

Los Angeles Auto Outlook



Comprehensive information on the LA County new vehicle market

FORECAST

Pent Up Demand Will Give Market a Boost When Supplies Improve

The observations below provide a concise review of key trends in the Los Angeles County new vehicle market.

Sales remained below average in the First Quarter of this year.

New retail light vehicle registrations in the county declined 8.7% during the first three months of 2022 versus a year earlier. The drop-off was expected as sales continued to be held back by lean supplies.

Larger decline expected in 2Q.

Registrations could fall by 15%, or more, in the Second Quarter of this year as tight inventories will continue to be a factor. The market would have struggled to exceed year-earlier levels even if supplies were plentiful. Registrations during the Second Quarter of last year approached 130,000 units, the highest total since the Third Quarter of 2017.

New vehicle affordability has taken a turn for the worse.

About 18 months ago, strong affordability was a primary ingredient contributing to the relatively upbeat outlook. Income growth was solid, interest rates were near 0%, inflation was under control, and transaction prices were relatively stable. Just about all

of that has changed. Lean supplies have pushed prices significantly upward and higher interest rates are boosting monthly payments. Higher wages have helped, but monthly vehicle loan and lease costs as a percent of disposable income have moved higher during the past several months.

Demand for new vehicles could soften over the coming months; but it's not likely to impact sales.

As mentioned above, affordability has weakened, gas prices have surged, and there's a war in Europe. In normal times, these simultaneous events would have pushed new vehicles sales sharply lower, but these are definitely not normal times. Vehicle production, not demand, will be the controlling factor that will dictate sales levels for at least the next year, and most analysts are predicting only a gradual improvement in production over the next several months.

Baseline forecast for county new light vehicle registrations in 2022: 439,000 units, up 2.7% from 2021.

2022 is likely to be the third straight year of registrations below 440,000 units. It's beginning to sound like a broken record, but since the onset of the pandemic, there has been a great deal of uncertainty re-

lated to the forecast. Vehicle supply constraints and the war in Europe have added to the risks. One thing we do know: significant pent up demand is accumulating which will provide a boost to sales in the coming years.

Market shares for Tesla, BMW, Kia, Ford, Nissan, and Subaru moved higher in early 2022.

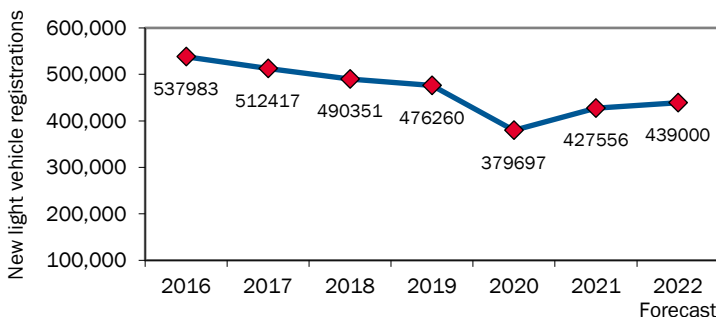
Typically, improving brand market share is a function of new product, effective marketing, incentives, and dealership sales performance. But in 2022, practically none of that matters. Brands that have benefitted from even a mild improvement in vehicle availability have had a boost in market share, while those with dwindling stocks lost share.

Forecast for LA County New Retail Light Vehicle Registrations in 2022



- Baseline scenario: 439,000 up 2.7% vs. '21
- Alternative upside: 461,800 up 8.0% vs. '21
- Alternative downside: 410,500 down 4.0% vs. '21

Annual Trend in Los Angeles County Market



Market Summary

	YTD '21	YTD '22	% Chg.	Mkt. Share
	March	March	'21 to '22	YTD '22
TOTAL	106,379	97,127	-8.7%	
Car	39,748	35,116	-11.7%	36.2%
Light Truck	66,631	62,011	-6.9%	63.8%
Domestic	26,042	27,497	5.6%	28.3%
European	21,754	18,504	-14.9%	19.1%
Japanese	49,621	41,993	-15.4%	43.2%
Korean	8,962	9,133	1.9%	9.4%

The graph above shows annual new retail light vehicle registrations from 2016 thru 2021 and Auto Outlook's projection for 2022. Historical Data Source: AutoCount data from Experian.

