VMAC®
AIR INNOVATED®

State Of The Mobile Compressed Air Industry Report

Survey Results 2023

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Why We Create This Survey

In 2020, VMAC developed a survey and report that allows you to compare yourself and your business against peers in various industries using mobile compressed air. The survey tracks trends across several key categories: fleets, truck classes, commercial vans, general equipment, mobile compressed air, and current industry challenges and business impacts.

Now in its fourth year, thousands of people have viewed, downloaded, and shared VMAC's State Of The Mobile Compressed Air Industry Report. This report has been published in various trade magazines, websites, and social media channels. From this strong industry support, it's clear there is a place and a need for this research to be conducted and shared.

Each year the survey has grown to include questions about the current issues facing the industry and the impacts on business. The first survey focused on the consequences of COVID-19 but has since expanded to include questions about the industry's most buzz-worthy topics, including electric vehicles, the truck chassis shortage, worldwide supply chain challenges, and rising interest rates.

By compiling this data from a wide range of industry professionals and constantly evolving the survey each year, we strive to provide you with a fresh view of industry trends. We've also included valuable insights and analysis to help you make decisions that allow your business to succeed and grow.

Methodology & Participants

VMAC surveyed 331 people for the State Of The Mobile Compressed Air Industry Survey between December 2022 and April 2023. Each participant spent an average of 7 minutes answering 33 questions and submitted answers to an online survey to share their perspective on the state of the industry.

This year there was a notable shift in survey respondents' fleet sizes. In past years respondents with 1 to 5 service trucks dominated the results, accounting for as much as 75% of respondents. However, in 2023, this category only represented about half of all respondents, at 52%, while mid-sized fleets of 6 to 25 trucks more than doubled to account for 26% of respondents.

The compressed air industry unites various businesses from numerous industries, including construction, equipment repair, agriculture, transportation, mobile tire service, service truck upfitting, landscaping, oil & gas, forestry, municipal and utilities infrastructure, and mining. Regardless of their job titles and industries, the need for mobile compressed air keeps people connected.

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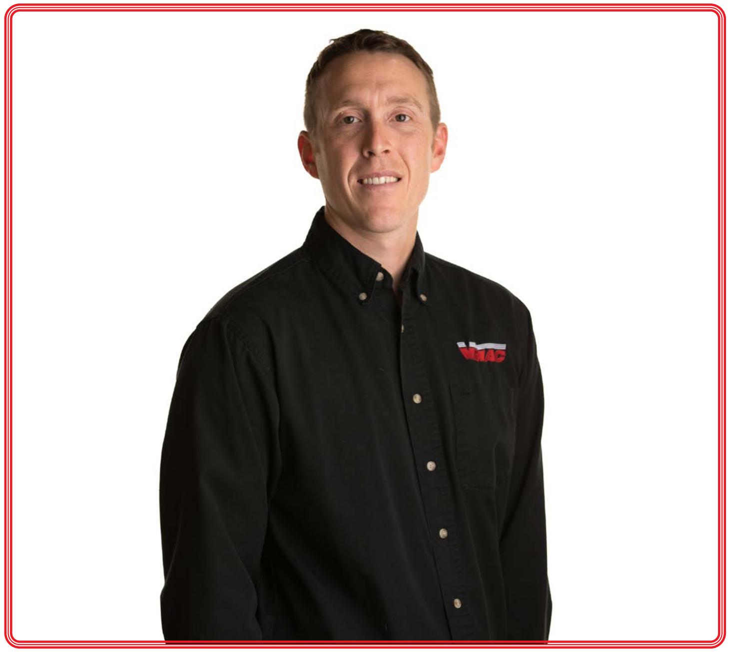
Survey Respondents

VMAC surveyed 331 professionals in the mobile compressed air industry survey, and the representation is almost identical to the 2022 survey:

- Owners and operators/mechanics represent 62% of respondents
- Equipment repair and construction work are the most represented industry applications



"Compressed air powers the tools and equipment critical to supporting diverse industries, including agriculture, construction, transportation, energy production, mining, forestry, and rail—and in equally diverse geographic locations and climates. Compressed air powers, feeds, and transports people around the world and unites the service truck and related industries. Because of this diversity, global economic and supply chain conditions impact compressed air users differently, with some facing significant challenges where others thrive. Through the ups and downs, companies can show what it means to be a partner, working with their suppliers and customers to build stronger relationships while providing innovative and sustainable solutions."

Tod Gilbert
President
VMAC

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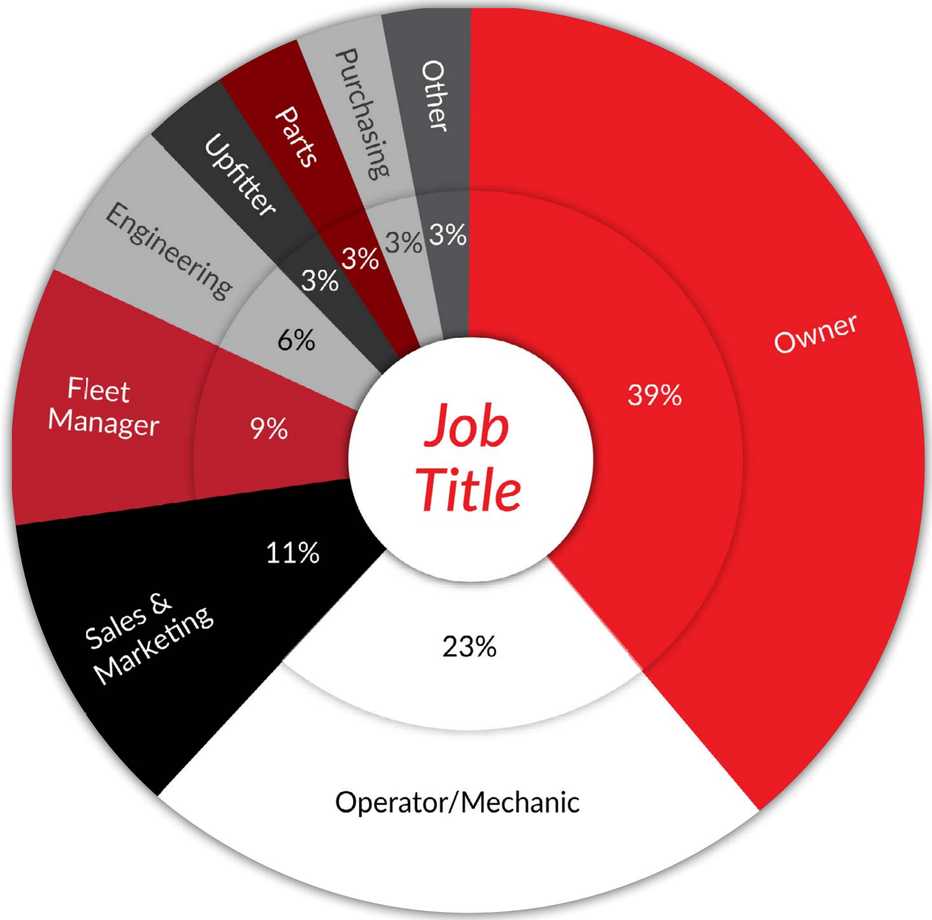
Owners And Operators/Mechanics Represent 62% Of Respondents

The 2023 survey respondents were asked to identify their current job title, and most respondents, at 62%, identified themselves as owners and operators/mechanics, identical to last year.

This year the owners accounted for 39% of respondents, while operators and mechanics represented almost a quarter of those surveyed, at 23%.

Other respondents included sales and marketing staff (11%), fleet managers (9%), and people in engineering (6%). Upfitters and those in parts and purchasing departments represented 3% of respondents, respectively.

Q | Select the job title/function that best describes you:



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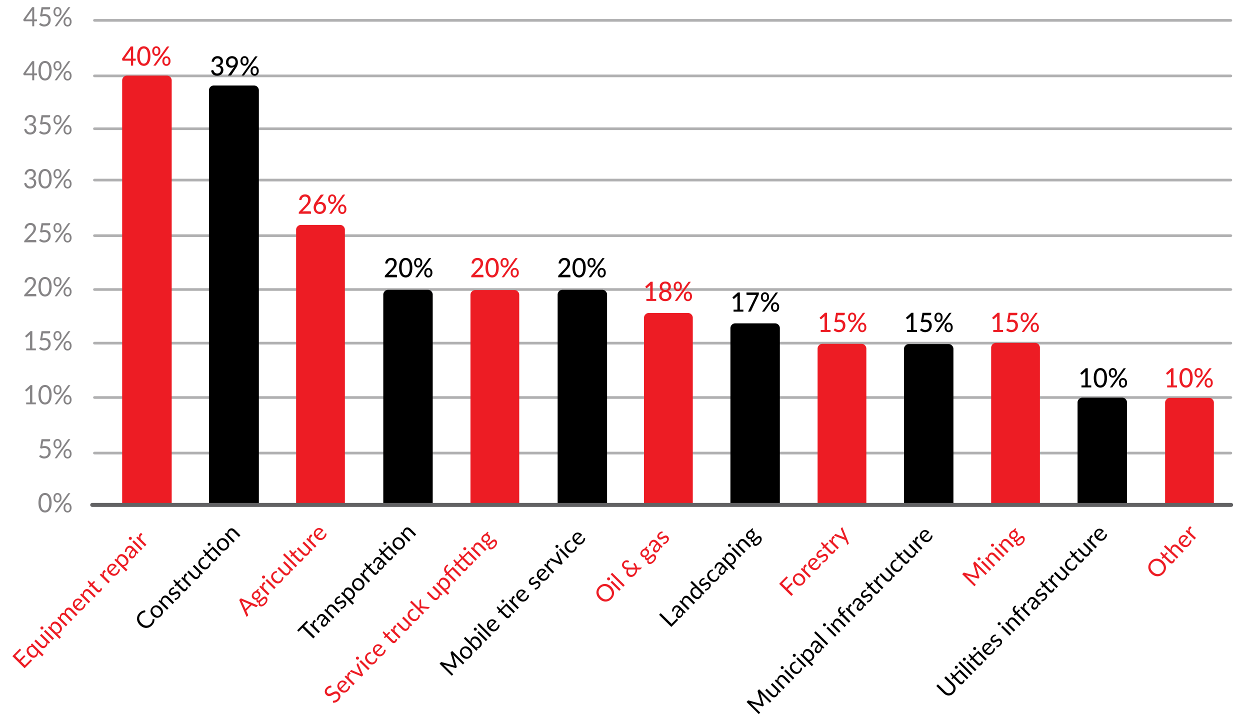
Equipment Repair And Construction Continue To Be The Top Industries Represented

This year, instead of segmenting industries and applications into two different questions, we combined them into one. Though this change means we can't make exact comparisons year over year in this report, we see a consistent trend.

In 2022 the top application was equipment repair, and the top industry was construction. This year, these two categories take the top spots again, with equipment repair chosen by 40% of respondents and construction selected by 39% of respondents.

Just over a quarter of respondents, or 26%, represent the agricultural industry, while transportation, service truck upfitting, and mobile tire service were each chosen by 20% of respondents. As with 2022 and 2021, utilities infrastructure and mining are the two least represented industries in the survey.

Q | What industry do you serve? Check all that apply:



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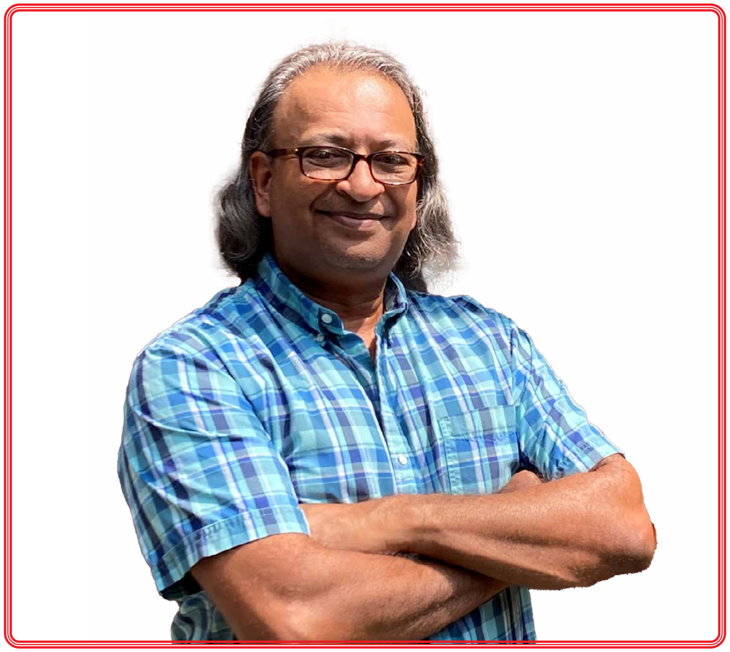
Service Vehicles & Fleets

Fleets within the mobile compressed air industry are changing as their fleets grow, age, and adapt. Despite these changes, most fleets are not interested in converting to alternative fuels any time soon, and many concerns with EV technologies linger.

- More fleets are utilizing service vans
- Fleet vehicles increase in Class size and age
- Diesel vehicles drop in popularity



"Although I am not from Missouri, their unofficial state motto is one I follow concerning the automotive industry: Show Me. And that's what VMAC's 2023 State Of The Industry report has done, and done well. Our readers seek information on where the industry is and where it is going. Service Truck Magazine is encouraged to learn that one-third of respondents want to increase the number of service vans they have, while almost all the rest remain as is. Now if we could only find the technicians to drive and provide service."

