

# 2019 Alberta Wage and Salary Survey

The Alberta Wage and Salary Survey is undertaken by the Alberta Government to provide current wage rates and skill shortage information on various occupations in Alberta, and in specific industries and Economic Regions. This labour market information helps Alberta employers to fine tune their compensation and recruitment strategies, helps individuals make career and education choices, and aids the provincial government in developing effective policies and providing services.

## Manufacturing Industry Summary Report

### SURVEY RESULTS

The survey was completed with 709 employers in the Manufacturing industry sector who provided information on over 30,224 employees in various occupational classifications<sup>1</sup>. Survey data were collected between January and July 2019. Alberta Wage and Salary Survey results by Four-Digit National Occupational Classification (NOC) for all of Alberta, by industry group, and by geographic area can be found at [www.alis.alberta.ca/occinfo](http://www.alis.alberta.ca/occinfo)

### WAGES FOR SELECTED OCCUPATIONS

The following table illustrates the wage survey results associated with some common occupations within this industry<sup>2</sup>. The tables below present results for three-digit NOC minor groups and for four-digit NOCs.

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
<b>Common Business, Managerial, Administrative, and Clerical Occupations</b>							
001 Legislators and senior management	120	264	B	41.9	\$64.68	\$82.27	\$74.53
0016 Senior managers - construction, transportation, production and utilities	113	254	B	42.0	\$64.59	\$82.47	\$74.40
011 Administrative services managers	140	310	A	39.5	\$41.79	\$56.55	\$50.23
0111 Financial managers	67	112	B	39.3	\$43.52	\$54.15	\$50.68
0112 Human resources managers	63	92	A	39.7	\$39.50	\$53.63	\$47.44

<sup>1</sup>The estimated sample error at the establishment level for overall results for this industry is estimated to be  $\pm 3.5\%$  at a 95% confidence level (i.e., 19 times out of 20) taking into account the sample design effect associated with over/under sampling and data weighting.

<sup>2</sup>Occupations were selected as the top occupations in terms of number of employees as per Statistics Canada 2016 Census for this industry and supplemented by other occupations frequently reported by industry employers. Only occupations with a minimum number of reportable observations were selected. Some occupations common to this industry may not be listed if sufficient reliable data were not available.

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
0113 Purchasing managers	22	27	B	39.7	\$41.46	\$52.68	\$50.67
0114 Other administrative services managers	33	79	C	39.6	\$42.41	\$65.23	\$53.27
012 Managers in financial and business services	33	44	B	38.8	\$46.41	\$55.28	\$51.43
0124 Advertising, marketing and public relations managers	19	24	C	38.2	\$46.96	\$55.78	\$55.36
021 Managers in engineering, architecture, science and information systems	56	124	A	40.0	\$51.60	\$63.73	\$57.70
0211 Engineering managers	37	79	B	40.3	\$54.98	\$68.28	\$61.34
0213 Computer and information systems managers	19	29	C	38.7	\$39.30	\$52.30	\$47.08
060 Corporate sales managers	43	106	B	40.3	\$37.81	\$54.37	\$49.20
0601 Corporate sales managers	43	106	B	40.3	\$37.81	\$54.37	\$49.20
062 Retail and wholesale trade managers	95	246	B	40.8	\$36.88	\$56.78	\$45.45
0621 Retail and wholesale trade managers	95	246	B	40.8	\$36.88	\$56.78	\$45.45
071 Managers in construction and facility operation and maintenance	88	226	A	41.0	\$39.31	\$56.01	\$46.88
0711 Construction managers	32	89	B	41.1	\$30.72	\$46.58	\$39.05
0714 Facility operation and maintenance managers	56	137	A	41.0	\$43.92	\$60.79	\$50.58
091 Managers in manufacturing and utilities	302	766	B	40.1	\$38.67	\$57.21	\$49.45
0911 Manufacturing managers	298	746	B	40.0	\$38.71	\$57.26	\$49.48
111 Auditors, accountants and investment professionals	109	230	A	38.6	\$28.86	\$44.80	\$36.32
1111 Financial auditors and accountants	104	190	A	38.5	\$28.23	\$41.46	\$35.03
112 Human resources and business service professionals	68	153	B	38.3	\$28.59	\$37.82	\$33.63
1121 Human resources professionals	37	67	B	39.5	\$28.49	\$35.48	\$32.07
1123 Professional occupations in advertising, marketing and public relations	31	60	B	35.9	\$25.06	\$36.58	\$31.66

