

Commercial Vehicle Service Analysis Report

Quarterly Report: Q4-2023

A Comprehensive Review of Service Costs and Activity by VMRS System Code

Report Overview

Across 25 VMRS System Codes in the 2023 Q4 Decisiv Commercial Vehicle Service Analysis Report, a 1.4% drop in combined parts and labor costs reversed the upward trend seen in 2023 Q3 when those costs rose 2.1%.

The decrease was driven largely by parts costs, which dropped 2.2% in 2023 Q4 while labor costs fell 0.2%. While quarter-over-quarter parts and labor costs both declined in 2023 Q4, the parts to labor ratio has held steady at about 1.5 for the past year.

On a year-over-year basis, combined parts and labor costs in 2023 Q4 were 0.2% higher than the same quarter in 2022. However, in the annual comparison a 2.2% drop in parts prices was offset by a 4.0% rise in labor costs.

With the most recent quarterly change, while labor costs decreased, the decline was at a slower rate. The higher labor costs relative to parts pricing and the year-over-year rise, however, do not necessarily indicate an increase in service work. Instead, the rise likely points to an ongoing need to spend more to attract technicians.

That industry-wide challenge for fleets and service providers is expected to continue as Baby Boomers age and fewer workers enter vocational education programs. The U.S. Bureau of Labor Statistics (BLS) reported that diesel service technician employment is projected to grow 4% from 2021 to 2031, creating about 28,500 openings for diesel service technicians each year, on average, over the decade. According to the TechForce Foundation's Transportation Technician Supply & Demand Report, 177,000 new entrants in the diesel technician field are needed between 2022 and 2026.

Overall, quarter-over-quarter and year-over-year parts cost decreases are good news for fleets and service providers and may be an indicator that inflationary pressures on parts pricing are easing as supply chains return to normal levels and more new trucks are placed in service.

Lower parts costs may reflect a decline in freight tonnage, leading to a decrease in mileage for trucking companies. The For-Hire Truck Tonnage Index from the American Trucking Associations for 2023 showed a 1.7% drop compared to the previous year. That figure, the largest decrease since 2020 and the only year since that tonnage contracted, represents a sizable drop for the trucking industry, which hauls more than 11 billion tons of freight annually.

Report Highlights

The Decisiv Commercial Vehicle Service Analysis Report indicates year-over-year increases in combined parts and labor costs between 2022 Q4 and 2023 Q4 in 16 of the 25 VMRS System Codes tracked for the analysis. Ranked by the annual increase in costs, the top five systems were Power Take Off (17.5%), Wheels, Rims, Hubs, and Bearings (14.6%), Cab and Sheet Metal (13%), Axle Driven-Rear (11.3%), and Instruments, Gauges and Meters (10.9%). The five largest annual cost decreases were seen in Aerodynamic Devices (12.9%), Tires (10.9%), Frame (3.8%), Driveshafts (3.3%) and Fuel System (1.9%).

Data on quarter-over-quarter service costs between 2023 Q3 and 2023 Q4 shows that Powerplant at 33.5% still accounted for the highest percentage although it was down from 35.1% in 2023 Q3. Exhaust System costs, the second highest, rose from 14% to 15% between the two quarters.

Rounding out the top five quarterly costs were Cooling System, which was unchanged at 6.0%, and Brakes at 5.9% (down from 6.1% in 2023 Q3). In 2023 Q4, Cab and Sheet Metal at 5.6% of service costs jumped ahead of Fuel System, which decreased to 5.3% in the current analysis.

Between 2023 Q3 and 2023 Q4 combined parts and labor cost increases were recorded for Cab and Sheet Metal (9.3%), Aerodynamic Devices (8.2%), Wheels, Rims, Hubs, and Bearings (6.1%), Axle Driven-Rear (5.6%), and Filter Kits (3.7%). The largest decreases were for Tires (15%), Steering (11.4%), Cooling (10.2%), Driveshafts (9.0%) and Fuel System (8.6%).

The data that Decisiv collects and analyzes for this report on 25 Vehicle Maintenance Reporting Standard (VMRS) system level codes accounts for more than 97% of total parts and labor costs for more than 7 million assets and over 300,000 monthly maintenance and repair events at more than 5,000 service locations.

Quarter-over-quarter between 2023 Q3 and 2023 Q4 and Year-over-Year (YoY) from 2022 Q4 to 2023 Q4, the following changes were realized in costs for the top ten VMRS System Codes:

- **Powerplant** Between the past two quarters combined parts and labor costs decreased 3.4%, reversing increases of 1.4% and 2.0% in the prior two reports. The bulk of the decrease came from a 4.3% drop in parts costs. On a YoY basis, combined costs were down 0.6% on 1.8% lower parts costs and 1.7% higher labor costs.
- **Exhaust** Following a 0.5% increase in the previous quarter, combined parts and labor costs rose 2.1% with labor accounting for most of the higher costs. YoY exhaust costs went up 6.2% with a significant 11.6% rise in labor costs and a smaller increase of 3.3% in parts cost contributing to the difference.
- **Cooling** Combined costs dropped by 10.2% between the past two quarters with parts costs decreasing 12.6% and labor costs down 7.0%. That follows combined cost rises in the previous two quarters. YoY, with parts cost dropping 2.7% and labor costs rising 1.2%, there was a 1.1% decrease in annual combined costs.
- **Brakes** After rising in the previous three quarters, parts costs dropped 4.0% and labor costs went up only 0.5% (compared to 4.4% in 2023 Q3) for a combined 1.8% quarter-over-quarter decrease. YoY, combined costs were up 1.5%, driven by 7.1% higher labor costs. The increase follows a 0.9% rise in the previous annual comparison.
- Fuel System Following 6.4% higher combined parts and labor costs in the previous quarter, costs dropped 8.6% in 2023 Q4. YoY combined costs were down 1.9%, driven mainly by 5.5% lower parts costs. On an annual basis, labor costs were up 3.7%.

- Cab and Sheet Metal Combined parts and labor costs between quarters were up 9.3%. The largest part of the current quarterly increase was an 11.8% rise in labor costs while parts costs rose 7.6%. YoY parts and labor costs continued to climb, rising 13.0% following 12.6% and 13.5% increases in the two previous quarters.
- Clutch After dropping 0.3% in 2023 Q3, combined parts and labor costs rose 2.3% in 2023 Q4. The increase was evenly distributed between parts and labor costs. Combined YoY parts and labor costs continued to increase, rising 5.8% after jumping 8.9% in the previous report. On an annual basis, labor costs are growing at more than twice the rate as parts costs.
- **Frame** Parts and labor costs combined were up 3.5% in 2023 Q4, a slightly larger increase than the 3.3% rise in 2023 Q3. Frame parts costs increases of 4.1% were greater than the 2.3% rise in labor costs. YoY combined costs continued to drop, falling 3.8% after decreasing 6.5% in the previous report.
- Air Conditioning, Heating & Ventilation In 2023 Q4 there were decreases in parts and labor costs of 2.2% and 10.0%, respectively, for a 6.2% drop in combined costs. YoY, continuing a trend seen in the previous report, parts cost were 4.1% higher and labor costs rose 7.6% for a combined increase of 5.8%.
- **Transmission-Main, Automatic** Between 2023 Q3 and 2023 Q4, combined costs rose only 1.0%. However, parts costs were up 2.5% while labor costs dropped 1.4%. YoY combined parts and labor costs were down 0.9% after rising 4.6% in the previous report.