Andrew Joseph
Editor
Service Truck Magazine

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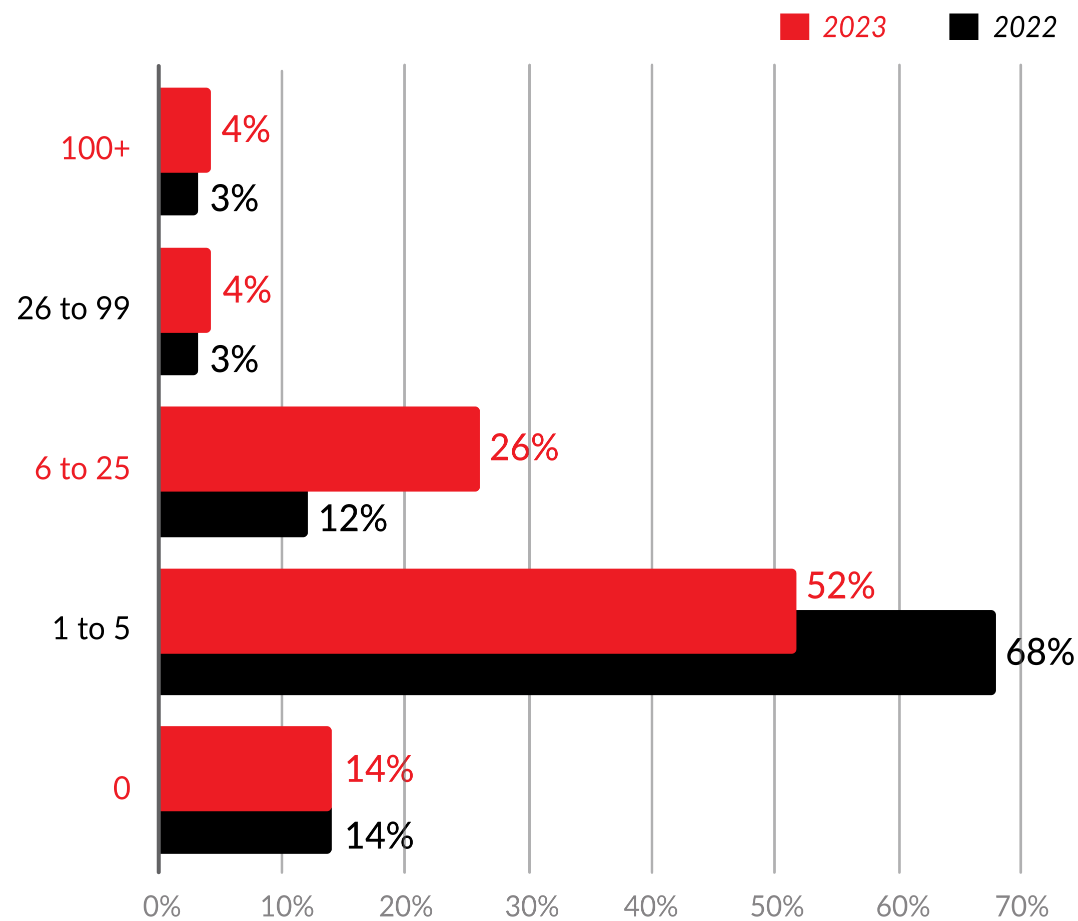
Most Survey Respondents Have 1-5 Service Trucks In Their Fleet

Most survey respondents indicated they have small fleets of 1 to 5 service trucks, similar to past years. However, this segment has notably declined over the years. In 2021, 75% of respondents had 1 to 5 service trucks, which dipped to 68% in 2022 and is now 52% in 2023.

Meanwhile, the 6 to 25 service truck category is growing. Over a quarter of respondents (26%) fell into this segment during the 2023 survey, compared to 12% in 2022 and 9% in 2021.

Only 8% of respondents have more than 26 service trucks, while 14% have no service trucks. These numbers are very similar to the previous years.

Q | How many service trucks are in your company's fleet?

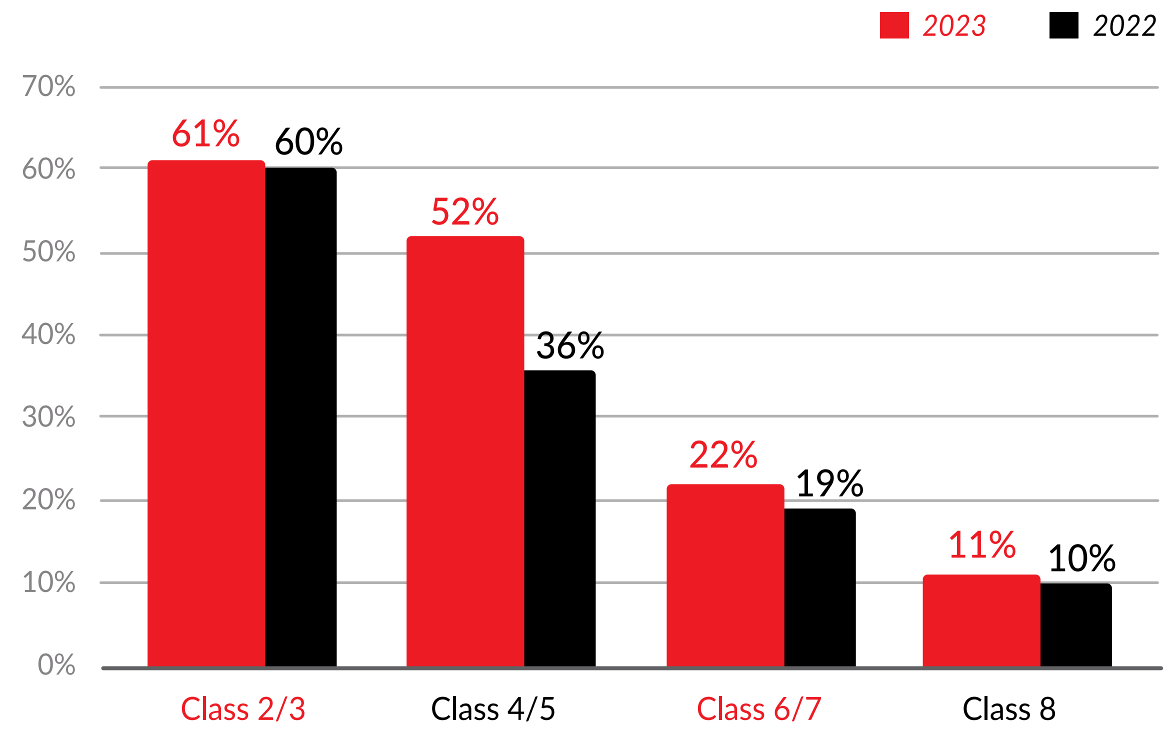


Most Popular Class For Service Vehicles Depends On The Industry

Nearly two-thirds of respondents have Class 2/3 service trucks in their fleet, half have Class 4/5, and a fifth have Class 6/7. However, a high number of respondents in the agriculture, mobile tire service, upfitting, and transportation industries skewed the overall data in favor of Class 2/3 vehicles.

Segmented by industry, construction, equipment repair, forestry, landscaping, mining, municipal infrastructure, oil & gas, and utilities infrastructure are more likely to have Class 4/5 than Class 2/3 service trucks in their fleet.

Q | Which classes of service trucks do you have in your fleet? Check all that apply.



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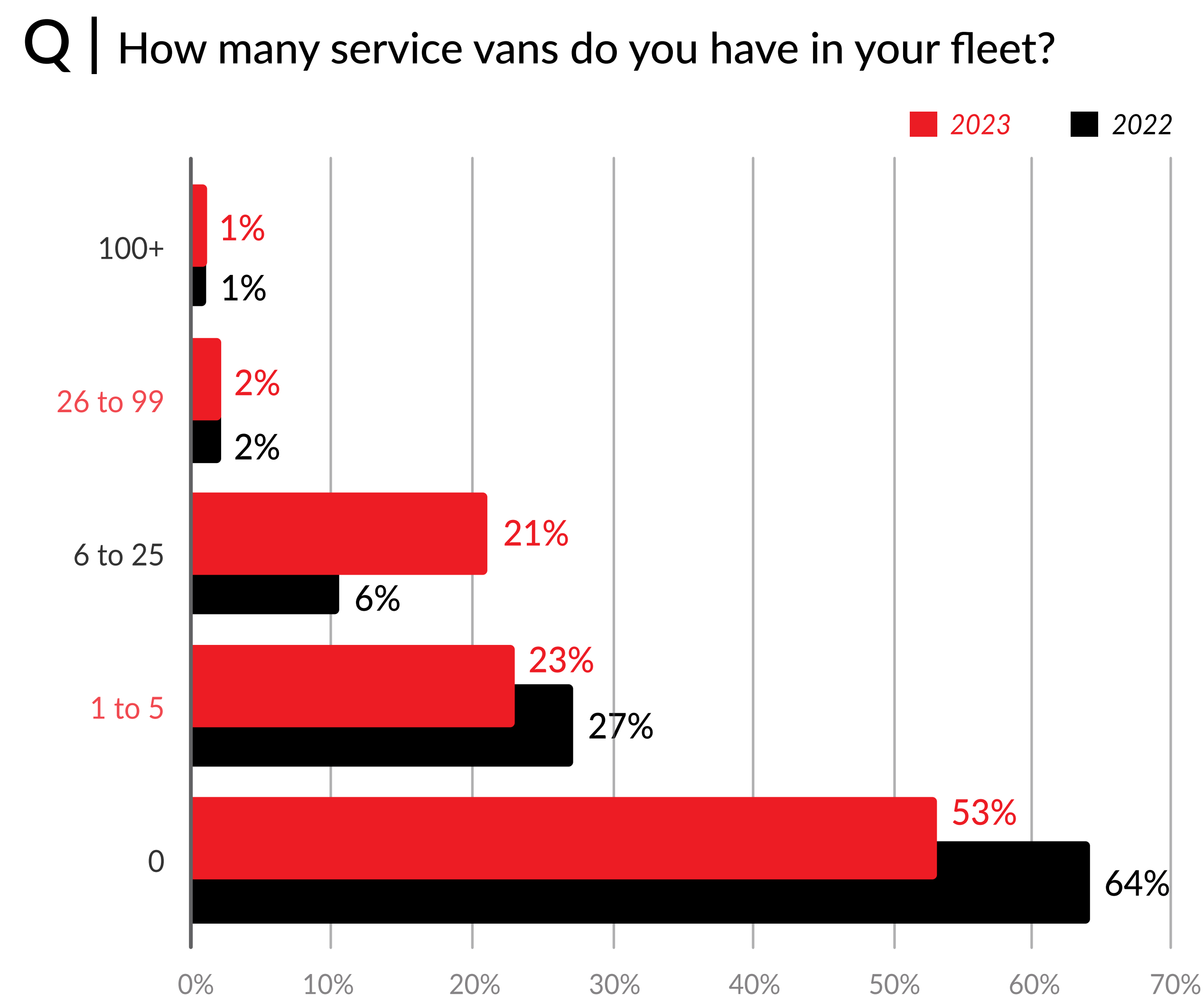
Nearly Half Of Fleets Include Service Vans

The number of fleets with service vans increased significantly from 36% in 2022 to 47% in 2023. In addition, fleets with 6 to 25 vans rose from 6% to 21%.

Vans are growing in popularity within fleets, which VMAC has predicted for years. However, it is unclear whether this increased adoption is due to limited truck chassis availability, a growing respect for work vans in North America, or both.



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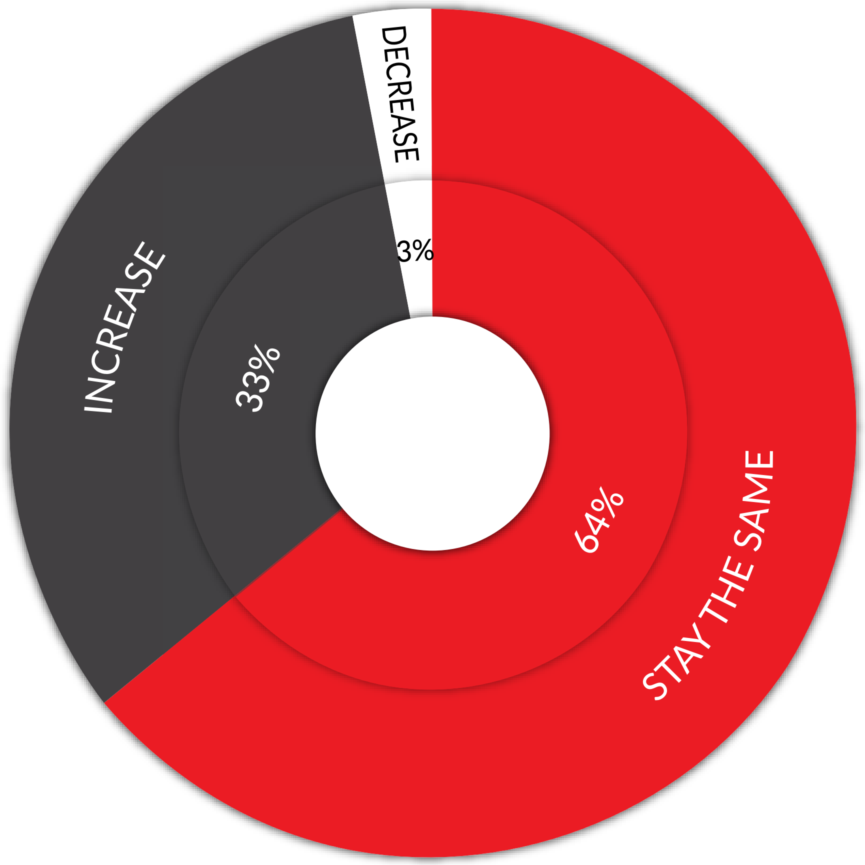
Respondents Are Divided On Whether They Will Acquire More Vans

Most respondents expect the number of service vans in their fleet to stay the same (64%) or increase (33%). A mere 3% of survey respondents expect a decrease in the number of vans in their fleet.

