

Choose the best answer to the following Multiple Choice Questions.

1. (1.2.7.1-1) If both the shell-and-tube lube oil cooler and shell-and-tube jacket water cooler of a diesel engine are sea water-cooled, what statement is true?
 - A. Sea water flows through the tubes of the jacket water cooler and through the shell of the lube oil cooler.
 - B. Sea water flows through the shells of both the lube oil and jacket water coolers.
 - C. Sea water flows through the tubes of the lube oil cooler and through the shell of the jacket water cooler.
 - D. Sea water flows through the tubes of both the lube oil and jacket water coolers.

2. (1.7.9.3.3-2) A fire, occurring in the windings, of an overloaded electrical motor, is considered a _____.
 - A. class "A" fire
 - B. class "B" fire
 - C. class "C" fire
 - D. class "D" fire

3. (1.2.11.5-3) A coolant is usually used when cutting metal in a power hacksaw to prevent the _____.
 - A. blade from bending
 - B. blade from overheating
 - C. cut from clogging
 - D. heat of friction

4. (1.2.4-9) 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 the entire length of the bristles, and the paint should be applied in parallel strokes only.
 - B. 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.
 - C. 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.
 - D. 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.

5. (1.2.12-3) When installing CAUTION tags when performing a tag-out and lock-out procedure in preparation for accomplishing maintenance, what is the color of these tags?
- A. Red
 - B. Yellow
 - C. Orange
 - D. Green
6. (1.2.9.1-2) Which of the following direct reading pressure gauges is capable of measuring and displaying two pressures simultaneously?
- A. Duplex gauge
 - B. Differential pressure gauge
 - C. Simplex gauge
 - D. Compound gauge
7. (1.7.10.1-1) An oxygen indicator will detect _____.
- A. an oxygen deficiency in a space
 - B. concentrations of explosive gas
 - C. the presence of harmful amounts of carbon monoxide
 - D. all of the above
8. (1.7.6.1-3) Which of the following procedures reduces the possibility of an interior ventilation duct fire from rapidly spreading?
- A. Having a portable CO₂ ready at each duct opening.
 - B. Keeping the duct exterior clean.
 - C. Having a fire hose charged at each duct opening.
 - D. Keeping the duct interior clean.
9. (1.2.11.4-8) Which of the devices shown in the illustration is designed for both inside and outside measurements? Illustration GS-0073
- A. A
 - B. B
 - C. C
 - D. D

- 10.** (1.7.7.1.1-4) Portable Halon extinguishers used on a class "B" fire should be directed _____.
- A. at the base of the fire near the edge
 - B. toward the upwind side of the fire
 - C. in short, quick bursts
 - D. at the top of the flames
- 11.** (1.2.12-6) Under what circumstances could equipment be operated when tagged with DANGER tags?
- A. Whenever permission is granted by your supervisor.
 - B. Whenever you feel that it is safe to do so.
 - C. Whenever there is a break in the actual maintenance activity.
 - D. Only when the tags have been removed by an authorized person.
- 12.** (1.2.11.1.2-6) The term referring to the number of teeth per inch on a hacksaw blade is known as the _____.
- A. rake
 - B. thread gauge
 - C. set
 - D. pitch
- 13.** (1.2.1.1-12) The air compressor shown in the illustration, when used aboard a vessel is typically operated as _____. Illustration GS-0119
- A. a constant capacity unit
 - B. a diesel engine air start unit only
 - C. a constant pressure unit while operating under all load conditions
 - D. an on-off cycle unit
- 14.** (1.2.1.5-3) By what means is biological sewage treatment plant effluent disinfected before discharge overboard?
- A. Ultraviolet light irradiation is the only approved means of disinfection.
 - B. Hypochlorite tablets or liquid solution is the only approved means of disinfection.
 - C. Disinfection is not required on biological sewage treatment plants.
 - D. Hypochlorite tablets or liquid solution and ultraviolet irradiation are both approved means of disinfection.

- 15.** (1.2.11.4-7) A dial indicator is used to measure _____.
- A. scribed layout lines on vertical surfaces
 - B. torque of a shaft
 - C. shaft eccentricity
 - D. positive readings only
- 16.** (1.7.3.5-1) If a person gets battery acid in their eye while filling a battery, they should FIRST wash the eye with _____.
- A. ammonia
 - B. water
 - C. baking soda solution
 - D. boric acid solution
- 17.** (1.7.3.7.3-2) Besides extreme exertion in a hot environment such as an engine room, what causes heat cramps which is pain and spasms associated with the abdomen, leg, and arm muscles?
- A. Taking in excessive amounts of salt in an attempt to restore electrolyte balance.
 - B. Failure to replace salt lost as a result of profuse sweating.
 - C. Failure to replace water lost as a result of profuse sweating.
 - D. Taking in excessive amounts of salt and water in an attempt to rehydrate.
- 18.** (1.7.5.1-9) The most critical part of the bunkering operations, which can result in an oil spill, is when the _____.
- A. pumping operation is first started
 - B. hose joints are made up
 - C. tanks are being topped off
 - D. system is being lined up
- 19.** (1.2.9.4-3) Which of the following is an example of a flowmeter which has associated with it a float for flow indication purposes?
- A. A turbine type flowmeter
 - B. A nutating disc flowmeter
 - C. A variable volume flowmeter (rotameter)
 - D. A differential pressure flowmeter

- 20.** (1.2.13.2.1-6) Which of the illustrations depicts the correct procedure for applying pipe dope?
Illustration GS-0046
- A. A
 - B. B
 - C. C
 - D. D
- 21.** (1.2.7.1-10) The general purpose of a heat exchanger is to _____.
- A. heat, or cool one fluid by means of another fluid
 - B. reduce the engine room temperature in tropical climates
 - C. maintain steady pressure in a system
 - D. eliminate hot air from the condenser
- 22.** (1.2.13.2.1-8) A thread die will be easier to start if the end of the shaft to be threaded is slightly _____.
- A. chamfered
 - B. center drilled
 - C. peened
 - D. reamed
- 23.** (1.7.11.4-1) What term is listed on a Material Safety Data Sheet (MSDS) to describe a chemical that can produce a life-threatening or seriously disabling health hazard?
- A. Recommended toxicity
 - B. Moderate toxicity
 - C. Low toxicity
 - D. High toxicity
- 24.** (1.2.1.1-6) The primary function of the device illustrated is to _____. Illustration GS-0029
- A. precharge the cylinders of an air compressor prior to the start-up of the unit
 - B. intensify the pressure developed by an air compressor during its normal running operation
 - C. remove all but the frictional load of an air compressor at start-up
 - D. open the discharge valves during the compressors' operation to supply compressed air

