



# TORQ Analysis of Sailors and Marine Oilers to Refuse and Recyclable Material Collectors

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Sailors and Marine Oilers	53-5011.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Refuse and Recyclable Material Collectors	53-7081.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:					82						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	 88	Level	 84	Level	 74						
Gaps To Narrow if Possible		Upgrade These Skills		Knowledge to Add							
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
No Critical Gaps Recorded!				No Skills Upgrade Required!				No Knowledge Upgrades Required!			
LEVEL and IMPT (IMPORTANCE) refer to the Target Refuse and Recyclable Material Collectors. GAP refers to level difference between Sailors and Marine Oilers and Refuse and Recyclable Material Collectors.											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Sailors and Marine Oilers	Refuse and Recyclable Material Collectors	Importance
Multilimb Coordination	50 	44 	62 
Control Precision	50 	50 	59 
Near Vision	50 	35 	59 
Oral Comprehension	51 	44 	56 
Oral Expression	46 	39 	56 
Problem Sensitivity	50 	32 	56 
Depth Perception	55 	39 	56 
Speech Recognition	41 	39 	56 
Arm-Hand Steadiness	44 	34 	53 
Manual Dexterity	44 	39 	53 
Static Strength	57 	44 	53 
Written Comprehension	44 	30 	50 
Deductive Reasoning	42 	34 	50 
Inductive Reasoning	42 	34 	50 



Information Ordering	42	35	50
Selective Attention	48	34	50
Reaction Time	48	37	50
Far Vision	69	34	50
Speech Clarity	48	39	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Sailors and Marine Oilers	Refuse and Recyclable Material Collectors	Importance
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Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Sailors and Marine Oilers	Refuse and Recyclable Material Collectors	Importance
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**Experience & Education Comparison**

Related Work Experience Comparison			Required Education Level Comparison		
Description	Sailors and Marine Oilers	Refuse and Recyclable Material Collectors	Description	Sailors and Marine Oilers	Refuse and Recyclable Material Collectors
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	0%	Master's Degree	0%	0%
2-4 years	9%	4%	Post-Bachelor Cert	0%	0%
1-2 years	34%	15%	Bachelors	0%	0%
6-12 months	21%	14%	AA or Equiv	0%	0%
3-6 months	20%	0%	Some College	0%	0%
1-3 months	1%	20%	Post-Secondary Certificate	29%	8%
0-1 month	2%	8%	High School Diploma or GED	68%	54%
None	11%	36%	No HSD or GED	0%	37%

Sailors and Marine Oilers

Refuse and Recyclable Material Collectors

Most Common Educational/Training Requirement:

Short-term on-the-job training

Short-term on-the-job training

Job Zone Comparison

**2 - Job Zone Two: Some Preparation Needed**  
 Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.  
 These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.  
 Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

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**Tasks**



## Sailors and Marine Oilers

## Core Tasks

## Generalized Work Activities:

- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- 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.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

## Specific Tasks

## Occupation Specific Tasks:

- Attach hoses and operate pumps in order to transfer substances to and from liquid cargo tanks.
- Break out, rig, and stow cargo-handling gear, stationary rigging, and running gear.
- Chip and clean rust spots on decks, superstructures, and sides of ships, using wire brushes and hand or air chipping machines.
- Clean and polish wood trim, brass, and other metal parts.
- Examine machinery to verify specified pressures and lubricant flows.
- Give directions to crew members engaged in cleaning wheelhouses and quarterdecks.
- Handle lines to moor vessels to wharfs, to tie up vessels to other vessels, or to rig towing lines.
- Load or unload materials from vessels.
- Lower and man lifeboats when emergencies occur.
- Lubricate machinery, equipment, and engine parts such as gears, shafts, and bearings.
- Maintain a ship's engines under the direction of the ship's engineering officers.
- Maintain government-issued certifications as required.
- Measure depth of water in shallow or unfamiliar waters, using leadlines, and telephone or shout depth information to vessel bridges.

## Refuse and Recyclable Material Collectors

## Core Tasks

## Generalized Work Activities:

- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.

## Specific Tasks

## Occupation Specific Tasks:

- Clean trucks and compactor bodies after routes have been completed.
- Communicate with dispatchers concerning delays, unsafe sites, accidents, equipment breakdowns, and other maintenance problems.
- Dismount garbage trucks to collect garbage and remount trucks to ride to the next collection point.
- Drive to disposal sites to empty trucks that have been filled.
- Drive trucks along established routes through residential streets and alleys, or through business and industrial areas.
- Fill out any needed reports for defective equipment.
- Inspect trucks prior to beginning routes to ensure safe operating condition.
- Keep informed of road and weather conditions to determine how routes will be affected.
- Operate automated or semi-automated hoisting devices that raise refuse bins and dump contents into openings in truck bodies.
- Operate equipment that compresses the collected refuse.
- Organize schedules for refuse collection.
- Provide quotes for refuse collection contracts.
- Refuel trucks and add other necessary



- Operate, maintain, and repair ship equipment such as winches, cranes, derricks, and weapons system.
- Overhaul lifeboats and lifeboat gear, and lower or raise lifeboats with winches or falls.
- Paint or varnish decks, superstructures, lifeboats, or sides of ships.
- Participate in shore patrols.
- Provide engineers with assistance in repairing and adjusting machinery.
- Read pressure and temperature gauges or displays, and record data in engineering logs.
- Record in ships' logs data such as weather conditions and distances traveled.
- Relay specified signals to other ships, using visual signaling devices such as blinker lights and semaphores.
- Splice and repair ropes, wire cables, and cordage, using marlinespikes, wirecutters, twine, and hand tools.
- Stand by wheels when ships are on automatic pilot, and verify accuracy of courses, using magnetic compasses.
- Stand gangway watches to prevent unauthorized persons from boarding ships while they are in port.
- Stand watch in ships' bows or bridge wings in order to look for obstructions in a ship's path or to locate navigational aids such as buoys and lighthouses.
- Steer ships under the direction of commanders or navigating officers, or direct helmsmen to steer, following designated courses.
- Sweep, mop, and wash down decks to remove oil, dirt, and debris, using brooms, mops, brushes, and hoses.
- Tie barges together into tow units for tugboats to handle, inspecting barges periodically during voyages and disconnecting them when destinations are reached.

#### Detailed Tasks

##### Detailed Work Activities:

- clean rooms or work areas
- deploy running gear on watercraft
- direct and coordinate activities of workers or staff
- direct course or speed of ship
- dismantle or reassemble rigging
- handle boat or ship tie-off lines
- inspect machinery or equipment to determine adjustments or repairs needed
- load/unload passenger luggage or cargo
- lubricate machinery, equipment, or parts
- maintain daily logs or records
- maintain or repair boat or ship hull or superstructure
- maintain or repair ship/boat engine,

- refuel trucks and add other necessary fluids, such as oil.
- Sort items set out for recycling and throw materials into designated truck compartments.
- Tag garbage or recycling containers to inform customers of problems such as excess garbage or inclusion of items that are not permitted.

#### Detailed Tasks

##### Detailed Work Activities:

- drive truck with capacity greater than 3 tons
- load, unload, or stack containers, materials, or products
- move or fit heavy objects
- use truck-mounted hydraulic lifts or other accessories
- use two-way radio or mobile phone

#### Technology - Examples



machinery or equipment

- maintain production or work records
- maintain records, reports, or files
- measure water depth
- mend or repair fishing nets or other watercraft gear
- monitor sonar or navigational aids
- move or fit heavy objects
- operate cargo handling gear
- operate emergency fire or rescue equipment
- operate hoist, winch, or hydraulic boom
- operate navigation technology or equipment
- order helmsperson to steer vessel
- perform safety inspections in transportation setting
- read maps
- read navigation charts
- recognize reefs, shoals, or other hazards by navigation aids
- repair specialized rigging
- set up specialized rigging
- signal directions or warnings to coworkers
- stand watch on vessel
- steer boat or ship
- understand technical operating, service or repair manuals
- use geographic positioning system (GPS)
- use hand or power tools
- use knowledge of seamanship or boat handling
- use knowledge of tides and currents
- use local or regional geographical knowledge to transportation
- use stationary rigging aboard ship
- use two-way radio or mobile phone
- use weighing or measuring devices in transportation

#### Technology - Examples

Data base user interface and query software

- KNM TurboWin
- Kongsberg Maritime K-Log Deck Logbook
- Log book software

Facilities management software

- Computerized maintenance management system  
CMMS software

#### Tools - Examples

- Crescent wrenches
- Engine room alarm systems



- Ship anchor chocks
- Mooring cables
- Electric windlasses
- Workshop vises
- Sheave blocks
- Bolt cutters
- Electric deck cranes
- Wire splicers
- Centrifugal cargo pumps
- Metal chisels
- Sounding rods
- Desktop computers
- Bilge pumping systems
- Magnetic compasses
- Explosimeters
- Galvanized thimbles
- Safety lanyards
- Centrifugal ventilators
- Fids
- Portable fire extinguishers
- Fire hoses
- Carbon dioxide CO2 firefighting systems
- Pyrotechnic distress signals
- Cargo booms
- Forklifts
- Portable gas detectors
- Emergency generators
- Gear pumps
- Grease dispensing guns
- Gyrocompasses
- Claw hammers
- Cargo derricks



- Thermal protective aids TPA
- Anti-exposure coveralls
- Pilot ladders
- Life buoys
- Life jackets
- Lifeboats
- Cargo hooks
- Lifeboat davits
- Container lift trucks
- Locking jaw pliers
- Bridge telephones
- Blinker lights
- Filter masks
- Liquid cargo transfer hoses
- Oil dispensing cans
- Riding pawls
- Personal computers
- Pipe wrenches
- Air chippers
- Hand punches
- Radar navigation systems
- Emergency position-indicating radio beacons
- Ratchet sets
- Reciprocating pumps
- Respiratory equipment
- Protective safety glasses
- Safety belts
- Protective safety helmets
- Sewing needles
- Sharpening steels
- Lifting slings
- Spanner wrenches



- Electric telegraphs
- Two way radios
- Welders
- Electric mooring winches
- Wire cutters

### Labor Market Comparison

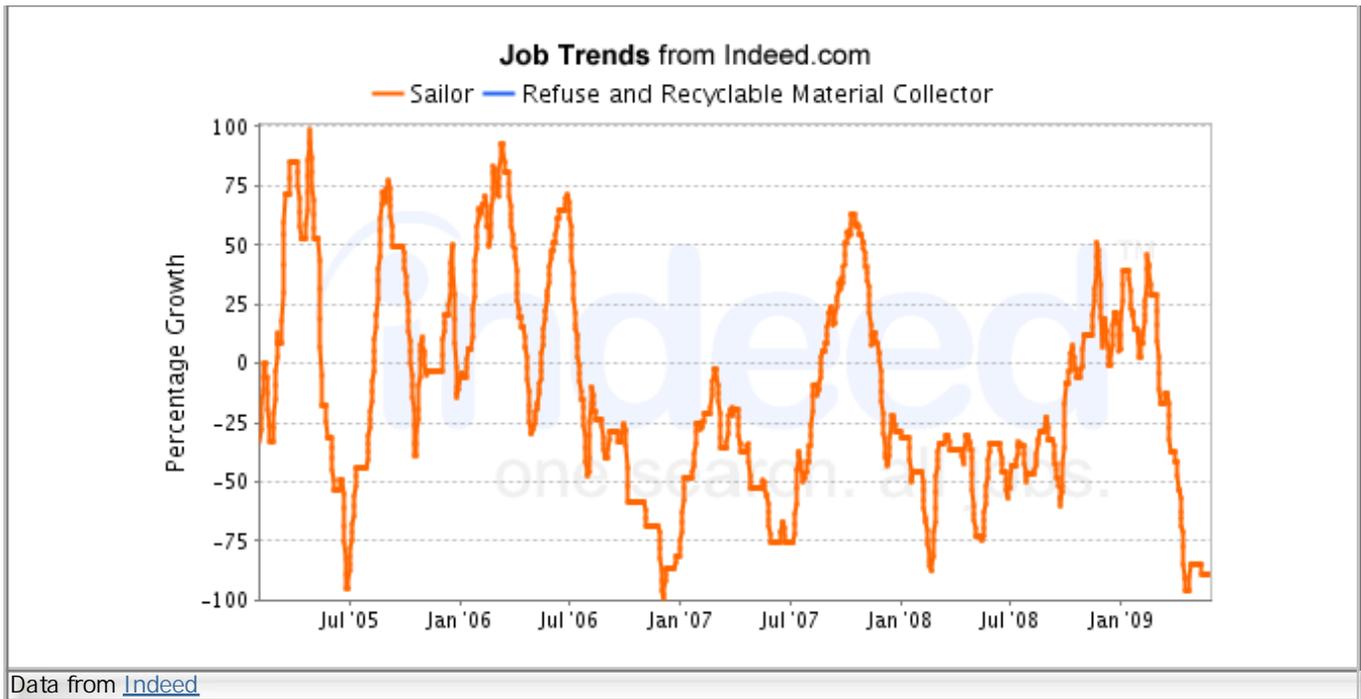
Maine Department of Labor.

