

# Alberta Ministry of Labour

## 2017 Alberta Wage and Salary Survey

*The Alberta Wage and Salary Survey is undertaken by the Alberta Ministry of Labour 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 644 employers in the Manufacturing industry sector who provided information on over 21,945 employees in various occupational classifications<sup>1</sup>. Survey data were collected between February and July 2017. 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/wageinfo](http://www.alis.alberta.ca/wageinfo)

#### 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	89	162	B	41.3	\$63.44	\$80.51	\$72.44
0016 Senior managers - construction, transportation, production and utilities	74	113	B	42.1	\$59.07	\$74.25	\$66.12
011 Administrative services managers	68	125	A	39.2	\$39.28	\$50.72	\$45.82
0111 Financial managers	38	43	B	40.3	\$40.72	\$51.42	\$46.12
0112 Human resources managers	28	55	B	37.9	\$37.84	\$48.94	\$43.85
012 Managers in financial and business services	19	37	C	39.2	\$27.79	\$44.41	\$38.95

<sup>1</sup> The estimated sample error at the establishment level for overall results for this industry is estimated to be  $\pm 3.4\%$  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 2011 National Household Survey data 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.

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b># of Employees</b>	<b>Data Reliability Code</b>	<b>Avg. Hours Worked per Week</b>	<b>Avg. Starting Pay</b>	<b>Avg. Top Pay</b>	<b>Overall Average Pay for All Employees</b>
0124 Advertising, marketing and public relations managers	15	20	C	38.4	\$41.13	\$55.10	\$51.76
021 Managers in engineering architecture science and information systems	16	40	C	39.1	\$52.08	\$67.39	\$59.36
0211 Engineering managers	13	25	C	38.9	\$60.90	\$75.89	\$67.53
060 Corporate sales managers	17	33	C	40.5	\$47.33	\$74.06	\$68.60
0601 Corporate sales managers	17	33	C	40.5	\$47.33	\$74.06	\$68.60
062 Retail and wholesale trade managers	72	157	B	39.3	\$35.63	\$54.33	\$49.47
0621 Retail and wholesale trade managers	72	157	B	39.3	\$35.63	\$54.33	\$49.47
071 Managers in construction and facility operation and maintenance	55	100	B	40.4	\$40.66	\$49.07	\$46.43
0711 Construction managers	22	46	B	40.3	\$41.34	\$48.88	\$46.30
0714 Facility operation and maintenance managers	33	51	B	40.1	\$40.76	\$50.61	\$47.75
091 Managers in manufacturing and utilities	245	552	A	40.9	\$39.93	\$55.59	\$47.58
0911 Manufacturing managers	244	548	A	41	\$40.02	\$55.50	\$47.54
111 Auditors accountants and investment professionals	68	114	A	38.9	\$29.21	\$45.00	\$36.19
1111 Financial auditors and accountants	66	107	A	38.9	\$28.88	\$44.59	\$35.75
112 Human resources and business service professionals	44	119	B	39.1	\$30.26	\$50.76	\$39.80
1121 Human resources professionals	34	69	B	39.2	\$32.47	\$50.94	\$40.63
1123 Professional occupations in advertising, marketing and public relations	18	43	C	38.9	\$25.03	\$46.06	\$36.55
121 Administrative services supervisors	29	58	B	39	\$28.99	\$40.56	\$33.96
1215 Supervisors, supply chain, tracking and scheduling co-ordination occupations	22	46	B	39.8	\$26.85	\$39.30	\$32.65
122 Administrative and regulatory occupations	141	281	A	39.2	\$25.53	\$36.17	\$30.03
1221 Administrative officers	89	184	A	39.1	\$25.00	\$36.58	\$29.52
1225 Purchasing agents and officers	54	79	B	39.9	\$26.51	\$36.67	\$31.40
124 Office administrative assistants - General legal and medical	54	140	A	38.9	\$19.74	\$30.42	\$24.47
1241 Administrative assistants	54	140	A	38.9	\$19.74	\$30.42	\$24.47
131 Finance insurance and related business administrative occupations	54	70	B	35.6	\$23.50	\$33.12	\$28.58
1311 Accounting technicians and bookkeepers	54	70	B	35.6	\$23.50	\$33.12	\$28.58
141 General office workers	183	385	A	37.9	\$18.87	\$28.73	\$23.83