- 25.** (1.2.11.4-4) The center head of a combination square set is used to _____.
- A. find right angles
 - B. check degrees of angle
 - C. check the angle of thread cutting tools
 - D. locate the center on round stock
- 26.** (1.2.13.2.3-1) The illustrated valve, figure "A", needs to be repaired due to a leak across the valve disk. To disassemble the valve you should _____. Illustration GS-0140
- A. turn the handwheel clockwise as viewed from the top, using a pipe wrench for assistance
 - B. tighten part 4
 - C. first fully loosen part 8, then turn the handwheel counter-clockwise to separate the bonnet from the body
 - D. first fully loosen part 8, then turn the handwheel clockwise to separate the bonnet from the body
- 27.** (1.7.4.1.1-1) What should you do when the alarm bell on a self-contained breathing apparatus sounds?
- A. Move the reserve lever to the "reserve" position on the regulator and reset the alarm so you can evacuate the area when it sounds again.
 - B. Immediately evacuate the contaminated area.
 - C. Move the tank selector lever to the full tank position and reset the alarm so you can evacuate the area when it sounds again.
 - D. Open the bypass valve on the regulator and immediately evacuate the contaminated area.
- 28.** (1.2.1.2-1) The components indicated as "7" and "8" as shown in the illustration, are known as the _____. Illustration GS-0153
- A. first stage oil separator and drip pan
 - B. inlet weir and inlet baffle
 - C. second stage oil separator and drip pan
 - D. outlet weir and outlet baffle
- 29.** (1.7.11.6-4) If emergency welding repairs must be made to the upper area of a fuel tank, the tank and/or adjacent compartments may need to be _____.
- A. inerted
 - B. filled with water
 - C. gas freed
 - D. all of the above as necessary

- 30.** (1.7.7.3.1-8) There is always a lower water pressure at the fire hose outlet than is found at the discharge of the pump. Which of the following reasons is the common cause of this loss in pressure?
- A. Wear in the hydrant
 - B. Leaky pump suction valve
 - C. Leaky pilot valve
 - D. Friction in the piping and valves
- 31.** (1.2.1.2-8) Which of the valves listed for the device shown in the illustration will be open while the unit is operating in the backflush mode? Illustration GS-0153
- A. valve "4"
 - B. valves "4" and "5"
 - C. valves "4" and "14"
 - D. valves "4", "5", and "14"
- 32.** (1.2.11.1.1-3) Which of the listed types of files is the best for producing a fine finish on metal?
- A. Float
 - B. Mill
 - C. Second cut
 - D. Warding
- 33.** (1.2.13.1.1-10) Piping cross-sections over 12 inches in diameter are sized by the _____.
- A. threaded diameter
 - B. inside diameter
 - C. outside diameter
 - D. wall thickness
- 34.** (1.7.8.2-1) It is necessary to cool the bulkheads and decks surrounding a compartment where there is a fire in order to _____.
- A. form a dense coating of smothering steam
 - B. cool the metal below its ignition temperature
 - C. prevent the fire from spreading by the conduction of heat
 - D. prevent oxygen from reaching the flames

- 35.** (1.7.2.4-3) The lengthening of a crack formed in the shell plating of a ship may be prevented by _____.
- A. cutting a square notch at each end of the crack
 - B. welding brackets across both ends of the crack
 - C. chipping out and slot welding the entire crack
 - D. drilling a hole at each end of the crack
- 36.** (1.2.17-10) What statement is true concerning remote valve position indication at a control station?
- A. 90° rotary valves and globe valves generally have valve only open and closed indicators, whereas gate valves generally have degree of opening indicators.
 - B. 90° rotary valves and gate valves generally have valve only open and closed indicators, whereas globe valves generally have degree of opening indicators.
 - C. Gate and globe valves generally have valve only open and closed indicators, whereas 90° rotary valves generally have degree of opening indicators.
 - D. 90° rotary valves generally have valve only open and closed indicators, whereas gate and globe valves generally have degree of opening indicators.
- 37.** (1.2.2-1) Back injuries are one of the most common injuries that result in lost work time. What is the proper technique for lifting an object?
- A. Bend the knees and grasp the object firmly. While keeping the back straight, lift the object by straightening the legs. Move the object while standing erect and keep object close to the body.
 - B. Bend over and grasp the object firmly. While keeping the legs straight, lift the object by straightening the back. Move the object while standing erect and keep object away from the body.
 - C. Bend the knees and grasp the object loosely. While keeping the back straight, lift the object by straightening the legs. Move the object while standing erect and keep object away from the body.
 - D. Bend over and grasp the object loosely. While keeping the legs straight, lift the object by straightening the back. Move the object while standing erect and keep object close to the body.
- 38.** (1.2.9.2-1) 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. Liquid-in-glass thermometer
 - B. Thermocouple pyrometer
 - C. Bimetallic thermometer
 - D. Bourdon tube thermometer
- 39.** (1.7.4.5-2) Kapok life jackets require proper care and should NOT be _____.
- A. stowed near open flame or where smoking is permitted
 - B. left on open decks
 - C. used as seats, pillows, or foot rests
 - D. all of the above

