



COMDTINST M16796.2E
AUG 20, 1996

COMMANDANT INSTRUCTION M16796.2E

Subj: AUXILIARY Vessel Examiner Manual

1. PURPOSE. This manual has been designed to provide up-to-date guidance for Coast Guard Auxiliarists qualified as Vessel Examiners. The manual prescribes policies and standards for the administration of the Courtesy Marine Examination (CME), the Personal Watercraft (PWC) Safety Check, and the Auxiliary Vessel Facility Inspection Programs.
2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, and commanding officers of headquarters units shall be sure that the units under their command adhere to the provisions of this manual. Coast Guard Auxiliarists, who participate in the Vessel Examination Program, shall be thoroughly familiar with the contents of this manual and take guidance from its provisions.
3. DIRECTIVES AFFECTED. The Auxiliary Vessel Examiner Manual, COMDTINST M16796.2D, is cancelled.
4. DISCUSSION.
 - a. The intent of the Courtesy Marine Examination and the Personal Watercraft Safety Check Programs is to provide a checkpoint at which the public can request an examination of the items on their boat (or PWC) required by federal law to be carried onboard, and certain additional safety items required by the Coast Guard Auxiliary for award of the CME or PWC decal. The intent of the Auxiliary Vessel Facility Inspection Program is to identify those Auxiliary boats that meet the requirements to be facilities and operational facilities. The success of these programs rests largely with each individual Vessel Examiner. The Vessel Examiner Manual shall not be cited for any action having legal implications. It is not the intent of the Vessel Examiner Program that any examination be conducted in such a manner as to be construed by members of the public as a marine survey. Award of the CME, PWC Safety Check, or Vessel Facility decal by Coast Guard Auxiliary Vessel Examiners does not imply that the boat has been inspected by the Coast Guard.

5. MAJOR CHANGES. A summary of the major changes in this manual are listed below.
 - a. Updated to reflect the new Vessel Examiner re-qualification requirements. (Chapter 1, paragraph K)
 - b. Updated to reflect the items on the new AUX-204 to be examined which were previously optional. (Chapter 3, paragraphs Q, R, S, T, and U; and Chapter 6)
 - c. Updated to reflect the Coast Guard's approval of the new fully inflatable personal flotation device. (Chapter 3, paragraph F.3.j; and Chapter 6, paragraph F.6)
 - d. Reflects the new fire fighting compounds developed to replace HALON. (Chapter 3, paragraph G.1)
 - e. Clarifies requirements for cooking stoves. (Chapter 3, paragraph O.2.b)
 - f. Updated to reflect the new FCC policy regarding marine radio licenses. (Chapter 3, paragraph U; and Chapter 6, paragraph X)
 - g. Requires Auxiliarists to submit all required paperwork in addition to the required CG-2736 when having boats examined as operational facilities. (Chapter 4, paragraph A.5)
 - h. Requires the owner/operator of Auxiliary vessel facilities to provide proof of ownership demonstrating the "owner's" authority to offer the facility for use. (Chapter 4, paragraph B.4)
 - i. Clarifies owner's requirements when transferring an operational vessel facility from one district/region to another. (Chapter 4, paragraph B.5)

- j. Updated to reflect to the new Vessel Facility Inspection and Offer For Use Form, CG-2736 (Rev. 5-96). (Chapter 4, paragraph C)
 - k. Updates the list of forms and materials applicable to the CME program. (Chapter 5)
 - l. Eliminates the state notes from Chapter 7.
6. FORMS/REPORTS. Chapter 5 of this manual contains information on requirements and sources for forms and applicable materials. This material may be ordered through normal channels from the Auxiliary National Supply Center (ANSC).

N. T. SAUNDERS
Chief, Operations

NONSTANDARD DISTRIBUTION:

Coast Guard Auxiliary
All Vessel Examiners
All Flotilla Commanders

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CHAPTER 1: THE COURTESY MARINE EXAMINATION PROGRAM

- A. **Purpose.** The Courtesy Marine Examination (CME) actively promotes boating safety by using trained Auxiliary volunteers to educate the boater through a direct, face to face boating safety information exchange with the owner or operator, and providing instructions on equipment to be carried on board and other matters affecting safety. Federal and local equipment regulations, and CME requirements are explained as well as other matters of interest.
- B. **Scope.** The CME is performed mainly on recreational boats 65 feet in length or less and on certain commercial vessels which are not inspected or certified by the Coast Guard. CME requirements parallel and sometimes exceed federal regulations with regard to equipment and condition of safety where such matters are within the direct personal control of the boat's owner/operator. The CME is not a law enforcement action by the Auxiliary. No official report is made to any law enforcement authority. The CME is performed only with the specific consent of the owner/operator, who is present at the time of the examination. The CME cannot circumvent the right of a federal, state or local boarding officer.
- C. **Definitions.** For brevity, common Auxiliary terms and acronyms are used throughout this manual.
1. **Approved.** A term used to indicate Coast Guard approval of a specific item of equipment which has been found to meet federal regulatory requirements, such as personal flotation devices, fire extinguishers, backfire flame arresters, visual distress signals, and Type I and II Marine Sanitation devices.
 2. **Boat.** A vessel propelled by hand, sail, or engine (other than steam), 65 feet (20 meters) or less in length.
 3. **Boat Operator.** Either the owner or operator. When conducting CMEs (or PWC Safety Checks), in all cases, if the owner is aboard, the discussion is directed to the owner.
 4. **Certification.** A manufacturer's statement that the boat complies with applicable Coast Guard safety or manufacturing standards in effect on the date of manufacture.
 5. **Coastal Waters.** Those waters directly connected to the Great Lakes and territorial seas (e.g., bays, sounds, harbors, rivers, inlets, etc.) where any entrance exceeds 2 nautical miles between opposite shorelines to the first point where the largest distance between shorelines narrows to 2 miles, as shown on the current edition of appropriate National Ocean Service chart used for navigation.

6. **Commercial Fishing Vessel/Boat.** A vessel or boat licensed and/or operated to harvest fish and other sea life for sale. This will also include fish tenders and fish processing vessels.
7. **Commercial Vessel/Boat.** Any vessel or boat used by its owner or operator to earn money by carrying freight or passengers.
8. **Courtesy Marine Examination (CME).**
 - a. A CME is:
 - (1) An authorized Auxiliary activity that contributes significantly to the Coast Guard's recreational boating safety mission.
 - (2) A valuable opportunity for the exchange of boating safety information between boaters, one of whom is a trained and qualified Auxiliary Vessel Examiner (VE).
 - (3) A valuable boating safety program which reaches large numbers of the boating public and is enthusiastically endorsed by state boating authorities and recreational boating organizations.
 - (4) A courtesy check of safety equipment carried or installed in a boat and certain aspects of the general condition of the boat.
 - (5) Uniform in its standards throughout the country, except for certain state requirements.
 - b. The CME is **not**:
 - (1) A law enforcement activity. It does not relieve a owner/operator of the responsibility to comply with federal, state, or local laws.
 - (2) A marine survey; an in-depth inspection of the material condition of the boat; a Coast Guard inspection required for certified vessels.
 - (3) Performed on boats under construction in factories or awaiting sale or delivery in dealerships; it does not encompass examination of equipment not carried or installed in the boat under examination, or equipment under manufacture or awaiting sale; it does not extend to the examination of launching or pier facilities.

- (4) Performed on livery (rental) boats or bare boats for charter (i.e., boats rented without crews as part of the rental).
 - (5) To be performed on a boat registered in a foreign country.
9. **Defect Notification.** Procedures in regulations which require manufacturers of boats and associated equipment to notify owners of products which fail to comply with applicable regulations or contain a defect which creates a substantial risk of personal injury to the public.
 10. **Director.** Director of Auxiliary; includes reference to the district commander, who delegates Auxiliary administration to the director.
 11. **Immediately Available.** Close at hand so as to be instantly ready (without delay) for easy use.
 12. **Inland Waters.** All sole state waters, lakes, and rivers not included in the definition of Coastal Waters.
 13. **Inspected Vessel.** A vessel that by law is required to be inspected by the U. S. Coast Guard to operate on navigable waters. This includes vessels that carry seven or more passengers for hire. This term is also used in reference to Coast Guard Auxiliary facilities subject to a mandatory annual Auxiliary inspection.
 14. **Manufacturer.** Any person engaged in the manufacture, construction, or assembly of boats or associated equipment; the importation into the United States for sale of boats and associated equipment, or components thereof.
 15. **Monohull Boat.** A boat on which the line of intersection of the water surface and the boat at any operating draft forms a single closed curve (catamarans, trimarans and pontoon boats are not monohull boats).
 16. **Operational Vessel Facility.** A vessel facility that has met additional district commander requirements concerning equipment and has been offered for use and accepted by the director.
 17. **Passenger for Hire Vessel/Boat.** A vessel or boat that carries a passenger or passengers for a consideration.
 18. **Personal Watercraft.** An inboard vessel, usually driven by a jet-pump that carries one to three persons, and operated by a person sitting, standing, or kneeling ON the boat, rather than the conventional manner of sitting or standing INSIDE the vessel.

19. **Readily Accessible.** To obtain quickly and use easily.
20. **Regulation.** An agency statement of general or particular applicability designed to implement, interpret, or prescribe policy to carry out the purpose of a law. It has the force of law.
21. **Rental Boat.** Any vessel offered for rent, bare boat charter, or belonging to a club where the members do not own a percentage of a specific vessel.
22. **Requirement.** An item necessary to fulfill an examination checkoff list, not necessarily a federal or state regulation.
23. **Uninspected Vessel.** A vessel that is not required to be inspected by the U. S. Coast Guard.
24. **Vessel.** All watercraft, other than seaplanes, of any size that are used or capable of being used as a means of transportation on the water.
25. **Vessel Examination Program.** The combined efforts of the Courtesy Marine Examination, Personal Watercraft Safety Check, and Vessel Facility Inspection Programs.
26. **Vessel Examiner.** A Vessel Examiner (VE) is:
 - a. A trained, qualified Auxiliarist who has been certified by the director to perform CMEs, Personal Watercraft (PWC) Safety Checks, and facility inspections.
 - b. A public representative of the Auxiliary without any law enforcement authority. Auxiliarists who are full or part-time marine law enforcement officers may not perform CMEs. Request for waiver of the prohibition against law enforcement officers as VEs should be forwarded to the director via the district commodore. Each request will be reviewed on an individual basis. The written response by the director constitutes a final determination.
 - c. One who retains a current qualification by performing at least ten passing or failing CMEs, PWC Safety Checks, or facility inspections during a calendar year, and, when required, attends a Coast Guard approved workshop.

27. **Vessel Facility.** A boat, owned whole or in part by an Auxiliarist, a corporation, an Auxiliary unit-owned boat, or a boat transferred to (or loaned) to an Auxiliary unit by the Coast Guard, that has met all the equipment and condition requirements of federal regulations, local/state regulations, any district commander requirements, and the additional requirements imposed by this manual.

D. Vessels Eligible For The Courtesy Marine Examination.

1. **Generally,** any recreational boat, if requested by the owner/operator.
 - a. To receive a CME, sailboats must meet the same requirements as motorboats. The Vessel Examiner (VE) does not have to be an expert in deck fittings, rigging or masts peculiar to sailboats; however, the VE must have a working knowledge of sailboat construction and nomenclature to discuss with the sailboat owner the progress and results of the CME. For the VE who has a background limited to power vessels, the CME requirements for a sailboat have been clearly defined to assist the VE. If questions arise that a VE does not feel qualified to answer, the VE shall seek out the correct answers and provide them to the boat owner.
 - b. Auxiliary members' motorboats less than 14 feet and sailboats less than 16 feet may be awarded a CME decal. All other Auxiliary members' boats may ONLY be inspected as facilities.
2. **Boats Out of the Water.**
 - a. The CME may be performed on boats out of the water, subject to the following conditions:
 - (1) Must be of known stock design and construction.
 - (2) Must be built of a material which is not subject to warping, shrinkage, or opening of the seams.
 - (3) Must have properly installed through hull fittings if required by the design of the boat. Some examples: the intake of cooling water, discharge of cooling water, bilge pump discharge, sanitation discharge, or propulsion (jet drive). This includes drain plugs within the basic meaning of hull fittings.
 - (4) Before the decal can be affixed, all provisions for a boat of that length, as stated in this manual, must be met.
 - b. VEs will find that these dry land examinations offer greater flexibility in arranging a time and place for the examination. The owner/operator will realize greater convenience in obtaining the examination, and will not experience lost time after trailering the boat long distances to the water while waiting for the examination to take place. Dry land examination stations may be set up in parking lots or even at the VE's residence.

3. **Commercial Vessels.**

- a. A CME may be conducted on commercial vessels which are less than 65 feet in overall length and carry six or less passengers for hire.
- b. Commercial vessels 65 feet and over MUST be Coast Guard inspected and are not eligible for A CME.
- c. Commercial fishing vessels are covered by another inspection program, specifically for this industry.

4. **Boats Owned by Federal, State, or Local Governments.**

- a. Boats owned by federal, state, or local government agencies are not public vessels for purposes of Coast Guard inspection. In order that these government agencies become better acquainted with the scope of the CME and the full meaning of the decal, certain boats owned by these agencies may be examined and awarded the decal if all requirements of this manual are met.
- b. At the request of a representative of the government agency concerned, a qualified VE may conduct a CME on the following categories of vessels not over 65 feet in overall length:
 - (1) Government owned recreational boats.
 - (2) Government owned non-recreational vessels or boats (such as patrol boats).
- c. A careful and complete examination of such boats is extremely important. Requests for examination of federal, state, or local government agency boats must be made by an agent of the government agency involved. These requests will be forwarded to the district staff officer for vessel examination (DSO-VE) in whose area the boat operates. The DSO-VE will coordinate these requests and assign an experienced VE to perform the examinations.
- d. Boats eligible to receive an examination must be of a design and construction similar to that commonly found in recreational boats.

5. **Inflatable Craft.**

- a. To be eligible for the CME, an inflatable craft must meet the following requirements:
- (1) Be fully inflated at the time of the examination.
 - (2) Have a minimum of three separate air chambers, which are not interconnected.
 - (3) Have an installed, rigid transom. A strap-on motor mount is not considered satisfactory.
 - (4) Vessel registration numbers must be properly displayed and firmly attached.
 - (5) All Coast Guard Auxiliary CME requirements must be met where applicable.
- b. There are no particular federal requirements for inflatables.

6. **Scouting of America.** Boats owned by the BSA/GSA or Sea Cadets may be given a CME. Do NOT seek these vessels out for examinations, but if requested by Scouting leaders, follow procedures as stated in paragraph D.4.

7. **Special Exceptions.** The primary purpose of a CME is boater education. In certain situations it is permissible to conduct a CME and withhold awarding of a decal (see paragraph E). In many cases, the vessels (e.g., surface effect craft, sailboards, etc.) can not meet our requirements to be awarded the decal, but the educational information could be beneficial to the boater. Do NOT seek out these craft, but give the public the benefit of our knowledge, if requested. (See CHAPTER 8 for PWCs.)

8. **Boats OVER 65 Feet.** Boats over 65 feet, used for recreational purposes may be examined and, if they qualify, be awarded the CME decal. Do not seek the larger boats but do accommodate them, if requested.

E. Vessels Not Eligible For The Courtesy Marine Examination.

1. The CME will not be performed on a craft of experimental or unproven design.
2. Commercial vessels over 65 feet in length are NOT eligible for a CME.

3. Vessels and boats answering the description of workboats (e.g., tugs, icebreaking boats, dredges, derrick barges, and similar craft).
4. Livery (rental) boats or bare boats for charter (see paragraph C.1.a.(4)).
5. The examination will not be performed on submersibles, amphibious vehicles, inflatable emergency life rafts, surface effect machines or the types of craft generally described as "thrill craft", in which the owner/operator does not ride in a cockpit located below the level of the sheer. (Note: See CHAPTER 8 which describes a special examination program for PWCs.)
6. Commercial fishing vessels which are inspected by another program specific to that industry.
7. Watercraft such as unmanned water-ski towing craft and motorized surf boards.
8. Vessels belonging to members of the Coast Guard Auxiliary and Auxiliary unit vessels (defined in the Auxiliary Operations Policy Manual ,COMDTINST M16798.3D) must be dealt with under the provisions of CHAPTER 4.

F. Activities Beyond The Scope Of The Courtesy Marine Examination.

1. The Vessel Examiner (VE) is not a marine surveyor. The CME is limited to certain aspects of the general condition of a boat and certain equipment carried or installed in a boat. It must not extend into areas beyond those intended and identified in this manual.
2. The VE is not intended to be a naval engineer, and is not expected to make exact measurements while conducting a CME. In certain situations, such as doubt as to the actual length of a boat, the VE shall make an accurate determination by measuring the boat. In most cases (such as determination of ventilation criteria of an open or closed boat), the VE is only expressing an educated opinion based upon experience and training in seamanship and boating safety. In most instances, the length of a vessel is indicated on the registration certificate or documentation papers.
3. It is not intended that the VE consider the exterior of the underwater body of boats examined in the water. Therefore, zincs, rudder, pintle bearings, shafting, struts, soundness of fastenings on the exterior of the boat, and condition of coatings are excluded from the examination. The examination is not intended to ferret out spots of dry rot not readily apparent to the eye. Deteriorated fastenings, wasted fittings, defective hoses, deteriorated skin connections, loosened planking or cracked ribs, which adversely affect the safety of the boat AND ARE READILY APPARENT TO THE EYE without probing or disassembling, DO fall within the scope of the examination. Under no condition will the examination include the following activities:

- a. Admeasurement;
 - b. Alignment check of shafting or motor mounts;
 - c. Calibration of sounding devices or water speed indicators;
 - d. Calibration of electronic devices;
 - e. Compass adjustment and construction of deviation tables;
 - f. Calibration check or construction of r.p.m. speed tables.
4. A VE will not become involved in a defect notification campaign. The following information is supplied in case the public asks questions about defect notification.
- a. 46 USC 4310 outlines the requirements pertaining to defect notification. Recreational boaters can obtain information on boat recalls by calling the Coast Guard Customer Infoline at 800-368-5647. Basically, it is the undertaking of a notification and recall program by the manufacturer to correct noncompliance with a Coast Guard standard or remedy a safety defect.
 - (1) A safety defect is a design or performance discrepancy which creates a substantial risk of personal injury.
 - (2) Noncompliance is the failure of a manufacturer to construct a product per a published Coast Guard safety standard or regulation.
 - b. The defect notification must contain the following information:
 - (1) The name and address of the manufacturer.
 - (2) Data or other information necessary to identify the watercraft or associated equipment affected by the defector noncompliance.
 - (3) A clear description of the defect or failure to comply with an applicable standard.

- (4) An evaluation of the hazard that can reasonably be expected to result from the defect or failure to comply.
 - (5) An offer and undertaking to correct the problems at the sole expense of the manufacturer.
- c. In conducting a CME, the VE may be of the opinion that a certain craft does not meet federal regulations or Auxiliary requirements. For example, a VE may believe that the ventilation aboard a certain craft does not meet the regulations and requirements as set forth in this manual. If so, the VE must refrain from writing a letter to the manufacturer, dealer, or boating organizations stating that a watercraft, motor, or piece of equipment does not meet such requirements. The proper action for the VE to take is to withhold the decal, write to the director through the normal chain-of-command, with information on the particular case, and request a formal ruling. The information should include the make of the watercraft, year of manufacture, model number, if possible the HIN, and where it was examined. The director will then request the assistance of the appropriate Marine Safety Office for a determination.
- d. Under 46 USC 4302, many of the legal requirements are the responsibility of the manufacturer. The VE will note any discrepancies of these manufacturer standards and report these discrepancies to the director. The director will forward these reports to the Marine Safety Office. This action by the VE must be clearly explained to the owner/operator; and it must be pointed out that the VE is only reporting those deficiencies caused by the manufacturer and is in no manner acting as a law enforcement agent. The name of the owner/operator will not appear in the report to the director; and the report must be limited to the make and model of the watercraft, the HIN, and the nature of the discrepancy. It shall be emphasized to the owner/operator that these actions are designed to improve boating safety and protect the consumer.

G. Relations With Law Enforcement Officials.

1. Coast Guard Personnel.

- a. The Coast Guard has a high regard for the importance of the Auxiliary Courtesy Marine Examination Program. Personnel of the Coast Guard are directed to cooperate to the fullest extent with members of the Auxiliary in the execution of this valuable program. Display of the CME Decal indicates that the boat carries proper safety equipment, and the owner/operator has exhibited an interest in safety on the water. Usually the boater will not be boarded for enforcement of boating regulations; however, obvious violations, unsafe practices observed, and boarding for random law enforcement inspection programs will include boats with the CME or facility decal.

- b. Coast Guard boarding personnel are in no way subordinate to any Auxiliarist, and quite properly resent attempts by overly enthusiastic Auxiliarists to assert authority over them. These personnel have their own assignments to perform. While they often go out of their way to be of assistance to Auxiliarists, this is done for the promotion of boating safety matters and better relations between the Coast Guard and the Auxiliary. They are under no obligation to perform any special service for any Auxiliarist. Auxiliarists who (by their position in the community or close association with high ranking Coast Guard officers) attempt to exert control over them, will only cause a deterioration in relationships between these personnel and the Auxiliary.

2. State and Local Enforcement Officials.

- a. A close working relationship with State and local enforcement personnel is essential to an effective CME Program. These enforcement officers represent a fund of knowledge concerning local regulations, water ski and swimming areas, prohibited areas, local speed limits and other matters concerning safe and legal boating in their area. State enforcement officers are often engaged in enforcement of conservation laws, and can advise the examiner of current restrictions or requirements.
- b. Vessel Examiners (VEs) can best assist state officials by becoming familiar with local regulations. Auxiliarists are then in a position to answer inquiries on these matters and direct pleasure boaters to the proper authorities in applying for original certificates of number (registration) replacement, notification of sale, destruction or loss of a boat, or of change in address, and submission of required accident reports.
- c. State and local recognition of the CME Program contributes significantly to the respect attained by the Auxiliary throughout the country. Examination procedures must be of consistently high quality if State and local officials are to honor the CME decal in the same way as does the Coast Guard.

- H. Examinations Performed Outside Of The Home District.** Vessel Examiners (VEs) may examine boats anywhere in the 50 states and territories. However, while such activity is permissible, there are some pitfalls which should be avoided. The CME Program is coordinated within each district at the division and flotilla levels. The visiting VE should be briefed on prevailing local conditions before engaging in extensive dialogue with local boaters. Local Auxiliarists often arrange specific dates on which examinations will be offered. Information and education programs are frequently carried on in conjunction with examinations. A visiting Auxiliarist who intrudes into an already well-planned program can do a great deal of harm. Visiting Auxiliarists should contact the local division or flotilla vessel examination staff officer or the director to familiarize themselves with local conditions and plans, and coordinate their efforts with those of the district in which they are visiting.
- I. District Supervision Of The Vessel Examination Program.** The directors and commodores shall ensure that the CME Program is carried out as outlined in this Manual by having spot inspections made of the facilities and pleasure boats which have been issued decals. Spot checks will be conducted to ensure compliance with the inspection/examination requirements, as well as with uniformity of the program. It is felt that the wholehearted cooperation between active duty personnel and the Auxiliary will improve safety conditions on boats. It is expected that all Coast Guard personnel give as much support as they possibly can to the Auxiliary and its various programs for improving safety on board recreational watercraft. It is anticipated that the response of all Coast Guard personnel will materially aid the Auxiliary in its efforts to improve boating safety.
- J. Vessel Examiner Qualification.**
1. For initial qualification as a Vessel Examiner (VE), the member must pass the current VE Qualification Examination, and satisfactorily conduct a minimum of five CMEs, PWC Safety Checks, or facility inspections under the supervision of a currently qualified VE. One Personal Watercraft examination may be included in the five training examinations. The credit for the first five supervised examinations goes to the qualified VE observer. If there is more than one trainee per qualified examiner, each trainee must conduct a minimum of five separate CMEs or facility inspections. The qualified VE must sign each AUX-204 or inspection document and will receive the credit for all examinations and inspections. The practical examinations/inspections may be conducted before taking the written examination, but not before completion of training.

2. Each Auxiliarist who initially qualifies as a QE will be exempt from attending any Headquarters approved workshop during the qualifying calendar year. All requalification requirements apply after the year of initial qualification.
 - a. Each newly qualified VE is required to conduct 10 CMEs, PWC Safety Checks, or facility inspections (in addition to the five training exams/inspections required in paragraph J.1. above) to retain the qualification for that calendar year.
 - b. Those members who qualify during the periods indicated below will be exempt from conducting the 10 CMEs, PWC Safety Checks, or facility inspections in that qualifying calendar year.
 - (1) The last five months of the calendar year for members of district (or region) 1N, 1S, parts of 8 (formally 2N), parts of 9 (formally 9E, 9C, 9W), and 17.
 - (2) The last four months of the calendar year for members of district (or region) parts of 8 (formally 2E, 2W), and 13.
 - (3) The last three months of the calendar year for members of district or region 5N, 5S, parts of 8 (formally 2S), and 11N.
 - (4) The last two months of the calendar year for members of district or region 7, 8, 11S, and 14.
3. The VE Qualification Examination is an open book, three hour time limit exam with a passing score of 90% required. This examination includes questions on the following material:
 - a. Scope of the CME Program.
 - b. CME procedures.
 - c. Legal requirements for recreational boats and approved equipment.
 - d. Auxiliary standards for award of the CME decal.
 - e. Vessel facility inspections including radiotelephone requirements.
 - f. Forms and reports.

- g. State requirements.
- 4. A VE may annually retain qualification by fulfilling the following requirements:
 - a. Performing at least ten passing or failing CMEs, PWC Safety Checks, or passing facility inspections each calendar year.
 - b. Attending, when required, one Headquarters approved CME/MDV workshop each calendar year. Annual workshops familiarize VEs with current regulations, changes in Coast Guard policies, and local requirements. Such training should be the joint endeavor of MT and VE staff officers at both the flotilla and division level.

K. Vessel Examiner Requalification.

- 1. Vessel Examiners (VEs) who fail to attend a required workshop have until 30 SEPT to attend a makeup workshop. Their VE Qualification will be suspended during the period from the normal workshop due date (generally, 31 MAY) until completion of the makeup. If the workshop has not been made up by September 30 then the member must retake and pass the VE Qualification Examination and complete the workshop that was missed. No training examinations are required as long as less than one year has elapsed since May 31 of the year the mandatory workshop was missed. If the member had also not conducted any CMEs, PWC Safety Checks, or facility inspections in the year the workshop was missed, then the five training examinations must also be conducted to complete the requalification.
- 2. VEs who fail to conduct 10 CMEs, PWC Safety Checks, or facility inspections (or any combination of the 3) during the previous year must retake the CME exam in addition to any required workshop. They do not have to perform the 5 practice CMEs.
- 3. After one year loss of qualification, the Auxiliarist must qualify the same as a new VE, described in paragraph J.1.

L. Assignment To Duty. For information pertaining to the benefits provided by Coast Guard Orders, consult the Auxiliary Manual, COMDTINST M16790.1 (series).

CHAPTER 2: TECHNIQUES OF THE COURTESY MARINE EXAMINATION

A. Attitude Of The Vessel Examiner.

1. Promote the Program (Enthusiasm and Sincerity).

- a. The Vessel Examiner (VE) must educate the public about the CME Program. Each VE must make every effort to get out and meet the boating public. Only by this face-to-face encounter with the public will the benefits of the CME become clear to every boater.
- b. No boat should be ignored or passed over simply because the boat obviously does not meet the requirements of the CME. This practice eliminates the opportunity for a valuable exchange of boating safety information between the owner/operator and the VE. In fact, the defective boat's owner/operator probably needs our education more than some owners/operators of well equipped boats.
- c. It is important that no attempt be made to coerce the owner/operator to accept the examination, nor shall the owner/operator be improperly led to believe that the VE is vested with any law enforcement powers. It is quite proper to explain the value of the CME Program fully to an uninformed owner/operator to solicit a request for an examination. Stress the safety/service aspect of the CME.

2. Outlook of the Vessel Examiner.

- a. The term "courtesy" exemplifies our basic philosophy. The polite and tactful VE attempts to foster high standards of boating safety in an atmosphere of good will. If the VE is officious and overbearing, the very purpose of the program will be defeated.
- b. Refrain from giving the appearance of working with enforcement agencies. If Coast Guard boarding officers, state, or local enforcement officers are working in the area where you want to conduct the CME, it would be better to move to another location.
- c. The owner/operator must not be subjected to sharp criticism for deficiencies noted during the examination. Rather, the VE shall assure the owner/operator that the boat will be cheerfully reexamined when the owner/operator requests it after any deficiencies have been corrected. When warranted, owners/operators should be complemented on the shipshape appearance of their boats. In short, VEs should help, not condemn. An examination shall never be forced on a boater. If an owner/operator seems dubious about the examination, the VE shall explain that the examination is strictly in the interest of the owner's/operator's personal safety and protection. The owner/operator should be advised that when the CME decal is displayed on the boat, the regular Coast Guard will ordinarily refrain from boarding for an official inspection unless an obvious violation is observed. An exception to this policy is that, in some areas, the Coast Guard and other law enforcement agencies MUST board all boats during certain periods to interdict smuggling activities. Many state and local authorities similarly honor the CME decal; however, routine boardings may be experienced in certain areas. The decal is not a guarantee of boarding immunity, and must not be represented as such.

3. **Availability of the Vessel Examiner.**

- a. Scheduled CME stations MUST be a regular part of the flotilla CME Program. The station schedule should be published so the public can locate a VE. We offer a public service and must be available at all times.
- b. VEs should make themselves known around yacht clubs and in boating circles. Visits should be made to places where boaters congregate. The nature of the examination should be fully explained to owners/operators. It is particularly important that the owner/operator be aware that the VE is not a law enforcement official when acting as an Auxiliarist, and that this service is being offered by the Coast Guard Auxiliary. Often the boating public does not know the difference between the Auxiliary and the regular Coast Guard, because of the similar uniforms.
- c. VEs should publicize their names and phone numbers in boating circles so they can be reached when questions concerning boating safety or CMEs arise. Most Auxiliary posters have a space which may be used to list persons to consult for more information. This is an ideal method to advertise the CME Program.
- d. VEs should include their addresses and phone numbers on the completed Seal Of Safety Check List (AUX-204) to allow follow-up action by the owner/operator when requesting more information or a reexamination. Also put your name and phone number on any handout literature.
- e. VEs are encouraged to contact boaters whose boats they have previously examined (decal awarded or decal withheld) to add a personal touch of concern as to their boating safety needs. This is best accomplished by a simple postcard a few weeks after the examination. VEs should not harass the owner/operator with repeated phone calls.

4. **Appearance of the Vessel Examiner.**

- a. The VE shall be dressed in an authorized Auxiliary uniform, with soft soled deck shoes, while conducting preplanned or organized CME activities. The uniform should be neat with the hat squared on the head. It is not the intent of this section to discourage "on-the-spot" CMEs if a VE should be out of uniform.
- b. DO NOT refuse or delay conducting an examination because you are not in uniform. It is more important that the CME be conducted and accommodate the public in a timely manner.

B. Educational Benefits Of The Courtesy Marine Examination Program.

- 1. Background Material. The following publications may aid the Vessel Examiner (VE) in conducting an examination. The latest edition of these publications should be held by the VE:
 - a. Federal Requirements for Recreational Boats.
 - b. Such publications as may be available from the state on state boating laws, rules, and regulations.
 - c. Navigation Rules, International-Inland, COMDTINST M16672.2 (series).
 - d. Auxiliary Public Education pamphlet with local classes listed.
 - e. Join The Coast Guard Auxiliary pamphlet.
 - f. Other safety publications stocked at ANSC.
- 2. **Exchange of Boating Information.**
 - a. The examination presents an excellent opportunity to discuss the various facets of boat operation and safety. Points which shall be brought to the attention of the owner/operator:
 - (1) The boat must be equipped over and above the legal requirements to qualify for the Auxiliary decal, where such items are deemed necessary for safety purposes and where the operator has direct control.

- (2) This program is in the interest of greater safety on the water, and not to determine mere compliance with legal requirements. This will reaffirm the purpose of the CME as being a means of helping the owner/operator to become more safety conscious, and to maintain and operate the boat with greater safety. It will also reaffirm that this program is a public service performed by a fellow boater and not by a law enforcement official.
- (3) In accepting and displaying the decal, the owner/operator pledges to maintain the boat and equipment to the safety standards of the examination. The award is not made simply to the boat. Therefore, the owner/operator shall be advised to remove the decal from the craft, should it be sold to another party. Conversely, in purchasing a watercraft that may have been awarded the decal, a reexamination should be requested.
- (4) The Navigation Rules place certain responsibilities upon owners/operators with regard to signals. The owner/operator should be aware of the Rules which apply to the length of the owner's/operator's own boat.
- (5) The speed of a boat should be kept down when proceeding through an anchorage, or close to moorings. The owner/operator must be aware of and comply with posted speed limits.
- (6) Small boats are well advised to keep out of the way of large boats whether the small boat is the stand-on-boat or not.
- (7) It is illegal to moor to buoys, daybeacons, or other aids to navigation owned or maintained by the government.
- (8) The owner/operator of a boat involved in an accident is required to stop and render assistance insofar as can be done without endangering the owner's/operator's own boat or persons aboard. Identification of the owner/operator and of the boat is required to be disclosed to any person injured and to the owner/operator of any property damaged.
- (9) A prompt report of boating accidents is required by federal law. In all states having an approved numbering system, this report must be made to the appropriate state agency. In Alaska, reports must be made to the Coast Guard. Reports must be made for any boating accident which results in death, injury requiring medical treatment beyond first aid, damage to a boat (or vessel) or other property totals more than \$500, or complete loss of a boat (or vessel), or the disappearance of a person (that indicates death or injury). Some states require reports on damage less than \$500, so check your state's requirements. The Boating Accident Report (CG-3865) will be used for this purpose, and may be obtained from Coast Guard stations and offices. In accidents involving death within 24-hours of the accident, or injury that requires medical treatment beyond first aid, or if a person disappears from a boat (or vessel), the proper authority must be notified immediately; and a written report sent within 48 hours. All other accidents must be reported within 10 days. Whenever more than one boat is involved, each operator shall file separately.

- (10) Where applicable, emphasize the importance of having an accurate r.p.m. speed table and an up-to-date deviation card for the compass posted near the operator's position.
 - (11) In the event of a boat overturning or flooding, the correct action would be to put on personal flotation devices and STAY WITH THE BOAT.
 - (12) Advise the owner/operator not to use automotive parts. While some marine engine components seem overly expensive compared to their automotive equivalents, there are major differences in the environments in which they are designed to operate. Some automotive fuel components release fuel and vapor into the engine room and some automotive electrical components emit sparks. Fuel vapors do not accumulate beneath the hood of a car, but they quickly reach explosive levels in the engine room on a boat. Refer to CHAPTER 6, for identification of automotive components and marine equivalents, differences between the two, and potential hazards when using automotive parts.
- b. The VE shall avoid using the words "safe" or "seaworthy" to describe a boat which has passed the examination and been awarded the decal. The examination is primarily a check of equipment, and not a complete survey of the boat. The examination is merely an expression of the opinion of a fellow boater, who has been trained in the principles of boating safety. It must be pointed out that this examination is an opinion and not a guarantee of safety. The approach and techniques of the VE and the experience and training brought to the examination will determine the value that the owner/operator will place upon the CME Program. The owner/operator must be made aware of the fact that, while the boat is free from obvious sources of danger, the decal does not guarantee immunity from trouble.

