

DIESEL EQUIPMENT & TRUCK

**Demand Analysis
2020**



MINNESOTA STATE
Transportation Center of Excellence



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Introduction and Sector Overview

This report highlights key opportunities in the Diesel, Equipment, and Truck career pathway for Minnesota's Transportation Industry. Professionals in Diesel, Equipment, and Truck careers work as Truck Mechanics, Diesel Specialists, Crane Operators, and Farm Equipment Mechanics serving a variety of industries. In all, about 13,249 people work in Diesel, Equipment, and Truck roles in Minnesota as of the second quarter of 2020.

Over the next 5 years, total employment in Minnesota is projected to expand by about 49,053 jobs under official baseline forecasts to model growth beyond the initial impacts of COVID-19, or up to 89,792 in an optimistic outlook that estimates moderate economic recovery by late 2023. During this time frame, opportunities in Diesel, Equipment, and Truck jobs are anticipated to grow by up to 307 total jobs. Total demand for Diesel, Equipment, and Truck talent is anticipated to be around 6,861 professionals needed to fill positions due to job exits and transfers, such as retirements and job changes.

Transportation Pathways in Minnesota - COVID, 2020Q2¹

Occupation	Current						5-Year History		5-Year Forecast				
	Empl	Avg Ann Wages ²	LQ	Unempl	Unempl Rate	Online Job Ads ³	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Automotive Technology Pathway	21,959	\$60,100	1.00	722	3.2%	870	1,057	1.0%	9,454	2,679	6,847	-71	-0.1%
Collision Repair Pathway	6,880	\$46,200	1.11	371	5.2%	280	-165	-0.5%	3,732	1,061	2,519	153	0.4%
Aviation Pathway	6,377	\$94,000	0.92	157	2.5%	55	211	0.7%	3,253	868	2,158	228	0.7%
Marine and Power Sports Pathway	5,354	\$40,900	1.10	367	6.6%	47	319	1.2%	3,274	997	2,215	62	0.2%
Diesel Equipment and Truck Pathway	13,249	\$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
Truck Driving Pathway	99,222	\$43,000	1.00	4,799	4.8%	6,250	5,015	1.0%	61,110	23,917	34,411	2,783	0.6%
Total - All Occupations	3,012,855	\$56,600	1.00	140,926	4.6%	155,869	48,618	0.3%	1,819,042	661,016	1,068,234	89,792	0.6%

Source: [JobsEQ®](#)