- 40.** (1.7.3.3-4) A minor heat burn of the eye should be treated by _____.
- A. warming the eye with moist warm packs
 - B. mineral oil drops directly on the eye
 - C. laying the person flat on his back
 - D. gently flooding with water
- 41.** (1.7.5.2-2) The most common type of containment device for spilled oil on the water is the use of _____.
- A. skimmers
 - B. chemical dispersants
 - C. booms
 - D. straw
- 42.** (1.2.2-4) 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
- 43.** (1.7.11.2.2-2) Which of the following hazards is associated with the handling of petroleum products?
- A. Fire
 - B. Explosion
 - C. Asphyxiation
 - D. All of the above
- 44.** (1.2.4-6) In preparing the surface of a metal for application of primers and finish coats, which of the listed hand tools is a must for cleaning inside corners?
- A. Chipping hammer
 - B. Sandpaper
 - C. Hand scraper
 - D. Wire brush

- 45.** (1.7.6.1-5) 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 fixed systems are activated
 - D. the fire is contained and no longer spreading
- 46.** (1.7.4.8.2-7) The purpose of the wire stretched between the lifeboat davit heads is to _____.
- A. keep the movement of the davits at the same speed
 - B. keep the davits from slipping when they are in the stowed position
 - C. prevent vibration during lowering of the boat
 - D. support the manropes
- 47.** (1.1.14-4) At a minimum threshold, how many milliamps of current through the body produces a condition where most people would suffer ventricular fibrillation and could only be resuscitated with a ventricular defibrillator?
- A. 3 to 7 mA
 - B. 10 to 16 mA
 - C. 30 mA
 - D. 75 mA for 5 sec.
- 48.** (1.2.2-9) What statement is true concerning the use of wrenches and drive tools as used to manipulate threaded fasteners?
- A. When extra leverage is needed for wrenches and drive tools, the use of a cheater bar is recommended.
 - B. Six point sockets are less prone to slippage than twelve point sockets.
 - C. Push wrenches and drive tool handles rather than pull them for greater control and balance and to avoid injury.
 - D. For initial breaking loose and final tightening of fasteners, the use of open end wrenches is recommended.
- 49.** (1.7.4.4-2) If for any reason it is necessary to abandon ship while far at sea, it is important for the crew members to _____.
- A. separate from each other as this will increase the chances of being rescued
 - B. get away from the area because sharks will be attracted to the vessel
 - C. immediately head for the nearest land
 - D. remain together in the area because rescuers will start searching at the vessel's last known position

- 50.** (1.7.1.2-1) What is the purpose of depressing the button on the handle of a sound-powered telephone handset?
- A. The button must be depressed to listen, but not to speak.
 - B. The button must be depressed in order to speak, but not to listen.
 - C. The button is depressed to ring the remote station.
 - D. The button must be depressed to speak and to listen.
- 51.** (1.2.12-4) Under what conditions is a DANGER tag installed at equipment control stations in preparation for performing maintenance or repairs?
- A. When operation of the equipment will harm the equipment ONLY.
 - B. When operation of the equipment will endanger personnel OR harm the equipment.
 - C. When operation of the equipment will endanger personnel ONLY.
 - D. When operation of the equipment requires unusual caution to be exercised.
- 52.** (1.7.10.1-4) To detect the presence of explosive gases in any space, tank, or compartment, you should use a _____.
- A. combustible gas indicator
 - B. halide torch
 - C. detector filament
 - D. flame scanner
- 53.** (1.7.9.2.1-1) In figure 1 of the illustration, fire would spread to compartment "B" by _____.
Illustration SF-0013
- A. radiation
 - B. impingement
 - C. convection
 - D. conduction
- 54.** (1.2.13.1.1-2) Which of the gasket types listed is typically used on high-pressure steam flange joints?
- A. Wire-impregnated sheet plastic
 - B. Spiral wound flexitallic
 - C. Wire-impregnated rubber
 - D. High temperature neoprene

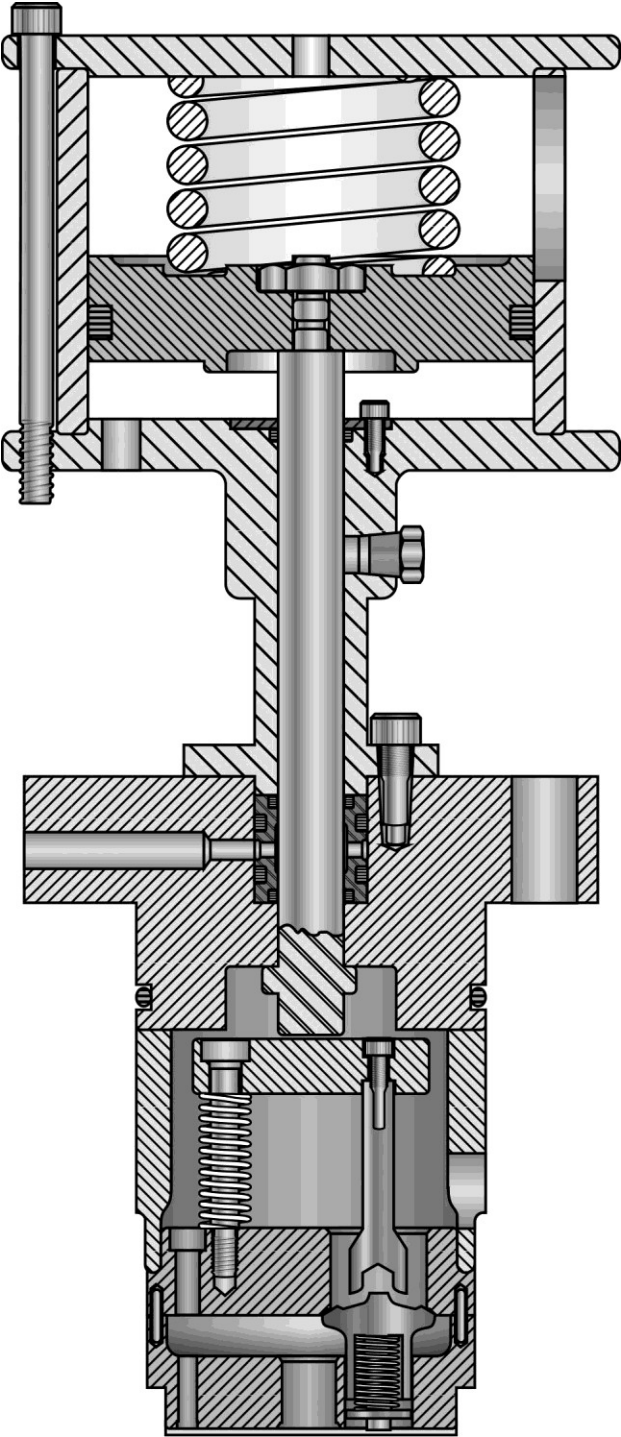
- 55.** (1.7.1.1-2) What is the alarm signal for dismissal from a fire emergency or fire drill onboard a merchant ship?
- A. Continuous blast of the whistle for not less than 10 seconds supplemented by the continuous ringing of the general alarm bells for not less than 10 seconds.
 - B. Continuous blast of the whistle for not less than 3 seconds supplemented by the continuous ringing of the general alarm bells for not less than 3 seconds.
 - C. General alarm sounded 3 times supplemented by 3 short blasts of the whistle.
 - D. A succession of more than 6 short blasts followed by 1 long blast of the whistle supplemented by a comparable signal on the general alarm.
- 56.** (1.2.13.1.1-11) The designation 'schedule 80 extra strong' refers to _____.
- A. tubing bursting strength
 - B. weight of steel plate
 - C. piping wall thickness
 - D. tensile strength of bolts
- 57.** (1.7.4.8.1-8) While adrift in an inflatable life raft in hot, tropical weather _____.
- A. the canopy should be deflated so that it will not block cooling breezes
 - B. the pressure valve may be periodically opened to prevent excessive air pressure
 - C. deflating the floor panels may help to cool personnel
 - D. the entrance curtains should never be opened
- 58.** (1.7.7.4.1-4) What would be the most probable cause for a high-pressure alarm to be activated in a low-pressure CO₂ fixed fire extinguishing system?
- A. An air leak has developed in the tank.
 - B. An excessive amount of insulation has been installed on the tank and piping.
 - C. The pilot cylinder discharge valve is leaking.
 - D. The tank cooling system has malfunctioned.
- 59.** (1.2.13.2.2-1) Copper coil tubing is best cut with a _____.
- A. hand hacksaw
 - B. pipe cutter
 - C. tubing cutter
 - D. flare cutter