The Decisiv Commercial Vehicle Service Analysis Report includes parts and labor costs in four U.S. regions and Canada, showcasing how costs vary based on differences in the volume of service activity and the cost of living. The rankings, which were unchanged in 2023 Q4 from the two previous quarters indicate that the highest combined costs by region are seen in the West followed by the South, Northeast, Midwest, and Canada.

Service Activity

In Q4 2023, 1,096,534 service transactions in the Decisiv SRM platform represented a 2.6% increase over the previous quarter. The rise in activity followed a 1.3% jump in Q3 2023. Year-over-year from Q4 2022 to Q4 2023, service activity was up 13.1%.

As supply chain challenges and OEM allocations keep new truck deliveries at a slower pace, the steady increase in quarterly service transactions reflects the continued use of older trucks. The ongoing impact of operating older equipment, which requires additional repairs, is also driving the annual rise in service transactions.

Transaction activity data in Q4 2023 showed no change in the four VMRS System Codes requiring the most service, including Powerplant (20%), Exhaust System (11%), Cab and Sheet Metal (11%), and Brakes (7%). In the latest quarterly analysis, Cooling System at 6% of service activity returned to the top five, replacing Air Conditioning, Heating, and Ventilating System service.

Additional activity for Cooling Systems is likely the result of the onset of winter weather and the VMRS System Code also accounted for the fifth highest increase (15.7%) in the latest quarter. That data tracks with higher use of Filter Kits, which rose 28.1% in Q4 2023. Other categories with quarter-over-quarter increases included Transmission—Main, Manual (20.9%), Axle Driven—Rear (17.4%), Fuel System (15.9%), and Cab and Sheet Metal (14.5%).

Decreases in quarterly service activity between Q3 2023 and Q4 2023 were seen in Air Conditioning, Heating, and Ventilating, which dropped 40.2%, Charging System (-12.0%), Driveshafts (-10.3%), Clutch (-9.7%), and Wheels, Rim, Hubs, and Bearings (-8.1%).

From Q4 2022 to Q4 2023, service activity in the Decisiv SRM platform continued to rise on a year-over-year basis across 20 of the 25 VMRS System Codes. Exceptions where service transactions dropped included Steering (-10.9%), Clutch (-3.4%), Cranking System (-3.4%). Powerplant (-2.2%), and Instruments, Gauges (All), and Meters (-1.2%).

Service Activity by Age Bracket

An in-depth analysis of service by vehicle age bracket gives a clear indication of both the impact of operating older equipment and the cyclical maintenance and repair needs of vehicle systems. For the top systems based on service transactions in the Decisiv SRM platform in Q4 2023 compared to Q3 2023:

- **Powerplant**—After accounting for the highest percentage of service activity across four age brackets in the previous quarter, service needs for newer engines in the 0-3 Years category dropped to second place. The change can be seen as a reflection of higher quality manufacturing and in-service practices for new engines.
- Cab and Sheet Metal—Continuing to rise in age bracket service activity rankings, transactions jumped to the top spot in Q4 2023 for equipment that is 0-3 Years old. The increase in service for newer equipment may reflect the growing number of new trucks being placed in service and the need to address initial manufacturing issues with those vehicles.
- **Exhaust**—Unchanged in the age bracket rankings across the past two quarters, service activity remained higher in the 3-6 Years, 6-9 Years, and 9+ Years categories than on the newest vehicles. That trend points to both initial product quality and the impact of mileage on exhaust system components.
- **Brakes**—Brakes remain among the top contributors to service activity across all age brackets. That data suggests that regular attention is paid to this routine maintenance item and key component of fleet safety performance.
- **Cooling**—In Q4 2023, Cooling System service activity returned to the list of VMRS System Codes requiring a higher amount of service in the 0-3 Years and 6-9 Years age brackets but dropped out of the highest rankings in the 3-6 Years category and is not on the list of top systems in the oldest vehicles. While seasonal service needs may dictate some of that activity, the cyclical nature of maintenance and repairs may be driven by system longevity and service lifecycles.

Top VMRS Systems Requiring Service by Age Bracket (excluding All Other)

0-3 Years	3-6 Years	6-9 Years	9+ Years
Cab and Sheet Metal	Powerplant	Powerplant	Powerplant
Powerplant	Exhaust	Exhaust	Exhaust
Cooling/Exhaust/Fuel	Cab and Sheet Metal	Cab and Sheet Metal/Brakes	Brakes
Brakes	Brakes	Cooling	Cab and Sheet Metal

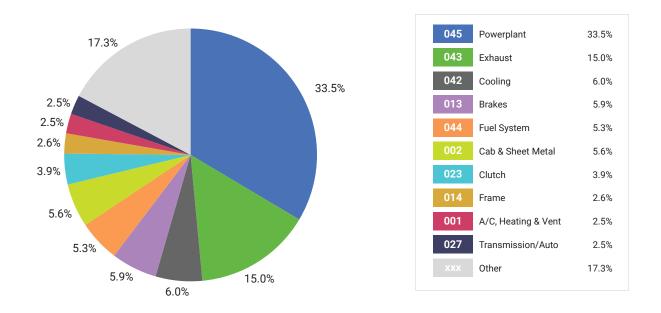
Overview

The Decisiv SRM Ecosystem is the industry's preferred system of engagement for tracking and managing service and repair events for more than 7 million assets on the SRM platform. These summaries are compiled from more than 300,000 monthly service maintenance and repair events conducted at more than 5,000 service locations.

Average Costs and Service Activity by VMRS System Code for Q4 2023

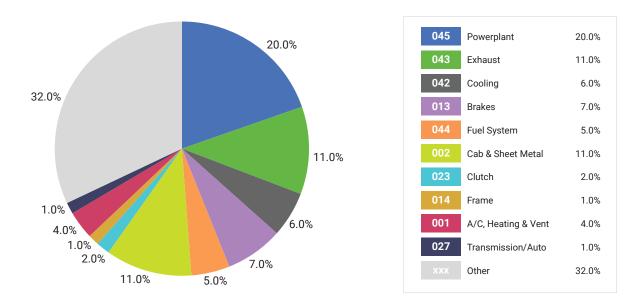
Code	System	Parts	Labor	Parts and Labor	Service Events
045	Powerplant	\$1,744	\$1,020	\$2,764	215,603
043	Exhaust	\$1,166	\$663	\$1,830	122,078
042	Cooling	\$818	\$619	\$1,437	63,522
013	Brakes	\$597	\$588	\$1,185	80,413
044	Fuel System	\$829	\$594	\$1,422	53,610
002	Cab and Sheet Metal	\$526	\$375	\$901	120,571
023	Clutch	\$1,875	\$1,373	\$3,248	18,921
014	Frame	\$1,712	\$918	\$2,630	15,361
001	A/C, Heating & Vent	\$491	\$474	\$964	39,261
027	Transmission/Auto	\$1,794	\$1,074	\$2,868	15,919

See supplement for details on 15 additional VMRS System Codes. These top 25 VMRS System Codes encompass 96% of service transactions managed on the Decisiv SRM Platform.