Segmenting the results further, fleet respondents with vans versus those without are divided on the future. Only 12% of respondents without vans anticipate getting vans, while 58% of respondents with vans expect their number to increase. This data suggests that vans are a beneficial addition to fleets, as people who already utilize service vans want to acquire more.

Q | Do you anticipate the number of service vans in your fleet to increase, decrease or stay the same?

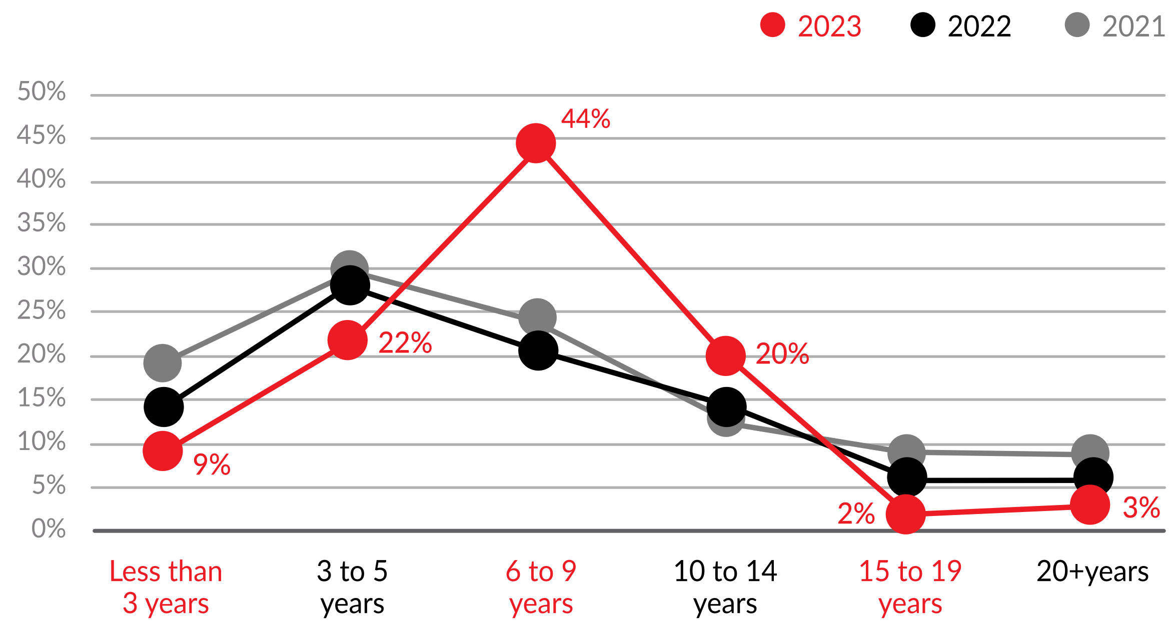


Most Fleet Vehicles Remain Under 10 Years Of Age

VMAC's 2023 survey indicated newer vehicles ages 0 to 9 make up 75% of fleets, compared to 62% of fleets in 2022 and 73% in 2021. Results have been consistent over time as most fleets' average age of service vehicles remains under 10 years.

However, the average age of service vehicles is notably higher than last year. Most of this year's respondents fall into the 6 to 9 years bracket, while the 3 to 5 years bracket was dominant the past two years, suggesting fleets are getting older. Chassis availability and an increase in used vehicle purchases may be the cause of this shift.

Q | What is the average age of the service vehicles in your fleet?



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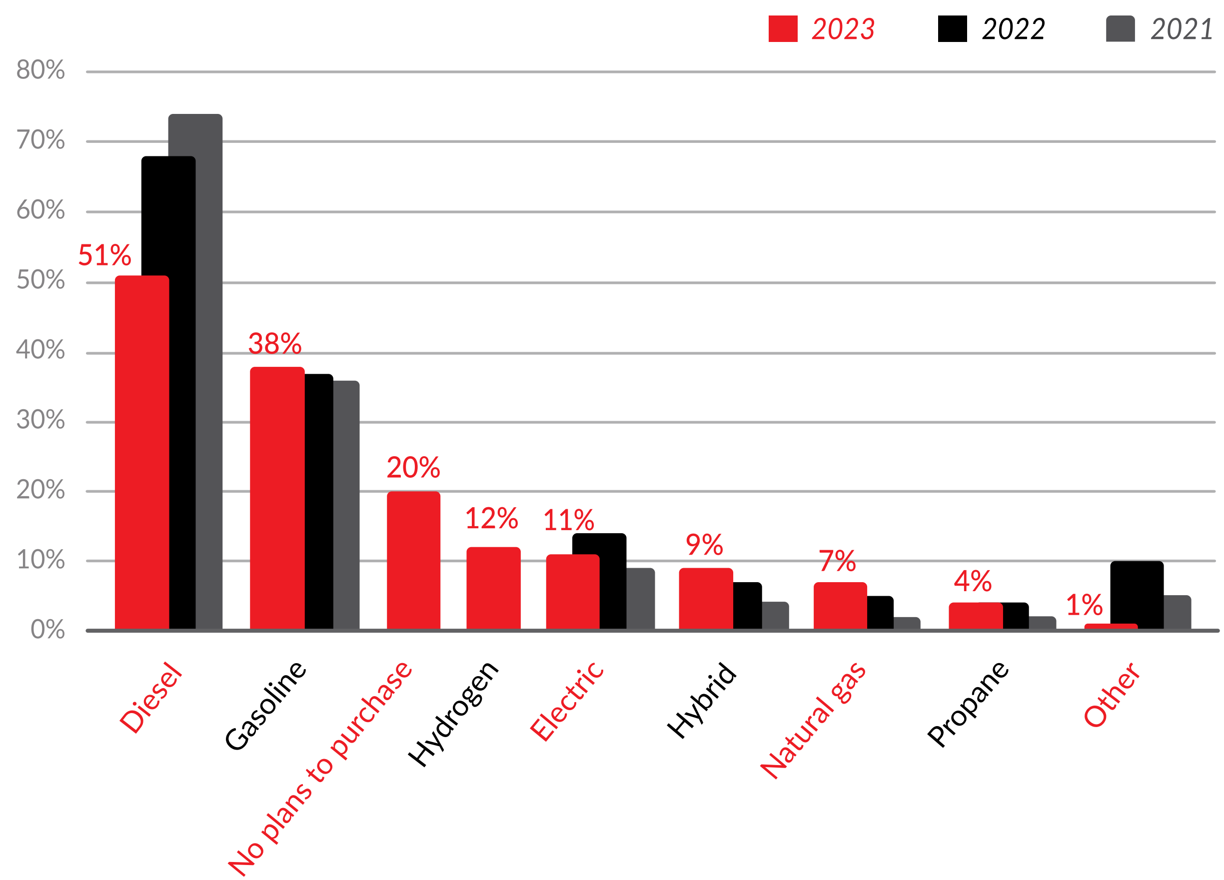
Diesel Loses Popularity As Hydrogen Tops Alternative Fuels

Diesel vehicles remain the most popular kind of service vehicle, but interest has dropped significantly. Only 51% of respondents are interested in purchasing a diesel vehicle in the future, compared to 68% in 2022 and 74% in 2021.

Gasoline was the second most common choice (38%), followed by two new survey options added this year: hydrogen fuel and "no plans to purchase." Hydrogen (12%) jumped to the top of the alternative fuel interest, followed by electric (11%), hybrid (9%), and natural gas (7%).

Only 4% of respondents are interested in propane, and a mere 1% in other fuel types.

Q | What kind of service vehicles are you interested in purchasing in the future? Check all that apply.



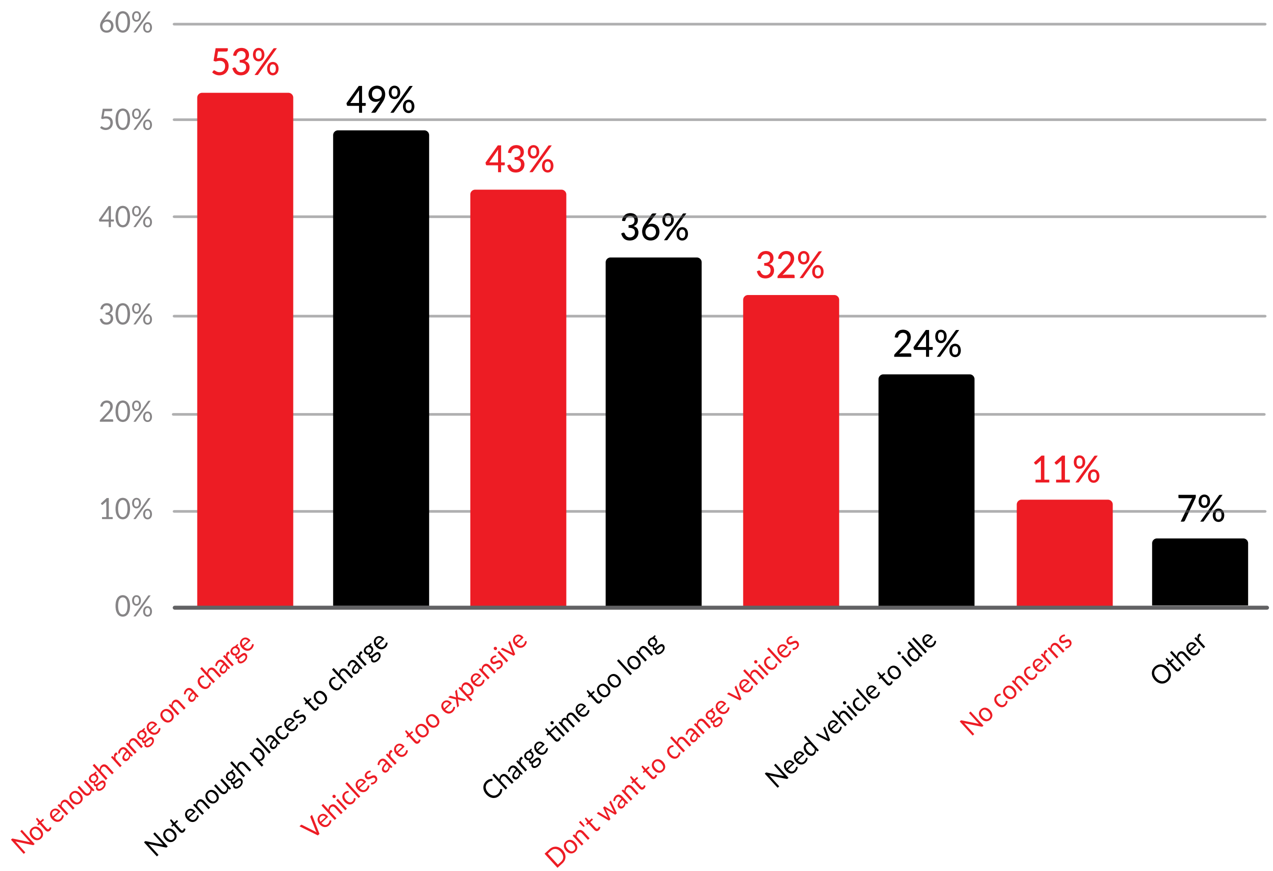
Range Anxiety, Charging & Vehicle Price Dominate EV Concerns

When asked about concerns regarding electric service vehicles, respondents indicated range (53%), charging availability (49%), vehicle price (43%), and charge time (36%) as their primary worries. Each of these concerns has increased when compared to last year.

A new survey option was added this year—the need for the vehicle to idle—and was selected by 24% of respondents. The need to idle was reflected across all industries but was most common in mining, forestry, and agriculture.

Within the comments for “Other,” numerous respondents mentioned cold weather as a significant EV concern. Battery longevity and the inability to purchase EV work trucks were also noted.

Q | Do you have any concerns about switching to an EV service vehicle? Check all that apply.



Air Compressors & Equipment

The mobile air industry continues to value air compressors within their fleets, recognizing their importance on service trucks. Rotary screw air compressors remain the industry preference, while gas air compressors have become the industry's most popular and desired style.