- c. One of the purposes of the CME Program is to encourage boaters to join the Auxiliary to further their nautical knowledge and to participate in Auxiliary activities. The VE must, in manner and dress, exemplify at all times the competent and qualified presence that constitutes the Auxiliary, and shall be prepared to answer any questions about the Auxiliary. If the owner/operator shows interest in the organization and its programs, and the VE, from observation of the individual and the boat, believes that the individual would be desirable for membership, the advantages of being a member should be discussed. Pamphlets on the Auxiliary, Public Education, and CME Programs, may be furnished to interested persons.

C. Conducting The Courtesy Marine Examination.

1. The Examination.

- a. The owner/operator of the boat must be present during the examination and while the decal is being affixed. The boat must be observed safely afloat at normal trim with adequate freeboard before the decal may be awarded (except those boats eligible for examination out of the water).
- b. The items on the Seal of Safety Check List (AUX-204) shall be checked off as the examination progresses. Upon completion, the form must be given to the owner/operator. If available, also give the owner/operator a copy of the Federal Requirements pamphlet. Under no circumstances must the impression be given that violations found will be reported to any enforcement agency. Each deficiency shall be carefully explained and suggestions for correction should be offered. In this discussion, the VE must be careful to avoid the use of such terms as "illegal" in describing a deficiency in the boat's condition or its equipment. The term, "Auxiliary CME requirements," as opposed to "Federal Regulations" will suffice.

- c. The VE must be well acquainted with both federal and state regulations and recommendations. The VE will indicate whether the boat meets state requirements on the AUX-204 or AUX-204A. For award of the decal, the boat must be equipped per the regulations of the state in which the examination is being conducted, not necessarily the one in which it is registered.
- d. Additional Federal Requirements. The AUX-204 has several items of federal requirements that are advisory in nature. These items are the Capacity Plate, Manufacturers Certificate of Compliance, and the HIN. Because these items are provided by the manufacturers and cannot be controlled by the owner/operator, they are not required for award of the decal. If any of them are required and are missing, advise the owner/operator to consult with their dealer to obtain replacements.
- e. Hailing Underway Boats. No VE will pursue or stop a boat on any waters for the purpose of conducting a CME.
- f. Examinations While on Operational Patrol. Examinations may be conducted while on patrol if the patrol boat is at a dock. While conducting the examination, advise the owner/operator that you are on call and may have to stop the process for a rescue. The patrol boat should have someone monitoring radio communications, and have a means to recall the VEs without leaving the patrol boat.
- g. Incomplete Examinations. Unless the owner/operator requests that the examination be terminated, the examination must be carried through to completion. An examination which is carried through to completion, even though disqualifying deficiencies have been noted, is perhaps the most valuable service the VE can render. It shows what must be done to bring the watercraft up to Auxiliary safety standards. Examinations which, for any reason, are not carried to completion will not be reported and will not be compiled in the district reports of CME activity.
- h. Reexamination. If an owner/operator corrects a deficiency from a prior examination and requests a reexamination to get the decal, a complete new examination MUST be performed if more than 24 hours has elapsed since the original examination. You may move a little faster with the new examination but explain, to the owner/operator, that this procedure is necessary because there could be changes in some of the items since the original examination. If the defective items are corrected in the same day, only check the defective items and award the decal. NOTE: You may claim credit, on form CG-3594 for the second examination on the same boat, even if it is done on the same day.

2. **Awarding The CME Decal.**

- a. If the decal is awarded, it shall be affixed personally by the VE, immediately upon completion of the examination, in such a location that will not interfere with or obscure the operator's view, and will be readily visible to authorities while underway. Normally, this will be on a lower corner of the port side of the windshield or a lower forward corner of a portside window. On boats with no windshield, the decal may be affixed to the dashboard or the back of a seat. If such areas are not present, it is often possible to place the decal inside under the gunwale and between the frames so that it is still visible from the outside and above. A little ingenuity is usually all that is required. Under no circumstances shall the decal be affixed to an outboard motor or any other item of equipment which is not permanently installed on the boat. It must NEVER be placed on the hull where it might be associated with registration numbers.
- b. See CHAPTER 8 for placement of the special decal for Personal Watercraft.
- c. Only one CME Decal may be displayed. The old decal should be removed if possible before affixing the new one. As an alternate procedure, the new decal may be placed directly over the old one.
- d. Watercraft which display the CME Decal from a preceding year are generally easier to examine. Although this is true, efforts should be made to contact boats which do not display the decal. By examining these boats, the education of the public is greatly increased.
- e. A strict accounting of decals is mandatory. District policy will dictate accounting procedures that record the number of decals issued to each VE within that district.

CHAPTER 3: THE COURTESY MARINE EXAMINATION

A. Introduction

1. This chapter contains the detailed information on numbering and equipment that the Vessel Examiner (VE) will be examining on boats. In addition to explanations, there are details on how to examine this equipment, and the condition it must be in to be acceptable.
2. Examination items are broken down into three parts as follows:
 - a. CME Requirements. Specifically outlines what is required to be examined.
 - b. Examination Techniques. Explains how to examine the equipment, and the condition it must be in to be accepted by you, the VE, for awarding of the CME decal.
 - c. Educational Exchange. Provides suggested topics to be covered in the one-on-one educational exchange between you and the boater.
3. The items subject to examination follow the same sequence in this chapter as found in the Seal of Safety Check List (AUX-204). This should provide the VE with an easy cross reference from either the manual or the check list.
4. Chapter 6, THE VESSEL EXAMINERS TECHNICAL REFERENCE GUIDE, provides more detailed federal and technical references needed to fully understand the items being examined.

B. Coast Guard Approved Equipment.

1. The following equipment must be Coast Guard approved or meet Coast Guard standards as listed below to be accepted for the CME decal:
 - a. Personal Flotation Devices (PFDs) - CG approval only.
 - b. Fire Extinguishers - CG approval only.
 - c. Flame Arresters - CG approval, UL number UL-1111, or SAE number J-1928.
 - d. Visual Distress Signals (except inland waters) - CG approval only.
 - e. Marine Sanitation Devices, Type I and II - CG approval only.

2. The Commandant has prescribed detailed specifications concerning the performance and design of this equipment. As will be noted later in this chapter, the equipment required aboard boats depends on the length of the boat.

C. Numbering And Documentation.

1. CME Requirements.

- a. Registered Boats. The boat's number, if required, must be permanently attached to each side of the forward half of the boat (the bow), and no other number shall be displayed thereon. Numbers are to read left to right, be plain vertical block characters, a color contrasting with the background, distinctly visible and legible, and no less than three inches in height. A space or dash must separate letters from numbers. Example: OK 2334 FG or OK-2334-FG. Numbers may be displayed on a board or plaque as long as they are attached to the forward half of the boat in a permanent fashion. A plaque suspended from the bow rail with wire or line is not considered permanent.
- b. Unregistered Boats. Some boats such as sailboats without power, or boats used on private lakes are not required by some states to be registered. In this situation, the Vessel Examiner may conduct the CME and award the decal. Be sure to note on the AUX-204 where there is no registration or numbers required by state law.
- c. Documented Vessels.
 - (1) Pleasure Boats. For boats documented exclusively for pleasure, the boat's name and hailing port must be plainly marked on the exterior part of the hull in clearly legible letters not less than four inches in height.
 - (2) Commercial Boats - For boats documented for commercial purposes, the name of the boat must be marked in clearly legible letters not less than four inches in height on some clearly visible exterior part of the port and starboard bow. The hailing port of such boats must be marked in clearly legible letters not less than four inches in height on some clearly visible exterior part of the stern of the boat. The state name must be part of the Hailing Port display (i.e., New York, NY).
 - (3) On all documented vessels, the official number of the vessel, preceded by the abbreviation "No." must be marked by any permanent method which cannot be obliterated or obscured, in block type Arabic numerals not less than three inches in height on some clearly visible interior structural part of the hull.

2. **Examination Techniques.**

- a. Ask the owner/operator for the registration or documentation papers for the purpose of determining age and length.
- b. Examine the registration numbers on both sides of the forward half of the boat. They must be in agreement, and be properly spaced and mounted.
- c. Verify the documentation numbers as placed on the interior structural part of the hull. Verify that the boat's name and hailing port marked on the exterior is clearly legible and not less than four inches in height.
- d. While you have the registration papers in hand, compare the hull identification numbers (HIN) with those marked on the exterior part of the hull, if a HIN is required.
- e. If the name on the registration document does not agree with the name of the owner or operator inquire about the difference. If you are satisfied, when the operator states they have permission to use the boat, proceed with the examination and award the decal if all else meets our requirements. If a reasonable answer cannot be given for the difference, proceed with the examination but do not award the decal, because a proper registration has not been submitted. One example of an unacceptable answer: the names do not agree, the operator states they want the examination for insurance purposes and does not confirm they just purchased the boat and cannot show a bill of sale or evidence the registration transfer is in process.
- f. In some cases, a boat without numbers may qualify for the CME decal. Examples would be in states that do not require numbers on sailboats without power, or a new boat that has not yet been assigned registration numbers. In the case of a new boat, if the owner/operator has a receipt or other evidence that the numbers are pending, the CME decal can be awarded. Instruct the owner/operator about proper spacing and coloring of numbers. Indicate on the AUX-204 the type of documentation that was accepted in lieu of numbers.

3. **Educational Exchange.**

- a. Since the request for the registration or documentation papers may be perceived by the owner/operator as law enforcement in nature, explain that this is not to validate ownership, from a legal stand point, but that many of the required items of safety equipment depend on the age and length of the boat. Examples are: ventilation requirements, fire extinguishers, etc.
- b. Emphasize that another reason is for the protection of the owner/operator, if search and rescue procedures are put into action. The boat's registration numbers or name and hailing port, if documented, are the primary methods of identification. They must be in conformance with requirements in order to be easily seen and identified.
- c. Checking the hull identification numbers for agreement is also for the owner's/operator's protection, since it is a federal requirement for the HIN to be placed on the boat by the manufacturer. If a discrepancy is noted, the owner/operator should check with the appropriate authority. Sometimes the state will make an error in posting the HIN on the registration paper. Recommend the owner/operator get the situation corrected as soon as possible.
- d. State Validation Stickers. Inform the owner/operator of the state requirement.

****NOTE**** - For technical data refer to Chapter 6, paragraph C.

D. **Navigation Lights.**

1. **CME Requirements.**

- a. Boats 16 feet or greater in length must have operable navigation lights and all-round anchor light to receive the CME decal.
- b. All navigation lights must be properly installed, operating correctly, and not be obscured.
- c. Boats less than 16 feet in length are not required to have navigation lights. If a boat has lights, the lights must work (see paragraph 2.b below). Because federal law requires all watercraft to display lights between sunset and sunrise, recommend to the owner/operator of a boat without navigation lights that they have navigation lights available for use.

- d. Sailboats capable of both power and sail must be able to display navigation lights for both systems for awarding of the CME decal.

2. Examination Techniques.

- a. Check both the proper operation and installation of the boat's navigation lights. Cracked or broken lenses or burned out bulbs are not acceptable. These may be replaced during the CME if such a condition is detected during the examination; however, the lights must operate properly before the award of the decal (except in the special case of boats less than 16 feet).
- b. If the boat is under 16 feet and does not have navigation lights installed, do not withhold the decal. If the boat does have lights installed, the lights must be configured properly and they must work for the boat to receive the decal.
- c. Make sure the navigation lights installed display an unbroken light through the prescribed arcs of visibility. All-round lights may not be obstructed more than six degrees by items such as collapsible canopies, bimini tops, masts, jackstuffs, trolling motors, and the like.
- d. The decal will not be awarded to any boat 16 feet or greater which cannot display proper navigation lights during the hours of daylight. Make sure they display both the underway and the anchor lights. Switches must exhibit the capability of turning off the navigation lights when the anchor light is on.
- e. Boats which are examined on the inland waters or those waters not defined as International per the Navigation Rules, have the option of displaying either Inland or International lighting during the CME in order to qualify for the decal.
- f. Suitable navigation lights operated by dry cell batteries are acceptable if they provide enough light to meet the minimum range of visibility. Suggest that the operator keep a spare set of fresh batteries on board.

3. Educational Exchange.

- a. Advise owner/operators that they are legally required, by the Navigation Rules, to display proper navigation lights should the boat be operated between sunset and sunrise or in reduced visibility.

- b. Be prepared to explain the differences between Inland and International lighting, and what the owner/operator needs to do to conform to the requirements.
- c. Discuss the most common navigation rules for lighting in your local area that boaters should know.

****NOTE**** - For technical datum refer to Chapter 6, paragraph D.

E. Sound Producing Devices.

1. CME Requirements.

- a. For compliance with the Navigation Rules and for distress signaling purposes, all boats must carry some type of sound producing device (whistle, horn, etc.) capable of a four-second blast audible for 1/2 mile.

****NOTE**** A "police/referees" type whistle is not acceptable on boats 12 meters or more.

- b. All boats 39.4 feet (12 meters) or longer must also carry a bell, in operating condition, with a minimum diameter at the mouth of 7 7/8 inches (per Navigation rules). For CME purposes, we can accept a bell 5 inches or larger that sounds a clear bell like tone. (Reason: Boarding Officers also do not enforce the 7 7/8 inch requirement).

2. Examination Techniques.

- a. Check for proper operation of the boat's whistle or other sound producing device. Request the owner/operator test, operate the device, and make a sound signal of about one second in duration.
- b. Checking the loudness criteria is a difficult value judgment which you should make with care. However, the Vessel Examiner is not expected to be an acoustics expert carrying sound measuring instruments.
- c. The bell need not be mounted for the award of the CME decal, but must be stored so as to be readily accessible. A mounting bracket is recommended.

3. Educational Exchange.

- a. Point out that the Navigation Rules require the sounding of signals for passing intentions and course changes. State that although recreational boaters may seldom sound such signals in some local areas, this does not relieve them of the legal responsibility to do so.

- b. Describe the appropriate whistle signals under the locally applicable Navigation Rules. Discuss other uses of the sound producing device such as in reduced visibility and as a distress signal. Recommend that they carry spares, such as a handheld gas-powered horn to back up an installed electric horn, and carrying a spare gas canister.
- c. Explain that the "pea" in the common police/referee type whistle may not operate when in the water. Recommend that they use a marine type whistle, which does not use a "pea" to make sound.

****NOTE**** - For technical datum refer to Chapter 6, paragraph E.

F. Personal Flotation Devices (PFDs).

1. CME Requirements for Recreational Boats.

- a. PFDs must be U.S. Coast Guard approved, in good and serviceable condition, and of suitable size for the wearer. Wearable PFDs must be readily accessible and throwable devices must be immediately available for use.
- b. Boats 16 feet or longer must have one TYPE I, II, or III (wearable) PFD of a suitable size for each person on board, and one TYPE IV (throwable) in each boat. A Type V (Hybrid) PFD may be counted to meet the minimum if it is worn by the passenger at the time of the examination. A minimum of two wearable and a throwable are required.
- c. Boats under 16 feet in length must have one Coast Guard approved Type I, II, or III PFD of a suitable size for each person on board. An appropriate Type V may be substituted for the appropriate Type I, II, or III. A minimum of two PFDs must be on all boats, one of which may be a type IV (throwable) if there is only one person on the boat.

2. CME Requirements for Commercial Boats (Except Commercial Fishing Vessels).

- a. Watercraft less than 40 feet, which do not carry passengers for hire, must have at least one TYPE I, II, or III PFD for each person on board. A TYPE V (Hybrid) PFD must be worn by the passenger during the examination to be counted as one of the minimum required.

- b. Watercraft carrying six or less passengers for hire, and each vessel 40 feet in length or longer not carrying passengers for hire, must have at least one life preserver Type I (Offshore), of a suitable size for each person on board.
- c. Watercraft 26 feet in length or longer, must have at least one life ring buoy in addition to the equipment required for F.2.a or b. Ring buoys must be 20", 24", or 30" size. Vessels 16 feet and less than 26 feet MUST carry a Type IV throwable cushion or ring buoy.
- d. All PFD's must be Coast Guard approved. The wearable PFD's must be in good and serviceable condition, and readily accessible. The ring buoy is to be immediately available and of proper size. The absence of these requirements would rule the PFD unacceptable.
- e. All commercial boats operating on the ocean, coastwise, or Great Lakes must have a Coast Guard approved PFD light on each wearable PFD, and must have retroreflective material on the front and back of the PFD. A minimum of 31 square inches of Coast Guard approved retroreflective tape is required (as well for all watercraft carrying passengers for hire).

3. Examination Techniques.

- a. All approved type PFDs for recreational boats must have the proper label attached. These labels must be clearly legible for award of the CME decal.
- b. When examining PFDs aboard pleasure craft or other watercraft, examine all PFDs aboard (regardless of the number required) to determine if they are in serviceable condition. If, during the examination, any PFD is found to be in poor or unserviceable condition, advise the owner/operator as to its condition and that it should be replaced. Excess PFDs which are not acceptable, are not cause for withholding the CME decal. However, you should point out that unserviceable PFDs should not be kept on board and should be destroyed.
- c. A TYPE V may be a Hybrid (inflatable type) or a special purpose vest. Read the label carefully. A Hybrid type MUST be worn by its intended user during the examination to qualify as one of the minimum required units. Other Type V special purpose vests may also meet the requirements for a Type III PFD. If so, the label will state the dual classification. A Type V work vest is NOT acceptable for pleasure or commercial boats.

- d. If PFDs are required to contain a PFD light, the light must be operable and serviceable. The battery will have an expiration date permanently marked on it, and must be changed on or before that date. If the light has a non-replaceable battery, the entire light must be replaced before the expiration date.
- e. Examination of PFDs is one of the most important facets of the CME. Know how to examine a PFD to determine if it is serviceable. The approval label must be legible and intact. PFDs must have no rips or tears, and the flotation material must be free from any indication of deterioration. Kapok is enclosed in plastic sacks, which must be given the "squeeze" test of each compartment separately. Any indication of a break in the sacks is cause to reject the PFD for unserviceability. If the kapok has already been exposed to moisture or has hardened, the PFD is considered unserviceable.
- f. In the course of the examination, you may find PFDs which have been repaired. Remember that emergency lifesaving equipment must be in good and serviceable condition, if it is to be entrusted with human life. Exercise sound judgment in determining if the repairs to the PFD have restored the PFD to that condition, or if proposed repairs will accomplish this result. Although unsatisfactory lifesaving equipment should not remain on board, there is no regulation prohibiting it on uninspected vessels. You can only point out the potential dangers of using unserviceable PFDs or leaving them available to the uninformed. Encourage destruction of unservicable units.
- g. The straps and belts used on PFDs must be unaltered and in perfect working condition. Metal rings or adjusting buckles must be free from excessive rust and corrosion.
- h. When you have checked the condition of each PFD on board, determine if the serviceable ones meet the number and type required to be carried on that boat. Check that each device is stored in such a location as to be readily accessible if it is needed. Carefully explain the reasons for not accepting the PFDs you have examined (if any). Stress the dangers involved in using defective PFDs. Provide recommendations on where to properly store these devices in order to ensure ready access.

- i. A Type V hybrid PFD that has been approved by the Coast Guard may be substituted on a pleasure craft for a Type I, II or III device. The hybrid PFD contains a minimum buoyancy of 7.5 pounds (enough to float an average boater), until the air chamber can be inflated. Inflated, the hybrid PFD provides 22 pounds of buoyancy. The device can be inflated several ways, depending on the style. The basic method of inflation required by the Coast Guard regulations for all hybrids is oral inflation (wearer blows into a mouth tube attached to the PFD, like blowing up a balloon).
- j. Inflatable PFDs that have NO INSTALLED BUOYANCY have been approved by the Coast Guard as an alternate recreational devices, FOR ADULTS ONLY. To be accepted, the totally inflatable PFD must have the proper CG approval number on the unit if it is to be counted toward the minimum PFD carriage requirement. Fully inflatable PFDs manufactured prior to the Coast Guard approval are not "grandfathered" as approved units, even though they are manufactured by the same company as the approved units. Examine these inflatable PFDs carefully and educate the owner/operator on proper storage so that the bladder is not punctured. Suggest that the owner/operator establish a routine to examine the inflatable PFD for leaks in the bladder every time before departing with the boat.
- k. The hybrid and totally inflatable PFD manufacturers may also add optional inflation mechanisms, such as automatic inflators that go off whenever the wearer enters the water, or manually operated inflators, such as CO2 cartridges, activated by the wearer. Hybrid PFDs usually are sized to fit a particular person. To be accepted, the hybrid PFD must be worn by the boat occupant if it is to be counted as one of the minimum PFDs to satisfy the CME requirement. Hybrid and totally inflatable PFDs contain a bladder which should be tested regularly to make sure that it does not have a leak. During the CME examination, ask the owner/operator to inflate every inflatable PFD on board so the examiner can check for leaks. (Hybrid PFDs being worn can be removed for the leak test).
- l. A TYPE IV Throwable Device common to sailboats is known as a "horseshoe". It is an approved type and is acceptable if properly labeled and in serviceable condition.

4. **Educational Exchange.**

- a. The various type PFDs have been given names that describe their intended use. Advise the owner/operator about the different types, being able to describe advantages/disadvantages of each, and show the proper method of wearing the following:
 - (1) TYPE I - OFFSHORE LIFE JACKET
 - (2) TYPE II - NEAR-SHORE BUOYANT VEST
 - (3) TYPE III - FLOTATION AID
 - (4) TYPE IV - THROWABLE DEVICE
 - (5) TYPE V - SPECIAL USE DEVICE
- b. Since all PFDs on board must be examined, this will be an excellent opportunity to show the owner/operator (and any guests) how to examine them - what to look and listen for, and why these checks are important.
- c. Emphasize why unserviceable PFDs SHOULD be removed from the boat. In a panic situation where a PFD is needed, a life could be lost by grabbing and using the wrong one.
- d. Remind the owner/operator that should the number of persons carried ever exceed the number of PFDs noted during the examination, federal law requires one approved device of proper type and size to be carried for each person on board.
- e. You must be able to discuss the purpose and characteristics of TYPES I, II, III and IV PFDs. If possible, demonstrate the proper way to wear and use each type carried on the boat. Particularly, relate the importance of carrying additional PFDs in excess of the minimum requirements. A variety of sizes to accommodate various passengers is recommended.
- f. Describe locations where PFDs should specifically not be stored, such as chain lockers, under front bunks in cabins, under deck hatches, or in bilges. Discuss the need to have one TYPE IV immediately available in case of an emergency, such as a man overboard, and recommend having a line attached so it can be retrieved. Discuss the difference between readily accessible and immediately available.

****NOTE**** - For technical data refer to Chapter 6, paragraph F.

G. Fire Extinguishers.

1. CME Requirements.

- a. Motorboats (and sailboats 16 feet or longer) must be equipped with fire extinguishers according to Table 1.

<u>Boat Length</u>	<u>Without Fixed System</u>	<u>With Approved Fixed System</u>
Less than 26'	1 B-1	1 B-1
26' to less than 40'	2 B-1 or 1 B-II	1 B-1
40' to 65'	3 B-1 or 1 B-II and 1 B-1	2 B-1 or 1 B-II

(For boats over 65' in length refer to CHAPTER 4, Table 2 - which is based on Gross Tonnage)

MINIMUM NUMBER OF HAND PORTABLE FIRE EXTINGUISHERS REQUIRED

Table 1

- b. Sailboats under 16 feet in length, without any auxiliary power or fuel tanks on board are not required to carry fire extinguishers for award of the CME decal. Sailboats 16 feet in length or greater without auxiliary power or fuel tanks are required to carry at least one B-1 marine fire extinguisher for award of the decal. If the sailboat has auxiliary power, then the requirements for motorboats apply.
- c. Extinguishers MUST display a Coast Guard approval number and be of certain minimum size (CHAPTER 6, Table 6). They must be free of excessive corrosion, fully charged and kept in a readily accessible location. Check to be sure that gauges are free and the nozzle is clear.
- d. Coast Guard approval must be visible along with the capacity weight of the contents, the remainder of nameplate is unimportant.
- e. Fire extinguishers must be firmly mounted and readily accessible in case of fire aboard. Common sense should dictate here. The approval states that a particular bracket number is part of the approval. If a better or firmer bracket is used, accept the installation.
- f. CO2 extinguishers plus Dry Chemical fire extinguishers without gauges MUST have been weighed and tagged within the last six months; foam fire extinguishers within the last 12 months. Portable Dry Chemical fire extinguishers without gauges, but with pin type pressure indicators, are acceptable, if they test satisfactory (these type of extinguishers have the same pressure sensitivity as the gauge type - see paragraph G.2.g).

- g. Automatic HALON extinguishers below decks MUST have the discharge light at the helm to be accepted as a complete unit, and must be of appropriate size for the volume of space where installed.
- h. New compounds are being developed to replace HALON. One of these is FE-241. These compounds, like HALON, are liquefied, gaseous materials, under pressure. When released, they expand rapidly and become a gas to fight the fire chemically. Rely on the Coast Guard approval label to accept the extinguisher toward the minimum number required on the boat. At this time FE-241 is only available for fixed systems with automatic discharge.
- i. All HALON and replacement compound extinguishers like FE-241 must be tagged within 6 months of the examination to be counted toward the minimum carriage requirement.

2. **Examination Techniques.**

- a. Check each fire extinguisher carried on board the boat. Ask the owner/operator to remove the extinguisher(s) from the bracket(s). Ensure that all are approved types and in serviceable condition. The Vessel Examiner (VE) must know how to check a fire extinguisher to determine if it is serviceable. The exposed metal parts of the extinguisher must be free of rust and corrosion to the extent they can be expected to function properly when needed. The approval label and instructions must be legible. The pressure indicator must show within the normal charge range. Either excessive high or low pressure is cause to reject an individual fire extinguisher. Do not rely on the gauge for HALON extinguishers.
- b. The widely accepted concept that the powdered chemical in a dry chemical extinguisher can be loosened by frequent shaking is erroneous. Check for caked powder (powder that has been exposed to moisture) by inverting the extinguisher to see if the powder moves. Caked powder will not "flow", but may fall with a perceptible "thunk" as the extinguisher is inverted. An effective procedure involves holding the fire extinguisher in an inverted position from the position that it is normally stored and solidly hitting the base of the extinguisher with the palm of your hand several times. Then, rock, not shake, the extinguisher to check that the dry chemical is free in the cylinder.

- c. Where an inspection tag is required, it must be recorded by a recognized firm such as a fire extinguisher servicing company or a local fire department, and must show the signature of the inspector.
- d. In checking the visual gauge at the top, determine that the plastic crystal covering the indicator is not pushed against the needle.
- e. If there is evidence of damage, use or leakage (such as dry chemical powder observed in the nozzle or elsewhere on the extinguisher), or if there is evidence of extensive rust or long term corrosion on the neck, shell, or seams, it is not acceptable.
- f. Outboard motorboats, less than 26 feet in length, of open construction, although not required by federal regulations to carry a fire extinguisher, must carry at least one hand portable fire extinguisher of approved type for the award of the decal.
- g. It is okay to tap the pressure indicator lightly or push a pressure indicating pin in/out several times, when testing dry chemical fire extinguishers. Those devices without visual indicators must carry an inspection tag showing evidence of a weight inspection within the last six months. Seals must not be broken.
- h. The manual controls for fixed systems must be located outside the space the system was designed to protect. The seal on these systems must be intact. System tests are not required. The seal is sufficient evidence that the system complies with requirements.
- i. For fixed systems, an indicator light will not show whether a cylinder leaked down over a period of time. For systems with manual activation (pull handle) only, an intact lead or plastic seal on the releasing mechanism, and a tag indicating the cylinder has been weighed (in the last 6 months for HALON, FE-241, other HALON replacements, Dry Chemical, CO2, and in the last 12 months for Foam) shall be taken as prima facie evidence of compliance with the law. For systems which are automatically actuated by a thermal-activated fusible element (sprinkler head), the absence of the fusible components inside the sprinkler head frame is additional evidence that system has been discharged. If there are indications the system may have been discharged, the owner/operator shall be advised to have the cylinders weighed and, if necessary, refilled at the earliest opportunity.

- j. For HALON, FE-241 and other HALON replacement fixed systems, pressure gauges alone are not an accurate indication of agent loss. It will still be necessary to weigh these cylinders to determine the amount of compound left. In view of the various types and sizes of fixed chemical and CO2 systems available, the owner/operator is urged to refer to the installation manual for complete system operating and maintenance instructions. Such a manual is provided by the system manufacturer with each system. If the location of the system cylinder is such that the VE suspects a portion of it is in contact with a wet or moist surface, the owner/operator should be warned of the possibility of corrosion, and the extreme danger to occupants and the boat should such a tank rupture.

3. Educational Exchange.

- a. The extra time you take in this part of the CME may save a life. Emphasize to the owner/operator that the primary requirement for a fire extinguisher aboard a boat is that it be readily accessible in the event of fire. Remember that, where there is no federal requirement, Auxiliary requirements specify at least one fire extinguisher for all motorboats and sailboats over 16 feet.
- b. Advise the owner/operator of any fire extinguishers that you may have rejected because of not meeting the criteria or unserviceability. Stress the danger of relying on such equipment. Point out the extreme danger to occupants and the boat caused by extensive corrosion to a carbon dioxide fire extinguisher. The CO2 cylinder can explode.
- c. Stress the need to place fire extinguishers in strategic locations. Note that a common mistake is to place them in the engine compartment on smaller boats where they are not accessible for use on fires in that area.
- d. It is good practice to show the owner/operator how to check the extinguisher and to point out the pressure indicator, approval criteria, and operating instructions. Discuss how the fire extinguisher would be used in the event of a fire on board.
- e. Advise the owner/operator with a fixed system that the system should be inspected as the manufacturer indicates or at least annually.

****NOTE**** For technical data refer to Chapter 6, paragraph G.

H. Visual Distress Signals (VDS).

1. CME Requirements.

- a. All recreational boats used on coastal waters, Great Lakes, or the high seas must carry day and night Visual Distress Signals on board at the time of the examination to qualify for the CME decal.
- b. When a boat is being examined in the Intracoastal Waterway, bays, sounds, rivers, etc., where Federal regulations may NOT require the carriage of VDS, and it is known that the intended use of the boat will include coastal waters, Great Lakes, or the high seas, the Vessel Examiner (VE) shall require Coast Guard approved day and night visual distress signals to qualify for the CME decal.
- c. These signals must be Coast Guard approved, of sufficient number, in serviceable condition and readily accessible. The devices are marked with an expiration date which must not have passed.

****NOTE**** Examine handheld flares for moisture. If they do not appear serviceable, withhold the decal.

- d. A wide variety of signaling devices, both pyrotechnic and non-pyrotechnic, can be carried to meet CME requirements. If pyrotechnic devices are selected, a minimum of three must be carried. Any combination can be carried as long as they add up to three signals for day use and three signals for night use. These day/night signaling devices must meet both requirements.
- e. For boats operating on inland waters, the Coast Guard Auxiliary requires some means of making a suitable day and night visual distress signal. The type of device and the amount carried is best judged by taking into account the size, area, and the conditions in which the boat will be operating. Recommended equipment could include approved VDS as described above, even if expired, but in serviceable condition, or one or more of the following in operating condition:

<u>NIGHT</u>	<u>DAY</u>
Strobe light,	Signal mirror, or
Flashlight, or	Red or orange
Lantern	flags

2. **Examination Techniques.**

- a. Certain States may prohibit the use of percussion cap type distress signals (such as Very Pistols, parachute flare guns, handheld pyrotechnic signal guns, etc.) without issuance of a permit. Therefore, in these States, do not encourage using these types of VDS, unless the owner/operator has been issued a permit for the use of these devices.
- b. Regardless of type or size of boat, devices suitable for day and night use must be on board at the time of the examination. Different combinations are acceptable; e.g., a boat carrying two handheld parachute flares and one red aerial pyrotechnic flare, would meet the CME requirements and the federal requirements. A boat carrying one approved electric distress light and three floating orange smokes would also meet the VDS requirements. The type device determines the number that is required to be on board. Only the approved VDS, as listed in CHAPTER 6, Table 8, and the exception noted for existing equipment, are acceptable for the decal.
- c. To be in serviceable condition, all pyrotechnic type VDS should be properly sealed with all wrappings intact to prevent moisture damage. Any signs of deterioration or water damage is cause to reject this type of VDS. When checking distress signals for serviceable condition, check for dents, rust, and waterlogged condition which you, as a VE, feel will make the signal unserviceable. **Test firing of VDS is not to be done.** VDS devices which do not have legible manufacture or expiration dates cannot be accepted as meeting the CME requirements.

3. **Educational Exchange.**

- a. Advise the owner/operator during a CME, that any pyrotechnic signaling device can be dangerous if used improperly or carelessly. Instruct the owner/operator, when using pyrotechnic signaling devices, to stand upwind of the device, pointing it away from the body when operating, and to hold it over the water. Since these devices have been known to misfire, protect the eyes when operating the unit. Devices which fail to operate or are expended should be quickly disposed of overboard and well away from the boat.
- b. Advise the owner/operator, that after using VDS to obtain assistance, notify the local Coast Guard unit or other law enforcement agency when you are safe or no longer need assistance. Rescue boats may still be searching for you after you've departed the area.

- c. If the owner/operator does not feel comfortable carrying pyrotechnics on board, point out the alternative VDS available.

****NOTE**** In some humid areas of the country, moisture collects under the caps of hand-held flares and they cannot be ignited. The VE should ask the owner/operator to remove the cover and look for moisture, advising them of the potential problem and recommend the units be kept in some type of humidity free sealed container.

****NOTE**** For technical data refer to Chapter 6, paragraph H.

I. Ventilation.

1. CME Requirements.

- a. Ventilation is NOT required in boats of open construction and in boats using fuel having a flash point of 110oF or more (diesel). Open construction means NO enclosed spaces where heavier than air fumes may accumulate.
- b. Ventilation requirements.
 - (1) **Natural** ventilation is a system having at least one intake duct extending to below the carburetor level, at least one exhaust duct extending to the lower portion of the bilge, and cowls (or equivalent) on each duct located and trimmed for maximum effectiveness. On boats manufactured **before** 8 MAR 87, intake cowls must face forward, and exhaust cowls aft. For boats manufactured on or **after** 8 MAR 87, amendments to the ventilation standard removed this requirement.
 - (2) **Power** ventilation systems contain an operational U.L. approved power blower, a 2" minimum diameter exhaust duct to the lower 1/3 of the compartment **and a warning label displayed at each ignition switch location**. An intake duct is not required. Intake and exhaust openings must be located for maximum efficiency (not necessarily having the intake openings facing forward and the exhaust openings facing aft). The exhaust duct opening must be permanently fixed above the normal level of accumulated bilge water.

****NOTE**** When a boat is required to have a blower, federal law requires it to have a warning label (see Table 2 below).