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b># of Employees</b>	<b>Data Reliability Code</b>	<b>Avg. Hours Worked per Week</b>	<b>Avg. Starting Pay</b>	<b>Avg. Top Pay</b>	<b>Overall Average Pay for All Employees</b>
1411 General office support workers	122	288	A	37.9	\$19.13	\$30.43	\$24.80
1414 Receptionists	66	93	A	37.2	\$17.50	\$21.60	\$19.69
143 Financial insurance and related administrative support workers	141	297	A	38.3	\$20.87	\$34.85	\$25.96
1431 Accounting and related clerks	137	279	A	38.4	\$20.17	\$34.85	\$25.53
152 Supply chain logistics tracking and scheduling co-ordination occupations	185	741	A	39.5	\$22.04	\$31.69	\$26.44
1521 Shippers and receivers	139	461	A	39.6	\$19.24	\$27.91	\$22.11
1522 Storekeepers and partspersons	31	126	B	39.2	\$24.91	\$37.94	\$34.27
1523 Production logistics co-ordinators	30	101	B	39.7	\$29.63	\$39.87	\$33.59
1524 Purchasing and inventory control workers	22	36	B	37.4	\$22.60	\$29.69	\$27.11
<b>Common Professional, Technical, Skilled, and Labour Occupations</b>							
213 Civil mechanical electrical and chemical engineers	47	225	A	39.6	\$37.73	\$65.21	\$50.62
2132 Mechanical engineers	34	104	A	39.1	\$37.07	\$60.32	\$48.36
214 Other engineers	20	131	B	39.7	\$34.45	\$69.91	\$47.98
2141 Industrial and manufacturing engineers	14	56	C	39.9	\$29.65	\$50.75	\$38.35
217 Computer and information systems professionals	17	46	C	39.7	\$37.28	\$49.97	\$44.31
221 Technical occupations in physical sciences	16	91	C	41.8	\$24.77	\$33.59	\$28.54
2211 Chemical technologists and technicians	16	91	C	41.8	\$24.77	\$33.59	\$28.54
223 Technical occupations in civil mechanical and industrial engineering	76	258	A	39.8	\$28.07	\$38.01	\$33.01
2232 Mechanical engineering technologists and technicians	15	41	C	40	\$26.64	\$36.67	\$30.65
2233 Industrial engineering and manufacturing technologists and technicians	43	153	A	39.7	\$28.12	\$38.85	\$33.60
2234 Construction estimators	21	51	B	39.7	\$29.23	\$38.56	\$34.23
224 Technical occupations in electronics and electrical engineering	26	82	B	39.5	\$28.85	\$38.66	\$33.24
2241 Electrical and electronics engineering technologists and technicians	15	45	C	39.8	\$23.66	\$35.37	\$28.62
225 Technical occupations in architecture drafting surveying geomatics and meteorology	65	271	A	39.7	\$25.89	\$44.35	\$34.35
2253 Drafting technologists and technicians	59	251	A	39.7	\$25.79	\$45.01	\$34.60
226 Other technical inspectors and regulatory officers	31	70	B	38.4	\$27.95	\$44.31	\$35.94

