



## CHIP SHORTAGES & CONSEQUENCES: A New Angle to the Outlook for PCMO

By George Morvey and Vera Sandarova

Passenger vehicle OEMs were among the first to be affected by chip shortages at the end of last year. Continuous shortages cause:



### OEMs to leave out high-end features where microchips are usually used

Navigation systems or "intelligent" rearview mirrors can be excluded from vehicles that would normally have them.



### An accelerated shift toward electric vehicles

The situation has caused OEMs to focus on EV production. Under Kline's most-likely scenario, EV technology is expected to hold 35% of the passenger vehicle parc by 2040; however, China, Europe, and the U.S. are expected to outsell ICE-equipped vehicles earlier than in our most-likely forecast scenario.



### Growth in sales (and cost) of used cars

Lower production of new vehicles is forcing prospective vehicle buyers to consider the used car market. There, they are likely to encounter vehicles with accumulated mileage/age, impacting the finished PVL segment differently until the chip shortage subsides.



## KLING'S POV ON THE IMPACT OF USED VEHICLE SALES GROWTH ON THE LUBRICANTS MARKET

SECTORS/TRADE CLASSES								FORMULATION TYPE				VISCOSITY GRADE						SUPPLIER			
QL	FWS	FF	IWS	APS	MM	\$/C-store	F-F	Full	Semi	Conv.	HiMi	0WS	5WS	10WS	15WS	20WS	AO	BA	OEM GPO	PL/Dist	
							X													X	
	X							X	X	X		X			X	X	X	X			
X		X	X	X	X	X					X		X	X							X

Compared to a new vehicle from a dealership, an older vehicle will impact sectors, formulation types, and visgrades differently.

Essentially, factory-fill takes a hit. For every passenger vehicle not built, 5.0-6.5 quarts of full synthetic 0W-XX is not being consumed as factory-fill and, fast-forward 6-12 months, is not drained and filled with full synthetic 0W-XX service fill. Used vehicles remaining in the vehicle parc and the average age of the overall U.S. parc reaching 12 years means demand for conventional 5Ws and 10Ws continues until new vehicle production and new unit sales return to normal levels.

Taking this to the trade class level, FWS and the OEM GPO full synthetic 0W-XX are being negatively impacted. The bright spot is that high mileage in either of the 3 formulation types should benefit and be pushed by suppliers and installers. Private label/distributor brands could gain, especially among owners of these used/older vehicles seeking an OEM-/industry-approved product at a cost advantage over a major brand. This is particularly true if the product is a conventional formulation.

**The questions here are: How should lube suppliers react to the situation in which used vehicles are in demand? And how and where can they target the owners of these vehicles?**

QL: Quick lubes  
 FWS: Franchised workshops (new car dealers)  
 FF: Fast fits  
 IWS: Independent workshops  
 APS: Auto parts stores  
 MM: Mass merchandisers  
 \$/C-stores: Dollar stores/Convenience stores  
 F-F: Factory fill  
 Full: Full synthetic  
 Semi: Semi-synthetic  
 Conv: Conventional  
 HiMi: High mileage  
 BA: Branded aftermarket  
 AO: All other visgrades  
 PL/Dist: Private label/Distributor brands