Description	Sailors and Marine Oilers	Refuse and Recyclable Material Collectors	Difference
Median Wage	N/A	\$ 22,780	N/A
10th Percentile Wage	N/A	\$ 15,690	N/A
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	N/A	\$ 28,570	N/A
90th Percentile Wage	N/A	\$ 33,230	N/A
Mean Wage	N/A	\$ 23,640	N/A
Total Employment - 2656	N/A	930	N/A
Employment Base - 2665	N/A	1,343	N/A
Projected Employment - 2665	N/A	1,356	N/A
Projected Job Growth - 2006-2665	N/A	1.0 %	N/A
Projected Annual Openings - 2006-2665	N/A	37	N/A
Special			

Special Occupations:

### National Job Posting Trends

Trend for Sailors and Marine Oilers and Refuse and Recyclable Material Collectors



### Programs

No information on programs or the occupation.

### Maine Statewide Promotion Opportunities for Sailors and Marine Oilers

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
37-3011.00	Landscaping and Groundskeeping Workers	82	1	4,040	\$24,450.00	\$24,450.00	12%	130	
53-7081.00	Refuse and Recyclable Material Collectors	82	2	930	\$22,780.00	\$22,780.00	1%	37	
47-5021.00	Earth Drillers, Except Oil and Gas	82	3	140	\$37,470.00	\$37,470.00	2%	4	
47-4061.00	Rail-Track Laying and Maintenance Equipment Operators	81	1	120	\$36,960.00	\$36,960.00	8%	4	
51-2091.00	Fiberglass Laminators and Fabricators	81		440	\$33,960.00	\$33,960.00	5%	11	
47-2071.00	Paving, Surfacing, and Tamping Equipment Operators	81	2	320	\$25,520.00	\$25,520.00	1%	7	



49-3093.00	Tire Repairers and Changers	80	1	330	\$19,920.00	\$19,920.00	25%	15
47-2051.00	Cement Masons and Concrete Finishers	80	3	640	\$29,060.00	\$29,060.00	7%	25
47-4051.00	Highway Maintenance Workers	80	2	2,210	\$28,790.00	\$28,790.00	7%	60
51-4121.06	Welders, Cutters, and Welder Fitters	80	2	1,610	\$38,030.00	\$38,030.00	7%	49
53-7021.00	Crane and Tower Operators	80	3	240	\$41,940.00	\$41,940.00	-2%	4
47-2061.00	Construction Laborers	80	2	3,020	\$26,660.00	\$26,660.00	5%	46
49-3031.00	Bus and Truck Mechanics and Diesel Engine Specialists	79	3	1,180	\$34,210.00	\$34,210.00	6%	34
53-3033.00	Truck Drivers, Light or Delivery Services	79	2	4,100	\$25,210.00	\$25,210.00	7%	108
53-7051.00	Industrial Truck and Tractor Operators	79	2	3,210	\$26,160.00	\$26,160.00	-2%	82

Special Occupations:

### Top Industries for Refuse and Recyclable Material Collectors

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Waste collection	562100	32.50%	44,187	50,140	13.47%
Waste treatment and disposal	562200	15.26%	20,746	23,452	13.05%
Self-employed workers, primary job	000601	5.78%	7,861	7,537	-4.12%
Remediation and other waste management services	562900	2.12%	2,885	3,434	19.02%
Miscellaneous durable goods merchant wholesalers	423900	0.99%	1,342	1,387	3.32%
General freight trucking	484100	0.91%	1,242	1,264	1.80%
Specialized freight trucking	484200	0.48%	654	662	1.37%
Private households, primary jobs	814100	0.44%	594	555	-6.41%
Self-employed workers, secondary job	000602	0.28%	382	343	-10.41%
Postal service	491100	0.14%	186	170	-8.38%



Colleges, universities, and professional schools, public and private	611300	0.11%	156	157	0.69%
Vocational rehabilitation services	624300	0.10%	135	148	9.63%
Other support services	561900	0.10%	138	170	23.30%
Management of companies and enterprises	551100	0.07%	101	105	3.75%
General medical and surgical hospitals, public and private	622100	0.06%	84	84	-0.36%

### Top Industries for Sailors and Marine Oilers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Support activities for water transportation	488300	24.87%	8,202	9,494	15.76%
Deep sea, coastal, and great lakes water transportation	483100	23.81%	7,854	9,651	22.88%
Inland water transportation	483200	19.73%	6,509	7,308	12.29%
Federal government, excluding postal service	919999	6.25%	2,062	1,949	-5.47%
Scenic and sightseeing transportation	487000	5.03%	1,659	2,145	29.32%
Commercial and industrial machinery and equipment rental and leasing	532400	2.25%	741	905	22.19%
Gambling industries	713200	1.62%	534	994	86.04%
Support activities for mining	213100	0.93%	306	288	-5.93%
Employment services	561300	0.92%	303	384	26.56%
Colleges, universities, and professional schools, public and private	611300	0.33%	108	121	11.87%
Fishing, hunting and trapping; primary job	114000	0.33%	108	84	-22.64%

# TORQ Analysis of Sailors and Marine Oilers to Railroad Conductors and Yardmasters

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Sailors and Marine Oilers	53-5011.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Railroad Conductors and Yardmasters	53-4031.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS													
Grand TORQ:												81	
Ability TORQ				Skills TORQ				Knowledge TORQ					
Level				86	Level				77	Level			81
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add					
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt		
Oral Expression	60	14	75	Operation and Control	62	33	70	Transportation	66	10	73		
Oral Comprehension	59	8	72	Reading Comprehension	62	14	77						
Deductive Reasoning	50	8	62	Active Listening	61	5	79						
Information Ordering	50	8	62	Instructing	63	5	69						
Reaction Time	55	7	59										
Written Expression	42	7	53										
Speech Recognition	46	5	65										
Speech Clarity	50	2	68										
Auditory Attention	59	2	59										
Inductive Reasoning	44	2	53										
Near Vision	51	1	68										
Rate Control	42	1	50										
LEVEL and IMPT (IMPORTANCE) refer to the Target Railroad Conductors and Yardmasters. GAP refers to level difference between Sailors and Marine Oilers and Railroad Conductors and Yardmasters.													

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Sailors and Marine Oilers	Railroad Conductors and Yardmasters	Importance
Oral Expression	46 	60 	75 
Oral Comprehension	51 	59 	72 



Far Vision	69	59	72
Problem Sensitivity	50	50	68
Near Vision	50	51	68
Speech Clarity	48	50	68
Speech Recognition	41	46	65
Deductive Reasoning	42	50	62
Information Ordering	42	50	62
Depth Perception	55	44	62
Visualization	48	44	59
Multilimb Coordination	50	42	59
Reaction Time	48	55	59
Auditory Attention	57	59	59
Written Comprehension	44	44	56
Category Flexibility	41	41	56
Perceptual Speed	46	42	56
Selective Attention	48	48	56
Written Expression	35	42	53
Inductive Reasoning	42	44	53
Flexibility of Closure	53	39	53
Arm-Hand Steadiness	44	41	53
Control Precision	50	48	53
Rate Control	41	42	50
Hearing Sensitivity	46	39	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Sailors and Marine Oilers	Railroad Conductors and Yardmasters	Importance
Active Listening	56	61	79
Reading Comprehension	48	62	77
Operation and Control	29	62	70
Instructing	58	63	69

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Sailors and Marine Oilers	Railroad Conductors and Yardmasters	Importance
Transportation	56	66	73

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Sailors and Marine Oilers	Railroad Conductors and Yardmasters	Description	Sailors and Marine Oilers	Railroad Conductors and Yardmasters
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	2%	Master's Degree	0%	0%
2-4 years	9%	0%			



Experience	Sailors and Marine Oilers	Railroad Conductors and Yardmasters	Education/Training	Sailors and Marine Oilers	Railroad Conductors and Yardmasters
1-2 years	34%	13%	Post-Bachelor Cert	0%	0%
6-12 months	21%	10%	Bachelors	0%	0%
3-6 months	20%	7%	AA or Equiv	0%	0%
1-3 months	1%	6%	Some College	0%	0%
0-1 month	2%	0%	Post-Secondary Certificate	29%	4%
None	11%	58%	High School Diploma or GED	68%	90%
			No HSD or GED	0%	5%

Sailors and Marine Oilers	Railroad Conductors and Yardmasters
<b>Most Common Educational/Training Requirement:</b>	
Short-term on-the-job training	Moderate-term on-the-job training
<b>Job Zone Comparison</b>	
2 - Job Zone Two: Some Preparation Needed	2 - Job Zone Two: Some Preparation Needed
Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.	Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.
These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.	These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.
Employees in these occupations need anywhere from a few months to one year of working with experienced employees.	Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

## Tasks

Sailors and Marine Oilers	Railroad Conductors and Yardmasters
Core Tasks	Core Tasks
<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.</li> <li>Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.</li> <li>Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.</li> <li>Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.</li> <li>Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.</li> </ul>	<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.</li> <li>Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.</li> <li>Identifying Objects, Actions, and Events - Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.</li> <li>Evaluating Information to Determine Compliance with Standards - Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.</li> <li>Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.</li> </ul>
Specific Tasks	Specific Tasks



## Occupation Specific Tasks:

- Attach hoses and operate pumps in order to transfer substances to and from liquid cargo tanks.
- Break out, rig, and stow cargo-handling gear, stationary rigging, and running gear.
- Chip and clean rust spots on decks, superstructures, and sides of ships, using wire brushes and hand or air chipping machines.
- Clean and polish wood trim, brass, and other metal parts.
- Examine machinery to verify specified pressures and lubricant flows.
- Give directions to crew members engaged in cleaning wheelhouses and quarterdecks.
- Handle lines to moor vessels to wharfs, to tie up vessels to other vessels, or to rig towing lines.
- Load or unload materials from vessels.
- Lower and man lifeboats when emergencies occur.
- Lubricate machinery, equipment, and engine parts such as gears, shafts, and bearings.
- Maintain a ship's engines under the direction of the ship's engineering officers.
- Maintain government-issued certifications as required.
- Measure depth of water in shallow or unfamiliar waters, using leadlines, and telephone or shout depth information to vessel bridges.
- Operate, maintain, and repair ship equipment such as winches, cranes, derricks, and weapons system.
- Overhaul lifeboats and lifeboat gear, and lower or raise lifeboats with winches or falls.
- Paint or varnish decks, superstructures, lifeboats, or sides of ships.
- Participate in shore patrols.
- Provide engineers with assistance in repairing and adjusting machinery.
- Read pressure and temperature gauges or displays, and record data in engineering logs.
- Record in ships' logs data such as weather conditions and distances traveled.
- Relay specified signals to other ships, using visual signaling devices such as blinker lights and semaphores.
- Splice and repair ropes, wire cables, and cordage, using marlinespikes, wirecutters, twine, and hand tools.
- Stand by wheels when ships are on automatic pilot, and verify accuracy of courses, using magnetic compasses.
- Stand gangway watches to prevent unauthorized persons from boarding ships while they are in port.
- Stand watch in ships' bows or bridge wings in order to look for obstructions in a ship's path or to locate navigational aids such as