Composite View: Service Cost Distribution for Q4 2023

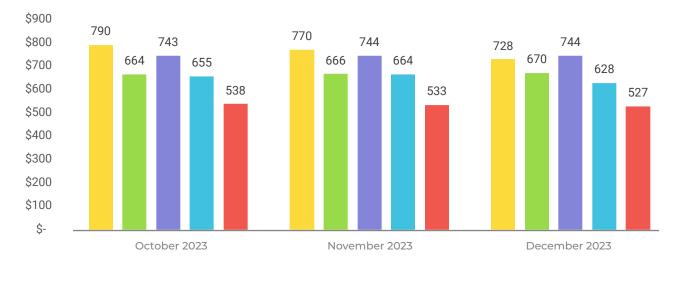
Composite View: Service Activity Distribution for Q4 2023





Regional Parts Costs

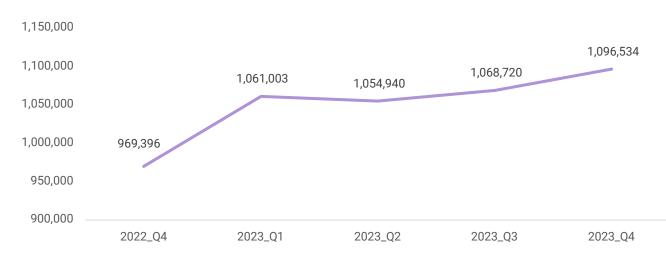
Regional Labor Costs





Quarterly Trends for Parts and Labor Costs

Quarterly Trends for Service Activity



Service Events

Code 045: Powerplant

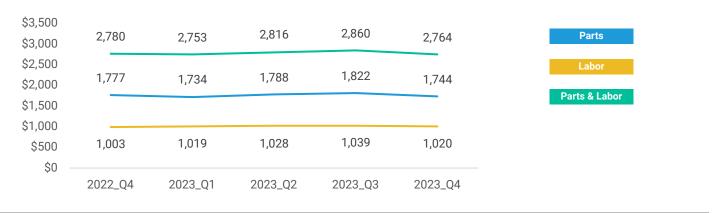
Parts and Labor Costs

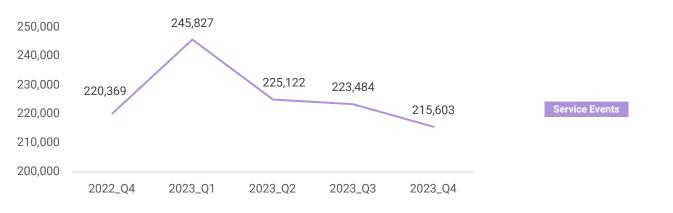


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





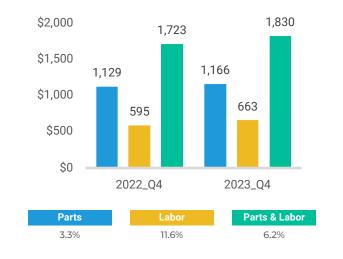
Code 043: Exhaust

Quarter over Quarter (QoQ)

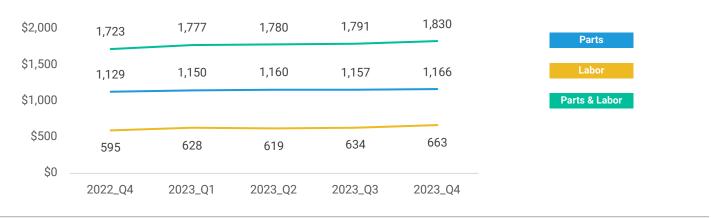
Parts and Labor Costs

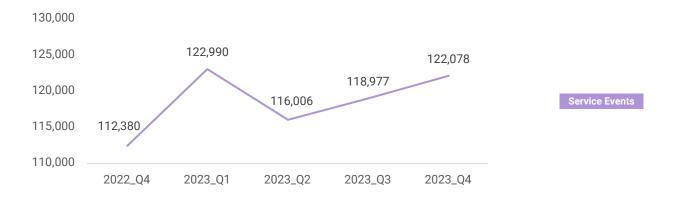


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





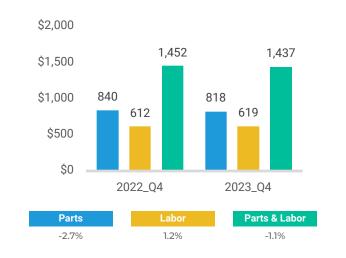
Code 042: Cooling

Quarter over Quarter (QoQ)

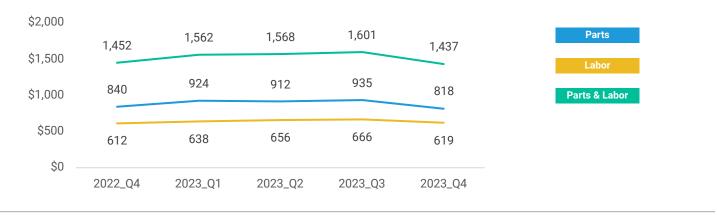
Parts and Labor Costs

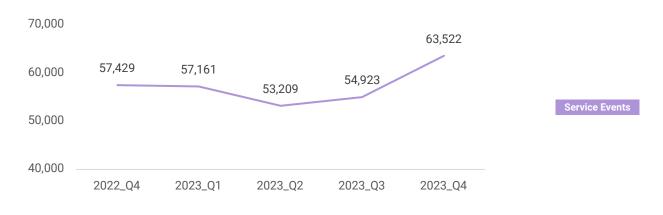


Year over Year (YoY)



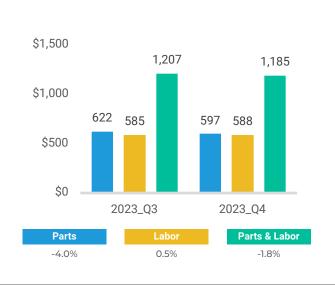
Quarterly Trends for Parts and Labor Costs





Parts and Labor Costs

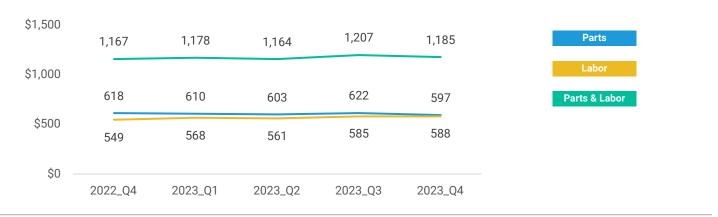
Quarter over Quarter (QoQ)