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b># of Employees</b>	<b>Data Reliability Code</b>	<b>Avg. Hours Worked per Week</b>	<b>Avg. Starting Pay</b>	<b>Avg. Top Pay</b>	<b>Overall Average Pay for All Employees</b>
2263 Inspectors in public and environmental health and occupational health and safety	26	47	B	37.7	\$29.95	\$41.76	\$37.24
322 Technical occupations in dental health care	21	101	C	39.1	\$21.50	\$38.72	\$29.57
3223 Dental technologists, technicians and laboratory assistants	14	80	C	38.9	\$16.90	\$34.07	\$24.45
524 Creative designers and craftspersons	51	102	A	38.5	\$17.99	\$29.47	\$22.89
5241 Graphic designers and illustrators	44	84	A	37.4	\$17.63	\$26.64	\$21.88
621 Retail sales supervisors	11	481	C	39	\$12.78	\$25.16	\$18.13
6211 Retail sales supervisors	11	481	C	39	\$12.78	\$25.16	\$18.13
622 Technical sales specialists in wholesale trade and retail and wholesale buyers	102	387	A	39.1	\$32.06	\$58.01	\$43.19
6221 Technical sales specialists - wholesale trade	96	371	A	39.2	\$32.48	\$59.51	\$44.05
633 Butchers and bakers	11	317	B	39.7	\$19.15	\$21.55	\$20.36
641 Sales and account representatives - Wholesale trade (non-technical)	85	318	A	39.5	\$22.79	\$39.18	\$29.58
6411 Sales and account representatives - wholesale trade (non-technical)	85	318	A	39.5	\$22.79	\$39.18	\$29.58
642 Retail salespersons	43	638	B	33.4	\$15.93	\$23.81	\$19.39
6421 Retail salespersons	43	638	B	33.4	\$15.93	\$23.81	\$19.39
655 Customer and information services representatives	41	118	B	39	\$19.69	\$27.62	\$24.18
6552 Other customer and information services representatives	41	118	B	39	\$19.69	\$27.62	\$24.19
673 Cleaners	49	159	B	37.2	\$20.61	\$28.84	\$25.10
6733 Janitors, caretakers and building superintendents	34	128	B	37.8	\$20.65	\$29.09	\$25.58
720 Contractors and supervisors industrial electrical and construction trades and related workers	57	197	B	40.7	\$27.92	\$40.97	\$32.87
7201 Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations	34	84	B	40.4	\$32.33	\$39.04	\$36.06
7205 Contractors and supervisors, other construction trades, installers, repairers and servicers	14	70	C	40.8	\$19.80	\$38.04	\$26.11
723 Machining metal forming shaping and erecting trades	205	2,292	A	40.2	\$25.33	\$37.49	\$31.24

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b># of Employees</b>	<b>Data Reliability Code</b>	<b>Avg. Hours Worked per Week</b>	<b>Avg. Starting Pay</b>	<b>Avg. Top Pay</b>	<b>Overall Average Pay for All Employees</b>
7231 Machinists and machining and tooling inspectors	75	567	A	39.7	\$25.28	\$39.10	\$31.91
7233 Sheet metal workers	12	67	C	40	\$20.39	\$39.49	\$30.67
7235 Structural metal and platework fabricators and fitters	23	317	B	39.8	\$20.94	\$31.93	\$26.18
7237 Welders and related machine operators	146	1,217	A	40.2	\$27.57	\$38.27	\$32.88
724 Electrical trades and electrical power line and telecommunications workers	31	307	B	39.1	\$36.00	\$46.63	\$40.10
7242 Industrial electricians	17	240	C	38.8	\$39.24	\$48.25	\$42.04
725 Plumbers pipefitters and gas fitters	12	119	C	40.3	\$35.90	\$43.84	\$38.76
727 Carpenters and cabinetmakers	31	211	B	40.7	\$17.26	\$28.43	\$24.13
7272 Cabinetmakers	21	152	B	41	\$16.53	\$27.22	\$23.13
730 Contractors and supervisors maintenance trades and heavy equipment and transport operators	36	122	B	40.6	\$32.66	\$47.33	\$42.09
7301 Contractors and supervisors, mechanic trades	23	80	B	41.2	\$35.33	\$51.07	\$45.52
731 Machinery and transportation equipment mechanics (except motor vehicle)	91	648	A	40.2	\$34.45	\$44.21	\$41.20
7311 Construction millwrights and industrial mechanics	64	370	B	40.5	\$37.38	\$44.00	\$40.91
7312 Heavy-duty equipment mechanics	31	254	B	39.6	\$30.18	\$44.87	\$42.17
738 Printing press operators and other trades and related occupations n.e.c.	25	128	B	39.6	\$24.22	\$30.29	\$26.42
7381 Printing press operators	23	118	B	39.4	\$23.71	\$29.97	\$25.97
744 Other installers repairers and servicers	43	225	B	40.2	\$20.03	\$33.79	\$26.32
7441 Residential and commercial installers and servicers	34	173	A	40.6	\$19.61	\$28.44	\$23.85
745 Longshore workers and material handlers	67	631	A	39.8	\$19.32	\$25.05	\$22.04
7452 Material handlers	67	631	A	39.8	\$19.32	\$25.05	\$22.04
751 Motor vehicle and transit drivers	72	299	B	42.4	\$23.20	\$27.99	\$25.71
7511 Transport truck drivers	48	249	A	43	\$23.60	\$28.63	\$26.31
7514 Delivery and courier service drivers	25	50	B	38.5	\$20.33	\$23.64	\$21.69
752 Heavy equipment operators	13	71	C	40.4	\$26.34	\$32.16	\$29.16
7521 Heavy equipment operators (except crane)	13	71	C	40.4	\$26.34	\$32.16	\$29.16
761 Trades helpers and labourers	55	418	A	40.9	\$18.42	\$27.55	\$22.73

