READING THE NETER A look inside a cleaner, safer, smarter auto industry.



Contents - March 3, 2023

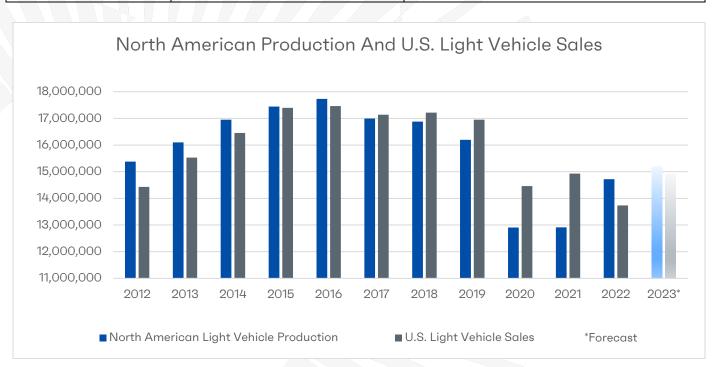
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Forecast Meter

Sales & Production Summary and Forecast (Updated 3/3)

2021-2022 Sales, ¹ Extended Sales Forecast ² and Production Forecasts ³				
	U.S. Sales & Forecasts	North American Production		
January '22	991,156 (-10% YoY)	1,111,390 (-4% YoY)		
February '22	1,052,524 (-11.8% YoY)	1,112,429 (-1% YoY)		
March '22	1,246,336 (-22% YoY)	1,350,102 (1% YoY)		
April '22	1,226,950 (-22% YoY)	1,177,851 (+8% YoY)		
May '22	1,104,993 (-23.8% YoY)	1,215,000 (+20.4% YoY)		
June '22	1,126,724 (-16.8% YoY)	1,259,515 (+13.8% YoY)		
July '22	1,129,371 (-8.4% YoY)	977,485 (+7% YoY)		
August '22	1,128,200 (7% YoY)	1,413,262 (+29 %)		
September '22	1,112,245 (+3.9% YoY)	1,258,501 (+38% YoY)		
October '22	1,151,774 (+13.8% YoY)	1,299,707 (+12.4% YoY)		
November '22	1,120,067 (+6% YoY)	1,200,244 (+5.5% YoY)		
December '22	1,263,268 (+4.9% YoY)	1,074,938 (+3.4% YoY)		
January '23	1,033,002 (+4.2% YoY)	1,195,548 (+12.9 YoY)		
February '23	1,136,332 (+8.7% YoY)	1,205,167 (forecast)		
2022 Full Year	13.7 million units (WardsIntelligence)	14,721,053 (+9.8% YoY) (U.S. 10,019,791)		

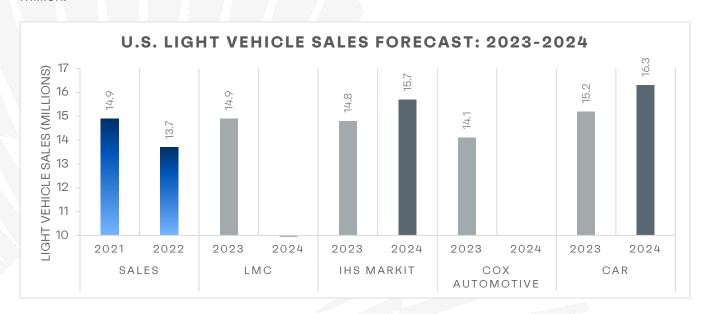




U.S. Light Vehicle Sales Outlook (Updated 3/3)

Wards Intelligence Outlook (3/3) *: "Initial modeling pegs March sales at a 14.2 million seasonally adjusted rate on volume of roughly 1.3 million units. However, if manufacturers continue to raise incentives at a pace similar to the past three months, there is more upside risk than downside to that outlook. Although average transaction prices continue to rise, incentive spending has turned up significantly in the past four months. Based on data from TrueCar, the trend started with a 1.1% month-to-month gain in November, then accelerated over the next three months, including a 9% increase in February. As total inventory increases, availability of more affordable vehicles is rising. Inventory, however, remains skewed toward higher price vehicles."

"First-quarter 2023 sales are tracking to a 14.9 million-unit SAAR, up from the prior quarter's 14.3 million and January-March 2022's 14.0 million. However, if enough of the upside risk to March kicks in, Q1 sales will reach a 15 million-unit SAAR, the first time any quarter hit that level since Q2-2021's 16.7 million."



North American Production & Inventory Outlook (Updated 3/3)

"Wards Intelligence Inventory Outlook (3/3)⁵: "Based on March's initial sales forecast, inventory is expected to rise 8.5% to 1.885 million units, which would be 53% above the year-ago month and highest for any month since 1.973 million in April 2021."

Wards Intelligence Production Outlook (2/21) 6: "The revised outlook for North America production in Q1-2023 remains relatively stable from month-ago's update, a sign that, though supply-chain-related shortages still exist, automakers are shaking lose much of the volatility in production planning of the past two years. Including final data for January, Q1 output of light vehicles and medium-/heavy-duty



trucks is tracking to 3.898 million units, 31,100 units below month-ago's outlook, but a 7.4% increase over like-2022's 3.630 million. First-quarter 2023 will mark the fourth consecutive year-over-year quarterly gain and be the highest total for any quarter since 3.94 million units in Q4-2020. Excluding medium/heavy trucks, light-vehicle production is tracking to 3.744 million units in Q1, up 7.3% from January-March 2022's 3.507 million. . . . Although several automakers remain plagued by supply-chain issues, there could be some conservativeness behind the scenes in production planning that also is serving to water down production levels of some vehicles. One reason could be manufacturers want to keep inventory tight and, thus, pricing strong. Also, there could be some tentativeness due to the risk that the economy will significantly weaken, even possibly falling into recession, which could dampen consumers' appetite for new vehicles despite the pent-up demand built since the pandemic first hit the U.S. in March 2020."