## Occupation Specific Tasks:

- Arrange for the removal of defective cars from trains at stations or stops.
- Collect tickets, fares, or passes from passengers.
- Confer with engineers regarding train routes, timetables, and cargoes, and to discuss alternative routes when there are rail defects or obstructions.
- Confirm routes and destination information for freight cars.
- Direct and instruct workers engaged in yard activities, such as switching tracks, coupling and uncoupling cars, and routing inbound and outbound traffic.
- Direct engineers to move cars to fit planned train configurations, combining or separating cars to make up or break up trains.
- Document and prepare reports of accidents, unscheduled stops, or delays.
- Inspect each car periodically during runs.
- Inspect freight cars for compliance with sealing procedures, and record car numbers and seal numbers.
- Instruct workers to regulate air-conditioning, lighting, and heating in passenger cars in order to ensure passengers' comfort.
- Instruct workers to set warning signals in front and at rear of trains during emergency stops.
- Keep records of the contents and destination of each train car, and make sure that cars are added or removed at proper points on routes.
- Observe yard traffic to determine tracks available to accommodate inbound and outbound traffic.
- Operate controls to activate track switches and traffic signals.
- Receive information regarding train or rail problems from dispatchers or from electronic monitoring devices.
- Receive instructions from dispatchers regarding trains' routes, timetables, and cargoes.
- Record departure and arrival times, messages, tickets and revenue collected, and passenger accommodations and destinations.
- Review schedules, switching orders, way bills, and shipping records to obtain cargo loading and unloading information and to plan work.
- Signal engineers to begin train runs, stop trains, or change speed, using telecommunications equipment or hand signals.
- Supervise and coordinate crew activities to transport freight and passengers and to provide boarding, porter, maid, and meal services to passengers.
- Supervise workers in the inspection and maintenance of mechanical equipment in order to ensure efficient and safe train



buoys and lighthouses.

- Steer ships under the direction of commanders or navigating officers, or direct helmsmen to steer, following designated courses.
- Sweep, mop, and wash down decks to remove oil, dirt, and debris, using brooms, mops, brushes, and hoses.
- Tie barges together into tow units for tugboats to handle, inspecting barges periodically during voyages and disconnecting them when destinations are reached.

#### Detailed Tasks

##### Detailed Work Activities:

- clean rooms or work areas
- deploy running gear on watercraft
- direct and coordinate activities of workers or staff
- direct course or speed of ship
- dismantle or reassemble rigging
- handle boat or ship tie-off lines
- inspect machinery or equipment to determine adjustments or repairs needed
- load/unload passenger luggage or cargo
- lubricate machinery, equipment, or parts
- maintain daily logs or records
- maintain or repair boat or ship hull or superstructure
- maintain or repair ship/boat engine, machinery or equipment
- maintain production or work records
- maintain records, reports, or files
- measure water depth
- mend or repair fishing nets or other watercraft gear
- monitor sonar or navigational aids
- move or fit heavy objects
- operate cargo handling gear
- operate emergency fire or rescue equipment
- operate hoist, winch, or hydraulic boom
- operate navigation technology or equipment
- order helmsperson to steer vessel
- perform safety inspections in transportation setting
- read maps
- read navigation charts
- recognize reefs, shoals, or other hazards by navigation aids
- repair specialized rigging
- set up specialized rigging
- signal directions or warnings to coworkers
- stand watch on vessel
- steer boat or ship
- understand technical operating, service or

order to ensure efficient and safe train operation.

- Verify accuracy of timekeeping instruments with engineers to ensure trains depart on time.

#### Detailed Tasks

##### Detailed Work Activities:

- answer customer or public inquiries
- collect payment
- direct and coordinate activities of workers or staff
- direct human or vehicle traffic
- direct passengers to designated locations
- distribute traffic control or caution signs or markers
- follow traffic laws
- follow transportation schedules
- inspect railroad equipment
- maintain records, reports, or files
- monitor railroad vehicle or equipment operation
- observe loading of freight to ensure crew compliance with procedures
- observe signal from other crewmembers
- observe signal light on switchboard
- operate track switches
- perform safety inspections in transportation setting
- prepare safety reports
- provide customer service in surface transportation
- read switching order, train orders, or arrival or departure schedules
- receive instructions from traffic control personnel
- review schedules to obtain cargo loading information
- set flares, flags, lanterns or torpedoes during emergency stops
- signal directions or warnings to coworkers
- understand railroad signals
- understand technical operating, service or repair manuals
- use established traffic or transportation procedures
- use two-way radio or mobile phone
- watch for or relay traffic signals
- work as a team member

#### Technology - Examples

##### Expert system software

- Positive train control PTC systems

##### Industrial control software

- Automated equipment identification AEI software



- understand technical operating, service or repair manuals
- use geographic positioning system (GPS)
- use hand or power tools
- use knowledge of seamanship or boat handling
- use knowledge of tides and currents
- use local or regional geographical knowledge to transportation
- use stationary rigging aboard ship
- use two-way radio or mobile phone
- use weighing or measuring devices in transportation

#### Technology - Examples

##### Data base user interface and query software

- KNM TurboWin
- Kongsberg Maritime K-Log Deck Logbook
- Log book software

##### Facilities management software

- Computerized maintenance management system CMMS software

#### Tools - Examples

- Crescent wrenches
- Engine room alarm systems
- Ship anchor chocks
- Mooring cables
- Electric windlasses
- Workshop vises
- Sheave blocks
- Bolt cutters
- Electric deck cranes
- Wire splicers
- Centrifugal cargo pumps
- Metal chisels
- Sounding rods
- Desktop computers
- Bilge pumping systems
- Magnetic compasses
- Explosimeters
- Galvanized thimbles

- RailComm DocYard
- SAIC Integrated AEI Software
- Softrail AEI Automatic Yard Tracking System

##### Inventory management software

- Inventory tracking software
- Softrail AEI Rail & Road Manager

##### Materials requirements planning logistics and supply chain software

- Bourque Data Systems YardMaster
- Freight reservation software

##### Office suite software

- Microsoft Office

#### Tools - Examples

- Adjustable wrenches
- Portable bar code scanners
- Desktop computers
- Bridge plates
- Intercom systems
- Portable satellite communications systems
- Automatic container locks
- Mainframe computers
- Laptop computers
- Personal computers
- Starting punches
- Radio frequency identification RFID device readers
- Ultra high frequency UHF radio communication systems
- Uncoupling levers
- Switching system controls
- Locking ratchet wrenches
- Switch adjusting wrenches
- Tie-down winches
- Weigh-in-motion scales
- Two way radios
- Car pullers



- Safety lanyards
- Centrifugal ventilators
- Fids
- Portable fire extinguishers
- Fire hoses
- Carbon dioxide CO2 firefighting systems
- Pyrotechnic distress signals
- Cargo booms
- Forklifts
- Portable gas detectors
- Emergency generators
- Gear pumps
- Grease dispensing guns
- Gyrocompasses
- Claw hammers
- Cargo derricks
- Thermal protective aids TPA
- Anti-exposure coveralls
- Pilot ladders
- Life buoys
- Life jackets
- Lifeboats
- Cargo hooks
- Lifeboat davits
- Container lift trucks
- Locking jaw pliers
- Bridge telephones
- Blinker lights
- Filter masks
- Liquid cargo transfer hoses
- Oil dispensing cans
- Riding pawls
- Cable sheath cutters



- Personal computers
- Pipe wrenches
- Air chippers
- Hand punches
- Radar navigation systems
- Emergency position-indicating radio beacons
- Ratchet sets
- Reciprocating pumps
- Respiratory equipment
- Protective safety glasses
- Safety belts
- Protective safety helmets
- Sewing needles
- Sharpening steels
- Lifting slings
- Spanner wrenches
- Electric telegraphs
- Two way radios
- Welders
- Electric mooring winches
- Wire cutters

### Labor Market Comparison

Maine Department of Labor.

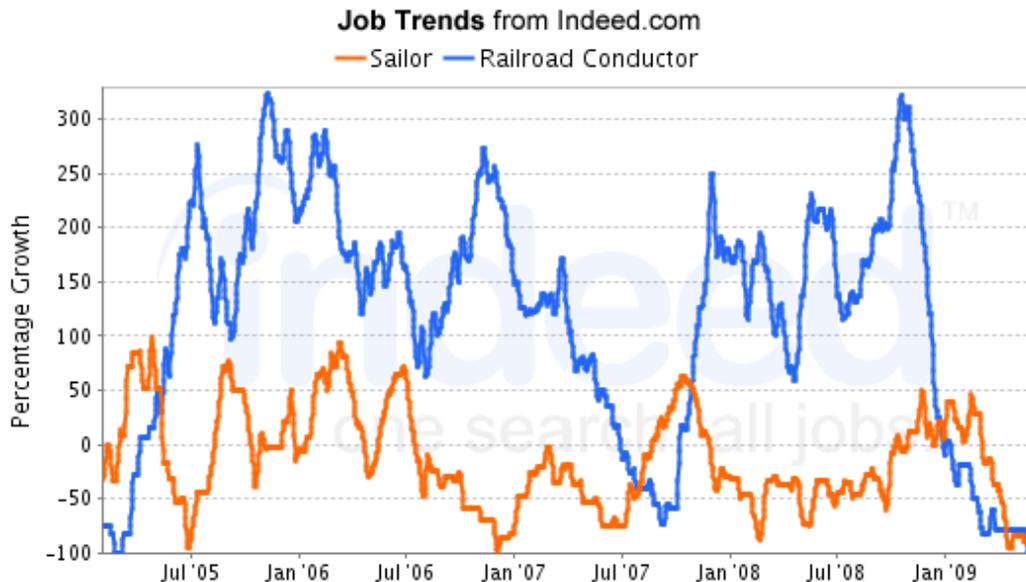
Description	Sailors and Marine Oilers	Railroad Conductors and Yardmasters	Difference
Median Wage	N/A	N/A	N/A
10th Percentile Wage	N/A	N/A	N/A
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	N/A	N/A	N/A
90th Percentile Wage	N/A	N/A	N/A
Mean Wage	N/A	N/A	N/A
Total Employment - 2640	N/A	90	N/A
Employment Base - 2649	N/A	87	N/A
Projected Employment - 2649	N/A	98	N/A



Projected Job Growth - 2006-2649	N/A	12.6 %	N/A
Projected Annual Openings - 2006-2649	N/A	4	N/A
Special			
Special Occupations:			

## National Job Posting Trends

Trend for Sailors and Marine Oilers and Railroad Conductors and Yardmasters



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

## Programs

### Related Programs

#### Heavy Equipment Main. and Repairer

Heavy Equipment Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.

Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	<a href="http://www.emcc.edu">www.emcc.edu</a>
Eastern Maine Community College	354 Hogan Rd	Bangor	<a href="http://www.emcc.edu">www.emcc.edu</a>
Wasington County Community College	One College Drive	Calais	<a href="http://www.wccc.me.edu">www.wccc.me.edu</a>

#### Truck and Bus Driver/Commercial Vehicle Operation

Truck and Bus Driver/Commercial Vehicle Operation. A program that prepares individuals to apply technical knowledge and skills to drive trucks and buses, delivery vehicles, for-hire vehicles and other commercial vehicles. Includes instruction in operating gas, diesel, or electrically-powered vehicles; loading and unloading cargo or passengers; reporting delays or accidents on the road; verifying load against shipping papers; arranging transportation for personnel; and keeping records of receipts and fares.



