ongoing operating rate reductions.” ([Lubes’n’Greases– U.S. Base Oil Price Report – June 16, 2021](#))



# Base Oil and Feedstock Prices

## Group II Base Oil Trend

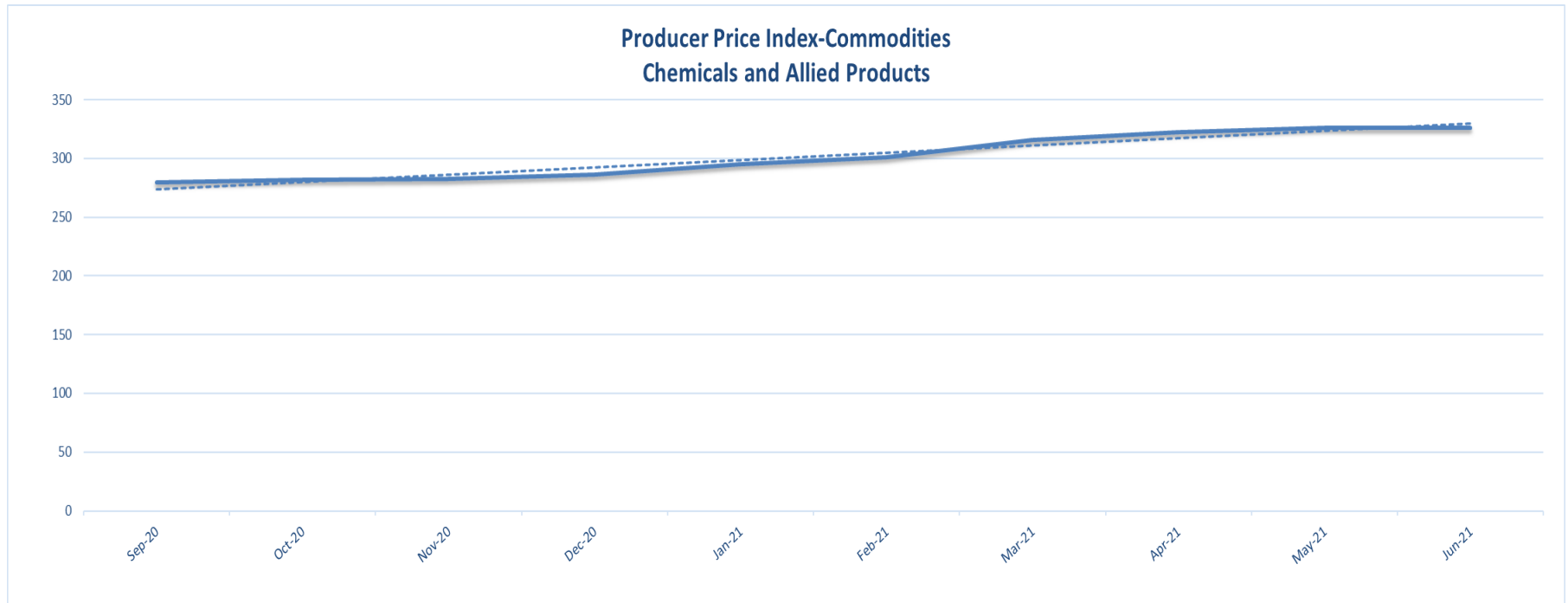


- USGC G2 average postings (Motiva, Excel Paralubes and Chevron)
- WTI crude increased by 86% since September 2020 and by 53% since year-end.
- VGO had an upward trend like crude.
- Group II base oil cost rose by 78% since September 2020 and 60% since year-end 2020, driven by six consecutive price increases due to tight supply conditions and higher crude prices.



# Other Finished Lubricant Cost Component Additives

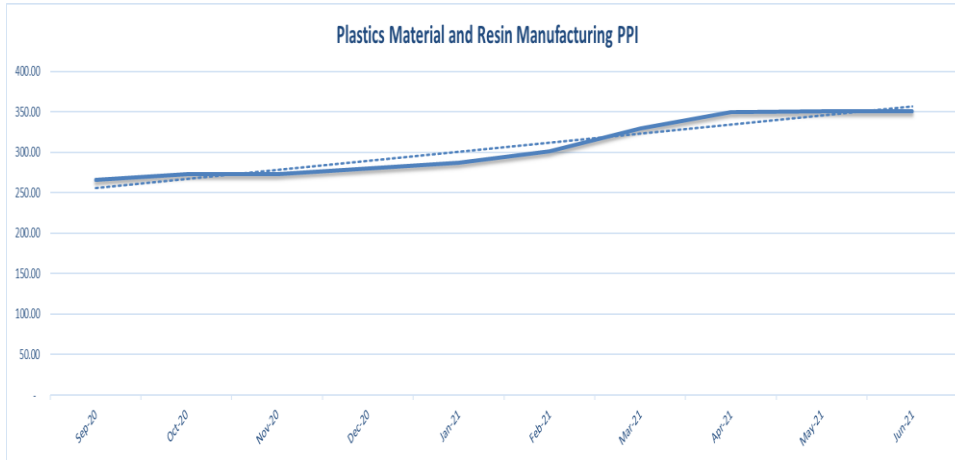
- The index below (PPI for Chemicals and Allied Products) was used as a representation for additives components.
- The data indicate an increase of 17% since September 2020 and 14% since year-end 2020.



