

U.S.C.G. Merchant Marine Exam

QMED

Q805 Oiler - Part II

(Sample Examination)

Choose the best answer to the following Multiple Choice Questions:

1. When replacing ball bearings on an electric motor shaft, you should _____.

- ☐ (A) tap the outer race with a mallet
- ☐ (B) apply pressure evenly to both the inner and outer races
- ☐ (C) apply even pressure to the outer race
- ☒ (D) apply even force to the inner race

If choice D is selected set score to 1.

2. Which of the following maintenance procedures would require a tag-out/lock-out to be performed?

- ☐ (A) Adding makeup oil to a main engine while underway.
- ☒ (B) Changing the oil of an air compressor.
- ☐ (C) Draining compressed air system moisture separators of condensation.
- ☐ (D) Shifting and cleaning a duplex strainer.

If choice B is selected set score to 1.

3. The most important reason for taking anti-seasickness pills as soon as possible after entering a life raft is to _____.

- ☐ (A) assist in sleeping
- ☐ (B) reduce appetite by decreasing nausea
- ☒ (C) prevent loss of body moisture by vomiting
- ☐ (D) prevent impaired judgment due to motion-induced deliriousness

If choice C is selected set score to 1.

4. The most common type of containment device for spilled oil on the water is the use of _____.

- ☐ (A) chemical dispersants
- ☐ (B) skimmers
- ☒ (C) booms
- ☐ (D) straw

If choice C is selected set score to 1.

5. If a fire broke out in an automation console, you would first secure the power and then proceed to use which of the listed hand portable fire extinguishers?

- ☐ (A) Soda acid
- ☐ (B) Dry chemical
- ☐ (C) Foam
- ☒ (D) CO₂

If choice D is selected set score to 1.

6. Using a sea anchor with the survival craft will _____.

- (A) reduce your drift rate
- (B) keep the survival craft from turning over
- (C) aid in recovering the survival craft
- (D) increase your visibility

If choice A is selected set score to 1.

7. A large oil fire on the weather deck of a ship can be effectively fought using _____.

- (A) soda acid
- (B) high velocity fog
- (C) dry chemical
- (D) foam

If choice D is selected set score to 1.

8. After prior isolation and lock-out/tag-out procedures are performed, which electrical device requires discharging any stored electrical energy before any work may safely begin?

- (A) capacitor
- (B) potential transformer
- (C) resistor bank
- (D) choke coil

If choice A is selected set score to 1.

9. You are making a round of the engine room and approaching the motor driven cargo pumps and discover a person laying at the foot of the ladder. What action should be taken?

- (A) Send the QMED to the area and have him determine if the person appears conscious.
- (B) Promptly notify the deck watch officer.
- (C) Immediately enter the area to see if the person is conscious.
- (D) Leave the scene and continue on your watch rounds.

If choice B is selected set score to 1.

10. What information can be obtained from a marine chemist's certificate on a tank barge?

- (A) The number of fire extinguishers required onboard.
- (B) The tanks which are safe to enter when the certificate was issued.
- (C) The quality of the barge's cargo.
- (D) The barge's stability information.

If choice B is selected set score to 1.

11. What statement best represents the characteristics of innage and ullage tank soundings?

- ☐ (A) Innage is the distance between the surface of the liquid and the top of the tank, and ullage is the distance between the surface of the liquid and the bottom of the tank.
- ☐ (B) Innage is the distance between the oil/water interface and top of the tank, and ullage is the distance between the oil/water interface and the bottom of the tank.
- ☒ (C) Innage is the distance between the surface of the liquid and the bottom of the tank, and ullage is the distance between the surface of the liquid and the top of the tank.
- ☐ (D) Innage is the distance between the oil/water interface and bottom of the tank, and ullage is the distance between the oil/water interface and the top of the tank.

If choice C is selected set score to 1.

12. Which of the following shoring materials is a short flat block that is placed under the end of a shore for the purpose of distributing pressure?

- ☐ (A) Beam
- ☒ (B) Shole
- ☐ (C) Wedge
- ☐ (D) Strongback

If choice B is selected set score to 1.

13. In what application is an emergency shutdown most likely to be located outside the machinery space when the pump itself is located within the machinery space?

- ☒ (A) Fuel oil transfer pump
- ☐ (B) Fire pump
- ☐ (C) Steering pump
- ☐ (D) Lube oil circulating pump

If choice A is selected set score to 1.

14. Which unit will provide excellent mobility to the wearer in an unsafe atmosphere and provide oxygen to sustain life?

- ☒ (A) A self-contained breathing apparatus
- ☐ (B) A fresh air breathing apparatus
- ☐ (C) An ammonia gas mask
- ☐ (D) All of the above

If choice A is selected set score to 1.

15. In a typical automatic fire alarm system, which of the listed actions will cause an indication of a fire to be given in the annunciator cabinet?

- ☐ (A) A manual fire alarm box is activated.
- ☐ (B) The fire alarm test push button is operated.
- ☐ (C) A rise in temperature activating a heat detector.
- ☒ (D) All of the above.

If choice D is selected set score to 1.

16. If a life raft should capsize, _____.

- ☐ (A) climb onto the bottom
- ☐ (B) swim away from the raft
- ☒ (C) right the raft using the righting straps
- ☐ (D) inflate the righting bag

If choice C is selected set score to 1.

17. The most common cooling agent used for fighting fires on tank vessels is _____.

- ☒ (A) water
- ☐ (B) carbon dioxide
- ☐ (C) flue gas
- ☐ (D) steam smothering

If choice A is selected set score to 1.