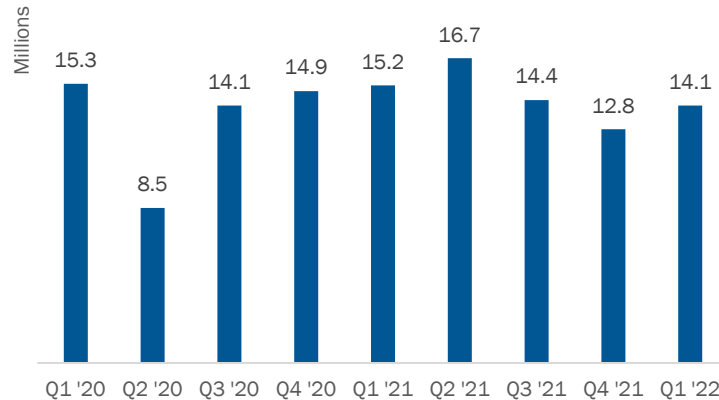
Domestics consist of vehicles sold by GM, Ford, Stellantis (excluding Alfa Romeo and FIAT), and Tesla. Data Source: AutoCount data from Experian.

Los Angeles County New Vehicle Market Dashboard



MARKET PERFORMANCE DURING PAST TWO YEARS

Los Angeles County Quarterly Registrations
Seasonally Adjusted Annual Rate, Converted to Equivalent U.S. New Vehicle Market SAAR (millions of units)



The graph on the left provides an easily recognizable way to gauge the strength of the county market. It shows quarterly registrations based on a seasonally adjusted annual rate. These figures are then indexed to SAAR sales figures for the U.S. new vehicle market. So just like in the national market, when the quarterly SAAR is above 17 million units, the county market is strong, 15 million is about average, and below 13 million is weak. Quarterly registrations in the county reached a U.S. equivalent level of 16.7 million units in the Second Quarter of 2021 and fell to below 15 million in the following three quarters

Data Source: AutoCount data from Experian. SAAR estimates: Auto Outlook.



COUNTY MARKET VS. U.S.

% Change In New Retail Market YTD '22 thru March vs. YTD '21

Los Angeles County	U.S.
DOWN 8.7%	DOWN 14.9%

New retail light vehicle registrations in the county declined by 8.7% during the first three months of this year versus year earlier, better than the 14.9% drop in the Nation. Any strength in the county market was due to Tesla. Excluding Tesla, the LA County market fell 14.5% in the First Quarter.

Source for county registrations: AutoCount data from Experian. U.S. figures estimated by Auto Outlook.

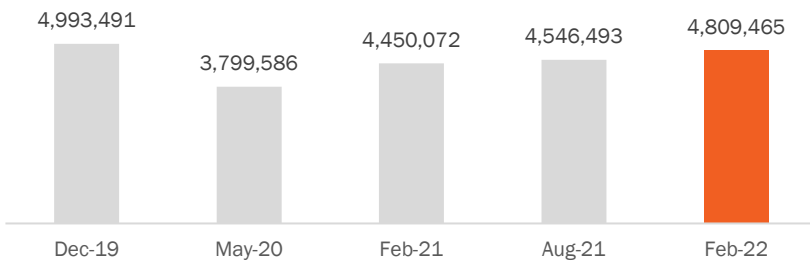
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Los Angeles County New Vehicle Market Dashboard



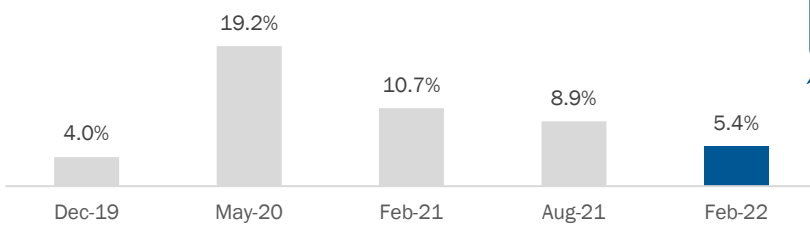
SNAPSHOT OF LOS ANGELES COUNTY ECONOMY

Total Employment in Selected Months



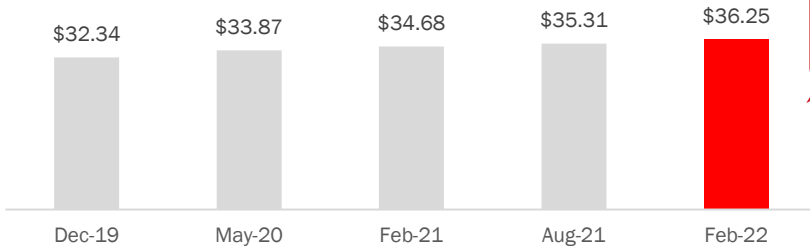
Change in total employment from Dec. '19 to Feb. '22: down 184,000, a 3.6% drop.