- 60.** (1.2.4-7) In preparing the surface of a metal for application of primers and finish coats, which of the listed hand tools is appropriate for surfaces with significant pitting?
- A. Sandpaper
 - B. Hand scraper
 - C. Wire brush
 - D. Chipping hammer
- 61.** (1.2.11.5-4) The blade for a power hacksaw should be installed with the teeth _____.
- A. pointing toward the motor end of the machine
 - B. pointing either toward or away from the motor end of the machine
 - C. pointing toward the motor if using a 4 or 6 tooth blade and away from the motor if using a 10 or 14 tooth blade
 - D. pointing away from the motor end of the machine
- 62.** (1.7.7.4.2-4) While fighting a fire, in order to utilize two hoses from a single "wye" gate attached to a hydrant outlet, you need only turn the valve handle _____.
- A. at the base of the "Y" in either direction
 - B. at the base of the "Y" counter-clockwise 180°
 - C. on each leg of the "Y" 180°
 - D. on each leg of the "Y" 90°
- 63.** (1.7.8.1-2) The most common cooling agent used for fighting fires on tank vessels is _____.
- A. steam smothering
 - B. carbon dioxide
 - C. flue gas
 - D. water
- 64.** (1.7.1.2-5) When conversing over a sound-powered telephone circuit, the words "yes" and "no" should be avoided. What are appropriate substitutes?
- A. "Yes" should be substituted by "yessiree" or suitable equivalent. "No" should be substituted by "nosiree" or equivalent.
 - B. "Yes" should be substituted by "affirmative" or suitable equivalent. "No" should be substituted by "negative" or equivalent.
 - C. "Yes" should be substituted by "yeah" or suitable equivalent. "No" should be substituted by "nah" or equivalent.
 - D. "Yes" should be substituted by "OK" or suitable equivalent. "No" should be substituted by "nope" or equivalent.

- 65.** (1.1.14-10) 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. resistor bank
 - B. choke coil
 - C. potential transformer
 - D. capacitor
- 66.** (1.1.14-2) At a minimum threshold, how many milliamps of current through the body produces a condition where most people would be unable to let go of the energized electrical conductor due to involuntary muscular contraction?
- A. 3 to 7 mA
 - B. 10 to 16 mA
 - C. 30 mA
 - D. 75 mA for 5 sec.
- 67.** (1.7.2.1-1) After measuring the length to which a section of shoring should be cut, you should cut the shoring _____.
- A. approximately 1/2 inch shorter than measured length to allow for the use of wedges
 - B. approximately 1/2 inch longer than measured length to allow for trimming
 - C. approximately 1/2 inch shorter per foot of shoring to allow for wet expansion
 - D. to the same length as the measured length
- 68.** (1.2.11.1.4-3) A chisel with a mushroom head should not be used because _____.
- A. it must be held firmly by the head to strike it
 - B. pieces may fly off the chisel and injure your eyes
 - C. the chisel cannot be struck squarely
 - D. the hammer head may be chipped
- 69.** (1.2.9.3-1) What statement is true concerning the vent pipes and sounding tubes associated with a vented tank?
- A. The sounding tube attaches to and ends at an opening at the top of the tank, and the vent pipe passes through the tank top and extends almost to the tank bottom.
 - B. Both the vent pipe and the sounding tube attach to and end at an opening at the top of the tank.
 - C. Both the vent pipe and the sounding tube pass through the tank top and extend almost to the tank bottom.
 - D. The vent pipe attaches to and ends at an opening at the top of the tank, and the sounding tube passes through the tank top and extends almost to the tank bottom.