- Most respondents require under 100 CFM and 120-149 psi for their service trucks
- 81% of people prefer rotary screw air compressors
- Rotary screw air compressors are preferred for their performance
- Above-deck gas driven air compressors are the most popular and desired system

"Once again, VMAC's survey respondents have shared that they prefer rotary screw air compressors over reciprocating compressors, and this sentiment aligns closely with what we're seeing with our customer base. Last year, the shortage of small combustible engines made it challenging for manufacturers and suppliers to fulfill gas powered air compressor orders. However, as lead times improve, we see more customers opting for above-deck gas engine air compressors, as they're often the most affordable type of rotary screw air compressor, offering a lightweight, compact design and full air power 100% of the time."

Rob Beukema
Vice President
Work Truck West

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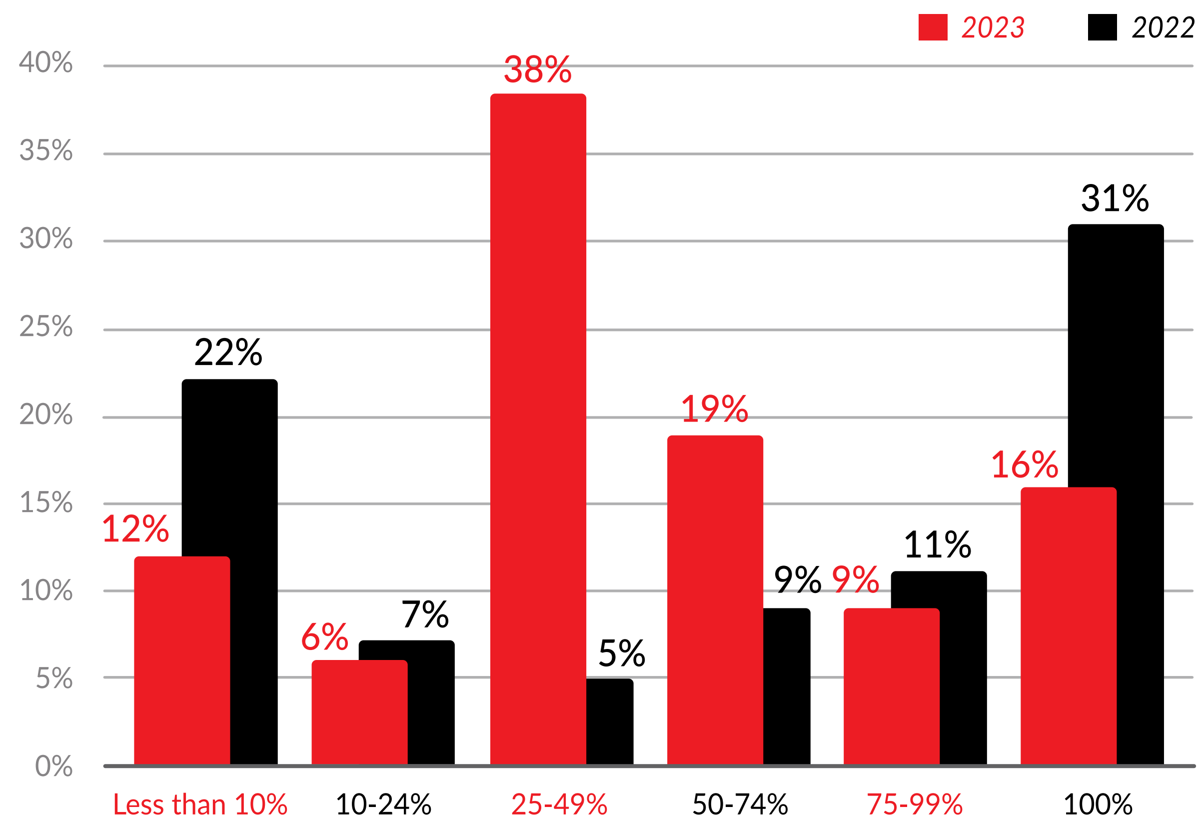
Most Fleets Have Air Compressors On 25-74% Of Vehicles

In previous years' surveys, there was a notable divide on whether service vehicles still have air compressors, and respondents seemed to take an "all or nothing" approach to adding air compressors on their service vehicles. This trend changed significantly in this year's survey, as 57% of respondents indicated they have air compressors on 25-74% of their service vehicles.

While it is possible that the work truck industry has adapted to supply chain challenges and replaced some vehicles and equipment, this shift is more likely explained by a change in survey respondents. Respondents with small fleets of 1-5 vehicles are most likely to choose "less than 10%" or "100%," while larger fleets more commonly utilize air power on a portion of their total fleets.

Q | Approximately what percent of your service vehicles are equipped with air compressors?



Note: The 2022 survey had an N/A option that was removed for 2023, as we changed the survey logic to only display this question to respondents who previously indicated they have air compressors on their service vehicles.

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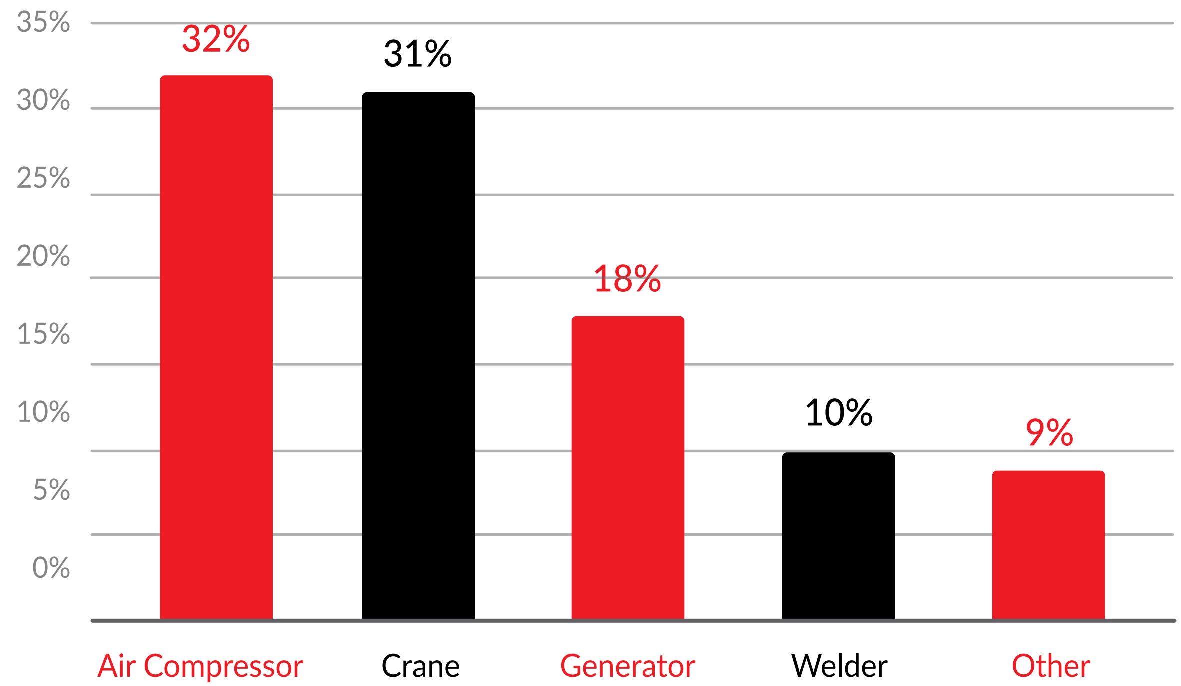
Air Compressors Remain The Most Important Piece Of Equipment

Air compressors remain the most important equipment on service vehicles (32%), with cranes a close second (31%).

VMAC has challenged respondents with this question every year while recognizing that operators use multiple pieces of equipment throughout their day-to-day work. These competing needs were reflected in the comments for “Other,” where many answers indicated they consider air compressors, generators, and welders, or “all of the above” equally important.

Q | What is the most important piece of equipment on your service vehicle?



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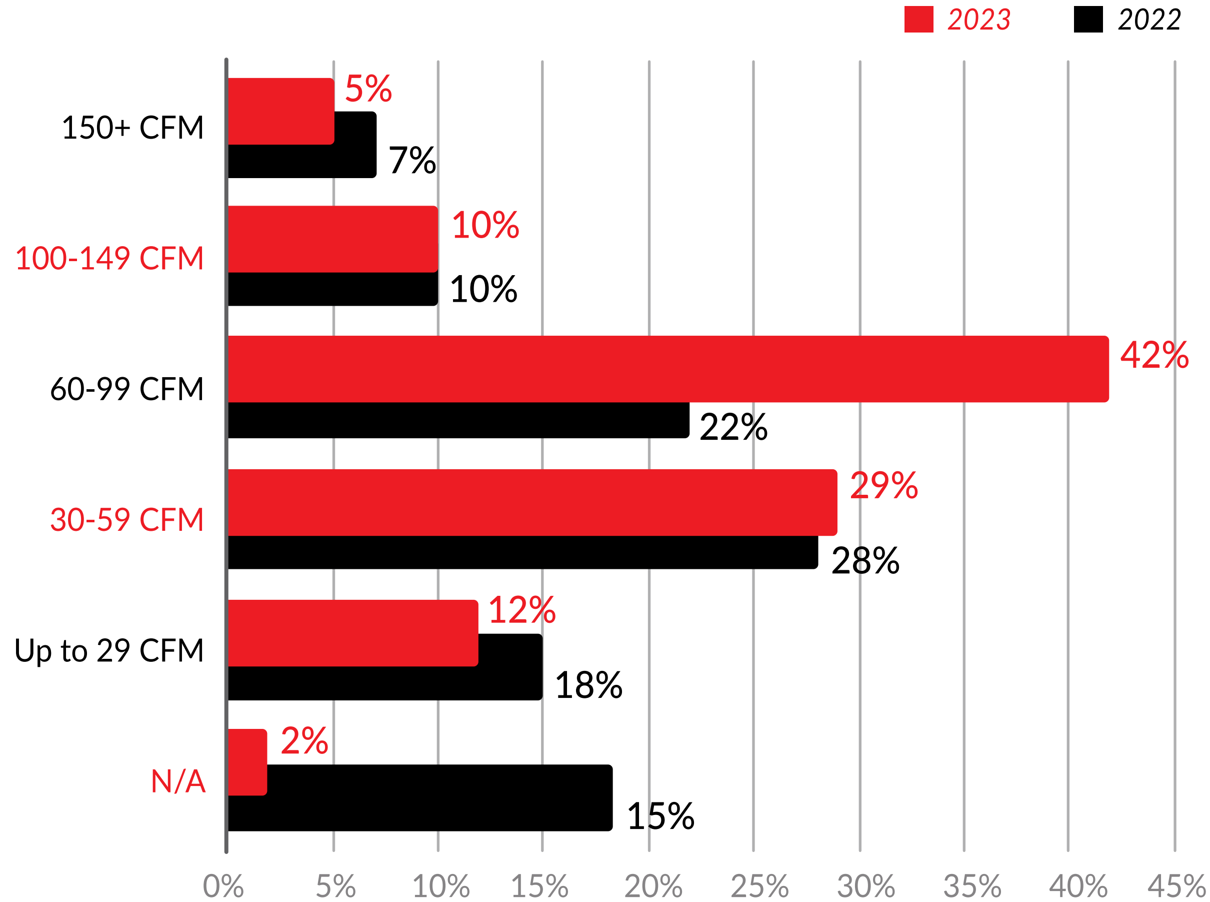
Most Require Under 100 CFM On Their Service Trucks

When asked about CFM requirements for their service trucks, 4 out of 5 people (83%) gave answers under 100 CFM. This was a significant increase from last year when only 68% gave the same response.

Meanwhile, two-fifths of respondents (41%) stated they only require up to 59 CFM on their service vehicles. Precisely 10% of respondents selected 100 to 149 CFM for the second consecutive year. Only 5% selected 150+ CFM.

The most considerable shift in results occurred in the 60-99 CFM range, which increased from 22% in 2022 to 42% in 2023. This change could be explained by the increasing adoption of battery electric tools, which can replace small air tools but are not powerful enough to displace larger tools and equipment.

Q | What CFM range best fits your requirements for your service vehicles?