Unemployment Rate in Selected Months



County unemployment rate was 1.4 percentage points higher in Feb. '22 vs. Dec. '19.

Average Hourly Earnings in Selected Months



Average hourly earnings increased by \$3.91 during the past two years.

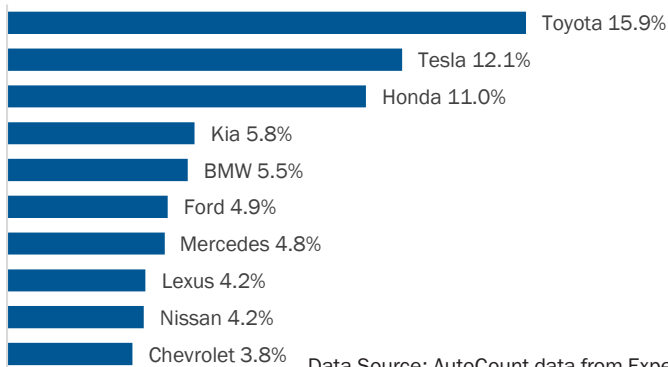
As discussed on page one, surging inflation, rising gas prices, and declining consumer sentiment are headwinds for economic growth, but as shown on the three graphs to the left, the Los Angeles County economy has largely recovered from the downturn caused by the pandemic. Total employment is down slightly from December of 2019 (before the onset of the pandemic) to February of this year. The unemployment rate was just 5.4%, and wages have increased.

Source: U.S. Department of Labor



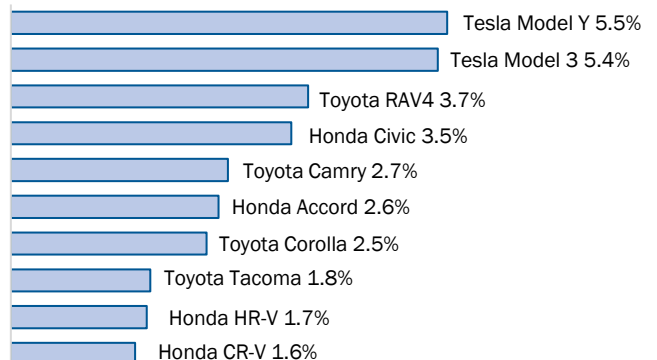
TOP TEN RANKINGS IN COUNTY MARKET

Market Share for Top Ten Selling Brands in County Market YTD 2022 thru March



Data Source: AutoCount data from Experian.