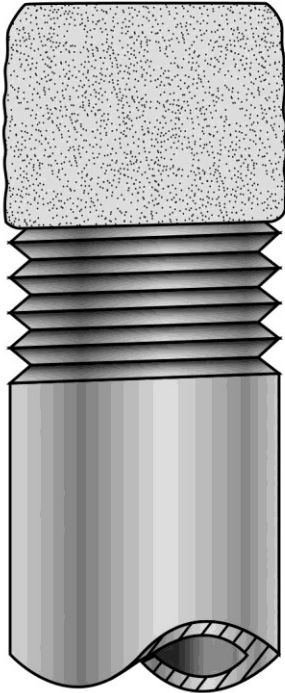
- 70.** (1.2.17-2) Where is the location of a chain-operated valve when a chain wheel is attached to the stem and is associated with an endless chain for operation?
- A. The valve is located too far directly above the deck where it is operated from.
 - B. The valve is located too far directly across from the location where it is operated.
 - C. The valve is located too far directly below the deck where it is operated from.
 - D. A chain-operated valve can be used in any of the applications listed above.

GS-0029

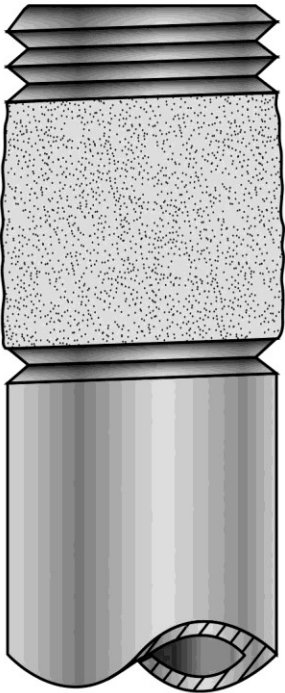


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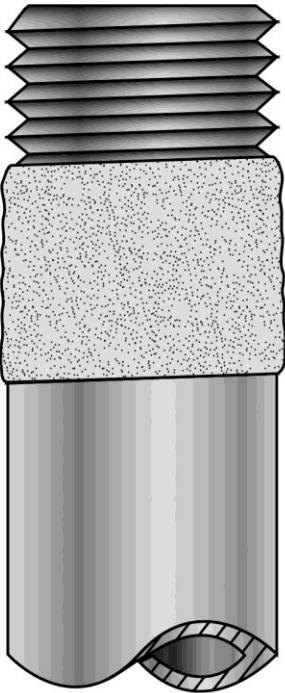
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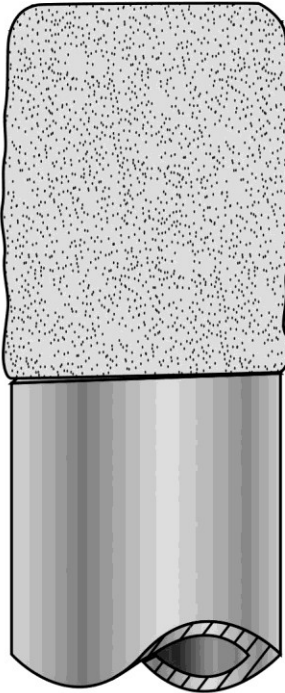
A



B



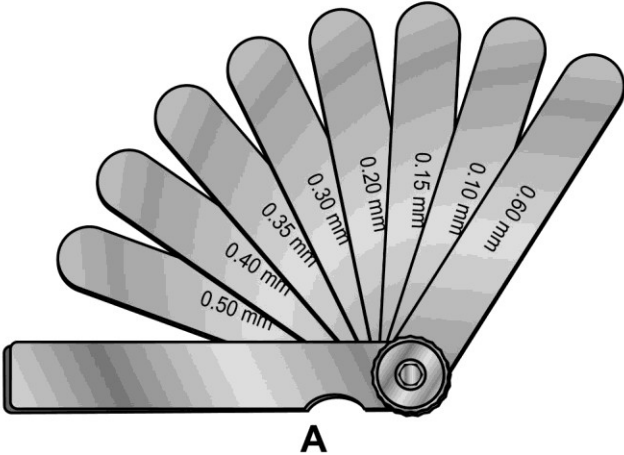
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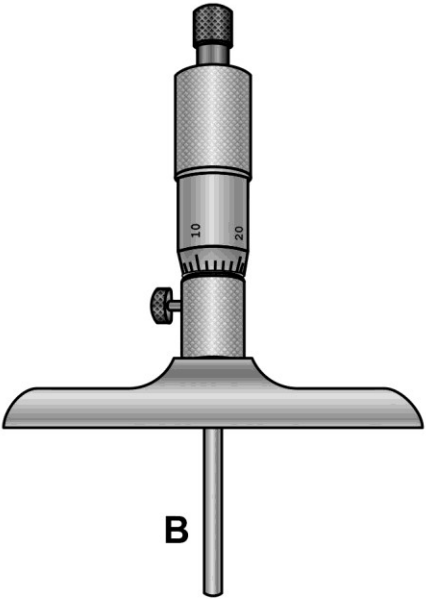
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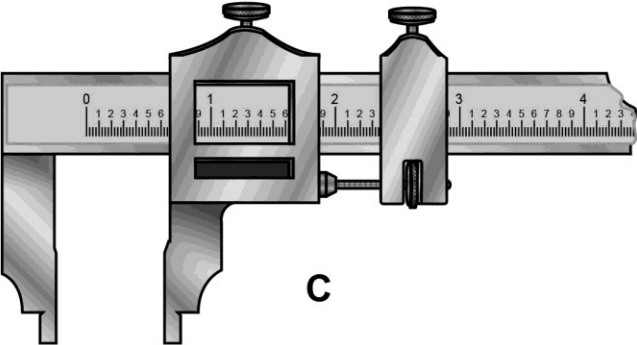
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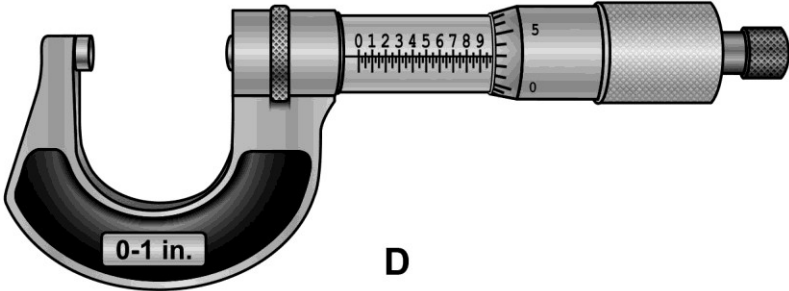
A