- (3) Storage of portable fuel containers used for mechanical power or propulsion, electrical generation, cooking, lighting, etc., must be in compartments that are properly ventilated regardless of when the boat was built. The compartment may be ventilated naturally or with sufficient compartment open to the atmosphere.

DATE OF MANUFACTURE (See H. I. N.)	TYPE OF VENTILATION	NOTES
25APR40 - 31JUL78	Natural (Required)	Each fuel & engine compartment. Operator's responsibility. (Ref. 6.I.)
01AUG78 - 31JUL80	Natural (Required) Power (Optional)	Each fuel & engine compartment. Operator's responsibility. Ref. 6.I.) Certificate of Compliance. (Ref. 3.I., 6.S.)
On/After 01AUG80	Power (Required)	Each engine compartment. Each permanent fuel tank compartment with electrical ignition source. Operator's responsibility. (Ref. 6.I.) Certificate of Compliance. (Ref. 3.I., 6.S.)
08MAR87	Removed regulation on direction intake and exhaust cowls must face.	

**Ventilation Requirements
Table 2**

2. Examination Techniques.

- a. All boats which have gasoline powered engines must comply with Coast Guard ventilation standards, depending on the date the boat was manufactured. Sailboat ventilation requirements are identical to those for power boats wherever combustible fuels are carried.

- (1) Natural Ventilation. A natural ventilation system, if manufactured prior to 1 August 1978, has at least two ventilation ducts fitted with supply and exhaust openings to efficiently ventilate the bilges of every engine or fuel tank compartment, there shall be installed at least one supply opening into the compartment, and at least one exhaust opening with the duct extending into the lower portion of the compartment.

- (2) Powered Ventilation. A powered ventilation system has a natural ventilation system and a "UL approved" power blower in the engine compartment and is capable of exhausting air aft to the outside to remove potentially explosive or flammable vapors that may have accumulated in the compartment during normal boat operation. The blower intake duct must be in the lower one third of the compartment and above the normal level of accumulated bilge water. The manufacturer's Certificate of Compliance will be accepted as proof of conformance with ventilation requirements as long as no obvious defects are observed. The owner/operator is expected to maintain the ventilation system in proper operating condition and as installed by the manufacturer. A warning label must be posted next to each ignition switch.
- b. Begin the examination by having the owner/operator open the hatch so the Vessel Examiner can look into the fuel and engine compartments or spaces. Immediately check for the presence of gas or fuel odors and fuel leaks. Surface streaks on bulkheads, tank sides, or in the bilges may be the first indication of fuel leaks. The odor of gasoline and any fuel leakage are unacceptable. Examine the ventilation intake and exhaust ports for proper installation and function. Each space required to be ventilated must have intake openings and exhaust openings with ducting. The intake provides the supply of fresh air to the upper levels of the ventilated space while the exhaust ducting removes the air and possible fuel fumes from the lowest levels of the space. Check to see that the intake and exhaust openings are not blocked or obstructed from the free flow of fresh air. Ducting must be snugly attached to the openings and free from obstructions. The duct hose must not have kinks or tears which would impair its function. Make sure that the hose is not so low as to be blocked by normal water level in the bilge. In smaller boats, it may be a good idea to check that the exhaust hose has not formed a gooseneck like a sink drain. This could result in water being trapped inside, blocking the hose. Check also to see that openings behind the cowls have been properly cut through. If the boat is equipped with an exhaust blower, check that the blower is operational by having the owner/operator turn on the blower and feel for air exhausting from the blower outlet.

- c. Boats with closed engine compartments, built before 01AUG80, must have either natural or powered ventilation; those built after that date must have powered ventilation in the engine compartment.
- d. Boats with closed fuel compartments, built before 01AUG78, must have either natural or powered ventilation in the compartment. Those boats built after that date need not have any ventilation in the fuel tank compartment, provided the compartment conforms with construction standards.
- e. Certificate of Compliance (on boats manufactured after 31JUL80) is accepted as conformance with ventilation requirements; however, if obvious defects are observed, do not accept.

3. **Educational Exchange.**

- a. If the boat is equipped with an exhaust blower, recommend that it be used at least four minutes before turning the ignition on and starting the engine.
- b. Remind the owner/operator that a blower is no substitute for a bilge sniff test.
- c. Tell the owner/operator that it is wise to periodically examine the intake and exhaust ducts to be sure that they are free of obstructions. Debris such as leaves and other matter blown into these ducts can cause the ventilation flow to be noneffective.
- d. On boats built after 31JUL78, if there is no source of electrical spark in the fuel compartment, ventilation is not required.
- e. At the present time, diesel fuel has a flash point higher than 110F. Advise the owner/operator that some diesel additives MAY bring the diesel fuel flash point below 110 F. Ventilation will be required if the flash point is lowered below 110F.

****NOTE**** For technical data refer to Chapter 6, paragraph I.

J. Backfire Flame Arrester.

1. CME Requirements.

- a. All boats with gasoline powered inboard engines must have a U.S. Coast Guard or other acceptable approved backfire flame arrester properly installed on each inboard engine carburetor. The Coast Guard, U.L., or S.A.E. approved backfire flame arrester must be tightly secured with flame tight connections, clean of oil and dirt, and in good serviceable condition. Flame arresters, manufactured after 1991, may use a U.L. approval number UL-1111 or a Society of Automotive Engineers (S.A.E.) number SAE-1928 in place of the Coast Guard approval number.
- b. Some special engine and fuel intake systems which have built-in backfire flame protection are labeled to indicate U.S. Coast Guard approval and do not require a separate flame arrester.
- c. **Exemptions:** Outboard engines, diesel engines, and any engine having an attachment secured to the carburetor air intake, so as to cause backfire flame to be directed safely into the open atmosphere, are exempt from the flame arrester requirement.

2. Examination Techniques.

- a. The decal will not be awarded unless one of the three methods of flame control, stipulated in CHAPTER 6, is properly installed on each carburetor of each inboard gasoline engine (including auxiliary generators) installed in the boat, regardless of the date of installation.
- b. Determine that the arrester grid and housing is securely attached to the inner housing and the inner housing is securely attached to the air intake. All elements are to be clean and free of foreign matter. Damaged elements, cracked housings and fittings are not acceptable. The reason for this is that if the grid elements are separated in any way, the arrester no longer would contain flames from a backfire.
- c. Some engines may have cowlings assembled around the carburetor obscuring the flame arrester approval number. If the assembly shows no sign of modifications, the Vessel Examiner (VE) can assume an approved flame arrester is enclosed. By feeling under the cowling the VE can determine if a flame arrester is present and check for excessive dirt.

- d. Some of the newer approved flame arresters look like automotive air cleaners. The approval number may be on the side of the removable filter. Examination of these units may require disassembly.

3. Educational Exchange.

- a. Recommend to the owner/operator routine servicing of the flame arrester, to include immersion in hot, soapy water and gently scrubbing the mesh with a soft bristled brush. Recommend that the manufacturer's procedures be followed. Advise against using solvents or gasoline for cleaning.
- b. Explain to the owner/operator the dangers of loose fitting or fouled and dirty flame arresters.

****NOTE**** For technical data refer to Chapter 6, paragraph J.

K. Fuel Systems.

1. CME Requirements.

- a. Portable Fuel Tanks. Tanks and containers of greater than seven-gallon capacity are not considered portable tanks and do not come under the provisions of this section. This section applies to those tanks containing gasoline or other fuels with a flashpoint of 110oF or less. Portable fuel tanks and spare fuel containers must meet the following standards:
 - (1) The tank must be free of holes, dents, (other than shallow dishing) distortion, rust, corrosion, scoring, or gouging.
 - (2) The tank must not leak.
 - (3) The tank vent, if installed, shall be capable of being closed when the tank is not in use.
 - (4) The tank construction must be sufficiently sturdy so that the tank will withstand ordinary usage without distortion or leakage of fuel.
 - (5) Tanks or containers may not be made of glass or any other easily breakable material.
 - (6) Spare fuel containers onboard must be fitted with a vapor-tight, leakproof cap. A vent, if installed, must be capable of being closed.
 - (7) Fuel tanks and containers shall be stowed in a rack, secured with a strap or other device, or so positioned in the boat that they will not go adrift.

- (8) All fuel tanks or containers carried in a boat shall be stowed in an accessible location, in well-ventilated spaces, outside enclosed living accommodations.
- (9) State requirements for portable fuel tanks must be met. Certain plastic materials, such as polyethylene, may be restricted for use as fuel containers.
- b. Permanent Fuel Tanks. Permanent fuel tanks (over seven gallon capacity) and fuel lines must be free of excessive corrosion or any cracking and must not leak. The fuel fill pipe must be tightly fitted to the fill plate and must be located outside of a closed compartment. If the fill pipe is non-conductive (i.e., rubber, etc.), and the fill plate is fiberglass or plastic, no gasoline can come in contact with metal on the way into the tank, thus no grounding is necessary. The fill pipe must also be located where any spilled fuel will be directed overboard. A vent terminating outboard of the hull and compartments must lead to each permanent fuel tank.

****NOTE**** New fill caps have a vent pipe attached so that any flow through the vent will return to the tank. This is acceptable.

****NOTE**** While not required, auxiliary generators should have separate, permanently installed fuel tanks.

- c. Of primary interest is a good visual check for obvious leaks and corrosion, as well as a basic "sniff" test. Specific tank and fuel line design features can be found in CHAPTER 6 of this manual.

2. Examination Techniques.

- a. Portable Fuel Tanks and Containers.
 - (1) Make sure the filling caps or fittings, fuel gauge and hose fittings are intact and free of leaks. Check plastic tanks for any evidence of cracks or puncture damage. Check the fuel hoses carefully for evidence of leaks and deterioration. Any fuel leak is cause to withhold the CME decal.
 - (2) Check the vents to determine if they can be closed, and whether the tank has a vapor-tight, leakproof cap.

- (3) Make sure that the space for tank stowage is ventilated properly. Use of unventilated cockpit or lazarette lockers to store portable fuel tanks is cause to withhold the decal.
- (4) Each tank should not exceed seven gallon capacity, and should be sturdy and free from damaging rust or corrosion. Particular care must be taken in examining the painted surface of the common types of stamped metal tanks. Many of these tanks are coated with red enamel; breaks and scratches in the enamel can result in leaching of the tin from the undercoating. Moisture is then easily trapped in the remaining porous lead material. Trapped moisture will rust the basic steel surface of the tank and pinhole leaks may develop. Check the underneath of the tank carefully, particularly where the bottom and sides are joined. Badly rusted or corroded portable fuel tanks should be rejected.

b. Permanent Fuel Tanks.

- (1) Thoroughly examine all permanently installed fuel tanks where accessible. If not accessible, on boats constructed or assembled after 01AUG77, the manufacturer certification of compliance label will suffice.
- (2) Locate and check each fuel filling connection. This must be tightly fitted to the deck surface and equipped with a cover plate to cap the filling pipe securely. A lip or similar device should be provided to prevent inboard flow in the event of over filling.
- (3) Check the vents to determine if they terminate overboard and are free of any blockage. The tank must be grounded if the system has metal fill fittings. Combined fill pipes and vents at the fill cap are acceptable.
- (4) Examine the tank and ensure that it is securely held in position by straps, clamps, or other means to prevent movement.
- (5) Check all the surfaces of the tank, particularly at the ends and in the vicinity of welds. If there is evidence of structural damage, undue rust, or corrosion and leaks, the tank is unacceptable.
- (6) Some boats are being retrofitted with large tanks in place of portable tanks supplied by the manufacturer. These tanks are filled inboard, and do not have an overboard vent. If the boat deck is not flush with open overboard scupper drains to discharge any spill, the system does NOT meet our requirement for permanent tanks. WITHHOLD THE DECAL!

- (7) While checking the fuel tanks, spend some extra time looking at the fuel system: fuel lines, fuel pumps, etc. With the introduction of alcohol in gasoline, and switch to unleaded fuel, problems may be experienced and there are some precautions that can be taken. Examine fuel lines for conditions discussed below; advise the owner/operator what you are looking for and suggest that they check the lines often for these conditions.
- (a) If it is an inboard or sterndrive gasoline powered boat, examine the markings on the fuel distribution lines. If they are not marked SAE J1527, advise the owner/operator that they should be replaced as soon as practical with hose meeting that specification. This same advice applies to permanently installed fuel systems on outboard powered boats. The hoses for portable tanks and those supplied with outboard motors usually are not a problem because they are out in the open air.
- (b) Owners of gasoline powered boats should be advised to examine their fuel hoses regularly, especially near the engine where engine heat can accelerate cracking, leaking, or general deterioration. Look for hoses that are dry and cracked or soft and mushy. A hose that has failed should be replaced immediately, preferably with hose meeting the SAE Standard. Owners of outboards should consider using this hose because it will last longer with regular gasoline or alcohol blends. If hose meeting the new standard is not available, use any hose marked "USCG Type A1, A2" or "USCG Type B1, B2" depending on whether the existing hose is Type A or Type B. If SAE J1527 is not available, use the older spec hose SAE J300 rather than continue to use the deteriorated hose. DETERIORATED FUEL HOSE SHOULD BE REPLACED IMMEDIATELY REGARDLESS OF THE MARKING. The signs of deterioration vary depending upon whether the fuel lines contain any fuel or not. A deteriorated fuel hose that contains no fuel is stiff and the cover is brittle and may have cracks.

- (c) If the hoses are soft and swollen, they should be replaced immediately. Boats with older hoses, particularly those that were manufactured prior to AUG78, the effective date of the Coast Guard Fuel System Standard, may have a serious problem because older hoses may fail more rapidly when in contact with alcohol. A fuel system containing a lot of hose full of fuel are particularly suspect, because the greater the length of the hose, the more the fuel that can escape. A hose ten feet long can leak a cup of fuel each day.

****NOTE**** There has been some disagreement on the effect of alcohol on fuel lines but there is no disagreement that leaking combustible fuels is the primary source of boat fires. We must pay particular attention to the condition of the entire fuel system of gasoline powered boats.

- (8) On certain watercraft built after the enactment of the Federal Boat Safety Act of 1971, a permanent fuel tank may be foam enclosed and not visible to the vessel examiner. Also, the fill pipe may be located on the center console if the complete fuel system is grounded. If the following conditions are satisfied, CME requirements will have been met.
 - (a) The boat carries a certificate of compliance label.
 - (b) The deck and hull are integrally constructed so that fuel spills must pass back directly to the aft scupper for draining overboard.
 - (c) The fill plate and fittings are nonmetallic so that fuel being pumped into the tank will not come in contact with any metal after leaving the fuel nozzle and before entering the tank.

3. **Educational Exchange.**

- a. Advise the owner/operator to do the "sniff test" prior to starting engines. Continually check for leaks and corrosion.

- b. This is a good time to remind the owner/operator concerning proper fuel filling procedures. The nozzle should always be in contact with the filler neck while servicing with fuel. Portable tanks should be removed from the boat prior to filling.

****NOTE**** For technical data refer to Chapter 6, paragraph K.

L. Anchor And Anchor Line.

1. CME Requirements.

- a. All boats must be equipped with an adequate anchor and anchor line of suitable size and length for the boat and the locality in which the boat is being used.

2. Examination Techniques.

- a. To be eligible for the decal, a boat must be equipped with at least one anchor, or other device suitable for the boat and the local waters, and anchor line in good condition, which is of size and length for the area in which the boat operates. Examine the anchor line to ensure it is in good condition.
- b. Devices for making fast to the bottom may vary. Boats operating on inland lakes that are extremely deep and that do not shoal out, may use line and hooks for securing to the shoreline, trees, stumps, etc. On rivers, where bottoms are muddy, anchor poles or spuds are acceptable. An anchor does not have to conform to the standard configurations as set forth in naval and yachting circles. An iron bar or a concrete block sinker, under certain unique conditions, could be a suitable anchor.

****NOTE**** There is no federal requirement for this item.

3. Educational Exchange.

- a. Discuss with the owner/operator the proper method of anchoring the boat, and the hazards of anchoring by the stern. Point out the problems that occur when using anchors that are too small, or rodes that are either too short or of insufficient size to anchor the boat. Note safety precautions to observe when anchoring and weighing anchor.
- b. Recommend that the anchor line be at least 5 to 7 times the depth of the water that the owner/operator may anchor in.
- c. Discuss the value of a short piece of chain between the anchor and the anchor line.

****NOTE**** For technical data refer to Chapter 6, paragraph L.

M. Alternate Propulsion.

1. **CME Requirements.** All boats less than 16 feet in length must carry a second method of propulsion. A paddle, oar, water ski, or other suitable device meets this requirement. If an alternate means of mechanical propulsion is carried (another outboard or trolling motor), it must use a separate fuel and starting source from the main propulsion motor.
2. **Examination Techniques.** Check that all boats under 16 feet in length carry at least one paddle or oar, or an additional means of alternate propulsion as described above.

****NOTE**** There is no federal requirement for this item.

3. **Educational Exchange.** Remember that a boat hook, although good to have on board, does not meet this requirement.

****NOTE**** - For technical data refer to Chapter 6, paragraph M.

N. Dewatering Devices.

1. **CME Requirements.**
 - a. All boats must carry at least one effective manual dewatering device (bucket, can, scoop, etc.). This requirement is in addition to any installed bilge pump that the boat may have on board.
 - b. An installed electrical or mechanical bilge pump is not a requirement for award of the CME decal; however, if such a pump is installed, it must be in satisfactory operating condition.
2. **Examination Techniques.**
 - a. Check that every boat has at least one effective means to dewater. A hand operated plunger type meets the criteria for the decal. A device as simple as a bucket or large plastic bottle, cut off at the bottom to serve as a water scoop, is also acceptable.
 - b. If clean water is evident in the bilges, have the boat operator test/operate any installed bilge pump. The device which is used should be in operating condition.
 - c. **PONTOON BOATS** with no bilge or compartments that can flood do not have to meet the dewatering requirement. If you want to have fun with pontoon boaters, suggest a broom for dewatering.

****NOTE**** 1355DO NOT PUMP OILY BILGE WATER OVERBOARD.& TA

3. **Educational Exchange.** Tell the owner/operator that the Auxiliary requirement to carry an effective manual dewatering device is based on good common sense. Such a device may be the only means to take care of an emergency situation.

****NOTE**** For technical data refer to Chapter 6, paragraph N.

O. General Condition.

1. **CME Requirements.**

a. Overall Boat Condition.

- (1) The boat must be free from fire hazards, in good overall condition, with bilges reasonably clean, and the visible hull and structure generally sound.
- (2) The maximum person capacity and horsepower must not be exceeded. Use the capacity plate as a guide.

b. Galley Equipment.

- (1) Appliances and their fuel tanks must be properly secured, and the system must not leak (no odor of fuel must be detected when the system is turned on).
- (2) There must be no flammable material in the immediate vicinity of stoves or heaters.
- (3) Adequate ventilation must be provided for appliances and their fuel supply.
- (4) Appliance fuel shut off valves must be readily accessible.
- (5) Only common type fuels must be on the boat. GASOLINE, NAPHTHA or BENZENE are NOT allowed!!

c. Electrical:

- (1) Wiring must be in good condition and properly installed. No exposed areas or deteriorated insulation is permitted.
- (2) The electrical system must be protected by fuses or manual resetting circuit breakers. Switches and fuse panels must be protected from rain or spray.

- (3) Batteries must be secured to prevent movement and the terminals covered to prevent arcing due to accidental contact with metal objects. Make sure the battery is well ventilated.

2. Examination Techniques.

a. Overall Boat Condition.

- (1) Examine the general condition of the boat. Take care and exercise good judgment in completing this part of the CME. Remember that you are not expected or authorized to function as a marine surveyor. In general, check to see that the bilges are clean and free from oil or grease and water. Check to see that the hull appears to be sound and seaworthy. No fractures should be visible in the basic hull material. The boat should be shipshape and clean, with equipment stowed in a neat and orderly manner.
- (2) Do not award the decal to a boat that is overloaded or overpowered, according to the capacity plate. Overpowering applies only to outboard boats of monohull design, whose construction began on or after 01NOV72, less than 20 feet in length, excluding sailboats, canoes, kayaks, and inflatable boats.
- (3) The rigging on sailboats should appear sound. You are not expected to be a rigger; however, on sailboats, rusty shackles, corroded fittings, broken stem heads and plates, and frayed wire straps and shrouds will not be accepted for award of the decal. A boat which is not generally shipshape and considered well maintained will not be awarded the decal.

****NOTE**** Forestays are frequently damaged on smaller sail boats due to poor boat handling when approaching the dock. If the stay fails the mast will collapse, disabling the boat. This is least serious possible outcome. Death or injury have also resulted. Therefore, pay close attention to the forestay, fittings, turnbuckle and chainplate, and discuss the potential dangers with the owner/operator when appropriate.

b. Galley Equipment.

- (1) This includes all galley equipment such as stoves, refrigerators, and heaters.

- (2) Appliances must be so positioned that no flammable material is in close proximity or could be ignited by the appliance. Portable appliances are acceptable, provided they are in a securely fixed position when in use and when in the stowed position. Permanently installed appliances must be securely fastened in place.
- (3) Gravity tanks on appliances using liquid fuel may not be of more than two gallon capacity, and must be located so that they are protected from heat produced by the appliance. A removable or accessible liquid-tight drip pan at least 3/4 inch deep must be provided under all burners of appliances using liquid fuel. A readily accessible shut-off valve shall be located so that it is not necessary to reach over the appliance to close it. Gravity tanks must be securely fixed in place.
- (4) Determine that the appliance is manufactured with acceptable material and is free from the effects of excessive rust, corrosion, or fuel leakage. Apply the "sniff" test for leaks.
- (5) The compartment in which a galley stove, heater, or refrigerator is located, must be adequately ventilated. The Vessel Examiner (VE) will determine that the compartment can be ventilated by open hatches, ports, or air flow, created by the craft's ventilation system.
- (6) Any appliances which use any of the common fuels are acceptable EXCEPT those which use gasoline and derivatives or distillates of naphtha or benzene. These latter fuels have a wide range in flashpoint, but are very volatile, and many are extremely flammable or explosive.
- (7) LPG and CNG is acceptable in boats carrying passengers for hire. See CHAPTER 6, paragraph 0.2.d.(5) for additional requirements.
- (8) Cooking stoves, using LPG or butane caddypack fuel containers are acceptable, ONLY IF THEY ARE SECURELY attached or gimbled to the galley counter. Advise the owner/operator that care should be exercised in the storage of fuel containers when not in use. Fuel containers should be detached from the stove when not in use, and stored in a ventilated location.

c. Electrical System.

- (1) Carefully examine the boat's electrical system. All general wiring should be in good condition, neatly bundled, and clamped to suitable supports at regular intervals, to prevent damage from vibration. Conduits or cable ways may also be used to route wiring. Circuits must be protected by fuses or circuit breakers. Circuit breakers must be of the non-automatic resetting type. No open knife switches may be located in the bilges, engine spaces, or fuel tank compartments.
- (2) Battery cables must be securely connected. The battery must be clamped down or otherwise secured so as to prevent movement in a seaway. Battery terminals must be covered. Plastic battery boxes or other covers to protect the battery are recommended, but not required. Installed battery chargers should be of a marine type design. Batteries must be well ventilated since they produce explosive gases (primarily hydrogen) while charging.
- (3) Boats bearing a Certificate of Compliance label must be maintained by the owner such that changes affecting the "certified" configuration of the boat must not be made. The VE will examine the engine and fuel compartments for possible replacement of parts and machinery with purely automotive parts. Examples are starter motors, solenoids, alternators, ventilation blowers, and any other devices capable of producing a spark in a closed compartment. Care must be taken regarding the use of ordinary household electrical appliances or gas refrigerators.

3. **Educational Exchange.**

a. Overall Boat Condition.

- (1) The Capacity Plate is not required for the decal, but because of the important information it contains, make sure the owner/operator understands it clearly. You must stress that these limits are the maximum safe limits under ideal sea conditions, the state of the weather and seas will reduce this capacity.

- (2) Do the same for a comparison of horsepower rating with maximum horsepower limits. Advise the owner/operator that the horsepower rating on the capacity label is "advisory" in nature, but some states have laws prohibiting such overpowering. Outboards in excess of the capacity plate are possibly in violation of these laws. In addition, most manufacturers will void the warranty if the boat is overpowered. Some insurance companies may cancel policies because of overpowering. (VEs should check state law for applicability.) Remember, if the boat is overpowered, i.e., if the limit as stated on the capacity plate is exceeded, DO NOT AWARD THE DECAL.
 - (3) Where applicable, be sure to compliment the owner/operator for the general good and clean appearance of the boat, and for any other features that indicate they are paying attention to good safety practices.
- b. Galley Equipment.
- (1) Suggest the owner/operator apply the "sniff test" prior to departing each time.
 - (2) Recommend that a hand portable fire extinguisher be located adjacent to the compartment containing the galley stove, heater, or refrigerator.
- c. Electrical Systems.
- (1) Discuss with the owner/operator some general safety precautions to observe in the operation of marine electrical systems. Explain the need for effective grounds and correct polarity connections. Describe the dangers of using jumper cables aboard the boat.
 - (2) Explain why automatic circuit breakers must not be used. It will reset itself after an interval, and continue to do so, and not give an indication or warning of a problem.
 - (3) Shorts and broken or bare wiring in the engine compartment's electrical system may cause a fire. This electrical system is subject not only to the same vibration and wear as the other electrical circuits and equipment on the boat, but also to heat produced by the engine. The electrical system should receive a periodic inspection for cracking, chafing, melting, or burning of the wiring and associated equipment.
 - (4) Faulty electric motors are prime causes of fire. Sparks and arcing may result if wiring becomes short-circuited or grounded, or from erratic operation of the brushes. If a spark or an arc is strong enough, it can ignite nearby combustible material.

- (5) When batteries are being charged, they emit hydrogen gas, highly flammable and potentially explosive. Hydrogen is lighter than air and consequently will rise as it is produced. If proper ventilation is not provided, the hydrogen will collect near the overhead, and any spark may cause an explosion and fire.
- (6) Battery cable connections should be checked frequently to ensure tightness. Loose connections may produce heat or sparks when being charged either by an installed or an auxiliary charging system.

****NOTE**** For technical data refer to Chapter 6, paragraph O.

P. State Requirements.

1. **CME Requirements.** State equipment requirements that pertain to basic safety and expand CME requirements (such as flashlights, number of fire extinguishers, etc.), must be met before the CME decal can be awarded. The boat will be checked against the requirements of the state where the CME is conducted.
2. **Examination Techniques.**
 - a. State equipment requirements for CME purposes do not include such items as liability insurance, license restrictions, or specific activity equipment requirements (such as rear view mirrors for water skiing). State equipment requirements do include those items that expand CME requirements such as PFDs, flashlights, or the number of visual distress signals carried.
 - b. Check to determine that the required equipment is on board and in serviceable condition. In most cases, this will be a non-detailed check of the item (i.e., that a flashlight is aboard and does in fact work).
 - c. Note in the Seal of Safety Check List (AUX-204) those equipment requirements that have not been met. Reemphasize that this will not be given to any law enforcement agency.
 - d. Check with state officials to see if any changes have been made to the listing in CHAPTER 7.

3. **Educational Exchange.** Explain that state requirements differ from state to state, and the owner's/operator's "state of principal use" may have different requirements, which the owner/operator will have to comply with when returning to that state.

****NOTE**** For technical data refer to Chapter 6, paragraph P.

Q. Marine Sanitation Devices.

1. **CME Requirements.**

- a. All boats with installed operable toilets must comply with federal regulations. These regulations are explained in CHAPTER 6. Note that some states have requirements which require boats with bunks to also have an operable toilet even if a toilet wasn't part of the manufacturer installed equipment.

2. **Examination Technique.**

- a. Most boats we examine use portable toilets that are Type III, with self contained holding tanks.
- b. Many other Type III toilets empty into a holding tank. Ask the owner/operator to explain how the system works. Determine that it is not possible to accidentally operate a valve that will cause an overboard discharge of the holding tank. Generally, the discharge valves should not be located in the head area. If so, the valve must be sealed or operating handles removed so that accidental operation cannot be initiated.
- c. Type I and II processing toilets must have a plaque attached to the unit, usually on the toilet lid, showing the type and Coast Guard approval. Again, determine that the unit cannot be discharged overboard in no discharge, controlled areas.

3. **Educational Exchange.**

- a. Advise the owner/operator that discharge laws are being strictly enforced. They should know where to have holding tanks pumped or where it is legal to discharge overboard.
- b. This non safety item is part of the CME decal requirement because of the increased enforcement activity. Environmental concerns should be important to everyone.

****NOTE**** For technical data refer to Chapter 6, paragraph U.

R. Garbage Dumping Restrictions Placard (formerly MARPOL placard).

1. CME Requirements.

- a. All boats 26 feet and over must display a proper size Garbage Dumping Restrictions Placard in a place clearly visible to all passengers.
- b. Boats 40 feet and over, that are ocean going or on the Great Lakes, must also have a written trash management plan. The written plan need not be complicated but must inform the reader who is in charge of trash disposal, where it will be stored and when and where disposal will take place.

2. Examination Technique.

- a. Observe the placard, if required. The Vessel Examiner should carry a supply of the placards and give one to the owner/operator to satisfy this requirement.
- b. Make sure the placard can be visible to all passengers. The galley area is an ideal place to post the placard.
- c. On larger boats it may be advisable to have more than one placard posted so it visible to all passengers.

3. Educational Exchange.

- a. Most areas of the country do not allow any trash disposal in the water. All trash should be accumulated in storage containers or litter bags. When the boat returns to port, the trash should be placed in proper disposal bins.
- b. Strict environmental and enforcement regulations make this item a necessary requirement for award of the decal.
- c. Although display of the placard begins with boats 26 feet and over, no trash may be discharged from a boat of any size. Remind all boaters of proper trash disposal.

****NOTE**** For technical data refer to Chapter 6, paragraph V.2.

S. Oily Waste Discharge Placard.

1. Examination Requirements.

- a. All boats 26 feet and longer, with machinery compartments, must display a placard at least 5 x 8 inches stating that the discharge of oil is prohibited. The placard must be displayed in a conspicuous place in the bilge area or at the pump control station.

b. Proper wording of the placard is in Chapter 6, paragraph V.1.

2. **Examination Technique.**

a. Observe the placard, if required.

b. If the placard is not in an easily visible position, suggest a new placard be placed in a better location.

c. Carry a supply of the placards, if available, to give to the owners/operators. Some marine supply stores have free placards available for distribution. All have them for sale.

3. **Educational Exchange.**

a. Environmental and enforcement concerns regarding illegal discharge of oil make this a necessary item for award of the CME decal.

b. Although display of the placard begins with boats 26 feet and over, discharge of oil by any size boat is prohibited by federal regulation.

c. If oil is spilled or leaks into the bilge, the owner/operator should use commercial oil absorbent materials to clean the oil. Once the oil is captured the absorbent materials should be properly disposed, on shore.

d. Advise the owner/operator never to use dispersant chemicals or soaps to clean a dirty bilge with the intention of pumping the fluid overboard. All dirty bilge waste should be collected and properly disposed on shore.

****NOTE**** For technical data refer to Chapter 6, paragraph V.1.

T. Inland Navigation Rules.

1. **CME Requirements.**

a. Boats 12 meters (39.4 feet) or more are required to carry a complete copy of the Inland Navigation Rules.

2. **Examination Technique.**

- a. Request that the owner/operator show you a copy of the Inland Navigation Rules, if required to be on board.
- b. Examine the book to determine if it is a current edition, published within the past few years.
- c. Determine if recent changes have been posted.
- d. If the book is seriously out of date and no changes have been posted, withhold the decal and advise the owner/operator to obtain a current edition.

3. **Educational Exchange.**

- a. This item has been added to the CME requirements because citations will be issued if they are not in compliance with federal regulation.
- b. If the owner/operator has not posted any changes, advise them how to obtain the Local Notice to Mariners from their Coast Guard district office. They then should post any changes when they are published.
- c. Copies of the Inland Navigation Rules may be purchased from:

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 371954
Pittsburg, PA 15250-7954
PH: (202)783-3238.

(They may also be purchased at many marine stores or chart houses.)

- d. If the book is seriously out of date and no changes have been posted, withhold the decal and advise the owner/operator to obtain a current edition.

****NOTE**** For technical data refer to Chapter 6, paragraph W.

U. Marine Radio Station License.

1. **CME Requirements.**

- a. VHF FM radios, EPIRBs, and any type of radar may be operated in United States waters without a license. Boats that use MF/HF single sideband radio (voice or telegraphy), use satellite communications, travel to foreign ports, or communicate with foreign land stations must be licensed by the Federal Communications Commission (FCC).

- b. Boats without enclosed wheelhouses are not required to have the license posted. However, it must be kept where it will be readily available for inspection.
- c. If a license is required, it must list all marine radio and radar services aboard. This includes VHF, single sideband, EPIRB, satellite, telegraph, and GMDSS (DSC) capabilities. Cellular telephone and CB equipment is not required to be licensed.

2. **Examination Technique.**

- a. Examine the radio station license for expiration date, name of the boat and owner, and the items which are licensed.
- b. Withhold the decal if, for instance, a boat has a VHF-FM marine radio and a radar (and is required to have a license) but only the radio is listed on the license. Advise the owner/operator to have the license updated to include all the equipment on the boat, or expected to be added to the boat.
- c. If the required station license is not on board, the Vessel Examiner should have a supply of the application forms, FCC Form 506, available to give one to the owner/operator. They can be obtained from a local FCC office or the FCC Forms Distribution Center, 2803 52nd Avenue, Hyattsville, MD 20781.

3. **Educational Exchange.**

- a. This item has been added for award of the CME decal because the Coast Guard has been charged with enforcement of the license regulation. Heavy fines have been assessed for non compliance with this regulation.
- b. Recommend that boaters have a means of communication with a shore station. In some areas only CB radio is available. This is better than no means of communication. The VHF-FM marine radio is the recommended radio for most boaters to communicate with the Coast Guard, marine telephone operators and other boaters or shore stations.
- c. For search and rescue purposes, rescue resources usually have direction finding equipment that can locate a signal broadcast by marine radio. This is not true for cellular phones or CB radio calls.

****NOTE**** For technical data refer to Chapter 6, paragraph X.

V. Other Federal Requirements.

1. The following items are legal requirements which are not part of the requirements for the CME decal, but could result in a citation by a Coast Guard boarding officer or state or local law enforcement officer. These items are an important part of the CME examination and will be checked off on the check sheet in the AUX-204. It is essential that the Vessel Examiner knowledgeable of these requirements and include these in the one-on-one educational exchange. They are listed below with references:
 - a. Capacity Plate. (CHAPTER 3, paragraph O, CHAPTER 6, paragraph R)
 - b. Hull Identification Number (CHAPTER 6, paragraph T)
 - c. Manufacturers Certificate of Compliance.
(CHAPTER 6, paragraph S)

W. Examination Of Commercial Vessels. With the Charter Boat Safety Act becoming law, charter boats carrying six or less passengers, are becoming more aware of the importance of boating safety. For this reason, requests to examine these boats will probably increase and the opportunity to educate this group will expand.