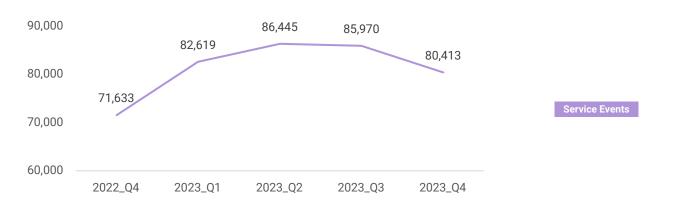


Year over Year (YoY)



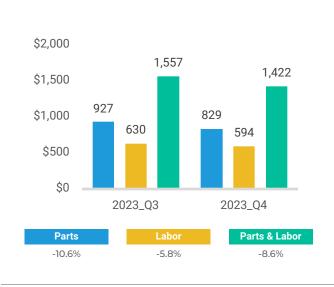
Quarterly Trends for Parts and Labor Costs



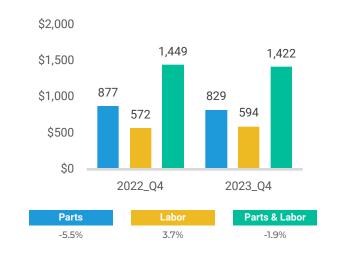


Quarter over Quarter (QoQ)

Parts and Labor Costs

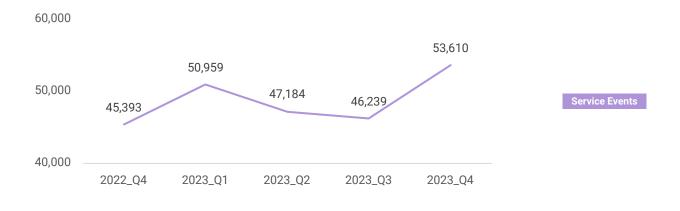


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





Code 002: Cab and Sheet Metal

Parts and Labor Costs

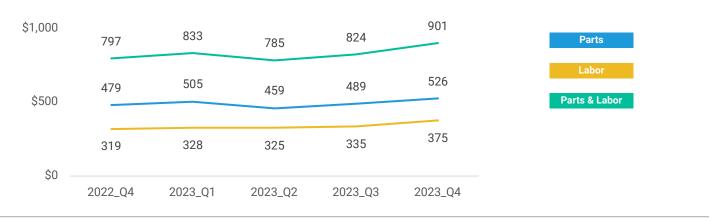
Quarter over Quarter (QoQ)

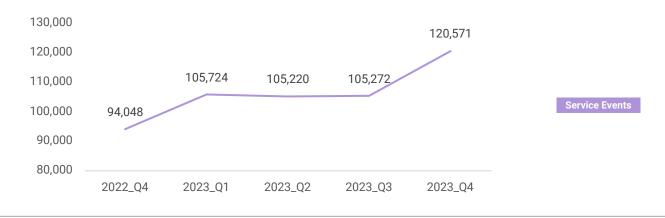


Year over Year (YoY)



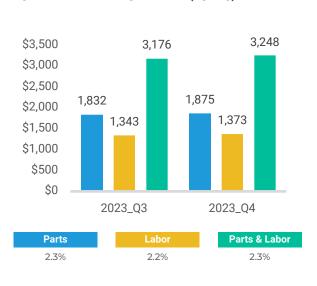
Quarterly Trends for Parts and Labor Costs





Code 023: Clutch

Parts and Labor Costs

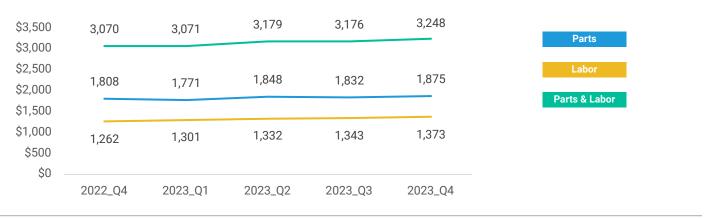


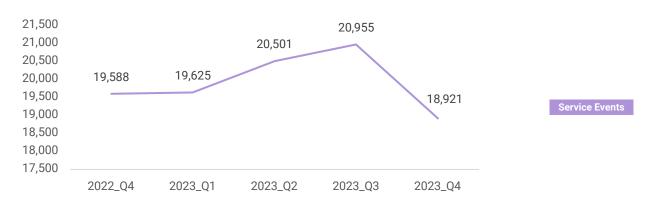
Quarter over Quarter (QoQ)

Year over Year (YoY)



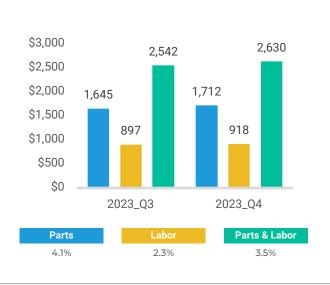
Quarterly Trends for Parts and Labor Costs





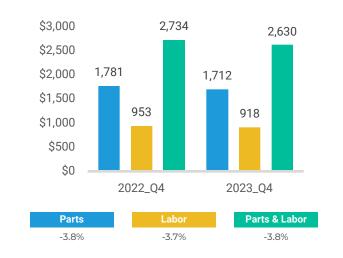
Code 014: Frame

Parts and Labor Costs

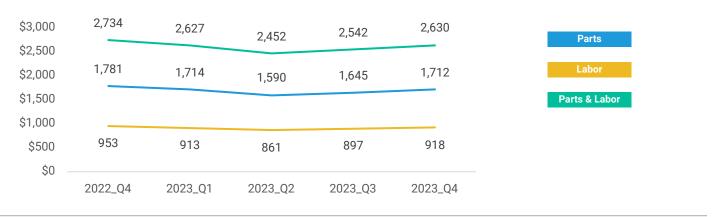


Quarter over Quarter (QoQ)

Year over Year (YoY)



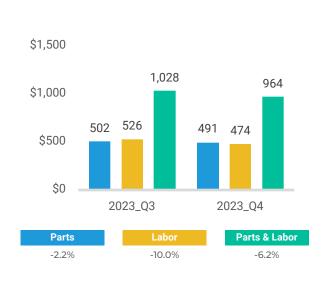
Quarterly Trends for Parts and Labor Costs





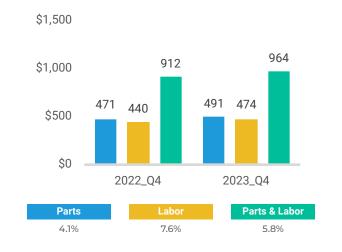
Code 001: Air Conditioning, Heating & Ventilating