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b># of Employees</b>	<b>Data Reliability Code</b>	<b>Avg. Hours Worked per Week</b>	<b>Avg. Starting Pay</b>	<b>Avg. Top Pay</b>	<b>Overall Average Pay for All Employees</b>
7611 Construction trades helpers and labourers	35	342	A	41.3	\$18.19	\$27.23	\$22.49
7612 Other trades helpers and labourers	22	76	B	39.6	\$19.12	\$28.49	\$23.44
921 Supervisors processing and manufacturing occupations	54	234	B	41.1	\$32.31	\$40.09	\$36.11
9213 Supervisors, food, beverage and associated products processing	17	75	C	42.3	\$26.35	\$30.16	\$28.33
922 Supervisors assembly and fabrication	52	133	B	40.6	\$36.88	\$50.71	\$41.95
9226 Supervisors, other mechanical and metal products manufacturing	31	53	B	40.6	\$34.11	\$50.03	\$41.10
941 Machine operators and related workers in mineral and metal products processing and manufacturing	94	1100	B	39.9	\$23.09	\$35.91	\$29.26
9411 Machine operators, mineral and metal processing	10	249	C	41.8	\$33.03	\$52.21	\$43.95
9416 Metalworking and forging machine operators	31	161	A	38.6	\$20.78	\$34.04	\$27.65
9417 Machining tool operators	34	263	B	39.1	\$21.20	\$31.67	\$27.07
942 Machine operators and related workers in chemical plastic and rubber processing	22	497	B	40.4	\$20.62	\$33.31	\$26.66
943 Machine operators and related workers in pulp and paper production and wood processing and manufacturing	23	453	B	40.8	\$25.68	\$36.61	\$32.87
944 Machine operators and related workers in textile fabric fur and leather products processing and manufacturing	23	119	B	38.3	\$14.40	\$19.54	\$16.61
9442 Weavers, knitters and other fabric making occupations	11	42	B	36.9	\$14.00	\$18.23	\$15.80
946 Machine operators and related workers in food beverage and associated products processing	37	2391	C	39.6	\$17.90	\$22.23	\$20.10
9461 Process control and machine operators, food, beverage and associated products processing	25	348	B	40.1	\$18.77	\$27.00	\$21.43
9462 Industrial butchers and meat cutters, poultry preparers and related workers	15	2,011	C	39.6	\$17.76	\$21.72	\$19.90
947 Printing equipment operators and related occupations	28	150	B	39.5	\$17.58	\$32.68	\$24.84
947 Plateless printing equipment operators	17	87	C	39.6	\$17.27	\$37.17	\$26.51
952 Mechanical electrical and electronics assemblers	48	713	B	40.1	\$15.88	\$25.93	\$19.04

<b>MANUFACTURING INDUSTRY Selected Occupations (NOC)</b>	<b>Employers Reporting (n)</b>	<b># of Employees</b>	<b>Data Reliability Code</b>	<b>Avg. Hours Worked per Week</b>	<b>Avg. Starting Pay</b>	<b>Avg. Top Pay</b>	<b>Overall Average Pay for All Employees</b>
9523 Electronics assemblers, fabricators, inspectors and testers	13	87	C	40	\$17.01	\$24.42	\$20.19
9524 Assemblers and inspectors, electrical appliance, apparatus and equipment manufacturing	11	159	B	40	\$15.09	\$24.03	\$18.10
9526 Mechanical assemblers and inspectors	19	189	B	40.3	\$16.65	\$28.82	\$19.24
953 Other assembly and related occupations	71	417	A	38	\$17.39	\$28.42	\$20.96
9533 Other wood products assemblers and inspectors	11	95	C	40.4	\$16.72	\$25.14	\$19.82
9536 Industrial painters, coaters and metal finishing process operators	34	130	A	39.4	\$19.76	\$28.34	\$24.08
961 Labourers in processing manufacturing and utilities	161	1,758	A	39.6	\$18.98	\$29.48	\$22.48
9612 Labourers in metal fabrication	50	277	A	39.9	\$18.11	\$28.54	\$23.25
9614 Labourers in wood, pulp and paper processing	11	221	B	39.4	\$24.70	\$27.53	\$26.11
9617 Labourers in food, beverage and associated products processing	29	460	B	38.5	\$15.37	\$25.28	\$17.58
9619 Other labourers in processing, manufacturing and utilities	50	362	B	39.5	\$18.10	\$27.76	\$23.08