B



C



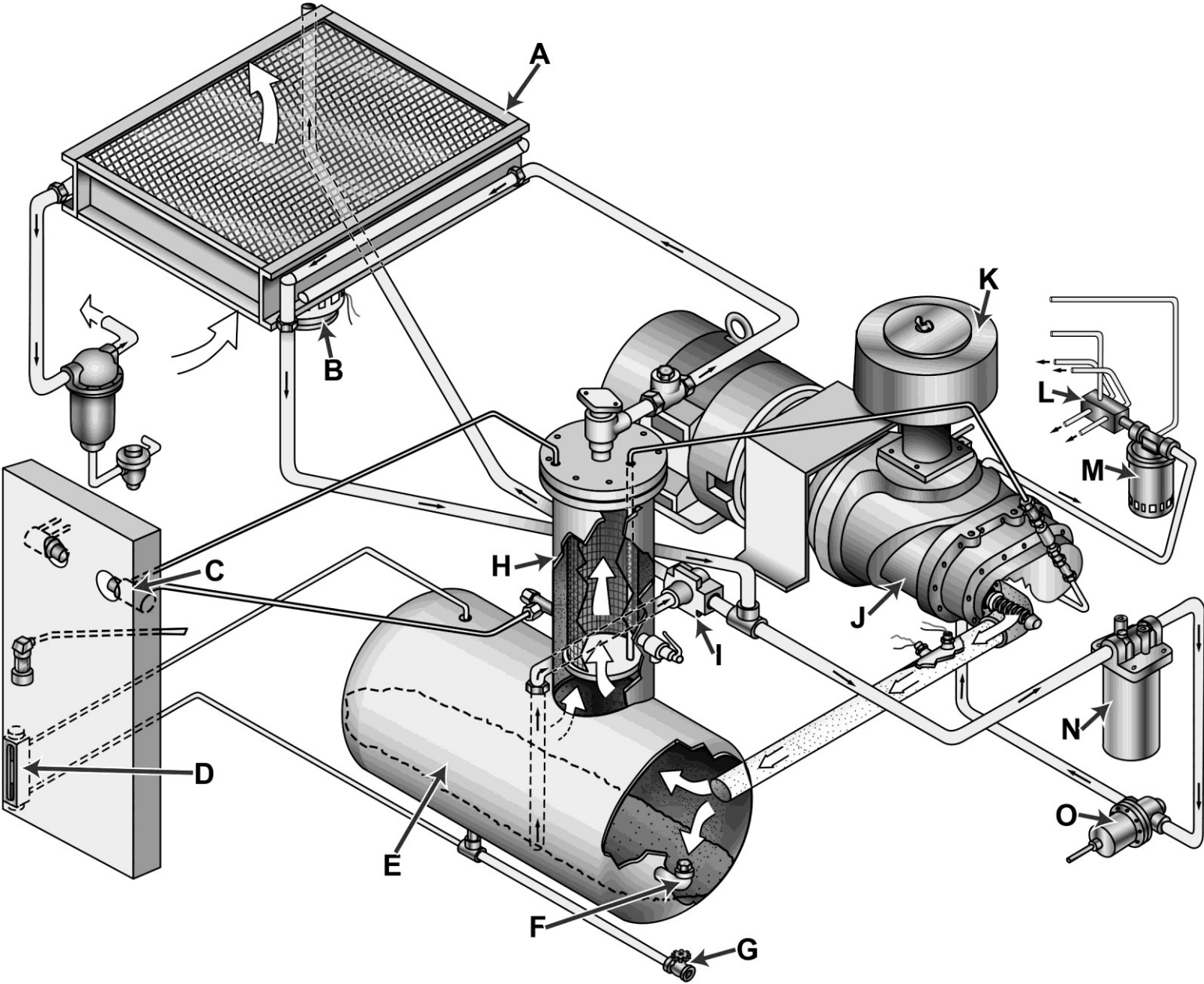
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Fundamentals Service Repair