18. When would be the safest time to close the ship's main switchboard "shore power" circuit breaker?

- ☐ (A) only after the ship's generators have been directly paralleled to those on shore
- ☐ (B) at any time in a shipyard
- ☐ (C) if a quick disconnect coupling is used
- ☒ (D) when the ship's generators have been disconnected from the main bus

If choice D is selected set score to 1.

19. For a lubricating oil, what is the relationship between viscosity and temperature?

- ☐ (A) As the temperature of a lubricating oil increases, the viscosity of the lubricating oil also increases.
- ☒ (B) As the temperature of a lubricating oil increases, the viscosity of the lubricating oil decreases.
- ☐ (C) As the temperature of a lubricating oil varies in either direction, the viscosity of the lubricating oil remains constant.
- ☐ (D) As the temperature of a lubricating oil increases, the viscosity of the lubricating oil may increase or decrease, depending upon the lubricant.

If choice B is selected set score to 1.

20. What is the main purpose of an electric space heater installed in a large AC generator?

- ☐ (A) prevent acidic pitting of the slip rings
- ☐ (B) keep the lube oil warm for quick starting
- ☒ (C) prevent moisture from condensing in the windings during shutdown
- ☐ (D) prevent the windings from becoming brittle

If choice C is selected set score to 1.

21. A file coated with oil and stowed away will _____.

- ☐ (A) cause the file to overheat
- ☐ (B) cause the file to slide across the work and prevent fast, clean cutting
- ☐ (C) cause dust and metal particles to collect in the teeth
- ☒ (D) both B and C are correct

If choice D is selected set score to 1.

22. What is the primary function of the device illustrated? Illustration GS-0029

- ☐ (A) intensify the pressure developed by an air compressor during its normal running operation
- ☒ (B) remove all but the frictional load of an air compressor at start-up
- ☐ (C) open the discharge valves during the compressors' operation to supply compressed air
- ☐ (D) precharge the cylinders of an air compressor prior to the start-up of the unit

If choice B is selected set score to 1.

23. On US flag steam propulsion vessels, the main reason for having a low suction line on the fuel oil service or settling tanks is to accomplish which of the following?

- ☒ (A) facilitate water removal
- ☐ (B) decrease suction head on the pump
- ☐ (C) increase the amount of fuel available for use
- ☐ (D) prevent loss of suction during rough weather

If choice A is selected set score to 1.

24. What is the purpose of the squirrel-cage windings included as part of a synchronous motor?

- ☐ (A) eliminate arcing between the stator and the frame
- ☒ (B) provide a means for starting
- ☐ (C) produce a higher power factor
- ☐ (D) provide more precise balancing

If choice B is selected set score to 1.

25. What type of eye protection affords the best protection from severe exposure to airborne impact hazards?

- ☐ (A) Side-shielded safety glasses
- ☐ (B) Full-face shield
- ☐ (C) Eyecup or cover-type safety goggles
- ☒ (D) Full-face shield and safety goggles

If choice D is selected set score to 1.

26. The process that occurs when heat is generated by a chemical reaction within a substance and continues to a point of ignition is known as _____.

- ☐ (A) chemical combustion
- ☐ (B) radiation ignition
- ☐ (C) chemical ignition
- ☒ (D) spontaneous combustion

If choice D is selected set score to 1.

27. The reading of a combustible gas indicator indicates the percentage of the _____.

- ☒ (A) lower explosive limit of a flammable gas concentration
- ☐ (B) concentration of flammable gas in a compartment
- ☐ (C) upper explosive limit of a flammable gas concentration
- ☐ (D) concentration by weight of nonflammable gas in a compartment

If choice A is selected set score to 1.

28. A reading of 0.625 inch on a micrometer with a 2 to 3 inch range would be equal to _____.

- ☒ (A) 2 5/8 inches
- ☐ (B) 2 7/16 inches
- ☐ (C) 3 1/8 inches
- ☐ (D) 3 9/16 inches

If choice A is selected set score to 1.

29. The purpose of try-cocks used on an auxiliary boiler is to _____.

- ☒ (A) provide an alternate means of determining the water level, if the gage glass fails
- ☐ (B) provide a means of adding chemical feed to the boiler water
- ☐ (C) provide a means for blowing down the gage glass
- ☐ (D) act as a steam sentinel valve, if any of the fusible plugs should melt

If choice A is selected set score to 1.

30. Why do roller bearings have higher loading capacities than ball bearings?

- ☐ (A) They have a greater tolerance for high-speed applications.
- ☐ (B) They are subject to less pitting and metal fatigue.
- ☒ (C) They have a greater contact area.
- ☐ (D) They are installed with tighter clearances.

If choice C is selected set score to 1.

31. A gate valve installed in a piping system should be used _____.

- ☒ (A) in either fully closed or fully opened positions
- ☐ (B) to throttle the flow of liquid
- ☐ (C) only for lube oil service
- ☐ (D) only with the stem facing down

If choice A is selected set score to 1.

32. The spreading of fire as a result of heat being carried through a vessel's ventilation system, is an example of heat transfer by _____.

- ☐ (A) windage
- ☐ (B) radiation
- ☒ (C) convection
- ☐ (D) conduction

If choice C is selected set score to 1.

33. Pushing the file endways (or with the axis), under pressure, against the work, is called _____.

- ☐ (A) standard form filing
- ☐ (B) draw filing
- ☐ (C) stroke filing
- ☒ (D) straight filing

If choice D is selected set score to 1.

34. To operate a carbon dioxide extinguisher having the type of head shown in the illustration, you would _____ . Illustration SF-0008

- ☐ (A) open valve and pull pin
- ☐ (B) open valve, pull pin, and pull up on release lever
- ☐ (C) pull pin, open valve, and pull up on release lever
- ☒ (D) pull pin and open valve

If choice D is selected set score to 1.