1. Many Vessel Examiners (VEs) may be inclined to shy away from this type of boat because it is not part of their "usual" exposure. A review of the VE Manual should, with few exceptions, prepare you to include these boats in your normal course of promoting safety among the boating public, no matter what their boat usage is. The manual has always included references to the commercial boats and provided adequate information for the examination of these boats.
2. There are new regulations pertaining to commercial fishing vessels. They are no longer examined under the CME program. Refer all requests to examine commercial fishing vessels to the nearest Coast Guard Marine Safety Office.

CHAPTER 4: AUXILIARY FACILITIES

A. General.

1. This chapter covers the required equipment which a boat needs to be considered a vessel facility or an operational vessel facility. The district commander (through the director) may specify additional requirements to support Auxiliary operations.
2. A primary mission of the Auxiliary, SAFETY, is promoted by the careful and complete inspection of vessel facilities. Every Auxiliary vessel facility is required to pass an annual inspection. A vessel facility, flying the Auxiliary ensign, must be one of the safest boats afloat. It must meet higher standards than are established for award of the CME decal. Conscientious and honest Vessel Examiners (VEs) will accomplish this purpose. VEs must be fully cognizant of requirements for facility inspections as well as those for CMEs.
3. All vessel facilities and operational vessel facilities must first meet the standards for a CME of a vessel the same length, then meet the facility inspection requirements set forth in this Chapter. However, a vessel facility which carries MORE than six passengers for hire (or is a motorboat that carries freight for hire) is required to be inspected and certified by the Coast Guard.
4. Inspection of vessel facilities shall be performed by Auxiliarists who are qualified VEs. The VE cannot be the owner of the facility being inspected, or a member of the immediate family.
5. VEs must ensure that along with the normal inspection paperwork (CG-2736, owner's info, etc.), Auxiliarists submit a "Non-Owner Use" authorization when Auxiliarists other than the owner are authorized to coxswain their operational vessel facility. See Appendix A for the "Non-Owner Use" letter format to determine the basic information which owners must submit.
6. The director shall insure that all facilities in the district are inspected annually prior to the deadline set by the district.
7. This program shall in no manner be construed as permission to infringe upon the Coast Guard vessel inspection program.
8. Credit for a vessel facility inspection is credited to the VE when the Vessel Facility Inspection and Offer For Use form (CG-2736) is posted. If a facility inspection fails to meet facility requirements, report the failed inspection as a regular CME on the current CME reporting form to receive credit for the inspection.

****NOTE**** When the VE completes an inspection of a vessel facility or operational vessel facility that VE has certified that ALL the required equipment is per this manual and the requirements of the district commander.

B. Vessel Facility Classifications.

1. **Vessel Facility vs Operational Vessel Facility.** There are two subdivisions of Auxiliary boats; vessel facilities and operational vessel facilities. A vessel facility is one that has met requirements of this Chapter. An operational vessel facility is one that meets the requirements of this Chapter, and has satisfactorily met the additional following criteria:

- a. Been offered for use;
- b. Met additional requirements imposed by the district commander via the director, who is his representative in supervision of the Auxiliary program; and
- c. Been accepted by the director.

2. **Vessel Facility Criteria.**

- a. Auxiliary boats that may be designated as a vessel facility are:
 - (1) Motorboats 14 feet or OVER in length. All vessels propelled by machinery 65 feet in length OR LESS, (except tugboats propelled by steam), are classed as motorboats. This includes motorboats carrying passengers or freight for hire and commercial fishing boats.
 - (2) Pleasure sailboats 16 feet or OVER in length.
 - (3) Pleasure motor vessels, more than 65 feet in length propelled by machinery (excluding steam). (Commercial motor vessels OVER 65 feet MUST be inspected by the Coast Guard).
- b. The majority of boats in the Auxiliary are motorboats, with which this section will be mostly concerned.
- c. Auxiliary member's motorboats less than 14 feet and sailboats less than 16 feet cannot be inspected as facilities, but may be examined for the CME decal. A member's boat with the CME decal cannot fly the Auxiliary ensign.

- d. An Auxiliarist owning more than one boat may request that all or several of those boats be designated as facilities, except those that do not meet the length requirement (see paragraph B.2.c). EACH boat must be inspected as a facility.
3. **Special Purpose Facility Criteria.** Any motorized (diesel, gas, or electric) watercraft (including PWCs), offered for use (in writing), and accepted by the director is a Special Purpose Facility. They are designed to transport people and are NOT otherwise eligible for an Auxiliary facility decal. Any motorized watercraft that is carried or towed by an operational facility, which is NOT otherwise eligible for an Auxiliary facility decal, is eligible to be a Special Purpose Facility. Vessel Examiners (VEs) must follow district policy and instructions regarding equipment requirements. See Appendix B for the Special Purpose Facility Offer For Use Letter format to determine the basic information which owners must submit.
4. **Retired Auxiliary Member Facility.**
 - a. Retired Auxiliary members may have their boats inspected as an Auxiliary Facility and fly the blue Auxiliary ensign. The retired Auxiliary member's boat cannot be an operational vessel facility.
 - b. The VE inspecting a retired Auxiliary member's boat will check the retired certificate and note on the CG-2736 that "This vessel owned by a retired Auxiliary member."
5. **Corporate, Partnership, or Multiple Owned Facilities.**
 - a. Facilities offered as operational facilities or special purpose facilities and not solely owned by a single Auxiliarist (this includes husband/wife combinations), including Auxiliary Unit Vessels (except those the Coast Guard gives or loans to the Auxiliary), must submit the proper authorization by all owners of the facility authorizing the Auxiliary member to use the boat for Coast Guard activities along with their Vessel Facility Inspection and Offer For Use form (CG-2736). See Appendices C and D for the information corporate, partnership, or multiple owners must submit.
 - b. Auxiliary Unit Vessels offered as operational facilities must submit documentation from the Auxiliary Unit authorizing the Auxiliary Unit Vessel be used following the same requirements as those for corporate and multiple owner facilities. See Appendices C and D for the information corporate, partnership, or multiple owners must submit.

- c. Auxiliarists offering a corporate owned facility, and Auxiliary Unit Vessels, for use as operational or special purpose, must, in addition to other requirements, provide written information that identifies the legal ownership of the facility. See Appendix E for the information corporate owners must submit.

6. Transfers of Operational Vessel Facilities between Districts/Regions

- a. If a member owning an operational vessel facility transfers to another district/region, the new district/region may require the facility to pass another inspection. This is to ensure that the facility meets any additional equipment requirements of the new district/region.
- b. If a member lives in one district/region and has an operational vessel facility located in and/or intends to patrol in a different district/region, then the operational vessel facility must be inspected by a VE from the host district/region and meet any special equipment requirement of the host district/region.

C. Equipment Requirements. The Vessel Facility Inspection and Offer For Use form (CG-2736) lists the specific requirements for ALL Auxiliary facilities except special purpose facilities. Equipment requirements for special purpose facilities are set by the director or active duty unit commander.

- 1. Directors may waive only the equipment noted on the Vessel Inspection and Offer For Use Form (CG-2736) as authorized to be waived, or may require additional equipment for operational vessel facilities, based on the operational needs of their area.
- 2. District unique items may be included on a supplemental sheet to the CG-2736, but, to reduce local administrative workload, directors are encouraged to use the standard CG-2736.
- 3. An operational vessel facility MUST meet the highest standards of equipment requirements. It must first meet the requirements of a CME. Then, it must meet OR exceed all requirements for a vessel facility, PLUS additional requirements as outlined below and those required by the district. Remember - this boat is a Coast Guard resource and a vessel of the U.S. when under operational orders.

- a. Communications capability as established by the director (i.e., VHF-FM radio) who will make the determination as to whether communications capability of operational vessel facilities is required in the local area. Refer to paragraph I of this Chapter for inspection of installed communications equipment.
- b. A supply of SAR Incident Reports (CG-4612) MUST be aboard (at least 1 copy).
- c. Sailboats MUST have an auxiliary engine.
- d. Two (2) PFDs OVER the legal requirement according to length of the facility.
- e. Patrol Sign Boards and Patrol Boat Ensign (refer to Operations Policy Manual, COMDTINST M16798.3 (series)).
- f. Search Pattern Plotting Guides as required by the director. A Course and Leg Identifier Plotter is available for course and time calculations for the Expanding Square (SS) and Sector Search (VS) patterns.
- g. Stern and bow cleats must be properly reinforced to withstand the stresses of towing. They MUST be bolted through, with additional support such as metal plates, blocks of wood and washers. On some boats it is impossible to inspect the backing without taking the boat apart. If this condition exists, examine the cleats carefully to determine if there is any potential weakness. Special towing cleats could be installed at a location where the cleat can be bolted through with backing.
- h. A knife with a minimum size blade of NO LESS than three inches.
- i. A means of measuring time for SAR reporting, executing search patterns, etc., is necessary. A mounted, portable, pocket, or wrist timepiece will suffice.
- j. Some means of dewatering a distressed vessel (i.e., portable pump, buckets, etc.). This is in addition to the dewatering device required on the AUX-204.
- k. Local Tide Tables as required by the director.
- l. Light List for area as required by the director.
- m. All operational vessel facilities 12 meters (39.4 feet) or more in length are REQUIRED to have on board a copy of the Navigation Rules publication (COMDTINST M16672.2 (series)). All other vessel facilities are encouraged to have on board a copy of the Navigation Rules publication but are permitted to substitute it with a quick reference navigation rule card.

****NOTE**** All coxswains of operational vessel facilities, even if they exercise the option to carry a quick reference Navigation Rules card, must own and maintain a copy of the Navigation Rules publication (COMDTINST M16672.2 (series)). They must also display it for each facility inspection.

- n. Must carry one EXTRA approved portable fire extinguisher, above the required number for the facility size.
- o. A way of boarding the facility by ladder, swim step, or other means.
- p. Carry a Kicker (Skiff) Hook as required by the director. The use of this tool is the safest method for connecting the towline to a trailer eyebolt.
- q. A minimum strength of 7x35 binoculars are required.
- r. A minimum of one blanket must be on board.
- s. A minimum of three extra fenders for side tow operations.
- t. Adequate tow line and bridle with towline free from cuts, abrasions, snags, and fusion. The "Y" bridle should be at least 2-3 times the width of the towing vessel, and the "V" bridle at least 3 times its width.
- u. Heaving and mooring lines in good condition, free of rot and weathered areas. The heaving line should be 75-100 feet in length, light and flexible, with weighted throwing end painted international orange. Additional mooring lines should be maintained for side tow operations, as the forward quarter and after bow spring lines should be approximately 1 1/2 times the length of the towing vessel.
- v. Anchors and anchor lines. Two anchors MUST be carried. The extra one is an emergency anchor. Suggested anchor weights are listed in Table 1.

- (1) Boats operating along the coasts shall have at least 300 feet of anchor line; those used on rivers and inland waterways shall be equipped with anchor line of at least 6-7 times the average depth of local waters. Boats operating on inland lakes that are of extreme depths and those which do not shoal out, may use line and hooks for securing to shorelines, trees, stumps, etc. On rivers where the bottoms are muddy, anchor poles may be used. An anchor does not have to conform with standard configurations as set forth in naval and yachting circles; i.e., an iron bar or a concrete block could be a suitable anchor. The district commander may define acceptable items. Lines shall be readily accessible in an emergency and shall not be accepted unless they are in good condition, including all splices.

<u>Max. Boat Length</u>	<u>Working Anchor</u>	<u>Storm Anchor</u>
20 feet (7 meters)	5 pounds	12 pounds
30 feet (10 meters)	12 pounds	18 pounds
40 feet (12 meters)	18 pounds	28 pounds

Table of Suggested Anchor Weights
Table 1

- (2) Suggested sizes of anchor lines follow:
- (a) Facilities less than 40 feet, 3/8 inch diameter nylon or its equivalent on an emergency anchor.
 - (b) Facilities more than 40 feet but less than 65 feet, 3/4 inch diameter nylon or its equivalent on service anchor, and 1 inch diameter nylon or its equivalent on the emergency anchor.
- (3) While not mandatory, it is good practice to insert a short length of chain of appropriate diameter between the anchor and the anchor line. This helps bring the anchor to and enhances its holding properties.
- w. A high-powered searchlight for night search operations. Although permanently mounted electrically connected units are desirable, handheld battery operated systems are acceptable (carry spare batteries!).
 - x. A loud-hailer or megaphone, and any other additional items as required by the director.

- y. Visual distress signals are covered in the AUX-204 portion of the facility inspection. All operational vessel facilities MUST carry VDS to meet the International or Offshore requirements. Where state law prohibits use of pyrotechnic devices, the director will designate the appropriate substitute.

D. Inspection Of A Sailboat Facility.

1. Only sailboats 16 feet and over in length with an auxiliary engine are eligible to be accepted as an operational vessel facility, and must meet additional requirements. Sailboats equipped with a motor must meet the equipment requirements of a motorboat of the same length.
2. In addition to the legal specifications, this class vessel MUST comply with the following safety requirements:
 - a. Have at least one hand portable B-I fire extinguisher on board if less than 26 feet in length; at least two B-I units or one B-II for vessels 26 feet to less than 40 feet; at least three B-Is, or one B-II and one B-I if 40 feet to 65 feet.
 - b. Meet all applicable standards for a CME and vessel facility inspection.

E. Inspection Of A Motor Vessel Facility.

1. Motor vessels are vessels MORE than 65 feet in length propelled by machinery (excluding steam).
2. Only motor vessels used exclusively for pleasure are eligible to be vessel facilities.
3. Motor vessels MUST comply with legal requirements and meet standards for award of the CME decal and the standards for vessel facility inspection. Legal requirements for such uninspected motor vessels are briefly stated as follows:
 - a. Ventilation -- same as for motorboats.
 - b. Backfire Flame Control -- same as for motorboats.
 - c. Fire Extinguishers -- per Table 2.
 - d. In addition to the hand portable fire extinguishers required by the preceding table, the following fire extinguishing equipment shall be fitted in the machinery space:

- (1) One size B-II hand portable fire extinguisher shall be carried for each 1,000 B.H.P. of the main engines or fraction thereof. However, not more than six such extinguishers need be carried.
- (2) On motor vessels of over 300 gross tons, either one size B-III semiportable fire extinguishing system shall be fitted, or alternatively, a fixed fire extinguishing system shall be fitted in the machinery space.

<u>Gross Tonnage</u>		Minimum number of B-II hand portable fire extinguishers
Over	Not Over	
....	50	1
50	100	2
100	500	3
500	1000	6
1000	8

Fire Extinguisher Requirements
Table 2

- e. Requirements for sound producing device, fog horn, bell, and navigation lights are the same as federal requirements.
- f. A pleasure motor vessel will most probably be documented as a yacht, but may be registered.
- g. As this type of vessel will rarely be encountered, Vessel Examiners will not be held responsible for these requirements in their qualification course, but must study them prior to inspecting motor vessels.
- h. Personal flotation devices must be Coast Guard approved Type I.

F. Inspection Of A Motor Vessel Facility Carrying Passengers For Hire.

1. Motorboats not carrying more than six passengers for hire, and not required to be inspected and certified by the Coast Guard, must meet the standards for facility inspection of a pleasure motorboat. The following additional legal requirements pertain to this class of boat.

- a. The operator of a motorboat not carrying more than six passengers for hire must have a valid Motorboat Operator or superior license issued by the Coast Guard.
 - b. A motorboat five net tons or over and carrying passengers for hire, MUST be documented by the Coast Guard.
 - c. Motorboats of all lengths carrying passengers for hire must have a Type I personal flotation device (PFD) for each person carried and, unless the service is such that children are never carried, have an additional number of approved PFDs suitable for children equal to at least ten percent of the total number of persons carried. It should be noted that ring buoys, buoyant vests, buoyant cushions, and special purpose water safety buoyant devices are not acceptable as part of the required lifesaving equipment for this type of motorboat regardless of length, and shall not be aboard except as excess equipment. For purposes of facility inspection, the minimum number of approved PFDs required should accommodate six adult passengers and one child - PLUS crew. PFDs must be in operable condition and include an emergency light and reflective tape for each.
 - d. By federal law, the use of gasoline for cooking, heating, or lighting is specifically PROHIBITED.
2. Motorboats carrying more than six passengers for hire are required by law to be inspected and certified by the Coast Guard, therefore an Auxiliary facility inspection for legal requirements is not necessary.
 - a. Possession of a Coast Guard Certificate of Inspection valid at the date of facility inspection shall be accepted by the Vessel Examiner as full compliance with all legal requirements. Accordingly, a notation will be made on form CG-2736 indicating the date that a Coast Guard inspection was last made and passed.
 - b. The operator must have a valid license issued by the Coast Guard.

G. Inspection Of A Motor Vessel Facility Carrying Freight For Hire.

1. This class of motorboat must meet standards for facility inspection of a pleasure motorboat. Motorboats over 15 gross tons, carrying freight for hire, are required by law to be inspected and certified by the Coast Guard. Therefore, a facility inspection for legal requirements is not required. Remember, any commercial vessel over 65 feet in length is NOT eligible to be a facility.

2. Possession of a Coast Guard Certificate of Inspection valid at the date of facility inspection shall be accepted by the inspector as full compliance with all legal requirements. Accordingly, a notation will be made on CG-2736 indicating the date a Coast Guard inspection was last made and passed.

H. Inspection Of A Commercial Fishing Vessel Facility.

1. Commercial fishing vessel facilities MUST meet the standards for facility inspection of a pleasure motorboat and the Commercial Fishing Vessel (CFV) Safety Act. The requirements of the CFV Safety Act are administered by the local Coast Guard Marine Safety Office. The commercial fishing vessel must also be awarded the current CFV decal, which is issued through the CFV examination program administered by the local MSO.
 - a. The vessel MAY require an EPIRB for their area of operation.
 - b. Remember, any commercial vessel over 65 feet in length is NOT eligible to be a facility.

I. Inspection Of Installed Communications Equipment.

1. The inspection of radio-equipped boats will be executed on the Vessel Facility Inspection and Offer For Use form (CG-2736). The initial (and all subsequent inspections) of the communications equipment may be accomplished by the Vessel Examiner (VE). The completed form will be forwarded to the director per district procedures.
 - a. Acceptance as a radio facility is not authorized.
 - b. The owner of inspected radio equipment will be responsible for the proper maintenance of the equipment. While not a mandatory requirement, annual frequency checks and a technical inspection by an appropriately licensed FCC electronics technician is encouraged to insure that specific transmitter requirements are maintained.
2. The initial (and each subsequent annual inspection) is limited to a check of the documents required to be aboard and a cursory inspection of installed equipment. The inspection will not include CB equipment installed in or carried aboard the facility.
3. **Station Documents.** Radio logs must be carried and maintained on a current basis by all operational vessel facilities. Vessel facilities under 65 feet in length and operating under direct communications control of a Coast Guard or Auxiliary land station are not required to make log entries. If an FCC license is otherwise required by current regulations, this license must be valid and available for inspection.

5. **Physical Checks.**

- a. The VE will make the following physical checks of installed equipment:
- (1) Check the antenna mounting. It must be secure and in good condition.
 - (2) Check condition of lead-in wire, where it enters through the skin of the facility. Inspect the condition of the cable. It must be flexible and the insulation undamaged.
 - (3) Check the lead-in coaxial cable. It must have no breaks in the outer shield or center conductor.
 - (4) Check the general condition of the transmitting and receiving equipment. It shall be securely mounted so that it cannot shift position. Shock mounts are, of course, permissible. Equipment must be clean, dry, and undamaged, and, if not installed in a watertight enclosure, it must be protected from the elements.
 - (5) Check the battery leads and plugs for good condition. Battery connections must be clean and tight. The battery must be mounted high enough to be clear of normal bilge water accumulation.
 - (6) Have the owner switch the radio on. The VE should not touch the controls. The owner shall demonstrate a radio check on each required frequency. Signals must be strong and without distortion, both with the engine in operation and with it secured. Reception must be clear of interference, (other than another station transmitting) both with the engine in operation and with it secured. If an auxiliary generator is installed in the facility, the quality of the signal and clarity of the reception must not be reduced when it is in operation.
 - (7) Check engine noise. Make sure the Auxiliarist follows safety procedures by ventilating the engine compartment prior to starting the engine. Have the owner/operator start the engine(s) and recheck reception. Signals should not be broken up by ignition noise. If the noise level is excessive, suggest that the ignition system be cleaned up, check the wiring, etc., or have a radio technician install noise suppressors.

6. Failure to pass the radiotelephone check does not disqualify a facility for award of the vessel facility decal. Depending on district policy, failure to pass may disqualify for awarding of the operational wreath (decal).

J. Display Of Facility Flag And Decal.

1. To be eligible to fly the flag of the Auxiliary (the "Blue Ensign"), a vessel facility MUST be owned wholly or in part by a member of the Auxiliary; MUST have passed the vessel facility inspection; MUST display the vessel facility decal; and, when underway, an Auxiliarist must be on board. This authority continues until the district year ends, unless this authority is revoked or upon the owner's disenrollment from the Auxiliary.
2. A facility accepted by the director as an operational vessel facility, in addition to the above, is required to display the Auxiliary patrol boat ensign (white with red diagonal stripe) and patrol signboards when operating under Coast Guard orders. The patrol boat ensign shall be flown in place of the "Blue Ensign." Any operational vessel facility flying the patrol boat ensign and displaying patrol signboards MUST also display the current vessel facility decal along with the operational "wreath." (See Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series), or district guidance).

****NOTE**** The "Blue Ensign" is flown ANYTIME by a vessel facility or an operational vessel facility (when not under orders). This signals that the facility is ready and willing to render assistance whenever needed by fellow boaters.

K. Display Of Safety ID Light.

1. An operational vessel facility engaged in public safety activities may use the alternating red and yellow identification light. The light does NOT grant the right of way or supersede other required lighting configurations as set forth in the Navigational Rules of the Road. Its primary purpose is to provide for public safety when actively engaged in activities such as regattas, traffic control, special celebrations and the wide-array of maritime assistance. Good judgement should prevail in using the ID light.

CHAPTER 5: FORMS AND MATERIALS

A. Courtesy Marine Examination Forms and Materials.

1. There are several forms and various materials applicable to the Courtesy Marine Examination (CME) program.
 - a. Federal Requirements Pamphlet.
 - (1) This printed book contains all of the federal requirements for recreational boaters plus additional safety recommendations and information beyond boating law.
 - (2) The differences between federal Regulations and our CME requirements are explained at the end of each section or, on a special page if there is no corresponding federal requirement. The CME decal at the beginning of a paragraph provides a description of the difference.
 - (3) The Federal Requirements pamphlet may be given to boaters inquiring about the CME Program but not taking time to have the examination.

****NOTE**** At times the ANSC is out of Federal Requirements pamphlets, so the AUX-204 check sheet has a brief description of the requirements for each category.

- (4) At the completion of a CME the Federal Requirements pamphlet should be given to the owner/operator, if available, along with the AUX-204 check sheet. Each item is explained in more detail in the pamphlet than on the check sheet.
 - b. Seal of Safety Check Sheet (AUX-204).
 - (1) This form is used by the Vessel Examiner (VE) while conducting a CME. It should be completed entirely and given to the owner/operator on completion of the examination, along with a copy of the Federal Requirements pamphlet.

****NOTE**** The AUX-204 is now a single sheet check list and does not require a Federal Requirements pamphlet for explanation of the items examined.

- (2) At the top of the form are several questions to ask the owner/operator if they are interested in our PE classes, have they had a prior CME, or are they interested in joining the Auxiliary. If so obtain their phone number, so they can be contacted later. These questions can also open a discussion about our Auxiliary activities.

- (3) The AUX-204 is only to be given on completion of the examination. This is NOT a "handout" for boat shows or any other purpose, other than a CME.
 - (4) Be sure your name and contact phone number is on each form. Boaters should be able to contact us if they want a repeat CME or have additional questions.
- c. Personal Watercraft Safety Check (AUX-204A).
- (1) This form is similar to the AUX-204, except it is to be used when conducting an examination on a personal watercraft, as outlined in CHAPTER 8. Follow the same guidelines as above.
- d. Auxiliary CME Report (CG-3594).
- (1) This form is used by the examiner to report CME activity to the flotilla VE staff officer and the director. Keep one copy according to district policy. This form should be used to report passing and failing CMEs, Personal Watercraft examinations, failing facility inspections and commercial fishing vessel inspections while working for a Marine Safety Office. The number and type of passing facility inspections conducted by the VE will be reported individually on the appropriate Vessel Facility Inspection and Offer For Use Form (CG-2736).
- e. Action Information Notification (AIN) (CG-5232).
- (1) This form is to be used as a direct line of communication between VEs and the VE National staff for questions on matters that deal with the CME program which cannot be resolved by the FSO-VE, SO-VE, or DSO-VE. Mail completed forms to the DVC-VT (contact your DSO-VE for proper address).
 - (2) If information about a specific boat is questioned, be sure to include the make, model, HIN, area where boat was examined, and any other description that will help identify the situation.

B. Other CME Program Related Forms and Reports.

- 1. Vessel Facility Inspection and Offer for Use Form (CG-2736).

(a) This must be completed by all Auxiliarists who wish to have the boats they own designated as vessel facilities or as operational vessel facilities. Once a boat is accepted as a facility, this form must be completed annually.

2. SAR Incident Auxiliary Report (CG-4612).

(a) A supply of this form MUST be on board (at least one copy).

C. Procurement Of Forms.

1. The forms noted in this chapter can be procured from the Auxiliary National Supply Center (ANSC), Granite City, Illinois, by the flotilla commander or flotilla materials officer. The ANSC stock numbers, and the maximum copies per order are listed below:

<u>Form Number</u>	<u>Stock Number</u>	<u>Maximum Order</u>
Federal Requirements Pamphlet	3006	200
AUX-204 (CME Check Sheet)	7012	200
AUX-204A (PWC Check Sheet)	7011	200
CG-2736 (Facility Insp Form)	7003	none
CG-3488 (PEC Training Cert)	7014	none
CG-3594 (CME Report)	7015	100
CG-4612 (SAR Incident Report)	7034	none
CG-5232 (CME Action Info Note)	7045	10
Garbage Dumping Restriction Placard	9022	50

D. Manufacturers Defect Reporting.

1. During a CME, if an item is discovered that appears not to be in compliance with manufacturers' standards, the Vessel Examiner (VE) should report it as outlined below.

- a. When reporting a hazardous or urgent condition, report by telephone to your director.
- b. When reporting suspected defects of a less urgent nature, submit a memo to your director.

- (1) Include complete details of the problem noted. Give the manufacturer's name, HIN, where you saw the boat, and as much other detailed information as possible; including the VE's name, address, phone number, and flotilla number for contact back if there are further questions.

c. An AIN shall be submitted as a follow up to the above reports as outlined elsewhere in this chapter.

E. Application As A Marine Dealer Visitor (MDV). Members may qualify as Marine Dealer Visitors (MDVs). To be a MDVisitor, the member should be experienced in ALL Auxiliary activities, and pass the MDV qualification examinations. The MDV test will cover considerable material from the CME program. The Marine Dealer Visitor Manual, COMDTINST M16796.3 (Series), contains all of the details of the program.

F. Coast Guard Marine Safety Offices By State.

AK Anchorage	KY Paducah	OR Portland
AK Juneau	LA New Orleans	PA Philadelphia
AK Valdez	LA Morgan City	PA Pittsburgh
AL Mobile	MA Boston	PR San Juan
CA Long Beach	MD Baltimore	RI Providence
CA San Diego	ME Portland	SC Charleston
CA San Francisco	MI Detroit	TN Memphis
FL Jacksonville	MI Sault Ste. Marie	TX Corpus Christi
FL Miami	MO St. Louis	TX Galveston
FL Tampa	MN Duluth	TX Houston
GA Savannah	NC Wilmington	TX Port Arthur
HI Guam	NY Buffalo	VA Norfolk
HI Honolulu	NY New York	WA Puget Sound
IL Chicago	OH Cleveland	WI Milwaukee
KY Louisville	OH Toledo	WV Huntington

G. Coast Guard Consumer Info-Line.

1. Info-Line Manager:

Commandant (G-OPB)
 U. S. Coast Guard Headquarters
 2100 2nd Street S.W.
 Washington, D.C.
 20593-0001
 PH: (202) 267-1005

2. Info-Line Telephone Number:

1-800-368-5647

H. Check List Of Federal Requirements For Uninspected Passenger Vessels.

(Guide for Examiners only; use AUX-204 check list in presence of boat owner)
STATE NUMBERED VESSELS.

- [] Certificate of Numbers on board.
- [] Numbers - properly spaced - on each bow. (Same as CME requirements for pleasure boats).

DOCUMENTED VESSELS.

- [] Vessel name on EACH bow, hailing port on stern.
- [] Certificate of documentation on board vessel AT ALL TIMES.
- [] Official numbers clearly marked on internal structural part of the hull.

****NOTE**** Vessels are no longer required to have the net tonnage marked on the main beam, nor is it required that it be removed if so marked.

SOUND PRODUCING DEVICES.

- [] Vessels UNDER 39.4 feet (12 meters) - Whistle and bell NOT specifically required, however, some means of making an "effective" sound signal must be carried.
- [] Vessels 39.4 feet (12 meters) and over - MUST carry a whistle (horn) and a bell. (Same as CME requirements for pleasure boats).

PERSONAL FLOTATION DEVICES.

- [] Vessels UNDER 39.4 feet (12 meters) - serviceable CG approved Type I, II, III, V (Hybrid PFD or Exposure (Immersion) Suit of suitable size for each person on board).
- [] Vessels 39.4 feet and over - serviceable CG approved Type I, V (Hybrid) PFD or Exposure (Immersion) Suit of suitable size for each person on board.
* * * * [] All above readily accessible.
- [] Vessels 26 feet and OVER - additionally - at least one serviceable CG approved Type IV Ring Buoy, 20", 24", or 30" in diameter. Vessels 16 feet to 26 feet must have a Type IV throwable cushion or ring buoy.
* * * * [] Immediately available.

****NOTE**** Each PFD, except buoy rings, carried on commercial vessels engaged in ocean, coastwise, or Great Lakes voyages MUST be equipped with a CG approved PFD light and retroreflective material. Vessels carrying six or less passengers for hire and vessels 39.4 feet (12 meters) or longer not carrying passengers for hire MUST have one Type I PFD for each person on board.

- [] PFD LIGHT REQUIREMENT. Each PFD light must have an up-to-date power supply (battery) and be securely attached to the front area of each PFD.
- [] PLACEMENT OF RETROREFLECTIVE MATERIAL. Each PFD - except ring buoys - must have 31 square inches of APPROVED retroreflective material on EACH side (front and back).

- [] VISUAL DISTRESS SIGNALS. For the purposes of awarding a CME decal, uninspected commercial passenger vessels ARE required to carry Visual Distress Signals in order to qualify for the CME decal.
- [] ALTERNATE PROPULSION. same as CME requirements for pleasure boats.
- [] ANCHOR AND ANCHOR LINE. same as CME requirements for pleasure boats.
- [] BACKFIRE FLAME ARRESTER. same as CME requirements for pleasure boats.
- [] FIRE EXTINGUISHERS. same as CME requirements for pleasure boats.
- [] DEWATERING DEVICE. same as CME requirements for pleasure boats.
- [] GENERAL CONDITION. same as CME requirements for pleasure boats.
- [] NAVIGATION LIGHTS. same as for pleasure vessels.
- [] VENTILATION. same as CME requirements for pleasure boats.

LIFE RAFTS. The inflatable raft has in recent years become a part of the standard survival equipment aboard many commercial vessels. Uninspected vessels are not required to carry life rafts. However, if a vessel is equipped with this equipment the following examination could be performed.

- [] Is raft Coast Guard approved?
- [] Has raft been inspected and serviced within the last year?
- [] Is raft stored clear of rigging or structures so it will float free?

CHAPTER 6: TECHNICAL REFERENCE GUIDE

A. Introduction.

1. This chapter provides detailed technical information about many CME requirements. It places emphasis on the educational nature of the CME, using the unique one-on-one relationship provided to promote boating safety. Many technical requirements are explained in detail to reinforce the safety discussions with the boater.

B. Coast Guard Approved Equipment.

1. The term "Coast Guard Approved Equipment" is applied only to those items of equipment which are required by regulation to be in compliance with Coast Guard specifications. For recreational boats, the five types of equipment listed below are required to be Coast Guard approved, or may have a U.L. or S.A.E. number. Each must also carry a label that includes the approval number. The five types of equipment are:
 - a. Personal Flotation Devices. - CG approval only.
 - b. Fire Extinguishers. - CG approval only.
 - c. Flame Arresters. - may have a U.L. or S.A.E. approval.
 - d. Visual Distress Signals. - CG approval only.
 - e. Marine Sanitation Devices - Type I & II - CG approval only.
2. **Equipment Approvals.** Required equipment approvals are issued by the Commandant. Such approvals are published in the Federal Register and in the publication Equipment Lists, COMDTINST M16714.3 (series). Each item whose identity is maintained and can be checked is assigned an approval number. Standards for manufacture of some equipment, the specification for approval, and the method of identifying approval have undergone changes during the years. When the specification for approval of the equipment is terminated or the approval for such an item is withdrawn, it is known as "formerly approved equipment." In the case of backfire flame arresters, the U.L. (approval number UL-1111) or the S.A.E. (approval number SAE-1928) standards are the same as the Coast Guard standards and their approval number may be accepted in place of the Coast Guard approval number.
3. Equipment which was once approved by the Coast Guard or former Bureau of Marine Inspection and Navigation, for which approval of the manufacturing has not been withdrawn, will remain approved equipment so long as it remains in good and serviceable condition.

4. When the required approval markings are no longer legible and the equipment cannot be otherwise identified as having been approved, such equipment must be replaced with currently Coast Guard approved equipment.

C. Numbering And Documentation.

1. Numbering and Registration of Undocumented Vessels.

- a. Every undocumented vessel equipped with propulsion machinery of any type, used on waters subject to the jurisdiction of the United States, and on the high seas beyond the territorial seas for vessels owned in the United States shall be numbered per Title 46 U.S.C. EXCEPT:

- (1) Foreign vessels temporarily using waters subject to U.S. jurisdiction;
- (2) Military or public vessels of the United States, excluding recreational type public vessels;
- (3) A vessel whose owner is a state or subdivision thereof, which is used principally for governmental purposes, and which is clearly identifiable as such;
- (4) Ship's lifeboats, when used as such;
- (5) A vessel which has or is required to have a valid marine document as a vessel of the United States; and
- (6) A vessel exempted from numbering by regulation as follows:

****NOTE**** (States do not have to exempt these vessels, but are given the authority to do so if they desire).

- (a) A vessel that is used exclusively for racing;
- (b) A vessel equipped with propulsion machinery of less than 10 horsepower that:
 - (i) Is owned by the owner of a vessel for which a valid certificate of number has been issued;
 - (ii) Displays the number of that numbered vessel followed by the suffix "1" in the manner prescribed by regulation; and is used as a tender for direct transportation between that vessel and the shore and for no other purpose.