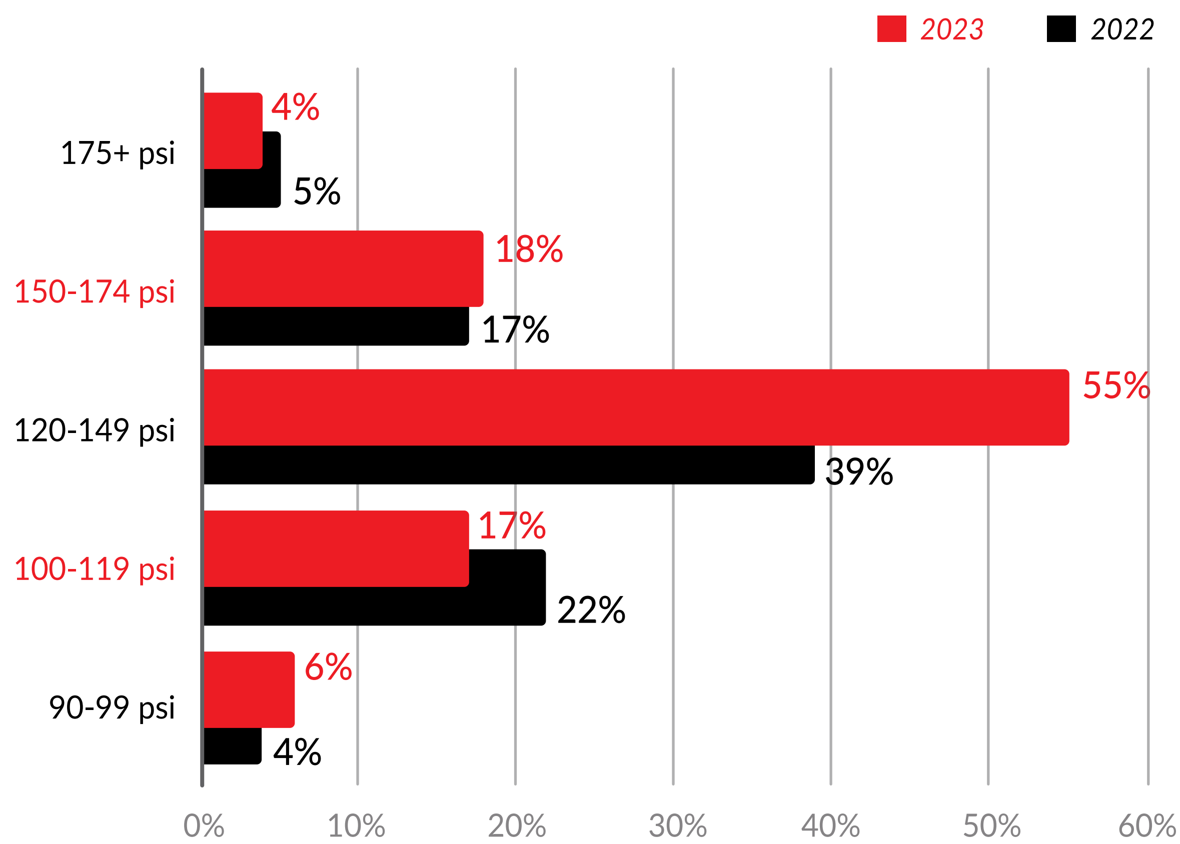
Most Service Vehicles Require 120-149 PSI

Over half of respondents (55%) agree that 120-149 psi is required for their service vehicles, increasing from 39% in 2022. This requirement is consistent with the psi requirements for most air tools today.

Meanwhile, one-fifth of respondents require 150-174 psi (18%), while another fifth require 100-119 psi (17%). The remaining responses of 90-99 psi (6%) and 175+ psi (4%) are outliers.

These trends are similar to last year's survey results, suggesting psi needs have remained stable over the past year.

Q | What psi range best fits your requirements for your service vehicles?



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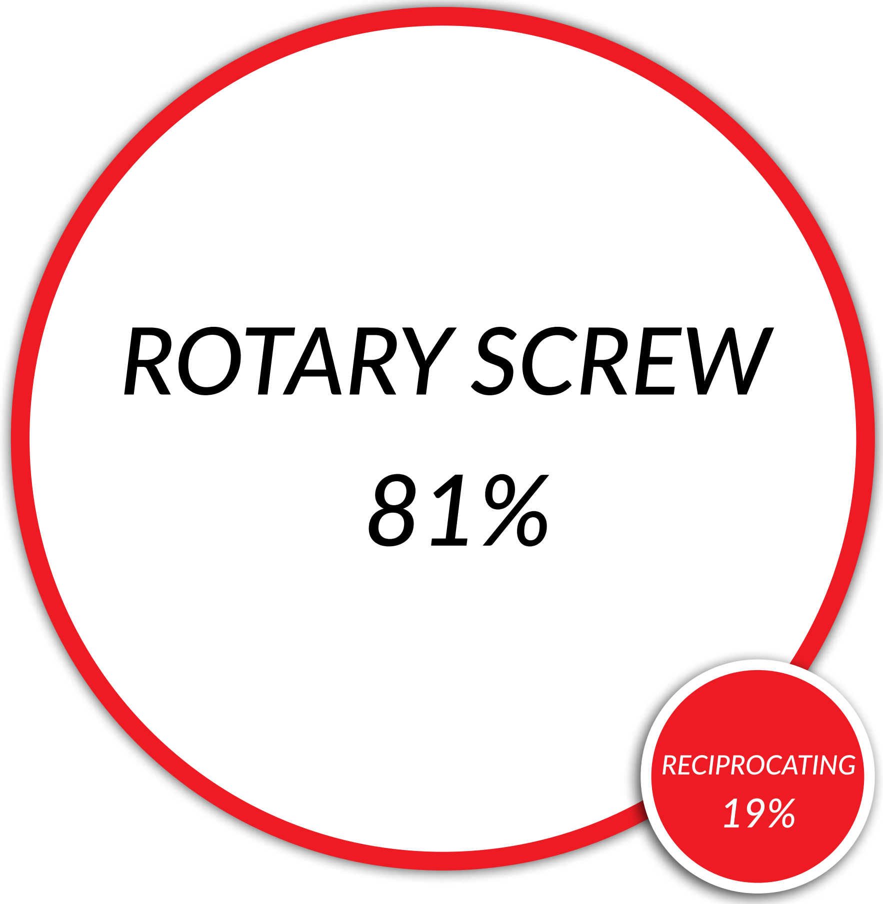
Vast Majority Prefer Rotary Screw Air Compressors

The preference for rotary screw air compressors continues to dominate the industry. When asked whether they prefer rotary screw or reciprocating air compressors for service vehicles, 81% of respondents said they prefer rotary screw air compressors.

This result is almost identical to the 2021 and 2022 survey results, as 80% of respondents chose rotary screw air compressors in both years.

Q | Do you prefer rotary screw or reciprocating air compressors for service vehicles?



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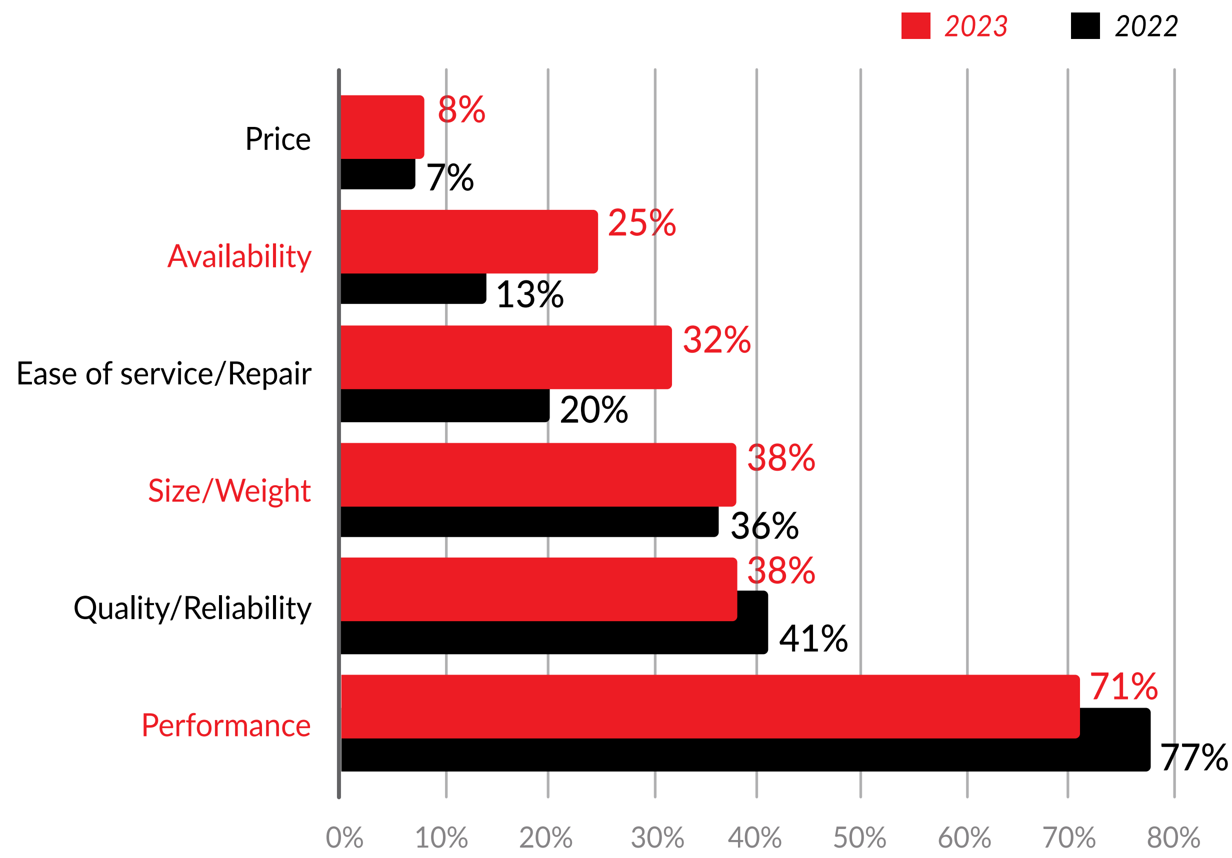
Rotary Screw Air Compressors Preferred For Their Performance

Following the trends of 2020-2022, most survey respondents (71%) preferred rotary screw air compressors because of their performance. Other reasons included quality/ reliability and size/weight, both at 38%.

The most notable change in preference was with availability, which increased from 13% in 2022 to 25% in 2023.

Q | Why do you prefer rotary screw air compressors for service vehicles? Check all that apply.



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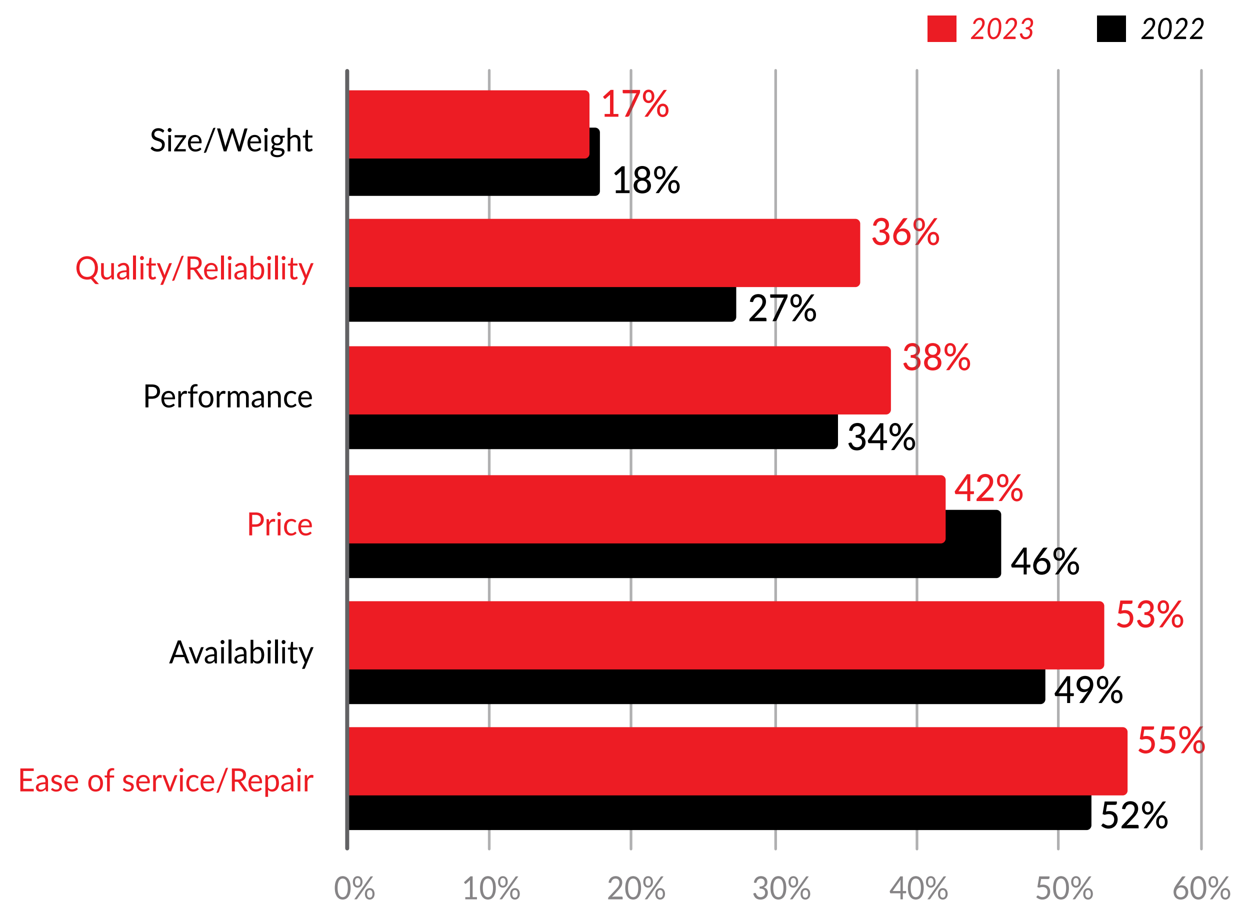
Reciprocating Air Compressors Preferred For Ease Of Repair

Only one-fifth of respondents (19%) said they prefer reciprocating air compressors over rotary screw air compressors. When asked why, the top answers were ease of service/ repair (55%) and availability (53%).

Price, the top answer in 2022, fell from 46% to 42%, suggesting purchase price might no longer be a primary deciding factor, as availability trumps the industry's needs.