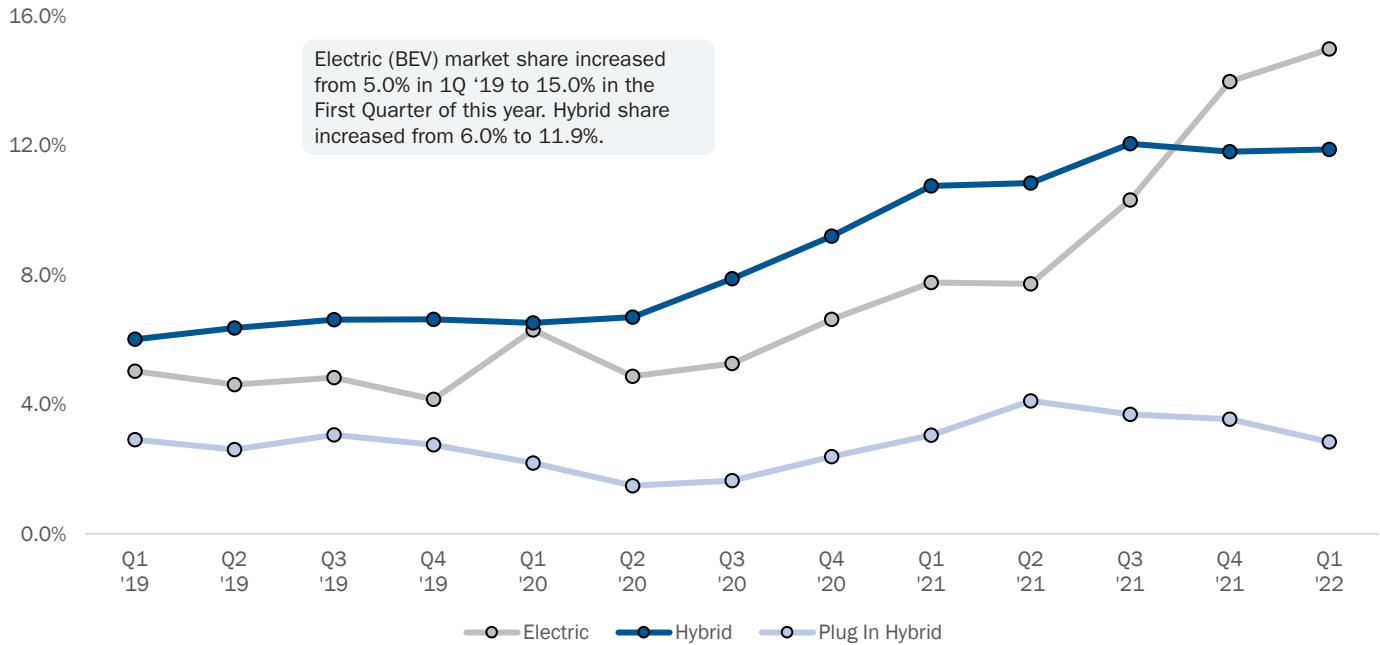
Market Share for Top Ten Selling Models in County Market YTD 2022 thru March



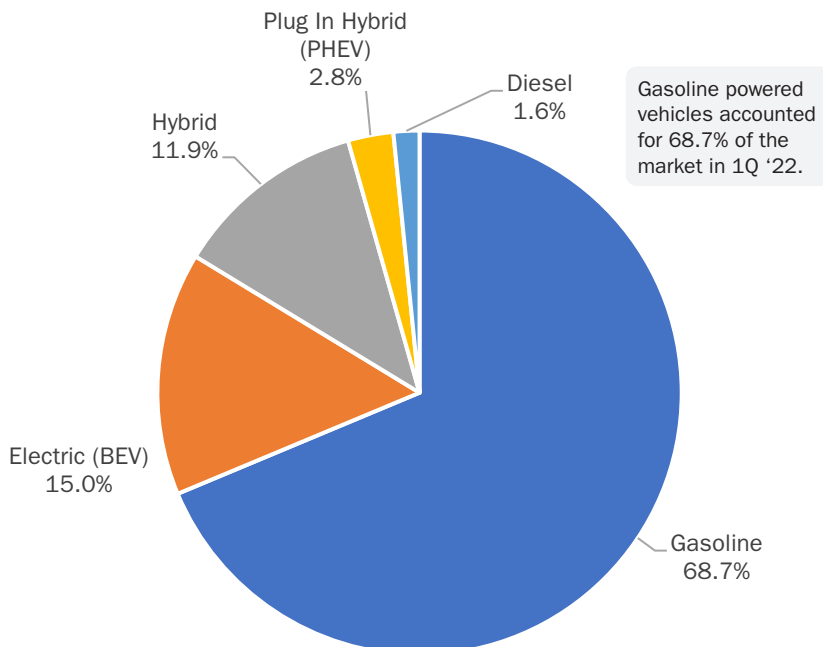
Vehicle Powertrain Dashboard



Estimated Quarterly Alternative Powertrain Market Share in County (includes hybrid and electric vehicles)



County Estimated Market Share by Powertrain Type YTD 2022 thru March



Top 10 Selling Brands in County for Hybrid, Electric (BEV), and Plug In Hybrid (PHEV) Vehicles - YTD '22 thru Mar.