S&P Global Mobility Outlook (2/21)7: "The outlook for North America light vehicle production was increased by 4,000 units and by 5,000 units for 2023 and 2024, respectively (and reduced by 2,000 units for 2025). Despite concerns surrounding the ongoing volatility of the supply chain, most notably for semiconductors, and demand destruction amid recessionary fears, the outlook for 2023 remains largely unchanged, with production revised upwards only modestly to total 15.09 million units. With production in the region projected to increase 5.4% in 2023, 70% of the growth is expected to come from 10 of the 102 plants in the region. Half of those plants are ramping up all-new or redesigned vehicles with the other half expected to experience strong recovery following supply chain reduced levels in 2022. While demand destruction concerns remain pervasive, inventory rebuild is well underway and is projected to improve vehicle availability by mid-2023. Greatly improved availability may in turn stimulate demand as incentive levels are expected to increase. This situation will vary markedly by manufacturer with GM, Ford and Stellantis already facing normalized inventory levels while their Asian counterparts struggle to restock depleted inventories. Global supply chain issues are expected to continually improve with the outlook for 2024 revised nominally upward to total 15.85 million units. Further gains are expected for 2025 while the forecast was revised only slightly lower reaching 16.48 million units."

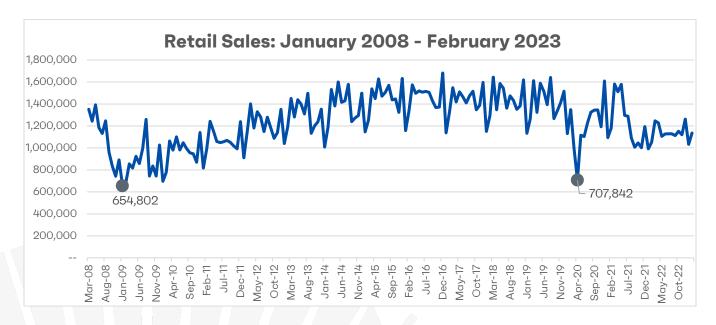
Market Meter

U.S. Light Vehicle Sales (Updated 3/3)

Monthly Sales (Updated 3/3)

This chart helps to put into context the monthly retail sales due to the COVID pandemic and showing the relative drop in sales compared to the 2008 financial crisis.





February Sales (Updated 3/3)

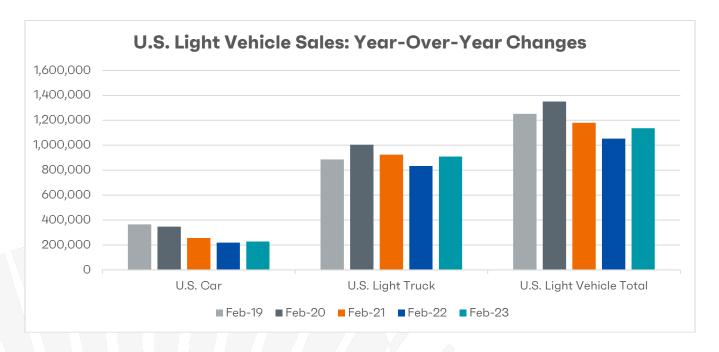
WardsIntelligence ⁸: "U.S. light-vehicle sales showed more strength than expected in February as increased incentive spending helped push sales slightly above expectations to a 14.9 million-unit seasonally adjusted annual rate, about 300,000 above forecast, well above like-2022's 13.7 million and the seventh straight month with year-over-year growth.

"Raw volume totaled 1.136 million units, up 8.7% from February 2022's 1.046 million. February's daily selling rate of 47,347 was an increase on same-month 2022's 43,568 – 24 selling days both periods. Based on DSRs, February marked the sixth straight year-over-year increase and was the highest since 47,437 in July 2021. Rising inventory is the primary driver for the year-over-year gains, but higher incentive spending likely boosted demand further in February, as well as in the prior two months.

"While incentives spurred retail volume an estimated year-over-year 4.0% increase, and accounted for roughly 85% of sales, fleet volume also played a major role, rising an estimated 39% from like-2022."

"Light trucks increased 9.7% year-over-year in February, while cars increased 4.6%. By segment, CUV, Van and Luxury Car posted double-digit gains over the same year-ago month. Small Car, down 2.7%, was the only segment to record a decline. Drilling down further, combined sales of luxury-priced CUVs and SUVs increased 16.8% year-over-year. Including luxury cars, luxury light vehicles recorded a 14.9% increase, as market penetration rose to 17.2% from like-2022's 16.3%. Sales of fullsize trucks, including luxury fullsize CUVs and SUVs, increased 15.4% year-over-year and penetration rose to 28.2% from like-2022's 26.5%."





Fleet Sales (Updated 3/3)

TrueCar⁹: "Fleet sales for February 2023 are expected to be up 33% from a year ago and up 16% from January 2023 when adjusted for the same number of selling days."

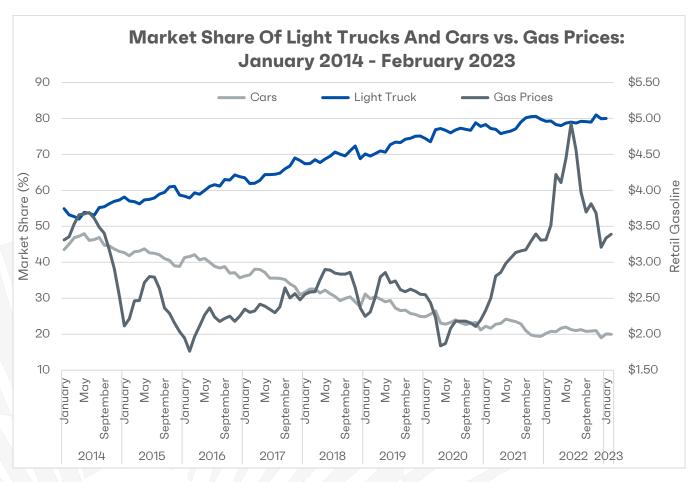
J.D. Power ¹⁰: "Fleet sales are expected to total 209,200 units in February, up 54.2% from February 2022 on a selling day adjusted basis. Fleet volume is expected to account for 19% of total light-vehicle sales, up from 13% a year ago."

