



TORQ Analysis of First-Line Supervisors/Managers of Mechanics, Installers, and Repairers to First-Line Supervisors/Managers of Production and Operating Workers

INPUT SECTION:

Transfer	Title	O* NET	Filters		
From Title:	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	49-1011.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	First-Line Supervisors/Managers of Production and Operating Workers	51-1011.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

OUTPUT SECTION:

Grand TORQ:				89							
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	97	Level	82	Level 88							
Gaps To Narrow if Possible				Upgrade These Skills		Knowledge to Add					
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
Written Expression	53	2	59	Monitoring	72	6	75	Production and Processing	68	18	87
				Active Listening	65	3	80				

LEVEL and IMPT (IMPORTANCE) refer to the Target First-Line Supervisors/Managers of Production and Operating Workers. GAP refers to level difference between First-Line Supervisors/Managers of Mechanics, Installers, and Repairers and First-Line Supervisors/Managers of Production and Operating Workers.

ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50

Description	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers	Importance
Oral Expression	66	57	78
Oral Comprehension	60	55	75
Problem Sensitivity	60	48	75
Written Comprehension	60	53	68
Speech Recognition	53	46	65
Speech Clarity	53	48	65
Deductive Reasoning	60	53	62
Written Expression	51	53	59
Inductive Reasoning	57	51	59
Near Vision	55	48	59
Originality	53	50	53
Information Ordering	55	50	53



Category	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers	Importance
Category Flexibility	53	42	53
Fluency of Ideas	48	48	50
Flexibility of Closure	50	44	50
Perceptual Speed	46	42	50
Skill Level Comparison - Abilities with importance scores over 69			
Description	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers	Importance
Active Listening	62	65	80
Reading Comprehension	67	63	77
Management of Personnel Resources	70	68	77
Speaking	63	61	75
Monitoring	66	72	75
Instructing	65	63	75
Time Management	69	62	73
Critical Thinking	64	60	72
Judgment and Decision Making	65	59	72
Coordination	72	68	70
Troubleshooting	64	56	69
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers	Importance
Production and Processing	50	68	87
Administration and Management	60	58	75

Experience & Education Comparison					
Related Work Experience Comparison			Required Education Level Comparison		
Description	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers	Description	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers
10+ years	22%	2%	Doctoral	0%	0%
8-10 years	8%	5%	Professional Degree	0%	0%
6-8 years	7%	12%	Post-Masters Cert	0%	0%
4-6 years	17%	11%	Master's Degree	7%	0%
2-4 years	19%	33%	Post-Bachelor Cert	0%	1%
1-2 years	16%	21%	Bachelors	11%	13%
6-12 months	6%	3%	AA or Equiv	29%	17%
3-6 months	0%	2%	Some College	5%	17%
1-3 months	0%	3%	Post-Secondary Certificate	33%	20%
0-1 month	0%	0%	High School		
None	1%	4%			



Diploma or GED	10%	26%
No HSD or GED	0%	3%

First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers
Most Common Educational/Training Requirement:	
Work experience in a related occupation	Work experience in a related occupation
Job Zone Comparison	
<p>4 - Job Zone Four: Considerable Preparation Needed</p> <p>A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.</p> <p>Most of these occupations require a four - year bachelor's degree, but some do not.</p> <p>Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.</p>	<p>3 - Job Zone Three: Medium Preparation Needed</p> <p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>

Tasks

First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers
Core Tasks	Core Tasks
<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person. Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources. Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems. Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems. Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects. 	<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person. Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems. Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks. Guiding, Directing, and Motivating Subordinates - Providing guidance and direction to subordinates, including setting performance standards and monitoring performance. Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
Specific Tasks	Specific Tasks
<p>Occupation Specific Tasks:</p> <ul style="list-style-type: none"> Compile operational and personnel records, such as time and production records, inventory data, repair and maintenance statistics, and test results. Compute estimates and actual costs of factors such as materials, labor, and outside contractors. Conduct or arrange for worker training in safety, repair, and maintenance techniques, operational procedures, or 	<p>Occupation Specific Tasks:</p> <ul style="list-style-type: none"> Calculate labor and equipment requirements and production specifications, using standard formulas. Confer with management or subordinates to resolve worker problems, complaints, or grievances. Confer with other supervisors to coordinate operations and activities within or between departments. Demonstrate equipment operations and work and safety procedures to new



equipment use.