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GS-0119



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GS-0140

Figure A

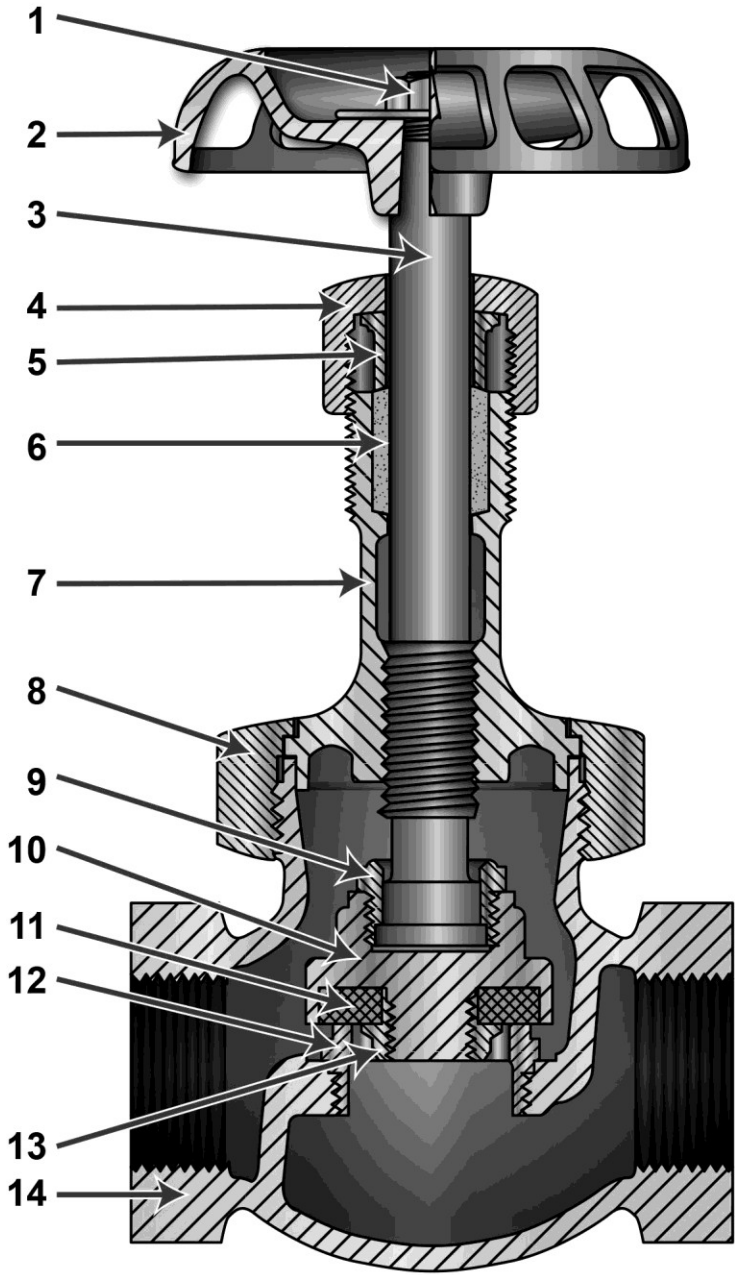
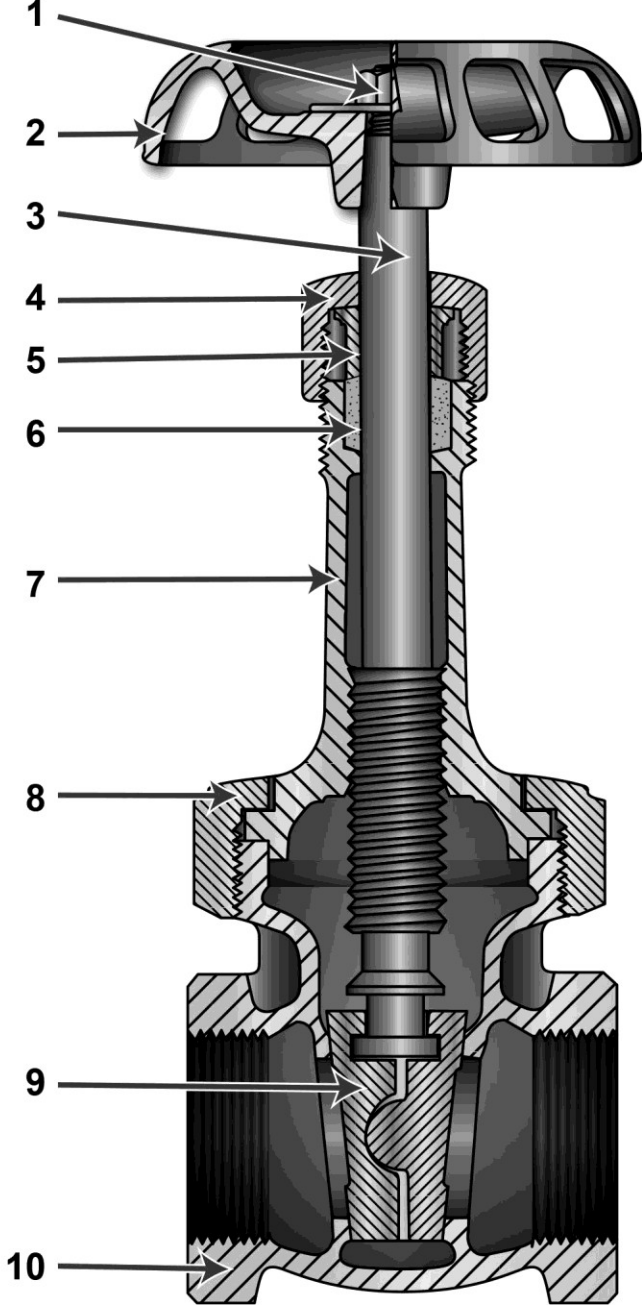
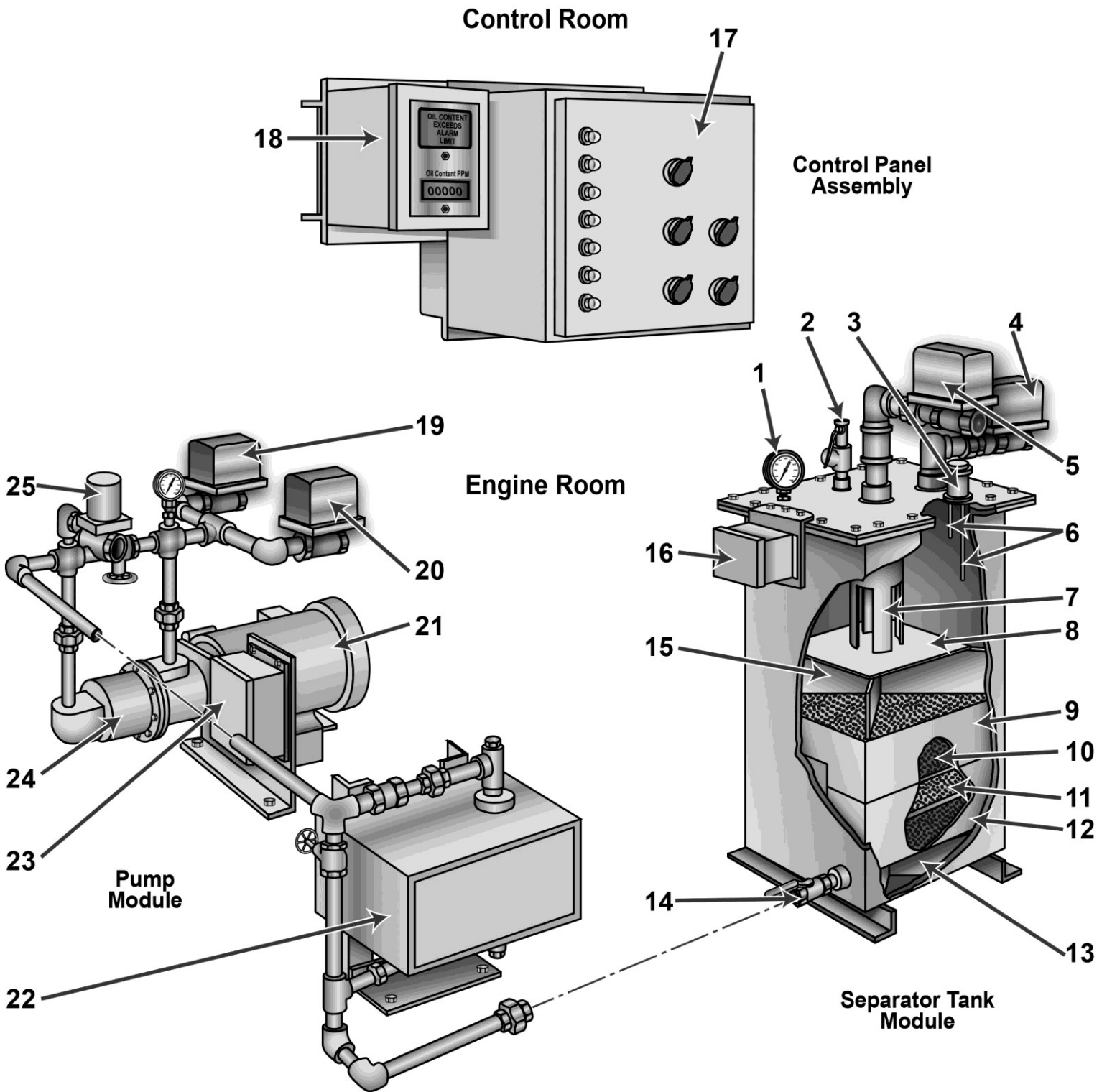