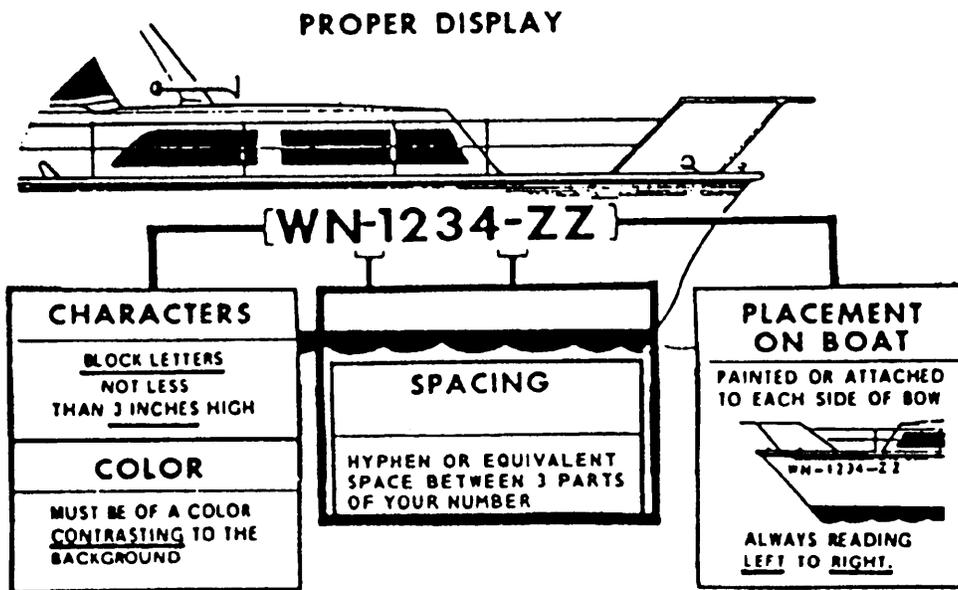
- (c) Sailboats without auxiliary machinery power are exempt from the numbering requirement under Federal Regulations and CME standards although states may require them. In measuring to determine length of the boat, bow sprits, rudders, and other attachments to the hull are excluded from the measurement.
- b. A boat is required to be registered in the state of principal operation, which need not be the state of permanent address of the owner. Certificates of number issued by the Coast Guard are valid for a period of three years. Certificates of number issued by states may be valid for a lesser period. No certificate of number, whether issued by the Coast Guard or by a state with an approved numbering system, is transferable by the original owner to a new owner without first re-registering in that state. Application must be submitted for a new certificate of number by the new owner. The certificate of number, whether issued by the Coast Guard or a state, is of pocket size and must be available for inspection at all times when the vessel is in use.
- c. In those places where the Coast Guard is the registering authority, in the absence of an approved state system, a delay may occur from the time application for the number is made until the certificate is received. A temporary certificate of number is issued which is valid for 60 days. Previously issued numbers may be shown in cases of ownership transfers provided the state of principal use is the same as before transfer and the new owner has been issued a certificate of number.
- d. The current certificate of number, whether issued by the Coast Guard or by a state, contains identifying information concerning the boat. Of principal interest are: name of owner, state of principal operation, make, length, statement as to the use of the boat (note that this is not an authorization to engage in a particular trade), the number awarded, and the date of expiration of the certificate of number.
- e. Registration Numbers.

- (1) A "registration number" always consists of two letters identifying the state of principal operation (prefix), followed by a combination of number(s). The one, two, or three letter suffix furnishes individual vessel identification. These numbers are issued by the Coast Guard or a state per the law, and while this kind of number is official in every respect, it is best to call it the "registration number." The registration number must be displayed as shown in Figure 6-1. In detail, each number must:
 - (a) Be painted on or permanently attached to each side of the forward half of the vessel except in the case of inflatable craft which may have the number firmly attached to the forward half of the vessel by a method which meets all other criteria;
 - (b) Be in plain vertical block characters of not less than three inches in height;
 - (c) Contrast to the color of the background and be distinctly visible (clearly readable at 100 ft.) and legible - multicolor numbers may be acceptable;
 - (d) Have space or hyphens that are equal to the width of a letter other than "I" or a number other than "1" between the letter and the number grouping;
 - (e) Read from left to right; and
 - (f) Be the only number displayed on the forward half of the vessel. (Except the validation sticker required by some states).
- (2) The following category of vessels are exempted as follows:
 - (a) When a vessel is used by a manufacturer or by a dealer for testing or demonstrating, the number may be painted on or attached to removable plates that are temporarily but firmly attached to each side of the forward half of the vessel.
 - (b) On vessels so configured that a number on the hull or superstructure would not be easily visible, the number must be painted on or attached to a backing plate that is attached to the forward half of the vessel so that the number is visible from each side of vessel.

(c) Each number displayed on a tender, used as direct transportation between the parent vessel and the shore and for no other purpose, must meet the display requirement above, and have a space or hyphen that is equal to the width of a letter other than "I" or a number other than "1" between the suffix and the number.

(**Example:** FL 5677 AJ 1 or FL-5677-AJ-1)

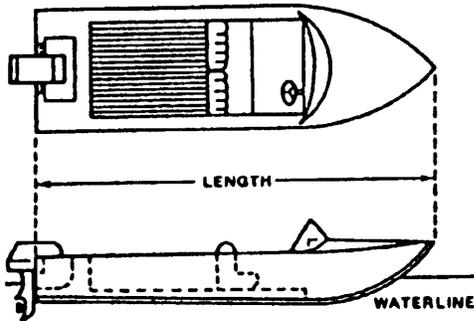
(3) Boat numbers will be considered in conformance with the legibility requirements of the federal regulations if legible at 100-feet, even though a discrepancy of a small fraction of an inch in size may exist.



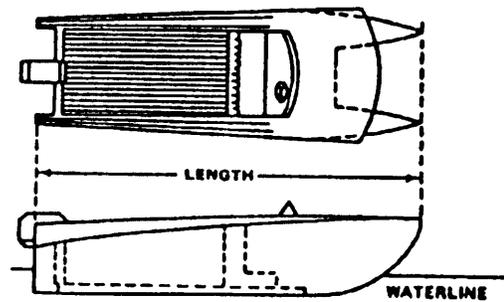
**Proper Display of Boat Numbers
Figure 6-1**

2. **Length of Boats (Measurement).** Registration or documentation papers must reflect vessel length accurately. This will be acceptable evidence of length, unless it is apparent that such is not the case. Since length has a bearing on certain equipment requirements it is an important factor, and if there is obvious error regarding a boat's actual length, the Vessel Examiner can resolve the question by measuring the boat. A rough measure along the outside length of the boat is sufficient. It should be noted that the length, as it appears on the document of documented boats, may not agree with the definition of length as stated here. The following definitions will apply:

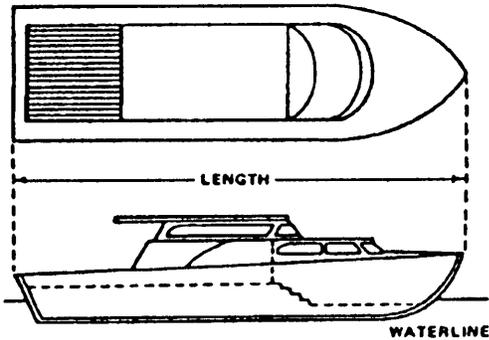
- a. For determining the length of the boat, the distance is measured from end to end, over the deck, excluding sheer. This means a straight line measurement of the overall length from the foremost part of the vessel to the aftermost part of the vessel, measured parallel to the centerline.
- b. Bowsprits, bumpkins, rudders, outboard motors and brackets, diving platforms, and similar fittings or attachments are not included in the measurement.
- c. Length shall be stated in feet and inches.



Outboard Motorboat with Cockpit

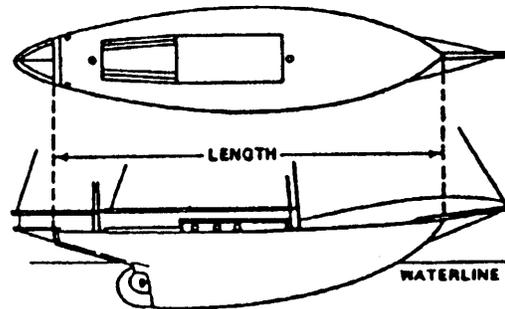


Catamaran or Tunnel Hull Motorboat



Vessel with More Than one Deck

Cabin Cruiser



Vessel with more than one Deck

Auxiliary

**Computing Boat Lengths (Measurement)
Figure 6-2**

- d. Examples of the measurement of length of different types of craft are shown in the accompanying illustrations in Figure 6-2.

3. Identification of Documented Vessels.

a. Documented Vessels.

- (1) Vessels which are "documented" have their identity established officially by the government. This is not the case with boats which are required to be neither documented nor numbered and are referred to as "unnumbered" boats (i.e., sailboats on private lakes that are not required to be registered by the state).
- (2) Documented boats must admeasure at least five net tons. The documentation of vessels is a function of the Coast Guard. Vessels five or more net tons which are employed in coastwise trade, carrying passengers for hire, or commercial fisheries are required to be documented. A vessel of five net tons or over which is used exclusively for pleasure may be documented or registered with the state of principal operation, at the option of the owner. Some states require documented vessels to also display a state registration decal.
- (3) The document, which is exclusive and issued to the particular vessel, serves a dual purpose: certificate of nationality, and an authorization from the United States for the vessel's use in general or specific trades. The vessel must be owned by a citizen of the United States, and at all times must be commanded by a master who is a U.S. citizen.
- (4) The document identifies the vessel by its home port, port of documentation, official number, net and gross tonnage, and owner's name and address. As of 01JUL82, the document issued to a vessel is a "Certificate of Documentation," and is required to be carried on board all documented vessels since 30JUN83. This certificate will be endorsed for every employment for which the vessel is eligible. The five types of endorsements are: foreign trade, coastwise trade, Great Lakes trade/fishing, fishing, and pleasure. The Certificate will also have on it information of any outstanding preferred mortgage.
- (5) Before a vessel may be issued a document, it must be admeasured to determine the gross and net tonnage. Tonnage in this sense is a volume measurement, not a weight measurement. The gross tonnage is the internal cubic capacity of all permanently enclosed spaces on the vessel expressed in tons of 100 cubic feet (100 cu ft = 1 ton). The net or registered tonnage is the remainder after deducting crew and machinery spaces.

- (6) Every documented vessel must have an official number, preceded by the abbreviation "No.," marked by any permanent method which cannot be obliterated or obscured, in block-type Arabic numerals not less than three inches in height on some clearly visible interior structural part of the hull.
 - (a) Commercial vessels must have the name of the vessel marked in clearly legible letters not less than four inches in height on some clearly visible exterior part of the port and starboard bow. The hailing port, including city and state abbreviation, must be marked in clearly legible letters not less than four inches in height on some clearly visible, exterior part of the stern.
 - (b) Documented pleasure vessels must have the name and hailing port, including city and state abbreviation, marked together in clearly legible letters not less than four inches in height on some clearly visible exterior part of the hull. (The "hailing port" is identified on the vessel's Certificate of Documentation).

b. Official Number.

- (1) The word "official number" refers to the permanent identification number required to be marked on a documented vessel, and is not to be confused or mistaken for the registration number issued to undocumented vessels. Documented vessels are exempt from any requirement to display state registration numbers. Some states may require a state tax stamp displayed and the state number somewhere other than at the bow.

D. Navigation Lights. Under the Inland Navigation Rules Act of 1980, which became effective on 24DEC81, the small craft operator is responsible for the display of proper navigation lights. Lighting configuration is not included in the boat manufacturer's Certification of Compliance.

1. The Vessel Examiner (VE) must be knowledgeable of the changes in the inland lighting rules and, and be able to explain them.

- a. The Navigation Rules contain the statutory portions of the law while the five technical annexes contain the technical details as regulatory provisions. This law supersedes the old Inland Rules, the Western Rivers Rules, and the Great Lakes Rules, their respective Pilot Rules, interpretive rules, and parts of the Motorboat Act of 1940.

2. **Federal Regulations.**

- a. All vessels whether under way or anchored (except when anchored in certain designated areas) are required by law to display lights between sunset and sunrise, or in restricted visibility.
- b. Vessels lighted per the International Rules may be legally operated in inland waters as well as in international waters. Vessels lighted per the Inland Rules are correct only on the inland waters of the U.S.
- c. International Rules apply on the high seas and U.S. territorial waters, beyond the lines of demarcation, as defined in 33 CFR 80. These rules are contained in COMDTINST M16672.2 (series) (Nav Rules: Int/Inl).
- d. The arcs of visibility, color, and distance from which lights must be visible are prescribed in the Navigational Rules: International-Rules, and their associated annexes.
- e. The repositioning of lights as a result of metric conversion and the rounding off of measurements are permanently exempt.

3. **Definitions.**

- a. The following definitions, extracted from Rule 21 of the Navigation Rules, will be used in reference to CME lighting requirements.
 - (1) "Masthead light" means a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 and so fixed as to show the light from right ahead to 22.5 abaft the beam on either side of the vessel, except that on a vessel of less than 12 meters (39.4 feet) in length the masthead light shall be placed as nearly as practicable to the fore and aft centerline of the vessel.

- (2) "Sidelight" means a green light on the starboard side and a red light on the port side, each showing an unbroken light over an arc of the horizon of 112.5 and so fixed as to show the light from right ahead to 22.5 abaft the beam on its respective side. On a vessel of less than 20 meters (65.6 feet) in length the sidelights may be combined in one lantern carried on the fore and aft centerline of the vessel, except that on a vessel of less than 12 meters in length the sidelights when combined in one lantern shall be placed as nearly as practicable to the fore and aft centerline of the vessel.
- (3) "Sternlight" means a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 and so fixed as to show the light 67.5 from right aft on each side of the vessel.
- (4) "Towing light" means a yellow light having the same characteristics as the "sternlight" defined in paragraph (3) above.
- (5) "All-round light" means a light showing an unbroken light over an arc of the horizon of 360.
- (6) "Flashing light" means a light flashing at regular intervals at a frequency of 120 flashes or more per minute. This light is used on air cushion vessels operating in the nondisplacement mode.
- (7) "Special flashing light" means a yellow light flashing at regular intervals at a frequency of 50 to 70 flashes per minute, placed as far forward and as nearly as practicable on the fore and aft centerline of the tow (being pushed ahead in inland waters) and showing an unbroken light over an arc of the horizon not less than 180 nor more than 225 and so fixed as to show the light from right ahead to abeam and no more than 22.5 abaft the beam on either side of the vessel.

****NOTE**** The use of any flashing or strobe light, other than those permitted by the Navigation Rules must be avoided in order to eliminate confusion with authorized distress signals.

4. **Lighting Configurations.** This discussion will cover vessels most apt to be examined by the VE. It will not cover rules for situations where navigation lights must be displayed, nor which lights should be displayed to cover those situations. For a more detailed discussion on lighting requirements, see the booklet, "Navigation Rules": International-Inland, COMDTINST M16672.2 (series), available from:

Superintendent of Documents
P.O. Box 371954
Pittsburg, PA 15250-7954

or call: (202) 783-3238
Request stock number: 050-012-00287-8

- a. Lighting requirements are based on three factors:
- (1) Length of Vessel.
 - (a) 39.4 feet (12 meters) to less than 65.6 feet (20 meters).
 - (b) 23 feet (7 meters) to less than 39.4 feet (12 meters).
 - (c) Less than 23 feet (7 meters).
 - (2) Type of Vessel.
 - (a) Power Driven.
 - (b) Sailboat under Power and Sail.
 - (c) Sailboat under sail only.
 - (d) Boats under oars.
 - (3) Type of Water.
 - (a) Inland waters (Inland Rules).
 - (b) International waters (International Rules).
- c. Lighting configurations are shown in the following tables, first by length of vessel, then by type, and whether it is an International or Inland requirement. The illustrations for vessel requirements are numbered to correspond with the figures in the AUX- 204 for easier comparison.

Power Driven Vessels And Sailboats Under Power And Sail

(See Table 4, Figures 1 or 2 INT/INL)

- Masthead Light - As far forward as practicable. Masthead light must be 8.2 feet (2.5 meters) higher than the gunwale. In Figure 1, the after masthead light must be higher than the forward one. The second masthead light is optional on vessels less than 50 meters in length (Rule 23 (a) (ii)).
- Sidelights - May be combined in one lantern carried on the fore and aft centerline of the vessel.

- Sternlight -

****NOTE1**** Motorboats built on 25DEC80 or after, may show configurations as shown in Figure 1 or 2 (INL).

****NOTE2**** Motorboats built before 25DEC80, are permanently exempt from the provisions of the 225 forward masthead light and the 135 sternlight provided that, in place of these lights, the vessel exhibit a WHITE ALL-ROUND LIGHT aft. (INLAND)

Sailboats Under Sail ONLY

(See Table 4, Figures 5, 6, or 7 INT/INL)

- Sidelights - - and - - Sternlight

****NOTE1**** On a sailing vessel of LESS than 20 meters in length, the lights MAY be combined in one lantern carried at or near the top of the mast where it can best be seen.

Vessels 39.4 Feet (12 Meters) To Less Than 64 Feet (20 Meters)

Table 1

Power Driven Vessels And Sailboats Under Power And Sail

(See Table 4, Figures 1, 2, or 3 - INT/INL)

- **Masthead Light** - As far forward as practicable, along the fore and aft centerline of the vessel. It may carry the uppermost light at a height of less than 8.2 feet (2.5 meters) above the gunwale. It shall be carried at least 3.3 feet (1 meter) higher than the sidelights.
- **Sidelights** - May be combined in one lantern. It shall be placed as nearly as practicable to the fore and aft centerline of the vessel.
- **Sternlight** - An all-round white light MAY be used in lieu of the stern and masthead light. If the configuration of the vessel so requires it may be mounted at the stern, centered or off the fore and aft center line. It must be 3.3 feet (1 meter) higher than the side lights.

****NOTE1**** Under International Rules, if the all-round white light is mounted off the fore and aft center line, the side lights must be combined in a single combination red and green light at the bow.

****NOTE2**** Vessels on the Great Lakes may show lighting configurations as shown in Figure 4 instead of Figure 1, Page 6-16.

Sailboats Under Sail ONLY

(See Table 4, Figures 5, 6, or 7 INT/INL)

- **Sidelights** - - and - - **Sternlight**

****NOTE1**** In lieu of sidelights and sternlight, may combine those lights in one lantern (tricolored) at or near the top of the mast.

****NOTE2**** In addition to sidelights and sternlight, may display at or near the top of the mast, two ALL-ROUND lights in a vertical line, the upper red, the lower green. If a tricolored lantern is used, these two may not be used.

Vessels 23 Feet (7 Meters) To Less Than 39.4 Feet (12 Meters)

Table 2

Power Driven Vessels And Sailboats Under Power And Sail

(See Table 4, Figures 1, 2, or 3 INT/INL)

- Masthead Light - - and - - Sidelights
- Sternlight - An all-round white light may be used in lieu of the stern and masthead light. If the configuration of the vessel so requires it may be mounted at the stern, centered or off the fore and aft center line. It must be 3.3 feet (1 meter) higher than the side lights.

****NOTE1**** Under International Rules, if the all-round white light is mounted off the fore and aft center line, the side lights must be combined in a single combination red and green light at the bow.

****NOTE2**** If maximum speed of vessel does not exceed 7 knots, it may exhibit only an ALL-ROUND WHITE light instead of the other navigation lights prescribed by the rules. (INT only). Such vessel shall, if practicable, also exhibit sidelights.

Sailboats Under Sail ONLY, And Boats Under Oars

(See Table 4, Figures 5, 6, 7, or 8 INT/INL)

- Sidelights - - and - - Sternlight

****NOTE1**** In lieu of sidelights and sternlight, a combined light (tricolored) in one lantern carried at or near the top of the mast where it can best be seen (only if practicable). This note does not apply to boats under oars.

****NOTE2**** If it is not practicable to exhibit lights as described above, the operator must have ready at hand an electric torch or lighted lantern showing a WHITE light which shall be exhibited in sufficient time to prevent collision.

Vessels Less Than 23 Feet (7 Meters)

Table 3

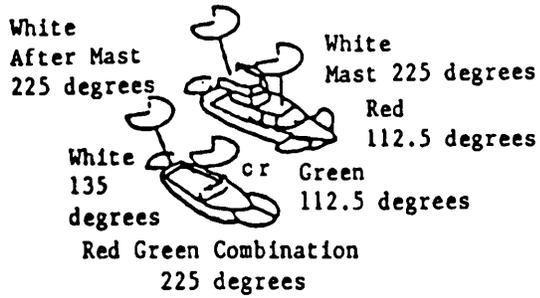


Figure 1.

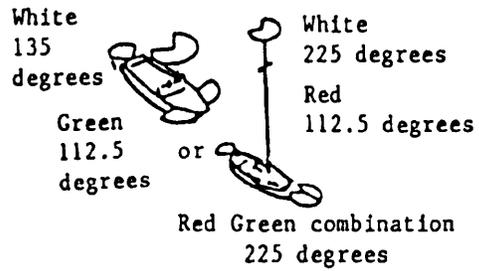


Figure 2.

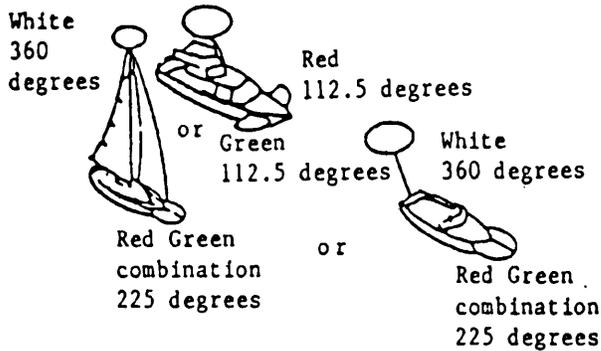


Figure 3.

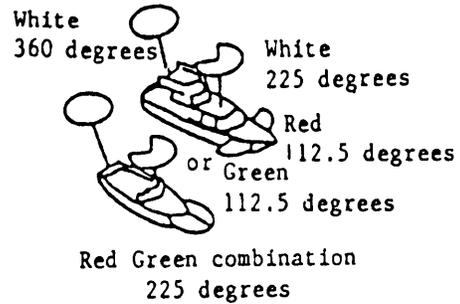


Figure 4. (Great Lakes)

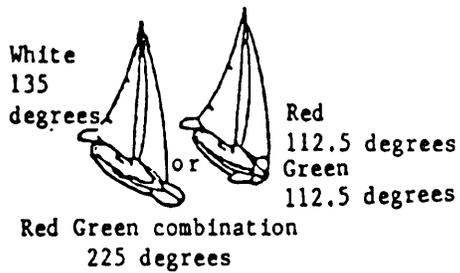


Figure 5.

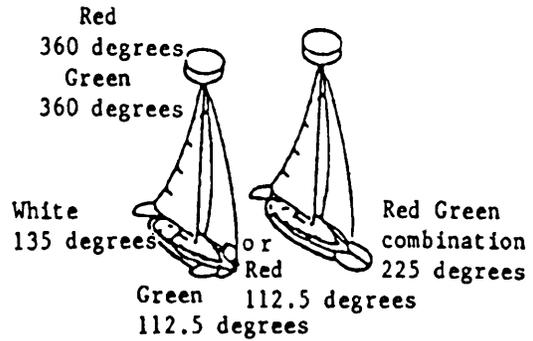


Figure 6.

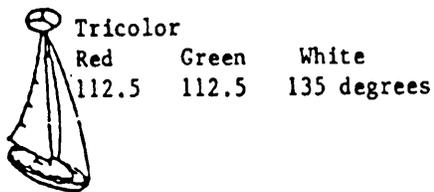


Figure 7.

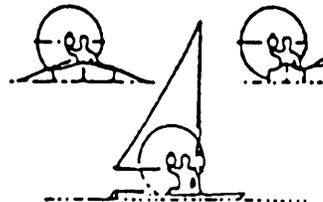


Figure 8.

Illustrations Of Lighting Configurations
 Table 4

E. Sound Producing Devices.

1. Federal Requirements. Motorboats of 16 feet to no more than 65 feet must have a sound producing device aboard. This requirement does not apply to motorboats engaged in a race which has been previously arranged or announced. Requirements imposed under the Old Motorboat Act Rules (Title 46 USC) have been superseded by the Navigational Rules Act of 1980 which became effective for all vessels in this category on 24DEC89. Motorboats less than 16 feet must follow the requirements outlined in Table 5.

<u>Length of Vessel</u>	<u>Type of Device</u>
LESS than 12 Meters No Bell Required!	Some means of making an efficient sound signal.
12m to LESS than 20m Bell Required!	Whistle audible for 1/2 mile (120 db)
20m and OVER Bell Required!	Whistle audible for 1 mile (130 db)

COLREGS - Inland Rules (Effective Since 24DEC89)
Table 5

2. Motorboats 39.4 feet (12 meters) to no more than 65 feet shall carry a bell capable of producing a clear bell-like tone of full round characteristics. The bell may be carried inside the cabin, but provisions should be made so that it may be mounted outside for use as a navigational warning when the boat is anchored under conditions of low visibility. This is of course only a recommendation, not a requirement. Motorboats engaged in a race which has been previously arranged or announced, or while tuning up for this race, need not carry a bell. Bells are not Coast Guard approved equipment. A bell such as a cow bell is not acceptable as it does not produce the required tone. Likewise, beating on a cooking pot with a spoon would not do the job as a bell unless it produced a clear bell-like tone of full round characteristics.
 - a. A vessel 39.4 feet (12 meters) or more in length shall be provided with a whistle and a bell. The whistle and bell shall comply with the specifications in Annex III to these regulations. The bell may be replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the prescribed required signals shall always be possible.

- b. A vessel of less than 39.4 feet (12 meters) in length shall not be obliged to carry the sound signaling appliances prescribed in this rule, but if it does not, it shall be provided with some other means of making an efficient sound signal.

F. Types Of Personal Flotation Devices (PFDs). Figures 6-3 and 6-3a describe and depict various Type I, II, III, IV, and V PFDs.

1. **Type I - Off-Shore Life Jacket.** A Type I PFD has the greatest required buoyancy and is designed to turn most unconscious persons in the water from a face down position to a vertical and slightly backward position, and to maintain the person in that position and therefore, greatly increase the chances of survival. The Type I PFD is suitable for all waters, especially for cruising on waters where there is a probability of delayed rescue, such as large bodies of water where it is not likely that a significant number of boats will be in close proximity. This type PFD is the most effective of all types in rough water. The Type I will bear an inspection stamp that indicates that the device has been inspected and tested per U.S. Coast Guard regulations. It is reversible and available in only two sizes - adult (90 lbs. or more) and child (less than 90 lbs.) which are universal sizes (designed to fit all persons in the appropriate category). Each Type I PFD must have clearly marked in waterproof ink on a front section in letters 3/4-inches or more in height:

- a. "ADULT," (for persons weighing 90 or more pounds); or
- b. "CHILD," (for persons weighing less than 90 pounds).

****NOTE1**** Some "ADULT" Type I PFDs are rated for children who weigh at least 75 pounds. Check the PFD's label to determine its intended use.

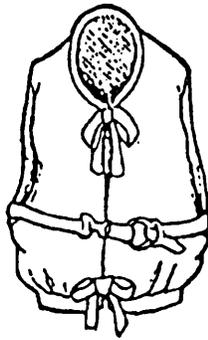
2. **Type II - Near-Shore Buoyant Vest.** A Type II PFD is designed to turn the wearer to a vertical and slightly backward position in the water. The turning action is not as pronounced as with the Type I, and the device will not turn as many persons under the same conditions as the Type I. The Type II PFD is usually more comfortable to wear than the Type I. It is not reversible. This type PFD is normally sized for ease of emergency donning and is available in the following sizes: Adult (more than 90 lbs.), child medium (50 lbs. to 90 lbs.), child small (30 lbs. to 50 lbs., OR less than 30 lbs.). In addition, some models are sized by chest sizes. You may prefer to use the Type II where there is a probability of quick rescue such as areas where it is common for other persons to be engaged in boating, fishing, and other water activities.

3. **Type III - Flotation Aid.** A Type III PFD is designed so that the wearer can assume vertical or slightly backward position, and the device will tend to maintain the wearer in that position and have no tendency to turn the wearer face down. A Type III can be the most comfortable, and comes in a variety of styles which should be matched to the individual use, and is a good choice for water sports, such as skiing, hunting, fishing, canoeing, and kayaking. These devices are not normally reversible. This type PFD normally comes in many chest sizes and weight ranges; however, some universal sizes are available. The wearer may also prefer to use the Type III where there is a probability of quick rescue such as areas where it is common for other persons to be engaged in boating, fishing, and other water activities.
4. **Type IV - Throwable Device.** Type IV PFDs are designed to be grasped and held by the user until rescued, as well as to be thrown to a person who has fallen overboard. While the Type IV is acceptable in place of a wearable device in certain instances, this type is suitable only where there is a probability of quick rescue such as areas where it is common for other persons to be engaged in boating, fishing, and other water activities. It is not recommended for non-swimmers and children.

****NOTE 1**** Ring buoys are available in 18, 18-1/2, 19, 20, 24, and 30 inch outside diameter. Only the 20, 24, and 30 inch size may be used on commercial boats.

****NOTE 2**** A Type IV "Throwable Device" common to sailboats is known as a "Horseshoe." The VE should be aware that while the design of this device is different from other Type IV devices, it is an approved type and is acceptable if properly labeled and in serviceable condition.

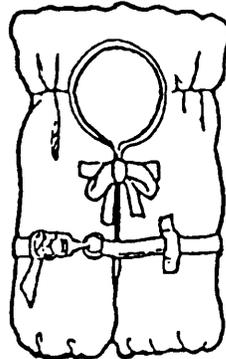
5. **Type V - Special Use Device.** Type V PFDs are approved only for certain restricted uses. The specific approved use of a Type V will be described on the device. Some Type V PFD's are also approved as a replacement for a Type III device, such as "exposure coveralls." Other Type V devices not specifically designated to serve as a Type III device (such as work vests) are NOT acceptable.
6. **Fully Inflatable Recreational PFD.** The Coast Guard has approved fully inflatable recreational PFDs. The inflatable PFDs will be classified Type I, II, or III, depending on the number of chambers and construction of the PFD. Before an approval number is issued, they must be tested and meet U.L. standards. They are only for adult recreational boaters that are 16 years (and older) and weigh more than 80 pounds.



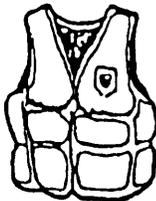
Type I, Off-Shore Life Jacket
 Kapok or Fibrous Glass.
 160.002 or 160.005
 Adult Minimum Buoyancy 22 LBS
 Child Minimum Buoyancy 11 LBS



Type II, Near-Shore Buoyant
 Vest, Unicellular Plastic
 Foam. 160.052
 Adult Min. Buoyancy 15.5 LBS
 Child, Med Min. Buoyancy 11 LBS
 Child, Sm Min. Buoyancy 7 LBS



Type II, Near-Shore Buoyant Vest
 Kapok or Fibrous Glass. 160.047
 Adult Min Buoyancy 16 LBS
 Child, Med Min Buoyancy 11 LBS
 Child, Sm Min Buoyancy 7 LBS

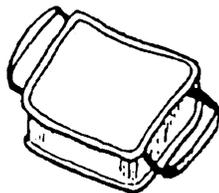


Type III Flotation Aid
 160.064
 Over 90 LBS Min Buoyancy 15.5 LBS
 50-90 LBS Min Buoyancy 11 LBS
 Under 50 LBS Min Buoyancy 7 LBS

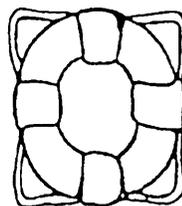


Type III Flotation Aid 160.064
 Over 90 LBS, Min Buoyancy 15.5 LBS
 50-90 LBS Min Buoyancy 11 LBS
 Under 50 LBS, Min Buoyancy 7 LBS

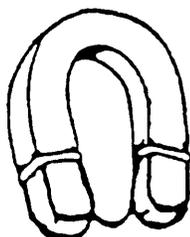
**Personal Flotation Devices
 Figure 6-3**



Type IV Throwable Device
 Buoyant Cushion, Kapok, Fibrous
 Glass or Plastic Foam 160.048 or
 160.049. Min Buoyancy Force
 20 LBS



Type IV Throwable Device 160.050
 Buoy, Life Ring, Unicellular Plastic
 Min Buoyancy Force 30in size: 32 LBS
 20-24in size: 16.5 LBS



Type IV Throwable Device 160.064
 Buoyant "Horseshoe"
 Minimum Buoyancy Force 20 LBS

Type V Hybrid Inflatable 160.077
 Min Buoyancy Force 15.5-22 LBS
 Inflated



Type V PFD
 Anti-Exposure Suit
 (Type III when worn)



Personal Flotation Devices
 Figure 6-3a

7. **Stowage.**

- a. No person may use a recreational boat UNLESS each Type I, II, III required device is readily accessible and of a suitable size for the person for whom it is intended. Readily accessible means that the PFD must be stowed in a manner so that it can be easily retrieved. PFDs must not be stowed in compartments, boxes, or lockers under gear which would hinder a person from getting to them in an emergency. Storage spaces must not be locked, and everyone on board should know where the PFDs are stowed.
- b. No person may use a recreational boat unless each Type IV PFD required is immediately available. Immediately available means that the device must be right at hand, so that if someone were to fall overboard, the Type IV device would be where someone could reach it immediately and throw it to the person in the water.

8. **Types of PFDs with Examples of Labeling Requirements.**

- a. On 01SEP78, regulations changed the wording of the labels on PFDs. The labels on PFDs manufactured prior to 1SEP78 will still be acceptable as long as the PFD is in good and serviceable condition. The new labels are shortened because an information pamphlet is required with each device. The pamphlets will be more informative to the general public as to what the specific PFD is best suited for. All the new labels must be printed in letters that can be read at a distance of 2 feet. The rules were placed into effect between 01SEP78 and 01SEP79. There are 12 different wording arrangements covering the five different types of PFDs. The wording was published in the Federal Register dated 09MAR78, Part II.
- b. Printed below is an **example** of the wording on one of the new labels.

Type II Personal Flotation Device. Inspected and tested in accordance with U.S. Coast Guard regulations. (Kapok or Fibrous glass) buoyant material provides a minimum buoyant force of (16 lbs., 11 lbs., or 7 1/4lbs.) Dry out thoroughly when wet. Do not snag or puncture plastic cover. If pads become waterlogged, replace device. Approved for use on all recreational boats and on uninspected commercial vessels less than 40 feet in length not carrying passengers for hire by persons weighing (more than 90 lbs., 50 lbs. to 90 lbs., or less than 50 lbs.)
U.S. Coast Guard Approval No. 160.047
(Assigned Mfgr's No.) / (Revision No.) (Model No.)
(Name/address of manufacturer/distributor) (Lot No.)