Data as of 2020Q2 unless noted otherwise

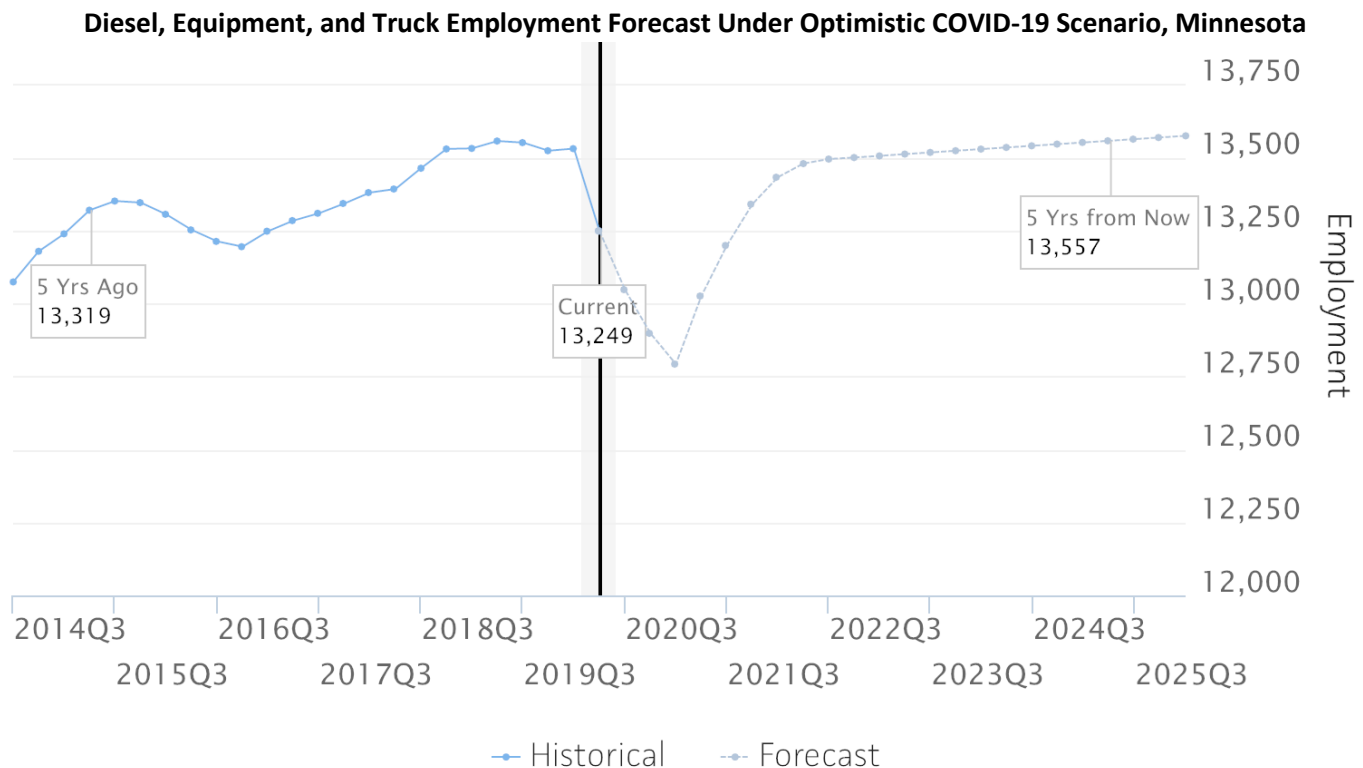
Note: Figures may not sum due to rounding.

1. Data based on a four-quarter moving average unless noted otherwise.

2. Wage data are as of 2019 and represent the average for all Covered Employment

3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).

As Minnesota looks to the future recovery from the pandemic's heavy blow to our economy and public health, forecasts made today may look very different from realities seen in years to come. Supply chain impacts, the drive to automation and technological innovation mean that the transportation industry, in particular, may look very different in five years from what it looks like today. The compounding impacts of a tight labor market prior to the start of the pandemic and significant, rapid layoffs of non-essential workers across service industry positions creates a complex landscape of employer demand and an available workforce. Forecasting future needs under current conditions with an eye to anticipated talent pipelines into Diesel, Equipment, and Truck careers suggest that there may be shortages of talent in several occupations of this career pathway unless more talent decides to enter the field.

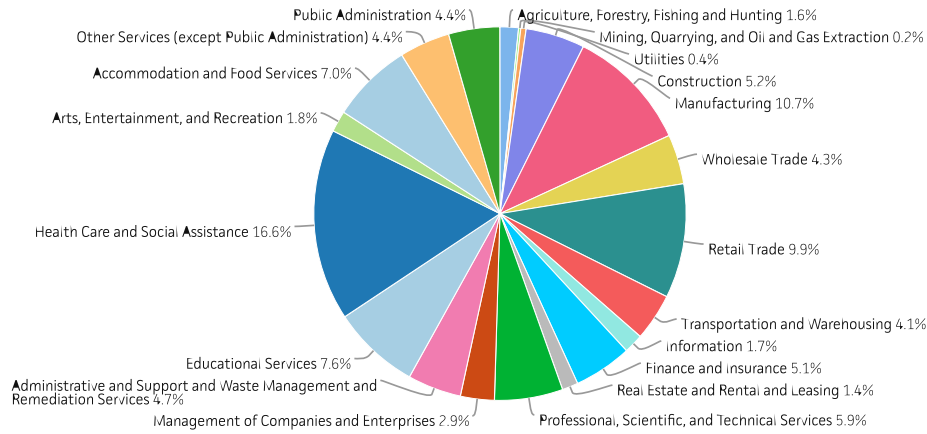


Source: JobsEQ®, Data as of 2020Q2, The shaded areas of the graph represent national recessions.