- Confer with personnel, such as management, engineering, quality control, customer, and union workers' representatives, to coordinate work activities, resolve employee grievances, and identify and review resource needs.
- Counsel employees about work-related issues and assist employees to correct job-skill deficiencies.
- Design equipment configurations to meet personnel needs.
- Determine schedules, sequences, and assignments for work activities, based on work priority, quantity of equipment and skill of personnel.
- Develop and implement electronic maintenance programs and computer information management systems.
- Develop, implement, and evaluate maintenance policies and procedures.
- Examine objects, systems, or facilities, and analyze information to determine needed installations, services, or repairs.
- Inspect, test, and measure completed work, using devices such as hand tools and gauges to verify conformance to standards and repair requirements.
- Interpret specifications, blueprints, and job orders to construct templates and lay out reference points for workers.
- Investigate accidents and injuries, and prepare reports of findings.
- Meet with vendors and suppliers to discuss products used in repair work.
- Monitor employees' work levels and review work performance.
- Monitor tool inventories and the condition and maintenance of shops in order to ensure adequate working conditions.
- Participate in budget preparation and administration, coordinating purchasing and documentation, and monitoring departmental expenditures.
- Patrol and monitor work areas and examine tools and equipment in order to detect unsafe conditions or violations of procedures or safety rules.
- Perform skilled repair and maintenance operations, using equipment such as hand and power tools, hydraulic presses and shears, and welding equipment.
- Recommend or initiate personnel actions, such as hires, promotions, transfers, discharges, and disciplinary measures.
- Requisition materials and supplies, such as tools, equipment, and replacement parts.

Detailed Tasks

employees, or assign employees to experienced workers for training.

- Determine standards, budgets, production goals, and rates, based on company policies, equipment and labor availability, and workloads.
- Direct and coordinate the activities of employees engaged in the production or processing of goods, such as inspectors, machine setters, and fabricators.
- Enforce safety and sanitation regulations.
- Inspect materials, products, or equipment to detect defects or malfunctions.
- Interpret specifications, blueprints, job orders, and company policies and procedures for workers.
- Maintain operations data such as time, production, and cost records, and prepare management reports of production results.
- Observe work, and monitor gauges, dials, and other indicators to ensure that operators conform to production or processing standards.
- Plan and develop new products and production processes.
- Plan and establish work schedules, assignments, and production sequences to meet production goals.
- Read and analyze charts, work orders, production schedules, and other records and reports, in order to determine production requirements and to evaluate current production estimates and outputs.
- Recommend or implement measures to motivate employees and to improve production methods, equipment performance, product quality, or efficiency.
- Recommend personnel actions such as hirings and promotions.
- Requisition materials, supplies, equipment parts, or repair services.
- Set up and adjust machines and equipment.

Detailed Tasks

Detailed Work Activities:

- adjust production equipment/machinery setup
- analyze operational or management reports or records
- assign work to staff or employees
- communicate technical information
- compute production, construction, or installation specifications
- conduct or attend staff meetings
- confer with other departmental heads to coordinate activities



Detailed Work Activities:

- assign work to staff or employees
- conduct or attend staff meetings
- conduct training for personnel
- confer with customer representatives
- confer with engineering, technical or manufacturing personnel
- consult with managerial or supervisory personnel
- coordinate equipment or personnel in mechanical repair setting
- demonstrate or explain assembly or use of equipment
- determine installation, service, or repair needed
- develop budgets
- develop maintenance schedules
- develop policies, procedures, methods, or standards
- develop staffing plan
- diagnose mechanical problems in machinery or equipment
- direct and coordinate activities of workers or staff
- discipline staff for infractions of rules or regulations
- establish employee performance standards
- estimate cost for repair services
- estimate materials or labor requirements
- evaluate performance of employees or contract personnel
- examine products or work to verify conformance to specifications
- hire, discharge, transfer, or promote workers
- inspect facilities to determine repair or replacement needs
- inspect machinery or equipment to determine adjustments or repairs needed
- modify work procedures or processes to meet deadlines
- monitor operations to verify conformance to standards
- monitor worker performance
- orient new employees
- oversee work progress to verify safety or conformance to standards
- perform safety inspections in manufacturing or industrial setting
- prepare or maintain employee records
- prepare reports
- read blueprints
- read schematics
- read specifications
- read technical drawings
- read work order, instructions, formulas, or