35. Which of the following descriptions should be included when identifying the length for pipe nipples?

- ☐ (A) Fully threaded, half threaded, long, and short
- ☒ (B) Close, short, long, and tank
- ☐ (C) Standard, extra-strong, double extra-strong, and schedule 80
- ☐ (D) Cast, wrought, stainless, and brass

If choice B is selected set score to 1.

36. To drill a hole in round stock, perpendicular to the axis of the piece, the stock should be mounted in a _____.

- ☐ (A) collet
- ☒ (B) V-block
- ☐ (C) clamp
- ☐ (D) morse sleeve

If choice B is selected set score to 1.

37. In a basic AC induction motor, by what means is current induced in the rotor?

- ☐ (A) an armature and brushes
- ☒ (B) magnetically by the rotating stator field
- ☐ (C) external variable resistors
- ☐ (D) a bridge rectifier

If choice B is selected set score to 1.

38. The component labeled "A", as shown in the illustration, would be identified as the _____.
Illustration GS-0175

- ☐ (A) pressure tank relief valve
- ☐ (B) water sensing probe
- ☐ (C) oily-water content monitor
- ☒ (D) oil level sensing probe

If choice D is selected set score to 1.

39. A fire is considered "under control" when _____.

- ☐ (A) all hands are at their fire stations
- ☐ (B) all firefighting equipment is at the scene
- ☒ (C) the fire is contained and no longer spreading
- ☐ (D) the fixed systems are activated

If choice C is selected set score to 1.

40. A dial indicator is used to measure _____.

- ☐ (A) positive readings only
- ☐ (B) scribed layout lines on vertical surfaces
- ☐ (C) torque of a shaft
- ☒ (D) shaft eccentricity

If choice D is selected set score to 1.

41. When applying paint with a brush, which of the following pairs of techniques are recommended?

- ☐ (A) Brushes should be dipped into the paint to cover only the ends of the bristles, and the paint should be applied in cross strokes only.
- ☐ (B) Brushes should be dipped into the paint to cover the entire length of the bristles, and the paint should be applied in cross strokes only.
- ☒ (C) Brushes should be dipped into the paint to cover only the ends of the bristles, and the paint should be applied in parallel strokes only.
- ☐ (D) Brushes should be dipped into the paint to cover the entire length of the bristles, and the paint should be applied in parallel strokes only.

If choice C is selected set score to 1.

42. What type of direct reading thermometer works on the principle of thermal volumetric expansion of a liquid as the temperature rises and features a linear scale?

- ☐ (A) Bimetallic thermometer
- ☐ (B) Bourdon tube thermometer
- ☐ (C) Thermocouple pyrometer
- ☒ (D) Liquid-in-glass thermometer

If choice D is selected set score to 1.

43. An LNG carrier has an approved type of gas detecting system to detect methane leaks in the _____.

- ☐ (A) cargo handling rooms
- ☐ (B) boiler burner supply piping
- ☐ (C) barrier spaces
- ☒ (D) all of the above

If choice D is selected set score to 1.

44. To properly cut even numbered threads using the lathe thread dial indicator shown in the illustration, you should close the lathe split or half-nut on _____. Illustration GS-0084

- (A) any line on the dial
- (B) even numbered lines only
- (C) any unnumbered half line
- (D) odd numbered lines only

If choice A is selected set score to 1.

45. An oxygen indicator will detect _____.

- (A) the presence of harmful amounts of carbon monoxide
- (B) an oxygen deficiency in a space
- (C) concentrations of explosive gas
- (D) all of the above

If choice B is selected set score to 1.

46. Steel-toed safety shoes are recommended for many types of work. What type of work activity would be an exception to the rule and where steel-toed shoes would NOT be recommended?

- (A) Machine shop work
- (B) Rigging and hoisting work
- (C) Welding fabrications work
- (D) Electrical maintenance work

If choice D is selected set score to 1.

47. In what remote temperature indicating system is a voltage generated by the magnitude of temperature difference between hot and cold junctions?

- (A) Thermistor
- (B) Resistance temperature detector
- (C) Thermocouple
- (D) Bimetallic sensor

If choice C is selected set score to 1.

48. For boring holes in mild steel and general work, the correct included angle of a drill point is _____.

- (A) 29°
- (B) 45°
- (C) 90°
- (D) 118°

If choice D is selected set score to 1.

49. Which of the following direct reading pressure gauges is capable of measuring and displaying two pressures simultaneously?

- ☐ (A) Simplex gauge
- ☐ (B) Differential pressure gauge
- ☐ (C) Compound gauge
- ☒ (D) Duplex gauge

If choice D is selected set score to 1.

50. In what application is a remote valve operator most likely to be located outside the machinery space when the valve itself is located within the machinery space?

- ☐ (A) A valve located in a compressed air line.
- ☒ (B) A valve located in a fuel oil transfer line.
- ☐ (C) A valve located in a potable water transfer line.
- ☐ (D) A valve located in a sea water cooling line.

If choice B is selected set score to 1.

51. If item "1" shown in the illustration is a compound gauge indicating zero psig and the water level in the bilges is one foot high, the unit is _____. Illustration GS-0153

- ☒ (A) not turned on
- ☐ (B) processing the bilge water
- ☐ (C) damaged and should not be used
- ☐ (D) in the oil discharge mode

If choice A is selected set score to 1.

52. On a ship with a continuously manned engine room, with a three-person watch rotation, what is the watch and rest period rotation?

- ☒ (A) 4 hours on watch followed by 8 hours rest
- ☐ (B) 6 hours on watch followed by 6 hours rest
- ☐ (C) 8 hours on watch followed by 4 hours rest
- ☐ (D) 8 hours on watch followed by 8 hours rest

If choice A is selected set score to 1.