Industry/Occupation Mix

The largest industry in Minnesota is Health Care and Social Assistance, employing 500,608 workers. The next-largest industries in the region are Manufacturing (323,587 workers) and Retail Trade (298,251). Industries in Minnesota with the highest average wages per worker are Management of Companies and Enterprises (\$127,764), Utilities (\$113,213), and Finance and Insurance (\$108,049). Regional industries with the best job growth (or most moderate job losses) over the last 5 years are Health Care and Social Assistance (+28,897 jobs), Professional, Scientific, and Technical Services (+15,102), and Transportation and Warehousing (+13,687).

Total Workers for Minnesota by industry



NAICS	Industry	Current			5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	500,608	\$55,109	1.14	28,897	1.2%	274,539	119,208	123,230	32,101	1.3%
31	Manufacturing	323,587	\$68,280	1.30	2,136	0.1%	153,273	60,975	104,408	-12,109	-0.8%
44	Retail Trade	298,251	\$31,708	0.97	-6,491	-0.4%	194,732	87,450	110,495	-3,213	-0.2%
61	Educational Services	229,169	\$51,171	0.93	4,567	0.4%	109,648	51,226	55,274	3,147	0.3%
72	Accommodation and Food Services	211,482	\$21,617	0.84	-13,014	-1.2%	181,949	76,946	96,911	8,092	0.8%
54	Professional, Scientific, and Technical Services	178,834	\$94,855	0.86	15,102	1.8%	87,704	29,033	49,147	9,524	1.0%
23	Construction	155,232	\$66,499	0.89	11,053	1.5%	84,336	27,816	49,767	6,753	0.9%
52	Finance and Insurance	152,296	\$108,049	1.24	10,280	1.4%	72,480	26,947	44,238	1,294	0.2%
56	Administrative and Support and Waste Management and Remediation Services	140,485	\$42,665	0.74	-5,819	-0.8%	84,945	34,586	47,177	3,182	0.4%
92	Public Administration	133,826	\$60,783	0.92	6,357	1.0%	60,075	25,862	35,190	-978	-0.1%
81	Other Services (except Public Administration)	132,398	\$31,779	1.00	-3,589	-0.5%	75,430	34,356	41,016	58	0.0%
42	Wholesale Trade	129,293	\$85,494	1.12	-5,695	-0.9%	65,121	25,321	41,964	-2,164	-0.3%
48	Transportation and Warehousing	123,264	\$55,195	0.87	13,687	2.4%	66,808	27,963	37,839	1,006	0.2%
55	Management of Companies and Enterprises	88,576	\$127,764	1.90	9,653	2.3%	41,604	14,844	25,335	1,426	0.3%
71	Arts, Entertainment, and Recreation	55,324	\$35,821	0.99	-2,550	-0.9%	40,504	17,557	21,685	1,262	0.5%
51	Information	50,849	\$81,466	0.85	-7,182	-2.6%	23,453	8,762	15,536	-845	-0.3%
11	Agriculture, Forestry, Fishing and Hunting	48,479	\$49,439	1.19	-2,442	-1.0%	24,433	11,010	14,848	-1,425	-0.6%
53	Real Estate and Rental and Leasing	41,580	\$57,134	0.79	-4,646	-2.1%	21,988	9,638	11,543	807	0.4%
22	Utilities	13,528	\$113,213	0.86	-975	-1.4%	5,585	2,173	3,828	-415	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	5,794	\$91,766	0.46	-711	-2.3%	2,900	956	1,984	-40	-0.1%
Total - All Industries		3,012,855	\$59,182	1.00	48,618	0.3%	1,701,217	706,144	946,020	49,053	0.3%

Source: [JobsEQ®](#). Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2019Q4 with preliminary estimates updated to 2020Q2. Forecast employment growth uses national projections adapted for regional growth patterns.