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
121 Administrative services supervisors	70	380	B	39.8	\$25.01	\$35.28	\$29.71
1215 Supervisors, supply chain, tracking and scheduling co-ordination occupations	63	363	B	39.9	\$25.01	\$35.33	\$29.73
122 Administrative and regulatory occupations	203	466	A	39.6	\$27.34	\$41.91	\$34.30
1221 Administrative officers	129	283	A	39.7	\$23.94	\$41.37	\$31.11
1225 Purchasing agents and officers	84	164	A	39.6	\$31.18	\$42.30	\$38.23
124 Office administrative assistants - general, legal and medical	119	332	A	38.9	\$20.24	\$28.49	\$24.07
1241 Administrative assistants	119	332	A	38.9	\$20.24	\$28.49	\$24.07
131 Finance, insurance and related business administrative occupations	65	108	B	36.4	\$21.36	\$36.59	\$28.31
1311 Accounting technicians and bookkeepers	65	108	B	36.4	\$21.36	\$36.59	\$28.31
141 General office workers	133	341	B	38.2	\$18.94	\$24.00	\$21.34
1411 General office support workers	80	262	B	38.4	\$19.06	\$24.26	\$21.49
1414 Receptionists	58	79	A	36.6	\$18.23	\$22.58	\$20.50
143 Financial, insurance and related administrative support workers	155	311	A	38.3	\$21.64	\$29.95	\$25.49
1431 Accounting and related clerks	137	260	A	38.2	\$20.95	\$28.57	\$24.56
1432 Payroll administrators	28	36	B	38.8	\$24.95	\$30.77	\$28.56
152 Supply chain logistics, tracking and scheduling co-ordination occupations	244	963	A	39.8	\$21.53	\$27.79	\$25.11
1521 Shippers and receivers	191	634	A	39.8	\$20.60	\$26.61	\$23.62
1522 Storekeepers and partspersons	30	134	B	39.9	\$22.21	\$29.37	\$27.31
1523 Production logistics co-ordinators	35	65	A	39.9	\$26.46	\$33.01	\$30.16
1524 Purchasing and inventory control workers	33	79	A	38.9	\$22.98	\$28.13	\$27.01

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
<b>Common Professional, Technical, Skilled, and Labour Occupations</b>							
213 Civil, mechanical, electrical and chemical engineers	49	241	B	39.9	\$32.49	\$54.14	\$42.21
2132 Mechanical engineers	24	154	B	39.9	\$31.26	\$53.82	\$41.16
214 Other engineers	48	148	A	39.8	\$33.41	\$46.63	\$39.83
2141 Industrial and manufacturing engineers	34	107	B	39.9	\$30.76	\$47.05	\$38.41
221 Technical occupations in physical sciences	32	158	B	39.5	\$23.30	\$30.24	\$27.46
2211 Chemical technologists and technicians	31	155	B	39.5	\$23.29	\$30.12	\$27.40
223 Technical occupations in civil, mechanical and industrial engineering	122	641	A	40.0	\$25.00	\$38.04	\$31.23
2233 Industrial engineering and manufacturing technologists and technicians	77	352	A	40.0	\$25.09	\$36.00	\$30.12
2234 Construction estimators	41	113	B	40.1	\$28.25	\$46.17	\$36.15
2243 Industrial instrument technicians and mechanics	31	177	B	42.2	\$25.79	\$39.34	\$32.15
225 Technical occupations in architecture, drafting, surveying, geomatics and meteorology	104	341	A	39.9	\$27.38	\$41.73	\$33.37
2253 Drafting technologists and technicians	95	308	A	40.0	\$26.98	\$41.60	\$32.85
226 Other technical inspectors and regulatory officers	79	191	A	39.5	\$32.13	\$38.65	\$35.15
2263 Inspectors in public and environmental health and occupational health and safety	65	117	A	39.5	\$33.67	\$41.24	\$37.65
228 Technical occupations in computer and information systems	32	82	B	39.6	\$26.05	\$38.29	\$32.43
2281 Computer network technicians	23	43	B	39.6	\$29.10	\$41.25	\$34.63
524 Creative designers and craftspersons	56	176	A	38.8	\$19.37	\$28.72	\$24.60
5241 Graphic designers and illustrators	42	114	A	38.5	\$19.39	\$28.75	\$24.83