Segments vs. Gas Prices (Updated 3/3)

Monthly Sales For January: Light trucks accounted for 80 percent of sales in February, a .8 pp increase in market share from a year ago. Compared to the same period in 2022, sales of cars are up 8,600, and down more than 138,000 from February 2019, when cars comprised 29% of the market as opposed to the 20% of the market passenger cars have now.

Historic Perspective: The upward trend in the popularity of light trucks over cars has been steady since 2013, when only 2% of annual market share separated the two segments ¹¹ and gas was over \$3.00 ¹² a gallon. As fuel prices dropped below the \$3.00 mark in mid-September 2014, light truck sales began to take off. Gas prices since have averaged only \$2.83 a gallon (through December 2022) and when combined with increased fuel economy for light trucks, an increase of 4 mpg since 2013, the perfect conditions existed to continue fueling light truck market growth. ¹³

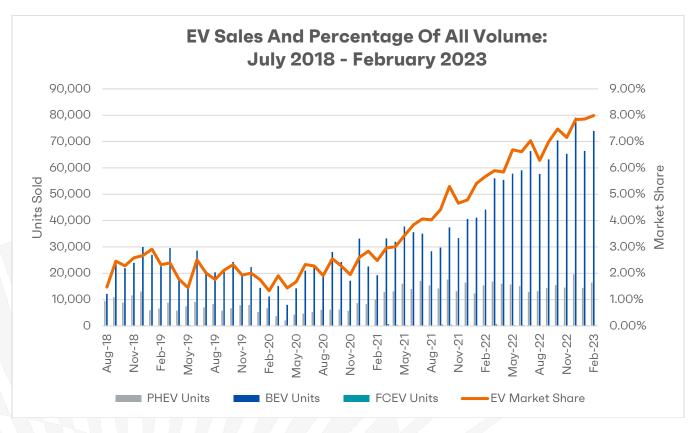




EV Powertrain Sales (Updated 3/3)

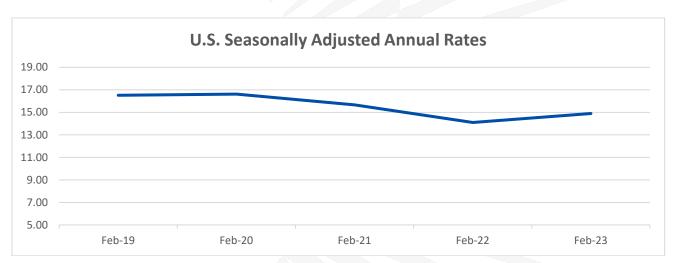
Sales of electric vehicles (BEV, PHEV, & Fuel Cell) accounted for 7.99% of total vehicle sales in February 2023 (90,756) – the highest market share to date, according to Wards Intelligence data. February's EV market share is up 2.3 pp from a year ago and up 0.14 pp from January 2023. Sales of battery electric vehicles led the way for ZEVs, accounting for 6.5% of total sales, up 2.3 pp from February 2022. Plug-in hybrids accounted for 1.45%, down 0.01 pp from the same time last year. ¹⁴





Seasonally Adjusted Annual Rates (Updated 3/3)

WardsIntelligence ¹⁵: "U.S. light-vehicle sales showed more strength than expected in February as increased incentive spending helped push sales slightly above expectations to a 14.9 million-unit seasonally adjusted annual rate, about 300,000 above forecast, well above like-2022's 13.7 million and the seventh straight month with year-over-year growth."





Average Transaction Price (Updated 3/3)

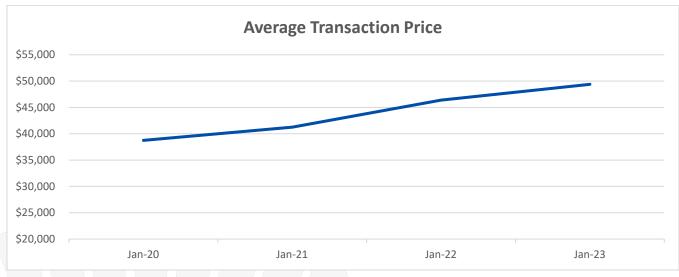
J.D. Power (Updated 3/3) ¹⁶: "New-vehicle transaction prices continue to rise, with the average price reaching a February record of \$46,229, a 4.8% increase from a year ago. The record transaction prices means that consumers are on track to spend nearly \$42.0 billion on new vehicles this month—the most ever for the month of February and an increase of 5.0% from February 2022.

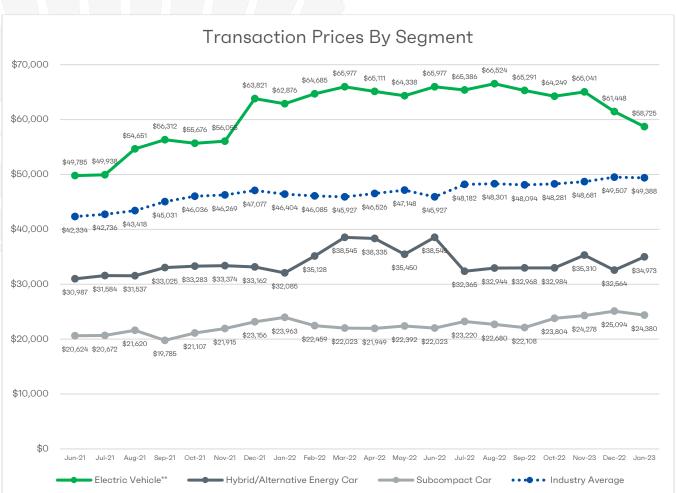
"Manufacturer discounts are up slightly from a month ago, but they remain historically low. The average incentive spend per vehicle is tracking toward \$1,335, a 4.7% increase from a year ago. Incentive spending per vehicle expressed as a percentage of the average vehicle MSRP is trending at 2.8%, down 0.1 percentage points from February 2022. One of the factors contributing to the low level of spending is the absence of discounts on vehicles that are leased. This month, leasing is accounting for just 18% of retail sales. In February 2019, leases accounted for 31% of all new-vehicle retail sales."