53. To get an accurate measurement using a 12 inch machinist's steel rule, you should measure _____.

- ☒ (A) from the one inch graduation mark
- ☐ (B) on the unmarked edge of the rule
- ☐ (C) from the zero end on the scale
- ☐ (D) on the narrow edge of the rule

If choice A is selected set score to 1.

54. A person manning a fire hose under pressure with an all-purpose nozzle attached, should be aware that the nozzle is most difficult to control when the handle position is changed from _____.

- (A) shut to solid stream
- (B) fog to shut
- (C) solid stream to fog
- (D) low velocity to high velocity fog

If choice A is selected set score to 1.

55. In which of the following heat related illnesses is it appropriate to reduce the individual's core temperature by immersion in a tub of cold water or repeatedly sponging with cold water?

- (A) Heat cramps
- (B) Heat prostration
- (C) Heat exhaustion
- (D) Heat stroke

If choice D is selected set score to 1.

56. When charging lead-acid batteries, why is the charging rate reduced as the battery nears its full charge capacity?

- (A) to prevent excessive gassing and overheating
- (B) to increase lead peroxide formation
- (C) to allow equalization of cell voltages
- (D) to reduce lead sulfate deposits

If choice A is selected set score to 1.

57. A crew member has suffered a burn on the arm. There is extensive damage to the skin with charring present. This is an example of what kind of burn?

- (A) Third degree burn
- (B) Lethal burn
- (C) Second degree burn
- (D) Dermal burn

If choice A is selected set score to 1.

58. Which of the wrenches listed practically eliminates the possibility of its slipping off while tightening a nut or bolt?

- (A) Box end wrench
- (B) Monkey wrench
- (C) Open end wrench
- (D) Crescent wrench

If choice A is selected set score to 1.

59. What type of fuel oil as part of an oily-water mixture is most likely to have a density approaching that of water?

- ☐ (A) Light distillate oil.
- ☐ (B) Distillate/residual fuel oil blends.
- ☐ (C) Marine diesel oil.
- ☒ (D) Heavy residual fuel oil.

If choice D is selected set score to 1.

60. Which of the following statements is true concerning the overboard discharge of vessel sewage at sea?

- ☐ (A) The vessel may discharge sewage into the sea, from an approved system which is not comminuted or disinfected, only if the vessel is more than 12 nautical miles from the nearest land.
- ☐ (B) The vessel must have an approved sewage plant.
- ☐ (C) The vessel may discharge disinfected and comminuted sewage into the sea, from an approved system, only if the vessel is more than 3 nautical miles from the nearest land.
- ☒ (D) All of the above.

If choice D is selected set score to 1.

61. For what reason should engine room watchstanders make periodic checks on the loads carried by electric motors?

- ☐ (A) residual magnetism may increase
- ☐ (B) low loads necessitate frequent insulation cleaning
- ☐ (C) energy is wasted if full loading is not utilized
- ☒ (D) exceeding nameplate currents shortens useful life

If choice D is selected set score to 1.

62. If a patient has an electrical burn, you would check for breathing, pulse, and _____.

- ☐ (A) locate the nearest water source and flood the burn with water for five minutes
- ☐ (B) apply alcohol to the burn area and wrap with clean cloth
- ☐ (C) remove any dirt or charred skin from the burned area
- ☒ (D) look for a second burn, which may have been caused by the current leaving the body

If choice D is selected set score to 1.

63. The tool used to prepare copper tubing for the installation of fittings is called a _____.

- ☒ (A) flaring tool
- ☐ (B) spreader
- ☐ (C) stretcher
- ☐ (D) swaging tool

If choice A is selected set score to 1.

64. All portable electric tools should have a ground connection to prevent _____.

- ☐ (A) burning out the motor from an overload
- ☒ (B) electric shock if the tool is shorted
- ☐ (C) grounding the plastic case through a short
- ☐ (D) overloading the motor from a short

If choice B is selected set score to 1.

65. A thread die will be easier to start if the end of the shaft to be threaded is slightly _____.

- ☐ (A) peened
- ☐ (B) reamed
- ☐ (C) center drilled
- ☒ (D) chamfered

If choice D is selected set score to 1.

66. If a person gets something in his eye and you observe that it is not embedded, you can _____.

- ☐ (A) remove it with a match or toothpick
- ☐ (B) remove it with a piece of dry sterilized cotton rag
- ☐ (C) get him to rub his eye until the object is gone
- ☒ (D) remove it with a moist cotton-tipped applicator

If choice D is selected set score to 1.

67. In the illustration shown, the sea painter is identified as item number _____. Illustration SF-0043

- ☐ (A) 3
- ☐ (B) 6
- ☒ (C) 7
- ☐ (D) 9

If choice C is selected set score to 1.

68. Which of the following voltage testers would be associated with high quality, be safe to use, and minimize the electric shock hazard?

- ☐ (A) a voltage tester with a high input impedance and a lower voltage rating than any expected measured voltages
- ☒ (B) a voltage tester with a high input impedance and a voltage rating higher than any expected measured voltages
- ☐ (C) a voltage tester with a low input impedance and a higher voltage rating than any expected measured voltages
- ☐ (D) a voltage tester with a low input impedance and a lower voltage rating than any expected measured voltages

If choice B is selected set score to 1.

69. If a sea water-cooled shell-and-tube lubricating oil cooler has the sea water inlet and outlet connections on the opposite end waterboxes, in terms of the number of passes, what statement is true?

- ☐ (A) The tube-side fluid flow pattern is two-pass.
- ☐ (B) The tube-side fluid flow pattern is four-pass.
- ☒ (C) The number of fluid passes cannot be determined.
- ☐ (D) The tube-side fluid flow pattern is single-pass.