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
622 Technical sales specialists in wholesale trade and retail and wholesale buyers	76	250	B	39.2	\$27.76	\$46.70	\$35.69
6221 Technical sales specialists - wholesale trade	72	242	B	39.5	\$27.98	\$47.31	\$36.00
641 Sales and account representatives - wholesale trade (non-technical)	72	351	B	37.8	\$22.54	\$38.19	\$30.10
6411 Sales and account representatives - wholesale trade (non-technical)	72	351	B	37.8	\$22.54	\$38.19	\$30.10
642 Retail salespersons	75	357	B	36.3	\$19.78	\$32.24	\$25.25
6421 Retail salespersons	75	357	B	36.3	\$19.78	\$32.24	\$25.25
655 Customer and information services representatives	68	257	A	39.7	\$20.66	\$27.25	\$24.58
6552 Other customer and information services representatives	68	257	A	39.7	\$20.66	\$27.25	\$24.58
673 Cleaners	55	138	A	34.8	\$20.53	\$28.14	\$24.74
6733 Janitors, caretakers and building superintendents	42	95	A	34.5	\$20.55	\$30.03	\$25.89
720 Contractors and supervisors, industrial, electrical and construction trades and related workers	79	218	A	40.8	\$34.75	\$42.93	\$39.11
7201 Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations	53	151	A	40.9	\$34.94	\$43.17	\$38.97
723 Machining, metal forming, shaping and erecting trades	250	2,906	A	40.2	\$26.81	\$38.71	\$32.60
7231 Machinists and machining and tooling inspectors	70	507	A	40.6	\$26.55	\$39.79	\$32.58
7233 Sheet metal workers	18	113	C	40.1	\$21.28	\$30.94	\$25.56
7235 Structural metal and platework fabricators and fitters	35	376	B	39.4	\$22.31	\$35.59	\$28.42
7237 Welders and related machine operators	181	1,889	A	40.3	\$27.89	\$39.37	\$33.57
724 Electrical trades and electrical power line and telecommunications workers	54	323	A	40.4	\$32.05	\$38.01	\$34.62
7241 Electricians (except industrial and power system)	32	135	A	40.8	\$32.79	\$41.53	\$36.67
7242 Industrial electricians	16	93	C	40.1	\$38.91	\$40.93	\$40.04

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
725 Plumbers, pipefitters and gas fitters	26	150	B	39.8	\$30.89	\$39.64	\$36.03
7252 Steamfitters, pipefitters and sprinkler system installers	20	124	B	40.1	\$31.53	\$40.06	\$36.38
727 Carpenters and cabinetmakers	26	216	B	41.3	\$19.62	\$29.15	\$25.11
7272 Cabinetmakers	19	136	C	41.4	\$20.15	\$29.81	\$26.08
730 Contractors and supervisors, maintenance trades and heavy equipment and transport operators	54	209	A	41.1	\$33.42	\$41.05	\$38.01
7301 Contractors and supervisors, mechanic trades	39	147	A	41.1	\$33.76	\$41.02	\$38.37
731 Machinery and transportation equipment mechanics (except motor vehicles)	95	886	A	40.5	\$32.24	\$40.97	\$35.69
7311 Construction millwrights and industrial mechanics	74	646	A	40.2	\$33.32	\$40.27	\$35.29
7312 Heavy-duty equipment mechanics	27	221	B	42.1	\$28.42	\$44.34	\$38.13
732 Automotive service technicians	20	75	B	40.4	\$25.35	\$35.24	\$31.75
7321 Automotive service technicians, truck and bus mechanics and mechanical repairers	19	57	C	40.5	\$28.61	\$38.22	\$34.40
738 Printing press operators and other trades and related occupations, n.e.c.	33	146	B	38.9	\$20.80	\$30.60	\$25.97
7381 Printing press operators	27	127	B	38.5	\$18.88	\$29.45	\$24.41
744 Other installers, repairers and servicers	44	359	A	40.1	\$19.01	\$29.65	\$23.64
7441 Residential and commercial installers and servicers	36	325	A	39.7	\$18.44	\$28.72	\$22.65
745 Longshore workers and material handlers	95	901	B	39.5	\$20.46	\$27.44	\$23.58
7452 Material handlers	95	901	B	39.5	\$20.46	\$27.44	\$23.58
751 Motor vehicle and transit drivers	76	675	B	42.7	\$26.41	\$32.44	\$28.86
7511 Transport truck drivers	50	638	A	42.9	\$26.68	\$32.81	\$29.09
7514 Delivery and courier service drivers	26	37	B	38.8	\$21.95	\$26.29	\$24.69