Kelley Blue Book (January) (Updated 2/21) ¹⁷: "The average transaction price (ATP) of a new vehicle in the U.S. declined slightly in January 2023 to \$49,388, a decrease of 0.6% (\$310) from December's record high and up 5.9% (\$2,768) from levels one year earlier. New-vehicle inventory levels are increasing from historic lows in early 2022, but prices remain elevated, according to data released today by Kelley Blue Book, a Cox Automotive company. According to Kelley Blue Book calculations, new-vehicle ATPs have been above the average manufacturer's suggested retail price (MSRP), also known as the sticker price, for more than a year. In January 2023, the average price paid was \$310 more than the average sticker, as prices continue to trend downward relative to sticker price. A year ago, in January 2022, the average ATP was more than \$900 above the average MSRP.

"The average price paid for a new EV decreased in January by \$3,363 (down 5.4%) compared to December. The average new EV sold for \$58,725, according to Kelley Blue Book estimates, and is still well above the industry average. The drop in pricing was driven by significant price cuts from Tesla, which commands roughly two-thirds of the EV market. Tesla's average transaction prices decreased \$5,440, down 8.4% month over month and down 5.5% year over year."







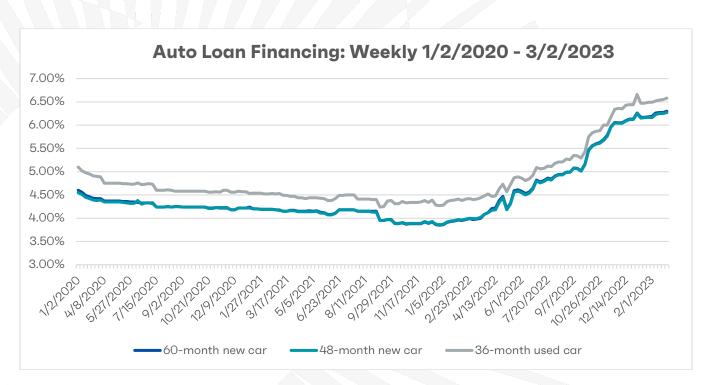


Auto Loan Financing (Updated 3/3)

JD Power (3/3)¹⁸: "Elevated pricing coupled with repeated interest rate increases continue to inflate monthly loan payments. After breaking the \$700 level for the first time ever in July 2022, the average monthly finance payment in February is on pace to be \$722, up \$59 from February 2022. That translates to an 8.9% increase in monthly payments from a year ago. The average interest rate for new-vehicle loans is expected to be 6.8%, an increase of 252 basis points from a year ago."

Interest Rates (updated 3/3): Interest rates continue their upward climb for the 60-month, 48-month and 36-month used car loans. Rates now stand at 6.30%, 6.27%, and 6.58%, respectively. Since the beginning of 2020, 60-month rates are up 1.70 pp, and are up 2.33 pp since the same time a year ago. ¹⁹

Dates	60-month new car	48-month new car	36-month used car
1/2/2020	4.60%	4.55%	5.10%
3/2/2022	3.97%	3.99%	4.40%
2/22/2023	6.27%	6.25%	6.55%
3/1/2023	6.30%	6.27%	6.58%
One Week Change	0.03%	0.02%	0.03%
Two Week Change	0.03%	0.02%	0.04%
Change since 1/3/20	1.70%	1.72%	1.48%
One Year Change	2.33%	2.28%	2.18%





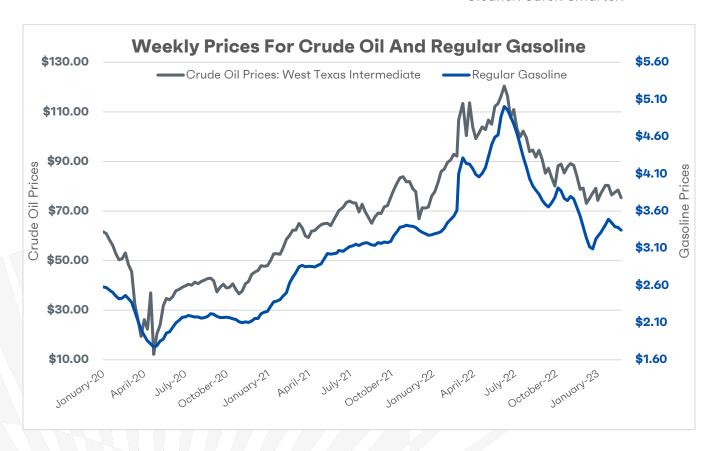
Crude Oil and Gas Prices (Updated 3/3)

EIA Outlook For Gasoline (2/21) ²⁰: "In 2022, many refiners postponed planned maintenance during the spring and fall as low product inventories and high refining margins encouraged refiners to maximize utilization. Although refining margins remain above normal levels, we expect more refiners will undergo deferred maintenance this season. We forecast U.S. distillation inputs will be less than 16 million b/d until April. Utilization remains below 90% until May, which we forecast will keep refining margins for gasoline and diesel above year-ago levels during February and March. However, we expect refinery inputs and utilization to increase after maintenance is completed, and 2023 inputs will likely be similar to 2022 inputs, leading to falling refining margins beginning in the second quarter of 2023.

EIA Outlook For Oil (2/21) ²¹: "he Brent crude oil spot price averaged \$82 per barrel (b) in January, about \$2/b higher than the average in December 2022. Oil prices rose during January in part because of the expectation of increasing oil demand as a result of relaxing COVID-19 restrictions and increasing mobility in China. Perceptions of a less severe recession and some improving macroeconomic conditions also likely contributed to rising crude oil prices over the past month. . . . We expect that the Brent spot price will average \$85/b in the first half of 2023 (1H23). However, we expect global oil production to continue to outpace demand over the forecast period, leading to persistent global oil inventory builds through 2024 and falling oil prices. After increasing by an average of 0.6 million b/d in 2022, we expect global oil inventories to also build by an average of 0.6 million b/d in 2023, with builds moderating to 0.4 million b/d in 2024. Correspondingly, our forecast spot price of Brent crude oil falls to an average of \$82/b in 2H23 and \$78/b in 2024.