G. Fire Extinguishers.

1. Federal Regulations and Classifications.

- a. Each fire extinguisher is classified by letter and number, according to the type of fire it is expected to extinguish, and the size of the extinguisher. The letter indicates the type of fire. "A" for combustible solids; "B" for flammable and combustible liquids; "C" for electrical. The minimum size fire extinguishers approved for use on boats are hand portable, of either B-I or B-II classification, and are listed in the table below:

B-I	Carbon Dioxide	(minimum lbs)	4
	Dry Chemical	(minimum lbs)	2
	HALON	(minimum lbs)	2-1/2
	AFFF (Foam)	(minimum gal)	1-3/4
B-II	Carbon Dioxide	(minimum lbs)	15
	Dry Chemical	(minimum lbs)	10
	HALON	(minimum lbs)	10
	AFFF (Foam)	(minimum gal)	2-1/2

**Fire Extinguisher Classifications
Table 6**

- b. In addition, fire extinguishers are specifically marked "Marine Type USCG Approved."
2. A fixed fire extinguishing system will reduce the number of required portable fire extinguishers by one, for example, a vessel that is required to carry two B-Is or one B-II fire extinguisher would only be required to carry one B-I portable extinguisher if a fixed extinguishing system is properly installed and maintained.
3. Boats shall carry at least the minimum number of hand portable fire extinguishers as set forth below, except that boats less than 26 feet in length, propelled by outboard motors and not carrying passengers for hire, need not carry such portable fire extinguishers if the construction of the boat will not permit the entrapment of explosive or flammable gases or vapors.

Length Of Motorboat	Without Fixed System	With Approved Fixed System
Less than 16 feet	1 B-I	None
16 ft. to under 26 ft.	1 B-I	None
26 ft. to under 40 ft.	2 B-I or 1 B-II	1 B-I
40 ft. to 65 ft.	3 B-I or 1 B-II and 1 B-I	2 B-I or 1 B-II

**** (Refer to Chapter 4 for yachts OVER 65 feet) ****

**Fire Extinguisher Requirements
Table 7**

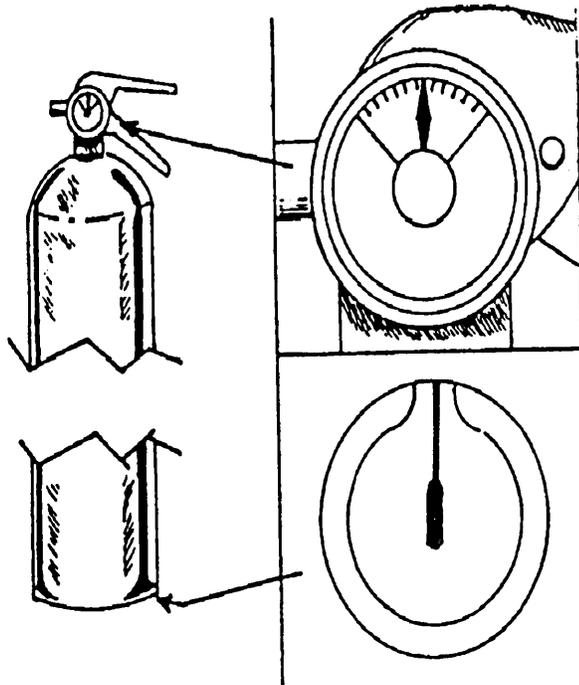
4. **Safety.**

- a. When performing a CME, the following points of safety should be emphasized:
- (1) No one expects to have a fire and when one occurs, it is a complete surprise. The cautious operator will be certain they know the capabilities and limitations of available equipment and how to use it in advance of an emergency. Examples of limitations are the duration of discharge and range of the particular unit. Each operator should be aware of the toxic properties of products of combustion and even the hazards of breakdown of extinguishing agents such as HALON.
 - (2) A fire extinguishing concentration of carbon dioxide is lethal. Owners, operators, and crew of those larger vessels with CO2 systems protecting spaces which can be occupied should be especially aware of the hazard to anyone trapped in the protected space should the system discharge either for an actual fire or due to an accident. It is mandatory that spaces protected with CO2 have a pre-discharge alarm and time delay to allow personnel to evacuate before the gas is discharged.
 - (3) If the fire extinguisher system has an automatic engine shutdown feature, the owner and crew should know how to restart the engine.
 - (4) CO2 is discharged at sub-zero temperatures. The operator may be injured if contact is made with the metal horn of a portable CO2 extinguisher.

- (5) There are a number of Coast Guard approved HALON 1211 and HALON 1301 extinguishing systems on the market. It is extremely important that the owner of such a device check the approved volume against the actual volume of the compartment to be protected. Too small a device will not put out the fire, and can create a very hazardous condition due to toxic breakdown of the agent. The owner should be advised that these units cannot be used in sequential multiples as the effect is not cumulative unless discharged simultaneously. The Vessel Examiner (VE) must be aware that some HALON extinguishers may be rated 5 BC and the contents not weigh 2 1/2 lbs. This is NOT acceptable. To be accepted the hand portable extinguisher must be rated 5 BC and the contents must weigh at least 2 1/2 lbs. Fixed HALON extinguisher systems do not have to comply with this requirement as they are designed for a specific compartment volume.
- (6) Because of the danger and difficulty of fighting a fire in an engine compartment which must be opened before fire fighting can be performed, the VE should discuss installing access ports which can be opened sufficiently to admit the extinguisher's agent into the engine space.



Typical Cartridge Type Dry Chemical Extinguisher



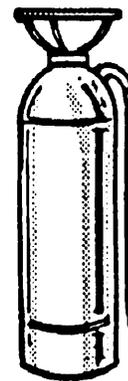
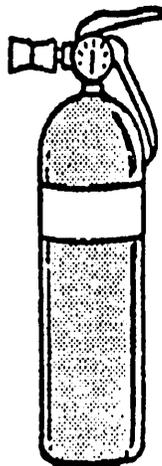
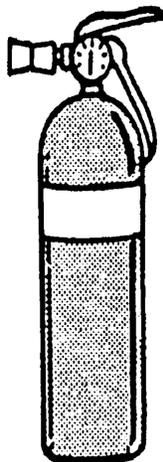
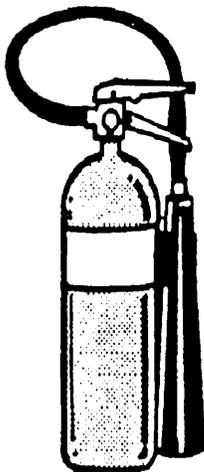
Typical Pressurized Dry Chemical Extinguisher

CARBON DIOXIDE (CO₂)

DRY CHEMICAL

HALON

FOAM



Portable (Hand-Carried) Extinguishing Agent Containers
Figure 6-4

H. Visual Distress Signals (VDS). The Federal Regulations for VDS are stated in 33 CFR 175, Subpart C. Table 8 shall be used as the basis for acceptability of VDS for award of the CME decal. Subpart C is provided herein to familiarize Vessel Examiners with these regulations.

(SUBPART C - Visual Distress Signals)

1. **Applicability.** This Subpart applies to boats owned in the United States, sailing its coastal waters and the seas beyond its territorial boundaries.
2. **Definitions.**
 - a. "Visual Distress Signal" means an emergency signaling device approved by the Commandant under 46 CFR part 160, or certified by the manufacturer under 46 CFR parts 160 and 161.
 - b. "Coastal Waters" means the U.S. waters of the Great Lakes, the territorial seas of the United States, and all connecting lakes, bays, sounds, harbors, rivers, inlets, etc. where any entrance exceeds two (2) nautical miles between opposite shorelines to the first point where the distance between shorelines narrows to two (2) nautical miles. Shorelines of islands or points of land present within a waterway ARE considered when determining the distance between opposite shorelines.
3. **Visual Distress Signals Required.**
 - a. No person may use a boat 16 feet or more in length or any boat carrying six or less passengers unless visual distress signals selected from Table 8 in the number required, are on board. Devices suitable for day use and devices suitable for night use, or devices suitable for both day and night use, must be carried.
 - b. Between sunset and sunrise, no person may use a boat less than 16 feet in length unless visual distress signals suitable for night use selected from Table 8, in the number required, are on board.
4. **Launcher.** When a visual distress signal carried to meet the requirements of paragraph H.3 of this chapter requires a launcher to activate, then a launcher approved under 46 CFR 160.028 must also be carried.
5. **Exceptions.**
 - a. The following persons need not comply with paragraph H.3. However, each must carry on board visual distress signals suitable for night use selected from Table 8, in the number required, between sunset and sunrise:

- (1) A person competing in any organized marine parade, regatta, race, or similar event;
 - (2) A person using a manually propelled boat; or
 - (3) A person using a sailboat of completely open construction, not equipped with propulsion machinery, under 26 feet in length.
6. Stowage. No person may use a boat unless the visual distress signals required by paragraph H.3 are readily accessible.
7. Serviceability. No person may use a boat unless each signal required by 175.110 is in serviceable condition and the service life of the signal, if indicated by a date marked on the signal, has not expired.

****NOTE**** The serviceable life of current signals is 42 months from the date of manufacture. The expiration date is marked on the signal.

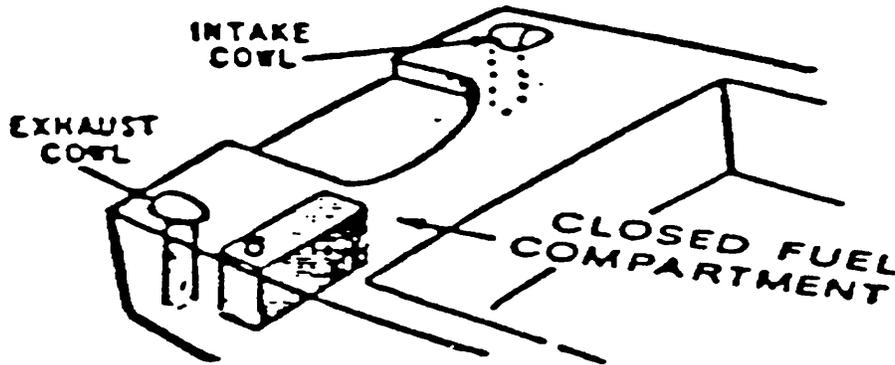
8. **Marking.** No person may use a boat unless each signal required by paragraph H.3 is legibly marked with the approval number or certification statement as specified in 46 CFR parts 160 and 161. Approved pyrotechnic devices must be stamped with a date of 01OCT80 or later.

Number	Description	Use	Required
160.021	Hand-held Flare	Day and Night	3
160.022	Floating Orange Smoke	Day only	3
160.024	Pistol Parachute Red Flare	Day and Night (a)	3
160.036	Hand-held Parachute Red Flare	Day and Night	3
160.037	Hand-held Orange Smoke	Day only	3
160.057	Floating Orange Smoke	Day only	3
160.066	Red Aerial Pyrotechnic Flare	Day and Night (a)	3
160.072	Orange Flag	Day only	1
161.013	Electric Distress Light	Night only (b)	1

**Visual Distress Signals Accepted
Table 8**

- (a) These devices may be either self-contained or pistol launched, and either meteor or parachute assisted type. Some of these signals may require use in combination with a suitable launching device approved under 46 CFR 160.026.
 - (b) Flashing lights should only be used as authorized in the Navigation Rules in order to avoid confusion with the authorized distress signals. Strobe lights may only be used as distress signals.
9. **Existing Equipment.** The following types of VDS equipment will be acceptable as complying with paragraph H.3 of this chapter so long as they remain in good and serviceable condition:
- a. Signal launchers for use with cartridges are accepted as complying with paragraph H.3 of this chapter and may still be accepted provided the devices themselves are in serviceable condition. However, the cartridge must bear Coast Guard approval numbers and date codes as prescribed under currently effective VDS regulations.
10. **Prohibited Use.** No person in a boat shall display a visual distress signal on waters to which this subpart applies under any circumstance except a situation where assistance is needed because of immediate or potential danger to the vessel or the persons on board.
- I. Ventilation.** The use of gasoline in boats will always present a safety hazard because the vapors are heavier than air. In open boats, these vapors may be dissipated through exposure to the open atmosphere. Therefore, open boats are exempted from ventilation requirements. The term "open boat," means those motorboats or motor vessels with all engine and fuel tank compartments (and other spaces to which explosive or flammable gases and vapors may flow), open to the atmosphere, preventing the entrapment of gases and vapors within the vessel. Federal regulations state the following:
- 1. **Open Boats.** Open boats MUST meet the following conditions:
 - a. Engine and fuel tank compartments shall have a minimum 15 square inches of open area directly exposed to the atmosphere for each cubic foot of net compartment volume. Length in inches X width in inches = square inches.
 - b. There must be no long or narrow unventilated spaces accessible from such compartments in which a flame front could propagate.

- c. Long, narrow compartments (such as side panels), if joining engine or fuel compartments and not serving as ducts thereto, shall have at least 15 square inches of open area per cubic foot provided by frequent openings along the full length of the compartment.
 - d. Sailboats. Ventilation requirements are identical to those for power boats whenever combustible fuels are carried.
2. **Boats Built Before 01AUG80.** The Motorboat Act of 1940 requires all vessels except open boats built after 25APR40 using fuel having a flash point of 110oF or less (gasoline) to have at least one intake cowl and duct extending from the atmosphere to a point at least midway to the bilge or below the carburetor, and one exhaust cowl and duct from the atmosphere to the lower portion of bilge in every closed engine and fuel tank compartment (see Figure 6-5). Cowls and louvers must be trimmed for maximum effectiveness. If louvers are used, the intake louver must be facing forward and must extend outward 1/2 inch.



**Natural Ventilation Of A Closed Fuel Compartment
Figure 6-5**

- a. The blower duct, if equipped, could also serve as the exhaust duct for the natural ventilation if the duct size is adequate and the flow of air is not obstructed by the blower fan blade. Separate ducting is also acceptable.
- b. On boats built prior to 01AUG80, there are no federal regulations that prescribe minimum ducting size. It is Coast Guard policy that the minimum acceptable size for all boats is 2 inches in diameter.

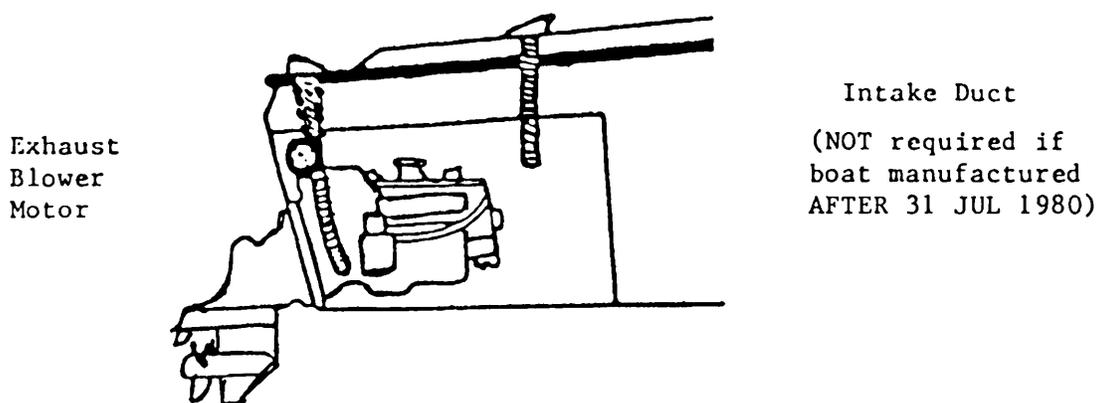
3. **Boats built AFTER 31JUL80.** All boats (except open boats) which have gasoline engines for electrical generation, mechanical power or propulsion, built after this date, **MUST** have a powered ventilation system. A manufacturer **MAY** elect to comply with this SUBPART any time after 31JUL78. On boats built after 31JUL80, the Vessel Examiner (VE) may assume that the manufacturer built the boat per the safety standards in effect on the date of manufacture.

a. Engine Compartments.

- (1) An operable power blower is required in ADDITION to natural ventilation in closed compartments having gasoline engines for propulsion, electrical generating, or mechanical power on boats built after 31JUL80.
- (2) A warning label for the blower **MUST** be mounted near each ignition switch. If there is more than one ignition switch, there must be a warning label near EACH. The same applies to auxiliary generators. The statement on the label **MUST** begin with the word "WARNING" while the rest of the label may be expressed in various forms. The suggested wording is:

WARNING
Gas vapors can explode.
Before starting engine, operate
blower for four minutes and
check engine compartment bilge
for gas vapors.

- (3) Exhaust ducting must be connected to the blower intake and extend to the lower 1/3 of the compartment, but above the normal accumulation of bilge water (see Figure 6-6). One or more blowers may be used in combination to achieve the proper output.
- (4) Intake openings are required, ducting is not required on the intake opening but is permissible. The intake opening may also be from another ventilated compartment.

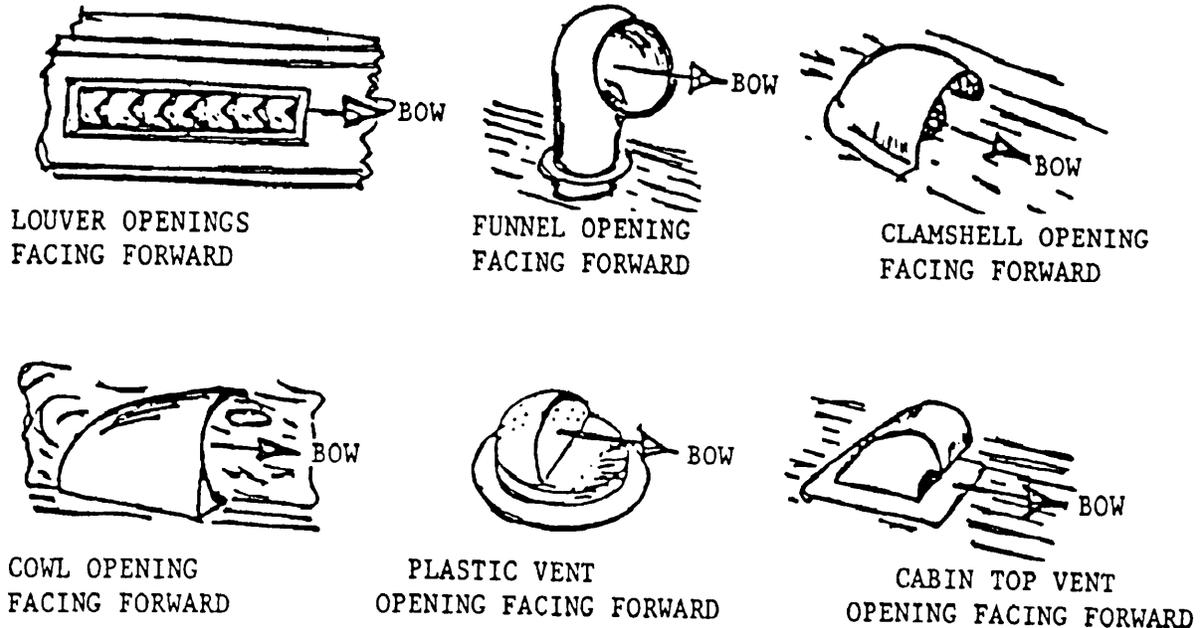


**Closed Engine Compartment
Figure 6-6**

b. Principles Of Natural Ventilation.

- (1) The typical natural ventilation system on a boat with a fuel tank or engine compartment that is not "open to the atmosphere" consists of at least one supply opening and one exhaust opening. Each of these openings is fitted with a cowl, vent, or louver located on the exterior surface of the boat. On most boats, two cowls, vents, or louvers usually face forward and two of them face aft. Ducting extends from these openings to the lower portion of a compartment requiring natural ventilation. The ducting extends no lower than the normal accumulation of bilge water.
- (2) Amendments to the Ventilation Standard have removed the requirement for forward facing supply openings on boats manufactured AFTER 06MAR87. Boats manufactured BEFORE 06MAR87 must have intake cowl facing forward and exhaust facing aft. For years the theory has been that in a typical cabin cruiser air flows over the bow, down the forward facing cowl, vent, or louver, so fuel vapors are pushed out of the engine or fuel compartment and through the exhaust opening which faced aft. Testing has shown the opposite may be true. Many openings in compartments act as ventilation openings and the direction in which these openings are facing has less impact on the effectiveness of the natural ventilation system than does the overall configuration of the boat. This testing has shown the natural air flow is over the stern and towards the bow, even with the boat underway in a headwind.

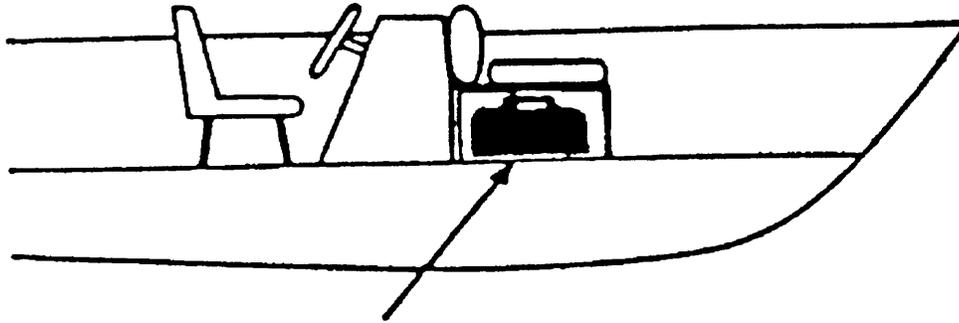
- (3) On boats built AFTER 31JUL80 the minimum size of ducting permitted is 3 square inches, or 2 inches in diameter. The manufacturer's Certification of Compliance label is proof that the ventilation system is installed properly, provided the system does not APPEAR to have been altered.



Acceptable Intake Openings
Figure 6-7

c. Fuel Tank Compartments.

- (1) There is no requirement for ventilation of the PERMANENT fuel tank compartment IF there is no electrical source of ignition in the compartment and IF the fuel tank is vented to the outside of the boat. Fuel compartments that do not meet these criteria must have proper ventilation.
- (2) Compartments containing portable fuel tanks, including those fixed to portable generators, trolling motors, etc., MUST be properly ventilated regardless of when the boat was built. They may be naturally ventilated or have sufficient compartment area open to the atmosphere.



Portable Fuel Tank

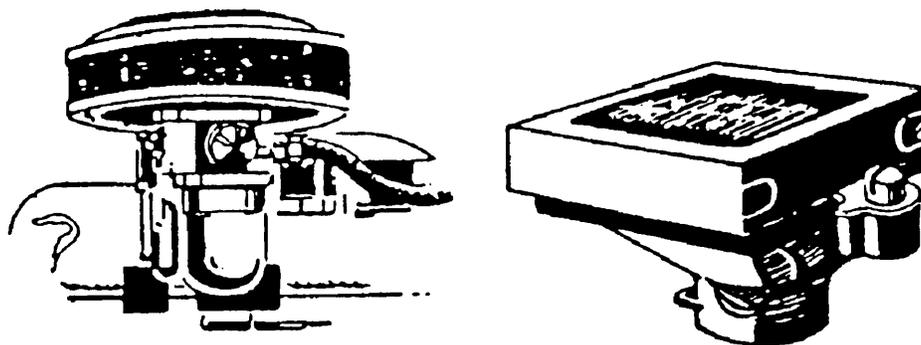
**Portable Fuel Tank Compartment Requiring Ventilation
Figure 6-8**

4. **Enclosed Spaces NOT Requiring Ventilation.**
 - a. Spaces not containing engine or fuel tank systems which are closed off by bulkheads from other compartments requiring ventilation. Bulkheads may have small limber holes for the passage of bilge water.
 - b. Engine compartments where the engine has no cranking motor. The engine cover box is removed for starting thus exposing the engine to the atmosphere. (Found in older boats, antiques, etc.). Requires only natural ventilation.
5. **Operator Responsibility For Maintenance.**
 - a. On boats built prior to 01AUG80, the owner/operator is responsible for the proper installation and maintenance of the system.
 - b. On boats built after 31JUL80, the owner/operator must maintain the ventilation system which the boat manufacturer installed. The owner/operator is not required to perform any system performance test for the power ventilation if the blower is replaced; however, the blower must be NO smaller than the original (this applies to replaced ducting also).
 - c. Should you, as a VE, discover a boat with a system that you feel does not comply with applicable standards, (either through owner changes or manufacturer error), report the discrepancy to your director.

J. **Backfire Flame Control.** Federal regulations state every boat in which gasoline engines are installed in a closed compartment, except outboard motors, shall be equipped with an acceptable means of backfire flame control.

1. The following are acceptable means of backfire flame control:

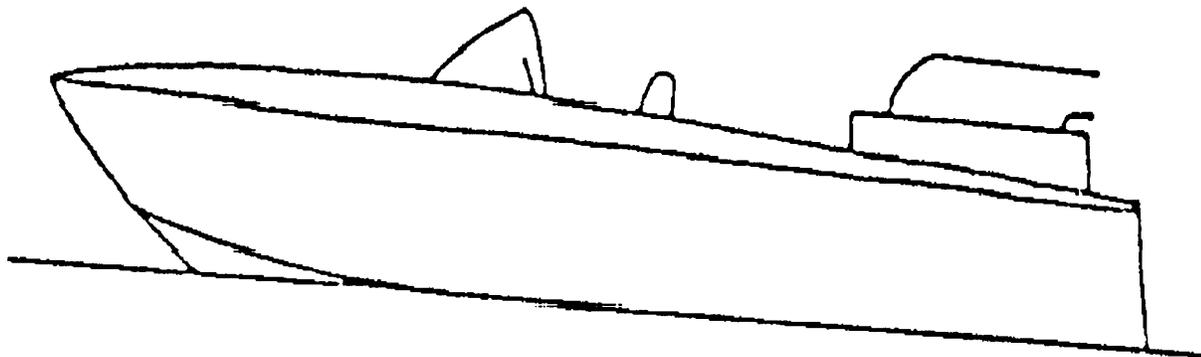
- a. A backfire flame arrester approved by the Commandant per 46 CFR 162.041. The backfire flame arrester shall be suitably secured to the air intake with flame-tight connections. (Gaskets on flame arresters are permitted if the arrester was manufactured to be used with a gasket). It must have a Coast Guard approval number, U.L. approval number UL-1111, or S.A.E. approval number SAE-1928.



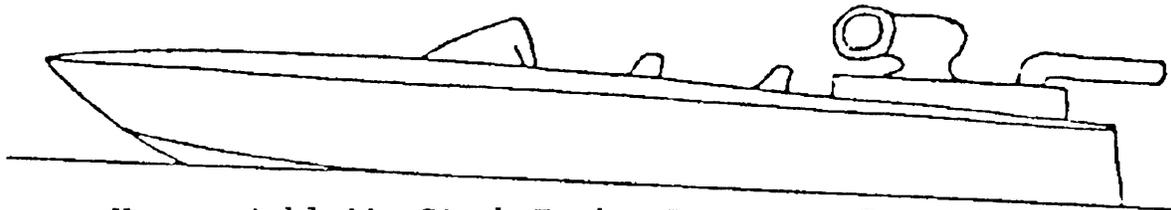
**Approved Flame Arrester
Figure 6-9**

- b. An engine air and fuel induction system approved by the Commandant under 46 CFR 162.042 properly marked and maintained in good serviceable condition. The engine will be marked with "U. S. Coast Guard Approval 162.042/XX."
- (1) An attachment to the carburetor or location of the engine air induction system by means of which flames caused by engine backfire will be dispersed to the atmosphere outside the boat in such a manner that the flames will not endanger the boat, persons on board, or nearby vessels and structures. All attachments shall be of metallic construction with flame-tight connections, firmly secured to withstand vibration, shock, and engine backfire, and maintained in good and serviceable condition. Placement of automotive type air filters on the top of these velocity stacks negates their usefulness and is prohibited. The installation of the air induction system does not require an approval number and labeling, but will be accepted by the Vessel Examiner (VE) on the basis of the above. Many inboard ski boats are constructed so that the fuel/air induction system is above the sides of the hull. In such cases, a cowl, scoop, or a multiple installation of either will be accepted by the VE, provided:

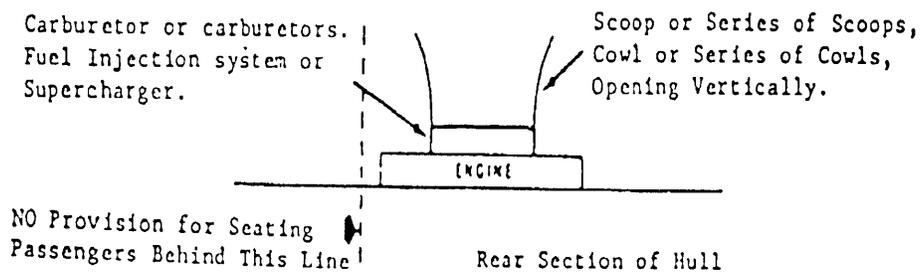
- (a) The cowl(s) or scoop(s) is installed as described above.
- (b) The cowl(s) or scoop(s) faces to the rear or vertically, thus directing any backfire flames to the open atmosphere.
- (c) There is no provision for carrying passengers behind the forward edge of the engine.
- (d) Cowls or scoops:
 - (i) All connections must be flame-tight and firmly secured.
 - (ii) Mounted so as to direct the backfire flames away from the boat and its occupants, not sideways, but over the transom or vertically.
 - (iii) If the cowl or scoop system is used, the boat should not be operated in a manner in which docks, other persons, and other boats might be damaged in the event of a backfire.



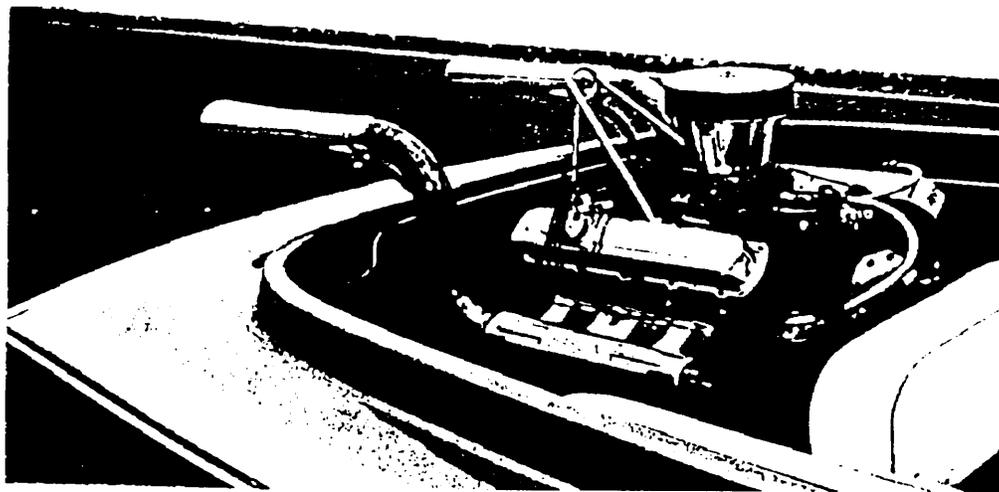
Acceptable Rear Velocity Stack
Figure 6-10



Unacceptable!! Stack Facing Passenger Compartment
Figure 6-11



Acceptable Vertical Velocity Stack
Figure 6-12



Acceptable Velocity Stack with New Type
Approved Backfire Flame Arrester
Figure 6-12a

K. Fuel Systems.

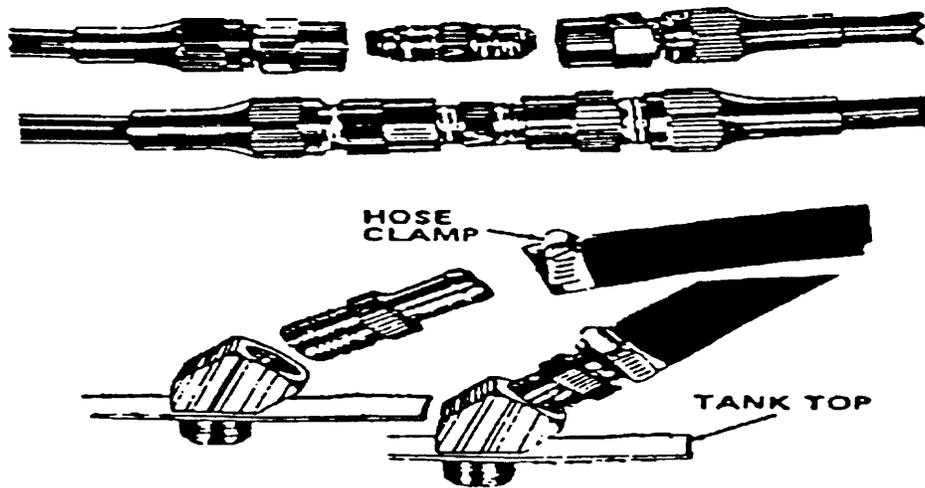
1. **Fuel Tanks, Portable.** There are no federal regulations that affect portable fuel tanks.

2. **Fuel Tanks, Permanent.**

a. The federal requirements that pertain to permanently installed fuel tanks are the responsibility of the boat manufacturer. Certain parts of the rules apply to boats which were constructed or assembled after the following dates: 01AUG77, 01FEB78, and 01AUG78. The regulations were established to govern the construction, installation, and testing of fuel lines and fuel tanks. These rules apply to boats using permanently installed inboard gasoline engines for propulsion or generating electrical power. The rules and regulations are contained in Subchapter S, 33 CFR Boating Safety.

- (1) The compartment in which the tank is located must meet the requirements for ventilation set forth in this manual, unless the craft qualifies as an "open boat."
- (2) Tanks shall be located in a dry space, preferably one which is easily accessible. Tanks must be adequately supported, braced, and held down so as to prevent movement of not more than 1/4 inch in any direction. Tanks must not support a deck, bulkhead, or other structural component. Water must drain from the surface of each metallic fuel tank when the boat is in its static floating position. Where it is possible to check fuel tanks, supports, chocks, or straps that are not integral with a metallic fuel tank must be insulated from the surface by a non- moisture absorbing material. Cellular plastic must not be the sole support for a metallic fuel tank.
- (3) Foamed-in fuel tanks are acceptable for the decal as long as they meet all other fuel tank and piping criteria.
- (4) There can be no petcock or other draining device located on the bottom of the tank for draining the tank. There can be no clean-out hand hole. Tank top surfaces must be constructed so that they cannot hold accumulations of moisture. All openings must be at or above the topmost surface of the tank.
- (5) The tank must be free from evidence of leaks at any point in its surface or connecting fittings, and must be free of distortion, creasing, gouging, or evidence of corrosion.

- (6) The tank and the fill pipe, if metallic, must be bonded to a common ground in the vessel. If other than metallic, the metal fittings for fuel piping to the engine must be bonded to a common ground.
- b. While not a requisite for award of the decal, the owner/operator shall be advised that tanks exceeding 30 inches in horizontal measurement should contain baffle plates for the control of excessive surge.
- c. Fuel piping leading from the tank to inboard engines must be run with as few connections as practicable, and be protected against mechanical damage from chafing or vibration. Fuel piping must be routed so that, in the event of a break in the line, there will be no siphoning of fuel. A shut-off apparatus shall be installed in the fuel line as close as practicable to the tank connection. An automatic anti-siphon valve is considered equivalent or better than a manual valve, in that it reduces the chances of human error. This shut-off valve must be of such construction as to allow no external leakage. The fuel line connections must be installed so as to be readily accessible for servicing or inspection. The parts of fuel piping secured to hull members must be separated from the part leading to the engine by a flexible section. Fuel piping must be free from leaks.



**Automatic Anti-Siphon Valve
Figure 6-13**

****NOTE1**** This valve is commonly called a "one way valve" or a "check valve" in the trade. There are two types that are shown in this figure, the in-line valve and the tank top valve.