Source: RealTime Talent Analysis of Chmura Economics JobsEQ®, <http://www.chmuraecon.com/jobseq>

Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020

https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=jocc=493031,493041,493042,493043,537021,475021&restrict=&exclude=anonymous,duplicates,bulk,expired

Diesel, Equipment, and Truck pathway talent is primarily employed in the Machinery, Equipment, and Supplies Merchant Wholesaler (18.4%) industry.

Top Industry Distribution for Diesel Equipment and Truck Pathway in Minnesota - COVID

NAICS Code	Industry Title	CURRENT			5-YEAR DEMAND			
		% of Occ Empl	Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	18.4%	2,432	\$51,500	368	811	-24	1,155
4841	General Freight Trucking	8.1%	1,074	\$52,700	151	352	12	515
2389	Other Specialty Trade Contractors	5.6%	739	\$58,400	123	290	34	447
2373	Highway, Street, and Bridge Construction	4.5%	596	\$59,100	97	220	27	344
8111	Automotive Repair and Maintenance	4.1%	541	\$50,000	78	181	22	281
4854	School and Employee Bus Transportation	4.1%	540	\$52,000	78	181	49	307
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	4.0%	536	\$53,900	78	182	29	289
9211	Executive, Legislative, and Other General Government Support	3.6%	474	\$55,100	70	159	10	239
4821	Rail Transportation	3.1%	411	\$78,400	65	143	19	227
4882	Support Activities for Rail Transportation	3.0%	398	\$61,500	63	140	16	219
2122	Metal Ore Mining	3.0%	394	\$66,100	61	136	-4	193
4842	Specialized Freight Trucking	2.5%	337	\$52,800	48	112	8	169
4851	Urban Transit Systems	2.3%	306	\$54,600	44	101	9	154
5621	Waste Collection	1.8%	240	\$52,700	36	82	12	130
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	1.6%	212	\$54,900	32	72	2	107
6111	Elementary and Secondary Schools	1.3%	174	\$52,600	24	57	2	84
2371	Utility System Construction	1.3%	172	\$58,500	30	67	14	110
2123	Nonmetallic Mineral Mining and Quarrying	1.3%	169	\$54,600	29	64	2	95
5321	Automotive Equipment Rental and Leasing	1.1%	150	\$52,000	22	51	12	85
5511	Management of Companies and Enterprises	1.0%	138	\$57,600	21	47	3	71
n/a	All Others	24.3%	3,215	n/a	479	1,109	41	1,629
Source: JobsEQ® Data as of 2020Q2 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding.								

Pathway Detail

Of all occupations found in the Diesel, Equipment, and Truck pathway, Farm Equipment Mechanics and Service Technicians and Rail Car Repairers are uniquely concentrated in Minnesota to a higher degree than seen in the nation overall. On average, Diesel, Equipment, and Truck careers pay about \$54,600 per year—about \$2,000 less than the average wage statewide across all positions at all education and experience levels.

Diesel Equipment and Truck Pathway in Minnesota - COVID, 2020Q2¹

SOC	Occupation	Current						5-Year History		5-Year Forecast				
		Empl	Avg Ann Wages ²	LQ	Unempl	Unempl Rate	Online Job Ads ³	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	6,390	\$52,600	1.17	264	4.1%	327	144	0.5%	3,203	908	2,107	188	0.6%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	3,164	\$60,000	1.08	122	3.9%	3	252	1.7%	1,640	495	1,087	59	0.4%
49-3041	Farm Equipment Mechanics and Service Technicians	1,619	\$47,100	1.89	46	2.8%	51	-139	-1.6%	766	246	540	-20	-0.2%
49-3043	Rail Car Repairers	827	\$62,300	1.66	33	4.0%	7	-182	-3.9%	459	132	289	38	0.9%
53-7021	Crane and Tower Operators	627	\$57,100	0.69	39	5.9%	4	22	0.7%	395	100	273	22	0.7%
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	622	\$54,800	0.70	54	8.2%	4	-168	-4.7%	397	115	261	21	0.7%
	Diesel Equipment and Truck Pathway	13,249	\$54,600	1.15	559	4.2%	396	-71	-0.1%	6,861	1,996	4,558	307	0.5%
	Total - All Occupations	3,012,855	\$56,600	1.00	140,926	4.6%	124,655	48,618	0.3%	1,819,042	661,016	1,068,234	89,792	0.6%