Q | Why do you prefer reciprocating air compressors for service vehicles? Check all that apply.



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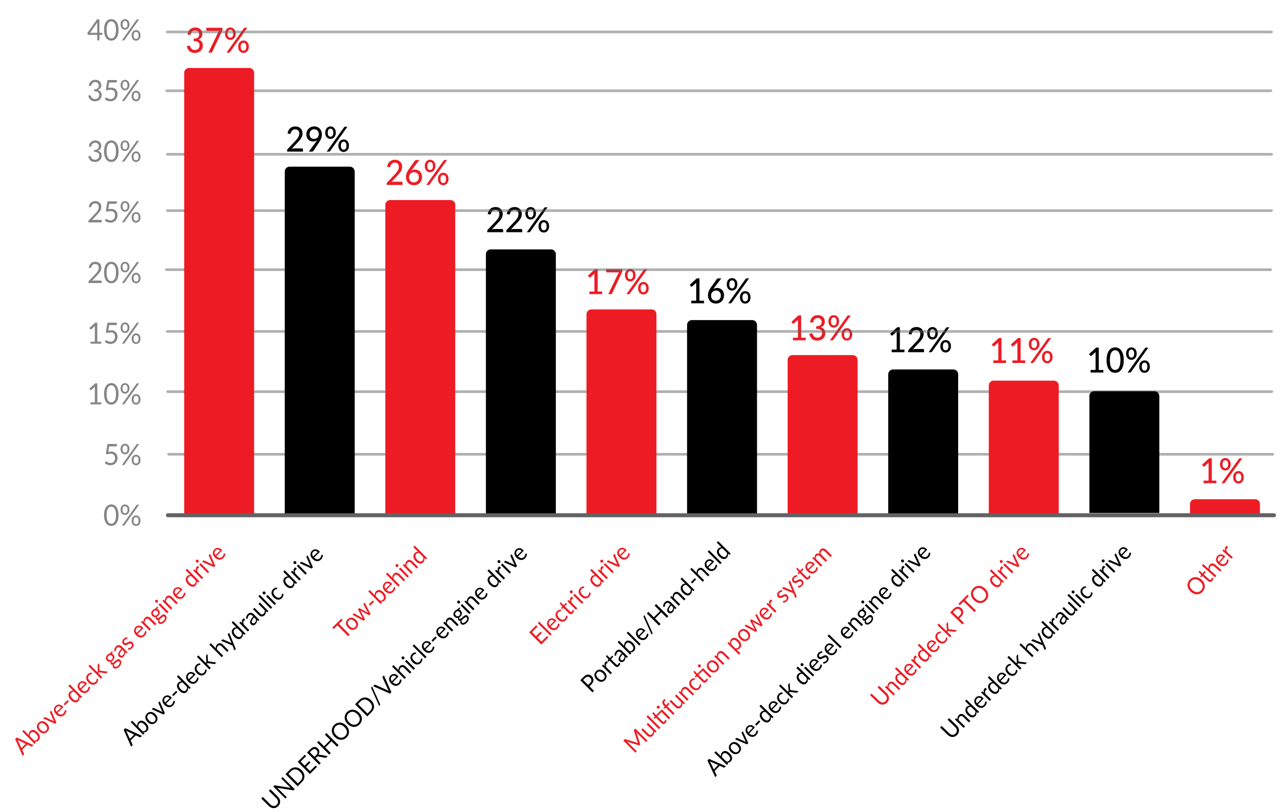
Gas Powered Air Compressors Are The Most Used Air Compressors

When asked what types of air compressors are used on their service vehicles, 37% of respondents said they use above-deck gas engine drive air compressors. This result is consistent with the 2022 survey results, but the similarities end there—this year demonstrated a massive mix-up in the rest of the results.

As of this year, above-deck hydraulic drive (29%), tow-behind (26%), and UNDERHOOD/vehicle-engine drive (22%) are the next most popular air compressor systems. Underdeck systems utilizing PTO or hydraulic drives are the least utilized systems.

Q | What type of air compressor system do you use on service vehicles? Check all that apply.



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Gas Engine Drive Air Compressors Overtake UNDERHOOD™ As Most Preferred System

Above-deck gas engine drive air compressors have taken the top spot for most preferred, defeating UNDERHOOD's two-year reign as #1. Over one-third (35%) of respondents said they prefer gas engine drive air compressors, compared to 28% last year, while UNDERHOOD fell from 34% to 30%.

Rotary screw gas engine drive air compressors are a relatively new introduction to the market, with VMAC launching the G30 in 2015, and competitors following shortly thereafter. Since then, gas engine drive air compressors have consistently grown in popularity, which could explain the shift in this year's survey results.

Despite this change, the overall results are similar to last year's preferences, as the industry proves loyal to its favorite air compressor systems. Tow-behind and portable hand-held air compressors remain the least popular options. A new addition to the survey options for 2023, multifunction power systems, emerged in the middle of the pack.

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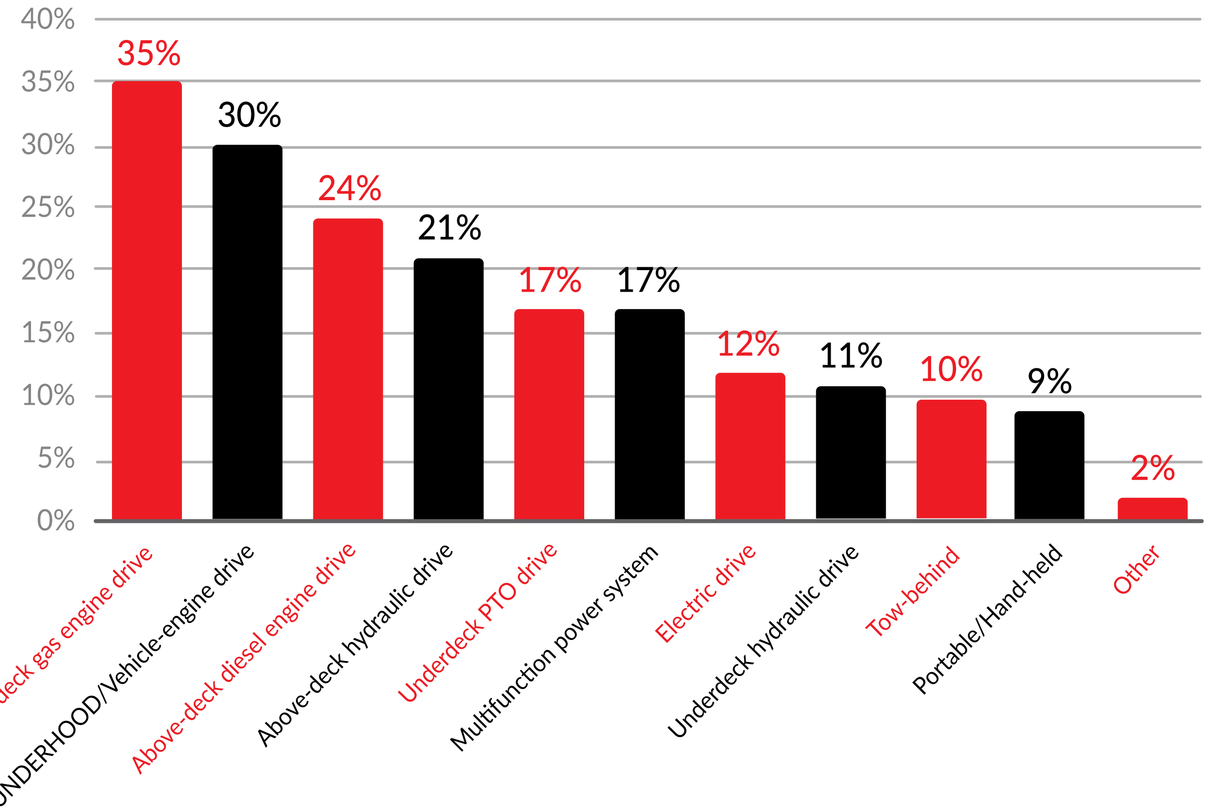
Q | What type of air compressor system do you prefer on service vehicles? Check all that apply.



2023 Business Impacts: COVID-19, Supply Chain Shortages, And Rising Interest Rates Challenge Mobile Air Industry

While the impacts of COVID-19 may be fading for some businesses, supply chain issues continue to challenge the industry, along with new trials and tribulations, like rising interest rates. Though businesses face plenty of challenges in 2023, most respondents agree conditions will improve or hold steady over the next twelve months.

- Fewer businesses are reporting COVID-19's negative impacts
- Plans for investment hold steady compared to previous years, with 82% planning to spend the same or more
- 64% of respondents are affected by rising costs of materials, equipment, trucks, freight and shipping
- Almost half of businesses are negatively impacted by increasing interest rates; 74% report increased expenses due to rising rates

"Since March 2022 when central banks around the world began raising interest rates, the impact has been felt through all industries and walks of life. The economy in North America continues to show strength through core price growth and strong labor markets which leads to the potential for further interest rate increases. This could continue to add volatility to industry, material and component costs and lead others to delay investment decisions. Companies that have positioned themselves to weather this cost increase will likely find opportunities to grow and expand partnerships when interest rates begin to ease."

Brent Johnston
CFO
VMAC

"We're beginning to see some stability in the supply chain with noticeable improvements in certain commodity lead times. However, while on-hand inventories remain robust, material costs are not falling, and labor remains a consistent challenge for our supply chain partners. Fortunately, a dual or alternating sourcing approach can help counter these disruptions and minimize their impacts."

Yolande Freed Dunbavin
Supply Chain Manager
VMAC

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Fewer Businesses Report Negative Impacts Of COVID-19

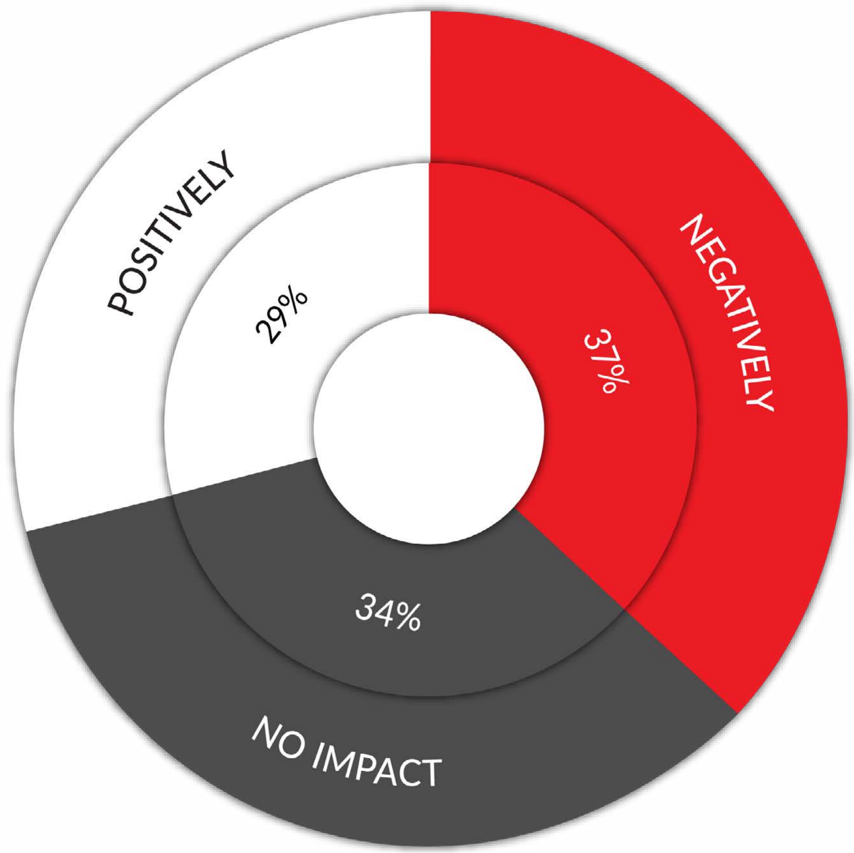
This year, 37% of respondents reported that COVID-19 negatively impacted their businesses, a notable shift from 2022, when nearly half of respondents (47%) reported negative impacts.

While fewer respondents stated their businesses were affected negatively, more respondents reported that COVID-19 positively impacted their businesses.

This swing in results could mean that finally, three years after the beginning of the COVID-19 pandemic, businesses feel relief and see their hard work and resilience paying off.

The number of those who noted no impact this year (34%) was closely aligned with last year when 38% chose this option.

Q | How has COVID-19 impacted your business?