Gas And Oil Holding Mostly Steady (3/3): Oil prices, as benchmarked at West Texas Intermediate, dipped slightly to \$75.42 in late February. Since election day 2020, oil prices are \$39 a barrel higher. Gas prices decreased \$0.04 to \$3.34. Gas is 30% higher than the beginning of 2020. ²²





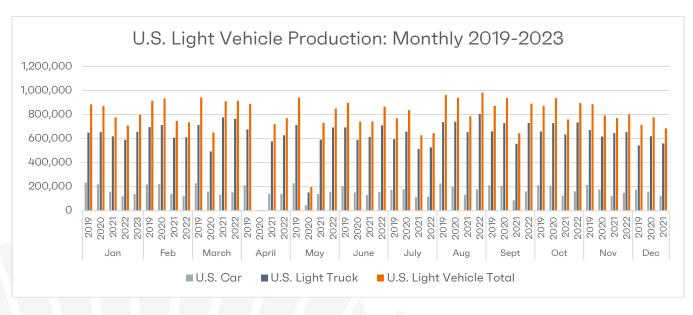
Production Meter

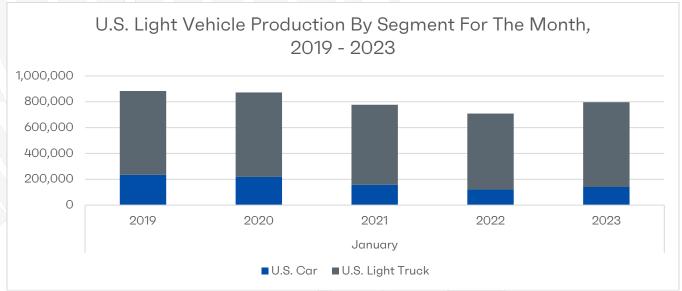
U.S. Light Vehicle Production (Updated 2/21)

Monthly Production (Upodated 2/21)

U.S. Light vehicle production for January 2023 increased month-over-month by 8 percent, totaling 797,110 vehicles (140,233 cars, 656,877 light trucks), year-over-year, production is up 12 percent from 2022. ²³







U.S. Light Vehicle Inventory and Days' Supply (Updated 3/3)

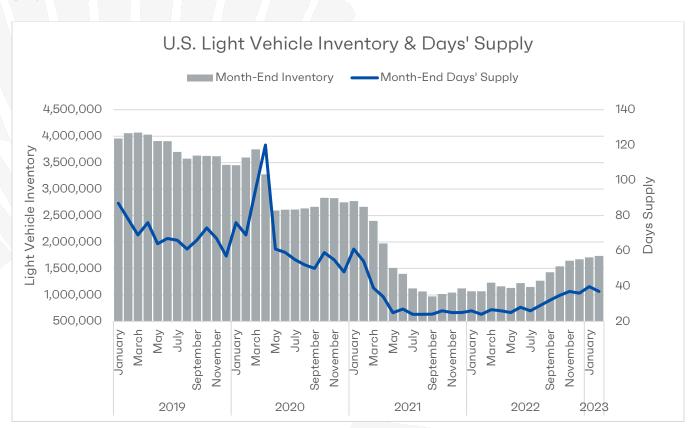
WardsIntelligence Inventory Update (3/3) ²⁴: "U.S. light-vehicle inventory increased 1.7% at the end of February from January, the seventh straight sequential gain, but with expectations for even stronger growth in March. Still at historically low levels for a relatively healthy market, inventory is creeping up since it tanked in mid-2021 from supply-chain disruptions, with semiconductor shortages the primary culprit in slashing production and, subsequently, vehicle availability for the U.S. market.



"Feb. 28 inventory totaled 1.737 million units, a slight increase from January's 1.708 million, but 62.9% above same-month 2022's 1.066 million.

"As total inventory increases, availability of more affordable vehicles is rising. Inventory, however, remains skewed toward higher price vehicles. The mix of inventory from luxury-priced cars, CUVs and SUVs, plus non-luxury fullsize trucks – high-priced, as well as the least fuel efficient among major segment groups – was 50.1% at the end of February. The inventory share of that grouping typically ran between 35% and 40% prior to the pandemic....

"Inventory-share of all fullsize trucks – including luxury-segment CUVs and SUVs - was 38.0% at the end of February, up from like-2022's 34.2%. Roughly two-thirds of fullsize-truck inventory consists of pickups. The share of luxury light vehicles, less fullsize-truck versions, was 12.1% on Feb. 28, down from 15.4% in like-2022. Putting a more straight-forward comparison to it, fullsize-truck inventory was up 81% year-over-year in February. Excluding those vehicles, the rest of the industry was up a much lesser 54%.



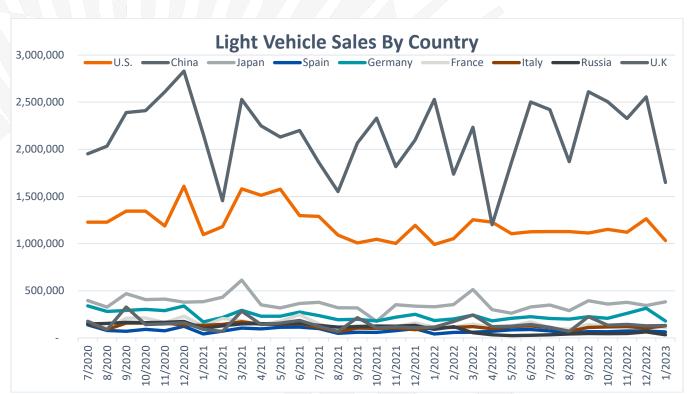


Global Meter

Global Light Vehicle Sales (Updated 3/3)

Wards Intelligence ²⁵: "Global sales declined year-over-year for the second straight month in January, as demand in China fell an estimated 9.8%. However, the circumstances that caused a decline in the largest market – China – are gone or lessening and year-over-year global growth likely resumed in February. January's global volume, which includes light vehicles and medium-/heavy-duty trucks, and estimates for some countries, totaled 6.19 million units, down 9.5% from like-2022's 6.84 million. Light vehicles totaled 5.80 million units in January, down 11.8% year-over-year.

