



# Harvey Gulf International Marine

## **COMPETENCY PROFILE**

**Job Title:**                **Engineer**  
**DOT Code:**              **197.130-010**

### **General Job Description:**

- Supervises, coordinates and participates in operating, maintaining and repairing propulsion engines, boilers, deck machinery, electrical systems, refrigeration, and sanitary equipment
- Routinely inspects engines and other vessel equipment for service requirements
- Directs and assists crew with repair or replace of defective parts and equipment
- Performs temporary repairs to get vessel to port when problems arise
- Starts engines to propel vessel, regulates engines and power transmission to control speed
- Stands engine room watch during specified periods, observing that required water levels are maintained in boilers, condensers, and evaporators
- Ensures that load on generators is within acceptable limits, and that oil and grease cups are kept full
- Operates, supervises or assists in operating various vessel equipment
- May be required to hold appropriate U.S. Coast Guard license, depending upon tonnage of vessel, waters navigated, type of engine and means of transmitting power to propeller shaft
- Maintains engineering log
- Repairs machinery, using hand tools and power tools
- Performs other duties as deckhand, cook or oiler (see relevant job description for duties)

### **Tools and Equipment Used:**

- Hand tools, cleaning equipment and cooking utensils are used on occasion
- Operates vessel equipment and machinery

### **Environmental Conditions:**

- Engine room is very hot, can go up to 140 degrees, usually between 125-130 degrees
- Noise and vibration levels in engine room can be very high (must wear ear muffs)
- Occasional presence of diesel fumes and exhaust fumes
- Other hazards are hot machinery and potential of fire.

### **Mobility Barriers:**

- Getting on and off boat: requires the individual to combine twisting, bending, stooping, jumping, squatting, climbing, balancing and swinging due to potential wave action
- Good upper and lower body strength is required
- Steep, narrow, one person stairwells throughout the vessel

### **Hours Worked:**

- Offshore schedule: 28 days on and 14 days off (flexible)
- Offshore shift: Shifts vary, but may be up to twelve (12) hours on, and twelve (12) hours off

### **Physical Demands:**

- Frequent lifting and/or carrying of objects up to 50 lbs.
- Occasional lifting and/or carrying of objects with help in excess of 50 lbs.
- Occasional climbing, balancing, stooping and crouching (climbing and descending stairs, climbing on machinery and equipment, chipping, painting, confined space entry, etc)
- Frequent reaching and handling of radios, spotlights, switches, levers and cables.
- Must have a clear voice and hearing

### **Vision Requirements:**

- Frequently uses near vision to read manuals, reports and troubleshooting equipment
- Frequently uses far vision to see landmarks and oncoming vessels
- Frequently uses depth perception to judge distance
- Frequently uses wide field of vision to be aware

### **Pushing and Pulling Tasks:**

- Opening and closing valves, wheels and levers
- Loosening and tightening bolts
- Pushes and pulls entry doors
- Pushes and pulls equipment housings and hatches
- Pushes and pulls deck lines

### **Standing and Walking Tasks:**

- Inspects gauges and takes temperature reading regularly
- Walking around for 5 to 10 minutes each time inspections are made
- Stands to work on engine frequently
- Majority of time walking in engine room and climbing stairs

### **Bending and Twisting Tasks:**

- Bends and twists to pick up and use tools
- Cleans bilge strainers and clean bilge
- Maneuvers around pipes, machinery, equipment, etc.
- Changes pipes and fixes circuit boards, switches, exhaust leaks, etc
- Must bend and twist to get into and out of tight places for doing repairs

### **Kneeling and Squatting Tasks:**

- Inspects for leaks on engine
- turns valves, checks gauges, crank cases, checks bearings, etc
- equipment repair may require long periods in awkward positions

### **Work Surface:**

- Smooth tile floor, steel decks and stairs.

## **SKILLS**

### **Reasoning Development:**

- Must apply principles of logical or scientific thinking to a wide range of problems
- Must deal with nonverbal symbolism (graphs etc) in their most difficult phases
- Must deal with a variety of abstract and concrete variables.

### **Mathematics Development:**

- Must be able to calculate surfaces, volumes, weights, measures, circumferences and areas
- Must understand kinds of angles, and properties of pairs and angles
- Must be able to add, subtract, multiply and divide, with use of decimals and percentages

### **Reading and Writing Tasks:**

- Must be able to read rules, regulations and maps
- Must be able to read safety signs, warnings and instructions
- Must read safety rules, warnings and instructions for tools, machinery and equipment
- Must write reports with proper format, punctuation, spelling and grammar, etc
- Must maintain engine logs and accurately keep maintenance records on various equipment
- Must be able to write instructions

### **Speaking:**

- Must speak fluent English
- Must be able to effectively communicate with supervisors and crew including over radio, using appropriate poise, and voice control and voice modulation

### **Mental Involvement:**

- Must have good mental recollection of numerous vessel details
- Must make inspection rounds regularly
- Must be alert for any unusual sounds or smells around the vessel
- Must be able to work under pressure to complete repairs safely
- Extreme concentration is required when the weather is rough
- Extreme concentration is required when working in confined areas
- Extreme concentration is required when working in close proximity of hot equipment
- Extreme concentration is required when working in close proximity of electrical panels and electrical equipment
- Extreme concentration is required when working in close proximity of flammable and/or hazardous materials

### **Human Relations Tasks:**

- Supervises and directs oiler, when applicable
- Must take supervision from Master and corporate office
- Primarily works independently most of the time but must be a part of the vessel team
- Must be able to influence people, make judgments, supervise, perform under stress
- Must be able to get along with crew in tight quarters for extended periods of time
- Must be able to work with crew when performing deckhand, cook or oiler duties

## **EDUCATION AND/OR LICENSING**

### Minimum Requirements

- must possess the following valid USCG documentation:
  - License with minimum rating of:
    - Designated Duty Engineer of at least 4000 hp and 3000 ITC tonnage)
    - Chief Engineer of at least 4000 hp and 3000 ITC tonnage
  - STCW-95 with "officer in charge of an engineering watch" endorsement
  - MMD (Z-Card)
- valid Transportation Worker Identification Credential (TWIC)
- high school diploma preferred but not required

## **TRAINING**

- STCW-95 with "officer in charge of an engineering watch" endorsement

## **EXPERIENCE**

Minimum of 6 months in this capacity