Rank	Brand	Registrations
1	Tesla	11769
2	Toyota	5757
3	Mercedes	1619
4	Honda	1496
5	Lexus	1485
6	Kia	1097
7	Hyundai	1062
8	Ford	936
9	Volvo	673
10	Audi	623

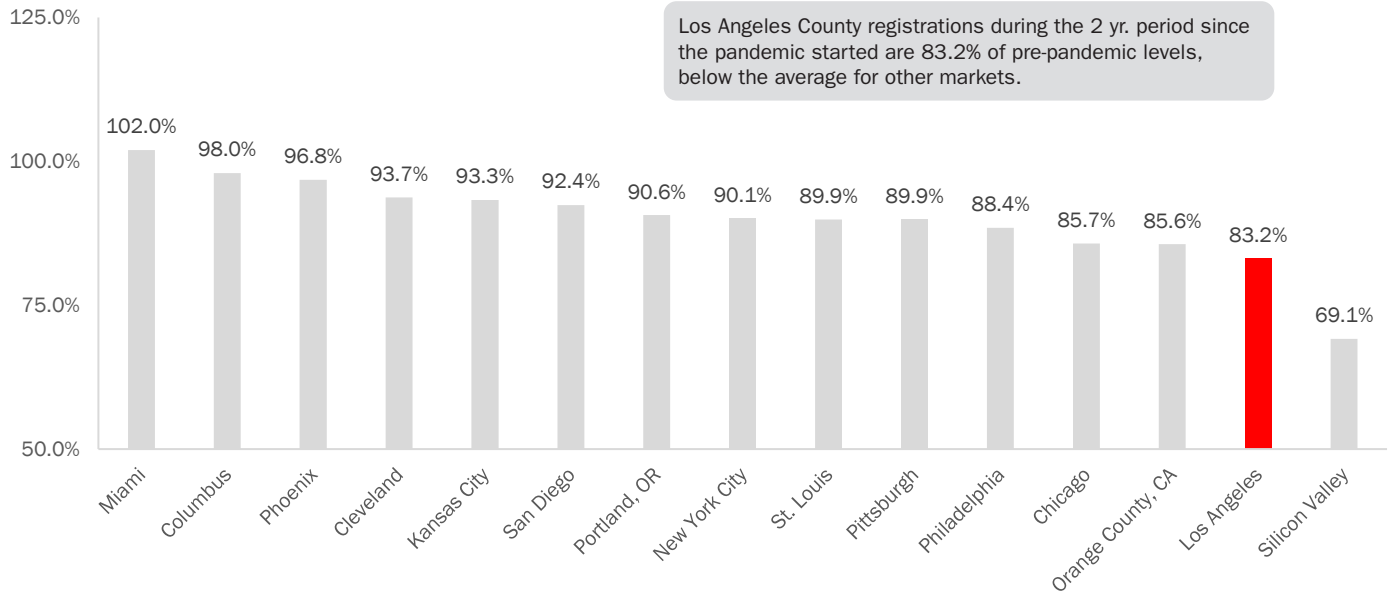
Registrations by powertrain for vehicles equipped with multiple engine types were estimated by Auto Outlook. The estimates are based on model registrations compiled by Experian Automotive, and engine installation rates collected from other sources.

Comparison of Selected Metro Area Markets

COVID-19 Impact of COVID-19 Pandemic and Ensuing Vehicle Supply Issues on Area Markets