No information on schools for the program

### Maine Statewide Promotion Opportunities for Sailors and Marine Oilers

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-5021.00	Earth Drillers, Except Oil and Gas	82	3	140	\$37,470.00	\$37,470.00	2%	4	
37-3011.00	Landscaping and Groundskeeping Workers	82	1	4,040	\$24,450.00	\$24,450.00	12%	130	
53-7081.00	Refuse and Recyclable Material Collectors	82	2	930	\$22,780.00	\$22,780.00	1%	37	
47-2071.00	Paving, Surfacing, and Tamping Equipment Operators	81	2	320	\$25,520.00	\$25,520.00	1%	7	
47-4061.00	Rail-Track Laying and Maintenance Equipment Operators	81	1	120	\$36,960.00	\$36,960.00	8%	4	
51-2091.00	Fiberglass Laminators and Fabricators	81		440	\$33,960.00	\$33,960.00	5%	11	
53-7021.00	Crane and Tower Operators	80	3	240	\$41,940.00	\$41,940.00	-2%	4	
49-3093.00	Tire Repairers and Changers	80	1	330	\$19,920.00	\$19,920.00	25%	15	
47-2061.00	Construction Laborers	80	2	3,020	\$26,660.00	\$26,660.00	5%	46	
47-2051.00	Cement Masons and Concrete Finishers	80	3	640	\$29,060.00	\$29,060.00	7%	25	
47-4051.00	Highway Maintenance Workers	80	2	2,210	\$28,790.00	\$28,790.00	7%	60	
51-4121.06	Welders, Cutters, and Welder Fitters	80	2	1,610	\$38,030.00	\$38,030.00	7%	49	
51-9198.00	Helpers--Production Workers	79	1	1,490	\$22,260.00	\$22,260.00	-10%	37	
49-3031.00	Bus and Truck Mechanics and Diesel Engine Specialists	79	3	1,180	\$34,210.00	\$34,210.00	6%	34	
53-3033.00	Truck Drivers, Light or Delivery Services	79	2	4,100	\$25,210.00	\$25,210.00	7%	108	

Special Occupations:



### Top Industries for Railroad Conductors and Yardmasters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Rail transportation	482100	94.06%	37,769	41,132	8.90%

### Top Industries for Sailors and Marine Oilers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Support activities for water transportation	488300	24.87%	8,202	9,494	15.76%
Deep sea, coastal, and great lakes water transportation	483100	23.81%	7,854	9,651	22.88%
Inland water transportation	483200	19.73%	6,509	7,308	12.29%
Federal government, excluding postal service	919999	6.25%	2,062	1,949	-5.47%
Scenic and sightseeing transportation	487000	5.03%	1,659	2,145	29.32%
Commercial and industrial machinery and equipment rental and leasing	532400	2.25%	741	905	22.19%
Gambling industries	713200	1.62%	534	994	86.04%
Support activities for mining	213100	0.93%	306	288	-5.93%
Employment services	561300	0.92%	303	384	26.56%
Colleges, universities, and professional schools, public and private	611300	0.33%	108	121	11.87%
Fishing, hunting and trapping; primary job	114000	0.33%	108	84	-22.64%

# TORQ Analysis of Sailors and Marine Oilers to Landscaping and Groundskeeping Workers

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Sailors and Marine Oilers	53-5011.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Landscaping and Groundskeeping Workers	37-3011.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:				<b>82</b>							
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	 84	Level	 81	Level	 81						
Gaps To Narrow if Possible		Upgrade These Skills		Knowledge to Add							
Ability	Level	Gap	Imp	Skill	Level	Gap	Imp	Knowledge	Level	Gap	Imp
No Critical Gaps Recorded!				No Skills Upgrade Required!				No Knowledge Upgrades Required!			
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Landscaping and Groundskeeping Workers. GAP refers to level difference between Sailors and Marine Oilers and Landscaping and Groundskeeping Workers.</p>											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Sailors and Marine Oilers	Landscaping and Groundskeeping Workers	Importance
Arm-Hand Steadiness	44	42	65
Multilimb Coordination	50	50	65
Control Precision	50	48	59
Oral Comprehension	51	44	56
Manual Dexterity	44	42	56
Static Strength	57	48	56
Near Vision	50	42	56
Extent Flexibility	50	42	53
Speech Recognition	41	34	53
Oral Expression	46	41	50
Problem Sensitivity	50	37	50
Visualization	48	41	50
Selective Attention	48	42	50
Trunk Strength	50	44	50
Speech Clarity	48	34	50



Skill Level Comparison - Abilities with importance scores over 69

Description	Sailors and Marine Oilers	Landscaping and Groundskeeping Workers	Importance
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Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Sailors and Marine Oilers	Landscaping and Groundskeeping Workers	Importance
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**Experience & Education Comparison**

Related Work Experience Comparison			Required Education Level Comparison		
Description	Sailors and Marine Oilers	Landscaping and Groundskeeping Workers	Description	Sailors and Marine Oilers	Landscaping and Groundskeeping Workers
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	4%	Post-Masters Cert	0%	0%
4-6 years	0%	4%	Master's Degree	0%	0%
2-4 years	9%	2%	Post-Bachelor Cert	0%	0%
1-2 years	34%	21%	Bachelors	0%	4%
6-12 months	21%	16%	AA or Equiv	0%	1%
3-6 months	20%	2%	Some College	0%	0%
1-3 months	1%	8%	Post-Secondary Certificate	29%	15%
0-1 month	2%	2%	High School Diploma or GED	68%	25%
None	11%	37%	No HSD or GED	0%	52%

Sailors and Marine Oilers

Landscaping and Groundskeeping Workers

Most Common Educational/Training Requirement:

Short-term on-the-job training

Short-term on-the-job training

Job Zone Comparison

**2 - Job Zone Two: Some Preparation Needed**  
 Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.  
 These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.  
 Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

**1 - Job Zone One: Little or No Preparation Needed**  
 No previous work-related skill, knowledge, or experience is needed for these occupations. For example, a person can become a cashier even if he/she has never worked before.  
 These occupations may require a high school diploma or GED certificate. Some may require a formal training course to obtain a license.  
 Employees in these occupations need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

**Tasks**

Sailors and Marine Oilers	Landscaping and Groundskeeping Workers
<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and</li> </ul>	<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and</li> </ul>



handling of materials.

- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- 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.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

#### Specific Tasks

#### Occupation Specific Tasks:

- Attach hoses and operate pumps in order to transfer substances to and from liquid cargo tanks.
- Break out, rig, and stow cargo-handling gear, stationary rigging, and running gear.
- Chip and clean rust spots on decks, superstructures, and sides of ships, using wire brushes and hand or air chipping machines.
- Clean and polish wood trim, brass, and other metal parts.
- Examine machinery to verify specified pressures and lubricant flows.
- Give directions to crew members engaged in cleaning wheelhouses and quarterdecks.
- Handle lines to moor vessels to wharfs, to tie up vessels to other vessels, or to rig towing lines.
- Load or unload materials from vessels.
- Lower and man lifeboats when emergencies occur.
- Lubricate machinery, equipment, and engine parts such as gears, shafts, and bearings.
- Maintain a ship's engines under the direction of the ship's engineering officers.
- Maintain government-issued certifications as required.
- Measure depth of water in shallow or unfamiliar waters, using leadlines, and telephone or shout depth information to vessel bridges.
- Operate, maintain, and repair ship equipment such as winches, cranes, derricks, and weapons system.
- Overhaul lifeboats and lifeboat gear, and lower or raise lifeboats with winches or falls.
- Paint or varnish decks, superstructures, lifeboats, or sides of ships.
- Participate in shore patrols.
- Provide engineers with assistance in repairing and adjusting machinery.

handling of materials.

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.

#### Specific Tasks

#### Occupation Specific Tasks:

- Advise customers on plant selection and care.
- Attach wires from planted trees to support stakes.
- Build forms, and mix and pour cement to form garden borders.
- Care for artificial turf fields, periodically removing the turf and replacing cushioning pads, and vacuuming and disinfecting the turf after use to prevent the growth of harmful bacteria.
- Care for established lawns by mulching, aerating, weeding, grubbing and removing thatch, and trimming and edging around flower beds, walks, and walls.
- Care for natural turf fields, making sure the underlying soil has the required composition to allow proper drainage and to support the grasses used on the fields.
- Decorate gardens with stones and plants.
- Follow planned landscaping designs to determine where to lay sod, sow grass, or plant flowers and foliage.
- Gather and remove litter.
- Haul or spread topsoil, and spread straw over seeded soil to hold soil in place.
- Install rock gardens, ponds, decks, drainage systems, irrigation systems, retaining walls, fences, planters, and/or playground equipment.
- Maintain and repair tools, equipment, and structures such as buildings, greenhouses, fences, and benches, using hand and power tools.
- Maintain irrigation systems, including winterizing the systems and starting them up in spring.
- Mark design boundaries, and paint natural and artificial turf fields with team logos and names before events.
- Mix and spray or spread fertilizers, herbicides, or insecticides onto grass, shrubs, and trees, using hand or automatic



- Read pressure and temperature gauges or displays, and record data in engineering logs.
- Record in ships' logs data such as weather conditions and distances traveled.
- Relay specified signals to other ships, using visual signaling devices such as blinker lights and semaphores.
- Splice and repair ropes, wire cables, and cordage, using marlinespikes, wirecutters, twine, and hand tools.
- Stand by wheels when ships are on automatic pilot, and verify accuracy of courses, using magnetic compasses.
- Stand gangway watches to prevent unauthorized persons from boarding ships while they are in port.
- Stand watch in ships' bows or bridge wings in order to look for obstructions in a ship's path or to locate navigational aids such as buoys and lighthouses.
- Steer ships under the direction of commanders or navigating officers, or direct helmsmen to steer, following designated courses.
- Sweep, mop, and wash down decks to remove oil, dirt, and debris, using brooms, mops, brushes, and hoses.
- Tie barges together into tow units for tugboats to handle, inspecting barges periodically during voyages and disconnecting them when destinations are reached.

#### Detailed Tasks

##### Detailed Work Activities:

- clean rooms or work areas
- deploy running gear on watercraft
- direct and coordinate activities of workers or staff
- direct course or speed of ship
- dismantle or reassemble rigging
- handle boat or ship tie-off lines
- inspect machinery or equipment to determine adjustments or repairs needed
- load/unload passenger luggage or cargo
- lubricate machinery, equipment, or parts
- maintain daily logs or records
- maintain or repair boat or ship hull or superstructure
- maintain or repair ship/boat engine, machinery or equipment
- maintain production or work records
- maintain records, reports, or files
- measure water depth
- mend or repair fishing nets or other watercraft gear
- monitor sonar or navigational aids
- move or fit heavy objects
- operate cargo handling gear

sprayers or spreaders.

- Mow and edge lawns, using power mowers and edgers.
- Operate powered equipment such as mowers, tractors, twin-axle vehicles, snow blowers, chain-saws, electric clippers, sod cutters, and pruning saws.
- Plan and cultivate lawns and gardens.
- Plant seeds, bulbs, foliage, flowering plants, grass, ground covers, trees, and shrubs, and apply mulch for protection, using gardening tools.
- Provide proper upkeep of sidewalks, driveways, parking lots, fountains, planters, burial sites, and other grounds features.
- Prune and trim trees, shrubs, and hedges, using shears, pruners, or chain saws.
- Rake, mulch, and compost leaves.
- Shovel snow from walks, driveways, and parking lots, and spread salt in those areas.
- Trim and pick flowers, and clean flower beds.
- Use hand tools such as shovels, rakes, pruning saws, saws, hedge and brush trimmers, and axes.
- Use irrigation methods to adjust the amount of water consumption and to prevent waste.
- Water lawns, trees, and plants, using portable sprinkler systems, hoses, or watering cans.