"Excluding China, volume in the rest of the world increased 7.6% year-over-year, with every region except the Asia-Pacific recording a gain. But less China, AP sales were up 9.7% from January 2022. Hurting January sales in China was a continuation of the surge in Covid-19 cases that started at the end of last year when the government lifted most pandemic-related restrictions, and that the weeklong Chinese New Year celebration occurred entirely during the month, whereas last year it spilled over into February, lessening the negative impact of consumers being pre-occupied in the previous month. With the celebration over, and the economy also opening up more as Covid cases ease, sales in China are expected to return to year-over-year increases in February, which should push global volume back to growth. Until China's Covid surge, which was the primary reason global sales declined 0.4% year-over-year, demand had grown five straight months."





Global Light Vehicle Production (Updated 2/21)

S&P Global Mobility Forecast (2/21) ²⁶: "The global auto industry continues to transition from supply constraints to a focus on more traditional demand dynamics. To be sure, supply chain conditions remain consequential, yet semiconductor availability continues to gradually improve. Demand destruction remains a concern with macroeconomic conditions and lofty vehicle pricing in some markets being critical factors. Vehicle electrification remains a key theme for major markets with new model launches forthcoming and government intervention playing an increasingly consequential role to support deployment and consumer adoption. The February 2023 forecast update reflects a mix of upgrades and downgrades, albeit mostly modest in nature, as the industry continues to navigate lingering supply chain challenges as well nascent demand recovery in select markets. The latest forecast update reflects near-term upgrades for South Asia and Europe on demand recovery and inventory restocking and other marginal upgrades elsewhere. The upward revisions are partially offset by fairly limited downward adjustments for Japan/Korea, Middle East/Africa and South America on lingering supply chain impacts and vehicle launch timing shifts, among other factors. The more noteworthy regional adjustments with the latest forecast update are detailed below:

"Europe: The outlook for Europe light vehicle production was increased by 48,000 units and reduced by 59,000 units for 2023 and 2024, respectively (and reduced by 73,000 units for 2025). While fears of production disruption related to energy inputs have abated somewhat, the flow of chips remains a challenge and there remains concern regarding the state of demand on the level of output for 2023. Nevertheless, the market has experienced an increase in activity supporting production outperformance in Q4-2022 which is expected to extend into Q1-2023. As inventories reach equilibrium in the near-term, more traditional demand fundamentals will take over and govern production activity through the near-to-intermediate term. With regard specifically to the overall volume increase for 2023, it is primarily related to an improved production outlook for Uzbekistan as we expect it to benefit further from ongoing production weakness in Russia. In the absence of significant changes in the underlying forecast assumptions and drivers, the overall forecast revisions in the near-term for Europe were fairly modest with the February 2023 update. The general theme of supply chain disruption transitioning to demand influences remains intact.

"Greater China: The outlook for Greater China light vehicle production was increased by 18,000 units for 2023 and by 57,000 for 2024 (and was increased by 66,000 units for 2025). The Chinese auto market has been significantly impacted by the nationwide COVID outbreak after the relaxation of a strict Zero-COVID policy since early December 2022. Further, combining the seasonal effect of the Chinese New Year holidays and the auto industry shutdown, January vehicle production was down nearly 40% year-over-year. Despite the reduced production, passenger vehicle inventory rebounded to an above average level with an index of 1.8 for January, reflecting the aforementioned COVID disruption as well as a demand hangover from the termination of purchase tax cuts at the end of 2022. With the near-term disruption presented by COVID spread and the Lunar New Year holiday, Q1-2023 production was reduced by 86,000 units relative to the January forecast, yet the relaxing of COVID restrictions and other consumption incentives are expected to accelerate economic recovery supporting vehicle demand and industrial output starting in H2-2023, with benefits extending into 2024. As a result, the outlook for 2024 has been upgraded and now reflects 5.6% growth for the region.



"Japan/Korea: Full-year 2023 Japan production was reduced by 4,000 units relative to last month. The first quarter of 2023 was downgraded by 3.1% relative to the prior forecast, yet much of that volume is expected to be recovered later in the year. Some automakers have been forced to reduce line rates due to a combination of factors including the ongoing semiconductor situation and supply chain and logistic disruptions associated with the easing of the Chinese government's Zero-COVID policy. The longer-term forecast was largely unchanged with the February forecast update. Full-year 2023 South Korea production was reduced by 14,000 units relative to the previous forecast primarily due to the delayed launch of the Buick Envista from December 2022 to April 2023. The longer-term forecast was largely unchanged with the February forecast update.

"North America: The outlook for North America light vehicle production was increased by 4,000 units and by 5,000 units for 2023 and 2024, respectively (and reduced by 2,000 units for 2025). Despite concerns surrounding the ongoing volatility of the supply chain, most notably for semiconductors, and demand destruction amid recessionary fears, the outlook for 2023 remains largely unchanged, with production revised upwards only modestly to total 15.09 million units. With production in the region projected to increase 5.4% in 2023, 70% of the growth is expected to come from 10 of the 102 plants in the region. Half of those plants are ramping up all-new or redesigned vehicles with the other half expected to experience strong recovery following supply chain reduced levels in 2022. While demand destruction concerns remain pervasive, inventory rebuild is well underway and is projected to improve vehicle availability by mid-2023. Greatly improved availability may in turn stimulate demand as incentive levels are expected to increase. This situation will vary markedly by manufacturer with GM, Ford and Stellantis already facing normalized inventory levels while their Asian counterparts struggle to restock depleted inventories. Global supply chain issues are expected to continually improve with the outlook for 2024 revised nominally upward to total 15.85 million units. Further gains are expected for 2025 while the forecast was revised only slightly lower reaching 16.48 million units.

"South America: The outlook for South America light vehicle production was reduced by 4,000 units for 2023 and only marginally adjusted for 2024 (and increased by 5,000 units for 2025). The nearterm outlook was reduced modestly on country mix adjustments in favor of Argentina at the expense of Brazil and the expectation that demand for the broader region will continue to face headwinds through the year. The production adjustments for 2024 and 2025 were similarly modest in nature yet continue to reflect a country mix shift benefiting Argentina notwithstanding a dynamic market environment and macroeconomic challenges.