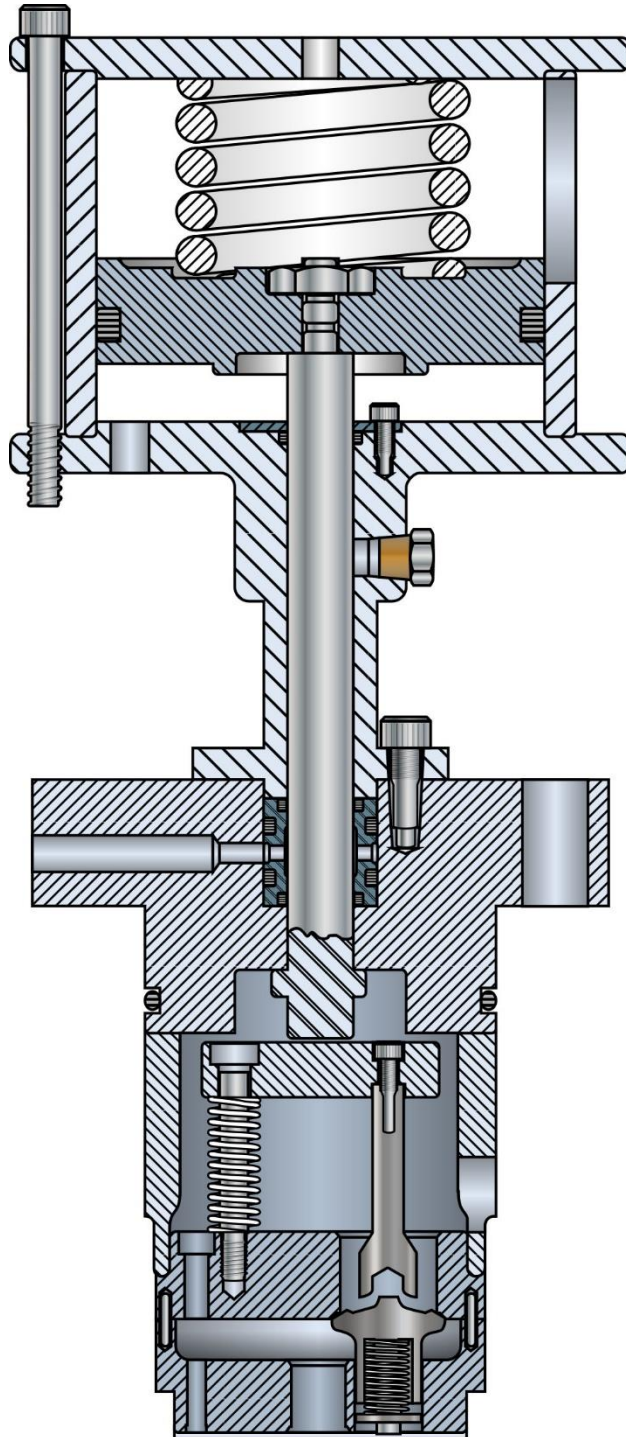
If choice C is selected set score to 1.

70. When an alternator is to remain idle for even a few days, what should be done?

- ☐ (A) open the equalizing bus disconnect switch
- ☐ (B) lift the brushes and disconnect the pigtails
- ☐ (C) insulate the collector rings with strips of cardboard
- ☒ (D) energize the space heater circuit

If choice D is selected set score to 1.