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
752 Heavy equipment operators	26	260	B	39.1	\$19.37	\$27.09	\$22.95
7521 Heavy equipment operators (except crane)	17	177	C	40.0	\$22.01	\$31.32	\$25.74
761 Trades helpers and labourers	57	457	A	37.6	\$18.94	\$27.90	\$22.90
7611 Construction trades helpers and labourers	36	353	A	36.9	\$18.21	\$26.30	\$21.54
7612 Other trades helpers and labourers	21	104	B	39.1	\$20.53	\$30.60	\$25.85
921 Supervisors, processing and manufacturing occupations	54	358	B	40.4	\$28.95	\$33.37	\$31.13
9213 Supervisors, food and beverage processing	19	203	C	40.0	\$29.20	\$31.02	\$30.07
922 Supervisors, assembly and fabrication	51	155	C	40.2	\$22.72	\$32.93	\$25.06
9227 Supervisors, other products manufacturing and assembly	20	103	C	40.0	\$19.86	\$31.52	\$21.70
924 Utilities equipment operators and controllers	21	134	B	40.6	\$36.49	\$48.58	\$41.53
9241 Power engineers and power systems operators	19	122	C	40.6	\$37.16	\$49.84	\$42.19
941 Machine operators and related workers in mineral and metal products processing and manufacturing	116	1,108	A	40.0	\$21.72	\$32.36	\$26.86
9416 Metalworking and forging machine operators	29	349	B	40.1	\$20.60	\$29.75	\$25.80
9417 Machining tool operators	54	390	A	40.1	\$23.17	\$34.99	\$28.84
9421 Chemical plant machine operators	17	163	C	40.8	\$22.18	\$35.47	\$26.97
946 Machine operators and related workers in food, beverage and associated products processing	39	3,391	B	39.5	\$19.05	\$23.50	\$21.45
9461 Process control and machine operators, food and beverage processing	30	1,520	B	38.8	\$17.76	\$24.03	\$20.84
9462 Industrial butchers and meat cutters, poultry preparers and related workers	12	1,832	C	40.0	\$19.89	\$23.16	\$21.82
947 Printing equipment operators and related occupations	32	163	A	37.7	\$19.45	\$28.57	\$23.46
9473 Binding and finishing machine operators	19	77	C	37.6	\$18.37	\$25.91	\$21.94

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	# of Employees	Data Reliability Code	Avg. Hours Worked per Week	Avg. Starting Pay	Avg. Top Pay	Overall Average Pay for All Employees
953 Other assembly and related occupations	115	1,497	A	40.2	\$17.28	\$25.81	\$21.66
9533 Other wood products assemblers and inspectors	19	542	B	40.7	\$15.93	\$26.10	\$21.40
9536 Industrial painters, coaters and metal finishing process operators	49	303	B	40.2	\$19.35	\$27.53	\$23.67
9537 Other products assemblers, finishers and inspectors	27	348	B	39.5	\$17.21	\$24.87	\$21.20
961 Labourers in processing, manufacturing and utilities	183	3,420	A	39.9	\$18.95	\$26.98	\$23.15
9612 Labourers in metal fabrication	58	603	B	39.8	\$19.54	\$29.73	\$26.57
9617 Labourers in food and beverage processing	29	867	B	39.6	\$17.00	\$23.29	\$19.46
9619 Other labourers in processing, manufacturing and utilities	61	1,048	B	39.5	\$17.39	\$22.58	\$20.71

"n" in the above table represents the number of employers who indicated at least one employee in an occupation. For example, 183 employers combined reported wages for 3,420 Labourers in processing, manufacturing and utilities (NOC 961).