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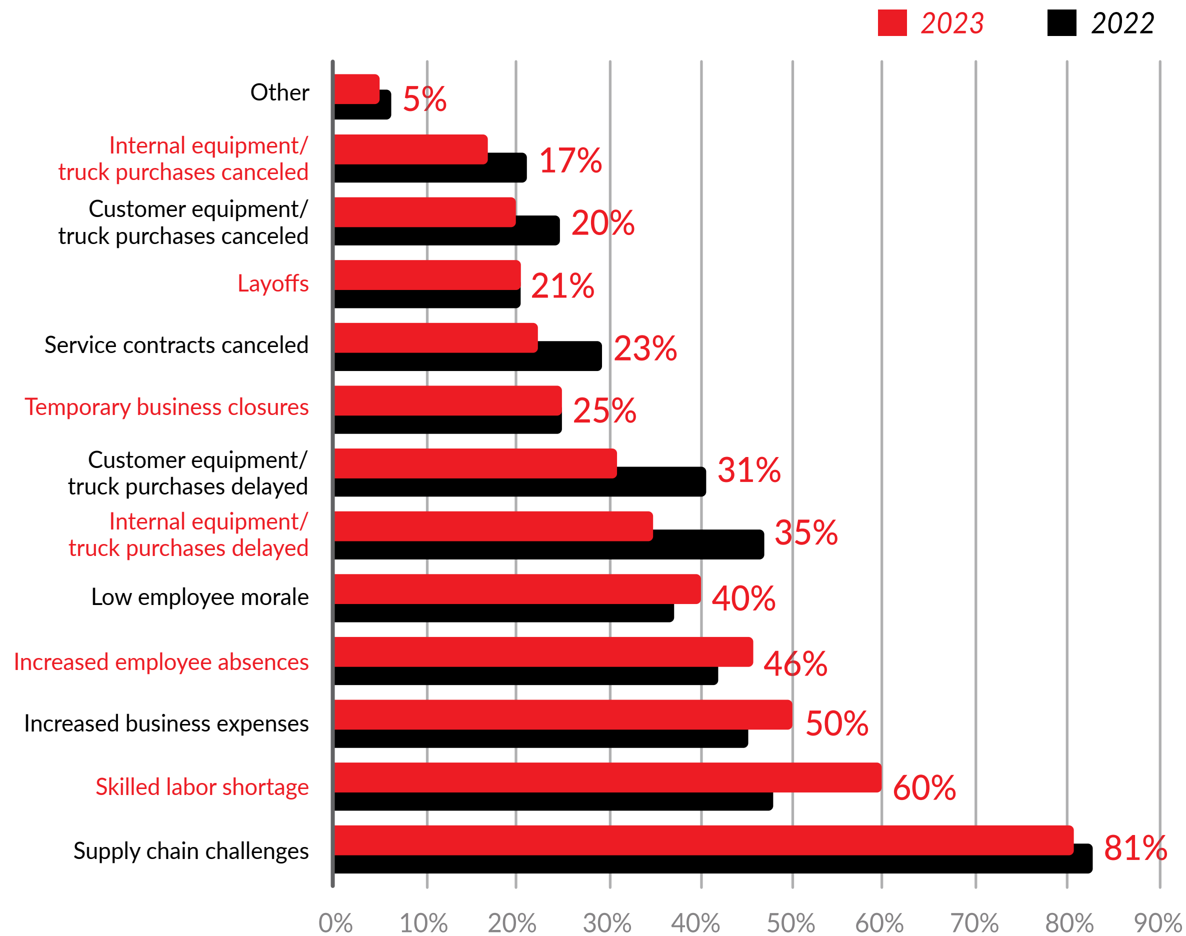
Internal And Customer Order Delays Decrease While Labor Issues Increase

Four out of five respondents (81%) identified supply chain challenges as the top COVID-19 business concern for 2023.

Fewer respondents reported delays with internal and customer equipment and truck purchases. Internal equipment/truck purchase delays were reported by 35% of respondents, down from 47% last year. Meanwhile, only 31% of respondents cited customer equipment/truck purchase delays, compared to 41% last year.

However, challenges associated with staffing and labor are becoming more prominent compared to the 2022 results. The skilled labor shortage is being felt by 60% of respondents in 2023, up from 47% in 2022. Low employee morale increased from 37% in 2022 to 40% in 2023, while increased employee absences climbed from 42% to 46%.

Q | How has COVID-19 impacted your business? Check all that apply.



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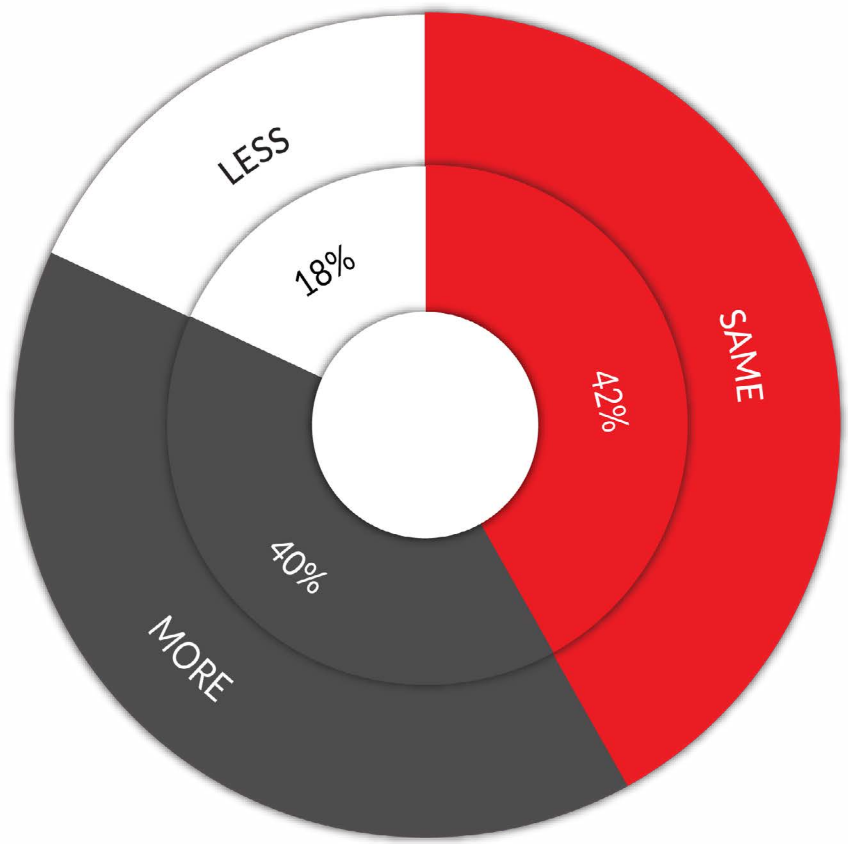
Investment Remains Steady For The Third Year In A Row

Once again, 82% of respondents plan to invest the same or more in new vehicles and equipment in 2023. This figure is identical to the 2022 and 2021 survey results.

However, there has been a notable shift in this group of 82%: more respondents are planning to increase their investment. In 2022, only 31% of respondents planned to invest more than the previous year, while this group now represents 40% of survey respondents.

Q | Compared to 2022, how much do you plan to invest in new vehicles/equipment in 2023?



35% Of Respondents Are Negatively Impacted By Truck Chassis Shortage

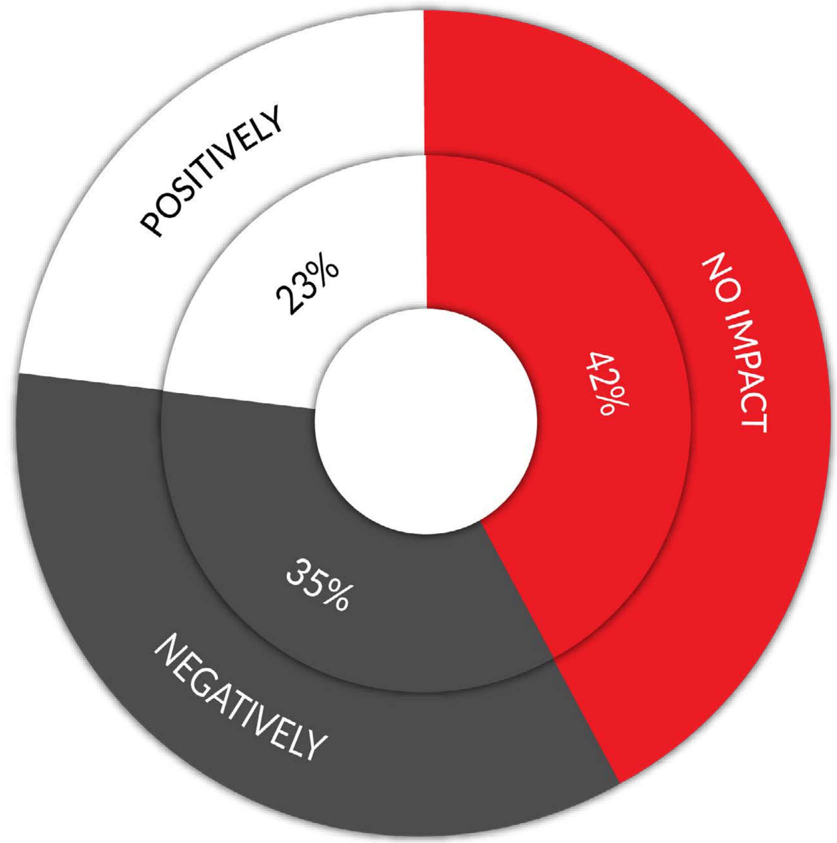
One in three respondents (35%) was negatively impacted by the truck chassis shortage, an improvement over the 2022 result of 46%.

Similar to the previous year's results, those reporting no impact were the largest group with 48% in 2022 and 42% in 2023.

The largest shift occurred when almost a quarter of respondents (23%) noted a positive impact, up from a mere 6% in 2022. This change could be attributed to the increased representation of respondents with 6-25 vehicles in their fleets.

When segmenting between fleet sizes, 69% of those with 6-25 service vehicles in their fleets noted positive impacts. However, large fleets bear the brunt of the chassis shortage, with 87% of fleets with 26 or more vehicles experiencing negative impacts.

Q | How has the shortage of truck chassis impacted your business?



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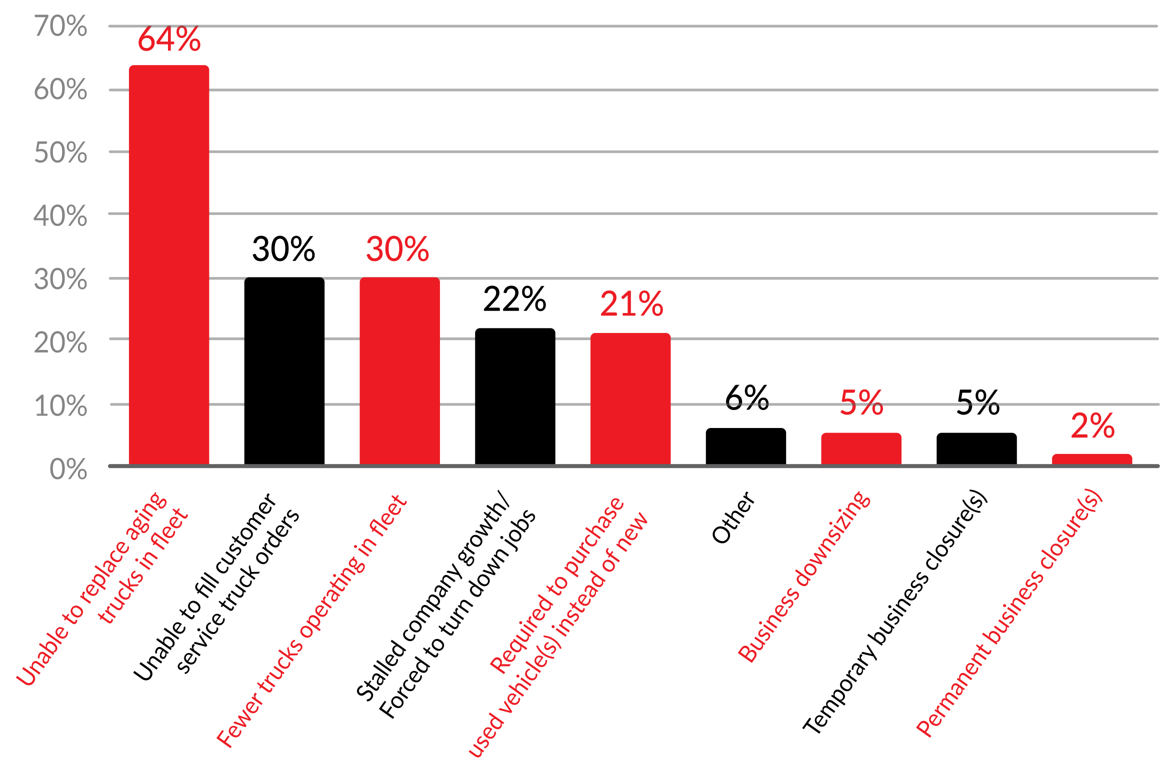
Aging Trucks Are Not Replaced; Fewer Trucks Operating In Fleets

Of those impacted by the chassis shortage, 64% of respondents said they are unable to replace aging trucks in their fleet—a figure identical to the 2022 survey. Meanwhile, 30% of respondents noted they're unable to fill customer service truck orders, compared to 33% in 2022.

This year's results are almost identical to last year's data, except responses to "fewer trucks operating in fleet" increased from 21% to 30%, suggesting that more fleets are operating with fewer vehicles due to their inability to replace aging trucks.

Q | In what ways has the shortage of truck chassis impacted your business? Check all that apply.