****NOTE2**** The top illustration shows the in-line valve in the center of the fittings before installation, and the figure below shows it installed. The bottom figure shows the tank top valve both ways.

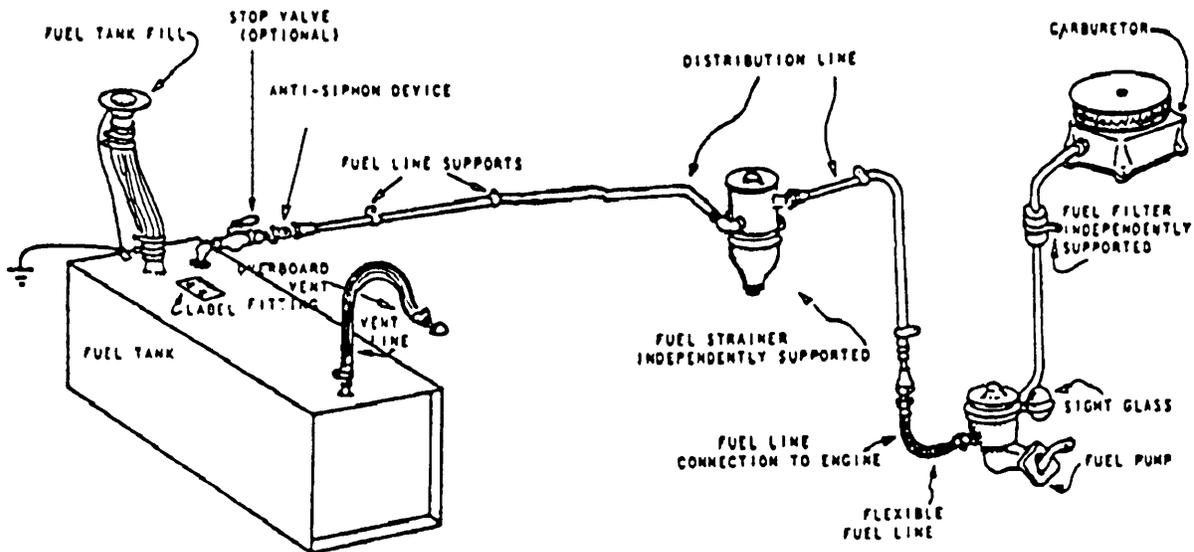
3. Fuel Tank Fill Pipe.

- a. Every permanently installed fuel tank must be fitted with a fuel tank fill pipe so arranged that it fits tightly to a fill plate located on deck outside the cockpit. The fill plate must be so located and arranged that any fuel spills are directed overboard. On runabouts or other craft not constructed with a coaming around the cockpit there must be a lip or similar device on the inboard side of the fill plate to prevent fuel spillage from flowing into the boat. Fuel fill inlets must terminate on the deck of a self-bailing cockpit outboard of the coaming. If no coaming, there must be a fill plate lip to be acceptable. Fill plates must be equipped with tight caps. The connections between the fill plate and the fill pipe, and the fill pipe and the tank must be tight so as to prevent leakage of fuel into the interior of the vessel. The fill plate must be tightly secured to the deck so that spilled fuel cannot leak into the boat around it.
- b. The owner/operator shall be advised that there is a need for electrical continuity between the fill plate and the vessel's common ground or between the fill plate and the fuel tank. This aspect cannot be readily determined in many construction configurations. No type of electrical instrumentation shall be used to check continuity because of the possibility of introducing a spark. While not a requirement for award of the decal, if it is readily and visually apparent that a bonding strap installed for the purpose of electrical continuity may not be performing its function, the Vessel Examiner (VE) may withhold the CME decal. In this situation the VE should suggest that the owner/operator have a qualified person examine the system and determine whether or not a defect exists and then have the vessel re-examined.

4. Fuel Tank Vent.

- a. Every permanently installed fuel tank must be equipped with an adequate vent leading from the top of the tank to a point directly overboard or to the atmosphere to permit displaced fumes to be conveyed safely outside the boat. Under no circumstances may tank vents terminate inside an enclosed compartment of the boat.

- b. While not a condition for award of the decal, owners/operators shall be advised that tank vents should be equipped with a flame screen/flame arrester to prevent flash back from any possible source of ignition.
- c. Some tank vents are combined with the fill plate so that any overflow of gasoline through the vent pipe will return to the tank through the fill pipe rather than discharge into the water.



Typical Fuel System Installation
Figure 6-14

L. Anchor And Anchor Lines.

1. **Anchor.** The size and shape of the anchor, while generally fitting into an area of individual preference, must be capable of holding the vessel on which it is used. Two anchors are recommended: one to be used for light holding power (the "lunch hook"); and a second, to be used as a storm anchor.
 - a. There are many textbook sources of information recommending the size of anchor for the length of the boat. Further, there are sources of data on the relative holding power of the various types of anchors. Owners/operators will usually have selected a particular design, but should the Vessel Examiner (VE) observe an obvious disparity between holding power and vessel size, appropriate recommendations must be made.

2. **Anchor Line.** The scope of the anchor rode (the length of the anchor line) must be 5 to 7 times the depth of the water in which the vessel is operated. The VE should consider the waters in which the vessel is operating in order to make a judgment for the scope of line.
 - a. The size of the line should be heavy enough to be able to withstand the tensile stress in storm conditions. In the case of very small crafts, the line should not be so small in diameter that the operator cannot grip the line for proper handling.
 - b. The VE must also consider the type of material; nylon, dacron, manila, etc., and be able to discuss relative advantages versus disadvantages.

M. Alternate Propulsion.

1. **Federal Regulations.** There are no federal regulations pertaining to alternate propulsion requirements.

N. Dewatering Devices.

1. **Federal Regulations.** There are no federal regulations pertaining to dewatering device requirements.

O. General Condition.

1. **Overall Boat Condition.**

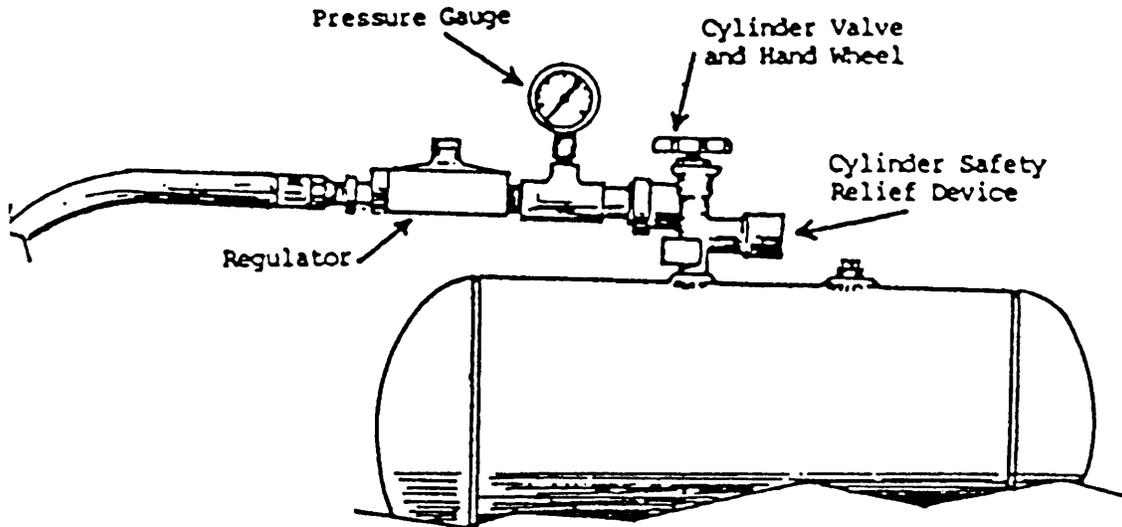
- a. **CME Requirements.** There is no federal regulation for overall boat condition. Refer to Chapter 3, paragraph O for a discussion of the recommended examination technique.

2. **Galley Equipment.**

- a. **CME Requirements.** There is no federal regulation concerning galley equipment on recreational boats.
- b. **Liquefied Petroleum Gas (LPG) Systems.** LPG includes any product predominantly composed of propane, propylene, butanes, or butylenes. Although LPG is two phased (liquid/vapor), under normal atmospheric pressure it is in the gaseous state. Under a pressure of about 240 psi, it liquefies. Upon its release from pressure it then vaporizes again. It is heavier than air and will fall and settle if released. It is also known as "bottled gas" and contains a distinctive odorant that will indicate a leak is occurring.

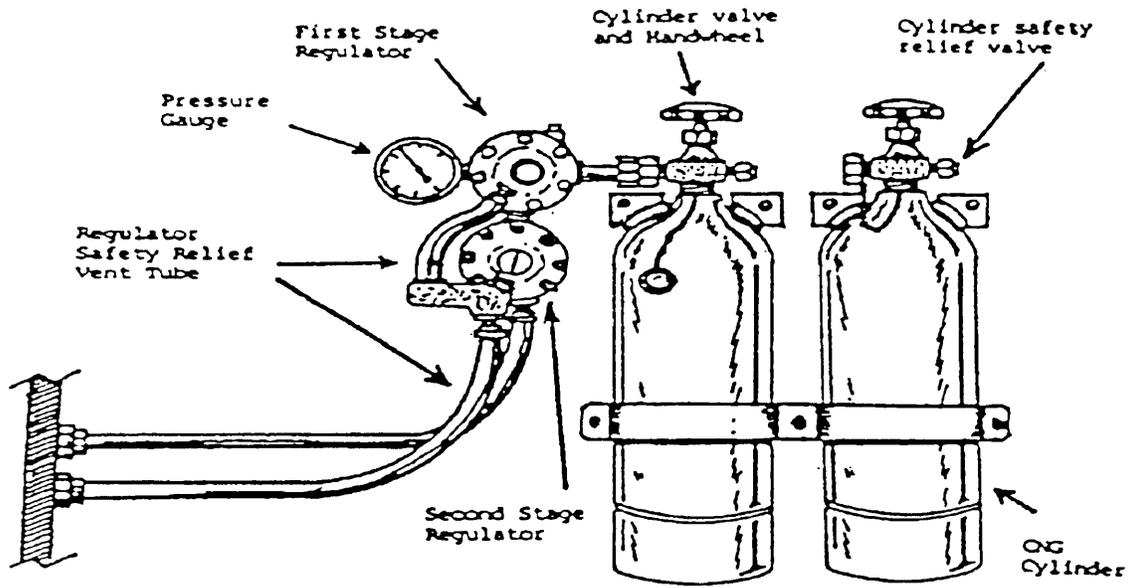
- c. Compressed Natural Gas (CNG) Systems. Compressed natural gas (CNG) is natural gas that is normally supplied as a fuel by a gas utility. It is stored in a portable cylinder which may reach a pressure of 2250 psi. CNG is lighter than air and will generally rise and diffuse into the open air unless trapped by pockets or partial enclosures in the cabin structure of the vessel where there is no forced ventilation. In such cases a 4% to 5% gas-to-air ratio by volume will constitute an explosive mixture. To alleviate the potential for an explosive mixture, some means of overhead ventilation must be provided. The gas itself must contain a distinctive odorant that will indicate a leak is occurring.
- d. LPG/CNG Equipment Requirements.
- (1) The LPG gas cylinder (including any empty or reserve cylinders) and regulating equipment must not be installed in closed compartments, or compartments that can be easily closed. They must be located so that escaping vapor cannot reach enclosed spaces. It must be substantially secured and readily accessible. The cylinder must be equipped with a manual shut-off valve with a hand wheel attached so it can be closed without the use of a separate wrench (a dual cylinder system shall be provided with a two way positive shut-off valve at the cylinder manifold). To be readily accessible the cylinder must be located so that the hand wheel can be conveniently and quickly operated. If the cylinders are enclosed in a storage locker, the determination of "readily accessible" will be made with the compartment open.
 - (2) LPG cylinders may be stowed in a protective enclosure topside. If such an enclosure is used it must be so constructed to provide convenient and quick access to the shut-off valve. Permanent ventilation openings shall be located in the bottom of the enclosure.
 - (3) Boat construction or design preventing the above, the cylinder, regulating equipment, and safety equipment shall be mounted in a locker or housing that is vapor-tight to the hull interior and located above the waterline in an open cockpit. The locker or housing must be constructed of or lined with corrosion-resistant material and shall open only from the top by means of a cover seated on a gasket and tightly latched but capable of being conveniently and quickly opened for operation of container valves and for testing the system for leakage. It shall also be vented by a pipe of at least 1/2 inch internal diameter, led outboard. The vent opening shall be at the bottom of and terminate at a point lower than the locker or housing bottom, but be above the waterline.

- (4) The LPG system must be equipped with a regulator to reduce the gas from the cylinder pressure down to the operating or line pressure. It must be substantially secured outside the enclosed spaces of the vessel and it must be readily accessible. The regulator shall be located in such a position that, in the event of component failure, it will discharge into the open atmosphere. The point of discharge shall be at least two feet from any opening to the cabin, the hull interior, or from an engine exhaust.



**LPG Storage Tank and Regulating Device
Figure 6-15**

- (5) CNG gas cylinders (including any empty or reserve cylinders) and regulating equipment shall be located in a well ventilated area. The area shall provide protection from water or mechanical damage. The cylinders and regulating equipment shall be readily accessible and secured (in vertical or horizontal position). The CNG cylinders shall not be installed in compartments containing an internal combustion engine. CNG cylinder storage compartments shall not have openings which communicate with the engine space above the level of the pressure regulator. The cylinder location shall be readily accessible such that the cylinder valve hand wheel can be conveniently and quickly operated. A pressure gauge is required on the high side of the system and the dial must be fully visible. Compartments and lockers in which CME cylinders are stored shall have a ventilation opening located above the cylinders. There must be two regulators to reduce gas pressure to operating line pressure. The pressure regulators must each have a safety relief vent tube installed which will direct escaping gas overboard above the water line. The vent hole shall be protected against entry of water or other foreign material.



CNG Cylinder and Regulator
Figure 6-16

****NOTE**** A pressure gauge is recommended but NOT required.

- (6) LPG and CNG systems on **vessels carrying passengers for hire** must have a remote shut off valve if the supply line enters an enclosed space. A valve must be installed that can be operated from a position adjacent to the appliance. The valve must be located between the fuel tank and the point where the fuel supply line enters the enclosed portion of the vessel. A power operated valve installed to meet this requirement must be of a type that will fail closed.

- (7) LPG and CNG systems on **vessels carrying passengers for hire** must have a pressure gauge on the high pressure side of the supply line.
- (8) Each CNG regulator assembly must also be fitted with a pressure gauge. The gauge serves to show the amount of fuel remaining in the cylinder and it provides an easy way to test the system for leaks. The gauge must be located so that it is easily readable.
- (9) The owner/operator can be advised of the proper procedures for performing a leak test as follows:
 - (a) Close all appliance valves.
 - (b) Open cylinder valve to pressurize system.
 - (c) Close cylinder valve and read pressure gauge.
 - (d) Read pressure gauge again in 15 minutes. If there is no pressure loss it is assumed there are no leaks.
- (10) The entire system must be free from leaks.
- (11) Advise the owner/operator to test the entire system at least monthly using the above procedure. Suspected leaking areas can be traced with a soapy water solution.

*** * * * * DO NOT FLAME TEST FOR LEAKS!! * * * * ***

- (12) All lines must be routed so that they are protected against physical damage. Wherever lines pass through decks or bulkheads, they must be protected by close fitting ferrules made of non-abrasive material. The fuel supply line system and its components shall be designed to be specifically for LPG/CNG and to withstand stress and exposure to the marine environment.
 - (a) LPG fuel supply lines must be one continuous length of either copper tubing or UL labeled hose. They are not the same as tubing for CNG.
 - (b) CNG fuel supply lines must be one continuous length and marked or otherwise identified to indicate suitability for CNG.

- (c) CNG has a corrosive effect on copper. Copper and copper alloy materials are prohibited within any CNG system.

****NOTE**** Internally tinned copper tubing is approved for use with CNG and is used regularly. This tubing looks like copper from the outside. It must be marked as suitable for CNG.

- (13) All appliances must be positioned and shielded so that no flammable material is in close proximity or could be ignited by the appliance.
- (14) The compartment in which a gas appliance is located must be adequately ventilated. The Vessel Examiner will determine that the compartment can be ventilated by open hatches, ports, or air flow created by the craft's ventilation system.
- (15) If the LPG/CNG installation has more than one appliance, assure that separate fuel supply piping is routed from the cylinder to the appliance. Any "TEE" fittings installed for fueling more than one appliance must be installed at the cylinder, down stream of the regulator, not behind the appliances or in the bilges. Fittings of dissimilar metal to the fuel tubing must not be exposed to water or electrolysis will result.
- (16) LPG/CNG stoves may be fitted in gimbals to assure that the appliance remains upright when the vessel rolls. A length of UL labeled flexible hose, suitable for the fuel in use, shall be installed at the end of the fuel supply line on these gimbals mounted appliances. (LPG/CNG labeled hose is required by the National Fire Protection Association and American Boat and Yacht Council standards for LPG/CNG installations.)
- (17) These guidelines apply to LPG and CNG systems on recreational boats only; as there are NO federal regulations concerning galley equipment on recreational boats.
- (18) Refer to paragraphs 0.2.d.(6) and (7) for special shut off valve requirements for vessels carrying passengers for hire.
- (19) Caddy Pack stoves using detachable 8-ounce butane canisters of fuel will be acceptable IF the stove is permanently attached to the counter or gimbled shelf in the galley. The use of suction cups on the legs is not acceptable as the suction may release and allow the stove to move. The fuel canister must be detached from the stove when it is not in use. Extra canisters of fuel must be stored in such a manner that they do not roll around in heavy seas. Fuel canisters larger than 8-ounces are not acceptable for this type stove.

3. Electrical Systems.

- a. Federal Regulations. The federal regulations that pertain to electrical systems are the responsibility of the boat manufacturer. Certain parts of the regulations apply to boats constructed or assembled on or after the following dates: 01AUG77, 01FEB78, 01AUG78, and 01FEB79. These regulations apply to boats that have gasoline engines for electrical power or propulsion, except outboard engines. The regulations are contained in Subchapter S, 33 CFR Boating Safety.

P. State Requirements. Refer to CHAPTER 7 and CHAPTER 3, paragraph P for information on state and CME requirements, techniques, and educational exchange.

Q. Other Federal Requirements.

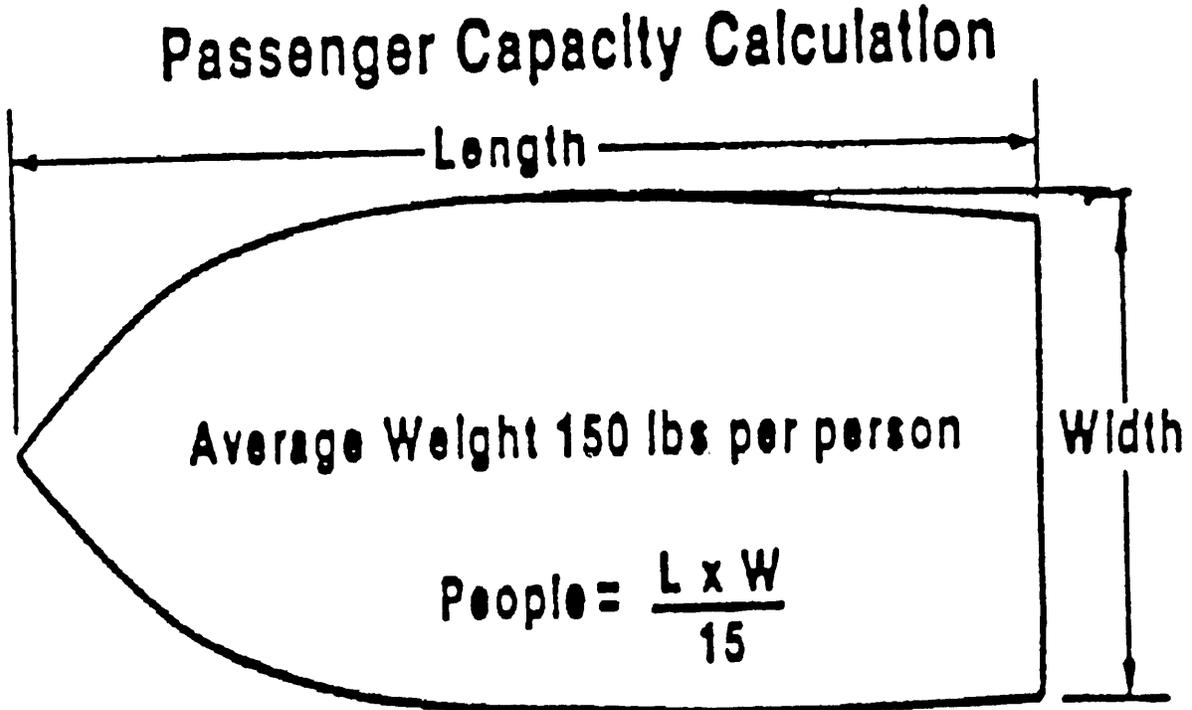
NOTE ***NOTE*** ***NOTE*** ***NOTE***

The following paragraphs discuss the particulars of items that are legal federal requirements for boat manufacturers, but are NOT needed for awarding of the CME decal. These items are an important part of the CME, and should be checked off on the AUX-204.

R. Capacity Plate.

- 1. **Federal Regulations.** Capacity plates are not required on sailboats by federal regulations, so there won't be any on most of these vessels.
- 2. **Display of Capacity Information.**
 - a. Federal capacity regulations apply to monohull boats less than 20 feet in length (except sailboats, canoes, kayaks, and inflatable boats) for which construction began on or after 01NOV72.
 - b. Federal regulations require that the capacity plate be displayed in a legible manner where it is clearly visible to the operator when getting underway. The boat manufacturer has the responsibility for affixing the capacity plate to the boat.

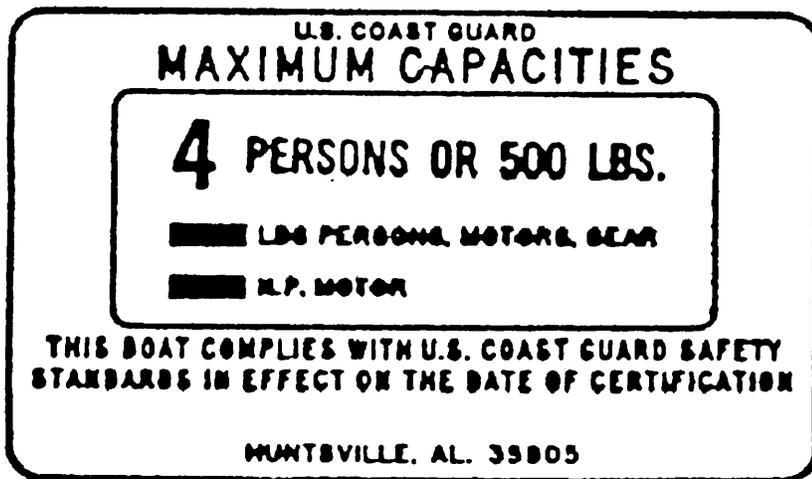
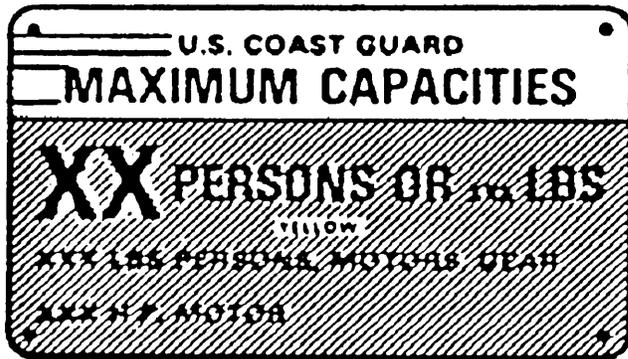
- (1) The capacity plate may be combined with the Certificate of Compliance into one label. When combined, the capacity portion of the label is yellow.
 - (a) The decal will not be awarded to a boat that is overloaded or overpowered at the time of examination when using the capacity plate as a guide. On a boat without a capacity plate, use the formula in Figure 6-17 to determine the number of persons that the boat can carry in good weather conditions.



Passenger Capacity Calculation
Figure 6-17

U.S. COAST GUARD CAPACITY INFORMATION

MAXIMUM HORSE POWER ████████████████████
 MAXIMUM PERSONS CAPACITY (POUNDS) ████████████████████
 MAXIMUM WEIGHT CAPACITY ████████████████████
 PERSONS MOTOR & GEAR (POUNDS) ████████████████████



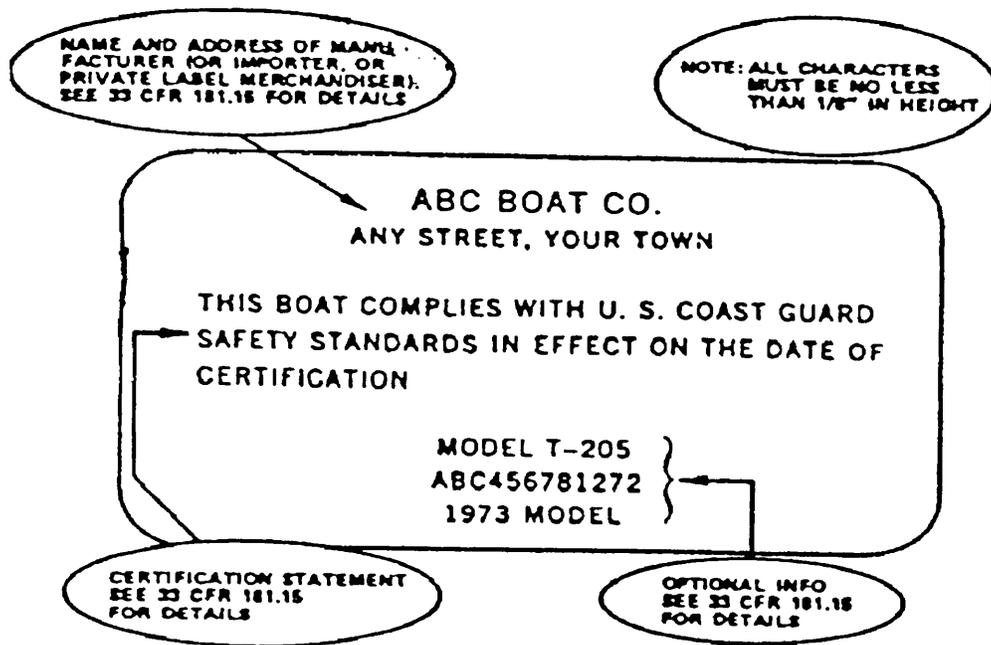
Several Examples of Capacity Plate Information
Figure 6-18

S. Manufacturer Certification Of Compliance.

1. **Federal Regulations.** Federal regulations prescribe requirements for the certification of boats and associated equipment to which 4301 Title 46 USC applies, and to which a safety standard applies.
 - a. Federal regulations require that the certification label letters and numbers on each label MUST be no less than 1/8 inch in height; and contrast with the basic color of the label, except the date of certification may be permanently stamped, engraved, or embossed on the label. Each certification label MUST contain:
 - (1) The name and address of the manufacturer or private label merchandiser who certifies the boat or associated equipment, and;
 - (2) The words: "This complies with U.S. Coast Guard Safety Standards in effect on the date of certification," or "This boat complies with U.S. Coast Guard Safety Standards in effect on (date)."
2. **Locations.** There is no requirement for the location of the certification label. It may be visibly displayed anywhere on the boat. However, if the certification label is combined with the capacity label, as is usually the case, it must be displayed where it can be seen when the operator is getting the boat underway.
 - a. Associated Equipment.
 - (1) Any system, part, or component of a boat as originally manufactured or sold for replacement, repair; or improvement of such system, part, or component.
 - (2) Any accessory or equipment for, or appurtenance to, a boat; and
 - (3) Any marine safety article, accessory, or equipment, for use by a person on board a boat; but,
 - (4) This does not apply to radio equipment, or any outboard motor or starting control.
 - b. Date of Certification. The date on which a boat or item of associated equipment is certified to comply with all applicable U. S. Coast Guard Safety Standards in effect on that date. Only boats and associated equipment that are subject to a federal standard are required or allowed to display a certification label.

c. The following boats are required to have a certification label to comply with federal manufacturers' requirements:

- (1) Monohull boats less than 20 feet in length (except sailboats, canoes, kayaks, and inflatable boats) whose construction began on or after 01NOV72.
- (2) All boats that have permanently installed gasoline engines for electrical or mechanical power or propulsion (except outboard engines) whose construction began on or after 01AUG77.
- (3) All gasoline powered boats, including most outboards, manufactured after 31JUL79.



Example of Certification Label
Figure 6-19

T. Hull Identification Number (HIN).

1. **Federal Regulations.** Boats manufactured between 01NOV72, and 31JUL84, were required to use a hull identification number such as those shown in Figures 6-20 or 6-21. The letter "M" in Figure 6-21 indicates the optional method for displaying the date of certification. The last three characters of Figure 6-21 indicate the month and model year. You will note that under this method the model year begins in August.

- a. Since 01AUG84, all boats must use the new Hull Identification format, as shown in Figure 6-22. The 9th character indicates the month of certification or manufacture. Character #10 indicates the last digit of the year of manufacture. Character #11 and #12 indicates the model year.
- b. The hull identification number is required to be displayed on each boat hull either on the transom near the starboard side or on the starboard side near the transom. Special rules apply for boats without a transom. On catamarans and pontoon boats for example, the number may be on the aft crossbeam within 1 foot of the starboard hull.
- c. The primary number must be affixed:
 - (1) On boats with transoms to the starboard side of the transom within 2 inches of the top of the transom, gunwale, or hull/deck joint whichever is lowest.
 - (2) On boats without transoms or on boats on which it would be impractical to use the transom, to the starboard outboard side of the hull, aft, within 1 foot of the stern and within 2 inches of the top of the hull side, gunwale, or hull/deck joint, whichever is lowest.
 - (3) On catamarans and pontoon boats which have readily replaceable hulls, to the aft crossbeam within 1 foot of the starboard hull attachment.
 - (4) If the hull identification number would not be visible, because of rails, fittings, or other accessories, the number must be affixed as near as possible to the location specified in this paragraph.
- d. The duplicate hull identification number must be affixed in an unexposed location on the interior of the boat or beneath a fitting or item of hardware. (The Vessel Examiner should not look for this number).
- e. Each hull identification number must be carved, burned, stamped, embossed, molded, bonded, or otherwise permanently affixed to the boat so that alteration, removal, or replacement would be obvious. If the number is on a separate plate, the plate must be fastened in such a manner that its removal would normally cause some scarring of or damage to the surrounding hull area. A hull identification number must not be attached to parts of the boat that are removable.

- f. The characters of the hull identification number must be no less than 1/4 inch in height.