Averages are calculated using data weighted by establishment to account for survey non-response (stratified by region, industry group and employer size) and by number of employees reported.

"n/a" indicates that results have been suppressed due to missing data for some employers or due to calculation anomalies.

Data Reliability Codes are based on coefficient of variation as an indicator of general reliability: "A": coefficient of variation of less than or equal to  $\pm 6.00\%$ , "B": from  $\pm 6.01\%$  to  $\pm 15.00\%$ , "C": from  $\pm 15.01\%$  to  $\pm 33.00\%$ , "D": more than  $\pm 33.01\%$ .



## JOB VACANCIES & HIRING DIFFICULTIES – SELECTED OCCUPATIONS

The following table illustrates the job vacancy survey results associated with some common occupations within the Manufacturing industry as cited by survey respondents and confirmed through review of the data.

MANUFACTURING INDUSTRY Selected Occupations (NOC)	Employers Reporting (n)	% of Employers that Hired for this Occupation within the Last 2 Years	% of Employers Experiencing Hiring Difficulties (out of those hiring)	% of Employers with Vacancies of Greater than 4 Months	Job Vacancy Rate
<b>Common Business, Managerial, Administrative, and Clerical Occupations</b>					
001 Legislators and senior management	117	18%	28%	3%	2.1%
0016 Senior managers - construction, transportation, production and utilities	110	19%	28%	4%	2.2%
011 Administrative services managers	133-134	28%	21%	2%	1.2%
0111 Financial managers	61-62	36%	17%	0%	n/a
0112 Human resources managers	55-57	23%	29%	2%	1.8%
0113 Purchasing managers	19	16%	n/a	0%	n/a
0114 Other administrative services managers	29-30	32%	0%	7%	2.5%
012 Managers in financial and business services	27-30	38%	0%	0%	n/a
0124 Advertising, marketing and public relations managers	16-18	33%	n/a	0%	n/a
021 Managers in engineering, architecture, science and information systems	49-50	32%	22%	3%	2.1%
0211 Engineering managers	31-33	32%	17%	5%	2.7%
0213 Computer and information systems managers	15	26%	n/a	0%	n/a
060 Corporate sales managers	38	44%	12%	1%	n/a
0601 Corporate sales managers	38	44%	12%	1%	n/a
062 Retail and wholesale trade managers	89-92	20%	19%	2%	1.4%
0621 Retail and wholesale trade managers	89-92	20%	19%	2%	1.4%
071 Managers in construction and facility operation and maintenance	82-83	25%	27%	0%	n/a

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b>% of Employers that Hired for this Occupation within the Last 2 Years</b>	<b>% of Employers Experiencing Hiring Difficulties (out of those hiring)</b>	<b>% of Employers with Vacancies of Greater than 4 Months</b>	<b>Job Vacancy Rate</b>
0711 Construction managers	32	19%	32%	0%	n/a
0714 Facility operation and maintenance managers	50-51	28%	25%	0%	n/a
091 Managers in manufacturing and utilities	292-295	18%	35%	2%	1.2%
0911 Manufacturing managers	288-291	18%	35%	2%	1.2%
111 Auditors, accountants and investment professionals	102-105	36%	12%	6%	5.3%
1111 Financial auditors and accountants	98-99	35%	13%	6%	5.6%
112 Human resources and business service professionals	61-62	45%	10%	12%	7.9%
1121 Human resources professionals	34-36	53%	10%	20%	n/a
1123 Professional occupations in advertising, marketing and public relations	27-28	33%	14%	5%	4.0%
121 Administrative services supervisors	65-67	35%	9%	0%	n/a
1215 Supervisors, supply chain, tracking and scheduling co-ordination occupations	58-60	38%	9%	0%	n/a
122 Administrative and regulatory occupations	192-196	23%	20%	1%	n/a
1221 Administrative officers	123-128	19%	23%	2%	1.0%
1225 Purchasing agents and officers	77-79	26%	18%	0%	n/a
124 Office administrative assistants - general, legal and medical	114-115	35%	12%	2%	0.7%
1241 Administrative assistants	114-115	35%	12%	2%	0.7%
131 Finance, insurance and related business administrative occupations	64-65	23%	19%	0%	n/a
1311 Accounting technicians and bookkeepers	64-65	23%	19%	0%	n/a
141 General office workers	124-129	38%	9%	2%	n/a
1411 General office support workers	75-77	35%	7%	3%	n/a