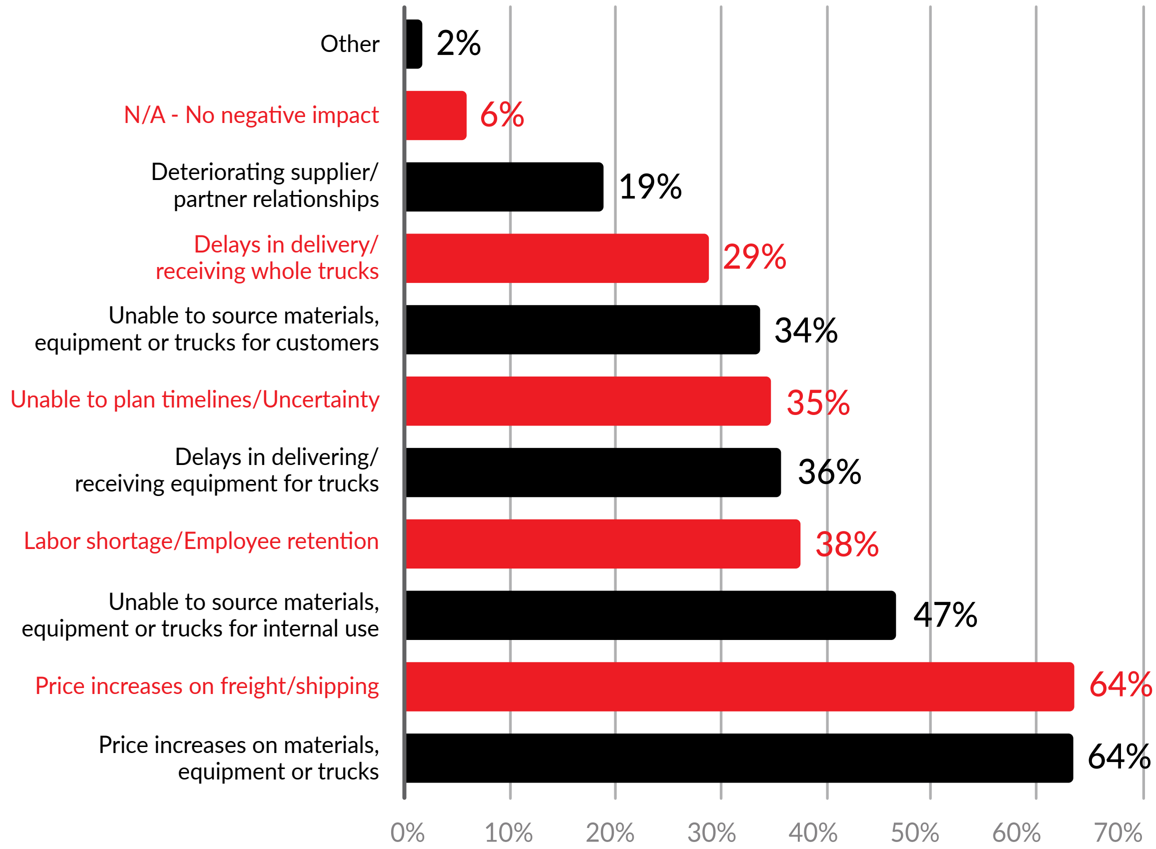
Price Increases Impact Most Businesses

Most survey respondents (64%) indicated that they have been affected by price increases on materials, equipment, or trucks, and an equal 64% also have been impacted by price increases on freight and shipping.

These results are similar to 2022 when price increases were also the top two concerns.

Aside from a slight increase in challenges with sourcing materials, which rose from 43% in 2022 to 47% in 2023, and labor shortages/ employee retention, which increased from 31% in 2022 to 38% in 2023, all supply chain challenges have trended down over the last year. This trend suggests supply chain challenges may be improving with time.

Q | How have supply chain challenges impacted your business? Check all that apply.



VMAC AIR INNOVATED

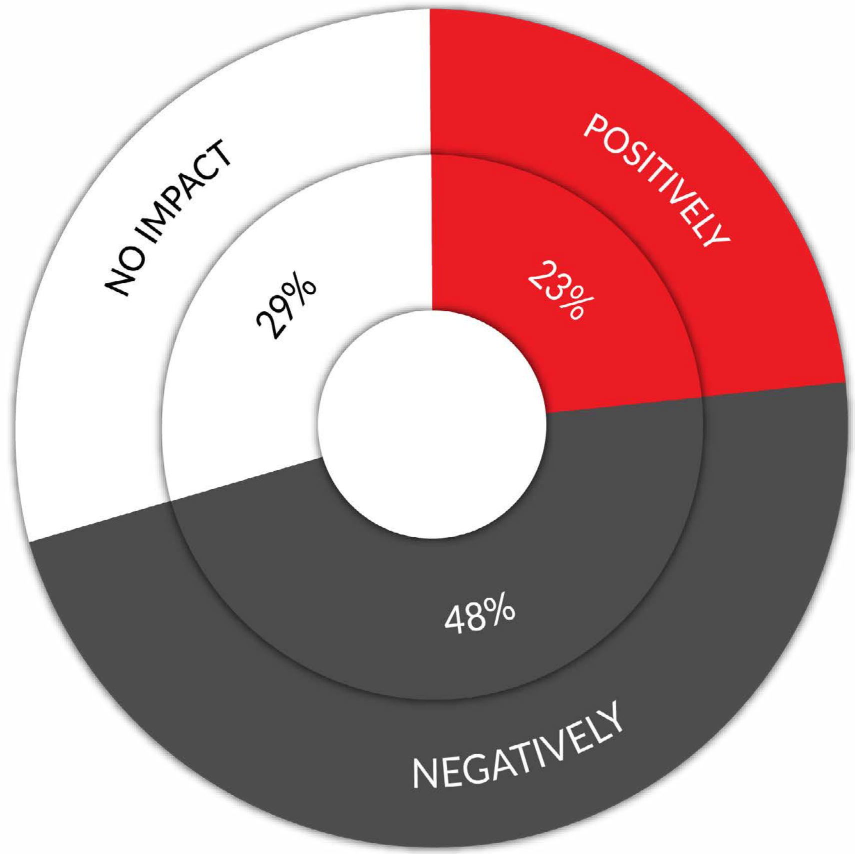
Almost Half Of Businesses Are Negatively Affected By Rising Interest Rates

Almost half of all survey respondents have been negatively impacted by rising interest rates, at 48%. Another 29% have experienced no impact, while 23% report a positive effect.

Segmenting by industry shows that 66% of respondents in utilities infrastructure and 65% of those in agriculture report challenges with rising interest rates, accounting for the two sectors hit hardest.

The forestry industry was the most resistant to increasing rates, with only 38% experiencing negative effects.

Q | How have rising interest rates impacted your business?



VMAC AIR INNOVATED

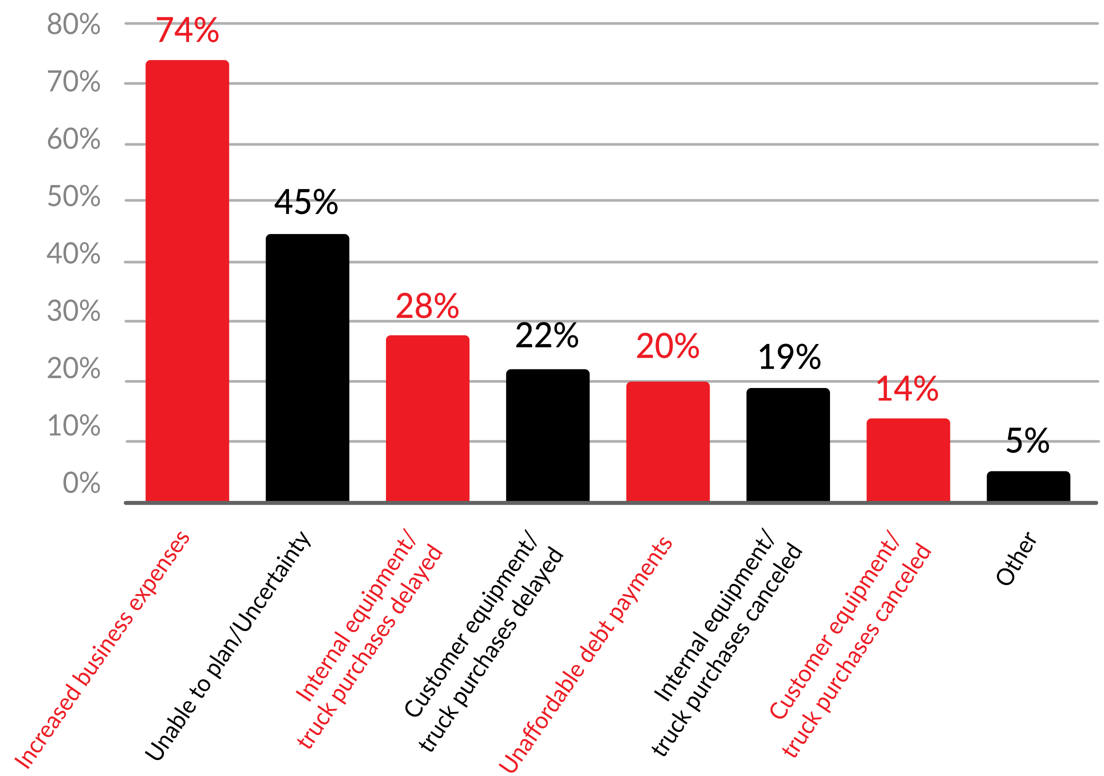
3 Out Of 4 Businesses Report Increased Expenses Due To Rising Interest Rates

Of those respondents negatively impacted by rising interest rates, three out of four (74%) noted increased business expenses.

Almost half of respondents (45%) cited the inability to plan and uncertainty, 28% experienced delays with internal equipment/truck purchases, and 22% selected delays with customer equipment and truck purchases.

On a more positive note, only 19% of respondents have experienced internal equipment/truck purchase cancelations, and even fewer have had customers cancel equipment/truck purchases at 14%.

Q | How have rising interest rates impacted your business? Check all that apply.



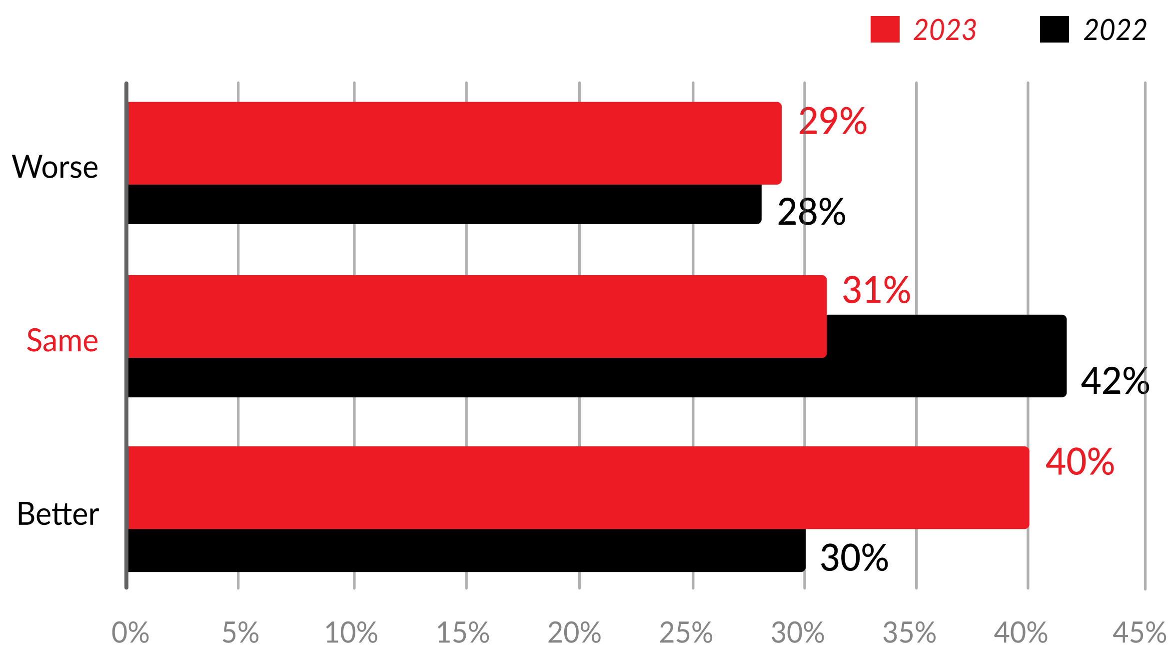
Respondents Are Cautiously Optimistic For The Next 12 Months

Survey respondents are becoming more optimistic about business conditions, as 40% predict better business conditions for the upcoming year, compared to 30% in 2022.

Meanwhile, 31% of respondents think business conditions will remain the same, down from 42% last year. These results show that many of those who selected this option last year have now changed to a more positive outlook.

Predictions for worse conditions held steady, with 29% of respondents having this outlook for 2023, compared to 28% in 2022.

Q | What do you think business conditions will be like in the next 12 months?



About VMAC
The Leader in Compressed Air Innovation®

VMAC designs and manufactures the most innovative mobile air compressors and multi-power systems available. With over 35 years of history, VMAC is the leading air compressor manufacturer in North America. VMAC has earned a reputation for air compressors and multi-power systems with extraordinary build quality, durability, and reliability, and confidently backs its air compressors with a VMAC Lifetime Warranty. Operators and fleet managers in construction, agriculture, mobile mechanic, tire service, utilities, mining, and oil and gas industries rely on VMAC systems to work in the most challenging applications, climates, and environments.

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