GS-0029

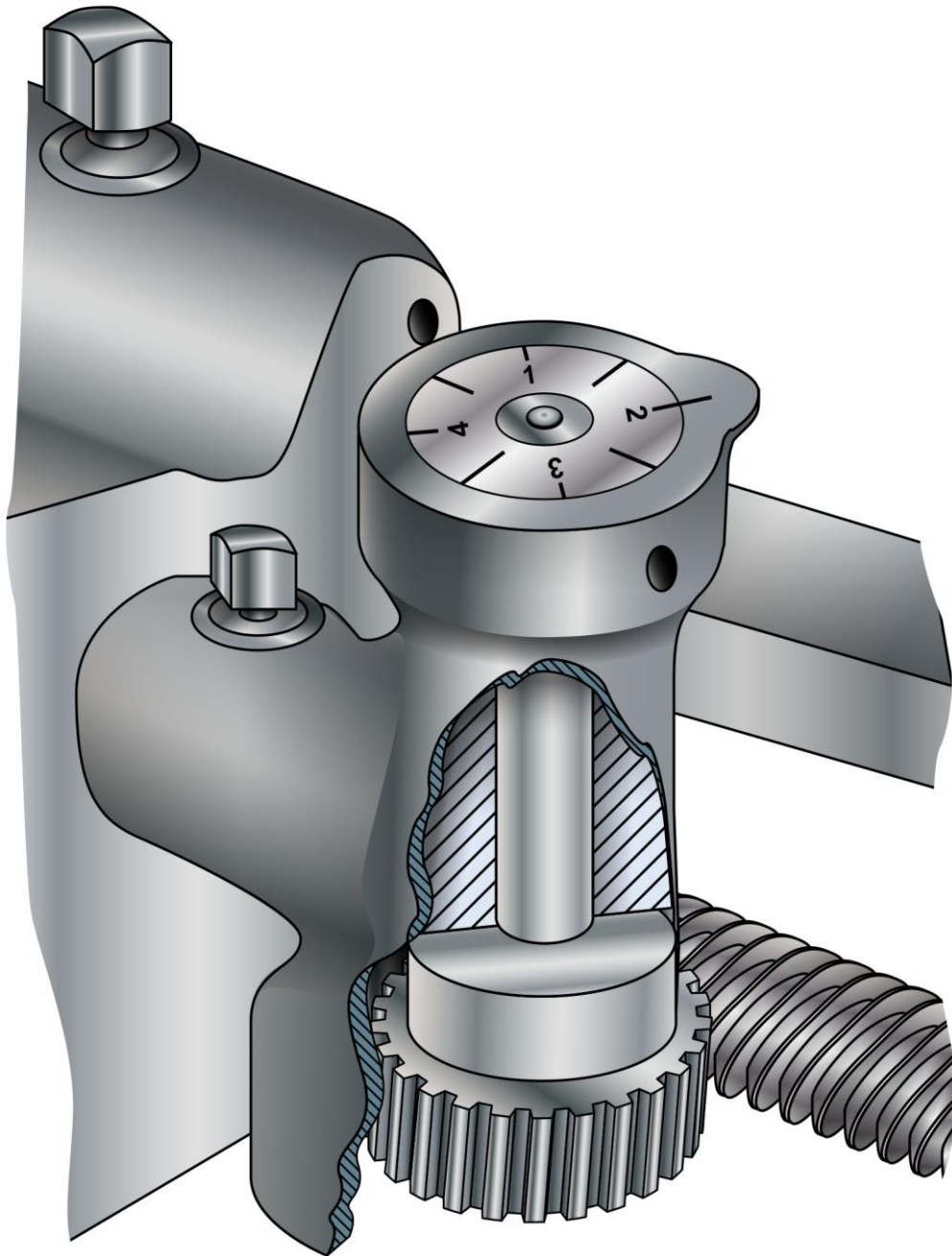


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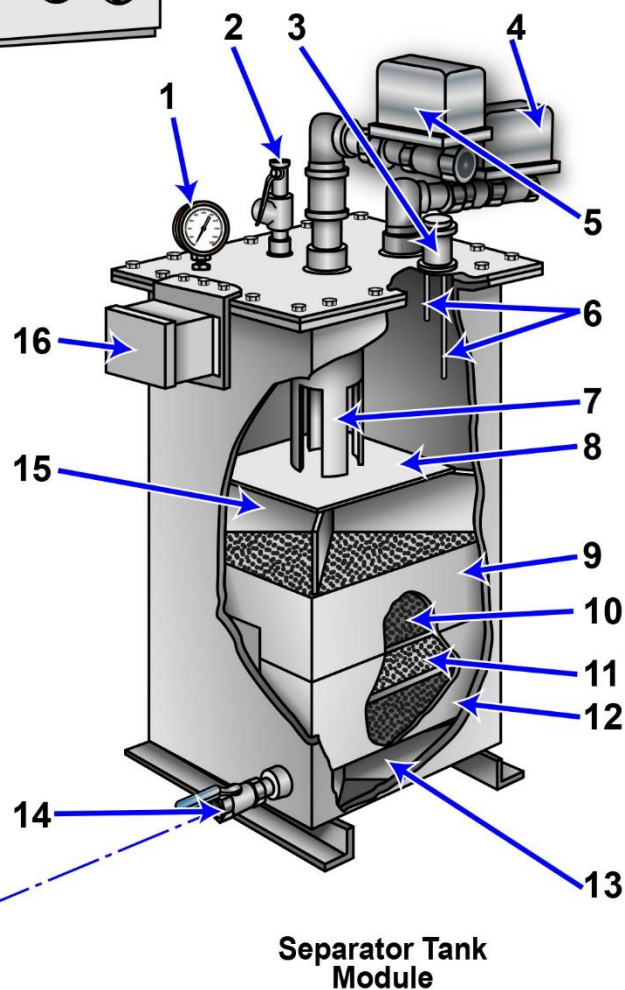
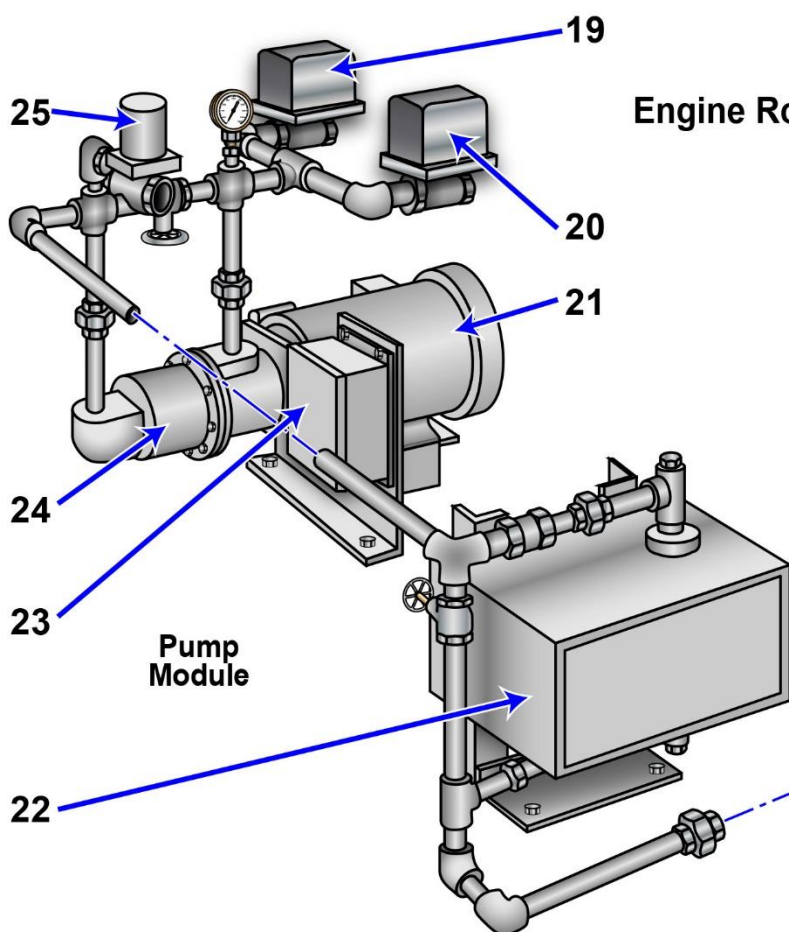
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Control Room