Parts and Labor Costs

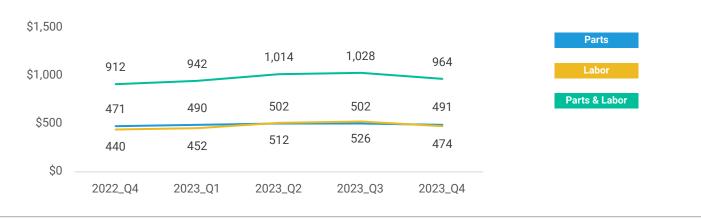


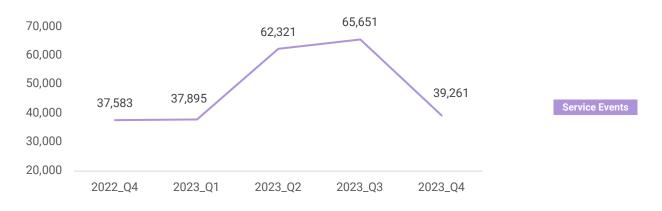
Quarter over Quarter (QoQ)





Quarterly Trends for Parts and Labor Costs





Code 027: Transmission – Main, Automatic

Parts and Labor Costs



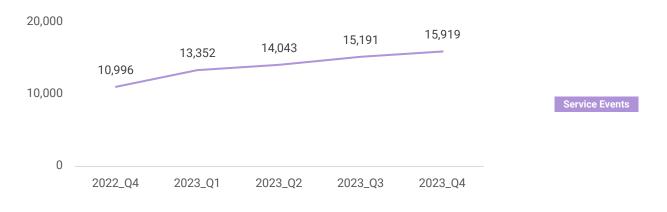
Quarter over Quarter (QoQ)





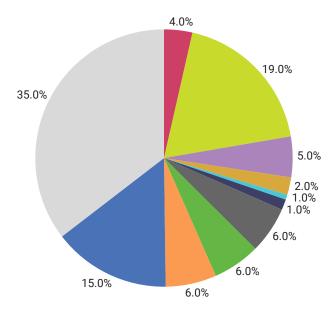
Quarterly Trends for Parts and Labor Costs





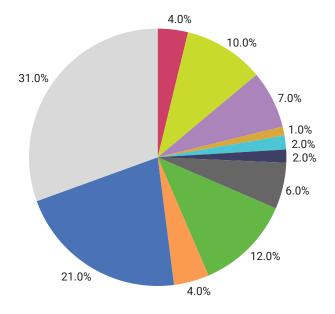
Service Activity by Age

Age: 0-3 years



001	A/C, Heating & Vent	4.0%
002	Cab & Sheet Metal	19.0%
013	Brakes	5.0%
014	Frame	2.0%
023	Clutch	1.0%
027	Transmission/Auto	1.0%
042	Cooling	6.0%
043	Exhaust	6.0%
044	Fuel System	6.0%
045	Powerplant	15.0%
XXX	Other	35.0%

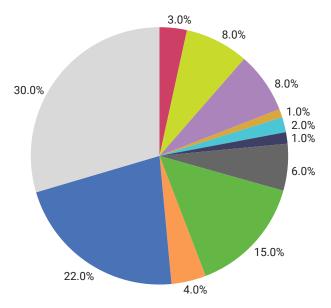
Age: 3-6 years



001	A/C, Heating & Vent	4.0%
002	Cab & Sheet Metal	10.0%
013	Brakes	7.0%
014	Frame	1.0%
023	Clutch	2.0%
027	Transmission/Auto	2.0%
042	Cooling	6.0%
043	Exhaust	12.0%
044	Fuel System	4.0%
045	Powerplant	21.0%
ХХХ	Other	31.0%

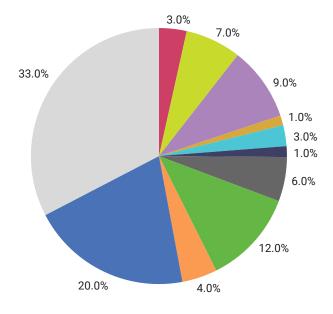
Service Activity by Age

Age: 6-9 years



001	A/C, Heating & Vent	3.0%
002	Cab & Sheet Metal	8.0%
013	Brakes	8.0%
014	Frame	1.0%
023	Clutch	2.0%
027	Transmission/Auto	1.0%
042	Cooling	6.0%
043	Exhaust	15.0%
044	Fuel System	4.0%
045	Powerplant	22.0%
XXX	Other	30.0%

Age: 9+ years



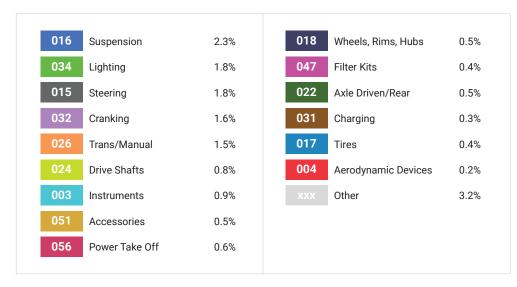
001	A/C, Heating & Vent	3.0%
002	Cab & Sheet Metal	7.0%
013	Brakes	9.0%
014	Frame	1.0%
023	Clutch	3.0%
027	Transmission/Auto	1.0%
042	Cooling	6.0%
043	Exhaust	12.0%
044	Fuel System	4.0%
045	Powerplant	20.0%
XXX	Other	33.0%

Overview

This supplement adds parts and labor costs for an additional 15 system-level VMRS systems to the 10 presented in the main section of this report – for a total of 25 VMRS codes. Overall, this report covers 96% of total parts and labor costs and 97% of total service activity from the 300,000+ service and maintenance events managed each month on the Decisiv SRM platform in North America.

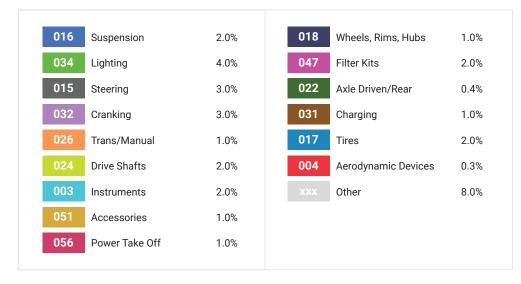
Code Parts and Labor Service Events System Parts Labor 016 Suspension \$602 \$621 \$1,223 25,310 034 Lighting \$293 \$332 \$625 47,981 015 Steering \$475 \$428 \$903 37,147 032 Cranking \$484 \$349 \$833 29,644 026 Trans/Manual \$2,121 \$1,294 \$3,414 6,678 024 Drive Shafts \$411 \$393 \$804 16,878 003 Instruments \$838 \$629 22,567 \$1,467 051 Accessories \$670 \$518 \$1,189 14,713 056 Power Take Off \$788 \$758 \$1,547 8,122 018 Wheels, Rims, Hubs \$295 \$494 \$789 8,566 047 Filter Kits \$365 \$256 \$621 18,215 022 Axle Driven/Rear \$919 \$741 \$1,660 4,141 031 \$385 \$840 6,245 Charging \$455 \$744 \$303 \$1,046 017 Tires 17,492 Aerodynamic Devices 004 \$902 \$619 \$1,521 2,925