#### Detailed Tasks

##### Detailed Work Activities:

- advise clients or customers
- construct, erect, or repair wooden frameworks or structures
- drive truck with capacity greater than 3 tons
- finish concrete surfaces
- follow horticulture irrigation techniques
- maintain physical building or grounds of property
- mix paint, ingredients, or chemicals, according to specifications
- move or fit heavy objects
- operate tractor with accessories or attachments
- plant, cultivate, or harvest crops, including aquaculture
- prepare site or surfaces for concrete or masonry work
- repair and maintain grounds keeping equipment and tools
- resolve landscaping problems
- use chain saws
- use hand or power tools
- use herbicides, fertilizers, pesticides or related products
- use plant disease control techniques
- use plant or crop transplant techniques



- operate emergency tire or rescue equipment
- operate hoist, winch, or hydraulic boom
- operate navigation technology or equipment
- order helmsperson to steer vessel
- perform safety inspections in transportation setting
- read maps
- read navigation charts
- recognize reefs, shoals, or other hazards by navigation aids
- repair specialized rigging
- set up specialized rigging
- signal directions or warnings to coworkers
- stand watch on vessel
- steer boat or ship
- understand technical operating, service or repair manuals
- use geographic positioning system (GPS)
- use hand or power tools
- use knowledge of seamanship or boat handling
- use knowledge of tides and currents
- use local or regional geographical knowledge to transportation
- use stationary rigging aboard ship
- use two-way radio or mobile phone
- use weighing or measuring devices in transportation

#### Technology - Examples

##### Data base user interface and query software

- KNM TurboWin
- Kongsberg Maritime K-Log Deck Logbook
- Log book software

##### Facilities management software

- Computerized maintenance management system  
CMMS software

#### Tools - Examples

- Crescent wrenches
- Engine room alarm systems
- Ship anchor chocks
- Mooring cables
- Electric windlasses
- Workshop vises
- Sheave blocks
- Bolt cutters

- use portable hand spray equipment
- use power mower
- use truck-mounted hydraulic lifts or other accessories

#### Technology - Examples



- Electric deck cranes
- Wire splicers
- Centrifugal cargo pumps
- Metal chisels
- Sounding rods
- Desktop computers
- Bilge pumping systems
- Magnetic compasses
- Explosimeters
- Galvanized thimbles
- Safety lanyards
- Centrifugal ventilators
- Fids
- Portable fire extinguishers
- Fire hoses
- Carbon dioxide CO2 firefighting systems
- Pyrotechnic distress signals
- Cargo booms
- Forklifts
- Portable gas detectors
- Emergency generators
- Gear pumps
- Grease dispensing guns
- Gyrocompasses
- Claw hammers
- Cargo derricks
- Thermal protective aids TPA
- Anti-exposure coveralls
- Pilot ladders
- Life buoys
- Life jackets
- Lifeboats



- Cargo hooks
- Lifeboat davits
- Container lift trucks
- Locking jaw pliers
- Bridge telephones
- Blinker lights
- Filter masks
- Liquid cargo transfer hoses
- Oil dispensing cans
- Riding pawls
- Personal computers
- Pipe wrenches
- Air chippers
- Hand punches
- Radar navigation systems
- Emergency position-indicating radio beacons
- Ratchet sets
- Reciprocating pumps
- Respiratory equipment
- Protective safety glasses
- Safety belts
- Protective safety helmets
- Sewing needles
- Sharpening steels
- Lifting slings
- Spanner wrenches
- Electric telegraphs
- Two way radios
- Welders
- Electric mooring winches
- Wire cutters

## Labor Market Comparison

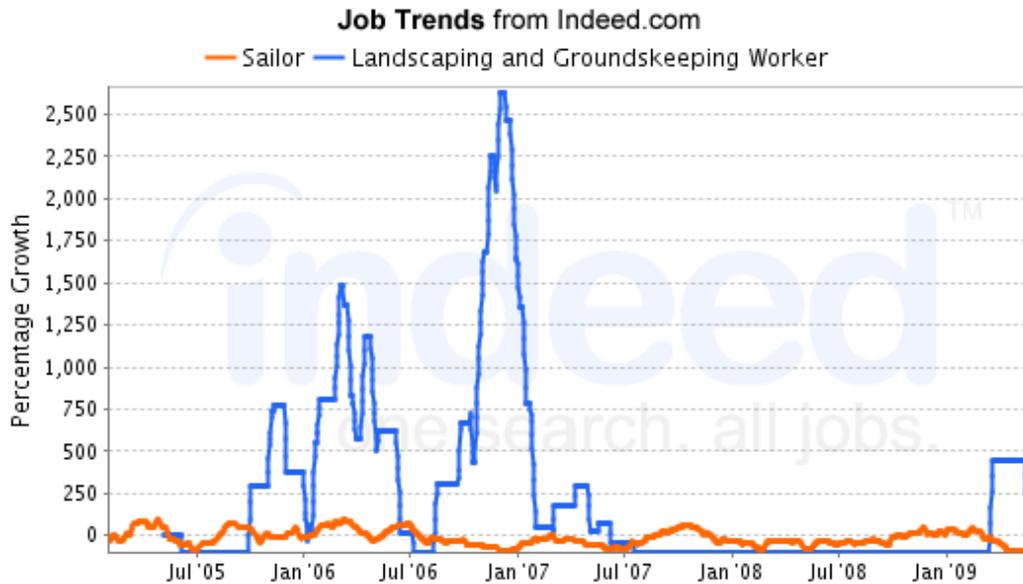
Maine Department of Labor.

Description	Sailors and Marine Oilers	Landscaping and Groundskeeping Workers	Difference
Median Wage	N/A	\$ 24,450	N/A
10th Percentile Wage	N/A	\$ 15,870	N/A
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	N/A	\$ 29,940	N/A
90th Percentile Wage	N/A	\$ 35,600	N/A
Mean Wage	N/A	\$ 25,000	N/A
Total Employment - 2346	N/A	4,040	N/A
Employment Base - 2355	N/A	5,237	N/A
Projected Employment - 2355	N/A	5,850	N/A
Projected Job Growth - 2006-2355	N/A	11.7 %	N/A
Projected Annual Openings - 2006-2355	N/A	130	N/A
Special			

Special Occupations:

**National Job Posting Trends**

Trend for Sailors and Marine Oilers and Landscaping and Groundskeeping Workers



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

**Programs**

Related Programs



### Landscaping and Groundskeeping

Landscaping and Groundskeeping. A program that prepares individuals to manage and maintain indoor and/or outdoor ornamental and recreational plants and groundcovers and related conceptual designs established by landscape architects, interior designers, enterprise owners or managers, and individual clients. Includes instruction in applicable principles of horticulture, gardening, plant and soil irrigation and nutrition, turf maintenance, plant maintenance, equipment operation and maintenance, personnel supervision, and purchasing.

Institution	Address	City	URL
University of Maine		Orono	<a href="http://www.umaine.edu/">www.umaine.edu/</a>
University of Maine		Orono	<a href="http://www.umaine.edu/">www.umaine.edu/</a>
Unity College	90 Quaker Hill Road	Unity	<a href="http://www.unity.edu">www.unity.edu</a>

### Turf and Turfgrass Management

Turf and Turfgrass Management. A program that focuses on turfgrasses and related groundcover plants and prepares individuals to develop ornamental or recreational grasses and related products; plant, transplant, and manage grassed areas; and to produce and store turf used for transplantation. Includes instruction in applicable plant sciences, genetics of grasses, turf science, use analysis, turf management, and related economics.

No information on schools for the program

## Maine Statewide Promotion Opportunities for Sailors and Marine Oilers

O*NET Code	Title	Grand TORO	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-5021.00	Earth Drillers, Except Oil and Gas	82	3	140	\$37,470.00	\$37,470.00	2%	4	
37-3011.00	Landscaping and Groundskeeping Workers	82	1	4,040	\$24,450.00	\$24,450.00	12%	130	
53-7081.00	Refuse and Recyclable Material Collectors	82	2	930	\$22,780.00	\$22,780.00	1%	37	
47-2071.00	Paving, Surfacing, and Tamping Equipment Operators	81	2	320	\$25,520.00	\$25,520.00	1%	7	
47-4061.00	Rail-Track Laying and Maintenance Equipment Operators	81	1	120	\$36,960.00	\$36,960.00	8%	4	
51-2091.00	Fiberglass Laminators and Fabricators	81		440	\$33,960.00	\$33,960.00	5%	11	
53-7021.00	Crane and Tower Operators	80	3	240	\$41,940.00	\$41,940.00	-2%	4	
47-2061.00	Construction Laborers	80	2	3,020	\$26,660.00	\$26,660.00	5%	46	
49-3093.00	Tire Repairers and Changers	80	1	330	\$19,920.00	\$19,920.00	25%	15	



47-2051.00	Cement Masons and Concrete Finishers	80	3	640	\$29,060.00	\$29,060.00	7%	25
47-4051.00	Highway Maintenance Workers	80	2	2,210	\$28,790.00	\$28,790.00	7%	60
51-4121.06	Welders, Cutters, and Welder Fitters	80	2	1,610	\$38,030.00	\$38,030.00	7%	49
51-9198.00	Helpers--Production Workers	79	1	1,490	\$22,260.00	\$22,260.00	-10%	37
43-5041.00	Meter Readers, Utilities	79	1	90	\$31,240.00	\$31,240.00	-11%	3
51-9041.00	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	79	2	260	\$28,330.00	\$28,330.00	-7%	5

Special Occupations:

### Top Industries for Landscaping and Groundskeeping Workers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Landscaping services	561730	36.82%	449,188	575,491	28.12%
Self-employed workers, primary job	000601	17.30%	211,079	226,203	7.17%
Local government, excluding education and hospitals	939300	6.79%	82,877	86,862	4.81%
Self-employed workers, secondary job	000602	3.24%	39,476	39,530	0.14%
Employment services	561300	2.29%	27,944	31,057	11.14%
Elementary and secondary schools, public and private	611100	1.89%	23,031	24,414	6.00%
Lessors of real estate	531100	1.77%	21,582	23,919	10.83%
Colleges, universities, and professional schools, public and private	611300	1.62%	19,754	22,230	12.53%
Fitness and recreational sports centers	713940	1.61%	19,680	26,376	34.03%
Religious organizations	813100	1.52%	18,555	22,398	20.71%
Death care services	812200	1.37%	16,677	19,176	14.98%
Activities related to real estate	531300	1.16%	14,139	18,125	28.19%
Lawn and garden equipment and supplies stores	444200	0.84%	10,300	9,322	-9.49%
State government, excluding education and hospitals	929200	0.66%	8,034	7,930	-1.29%
Private households, primary jobs	814100	0.66%	8,015	8,384	4.60%

### Top Industries for Sailors and Marine Oilers



Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Support activities for water transportation	488300	24.87%	8,202	9,494	15.76%
Deep sea, coastal, and great lakes water transportation	483100	23.81%	7,854	9,651	22.88%
Inland water transportation	483200	19.73%	6,509	7,308	12.29%
Federal government, excluding postal service	919999	6.25%	2,062	1,949	-5.47%
Scenic and sightseeing transportation	487000	5.03%	1,659	2,145	29.32%
Commercial and industrial machinery and equipment rental and leasing	532400	2.25%	741	905	22.19%
Gambling industries	713200	1.62%	534	994	86.04%
Support activities for mining	213100	0.93%	306	288	-5.93%
Employment services	561300	0.92%	303	384	26.56%
Colleges, universities, and professional schools, public and private	611300	0.33%	108	121	11.87%
Fishing, hunting and trapping; primary job	114000	0.33%	108	84	-22.64%