“n” in the above table represents the number of employers who indicated at least one employee in an occupation. For example, 50 employers combined reported wages for 362 Other labourers in processing, manufacturing and utilities - (NOC 9619).

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.

<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>
<b>Common Business, Managerial, Administrative, and Clerical Occupations</b>					
001 Legislators and senior management	88-89	10%	18%	2%	1.3%
0016 Senior managers - construction, transportation, production and utilities	73-74	8%	30%	2%	2.0%
011 Administrative services managers	67	15%	20%	1%	n/a
0111 Financial managers	38	9%	n/a	0%	n/a
0112 Human resources managers	28	22%	15%	3%	2.1%
012 Managers in financial and business services	19	32%	14%	0%	n/a
0124 Advertising, marketing and public relations managers	15	42%	15%	0%	n/a
021 Managers in engineering architecture science and information systems	15 - 16	17%	n/a	0%	n/a
0211 Engineering managers	12 - 13	11%	n/a	0%	n/a
060 Corporate sales managers	17	41%	4%	0%	n/a
0601 Corporate sales managers	17	41%	4%	0%	n/a
062 Retail and wholesale trade managers	70-72	16%	0%	4%	2.1%
0621 Retail and wholesale trade managers	70-72	16%	0%	4%	2.1%
071 Managers in construction and facility operation and maintenance	54-55	11%	30%	0%	n/a
0711 Construction managers	21-22	9%	n/a	0%	n/a
0714 Facility operation and maintenance managers	33	13%	32%	0%	n/a
091 Managers in manufacturing and utilities	242 - 243	15%	19%	1%	n/a
0911 Manufacturing managers	241 - 242	15%	19%	1%	n/a
111 Auditors accountants and investment professionals	66-68	30%	24%	5%	2.9%
1111 Financial auditors and accountants	64-66	27%	20%	5%	3.1%
112 Human resources and business service professionals	42-44	28%	9%	0%	n/a
1121 Human resources professionals	32-34	31%	12%	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>
1123 Professional occupations in advertising, marketing and public relations	17-18	26%	0%	0%	n/a
121 Administrative services supervisors	29	19%	25%	5%	3.1%
1215 Supervisors, supply chain, tracking and scheduling co-ordination occupations	22	20%	n/a	1%	n/a
122 Administrative and regulatory occupations	139-140	18%	2%	1%	n/a
1221 Administrative officers	88	15%	0%	0%	n/a
1225 Purchasing agents and officers	53-54	21%	5%	0%	n/a
124 Office administrative assistants - General legal and medical	53-54	19%	12%	0%	n/a
1241 Administrative assistants	53-54	19%	12%	0%	n/a
131 Finance insurance and related business administrative occupations	53-54	21%	0%	0%	n/a
1311 Accounting technicians and bookkeepers	53-54	21%	0%	0%	n/a
141 General office workers	180-182	29%	12%	1%	n/a
1411 General office support workers	121-122	27%	14%	2%	n/a
1414 Receptionists	64-65	32%	10%	0%	n/a
143 Financial insurance and related administrative support workers	140	23%	10%	0%	n/a
1431 Accounting and related clerks	136	24%	4%	0%	n/a
152 Supply chain logistics tracking and scheduling co-ordination occupations	181-183	23%	10%	0%	n/a
1521 Shippers and receivers	136-139	28%	9%	0%	n/a
1522 Storekeepers and partspersons	31	15%	26%	2%	n/a
1523 Production logistics co-ordinators	29	14%	4%	0%	n/a
1524 Purchasing and inventory control workers	21-22	16%	0%	0%	n/a
<b>Common Professional, Technical, Skilled, and Labour Occupations</b>					
213 Civil mechanical electrical and chemical engineers	44-46	21%	0%	0%	n/a
2132 Mechanical engineers	31-33	21%	0%	0%	n/a
214 Other engineers	19	36%	27%	0%	n/a
2141 Industrial and manufacturing engineers	13	30%	n/a	0%	n/a
217 Computer and information systems professionals	17	19%	n/a	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>
221 Technical occupations in physical sciences	16	24%	n/a	5%	3.8%
2211 Chemical technologists and technicians	16	24%	n/a	5%	3.8%
223 Technical occupations in civil mechanical and industrial engineering	74-75	28%	30%	3%	1.0%
2232 Mechanical engineering technologists and technicians	15	31%	n/a	0%	n/a
2233 Industrial engineering and manufacturing technologists and technicians	42	24%	36%	4%	1.4%
2234 Construction estimators	21	37%	39%	3%	1.4%
224 Technical occupations in electronics and electrical engineering	26	21%	6%	3%	1.1%
2241 Electrical and electronics engineering technologists and technicians	15	25%	n/a	0%	n/a
225 Technical occupations in architecture drafting surveying geomatics and meteorology	65	26%	26%	1%	1.0%
2253 Drafting technologists and technicians	59	27%	27%	1%	1.0%
226 Other technical inspectors and regulatory officers	30-31	15%	15%	0%	n/a
2263 Inspectors in public and environmental health and occupational health and safety	25-26	15%	n/a	0%	n/a
322 Technical occupations in dental health care	21	28%	33%	3%	1.0%
3223 Dental technologists, technicians and laboratory assistants	13-14	33%	50%	6%	1.3%
524 Creative designers and craftspersons	51	35%	43%	6%	2.4%
5241 Graphic designers and illustrators	44	34%	32%	7%	3.5%
621 Retail sales supervisors	11	70%	6%	38%	2.0%
6211 Retail sales supervisors	11	70%	6%	38%	2.0%
622 Technical sales specialists in wholesale trade and retail and wholesale buyers	99-101	33%	19%	3%	0.9%
6221 Technical sales specialists - wholesale trade	93-95	35%	20%	3%	0.9%
633 Butchers and bakers	10	63%	47%	13%	6.6%
641 Sales and account representatives - Wholesale trade (non-technical)	83-84	44%	13%	3%	n/a
6411 Sales and account representatives - wholesale trade (non-technical)	83-84	44%	13%	3%	n/a
642 Retail salespersons	43	50%	17%	7%	1.4%