Average Costs and Service Activity by VMRS System Code for Q4 2023



Composite View: Service Cost Distribution for Q4 2023

Composite View: Service Activity Distribution for Q4 2023

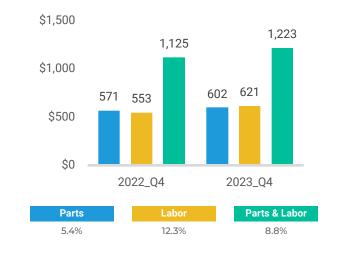


Code 016: Suspension

Parts and Labor Costs

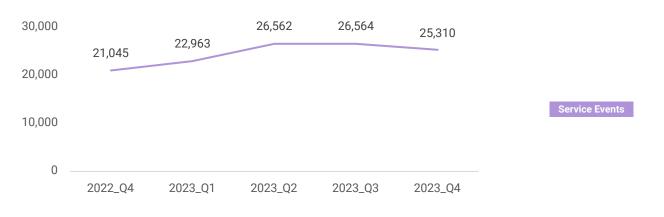


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





625

332

2023_Q4

Parts & Labor

9.8%

293

Year over Year (YoY)

267

569

9.9%

302

2022_Q4

\$1,000

\$500

\$0

Parts

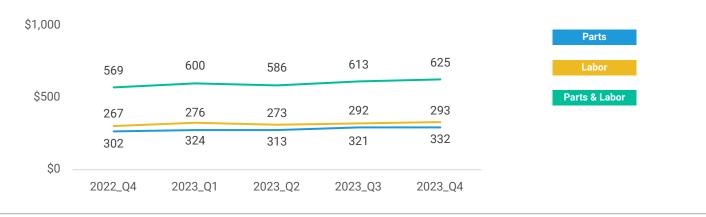
9.7%

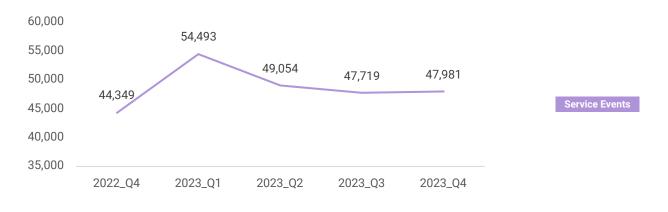
Code 034: Lighting

Parts and Labor Costs



Quarterly Trends for Parts and Labor Costs

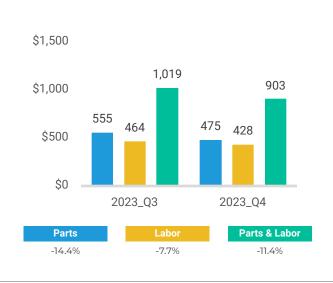




Code 015: Steering

Quarter over Quarter (QoQ)

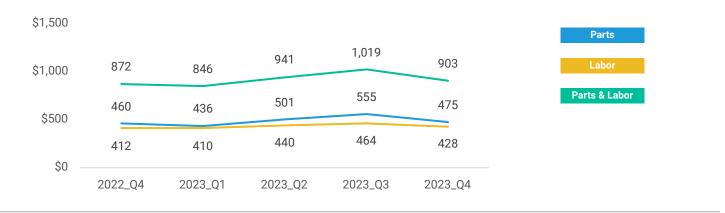
Parts and Labor Costs



Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





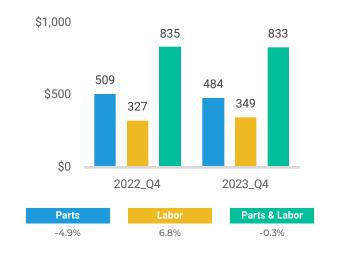
Code 032: Cranking

Quarter over Quarter (QoQ)

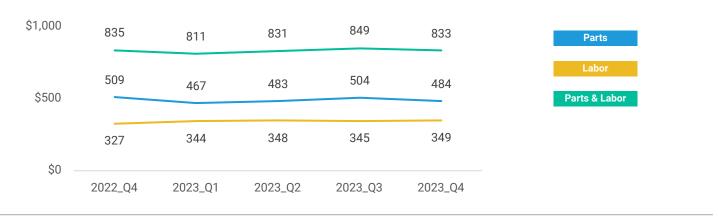
Parts and Labor Costs

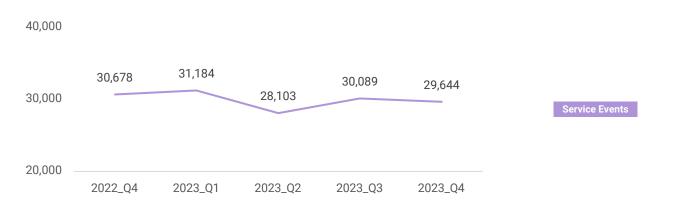


Year over Year (YoY)



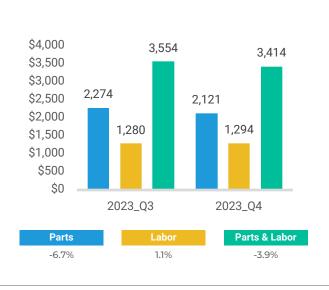
Quarterly Trends for Parts and Labor Costs





Code 026: Transmission-Main, Manual

Parts and Labor Costs



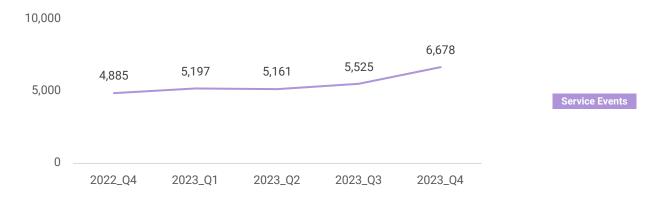
Quarter over Quarter (QoQ)





Quarterly Trends for Parts and Labor Costs



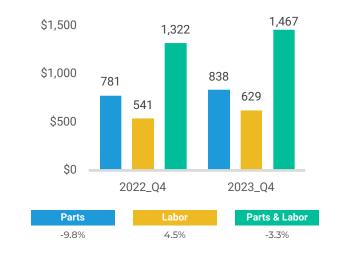


Code 024: Drive Shaft(s)