Control Panel Assembly

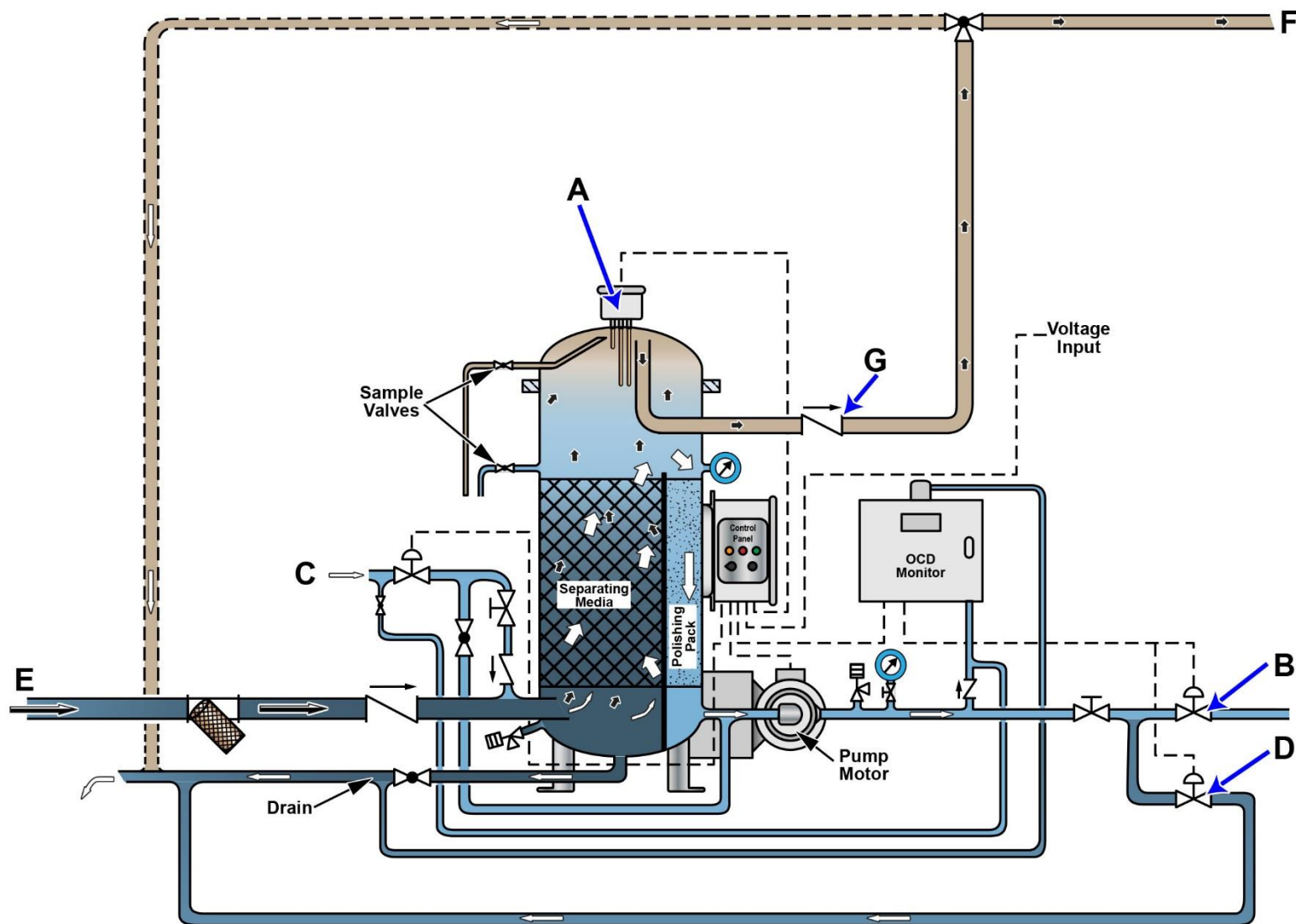
Engine Room



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Including Repair Parts and Special Tools List for Oil Water Separator