<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>
6421 Retail salespersons	43	50%	17%	7%	1.4%
655 Customer and information services representatives	41	40%	14%	4%	2.5%
6552 Other customer and information services representatives	41	40%	14%	4%	2.5%
673 Cleaners	48	33%	2%	2%	1.1%
6733 Janitors, caretakers and building superintendents	33	37%	2%	3%	1.3%
720 Contractors and supervisors industrial electrical and construction trades and related workers	56-57	17%	28%	0%	n/a
7201 Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations	33-34	11%	n/a	0%	n/a
7205 Contractors and supervisors, other construction trades, installers, repairers and servicers	14	24%	n/a	0%	0.0%
723 Machining metal forming shaping and erecting trades	203	49%	23%	5%	n/a
7231 Machinists and machining and tooling inspectors	74	51%	30%	9%	1.9%
7233 Sheet metal workers	11-12	26%	n/a	0%	n/a
7235 Structural metal and platework fabricators and fitters	23	40%	32%	8%	1.4%
7237 Welders and related machine operators	143-144	51%	15%	2%	n/a
724 Electrical trades and electrical power line and telecommunications workers	29-30	45%	6%	0%	n/a
7242 Industrial electricians	17	52%	9%	0%	n/a
725 Plumbers pipefitters and gas fitters	12	33%	n/a	6%	1.7%
727 Carpenters and cabinetmakers	30-31	64%	49%	22%	5.8%
7272 Cabinetmakers	20-21	71%	43%	20%	4.5%
730 Contractors and supervisors maintenance trades and heavy equipment and transport operators	35-36	19%	10%	6%	2.6%
7301 Contractors and supervisors, mechanic trades	22-23	19%	13%	9%	3.7%
731 Machinery and transportation equipment mechanics (except motor vehicle)	90-91	35%	32%	11%	2.5%
7311 Construction millwrights and industrial mechanics	63-64	31%	39%	9%	1.9%