## TORQ Analysis of Sailors and Marine Oilers to Rail-Track Laying and Maintenance Equipment Operators

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Sailors and Marine Oilers	53-5011.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Rail-Track Laying and Maintenance Equipment Operators	47-4061.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:								81			
Ability TORQ			Skills TORQ				Knowledge TORQ				
Level		91	Level		63	Level		89			
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Imp	Skill	Level	Gap	Imp	Knowledge	Level	Gap	Imp
Control Precision	57	7	68	Time Management	61	30	72	No Knowledge Upgrades Required!			
Response Orientation	48	6	56	Troubleshooting	60	22	72				
Multilimb Coordination	53	3	68	Repairing	63	18	73				
Reaction Time	51	3	65	Equipment Maintenance	62	17	69				
Dynamic Strength	44	3	53								
Manual Dexterity	46	2	68								
Finger Dexterity	44	2	59								
Visualization	50	2	56								
Speed of Limb Movement	41	2	56								
Rate Control	42	1	53								
Stamina	42	1	53								
LEVEL and IMPT (IMPORTANCE) refer to the Target Rail-Track Laying and Maintenance Equipment Operators. GAP refers to level difference between Sailors and Marine Oilers and Rail-Track Laying and Maintenance Equipment Operators.											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators	Importance
Manual Dexterity	44	46	68
Control Precision	50	57	68
Multilimb Coordination	50	53	68
Depth Perception	55	46	68



Problem Sensitivity	50	42	65
Arm-Hand Steadiness	44	42	65
Reaction Time	48	51	65
Static Strength	57	53	62
Far Vision	69	51	62
Finger Dexterity	42	44	59
Near Vision	50	42	59
Flexibility of Closure	53	46	56
Visualization	48	50	56
Response Orientation	42	48	56
Speed of Limb Movement	39	41	56
Trunk Strength	50	50	56
Perceptual Speed	46	44	53
Rate Control	41	42	53
Dynamic Strength	41	44	53
Stamina	41	42	53
Visual Color Discrimination	46	39	53
Hearing Sensitivity	46	42	53
Oral Comprehension	51	46	50
Oral Expression	46	42	50
Deductive Reasoning	42	41	50
Inductive Reasoning	42	39	50
Information Ordering	42	42	50
Extent Flexibility	50	48	50
Gross Body Coordination	44	39	50
Auditory Attention	57	41	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators	Importance
Repairing	45	63	73
Troubleshooting	38	60	72
Time Management	31	61	72
Equipment Maintenance	45	62	69

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators	Importance
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**Experience & Education Comparison**

Related Work Experience Comparison			Required Education Level Comparison		
Description	Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators	Description	Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators
10+ years	0%	0%	Doctoral	0%	0%



6-8 years	0%	0%	Professional Degree	0%	0%
4-6 years	0%	4%	Post-Masters Cert	0%	0%
2-4 years	9%	10%	Master's Degree	0%	0%
1-2 years	34%	21%	Post-Bachelor Cert	0%	0%
6-12 months	21%	14%	Bachelors	0%	0%
3-6 months	20%	3%	AA or Equiv	0%	0%
1-3 months	1%	8%	Some College	0%	12%
0-1 month	2%	1%	Post-Secondary Certificate	29%	8%
None	11%	33%	High School Diploma or GED	68%	71%
			No HSD or GED	0%	7%

Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators
<b>Most Common Educational/Training Requirement:</b>	
Short-term on-the-job training	Moderate-term on-the-job training
<b>Job Zone Comparison</b>	
2 - Job Zone Two: Some Preparation Needed	1 - Job Zone One: Little or No Preparation Needed
Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.	No previous work-related skill, knowledge, or experience is needed for these occupations. For example, a person can become a cashier even if he/she has never worked before.
These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.	These occupations may require a high school diploma or GED certificate. Some may require a formal training course to obtain a license.
Employees in these occupations need anywhere from a few months to one year of working with experienced employees.	Employees in these occupations need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

<b>Tasks</b>	
Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators
Core Tasks	Core Tasks
<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>• Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.</li> <li>• Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.</li> <li>• Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.</li> <li>• Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.</li> <li>• Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.</li> </ul>	<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>• Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.</li> <li>• Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).</li> <li>• Evaluating Information to Determine Compliance with Standards - Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.</li> <li>• Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.</li> <li>• Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.</li> </ul>
Specific Tasks	Specific Tasks
	Occupation Specific Tasks:



### Occupation Specific Tasks:

- Attach hoses and operate pumps in order to transfer substances to and from liquid cargo tanks.
- Break out, rig, and stow cargo-handling gear, stationary rigging, and running gear.
- Chip and clean rust spots on decks, superstructures, and sides of ships, using wire brushes and hand or air chipping machines.
- Clean and polish wood trim, brass, and other metal parts.
- Examine machinery to verify specified pressures and lubricant flows.
- Give directions to crew members engaged in cleaning wheelhouses and quarterdecks.
- Handle lines to moor vessels to wharfs, to tie up vessels to other vessels, or to rig towing lines.
- Load or unload materials from vessels.
- Lower and man lifeboats when emergencies occur.
- Lubricate machinery, equipment, and engine parts such as gears, shafts, and bearings.
- Maintain a ship's engines under the direction of the ship's engineering officers.
- Maintain government-issued certifications as required.
- Measure depth of water in shallow or unfamiliar waters, using leadlines, and telephone or shout depth information to vessel bridges.
- Operate, maintain, and repair ship equipment such as winches, cranes, derricks, and weapons system.
- Overhaul lifeboats and lifeboat gear, and lower or raise lifeboats with winches or falls.
- Paint or varnish decks, superstructures, lifeboats, or sides of ships.
- Participate in shore patrols.
- Provide engineers with assistance in repairing and adjusting machinery.
- Read pressure and temperature gauges or displays, and record data in engineering logs.
- Record in ships' logs data such as weather conditions and distances traveled.
- Relay specified signals to other ships, using visual signaling devices such as blinker lights and semaphores.
- Splice and repair ropes, wire cables, and cordage, using marlinespikes, wirecutters, twine, and hand tools.
- Stand by wheels when ships are on automatic pilot, and verify accuracy of courses, using magnetic compasses.
- Stand gangway watches to prevent unauthorized persons from boarding ships while they are in port.
- Stand watch in ships' bows or bridge wings in order to look for obstructions in a ship's path or to locate navigational aids such as
  - Adjust controls of machines that spread, shape, raise, level, and align track, according to specifications.
  - Clean and make minor repairs to machines and equipment.
  - Clean tracks, and clear ice and snow from tracks and switch boxes.
  - Clean, grade, and level ballast on railroad tracks.
  - Cut rails to specified lengths, using rail saws.
  - Dress and reshape worn or damaged railroad switch points and frogs, using portable power grinders.
  - Drill holes through rails, tie plates, and fishplates for insertion of bolts and spikes, using power drills.
  - Drive graders, tamping machines, brooms, and ballast cleaning/spreading machines to redistribute gravel and ballast between rails.
  - Drive vehicles that automatically move and lay tracks or rails over sections of track to be constructed, repaired, or maintained.
  - Engage mechanisms that lay tracks or rails to specified gauges.
  - Grind ends of new or worn rails to attain smooth joints, using portable grinders.
  - Lubricate machines, change oil, and fill hydraulic reservoirs to specified levels.
  - Observe leveling indicator arms to verify levelness and alignment of tracks.
  - Operate single- or multiple-head spike driving machines to drive spikes into ties and secure rails.
  - Operate single- or multiple-head spike pullers to pull old spikes from ties.
  - Operate tie-adzing machines to cut ties and permit insertion of fishplates that hold rails.
  - Operate track-wrench machines to tighten or loosen bolts at joints that hold ends of rails together.
  - Paint railroad signs, such as speed limits and gate-crossing warnings.
  - Patrol assigned track sections so that damaged or broken track can be located and reported.
  - Push controls to close grasping devices on track or rail sections so that they can be raised or moved.
  - Raise rails, using hydraulic jacks, to allow for tie removal and replacement.
  - Repair and adjust track switches, using wrenches and replacement parts.
  - Spray ties, fishplates, and joints with oil to protect them from weathering.
  - String and attach wire-guidelines machine to rails so that tracks or rails can be aligned or leveled.
  - Turn wheels of machines, using lever controls, to adjust guidelines for track alignments and grades, following specifications.



buoys and lighthouses.

- Steer ships under the direction of commanders or navigating officers, or direct helmsmen to steer, following designated courses.
- Sweep, mop, and wash down decks to remove oil, dirt, and debris, using brooms, mops, brushes, and hoses.
- Tie barges together into tow units for tugboats to handle, inspecting barges periodically during voyages and disconnecting them when destinations are reached.

#### Detailed Tasks

##### Detailed Work Activities:

- clean rooms or work areas
- deploy running gear on watercraft
- direct and coordinate activities of workers or staff
- direct course or speed of ship
- dismantle or reassemble rigging
- handle boat or ship tie-off lines
- inspect machinery or equipment to determine adjustments or repairs needed
- load/unload passenger luggage or cargo
- lubricate machinery, equipment, or parts
- maintain daily logs or records
- maintain or repair boat or ship hull or superstructure
- maintain or repair ship/boat engine, machinery or equipment
- maintain production or work records
- maintain records, reports, or files
- measure water depth
- mend or repair fishing nets or other watercraft gear
- monitor sonar or navigational aids
- move or fit heavy objects
- operate cargo handling gear
- operate emergency fire or rescue equipment
- operate hoist, winch, or hydraulic boom
- operate navigation technology or equipment
- order helmsperson to steer vessel
- perform safety inspections in transportation setting
- read maps
- read navigation charts
- recognize reefs, shoals, or other hazards by navigation aids
- repair specialized rigging
- set up specialized rigging
- signal directions or warnings to coworkers
- stand watch on vessel
- steer boat or ship
- understand technical operating, service or

#### Detailed Tasks

##### Detailed Work Activities:

- grade or redistribute earth for roads or other construction
- maintain or repair construction machinery or equipment
- operate earth-moving or other heavy construction equipment
- read specifications
- use measuring devices in construction or extraction work

#### Technology - Examples



repair manuals

- use geographic positioning system (GPS)
- use hand or power tools
- use knowledge of seamanship or boat handling
- use knowledge of tides and currents
- use local or regional geographical knowledge to transportation
- use stationary rigging aboard ship
- use two-way radio or mobile phone
- use weighing or measuring devices in transportation

#### Technology - Examples

##### Data base user interface and query software

- KNM TurboWin
- Kongsberg Maritime K-Log Deck Logbook
- Log book software

##### Facilities management software

- Computerized maintenance management system  
CMMS software

#### Tools - Examples

- Crescent wrenches
- Engine room alarm systems
- Ship anchor chocks
- Mooring cables
- Electric windlasses
- Workshop vises
- Sheave blocks
- Bolt cutters
- Electric deck cranes
- Wire splicers
- Centrifugal cargo pumps
- Metal chisels
- Sounding rods
- Desktop computers
- Bilge pumping systems
- Magnetic compasses
- Explosimeters
- Galvanized thimbles



- Safety lanyards
- Centrifugal ventilators
- Fids
- Portable fire extinguishers
- Fire hoses
- Carbon dioxide CO2 firefighting systems
- Pyrotechnic distress signals
- Cargo booms
- Forklifts
- Portable gas detectors
- Emergency generators
- Gear pumps
- Grease dispensing guns
- Gyrocompasses
- Claw hammers
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- Bridge telephones
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- Filter masks
- Liquid cargo transfer hoses
- Oil dispensing cans
- Riding pawls



- Personal computers
- Pipe wrenches
- Air chippers
- Hand punches
- Radar navigation systems
- Emergency position-indicating radio beacons
- Ratchet sets
- Reciprocating pumps
- Respiratory equipment
- Protective safety glasses
- Safety belts
- Protective safety helmets
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### Labor Market Comparison

Maine Department of Labor.