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b>% of Employers that Hired for this Occupation within the Last 2 Years</b>	<b>% of Employers Experiencing Hiring Difficulties (out of those hiring)</b>	<b>% of Employers with Vacancies of Greater than 4 Months</b>	<b>Job Vacancy Rate</b>
1414 Receptionists	52-55	45%	12%	0%	n/a
143 Financial, insurance and related administrative support workers	146-150	32%	19%	2%	1.3%
1431 Accounting and related clerks	128-132	35%	20%	3%	1.6%
1432 Payroll administrators	25-27	23%	11%	0%	n/a
152 Supply chain logistics, tracking and scheduling co-ordination occupations	230-232	37%	22%	3%	1.4%
1521 Shippers and receivers	181	41%	20%	5%	1.6%
1522 Storekeepers and partspersons	26-28	30%	21%	2%	1.6%
1523 Production logistics co-ordinators	31-33	21%	61%	1%	1.0%
1524 Purchasing and inventory control workers	30	42%	0%	0%	n/a
<b>Common Professional, Technical, Skilled, and Labour Occupations</b>					
213 Civil, mechanical, electrical and chemical engineers	44-46	32%	17%	5%	1.2%
2132 Mechanical engineers	22	40%	3%	7%	1.2%
214 Other engineers	45-47	30%	11%	1%	1.1%
2141 Industrial and manufacturing engineers	32-34	32%	8%	0%	n/a
221 Technical occupations in physical sciences	29-30	39%	34%	3%	1.7%
2211 Chemical technologists and technicians	28-29	37%	19%	4%	1.7%
223 Technical occupations in civil, mechanical and industrial engineering	114-117	46%	23%	6%	2.3%
2233 Industrial engineering and manufacturing technologists and technicians	71-73	45%	18%	4%	1.8%
2234 Construction estimators	40-41	43%	43%	14%	6.7%
2243 Industrial instrument technicians and mechanics	28-29	24%	22%	0%	0.0%

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b>% of Employers that Hired for this Occupation within the Last 2 Years</b>	<b>% of Employers Experiencing Hiring Difficulties (out of those hiring)</b>	<b>% of Employers with Vacancies of Greater than 4 Months</b>	<b>Job Vacancy Rate</b>
225 Technical occupations in architecture, drafting, surveying, geomatics and meteorology	100	41%	36%	3%	1.6%
2253 Drafting technologists and technicians	91-92	43%	33%	1%	0.3%
226 Other technical inspectors and regulatory officers	74-76	34%	8%	5%	2.8%
2263 Inspectors in public and environmental health and occupational health and safety	60-62	33%	0%	4%	2.3%
228 Technical occupations in computer and information systems	28	46%	23%	6%	3.2%
2281 Computer network technicians	20-21	40%	40%	10%	5.7%
524 Creative designers and craftspersons	54	44%	44%	4%	1.4%
5241 Graphic designers and illustrators	40-41	51%	43%	6%	2.4%
622 Technical sales specialists in wholesale trade and retail and wholesale buyers	72-73	36%	20%	2%	n/a
6221 Technical sales specialists - wholesale trade	68-69	37%	21%	2%	n/a
641 Sales and account representatives - wholesale trade (non-technical)	67-68	38%	34%	4%	1.5%
6411 Sales and account representatives - wholesale trade (non-technical)	67-68	38%	34%	4%	1.5%
642 Retail salespersons	72-74	47%	28%	9%	2.1%
6421 Retail salespersons	72-74	47%	28%	9%	2.1%
655 Customer and information services representatives	61-65	51%	24%	9%	3.6%
6552 Other customer and information services representatives	61-65	51%	24%	9%	3.6%
673 Cleaners	50-52	45%	42%	9%	4.8%
6733 Janitors, caretakers and building superintendents	39-40	39%	40%	9%	4.6%