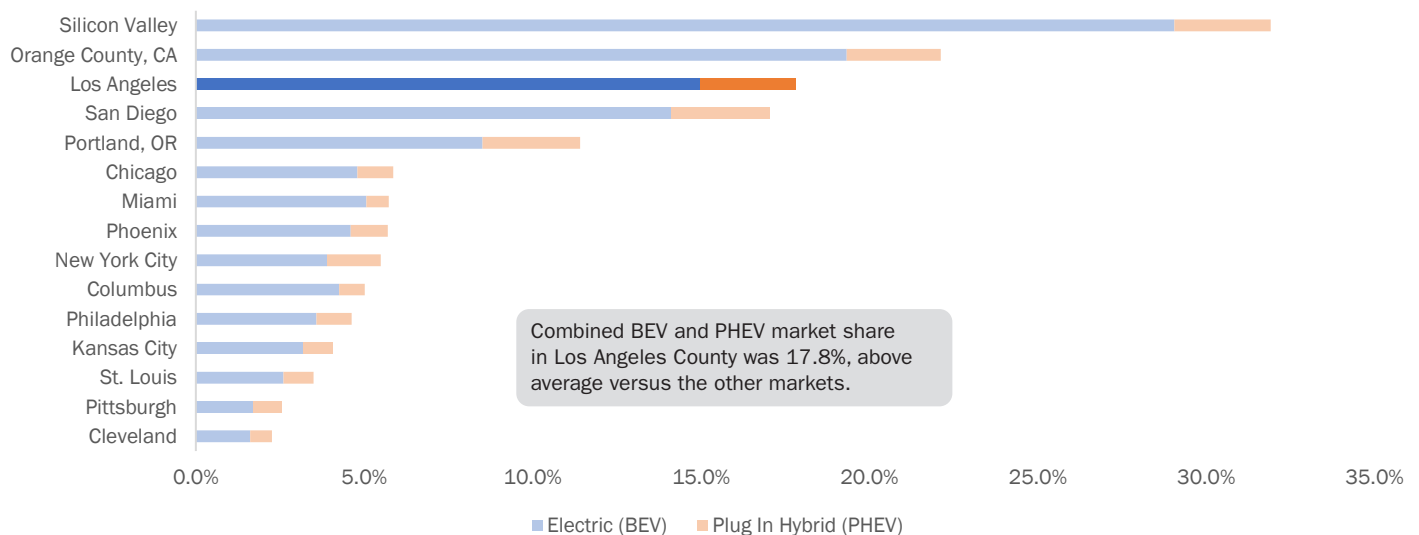
The graph below provides a comparison of how metro area new vehicle sales have been impacted by the pandemic and resulting vehicle inventory shortages. The percentages shown represent new vehicle registrations during the two year period since the pandemic started (2Q '20 thru 1Q '22) divided by registrations during the preceding two year period (2Q '18 thru 1Q '20). Areas on the left of the graph (Miami and Columbus) experienced a relatively mild impact, while those on the right (LA and Silicon Valley) lost more sales due to the pandemic.

New Vehicle Registrations During 2Q '20 thru 1Q '22 as a % of Registrations during 2Q '18 thru 1Q '20



Comparison of BEV and PHEV Market Share

Estimated Electric (BEV) and Plug in Hybrid (PHEV) Market Share During 1Q '22



	Clev.	Pitt.	St. L	KC	Phil.	Colum.	NYC	Phoenix	Miami	Chic.	Portland	SD	LA	OC, CA	Sil. Val.
Electric	1.6%	1.7%	2.6%	3.2%	3.6%	4.3%	3.9%	4.6%	5.1%	4.8%	8.5%	14.1%	15.0%	19.3%	29.1%
Plug In Hy.	0.6%	0.8%	0.9%	0.9%	1.1%	0.8%	1.6%	1.1%	0.7%	1.1%	2.9%	2.9%	2.8%	2.8%	2.9%

Note: registrations by powertrain for vehicles equipped with multiple engine types were estimated by Auto Outlook. The estimates are based on model registrations compiled by Experian, and engine installation rates collected from other sources. March '22 figures were estimated for some markets.