"South Asia: The outlook for South Asia light vehicle production was increased by 53,000 units and by 61,000 units for 2023 and 2024, respectively (and was increased by 29,000 units for 2025). The upgraded outlook for 2023 was largely driven by continued efforts by automakers to fulfill robust backorders during H1-2023 across the ASEAN market. On the other hand, continued strength in production for India was offset by a near-term downgrade for Pakistan as political instability and the removal of Prime Minister Imran Khan from office bring fresh challenges for the country. With regard to the ASEAN market, production in the second half of 2023 could face pressure in the form of demand headwinds presented by high inflation and interest rate hikes. The forecast for 2024 was upgraded primarily on a somewhat stronger outlook for the India and Philippines markets. The intermediate-to-long term forecast has been revised only modestly across the South Asia region.

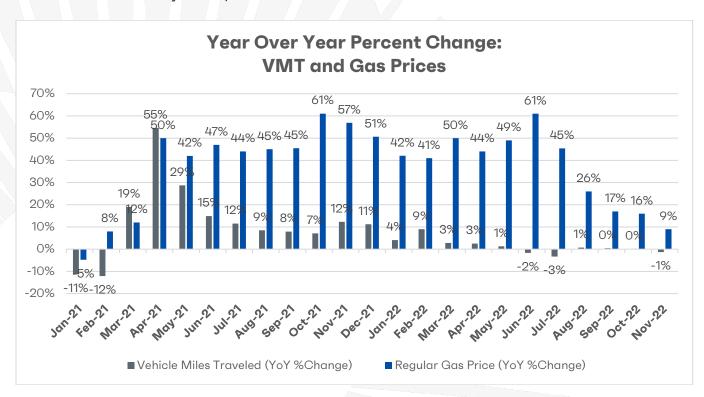


Recovery Meter

Roadway Travel (Updated 3/3)

According to the U.S. Department of Transportation, seasonally-adjusted vehicle miles traveled in December decreased 1.3% from the same time a year ago. The cumulative travel estimate for 2022 is 3,169.4 billion vehicle miles. ²⁷

- Travel on all roads and streets changed by -1.8% (-4.6 billion vehicle miles) for December 2022
 as compared with December 2021. Travel for the month is estimated to be 256.4 billion vehicle
 miles.
- The seasonally adjusted vehicle miles traveled for December 2022 is 263.4 billion miles, a -1.3% (-3.4 billion vehicle miles) change over December 2021. It also represents a -0.04% change (-0.1 billion
- Cumulative Travel for 2022 changed by +0.9% (+29.3 billion vehicle miles). The cumulative estimate for the year is 3,169.4 billion vehicle miles of travel.



Economic News (Updated 2/3)



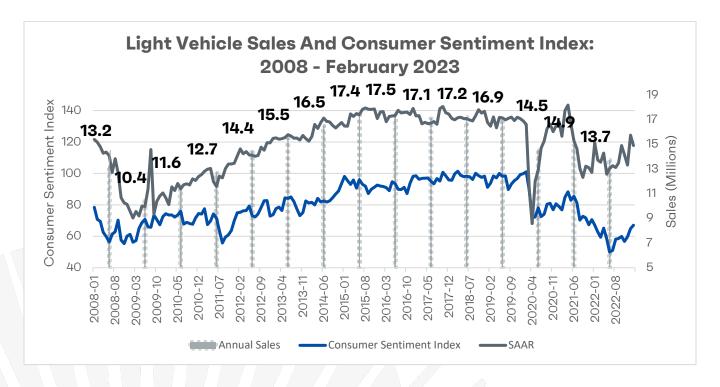
Manufacturing Gained 19,000 Jobs In January, While Motor Vehicles And Parts Lost 6,500. ²⁸ "Manufacturing boosted employment by 19,000 jobs in January, with non-durable goods doing the heavy lifting. . .. Jobs losers among durable goods included transportation equipment, down 8,400 jobs. That included a job loss of 6,500 in motor vehicles and parts.

The ISM Index Remains Below 50, The Third Straight Month Of Manufacturing Contraction. "The contraction in the manufacturing economy deepened last month, the Institute for Supply Management said today. The Tempe, Ariz.-based group's manufacturing index, known as the PMI, slipped to 47.4 percent in January. That was down from 48.4 percent the month before. An index reading above 50 percent indicates economic expansion, while below 50 percent shows contraction. The index has been in negative territory for three consecutive months. The PMI has averaged 52.7 percent the past 12 months." ²⁹

Consumer Confidence and Sales (Updated 3/3)

Surveys of Consumers Director Joanne Hsu³⁰: "Consumer sentiment confirmed the preliminary February reading, rising a modest 3% above January. After lifting for the third consecutive month, sentiment is now 17 index points above the all-time low from June 2022 but remains almost 20 points below its historical average. Consumers with larger stock holdings exhibited particularly large increases in sentiment. Overall, February's reading was supported by a 12% improvement in the short-run economic outlook, while all other index components were essentially unchanged. Year-ahead inflation expectations rebounded to 4.1% this month, from 3.9% in January and 4.4% in December. Consumers continued to exhibit considerable uncertainty over short-run inflation, and thus their expectations may be unstable in the months to come. Long-run inflation expectations remained at 2.9% for the third straight month and stayed within the narrow 2.9-3.1% range for 18 of the last 19 months."