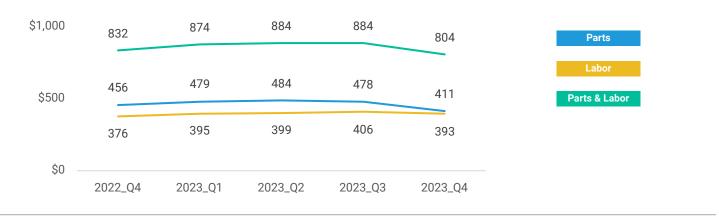
Parts and Labor Costs

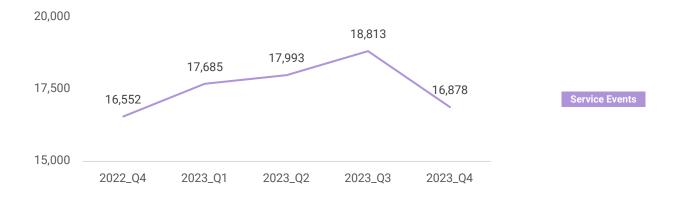


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





Code 003: Instruments, Gauges (All) & Meters

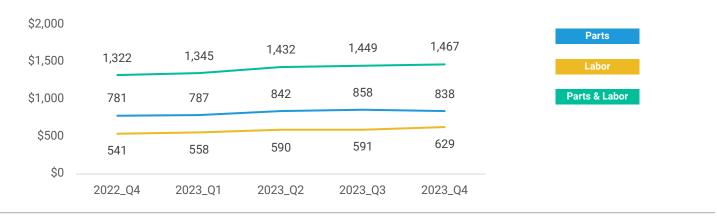
Parts and Labor Costs

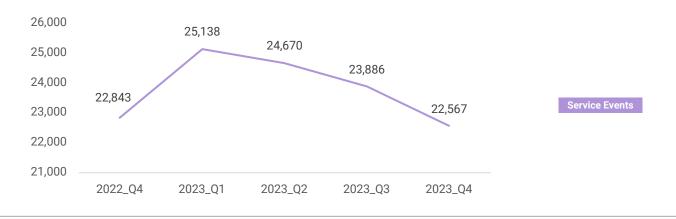


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





Code 051: General Accessories

Parts and Labor Costs

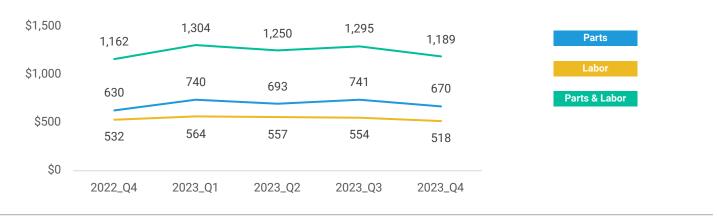
Quarter over Quarter (QoQ)

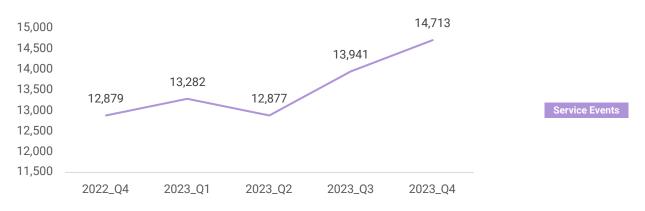


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





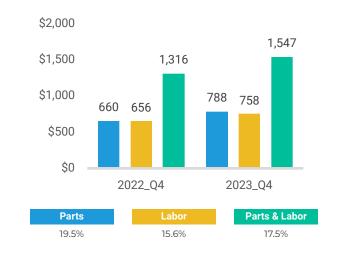
Code 056: Power Take Off

Quarter over Quarter (QoQ)

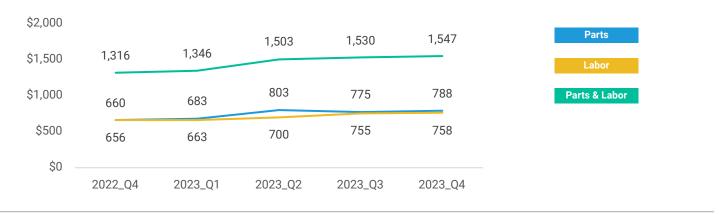
Parts and Labor Costs

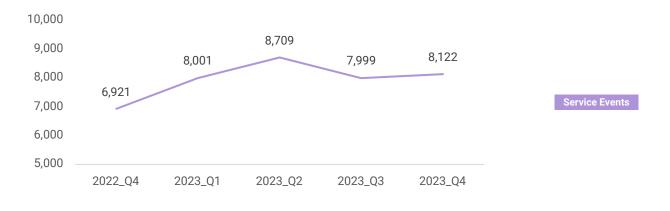


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs

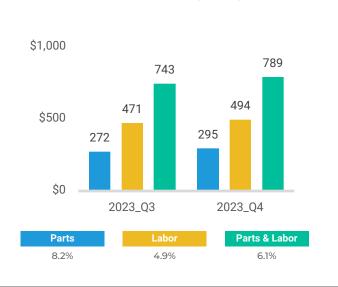




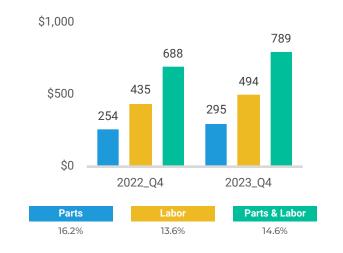
Code 018: Wheels, Rims, Hubs & Bearings

Parts and Labor Costs

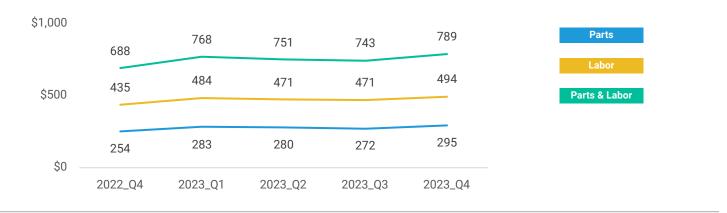
Quarter over Quarter (QoQ)

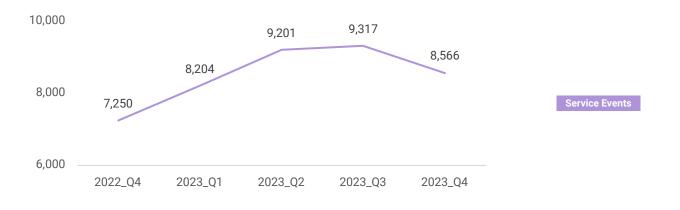


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





Code 047: Filter Kits (Multi-Piece)

621

Parts & Labor

3.0%

Year over Year (YoY)