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b>% of Employers that Hired for this Occupation within the Last 2 Years</b>	<b>% of Employers Experiencing Hiring Difficulties (out of those hiring)</b>	<b>% of Employers with Vacancies of Greater than 4 Months</b>	<b>Job Vacancy Rate</b>
720 Contractors and supervisors, industrial, electrical and construction trades and related workers	77-78	15%	23%	0%	n/a
7201 Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations	51-52	13%	6%	0%	n/a
723 Machining, metal forming, shaping and erecting trades	239-248	54%	27%	13%	2.4%
7231 Machinists and machining and tooling inspectors	69	48%	56%	30%	4.9%
7233 Sheet metal workers	15-16	70%	11%	0%	n/a
7235 Structural metal and platework fabricators and fitters	32-34	55%	21%	9%	1.6%
7237 Welders and related machine operators	171-179	55%	22%	9%	2.0%
724 Electrical trades and electrical power line and telecommunications workers	49-50	60%	30%	13%	2.4%
7241 Electricians (except industrial and power system)	29	55%	19%	13%	3.4%
7242 Industrial electricians	15-16	69%	39%	12%	1.9%
725 Plumbers, pipefitters and gas fitters	26	42%	45%	15%	3.0%
7252 Steamfitters, pipefitters and sprinkler system installers	20	40%	40%	8%	1.3%
727 Carpenters and cabinetmakers	25	60%	43%	11%	3.6%
7272 Cabinetmakers	18	61%	59%	15%	4.9%
730 Contractors and supervisors, maintenance trades and heavy equipment and transport operators	51-52	31%	30%	0%	0.0%
7301 Contractors and supervisors, mechanic trades	36-37	30%	41%	0%	0.0%
731 Machinery and transportation equipment mechanics (except motor vehicles)	90-92	55%	48%	16%	3.8%
7311 Construction millwrights and industrial mechanics	70-72	54%	51%	20%	4.3%
7312 Heavy-duty equipment mechanics	26-27	60%	40%	4%	1.6%

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b>% of Employers that Hired for this Occupation within the Last 2 Years</b>	<b>% of Employers Experiencing Hiring Difficulties (out of those hiring)</b>	<b>% of Employers with Vacancies of Greater than 4 Months</b>	<b>Job Vacancy Rate</b>
732 Automotive service technicians	18-19	65%	35%	8%	4.0%
7321 Automotive service technicians, truck and bus mechanics and mechanical repairers	17-18	62%	26%	10%	6.6%
738 Printing press operators and other trades and related occupations, n.e.c.	32	43%	34%	4%	n/a
7381 Printing press operators	26	47%	38%	4%	n/a
744 Other installers, repairers and servicers	41-42	65%	30%	5%	1.0%
7441 Residential and commercial installers and servicers	33-34	60%	39%	6%	1.1%
745 Longshore workers and material handlers	91-92	50%	15%	5%	n/a
7452 Material handlers	91-92	50%	15%	5%	n/a
751 Motor vehicle and transit drivers	74-75	46%	55%	6%	2.9%
7511 Transport truck drivers	48-49	53%	65%	6%	2.7%
7514 Delivery and courier service drivers	26	32%	18%	4%	6.5%
752 Heavy equipment operators	25	52%	32%	5%	n/a
7521 Heavy equipment operators (except crane)	17	49%	32%	9%	1.6%
761 Trades helpers and labourers	54	60%	33%	1%	1.2%
7611 Construction trades helpers and labourers	34-35	64%	40%	2%	1.8%
7612 Other trades helpers and labourers	19-20	54%	20%	0%	0.0%
921 Supervisors, processing and manufacturing occupations	51-52	23%	22%	1%	n/a
9213 Supervisors, food and beverage processing	16-17	24%	n/a	0%	n/a
922 Supervisors, assembly and fabrication	51	13%	36%	3%	n/a
9227 Supervisors, other products manufacturing and assembly	20	9%	n/a	0%	0.0%