- consult with managerial or supervisory personnel
- coordinate production materials, activities or processes
- demonstrate or explain assembly or use of equipment
- determine factors affecting production processes
- develop maintenance schedules
- direct and coordinate activities of workers or staff
- establish employee performance standards
- estimate materials or labor requirements
- examine products or work to verify conformance to specifications
- explain rules, policies or regulations
- explain work orders, specifications, or work techniques to workers
- maintain file of job openings
- maintain inventory of office equipment or furniture
- maintain job descriptions
- maintain production or work records
- maintain records, reports, or files
- manage inventories or supplies
- modify work procedures or processes to meet deadlines
- monitor production machinery/equipment operation to detect problems
- monitor worker performance
- motivate workers to achieve work goals
- orient new employees
- oversee work progress to verify safety or conformance to standards
- prepare or maintain employee records
- prepare reports
- read blueprints
- read technical drawings
- read work order, instructions, formulas, or processing charts
- recommend improvements to work methods or procedures
- requisition stock, materials, supplies or equipment
- resolve or assist workers to resolve work problems
- resolve personnel problems or grievances
- schedule activities, classes, or events
- schedule employee work hours
- set up production equipment or machinery
- understand second language
- understand technical operating, service or repair manuals
- use oral or written communication techniques

Technology - Examples



- processing criteria
- recommend improvements to work methods or procedures
 - recommend personnel actions, such as promotions, transfers, and dismissals
 - recommend purchase or repair of furnishings or equipment
 - requisition stock, materials, supplies or equipment
 - resolve or assist workers to resolve work problems
 - understand service or repair manuals
 - understand technical operating, service or repair manuals

Technology - Examples

Accounting software
• Cost accounting software
Calendar and scheduling software
• Scheduling software
Data base user interface and query software
• Database software
• Microsoft Access
• Vehicle management software
Electronic mail software
• Email software
• Microsoft Outlook
Enterprise resource planning ERP software
• Infor SyteLine ERP
• SAP software
• WorkTech MAXIMO
Facilities management software
• Computerized maintenance management system CMMS software
• Maintenance management software
Industrial control software
• Programmable logic controller PLC software
Internet browser software
• Internet browser software
• Microsoft Internet Explorer
Inventory management software
• Automated inventory software
• Inventory management software
Office suite software

Data base user interface and query software
• Database software
• Oracle software
Electronic mail software
• Email software
• IBM Lotus Notes
• Microsoft Outlook
Enterprise resource planning ERP software
• Bowen & Groves M1 ERP
• Capterra Enterprise Resource Planning
• Encompix ERP
• Epicor Vantage ERP
• Epicor Vista ERP
• Giraffe Production Systems software
• Intacct ERP software
• Made2Manage software
• Microsoft Axapta
• NetSuite NetERP
• Resource planning software
• Retain Resource Planning
• SAP Business One
• SAP software
• SYSPRO software
• Technology Group International Enterprise 21 ERP
Human resources software
• GHG electronic employee management suite eEMS software
Internet browser software
• Netscape software
Inventory management software
• Inventory management software
Materials requirements planning logistics and supply chain software
• Integrated materials management systems
• Materials management software
• OA Software OMS Materials Management



• Microsoft Office
Project management software
• Recordkeeping software
Spreadsheet software
• Microsoft Excel
• Spreadsheet software
Time accounting software
• Payroll software
Word processing software
• Microsoft Word
• Word processing software
Tools - Examples
• Desktop computers
• Laser printers
• Mainframe computers
• Programmable logic controllers PLC
• Personal computers
• Two way radios