Brand Registrations Report												
Los Angeles County New Retail Car and Light Truck Registrations												
	First Quarter						Annual Totals					
	Registrations			Market Share (%)			Registrations			Market Share (%)		
	1Q '21	1Q '22	% change	1Q '21	1Q '22	Change	2020	2021	% change	2020	2021	Change
TOTAL	106,379	97,127	-8.7				379,697	427,556	12.6			
Cars	39,748	35,116	-11.7	37.4	36.2	-1.2	156,444	163,134	4.3	41.2	38.2	-3.0
Light Trucks	66,631	62,011	-6.9	62.6	63.8	1.2	223,253	264,422	18.4	58.8	61.8	3.0
Domestic Brands	26,042	27,497	5.6	24.5	28.3	3.8	86,822	101,179	16.5	22.9	23.7	0.8
European Brands	21,754	18,504	-14.9	20.4	19.1	-1.3	77,444	86,041	11.1	20.4	20.1	-0.3
Japanese Brands	49,621	41,993	-15.4	46.6	43.2	-3.4	182,871	199,178	8.9	48.2	46.6	-1.6
Korean Brands	8,962	9,133	1.9	8.4	9.4	1.0	32,560	41,158	26.4	8.6	9.6	1.0
Acura	902	736	-18.4	0.8	0.8	0.0	3,650	4,416	21.0	1.0	1.0	0.0
Alfa Romeo	613	300	-51.1	0.6	0.3	-0.3	2,137	1,756	-17.8	0.6	0.4	-0.2
Audi	3,167	2,084	-34.2	3.0	2.1	-0.9	10,619	11,288	6.3	2.8	2.6	-0.2
BMW	5,027	5,382	7.1	4.7	5.5	0.8	16,851	22,002	30.6	4.4	5.1	0.7
Buick	172	79	-54.1	0.2	0.1	-0.1	674	720	6.8	0.2	0.2	0.0
Cadillac	704	530	-24.7	0.7	0.5	-0.2	1,782	2,166	21.5	0.5	0.5	0.0
Chevrolet	6,027	3,739	-38.0	5.7	3.8	-1.9	20,862	20,447	-2.0	5.5	4.8	-0.7
Chrysler	261	137	-47.5	0.2	0.1	-0.1	723	811	12.2	0.2	0.2	0.0
Dodge	1,603	1,022	-36.2	1.5	1.1	-0.4	6,100	5,612	-8.0	1.6	1.3	-0.3
Ford	4,587	4,789	4.4	4.3	4.9	0.6	16,957	17,608	3.8	4.5	4.1	-0.4
Genesis	185	421	127.6	0.2	0.4	0.2	510	1,440	182.4	0.1	0.3	0.2
GMC	1,052	839	-20.2	1.0	0.9	-0.1	3,391	3,697	9.0	0.9	0.9	0.0
Honda	13,181	10,690	-18.9	12.4	11.0	-1.4	54,815	55,734	1.7	14.4	13.0	-1.4
Hyundai	3,497	3,122	-10.7	3.3	3.2	-0.1	13,360	15,601	16.8	3.5	3.6	0.1
Infiniti	743	508	-31.6	0.7	0.5	-0.2	3,387	2,695	-20.4	0.9	0.6	-0.3
Jaguar	181	106	-41.4	0.2	0.1	-0.1	1,091	701	-35.7	0.3	0.2	-0.1
Jeep	3,118	3,101	-0.5	2.9	3.2	0.3	12,116	12,468	2.9	3.2	2.9	-0.3
Kia	5,280	5,590	5.9	5.0	5.8	0.8	18,690	24,117	29.0	4.9	5.6	0.7
Land Rover	1,643	989	-39.8	1.5	1.0	-0.5	5,448	5,571	2.3	1.4	1.3	-0.1
Lexus	5,387	4,125	-23.4	5.1	4.2	-0.9	18,472	20,320	10.0	4.9	4.8	-0.1
Lincoln	355	204	-42.5	0.3	0.2	-0.1	1,410	1,050	-25.5	0.4	0.2	-0.2
Maserati	92	111	20.7	0.1	0.1	0.0	401	448	11.7	0.1	0.1	0.0
Mazda	2,115	2,376	12.3	2.0	2.4	0.4	8,814	10,354	17.5	2.3	2.4	0.1
Mercedes	5,622	4,698	-16.4	5.3	4.8	-0.5	20,207	20,495	1.4	5.3	4.8	-0.5
MINI	419	479	14.3	0.4	0.5	0.1	1,788	1,649	-7.8	0.5	0.4	-0.1
Mitsubishi	187	305	63.1	0.2	0.3	0.1	741	1,092	47.4	0.2	0.3	0.1
Nissan	3,954	4,072	3.0	3.7	4.2	0.5	15,365	16,962	10.4	4.0	4.0	0.0
Other	300	214	-28.7	0.3	0.2	-0.1	1,168	1,085	-7.1	0.3	0.3	0.0
Porsche	1,396	1,144	-18.1	1.3	1.2	-0.1	4,000	5,250	31.3	1.1	1.2	0.1
Ram	1,661	1,288	-22.5	1.6	1.3	-0.3	5,414	5,778	6.7	1.4	1.4	0.0
Subaru	3,472	3,719	7.1	3.3	3.8	0.5	13,259	13,477	1.6	3.5	3.2	-0.3
Tesla	6,502	11,769	81.0	6.1	12.1	6.0	17,393	30,822	77.2	4.6	7.2	2.6
Toyota	19,680	15,462	-21.4	18.5	15.9	-2.6	64,368	74,128	15.2	17.0	17.3	0.3
Volkswagen	2,389	2,197	-8.0	2.2	2.3	0.1	10,172	11,624	14.3	2.7	2.7	0.0
Volvo	905	800	-11.6	0.9	0.8	-0.1	3,562	4,172	17.1	0.9	1.0	0.1

Source: AutoCount data from Experian.

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