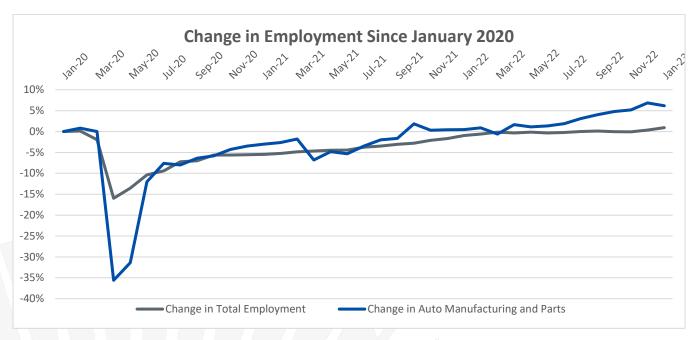


Employment (Updated 2/3)

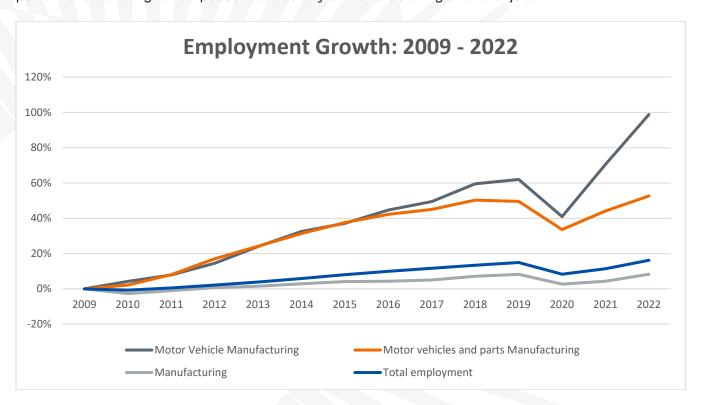
Motor Vehicle And Parts Manufacturing Lost 6,500 Jobs In January.31

After a loss of nearly 350,000 employees (about 35% of the workforce) in the height of the pandemic, employment in the Automobile Manufacturing and Parts sectors raced back but is now fighting losses due to supply chain disruptions with semiconductors. ³²





After the recession in 2009, the auto industry was credited with being on the leading edge of the recovery, which began a ripple effect through other parts of the country. ³³ Additionally, the chart below shows how the recovery of jobs in motor vehicle manufacturing alone and motor vehicle and parts manufacturing far outpaced the recovery of manufacturing and total jobs.





Sources

- ¹ WardsIntelligence, U.S. Light Vehicle Sales, January 2021 December 2022
- ² WardsIntelligence, North America Production, January 2021 December 2022
- ³ WardsIntelligence, North America Platform by Plant Production Forecast, Q1
- ⁴ Haig Stoddard, "February U.S. Light-Vehicle Inventory Up 1.7% from January; March Poised for Stronger Increase," *WardsIntelligence*, 3/2/23
- ⁵ Haig Stoddard, "February U.S. Light-Vehicle Inventory Up 1.7% from January; March Poised for Stronger Increase," *WardsIntelligence*, 3/2/23
- ⁶ Haig Stoddard, "First-Quarter North America Production Tracking to 7.4% Gain," WardsIntelligence, 2/17/23
- 7 S&P Global Mobility, email, "S&P Global Mobility Monthly Automotive Update February 2023," 2/16/23
- ⁸ Haig Stoddard, "U.S. Light-Vehicle Sales Record Another Gain in February, Beating Expectations," WardsIntelligence, 3/1/23
- ⁹ TrueCar, Press Release, "TrueCar Releases Analysis of February Industry Sales," 2/24/2023
- ¹⁰ J.D. Power, Press Release, "Total New-Vehicle Sales Increase as Availability Improves," 2/24/2023
- ¹¹ WardsIntelligence, U.S. Light Vehicle Sales, January 2013 January 2023
- 12 U.S. Energy Information Administration, Weekly Retail Gasoline and Diesel Prices, Regular price per gallon, including taxes
- ¹³ WardsIntelligence, Fuel Economy Index, December 2013 & 2019
- ¹⁴ WardsIntelligence, U.S. Light Vehicle Sales, September 2020; U.S. Light Vehicle Sales, September, 2021
- ¹⁵ Haig Stoddard, "U.S. Light-Vehicle Sales Record Another Gain in February, Beating Expectations," WardsIntelligence, 3/1/23
- ¹⁶ J.D. Power, Press Release, "Total New-Vehicle Sales Increase as Availability Improves," 2/24/2023
- ¹⁷ Kelley Blue Book, Press Release, "Luxury Share of U.S. Market Sets New Record in January, as Transaction Prices Remain Up 5.9% Year Over Year, According to Kelley Blue Book," 2/13/23
- ¹⁸ J.D. Power, Press Release, "Total New-Vehicle Sales Increase as Availability Improves," 2/24/2023
- ¹⁹ Bankrate, "Current Car Loan Interest Rates," Accessed 2/21/23
- ²⁰ EIA, "Short-Term Energy Outlook," 2/2023
- ²¹ EIA, "Short-Term Energy Outlook," 2/2023
- ²² U.S. Energy Information Administration, Regular Gasoline, www.eia.gov, Accessed 1/5/23; U.S. Energy Information Administration, Weekly Cushing, OK WTI Spot Price, www.eia.gov, Accessed 1/5/23
- ²³ WardsIntelligence, "North America Production, November," 2019, 2020, 2021, 2022
- ²⁴ Haig Stoddard, "February U.S. Light-Vehicle Inventory Up 1.7% from January; March Poised for Stronger Increase," *WardsIntelligence*, 3/2/23
- ²⁵ Haig Stoddard, "Global Sales Fall Second Straight Month in January, But Growth Expected to Resume in February," WardsIntelligence, 2/28/23
- ²⁶ S&P Global Mobility, email, "S&P Global Mobility Monthly Automotive Update February 2023," 2/16/23
- ²⁷ U.S Department of Transportation, https://www.fhwa.dot.gov/policyinformation/travel_monitoring/21septvt/, Accessed 2/3/2023
- ²⁸ Bill Koenig, "Manufacturing Adds 19,000 Jobs, Mostly in Non-Durable Goods," SME, 2/3/2023
- ²⁹ Bill Koenig, "Manufacturing Contraction Deepens in January," SME, 2/12023
- ³⁰ University of Michigan, Survey of Consumers, http://www.sca.isr.umich.edu/, Accessed January 20, 2023
- ³¹ Bureau of Labor Statistics, Table B-1. Employees on nonfarm payrolls by industry sector and selected industry detail, October 2022
- 32 Bureau of Labor Statistics, Current Employment Statistics, Accessed 11/11/2021
- 33 Jerry Hirsch, "Auto Industry Has Soared Since 2010, Leading Economic Recovery," Los Angeles Times, 1/3/14