Office suite software
• Microsoft Office
Presentation software
• Microsoft PowerPoint
Project management software
• Microsoft Total Quality Control Management
• Total quality management TQM software
Spreadsheet software
• Microsoft Excel
• Spreadsheet software
Time accounting software
• Kronos Workforce Timekeeper
• Timekeeping software
• Work Technology WorkTech Time
Word processing software
• Microsoft Word
• Word processing software
Tools - Examples
• Desktop computers
• Personal protective clothing
• Laser printers
• Notebook computers
• Personal computers
• Respirators
• Safety glasses
• Protective shoes
• Laser scanners
• Operator terminals

Labor Market Comparison

Description	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	First-Line Supervisors/Managers of Production and Operating Workers	Difference
Median Wage	\$ 46,810	\$ 45,510	\$(1,300)
10th Percentile Wage	\$ 29,560	\$ 28,000	\$(1,560)



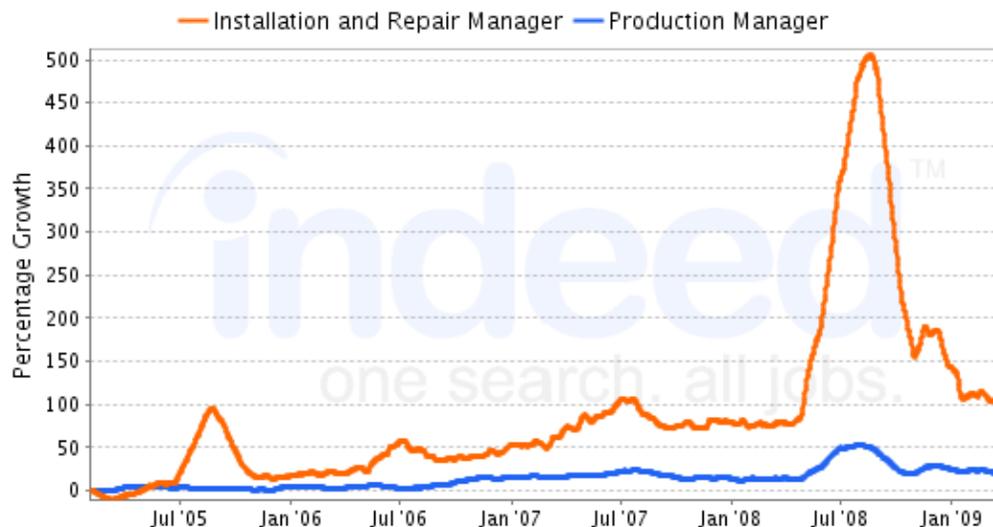
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 59,530	\$ 58,890	\$(640)
90th Percentile Wage	\$ 74,550	\$ 73,810	\$(740)
Mean Wage	\$ 49,310	\$ 48,010	\$(1,300)
Total Employment - 2007	2,490	3,750	1,260
Employment Base - 2006	2,530	3,893	1,363
Projected Employment - 2016	2,535	3,745	1,210
Projected Job Growth - 2006-2016	0.2 %	-3.8 %	-4.0 %
Projected Annual Openings - 2006-2016	60	65	5

National Job Posting Trends

Trend for First-Line Supervisors/Managers of Mechanics, Installers, and Repairers

Trend for First-Line Supervisors/Managers of Production and Operating Workers

Job Trends from Indeed.com



Data from [Indeed](http://Indeed.com)

Recommended Programs

Operations Management and Supervision

Operations Management and Supervision. A program that prepares individuals to manage and direct the physical and/or technical functions of a firm or organization, particularly those relating to development, production, and manufacturing. Includes instruction in principles of general management, manufacturing and production systems, plant management, equipment maintenance management, production control, industrial labor relations and skilled trades supervision, strategic manufacturing policy, systems analysis, productivity analysis and cost control, and materials planning.