<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>
7312 Heavy-duty equipment mechanics	31	41%	30%	17%	3.6%
738 Printing press operators and other trades and related occupations n.e.c.	25	43%	7%	1%	n/a
7381 Printing press operators	23	48%	7%	1%	n/a
744 Other installers repairers and servicers	42-43	37%	46%	2%	1.8%
7441 Residential and commercial installers and servicers	33-34	38%	44%	3%	2.7%
745 Longshore workers and material handlers	66-67	48%	10%	0%	n/a
7452 Material handlers	66-67	48%	10%	0%	n/a
751 Motor vehicle and transit drivers	71-72	36%	28%	2%	n/a
7511 Transport truck drivers	47-48	39%	31%	3%	n/a
7514 Delivery and courier service drivers	25	30%	18%	0%	n/a
752 Heavy equipment operators	13	45%	20%	8%	1.5%
7521 Heavy equipment operators (except crane)	13	45%	20%	8%	1.5%
761 Trades helpers and labourers	54-55	45%	4%	0%	n/a
7611 Construction trades helpers and labourers	35	51%	6%	0%	n/a
7612 Other trades helpers and labourers	21-22	37%	0%	0%	n/a
921 Supervisors processing and manufacturing occupations	52-54	19%	18%	4%	1.7%
9213 Supervisors, food, beverage and associated products processing	16-17	38%	28%	4%	1.2%
922 Supervisors assembly and fabrication	51-52	13%	36%	1%	n/a
9226 Supervisors, other mechanical and metal products manufacturing	30-31	11%	n/a	2%	1.0%
941 Machine operators and related workers in mineral and metal products processing and manufacturing	93-94	40%	24%	2%	0.2%
9411 Machine operators, mineral and metal processing	10	48%	n/a	0%	0.0%
9416 Metalworking and forging machine operators	30-31	28%	11%	2%	n/a
9417 Machining tool operators	33-34	46%	12%	2%	0.8%
942 Machine operators and related workers in chemical plastic and rubber processing	20-21	59%	25%	6%	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>
943 Machine operators and related workers in pulp and paper production and wood processing and manufacturing	22-23	22%	28%	6%	5.9%
944 Machine operators and related workers in textile fabric fur and leather products processing and manufacturing	22-23	23%	30%	5%	2.4%
9442 Weavers, knitters and other fabric making occupations	11	26%	n/a	0%	n/a
946 Machine operators and related workers in food beverage and associated products processing	37	60%	33%	18%	2.9%
9461 Process control and machine operators, food, beverage and associated products processing	25	65%	15%	14%	1.4%
9462 Industrial butchers and meat cutters, poultry preparers and related workers	15	56%	81%	33%	3.1%
947 Printing equipment operators and related occupations	27	37%	6%	2%	n/a
9471 Plateless printing equipment operators	16	51%	8%	4%	n/a
952 Mechanical electrical and electronics assemblers	47-48	49%	9%	4%	0.4%
9523 Electronics assemblers, fabricators, inspectors and testers	13	47%	9%	9%	2.0%
9524 Assemblers and inspectors, electrical appliance, apparatus and equipment manufacturing	11	71%	11%	0%	0.0%
9526 Mechanical assemblers and inspectors	18-19	32%	8%	1%	0.1%
953 Other assembly and related occupations	69-70	49%	32%	2%	n/a
9533 Other wood products assemblers and inspectors	9-11	38%	18%	0%	n/a
9536 Industrial painters, coaters and metal finishing process operators	32-33	45%	31%	0%	n/a
961 Labourers in processing manufacturing and utilities	153-157	41%	18%	8%	2.6%
9612 Labourers in metal fabrication	46-50	45%	27%	2%	0.4%
9614 Labourers in wood, pulp and paper processing	10-11	13%	31%	3%	1.0%
9617 Labourers in food, beverage and associated products processing	28	62%	12%	16%	5.8%
9619 Other labourers in processing, manufacturing and utilities	47-49	38%	13%	8%	1.2%

“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.*