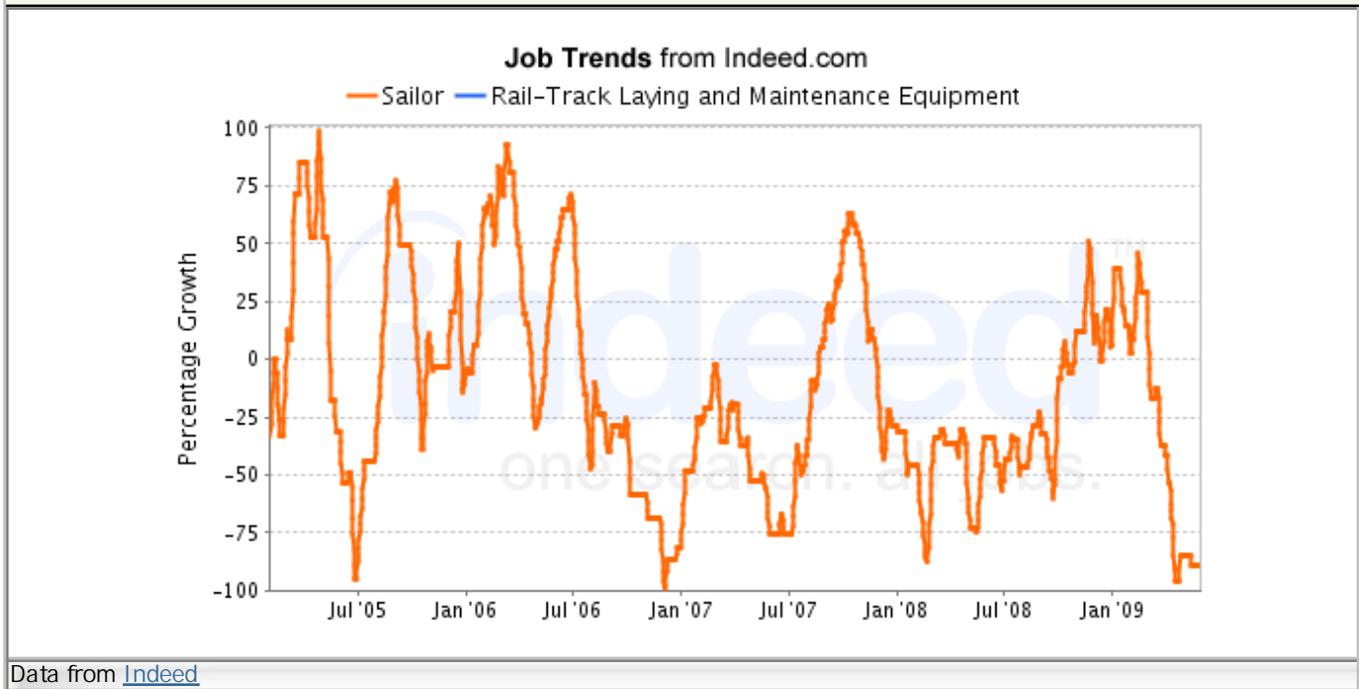
Description	Sailors and Marine Oilers	Rail-Track Laying and Maintenance Equipment Operators	Difference
Median Wage	N/A	\$ 36,960	N/A
10th Percentile Wage	N/A	\$ 26,530	N/A
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	N/A	\$ 43,700	N/A
90th Percentile Wage	N/A	\$ 48,640	N/A
Mean Wage	N/A	\$ 36,940	N/A
Total Employment - 2484	N/A	120	N/A
Employment Base - 2493	N/A	114	N/A



Projected Employment - 2493	N/A	123	N/A
Projected Job Growth - 2006-2493	N/A	7.9 %	N/A
Projected Annual Openings - 2006-2493	N/A	4	N/A
Special			
Special Occupations:			

## National Job Posting Trends

Trend for Sailors and Marine Oilers and Rail-Track Laying and Maintenance Equipment Operators



## Programs

### Related Programs

#### Construction Equipment Operator

Construction/Heavy Equipment/Earthmoving Equipment Operation. A program that prepares individuals to apply technical knowledge and skills to operate and maintain a variety of heavy equipment, such as a crawler tractors, motor graders and scrapers, shovels, rigging devices, hoists, and jacks. Includes instruction in digging, ditching, sloping, stripping, grading, and backfilling, clearing and excavating.

Institution	Address	City	URL
Wasington County Community College	One College Drive	Calais	<a href="http://www.wccc.me.edu">www.wccc.me.edu</a>

#### Heavy Equipment Main. and Repairer

Heavy Equipment Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.



Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	<a href="http://www.emcc.edu">www.emcc.edu</a>
Eastern Maine Community College	354 Hogan Rd	Bangor	<a href="http://www.emcc.edu">www.emcc.edu</a>
Washington County Community College	One College Drive	Calais	<a href="http://www.wccc.me.edu">www.wccc.me.edu</a>

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47-2051.00	Cement Masons and Concrete Finishers	80	3	640	\$29,060.00	\$29,060.00	7%	25	
47-4051.00	Highway Maintenance Workers	80	2	2,210	\$28,790.00	\$28,790.00	7%	60	
51-4121.06	Welders, Cutters, and Welder Fitters	80	2	1,610	\$38,030.00	\$38,030.00	7%	49	
51-9198.00	Helpers--Production Workers	79	1	1,490	\$22,260.00	\$22,260.00	-10%	37	
49-3031.00	Bus and Truck Mechanics and Diesel Engine Specialists	79	3	1,180	\$34,210.00	\$34,210.00	6%	34	



53-3033.00	Truck Drivers, Light or Delivery Services	79	2	4,100	\$25,210.00	\$25,210.00	7%	108
Special Occupations:								

### Top Industries for Rail-Track Laying and Maintenance Equipment Operators

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Rail transportation	482100	77.98%	11,412	11,820	3.58%
Other heavy and civil engineering construction	237900	9.03%	1,322	1,420	7.41%
Local government, excluding education and hospitals	939300	3.51%	514	577	12.34%
Nonresidential building construction	236200	1.09%	160	179	12.05%
Coal mining	212100	0.76%	111	112	0.99%

### Top Industries for Sailors and Marine Oilers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Support activities for water transportation	488300	24.87%	8,202	9,494	15.76%
Deep sea, coastal, and great lakes water transportation	483100	23.81%	7,854	9,651	22.88%
Inland water transportation	483200	19.73%	6,509	7,308	12.29%
Federal government, excluding postal service	919999	6.25%	2,062	1,949	-5.47%
Scenic and sightseeing transportation	487000	5.03%	1,659	2,145	29.32%
Commercial and industrial machinery and equipment rental and leasing	532400	2.25%	741	905	22.19%
Gambling industries	713200	1.62%	534	994	86.04%
Support activities for mining	213100	0.93%	306	288	-5.93%
Employment services	561300	0.92%	303	384	26.56%
Colleges, universities, and professional schools, public and private	611300	0.33%	108	121	11.87%
Fishing, hunting and trapping; primary job	114000	0.33%	108	84	-22.64%



# TORQ Analysis of Sailors and Marine Oilers to Fiberglass Laminators and Fabricators

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Sailors and Marine Oilers	53-5011.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Fiberglass Laminators and Fabricators	51-2091.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS							
Grand TORQ:					81		
Ability TORQ		Skills TORQ		Knowledge TORQ			
Level	88	Level	83	Level	71		
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add		
Ability	Level	Gap	Imp	Skill	Level	Gap	Imp
Arm-Hand Steadiness	48	4	65	No Skills Upgrade Required!		No Knowledge Upgrades Required!	
Manual Dexterity	48	4	59				
Category Flexibility	44	3	53				
Information Ordering	44	2	59				
Finger Dexterity	44	2	56				
Multilimb Coordination	51	1	72				
<p>LEVEL and IMP (IMPORTANCE) refer to the Target Fiberglass Laminators and Fabricators. GAP refers to level difference between Sailors and Marine Oilers and Fiberglass Laminators and Fabricators.</p>							

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators	Importance
Multilimb Coordination	50	51	72
Arm-Hand Steadiness	44	48	65
Trunk Strength	50	44	65
Problem Sensitivity	50	41	62
Information Ordering	42	44	59
Perceptual Speed	46	42	59
Manual Dexterity	44	48	59
Static Strength	57	46	59
Near Vision	50	48	59



Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators	Importance
Deductive Reasoning	42	41	56
Flexibility of Closure	53	50	56
Finger Dexterity	42	44	56
Control Precision	50	44	56
Far Vision	69	48	56
Oral Comprehension	51	44	53
Category Flexibility	41	44	53
Selective Attention	48	41	53
Stamina	41	39	53
Extent Flexibility	50	48	53
Visual Color Discrimination	46	44	53
Depth Perception	55	42	53
Auditory Attention	57	44	53
Written Comprehension	44	41	50
Oral Expression	46	39	50
Inductive Reasoning	42	41	50
Visualization	48	46	50
Hearing Sensitivity	46	39	50
Speech Recognition	41	35	50
Speech Clarity	48	34	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators	Importance
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Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators	Importance
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### Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators	Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	9%	Master's Degree	0%	0%
2-4 years	9%	11%	Post-Bachelor Cert	0%	0%
1-2 years	34%	0%	Bachelors	0%	0%
6-12 months	21%	18%	AA or Equiv	0%	3%
3-6 months	20%	14%	Some College	0%	11%
1-3 months	1%	8%	Post-Secondary Certificate	29%	7%
0-1 month	2%	0%	High School Diploma or GED	68%	47%
None	11%	35%	No HSD or GED	0%	30%

Sailors and Marine Oilers

Fiberglass Laminators and Fabricators



## Most Common Educational/Training Requirement:

Short-term on-the-job training	
Job Zone Comparison	
2 - Job Zone Two: Some Preparation Needed	-
Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.	
These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.	
Employees in these occupations need anywhere from a few months to one year of working with experienced employees.	

## Tasks

Sailors and Marine Oilers	Fiberglass Laminators and Fabricators
<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.</li> <li>Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.</li> <li>Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.</li> <li>Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.</li> <li>Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.</li> </ul> <p>Specific Tasks</p> <p>Occupation Specific Tasks:</p> <ul style="list-style-type: none"> <li>Attach hoses and operate pumps in order to transfer substances to and from liquid cargo tanks.</li> <li>Break out, rig, and stow cargo-handling gear, stationary rigging, and running gear.</li> <li>Chip and clean rust spots on decks, superstructures, and sides of ships, using wire brushes and hand or air chipping machines.</li> <li>Clean and polish wood trim, brass, and other metal parts.</li> <li>Examine machinery to verify specified pressures and lubricant flows.</li> <li>Give directions to crew members engaged in cleaning wheelhouses and quarterdecks.</li> </ul>	<p>Core Tasks</p> <p>Generalized Work Activities: No information about "Generalized Work Activities" for this occupation is available.</p> <p>Detailed Work Activities:</p> <ul style="list-style-type: none"> <li>examine products or work to verify conformance to specifications</li> <li>fabricate, assemble, or disassemble manufactured products by hand</li> <li>measure, weigh, or count products or materials</li> <li>mix paint, ingredients, or chemicals, according to specifications</li> <li>perform repetitive tasks in assembly setting</li> <li>read blueprints</li> <li>read specifications</li> <li>read work order, instructions, formulas, or processing charts</li> <li>use hand or power tools</li> <li>use spray application production equipment</li> </ul> <p>Specific Tasks</p> <p>Occupation Specific Tasks:</p> <ul style="list-style-type: none"> <li>Apply lacquers and waxes to mold surfaces to facilitate assembly and removal of laminated parts.</li> <li>Apply layers of plastic resin to mold surfaces prior to placement of fiberglass mats, repeating layers until products have the desired thicknesses and plastics have jelled.</li> <li>Bond wood reinforcing strips to decks and cabin structures of watercraft, using resin-saturated fiberglass.</li> <li>Check all dies, templates, and cutout patterns to be used in the manufacturing process to ensure that they conform to dimensional data, photographs, blueprints, samples, and/or customer specifications.</li> <li>Check completed products for conformance</li> </ul>



- Handle lines to moor vessels to wharfs, to tie up vessels to other vessels, or to rig towing lines.
- Load or unload materials from vessels.
- Lower and man lifeboats when emergencies occur.
- Lubricate machinery, equipment, and engine parts such as gears, shafts, and bearings.
- Maintain a ship's engines under the direction of the ship's engineering officers.
- Maintain government-issued certifications as required.
- Measure depth of water in shallow or unfamiliar waters, using leadlines, and telephone or shout depth information to vessel bridges.
- Operate, maintain, and repair ship equipment such as winches, cranes, derricks, and weapons system.
- Overhaul lifeboats and lifeboat gear, and lower or raise lifeboats with winches or falls.
- Paint or varnish decks, superstructures, lifeboats, or sides of ships.
- Participate in shore patrols.
- Provide engineers with assistance in repairing and adjusting machinery.
- Read pressure and temperature gauges or displays, and record data in engineering logs.
- Record in ships' logs data such as weather conditions and distances traveled.
- Relay specified signals to other ships, using visual signaling devices such as blinker lights and semaphores.
- Splice and repair ropes, wire cables, and cordage, using marlinespikes, wirecutters, twine, and hand tools.
- Stand by wheels when ships are on automatic pilot, and verify accuracy of courses, using magnetic compasses.
- Stand gangway watches to prevent unauthorized persons from boarding ships while they are in port.
- Stand watch in ships' bows or bridge wings in order to look for obstructions in a ship's path or to locate navigational aids such as buoys and lighthouses.
- Steer ships under the direction of commanders or navigating officers, or direct helmsmen to steer, following designated courses.
- Sweep, mop, and wash down decks to remove oil, dirt, and debris, using brooms, mops, brushes, and hoses.
- Tie barges together into tow units for tugboats to handle, inspecting barges periodically during voyages and disconnecting them when destinations are reached.