TM 55-1925-285-13 & P

GS-0175



Adapted for testing purposes only from Heli-Sep Model 550/OCD Technical Manual

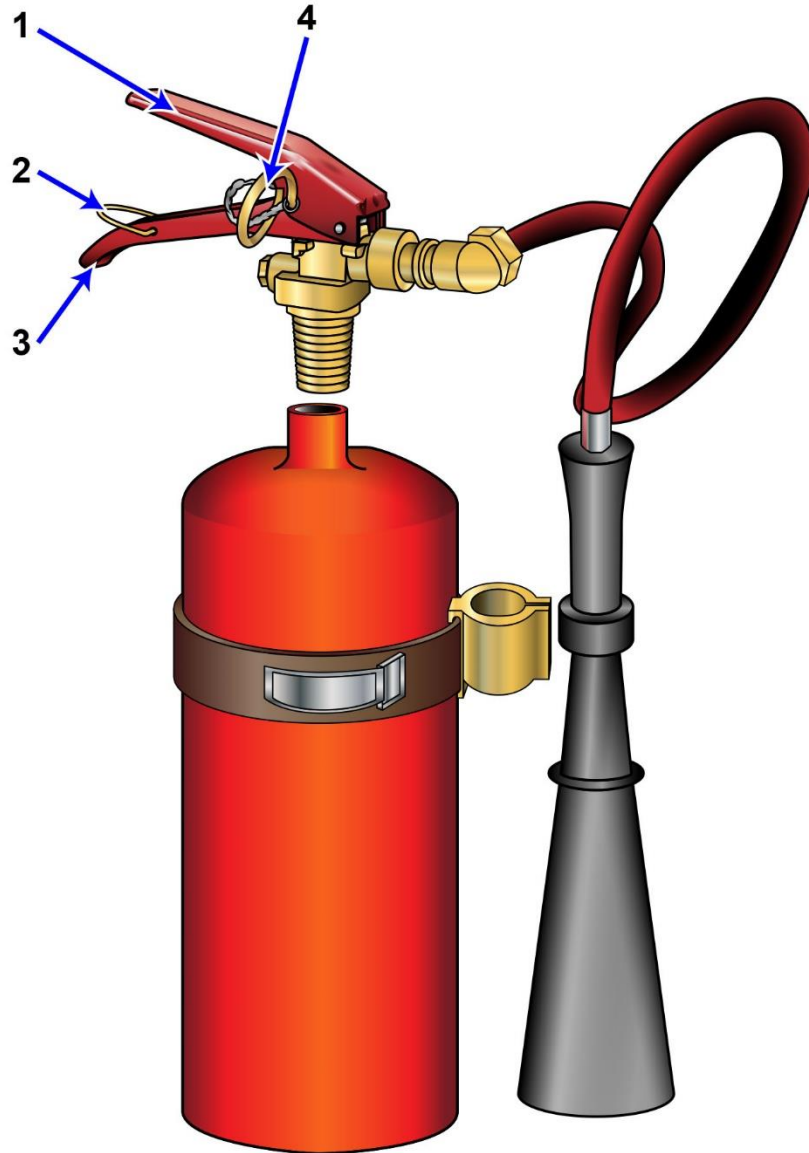
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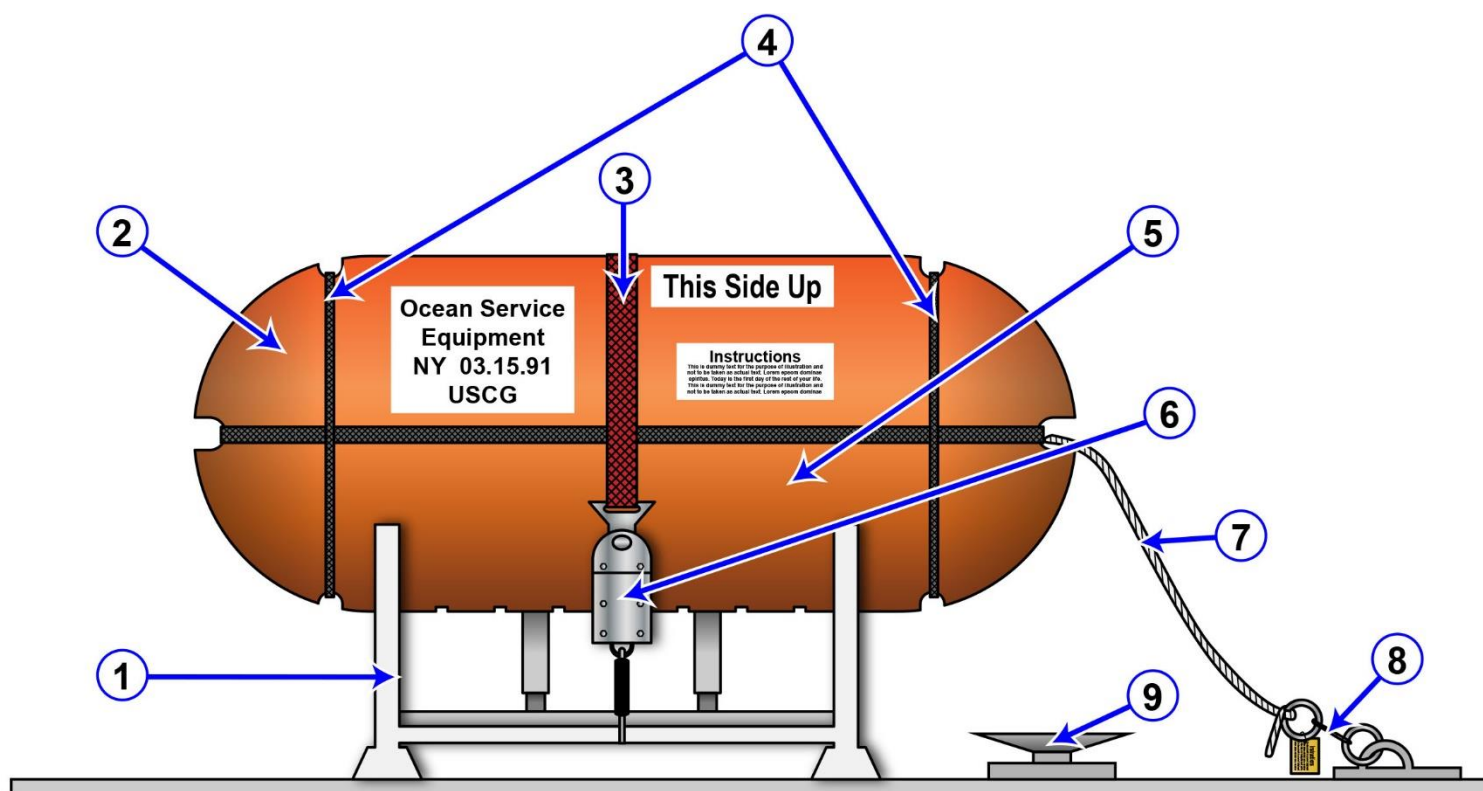


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