No schools available for the program

**Maine Statewide Promotion Opportunities for First-Line Supervisors/Managers of Mechanics, Installers, and Repairers**

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	100	4	2,490	\$46,810.00	\$0.00	0%	60
11-9021.00	Construction Managers	87	3	970	\$72,320.00	\$25,510.00	4%	35
11-3051.00	Industrial Production Managers	86	4	690	\$72,560.00	\$25,750.00	-12%	24
17-3026.00	Industrial Engineering Technicians	84	3	370	\$51,700.00	\$4,890.00	6%	9
11-3071.02	Storage and Distribution Managers	84	3	710	\$62,270.00	\$15,460.00	5%	25
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	83	5	20	\$60,790.00	\$13,980.00	5%	1
49-9051.00	Electrical Power-Line Installers and Repairers	83	3	280	\$47,750.00	\$940.00	9%	12
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	83	3	170	\$47,860.00	\$1,050.00	-9%	3
27-1021.00	Commercial and Industrial Designers	82	4	140	\$49,170.00	\$2,360.00	5%	5
47-4021.00	Elevator Installers and Repairers	82	4	0	\$50,960.00	\$4,150.00	0%	0
51-8013.00	Power Plant Operators	81	3	480	\$50,240.00	\$3,430.00	10%	21
51-8012.00	Power Distributors and Dispatchers	81	4	0	\$47,720.00	\$910.00	0%	0
11-3071.01	Transportation Managers	81	3	710	\$62,270.00	\$15,460.00	5%	25
11-9011.01	Nursery and Greenhouse Managers	81	4	30	\$60,610.00	\$13,800.00	20%	15
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	81	3	440	\$49,450.00	\$2,640.00	-19%	15

Top Industries for First-Line Supervisors/Managers of Production and Operating Workers

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Plastics product manufacturing	326100	4.03%	28,154	29,844	6.00%
Printing and related support activities	323100	3.61%	25,224	19,985	-20.77%
Motor vehicle parts manufacturing	336300	3.08%	21,518	17,131	-20.39%
Architectural and structural metals manufacturing	332300	2.52%	17,595	18,792	6.80%



Self-employed workers, primary job	000601	2.40%	16,779	17,876	6.54%
Grocery stores	445100	2.37%	16,559	18,067	9.11%
Animal slaughtering and processing	311600	2.24%	15,642	17,851	14.13%
Local government, excluding education and hospitals	939300	2.07%	14,471	16,257	12.34%
Machine shops	332710	1.99%	13,948	11,538	-17.28%
Converted paper product manufacturing	322200	1.89%	13,212	11,088	-16.08%
Semiconductor and other electronic component manufacturing	334400	1.88%	13,126	11,473	-12.59%
Drycleaning and laundry services	812300	1.75%	12,216	12,217	0.01%
Other wood product manufacturing	321900	1.64%	11,463	10,802	-5.77%
Other fabricated metal product manufacturing	332900	1.57%	10,950	9,702	-11.39%
Other general purpose machinery manufacturing	333900	1.41%	9,879	8,918	-9.73%

Top Industries for First-Line Supervisors/Managers of Mechanics, Installers, and Repairers

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Automobile dealers	441100	6.95%	32,287	36,627	13.44%
Automotive mechanical and electrical repair and maintenance	811110	5.50%	25,547	30,332	18.73%
Local government, excluding education and hospitals	939300	5.31%	24,681	27,727	12.34%
Plumbing, heating, and air-conditioning contractors	238220	3.15%	14,658	16,552	12.93%
Automotive parts, accessories, and tire stores	441300	2.86%	13,294	12,969	-2.44%
Automotive body, paint, interior, and glass repair	811120	2.85%	13,264	15,487	16.76%
Electric power generation, transmission and distribution	221100	2.79%	12,970	11,929	-8.03%
Federal government, excluding postal service	919999	2.45%	11,388	10,766	-5.47%
Wired telecommunications carriers	517100	2.42%	11,241	8,825	-21.49%
Lessors of real estate	531100	2.27%	10,546	11,619	10.18%
Electrical contractors	238210	1.83%	8,518	8,931	4.86%
State government, excluding education and hospitals	929200	1.66%	7,712	7,568	-1.87%
Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	811300	1.46%	6,774	7,168	5.82%
Elementary and secondary schools, public and private	611100	1.43%	6,655	7,013	5.38%
Activities related to real estate	531300	1.41%	6,543	8,339	27.44%