Source: [JobsEQ®](#)

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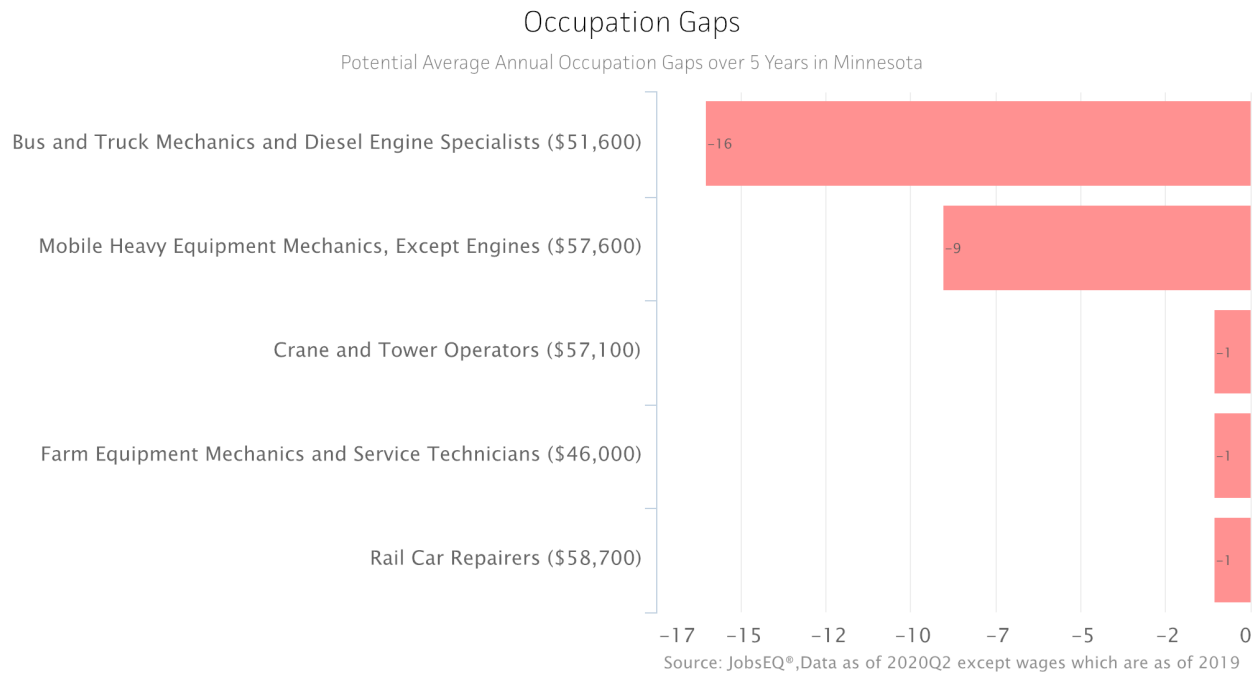
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Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020