381

221

2022_Q4

603

15.7%

365

256

2023_Q4

\$1,000

\$500

\$0

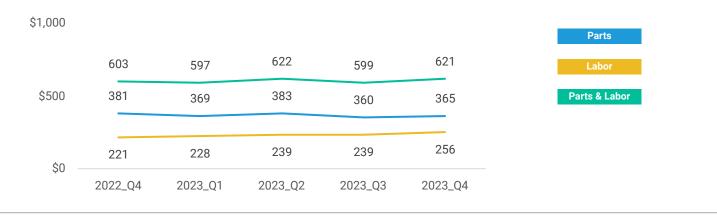
Parts

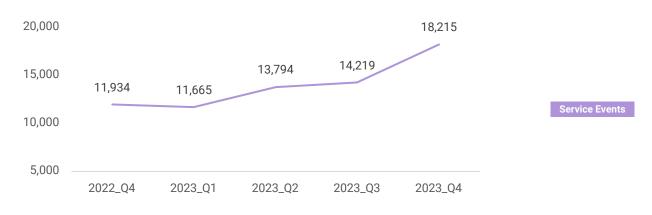
-4.3%

Parts and Labor Costs



Quarterly Trends for Parts and Labor Costs



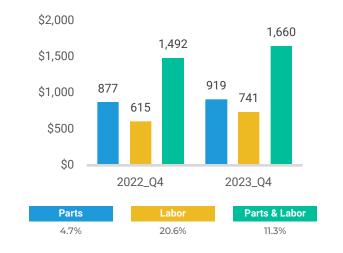


Code 022: Axle Driven-Rear

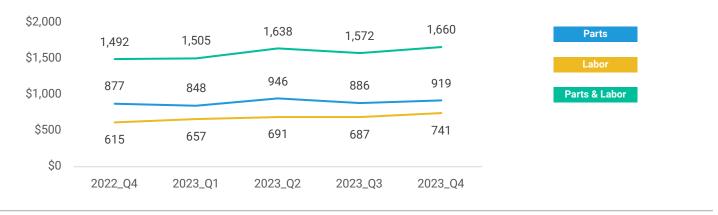
Parts and Labor Costs

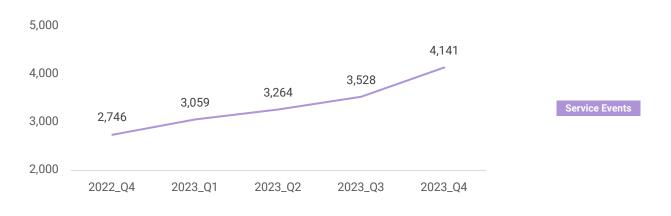


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs

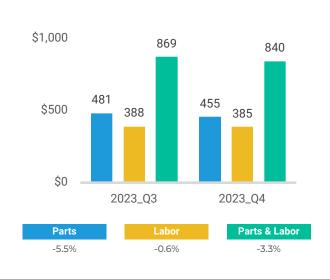




Code 031: Charging

Quarter over Quarter (QoQ)

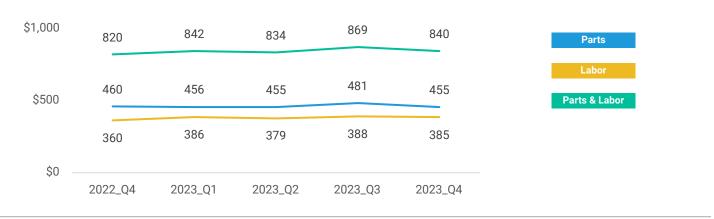
Parts and Labor Costs

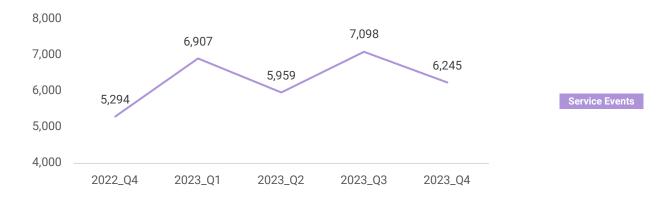


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs

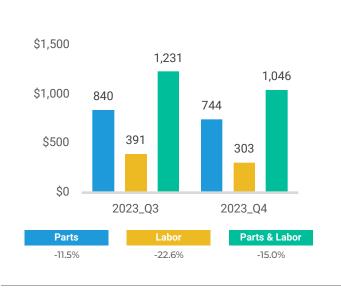




Code 017: Tires

Parts and Labor Costs

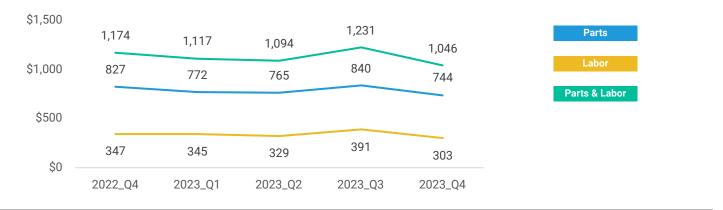
Quarter over Quarter (QoQ)

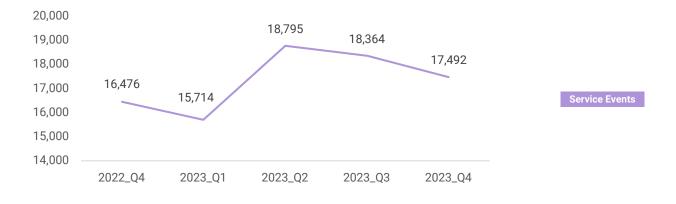


Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs





Code 004: Aerodynamic Devices

Parts and Labor Costs

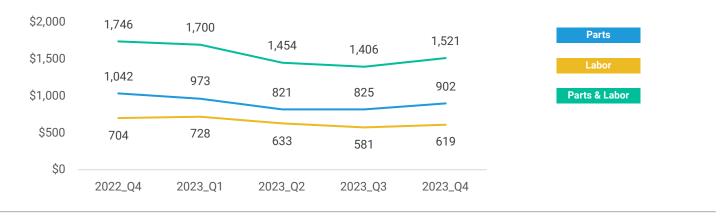


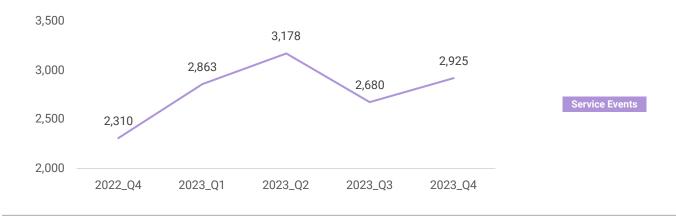
Quarter over Quarter (QoQ)

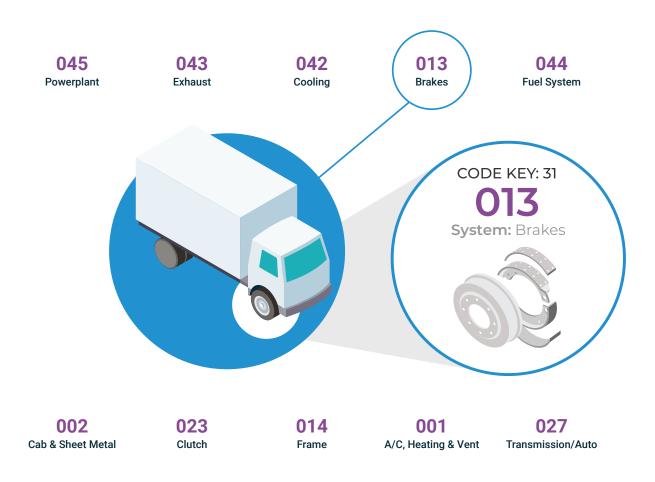
Year over Year (YoY)



Quarterly Trends for Parts and Labor Costs







Research Methodology

We currently capture parts and labor information on more than 70,000 weekly repair events and therefore have unique insight and the ability to quantify and dynamically report on changes in parts and labor costs. We are the authoritative source for service repair data, able to generate detailed analysis of service repairs at the operation level including the associated VMRS Group Level and System.

For more information on Decisiv industry research, visit decisivmarketplace.com