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b>% of Employers that Hired for this Occupation within the Last 2 Years</b>	<b>% of Employers Experiencing Hiring Difficulties (out of those hiring)</b>	<b>% of Employers with Vacancies of Greater than 4 Months</b>	<b>Job Vacancy Rate</b>
924 Utilities equipment operators and controllers	19-21	32%	8%	0%	n/a
9241 Power engineers and power systems operators	17-19	33%	8%	0%	n/a
941 Machine operators and related workers in mineral and metal products processing and manufacturing	111-113	54%	40%	7%	1.7%
9416 Metalworking and forging machine operators	26-28	48%	50%	3%	n/a
9417 Machining tool operators	52-53	58%	45%	11%	2.8%
9421 Chemical plant machine operators	15-17	36%	28%	0%	0.0%
946 Machine operators and related workers in food, beverage and associated products processing	36-37	57%	35%	17%	4.8%
9461 Process control and machine operators, food and beverage processing	27-28	58%	28%	15%	3.0%
9462 Industrial butchers and meat cutters, poultry preparers and related workers	11-12	75%	48%	17%	5.8%
947 Printing equipment operators and related occupations	32	34%	8%	3%	n/a
9473 Binding and finishing machine operators	19	35%	13%	0%	n/a
953 Other assembly and related occupations	111	47%	25%	5%	0.9%
9533 Other wood products assemblers and inspectors	18	36%	23%	4%	0.2%
9536 Industrial painters, coaters and metal finishing process operators	46-48	55%	35%	5%	0.8%
9537 Other products assemblers, finishers and inspectors	25-26	63%	9%	10%	n/a
961 Labourers in processing, manufacturing and utilities	180	60%	19%	8%	1.2%
9612 Labourers in metal fabrication	57-58	62%	15%	6%	0.7%
9617 Labourers in food and beverage processing	27-28	68%	29%	13%	1.5%
9619 Other labourers in processing, manufacturing and utilities	60-61	63%	22%	14%	2.0%

“n” in the above table represents the range of the number of employers who indicated at least one employee in an occupation and responded to individual questions about hiring difficulties and vacancies (not all employers responded to all questions).

“n/a” indicates that results have been suppressed due to missing data for some employers.

Statistics on hiring activity, hiring difficulties, and employers reporting vacancies were calculated based on *the number of employers responding* for each question, weighted by establishment for survey non-response (stratified by region, industry group and employer size).

Job Vacancy Rate for vacancies that had been unfilled for 4 months or more calculated as:  $\text{Sum of Unfilled Vacancies} / (\text{Sum of Current Employees} + \text{Sum of Unfilled Vacancies})$ , with data weighted by establishment for survey non-response (stratified by industry group and employer size).

## Industry Definition as per North American Industry Classification System (NAICS)

### Manufacturing Sector (NAICS 31-33)

This sector comprises establishments primarily engaged in the physical or chemical transformation of materials or substances into new products. These products may be finished, in the sense that they are ready to be used or consumed, or semi-finished, in the sense of becoming a raw material for an establishment to use in further manufacturing. Related activities, such as the assembly of the component parts of manufactured goods; the blending of materials; and the finishing of manufactured products by dyeing, heat-treating, plating and similar operations are also treated as manufacturing activities. Manufacturing establishments are known by a variety of trade designations, such as plants, factories or mills.

Manufacturing establishments may own the materials which they transform or they may transform materials owned by other establishments. Manufacturing may take place in factories or in workers' homes, using either machinery or hand tools.

- Certain activities involving the transformation of goods are classified in other sectors. Some examples are post-harvest activities of agricultural establishments, such as crop drying; logging; the beneficiating of mineral ores; the production of structures by construction establishments; and various activities conducted by retailers, such as meat cutting and the assembly of products such as bicycles and computers.

*Research conducted for the Alberta Ministry of Labour by R.A. Malatest & Associates Ltd.*