Figure B



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GS-0153



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Including Repair Parts and Special Tools List for Oil Water Separator
TM 55-1925-285-13 & P

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SF-0013

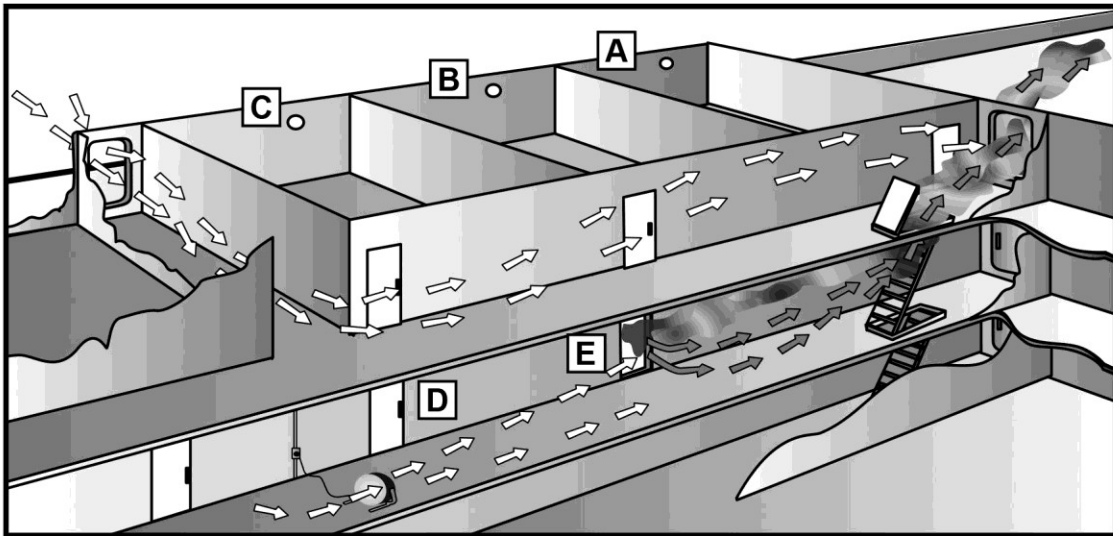


Figure 1

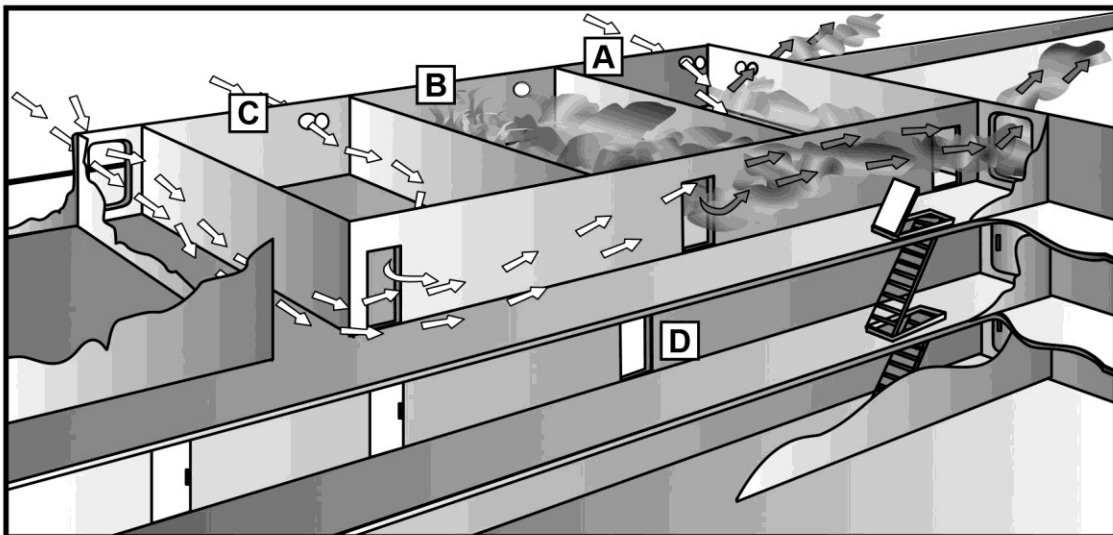


Figure 2