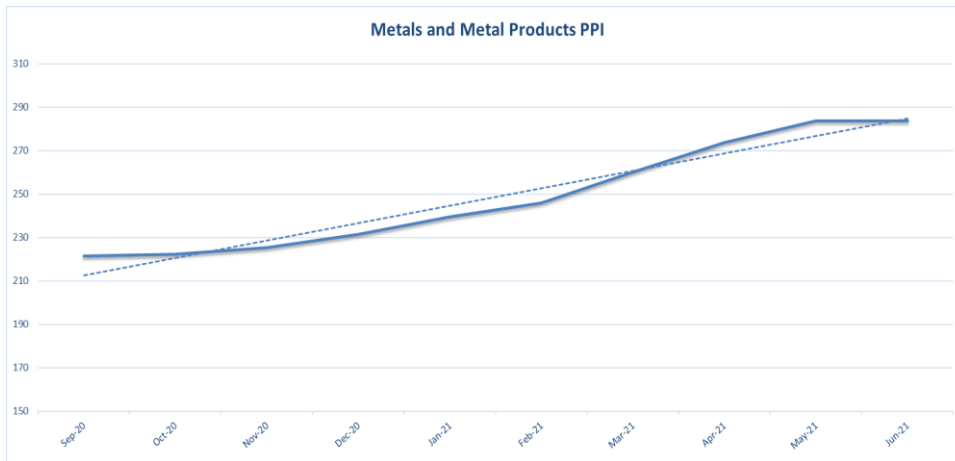
Source: United States Department of Labor, Bureau of Labor Statistics



# Other Finished Lubricant Cost Component Packaging Cost Trend



- Plastics Material and Resin Manufacturing PPI increased 34% since September and 26% since December 2020.



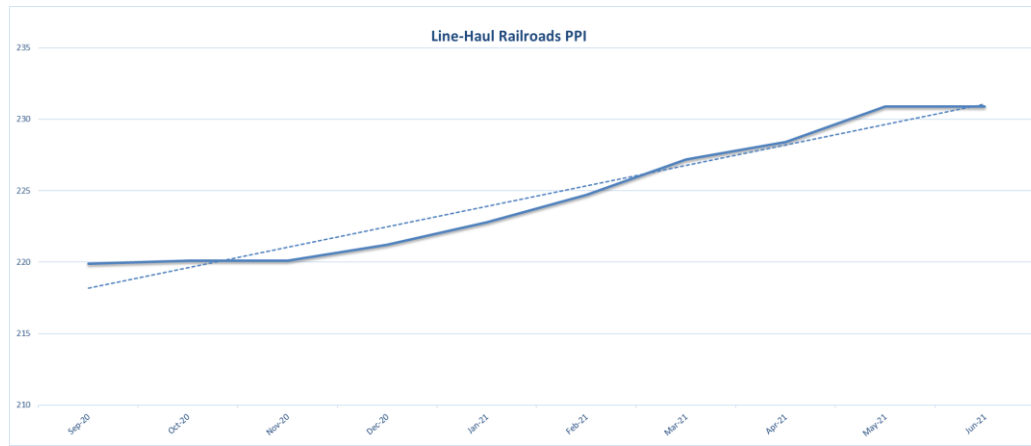
- Metals and Metal Products PPI increased 28% over the last nine months. Since year-end 2020, the data indicate an upward trend of 23%.

Source: United States Department of Labor, Bureau of Labor Statistics



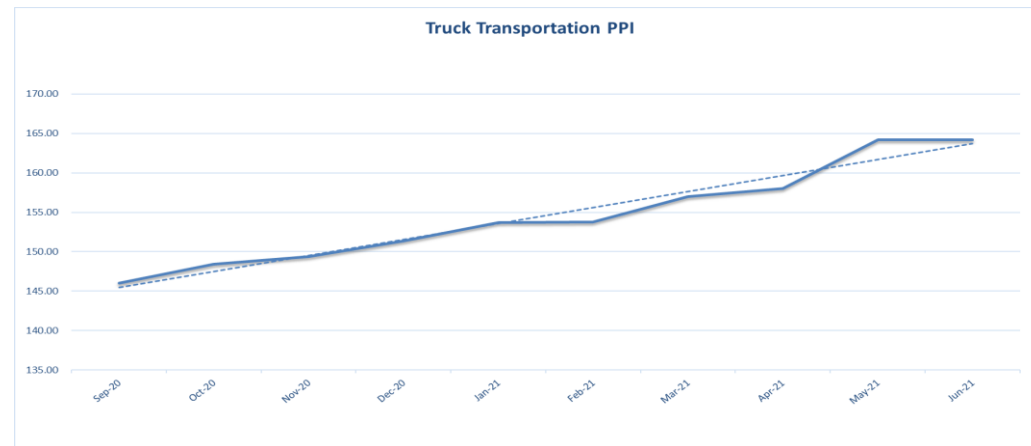
# Other Finished Lubricant Cost Component Transportation Costs

Line-Haul Railroads PPI



- **Line-haul PPI** indicates a growth of 5% since September 2020.

Truck Transportation PPI



- **Truck Transportation PPI** increased 12% over the last nine months and 8% since year-end.



Source: Bureau of Labor Statistics - <http://data.bls.gov/cgi-bin/surveymost?pc>



# General Overview

A consistent upward trend in all cost components since 3Q2020. The increases are driven by the prevailing tight supply conditions, healthy demand, firm feedstock and crude oil prices and other increased production costs.



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