#### Detailed Tasks

#### Detailed Work Activities:

to specifications and for defects by measuring with rulers or micrometers, by checking them visually, or by tapping them to detect bubbles or dead spots.

- Cure materials by letting them set at room temperature, placing them under heat lamps, or baking them in ovens.
- Inspect, clean, and assemble molds before beginning work.
- Mask off mold areas which are not to be laminated, using cellophane, wax paper, masking tape, or special sprays containing mold-release substances.
- Mix catalysts into resins, and saturate cloth and mats with mixtures, using brushes.
- Pat or press layers of saturated mat or cloth into place on molds, using brushes or hands, and smooth out wrinkles and air bubbles with hands or squeegees.
- Release air bubbles and smooth seams, using rollers.
- Repair or modify damaged or defective glass-fiber parts, checking thicknesses, densities, and contours to ensure a close fit after repair.
- Select precut fiberglass mats, cloth, and woodbracing materials as required by projects being assembled.
- Spray chopped fiberglass, resins, and catalysts onto prepared molds or dies using pneumatic spray guns with chopper attachments.
- Trim cured materials by sawing them with diamond-impregnated cutoff wheels.
- Trim excess materials from molds, using hand shears or trimming knives.

#### Detailed Tasks

#### Detailed Work Activities:

- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- measure, weigh, or count products or materials
- mix paint, ingredients, or chemicals, according to specifications
- perform repetitive tasks in assembly setting
- read blueprints
- read specifications
- read work order, instructions, formulas, or processing charts
- use hand or power tools
- use spray application production equipment

#### Technology - Examples

#### Data base user interface and query software

- Data entry software

#### Spreadsheet software



- clean rooms or work areas
- deploy running gear on watercraft
- direct and coordinate activities of workers or staff
- direct course or speed of ship
- dismantle or reassemble rigging
- handle boat or ship tie-off lines
- inspect machinery or equipment to determine adjustments or repairs needed
- load/unload passenger luggage or cargo
- lubricate machinery, equipment, or parts
- maintain daily logs or records
- maintain or repair boat or ship hull or superstructure
- maintain or repair ship/boat engine, machinery or equipment
- maintain production or work records
- maintain records, reports, or files
- measure water depth
- mend or repair fishing nets or other watercraft gear
- monitor sonar or navigational aids
- move or fit heavy objects
- operate cargo handling gear
- operate emergency fire or rescue equipment
- operate hoist, winch, or hydraulic boom
- operate navigation technology or equipment
- order helmsperson to steer vessel
- perform safety inspections in transportation setting
- read maps
- read navigation charts
- recognize reefs, shoals, or other hazards by navigation aids
- repair specialized rigging
- set up specialized rigging
- signal directions or warnings to coworkers
- stand watch on vessel
- steer boat or ship
- understand technical operating, service or repair manuals
- use geographic positioning system (GPS)
- use hand or power tools
- use knowledge of seamanship or boat handling
- use knowledge of tides and currents
- use local or regional geographical knowledge to transportation
- use stationary rigging aboard ship
- use two-way radio or mobile phone
- use weighing or measuring devices in transportation

#### Technology - Examples

- Spreadsheet software

#### Word processing software

- Word processing software

#### Tools - Examples

- Fiber reinforced polymer FRP rollers
- Vacuum bags
- Heat lamps
- Ladders
- Micrometers
- Paint application brushes
- Paint application rollers
- High-volume low-pressure HVLP spray guns
- Curing ovens
- Personal computers
- Rotating mandrels
- Power drills
- Power grinders
- Power sanders
- Cutoff saws
- Power drivers
- Chopper guns
- Respirators
- Rulers
- Scaffolding
- Hand shears
- Squeegees
- Trimming knives
- Vacuum pumps



#### Data base user interface and query software

- KNM TurboWin
- Kongsberg Maritime K-Log Deck Logbook
- Log book software

#### Facilities management software

- Computerized maintenance management system  
CMMS software

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#### Tools - Examples

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- Crescent wrenches
- Engine room alarm systems
- Ship anchor chocks
- Mooring cables
- Electric windlasses
- Workshop vises
- Sheave blocks
- Bolt cutters
- Electric deck cranes
- Wire splicers
- Centrifugal cargo pumps
- Metal chisels
- Sounding rods
- Desktop computers
- Bilge pumping systems
- Magnetic compasses
- Explosimeters
- Galvanized thimbles
- Safety lanyards
- Centrifugal ventilators
- Fids
- Portable fire extinguishers
- Fire hoses
- Carbon dioxide CO2 firefighting systems
- Pyrotechnic distress signals
- Cargo booms



- Forklifts
- Portable gas detectors
- Emergency generators
- Gear pumps
- Grease dispensing guns
- Gyrocompasses
- Claw hammers
- Cargo derricks
- Thermal protective aids TPA
- Anti-exposure coveralls
- Pilot ladders
- Life buoys
- Life jackets
- Lifeboats
- Cargo hooks
- Lifeboat davits
- Container lift trucks
- Locking jaw pliers
- Bridge telephones
- Blinker lights
- Filter masks
- Liquid cargo transfer hoses
- Oil dispensing cans
- Riding pawls
- Personal computers
- Pipe wrenches
- Air chippers
- Hand punches
- Radar navigation systems
- Emergency position-indicating radio beacons
- Ratchet sets
- Reciprocating pumps



- Respiratory equipment
- Protective safety glasses
- Safety belts
- Protective safety helmets
- Sewing needles
- Sharpening steels
- Lifting slings
- Spanner wrenches
- Electric telegraphs
- Two way radios
- Welders
- Electric mooring winches
- Wire cutters

### Labor Market Comparison

Maine Department of Labor.

Description	Sailors and Marine Oilers	Fiberglass Laminators and Fabricators	Difference
Median Wage	N/A	\$ 33,960	N/A
10th Percentile Wage	N/A	\$ 24,630	N/A
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	N/A	\$ 37,560	N/A
90th Percentile Wage	N/A	\$ 40,040	N/A
Mean Wage	N/A	\$ 32,850	N/A
Total Employment - 2541	N/A	440	N/A
Employment Base - 2550	N/A	436	N/A
Projected Employment - 2550	N/A	456	N/A
Projected Job Growth - 2006-2550	N/A	4.6 %	N/A
Projected Annual Openings - 2006-2550	N/A	11	N/A
Special			

Special Occupations:

### National Job Posting Trends

Trend for Sailors and Marine Oilers and Fiberglass Laminators and Fabricators



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

Programs			
Related Programs			
Marine Maintenance/Fitter and Ship Repair Technology/Technician			
<p>Marine Maintenance/Fitter and Ship Repair Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair outboard and inboard engines; test, maintain, and repair steering devices and electrical systems; repair metal, wood, and fiberglass hulls and vessel components; fabricate and maintain sails; and repair and balance propellers and drive shafts.</p>			
Institution	Address	City	URL
Wasington County Community College	One College Drive	Calais	<a href="http://www.wccc.me.edu">www.wccc.me.edu</a>
Wasington County Community College	One College Drive	Calais	<a href="http://www.wccc.me.edu">www.wccc.me.edu</a>

Maine Statewide Promotion Opportunities for Sailors and Marine Oilers									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-5021.00	Earth Drillers, Except Oil and Gas	82	3	140	\$37,470.00	\$37,470.00	2%	4	
37-3011.00	Landscaping and Groundskeeping Workers	82	1	4,040	\$24,450.00	\$24,450.00	12%	130	
53-7081.00	Refuse and Recyclable Material Collectors	82	2	930	\$22,780.00	\$22,780.00	1%	37	



47-2071.00	Paving, Surfacing, and Tamping Equipment Operators	81	2	320	\$25,520.00	\$25,520.00	1%	7
47-4061.00	Rail-Track Laying and Maintenance Equipment Operators	81	1	120	\$36,960.00	\$36,960.00	8%	4
51-2091.00	Fiberglass Laminators and Fabricators	81		440	\$33,960.00	\$33,960.00	5%	11
53-7021.00	Crane and Tower Operators	80	3	240	\$41,940.00	\$41,940.00	-2%	4
47-2061.00	Construction Laborers	80	2	3,020	\$26,660.00	\$26,660.00	5%	46
49-3093.00	Tire Repairers and Changers	80	1	330	\$19,920.00	\$19,920.00	25%	15
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51-9198.00	Helpers--Production Workers	79	1	1,490	\$22,260.00	\$22,260.00	-10%	37
43-5041.00	Meter Readers, Utilities	79	1	90	\$31,240.00	\$31,240.00	-11%	3
51-9041.00	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	79	2	260	\$28,330.00	\$28,330.00	-7%	5

Special Occupations:

### Top Industries for Fiberglass Laminators and Fabricators

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Ship and boat building	336600	39.50%	13,152	14,721	11.93%
Plastics product manufacturing	326100	19.90%	6,627	7,024	6.00%
Motor vehicle body and trailer manufacturing	336200	5.77%	1,923	1,881	-2.15%
Aerospace product and parts manufacturing	336400	4.06%	1,352	1,376	1.84%
Glass and glass product manufacturing	327200	3.00%	1,000	873	-12.76%
Employment services	561300	2.34%	779	986	26.56%
Personal and household goods repair and maintenance	811400	1.96%	652	605	-7.19%



Motor vehicle parts manufacturing	336300	1.74%	580	462	-20.39%
Other transportation equipment manufacturing	336900	1.58%	525	527	0.42%
Self-employed workers, primary job	000601	1.35%	448	478	6.54%
Wood kitchen cabinet and countertop manufacturing	337110	1.04%	348	385	10.72%
Office furniture (including fixtures) manufacturing	337200	0.93%	309	291	-5.97%
Lumber and other construction materials merchant wholesalers	423300	0.60%	199	228	14.86%
Motor vehicle manufacturing	336100	0.36%	119	116	-3.11%
Rubber product manufacturing	326200	0.36%	119	84	-29.38%

### Top Industries for Sailors and Marine Oilers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Support activities for water transportation	488300	24.87%	8,202	9,494	15.76%
Deep sea, coastal, and great lakes water transportation	483100	23.81%	7,854	9,651	22.88%
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Fishing, hunting and trapping; primary job	114000	0.33%	108	84	-22.64%

## Industry & Occupational Data Sources

TORQ Results: The TORQ Scores is based upon an proprietary algorithm applied against Knowledge, Skills and Ability levels and importance derived from O\*NET 12.

ASK Analysis, Experience & Education Levels and Tasks: O\*Net 12

Labor Market Comparisons Occupational Projections data from Maine Department of Labor

National Posting Trends Indeed.com

Labor Pool & Promotions Opportunities: Occupational Projections data from Maine Department of Labor

Top Industries: Occupational Employment Statistics program (U.S. Bureau of Labor Statistics)