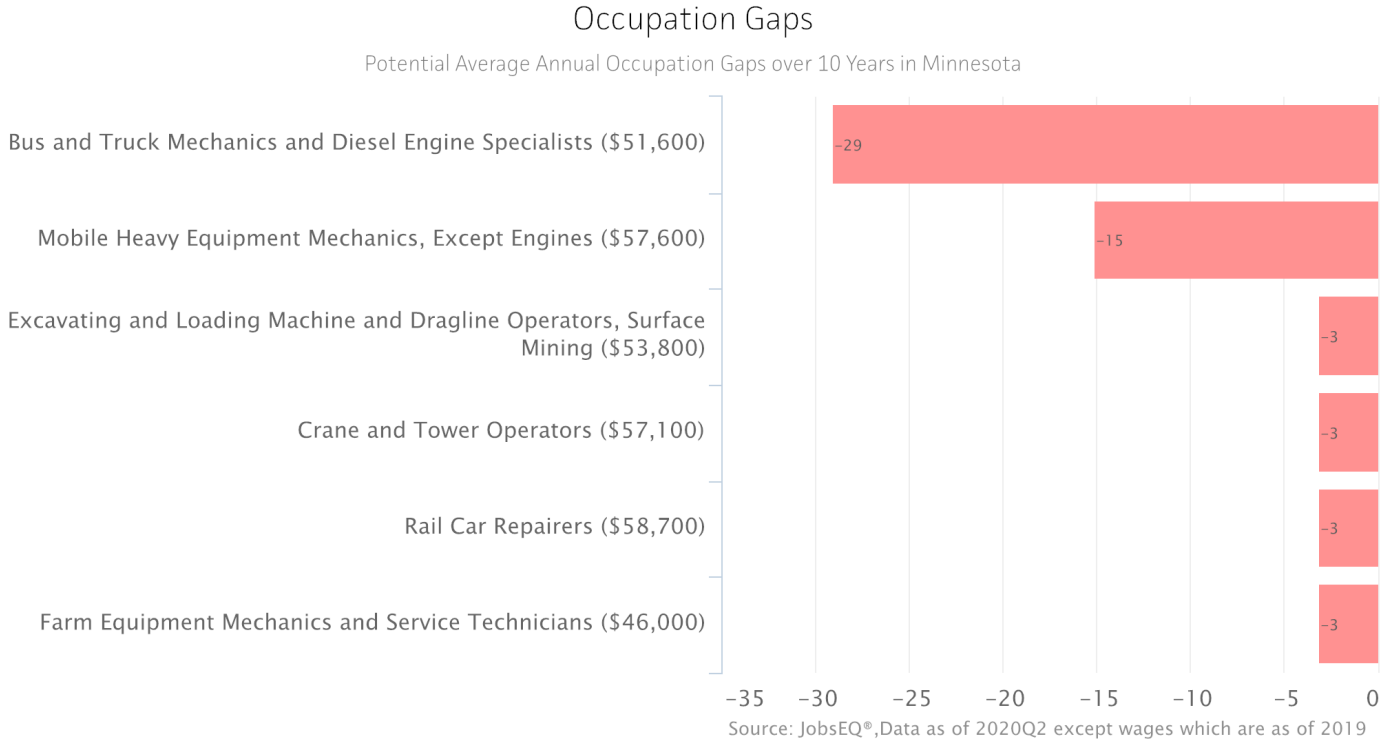
<https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cdupe%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096>

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By 2025, Minnesota may have a small shortage of Bus and Truck Mechanics, Mobile Heavy Equipment Maintenance, Crane and Tower Operators, Farm Equipment Mechanics, and Rail Car Repairers (shown in red below).



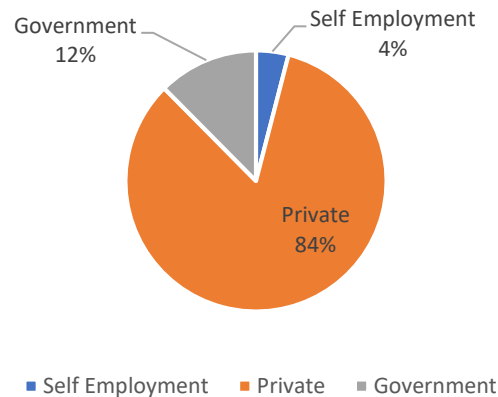
Looking out the next ten years, these shortages are anticipated to grow two to three times in volume.



Employment Types

About 84% of people employed in Diesel, Equipment, and Truck occupations in Minnesota work for private employers, while an estimated 12% work for state, federal or local government. The remaining 4% are self employed.

Employment Types, Minnesota 2020Q2



Job Posting Trends

Data in this section focuses on jobs newly advertised between November 1, 2019 and October 31, 2020 in Diesel, Equipment, and Truck roles across Minnesota. All data in this section comes from Gartner TalentNeuron. Overall, there were 6,926 new jobs advertised in Diesel, Equipment and Truck careers during this time frame, an increase of about 22% from the prior 12-month period.

Top Employers by Volume of New Job Postings, With Change from Prior Year

1. Titan Machinery: 1,604 (+38%)
2. Boyer Trucks: 1,230 (+8,686%)
3. True North Equipment: 463 (+2,337%)
4. Allstate: 247 (+502%)
5. C & B Operations: 221 (-19%)
6. Waste Management: 145 (-76%)
7. Penske: 114 (+87%)
8. Sysco: 110 (-21%)
9. Ryder: 101 (-15%)

New Job Postings Advertised in Minnesota by Employer Type



Top Skills by Volume of New Job Postings, With Change from Prior Year

1. Diagnosing (-1%)
2. Mechanics (+6%)
3. Problem Solving (+40%)
4. Detail-Oriented (+37%)
5. Product Knowledge (+42%)
6. Customer-Oriented (+40%)
7. Computer Applications (+19%)
8. Heavy Trucks (+169%)
9. Responsibility (+93%)
10. Dedication (-3%)

Top Certifications by Volume of New Job Postings, With Change from Prior Year

1. Class A Commercial Driver's License (+41%)
2. Class D Driver's License (-11%)
3. Automotive Service Excellence (+9%)
4. OSHA (-58%)
5. EPA Certification (+133%)

Top Sites Used by Volume of New Job Postings, With Change from Prior Year

1. The Job Network (+203%)
2. Snag (+358%)
3. Jobs in the US (+128%)
4. MinnesotaWorks (-24%)
5. Local Job Network (+145%)

Source: RealTime Talent Analysis of Chmura Economics JobsEQ®, <http://www.chmuraecon.com/jobseq>

Gartner TalentNeuron Recruit Job posting data 11/1/2019 – 10/31/2020

https://www.wantedanalytics.com/wa/counts?country=US&exclude=anonymous%2Cduplicates%2Cbulk%2Cexpired&jloc=state-24&jocc=493023%2C172141%2C493031%2C119041%2C493042%2C493021%2C536031%2C493041%2C172072%2C173027%2C492093%2C17302907%2C493022%2C172131%2C492096&methodology=new&require=&saved_search_id=61739&t%5Btimeframe%5D=f2019-11-01-2020-10-31&timeframe=f2019-11-01-2020-10-31#saved_search_id=&jocc=493031,493041,493042,493043,537021,475021&restrict=&exclude=anonymous,duplicates,bulk,expired

FAQ

What is a location quotient?

A location quotient (LQ) is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is separation demand?

Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. The total projected demand for an occupation is the sum of the separation demand and the growth demand (which is the increase or decrease of jobs in an occupation expected due to expansion or contraction of the overall number of jobs in that occupation).

What is a cluster?

A cluster is a geographic concentration of interrelated industries or occupations. If a regional cluster has a location quotient of 1.25 or greater, the region is considered to possess a competitive advantage in that cluster.

What is the difference between industry wages and occupation wages?

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.

What is NAICS?

The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. The NAICS Code comprises six levels, from the “all industry” level to the 6-digit level. The first two digits define the top level category, known as the “sector,” which is the level examined in this report.

What is SOC?

The Standard Occupational Classification system (SOC) is used to classify workers into occupational categories. All workers are classified into one of over 804 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 22 major groups, 95 minor groups, and 452 occupation groups. Each occupation group includes detailed occupations requiring similar job duties, skills, education, or experience.

Who created this report?

This report was developed by RealTime Talent for the Transportation Center of Excellence. If you have questions about the data found in this report, or are interested in learning more, please contact Research Strategist Erin Olson at erin@realtimetalentmn.org or visit the RealTime Talent website at www.realtimetalent.org