Manufacturer Hull Identification Number (HIN) Examples

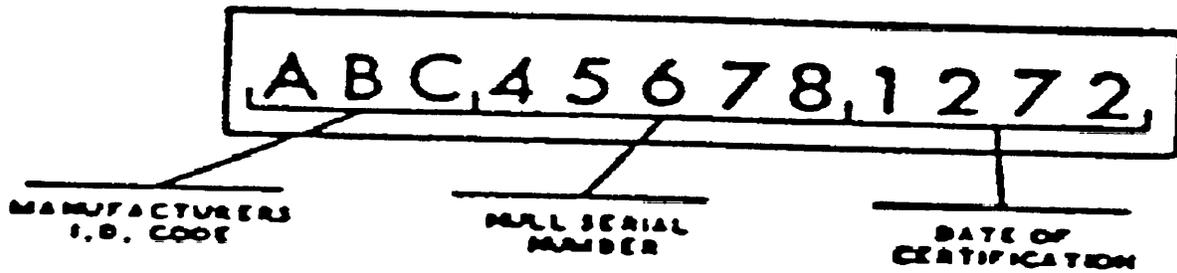


Figure 6-20

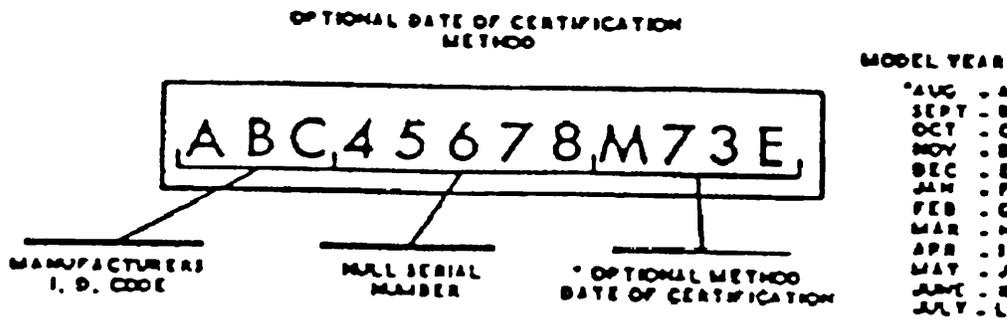


Figure 6-21

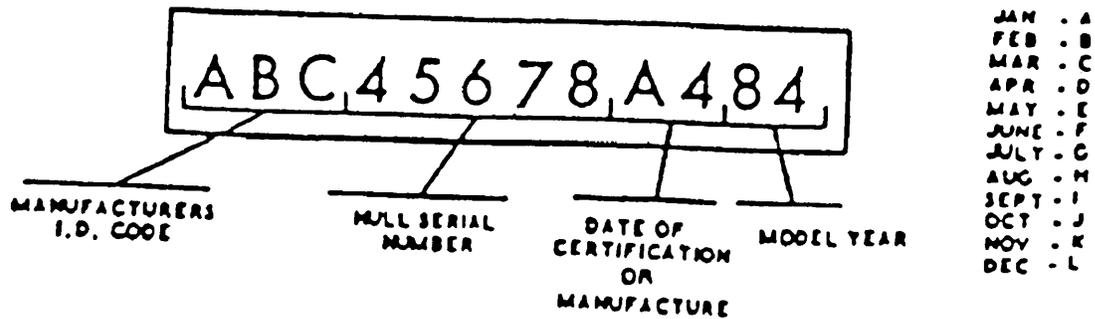
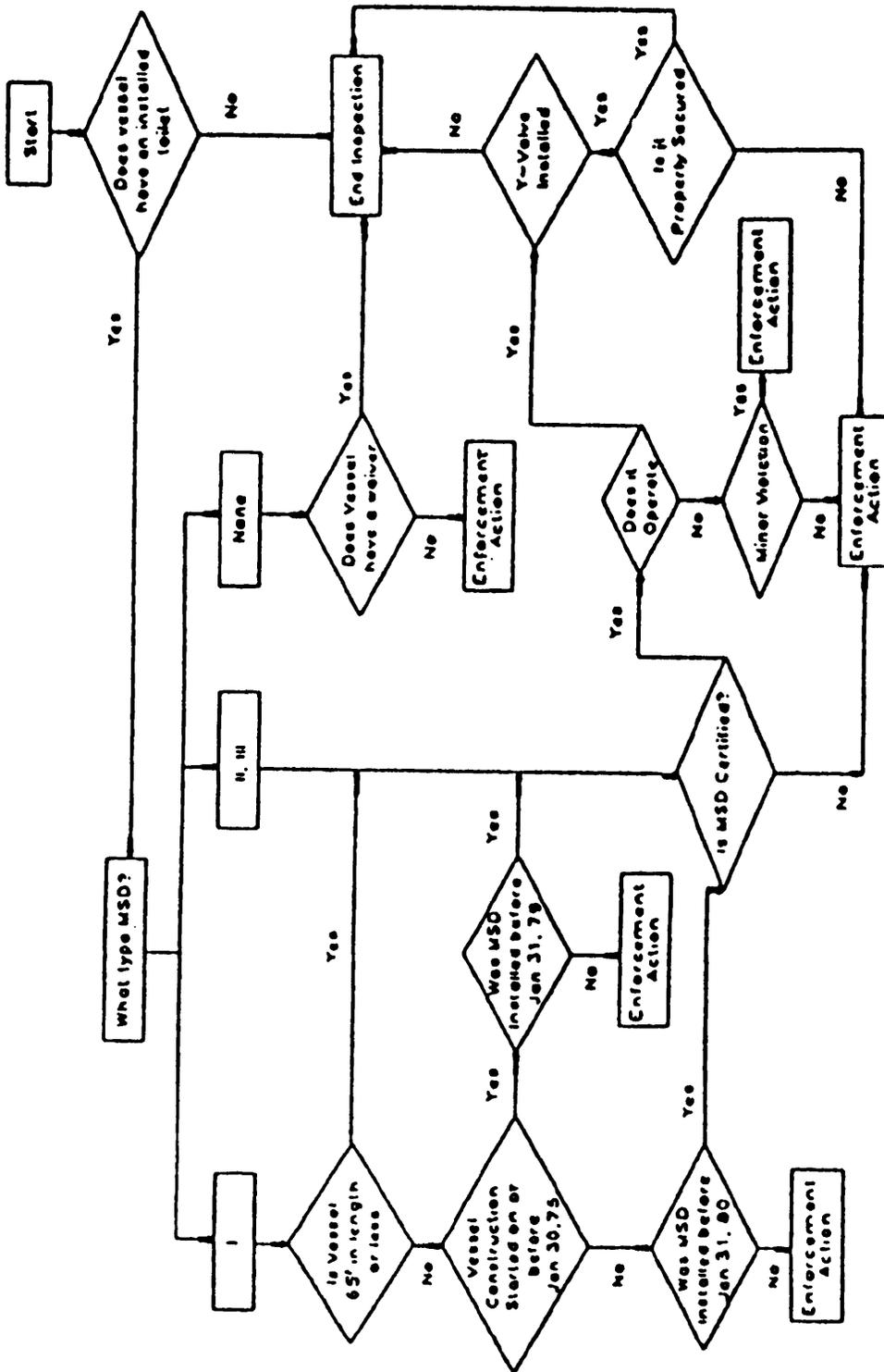


Figure 6-22

U. Marine Sanitation Devices (MSDs).

1. **Federal Requirements.** Since 30JAN80, all vessels with an installed operable toilet MUST have an installed, certified marine sanitation device (MSD) attached to the toilet. Direct discharge toilets are illegal after this date unless the vessel is operating under a waiver granted by the Commandant. The Coast Guard expects to grant few waivers, limiting them to cases when a vessel owner is unable to install a MSD due to the physical limitations of the vessel. Cost of compliance was taken into account when the MSD standards were developed, consequently, cost will not be a factor in approving or denying a waiver request. Waivers are granted on a case by case basis.
 - a. Vessels 65 feet in length and under may install a Type I, II, or III MSD.
 - b. Vessels over 65 feet in length must install a Type II or III MSD.
 - c. Types of devices are described as follows:
 - (1) **TYPE I DEVICE.** Flow-through; fecal coliform 100/ml, no visible floating solids standard.
 - (2) **TYPE II DEVICE.** Flow through; effluent USCG Certified to 200 fecal coliform 100/ml, 150 mg/l total suspended solids standard.
 - (3) **TYPE III DEVICE.** USCG Certified to no-discharge standard.
2. **No-Discharge Areas.** Vessels shall not discharge sewage overboard, even through an operable MSD, in an area designated as no discharge. A Type III installation is not required for a vessel which operates in a no-discharge area. A Type I or II flow-through MSD must be adequately secured while the vessel is in a no-discharge area to prevent any overboard discharge of treated or untreated sewage. Closing the seacock and padlocking, using a non-releasable wire-tie, or removing the seacock handle is sufficient. Locking the door to the head with the owner/operator in possession of the key is another acceptable method of securing the MSD.



MSD FLO-CHART
Figure 6-23

3. **Y-Valves.** Federal regulations do not specifically prohibit the installation of Y-Valves; therefore, Y-Valves may be installed on any MSD to provide for direct discharge of sewage when the vessel is outside U.S. water more than three miles from shore. The valve must be secured in the closed position while operating in U.S. waters. Use of a padlock, heavy tape, non-releasable wire-tie, or the removal of the valve handle would be considered adequate securing of the device. The method chosen must be one that presents a physical barrier to the use of the valve, accidentally or intentionally, and where surreptitious use could not occur without the owner's/operator's knowledge.
4. **Portable Toilets.** Portable toilets are not considered installed devices and therefore are not subject to the regulations. If a vessel has an installed direct-discharge toilet, the use of a portable toilet does not bring the vessel into compliance with the MSD regulations. Either the installed toilet must hook into a certified MSD, or it must be removed or permanently disconnected. In the latter case, the vessel no longer has an installed head and does not come under the regulations. Small vessel owners, such as day sailers, may find that the cheapest option is to remove their installed toilet and substitute a portable device. Sewage from portable toilets may not be dumped overboard in U.S. waters.

V. Oily Waste And Trash Disposal Placards.

1. **Federal Requirements for Oily Waste Discharge.**
 - a. No person may operate a vessel of less than 100-gross tons unless it has a fixed or portable means to discharge oily bilge slops to a reception facility.
 - b. No person may operate a vessel, except a foreign vessel or a vessel less than 26 feet in length, unless it has a placard at least 5 x 8 inches, made of durable material, fixed in a conspicuous place in the machinery spaces, or at the bilge and ballast pump control station, stating the following:

DISCHARGE OF OIL PROHIBITED

The Federal Water Pollution Control Act prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States, or the waters of the contiguous zone, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States, if such discharge causes a film or discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water. Violators are subject to substantial civil penalties and/or criminal sanctions including fines and imprisonment.

- c. No person may drain the sumps of oil-lubricated machinery or the contents of oil filters, strainers, or purifiers into the bilge of any U.S. vessel.
- d. If the required placard is not posted, advise the operator that this could be subject to a citation.

2. **Trash Disposal Placard.**

- a. On 31MAY90, the Coast Guard amended the Garbage Pollution Regulations by adding waste management plans and placard requirements for certain U.S. ships. For CME purposes:
- (1) All boats 26 feet and over operating in navigable waters of the U.S. MUST post one or more pollution placards in a prominent place visible to all passengers and crew. The placard must be a minimum 4 x 9 inches with wording as described in the examples in Figures 6-24 and 6-25.
 - (2) Each oceangoing vessel of 40 feet or more in length with a galley and berths MUST have available a written trash management plan naming the person in charge of the plan (plan may be simple or complex), and must state how and where garbage will be collected and disposed.
 - (3) Commercial and recreational vessels used exclusively in the Great Lakes may use the Annex V placards or a specially developed placard that prohibits the dumping of garbage.
 - (i) The trash placard is NOT required on inland lakes and sole State waters.
 - (ii) The trash disposal laws apply to everyone; not just those on boats 26 feet and over. Remind ALL boaters that it is against the law to dump trash in just about any body of water.

It is illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the United States. Annex V of the MARPOL TREATY is a new International Law for a cleaner,

safer marine environment. Each violation of these requirements may result in civil penalty up to \$25,000, a fine up to \$50,000, and imprisonment up to 5 years.

3 to 12 miles

ILLEGAL TO DUMP

Plastic
Dunnage (lining & packing materials that float) also if not ground to less than one inch:
Paper Crockery
Rags Metal
Glass Food

U.S. Lakes, Rivers, Bays, Sounds and 3 miles from shore

ILLEGAL TO DUMP

Plastic & Garbage
Paper Metal
Rags Crockery
Glass Dunnage
Food

12 to 25 miles

ILLEGAL TO DUMP

Plastic
Dunnage (lining & packing materials that float)

Outside 25 miles

ILLEGAL TO DUMP

Plastic

State and local regulations may further restrict the disposal of garbage.

WORKING TOGETHER, WE CAN ALL MAKE A DIFFERENCE!

Report any violation to the local U.S. Coast Guard Captain of the Port

Designed by the CENTER FOR MARINE CONSERVATION, Washington, DC



Trash Dumping Placard
Figure 6-24

GARBAGE DUMPING RESTRICTIONS

Under Federal law, it is illegal to discharge plastic or garbage mixed with plastic into any waters. Regional, state or local regulations may also apply. All discharge of garbage is prohibited in the Great Lakes and their connecting or tributary waters.

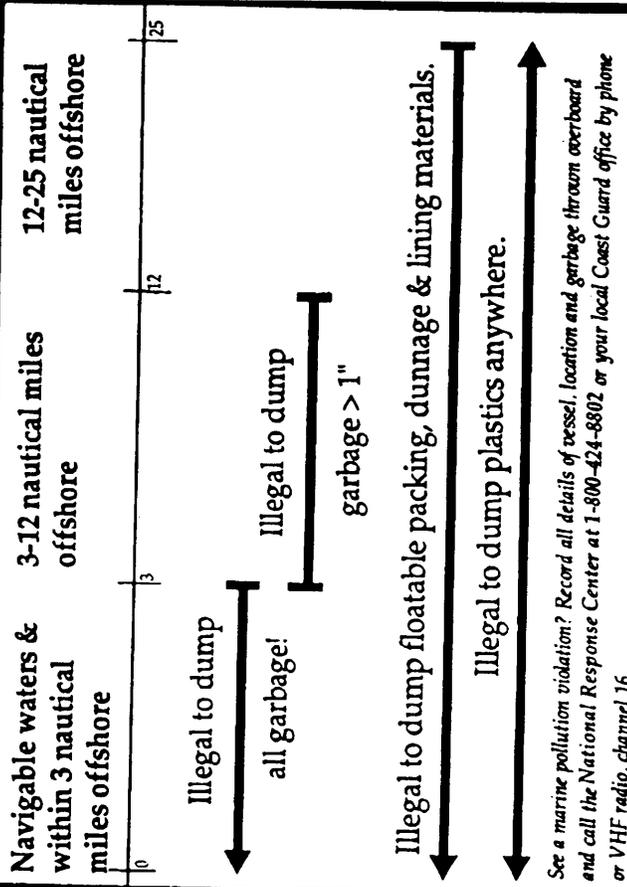
Violators are subject to substantial civil penalties and/or criminal sanctions, including fines and imprisonment.



United States
Coast Guard



Center for
Marine Conservation



See a marine pollution violation? Record all details of vessel, location and garbage thrown overboard and call the National Response Center at 1-800-424-8802, or your local Coast Guard office by phone or VHF radio, channel 16.

Trash Dumping Placard
Figure 6-25

W. Carriage Of Inland Navigation Rules.

1. **Federal Regulations.** The owner/operator of each self-propelled vessel 12 meters or more in length shall carry on board and maintain for ready reference a copy of the Navigation Rules as required by Part 88.05 of the Rules. When it is required to carry a copy of the Rules aboard, a *complete* copy must be carried.

X. Marine Radio Licenses.

1. The Federal Communications Commission (FCC) requires a station license for ALL vessels traveling to foreign ports or communicating with foreign stations. Therefore, any vessel with MF/HF single sideband or satellite equipment aboard or calling at foreign ports is required to have ALL marine electronic emitting equipment licensed. Recreational boats which carry a radio (but not required by law to carry one) and only use the radio domestically are not required to license VHF, radar, or EPIRB equipment.
 - a. Vessel Examiners (VEs) conducting CMEs on recreational boats will not award the CME decal if an FCC license is required and not present.
 - b. Auxiliary vessel facilities are required to pass a CME as part of a facility inspection which should resolve the requirement for a license. (Note: An operational facility will still be required to have the communications capability as established by the director.)
2. Do not confuse the FCC license with being an operator's license, but rather, a license for the equipment on a particular boat.
 - a. A ship station license may NOT be transferred or assigned from one licensee to another, or from one boat to another. When a boat changes hands, its former owner MUST return the license to the FCC, and the boat's new owner must apply for a new license using FCC Form 506.
 - b. It takes (approximately) 30 days from the date of application to obtain a ship station license. However, an applicant who has a state, federal, or other documented registration number for a boat, may fill out FCC Form 506A which grants temporary authority (90 days) to operate the radio station pending receipt of the license.
 - (1) There is a charge for the original application and each renewal.

(2) For more information, boaters may call the FCC Private Radio Consumer Assistance staff in Gettysburg, Pennsylvania at (717) 337-1212.

3. The required FCC license MUST be valid and readily available, as Coast Guard boarding officers may want to examine the license and issue citations if there is any violation.

Y. **Automotive Parts.** Although there are no federal regulations prohibiting their use. Their use does constitute cause to withhold awarding of the CME decal. The Vessel Examiner should stress the fallacy of this very unsafe practice. The following information is provided for this reason.

1. **Identification of Parts.**

- a. **Alternators.** A standard automotive alternator has exposed electrical contacts that can create sparks and ignite fuel vapors in the engine compartment. On marine alternators, which must meet the ignition protection requirements of 33 CFR 183.410(a), the contacts are sealed inside.
- b. **Distributors.** Automotive distributors create high energy sparks internally that can escape through a vent which permits the release of ozone gas. Marine distributors are ignition protected and the vent has a flame arrester device to prevent sparking that could cause a fire or explosion in the engine compartment.
- c. **Starters, Generators, Accessory Motors.** These motors (hydraulic pump, tilt drive, etc.) have brushes and an armature which spark in normal operation in an automobile. To meet the requirements of 33 CFR 183.410(a), the marine versions of these motors are usually completely sealed. Marine starters are also equipped with an additional seal between their motor section and bendix gear section.
- d. **Starter Solenoids.** Each time the solenoid operates it creates a high energy spark internally. A vent hole in the automotive starter solenoid for the release of ozone is absent on a marine starter solenoid that is ignition protected.
- e. **Carburetors.** The float chambers on carburetors are vented to permit the free flow of fuel into and out of the chambers. On automotive carburetors any overflow from the vents flows outside the carburetor into the engine compartment. On a marine carburetor the vents lead into the carburetor throat so that any overflow is consumed by the engine.

- f. **Fuel Pumps.** Automotive fuel pumps have a vent hole that will leak gasoline into the engine room if the fuel pump diaphragm fails. The Coast Guard Fuel System Standard requires that each diaphragm pump must not leak fuel if the primary diaphragm fails.

CHAPTER 7: STATE BOATING SAFETY PROGRAMS

A. Introduction.

1. State Boating Safety Programs promote boating safety, similar to the Coast Guard program, and are especially effective on sole State waters where the Coast Guard has no jurisdiction. The states, in addition to performing boating safety patrols and enforcing boating laws, have concentrated heavily on establishing boating safety educational programs. Many states now require minors to have a safety certificate in order to operate a motorboat. The only way these minors can obtain this certificate is by completing some type of boating safety education course. The majority of states offer or recommend voluntary adult-type boating safety courses. To assist the states in this educational endeavor, the Coast Guard Auxiliary and the U.S. Power Squadrons have in some cases made their members available to teach the state boating safety courses in addition to their own public education courses.
2. A comparison of the state boating laws to the federal boating laws is presented in this chapter. Although every effort has been made to furnish up-to-date information on state boating regulations, the Vessel Examiner must make it a point to keep abreast of the regulations existing in the local area, and must be able to relate the latest changes and additions.
3. To lend further support to boating safety on state waters, the vast majority of states have adopted the Uniform State Waterway Marking System for marking waters. Some states are also dredging waterways to remove underwater obstructions. These two programs definitely make state waters safer. In addition to the foregoing, many states are also constructing large and modern mooring facilities in an effort to make boating safer and more pleasurable to the boating public.

B. Vessel Examiner Responsibility.

1. Each Vessel Examiner (VE) must remain current on the boating laws for the state(s) where examinations are performed. While conducting the examination you must consider the law for the place of the examination, not the state where the boat is registered. If the boat may be used in more than one state, advise the owner/operator of the laws (especially any differences) of each state.

2. Boating laws are rapidly changing. Each year, or before the boating season, the VE should contact the State Boating Law Administrator for the state(s) where they operate, and ascertain whether there are any changes or additions to the laws which would affect their examinations. A recommendation is to have the SO-VE or FSO-VE contact the state and then pass the information to all the VEs.
3. Many new laws deal with jet-ski regulation and education for boaters. Part of our Courtesy Marine Examination is to provide the owner/operator with information about all boating safety and boating laws. Do not hesitate to pass this information to all boaters contacted.

CHAPTER 8: PERSONAL WATERCRAFT SAFETY CHECK

A. Introduction.

1. The growing popularity of personal watercraft (PWC) has been established in recent years by the fact that over one-half of all boat sales in the United States are now PWCs. This has made PWC users the fastest-growing segment of the boating community in the world.
2. By their very nature, PWCs, if carelessly operated, present the potential for serious accidents both to operators, swimmers, and other boaters. It is for this reason the Coast Guard Auxiliary has embarked on a program of safety information exchange with the owners/operators of these craft concerning safety equipment to be carried on board with an emphasis on safe and responsible operation.
3. Like the Courtesy Marine Examination (CME) for recreational boats, the PWC Safety Evaluation is performed only with the specific consent of the owner/operator who is present at the time of the evaluation. If the PWC meets all the requirements of the PWC Safety Evaluation, the PWC Safety Check decal will be issued.

B. Program Participation.

1. The opportunity to conduct Personal Watercraft (PWC) Safety Checks will be extended to all Vessel Examiners (VEs) who are currently qualified to perform Courtesy Marine Examinations. A special PWC Safety Check form (AUX-204A) will be used in lieu of the Seal of Safety check list (AUX-204), used for regular boat examinations. Each VE must become familiar with the new safety check form and the deviations from the AUX-204 before undertaking the responsibility of evaluating PWCs for the purpose of issuing the decal.
2. This program will attract:
 - a. Existing VEs who are currently active in the program.
 - b. Inactive VEs who may be looking for a different challenge.
 - c. VEs who, as a result of physical limitations, are unable to perform examinations on other types of boats.
 - d. VEs who can meet the challenge of the additional public education effort that will be part of the PWC Safety Check process.

C. Communication Skills.

1. Many owners/operators of personal watercraft (PWC) may have a resistance to communication with authority figures, individuals in uniform, or adults that may resemble parents. Therefore, Vessel Examiners (VEs) must be very careful not to lecture our customers and thereby have them become non-receptive to our message.
2. One method to gain customer confidence is to involve them, the PWC owner/operator, in the safety check. Ask them questions about the items being evaluated. One example: "Can you tell me some of the rules of the road?" Then help them with the answer or compliment them if they provide a good, complete response. Never make them feel as though they are being cross-examined or lectured. As VEs, we are there to inform and help.

D. Definition Of A Personal Watercraft.

1. A personal watercraft (PWC) is termed as a Class A Inboard Boat (a boat less than 16 feet in length) by the U.S. Coast Guard. They are designed to carry from one to three persons, and to be operated by a person sitting, standing, or kneeling ON the watercraft, rather than the conventional manner of sitting or standing INSIDE the watercraft. Any watercraft that is configured where the operator and passenger sit inside the boat, below the gunwale, would be examined using requirements of the Courtesy Marine Examination (CME) and the AUX-204 check list. On successful completion of the CME exam, the owner/operator will be awarded the CME decal.
2. As boats, PWCs are required to operate per the laws and regulations that have been established for any powerboat. Although PWCs are small boats powered by an inboard engine and jet pump mechanism -- **they are still boats!**

E. The Personal Watercraft Safety Check.

1. This section contains the detailed information on numbering, equipment, and state regulations that the Vessel Examiner will be sharing with the personal watercraft (PWC) owner/operator.
2. In addition, there are details on how to evaluate this equipment and the conditions that must be met for the award of the decal. This section is comparable to CHAPTER 3 and should be compared with that chapter to determine the differences between a PWC Safety Check and a Courtesy Marine Examination (CME) for recreational boats.
3. In all cases, unless otherwise noted, CME requirements, examination techniques, and the educational exchanges are the same for PWCs as they are for examinations of recreational boats.

F. Specific Exemptions.

1. A personal watercraft (PWC) **is exempt** from many of the requirements that other boats must comply with: including display of capacity information, safe loading information, flotation requirements, electrical systems, fuel systems, and powered ventilation.
2. These exemptions are noted on the Certificate of Compliance plate attached to each PWC. However, for award of the PWC Safety Check decal, some minimal Auxiliary requirements have been included regarding fuel and electrical systems.

G. Numbering.

1. Numbering requirements for a personal watercraft (PWC) are the same as for any boat. However, due to the size and shape of some PWCs and different color decorations on some models, it may be difficult to apply registration numbers so that they may be read easily. The Vessel Examiner (VE) is expected to use good judgement in determining whether the PWC owner has made every effort to comply with the numbering and spacing requirements.
2. VEs can accept numbers that are not on the forward half of the PWC or that must be compressed to fit the space available; however, VEs cannot accept numbering that is not solid block, not affixed to a contrasting background or less than 3 inches high.

H. Registration Documents.

1. Federal regulations require every personal watercraft (PWC) to be issued a registration number and hull identification number (HIN).
2. The Certificate of Registration must be on board whenever the PWC is used and the registration number and HIN on the hull must coincide with the information on the registration certificate.

I. Sound Producing Devices.

1. The most common and convenient sound producing device for a personal watercraft (PWC) is a whistle that can be attached to the operator's personal flotation device.
2. The whistle, in addition to meeting the Navigation Rules requirement, provides the operator with the ability to **draw attention** in the event operators are separated from their PWC.

J. Wearable Personal Flotation Devices.

1. A Coast Guard approved personal flotation device (PFD) with a **50 mph impact rating** must be worn by the operator and any passengers on the personal watercraft for the issuance of the decal. This exceeds the federal requirement.
2. A **50 mph impact rated** PFD can be determined by examining the approval label attached to the PFD. The impact rating will be noted on the label. These devices are usually Type III (or substitutable Type V) PFDs and are distinguished by their three or four securing belts. Explain the importance of the impact rating when operating watercraft that travel at a high rate of speed where the rider may be easily separated from the watercraft.

K. Fire Extinguishers.

1. It is a federal requirement that a minimum of one (1) Coast Guard approved Type BC-1 extinguisher be readily available and properly secured in a designated compartment.
2. Inform the owner/operator that in the event of fire aboard their personal watercraft (PWC), the operator is advised to swim away from the PWC to a safe distance as soon as possible. Although a fire extinguisher is required for award of the decal, this is one of the few instances when someone on a watercraft is advised to abandon their watercraft in order to be safe.

L. Visual Distress Signals.

1. The visual distress signal (VDS) requirements for a personal watercraft (PWC) is the same as those for recreational boats. In most instances, PWCs will be operating on inland waters and are allowed to be operated only during daylight hours. Therefore, a red or orange cloth located in a storage compartment will meet the requirement. Other devices that provide the necessary visibility in daylight are acceptable.
2. The Vessel Examiner is reminded that if the PWC is operating on, or can be expected to be used on international or offshore waters, the VDS requirements are the same for a PWC as the CME requirements for a regular boat.

M. Backfire Flame Arrester. The backfire flame control requirement for personal watercraft (PWC) is the same as the requirement for any boat with a gasoline powered inboard engine. However, the location and configuration of the unit may be different from what Vessel Examiners have experienced with regular engines. A backfire flame arrester on a PWC is required to display Coast Guard (CG), Underwriter Laboratories (UL), or Society of Automotive Engineers (SAE) approval numbering on the unit.

- N. Fuel Systems.** Personal watercraft fuel system requirements are the same as for all recreational boats. Fuel tanks must be secured and vented, fill pipe and plate tightly fitted and located outside of any closed compartments, and any spilled fuel must travel directly overboard. Examine fuel lines and connections for leaks. Remind the owner/operator about proper fuel management and the need to conserve fuel to have enough reserve to return to shore.
- O. Electrical Systems.** Though a personal watercraft (PWC) contains a relatively simple electrical system, each unit is equipped with a battery and some type of overload protection. The batteries on a PWC must be secured, terminals covered, and the wiring well organized. Insure that the PWC's electrical system is properly maintained with no apparent modifications.
- P. Default/Override Systems.**
1. To qualify for the decal, a personal watercraft (PWC) must be equipped with some type of device to stop the PWC's engine if the operator falls off. The throttle must return to idle when released so the PWC will turn in a self-circling motion at idle speed or there must be a lanyard type kill switch that is attached to the operator when the PWC is underway.
 2. To examine the self-circling ability, have the owner/operator open the throttle and see if it returns to the idle position when released. If the PWC uses a lanyard kill switch, have the owner/operator start the engine and then pull the lanyard to kill the engine. If any part of either system has been removed or tampered with, do not issue the decal. This examination may be conducted while the watercraft is out of the water.
- Q. Overall Condition.** Examine the personal watercraft (PWC) steering and throttle controls for proper operation, check the hood cover and seat latch to insure they can be secured, examine hull for cracks or other damage, and observe the PWC for general maintenance and upkeep. Check the PWC for any modification to factory installed systems or components.
- R. State Regulations.** Many states and/or local governments have implemented laws specifically directed toward the safe operation of a personal watercraft (PWC). It is imperative that each Vessel Examiner become familiar with the state regulations where the PWC Safety Check is being conducted. If available, obtain copies of PWC regulations from the state. Know the rules so that you can properly discuss them with the PWC owner/operator. If the PWC does not meet the special state or local requirements, no decal can be awarded. If you are on a waterway (lake, river, etc.) that joins two states, know the rules for each state. Special rules for pulling water-skiers, minimum operator age, times of operation, areas of operation, speed limits, and noise levels may apply in certain areas. If available, give a copy of the state regulations to the PWC owner/operator upon completion of the safety check.

S. Discussion Items.

1. Rules Of The Road.

a. The Rules of the Road were developed to prevent collisions between boats. They provide uniform guidelines for safe operating behavior and help prevent accidents. Advise the personal watercraft (PWC) owner/operator to follow these basic guidelines:

- (1) Sailboats, commercial boats, and fishing boats normally have the right of way.
- (2) The PWC operator has a legal responsibility to stay away from non-powered and less maneuverable watercraft and objects.
- (3) Stay to the right when approaching an oncoming watercraft so that it passes on your left side.
- (4) When overtaking another watercraft, pass on either side. In all cases, stay clear of the overtaken watercraft.
- (5) When crossing paths with another watercraft, the watercraft on the right has the right of way. Advise the owner/operator to slow down to let the watercraft on the right continue on course, then pass safely behind.

2. Responsibility For Wake. Advise the PWC owner/operator to be aware of **NO WAKE** zones which are usually marked with signs or buoys. These markers signal the operator to proceed at a minimum speed for making headway and maintaining steerage, usually five miles per hour or less. These areas are usually found near swimming beaches, marinas, mooring areas, docking sites, waterfront residences, jetties, and boat ramps. **NO WAKE** zones are posted in areas where property, the environment, animals, or people could be harmed by speeding boats. These zones apply to all boats including PWCs. Remind the owner/operator that they are responsible for any damage caused by their wake.

3. **Safe Operation.** Inform the PWC owner/operator of the posted speed limits for the waterways they use. Excessive speed can be dangerous and creates large wakes. Lack of attention to the surroundings or to situations developing on the water is one of the most common causes of accidents involving all watercraft. Remind the owner/operator to slow down when approaching congested areas, moored boats (small or large), or swimming areas. Advise them to constantly be on the lookout for traffic on the water and know where other boats are and where they are headed. Courtesy and common sense will keep them in good standing with other water users.
4. **Accident Reporting.** Discuss the requirement for reporting accidents or injury. All boating accidents must be reported by the PWC owner/operator to the appropriate marine law enforcement authority for the state in which the accident occurred. Immediate notification to the state boating authority in which the accident occurred (if the accident occurred in Alaska, only notify the Coast Guard), is required for all fatal boating accidents or if a person disappears as a result of a recreational boating accident. The following must be provided: date, time, and exact location of the accident; name of each person who died or disappeared; number of the PWC; and name and address of the owner/operator. If a person dies or there are injuries requiring more than first aid, a formal report must be sent to the appropriate state boating authority (if the accident occurred in Alaska, send the report to the Coast Guard) within 48 hours. A formal report must be sent within 10 days for accidents involving more than \$500.00 damage or complete loss of a PWC. Some states require reports be sent for accidents that have less than \$500.00 damage. Determine the reporting requirements for the state(s) in your examination area. For further information, suggest the owner/operator call the Coast Guard Customer Infoline, 800-368-5647.
5. **Operator Instructions.** A PWC, more than any other watercraft, is operated by someone other than the owner. When this situation occurs, it is the owner's responsibility to instruct the operator about the PWC's operating systems. The owner should point out the safety features, inform the operator about safe operation guidelines, and discuss any hazardous or unusual operating conditions in the area.

6. **Public Education Classes.** This discussion topic is to remind the Vessel Examiner (VE) to inform the PWC owner/operator about the opportunity to participate in a public education class. If your flotilla offers a PWC course, you may be talking to a potential student. Also, the state may require special education for PWC operators. Many PWC owners/operators may also own other watercraft now or in the future and may be interested in a basic boating and seamanship class. Make sure you can provide these owners/operators with information about your next available class. It would be an oversight for VEs not to consider every PWC owner/operator as a potential member of the Auxiliary.

T. **Decal Issuing.** Only special personal watercraft (PWC) Safety Check decals are to be used when these boats meet all requirements of the PWC Safety Check. The decal is to be placed on the forward portion of the port side of the PWC whenever possible.

DO NOT ISSUE THE CME DECAL TO A PWC.

U. **Personal Watercraft Safety Check Reporting.** Personal Watercraft (PWC) Safety Check activity is reported on the Auxiliary CME Report Form (CG-3594). On the current form, indicate "PWC" in the "Decal Number Issued or Reason for Failure" column. List any reason(s) for failure using the corresponding number(s) from the PWC Safety Check sheet.

V. **Hand-Out Material.** Most states have special pamphlets for Personal Watercraft (PWC) operation. Obtain a supply and give a copy to the PWC owner/operator along with the AUX-204A at the conclusion of the examination.

APPENDIX A

Authorization For Non-Owner Use Of A Facility.

A. The following is an example of a "Non-Owner Use" authorization letter.

[date]

From: [name] , [member number]

To: Director of Auxiliary, [specify] Coast Guard District

Subj: OPERATION OF AUXILIARY FACILITY BY A NON-OWNER

Ref: (a) Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series)

[use either paragraph 1 or 2, or use both]
[correctly number paragraphs if paragraph 1 or 2 not used]

1. When I am on board as a crewmember, I authorize any qualified [fill in name of group, Coxswains, Pilots, etc.] to operate my facility, [description & registration, documentation, or aircraft ID number of facility] under reimbursable or non-reimbursable orders.

2. When I am not on board, I authorize the Auxiliarists listed below to operate my facility, [description & identification number of facility] , under reimbursable or non-reimbursable orders, contingent on these Auxiliarists being qualified for such orders in accordance with current directives.

[Add as many lettered paragraphs as necessary to list all non-owner operators.]

	Member's Name	Member's Number
a.		
b.		
c.		

3. This letter is valid for [**Specify specific mission or time period -- 12 month maximum**] , so long as the facility is offered and accepted for use or until specifically revoked by me.

[type owner's name and signature]

Copy: [specify who will get a copy]

Witness: _____ Date: _____
[type name & title]

DEDICATED TO PROMOTING RECREATIONAL BOATING SAFETY

APPENDIX B

Special Purpose Facility Offer For Use Letter Format.

The following is an example of a Special Purpose Facility "Offer For Use" letter.

[date]

From: [name] , [member number]

To: Director of Auxiliary, [specify] Coast Guard District

Subj: SPECIAL PURPOSE FACILITY OFFER FOR USE

Ref: (a) Auxiliary Operations Policy Manual, COMDTINST M16798.3 (Series)

1. I hereby offer the below listed special purpose facility for use in any authorized Auxiliary mission.
 - a. [complete description including make, model, motor type, VIN, and registration numbers, as appropriate]
2. This letter is valid for [specify specific time period -- 12 month maximum] , so long as the above special purpose facility continues to be accepted for use or unless specifically revoked by me.

[owner's name and signature]

Copy: [member, member's division, etc.]

____ Accepted ____ Rejected
[director check one] [director signature and date]

DEDICATED TO PROMOTING RECREATIONAL BOATING SAFETY

APPENDIX C

Sample Format For Corporate Ownership

A. The following is a sample format to document the authorization to use corporate owned facilities.

**[name of corporation]
CORPORATE RESOLUTION**

I, _____, duly elected Clerk/Secretary of
below hereto were duly adopted by all of the existing Directors
holding office at a meeting held on _____, 199 .

I further certify that said Votes are in accordance with law,
the By-Laws and Articles of Incorporation/Organization of said
Corporation, and that said Votes are presently in full force and
effect and have not been adversely affected by any other Vote of
the Directors or Stockholders of this Corporation.

VOTED: That the Corporation offer the Vessel/Aircraft/Radio Station
described in the attached U.S. Coast Guard Offer of Use Form as an
Auxiliary Facility/Operational Facility (hereinafter referred to
as "the Facility"), in accordance with the provisions of Title 14,
U.S.C. 826 and applicable regulations, and that the President,
Treasurer or any Vice President of this Corporation, acting
singly, be and is hereby authorized and empowered, in the name of
and on behalf of this Corporation, and with or without corporate
seal, to execute and deliver to the United States Coast Guard, or
Coast Guard Auxiliary, now or at any time in the future, such
forms, applications, documents, instruments and writings, without
limitation upon such terms and conditions and whenever the said
President, Treasurer or any Vice President shall deem it necessary
or desirable pertaining to the use of the Facility, and the
execution thereof shall be sufficient evidence of the
determination authorizing the transaction by the Board of
Directors.

VOTED: That the Facility may be utilized and operated by the attached
list of Coast Guard Auxiliarists who may use the Facility for any
authorized Coast Guard or Coast Guard Auxiliary purpose, provided
the Coast Guard issues reimbursable or non-reimbursable patrol
orders.

VOTED: That the Corporation understands that the Facility may be used in circumstances which could result in damage to the Facility and/or third party claims. The Corporation understands that pursuant to Title 14 U.S.C. 830 and Coast Guard Regulations promulgated thereunder that loss or damage to the Facility and/or third party claims could occur which would not be paid for or reimbursed by the Coast Guard. The Corporation has determined that it has adequate insurance in the event the Facility is so damaged or if such a claim results, or has sufficient finances available to assume this risk.

I further certify that the Corporation is validly existing and in good standing, and the person(s) named as officers and Directors of this Corporation, as set forth in the Corporate-Owned Facility Application, are true, complete and correct.

A true copy Attest.

Secretary/Clerk

DATED: _____

APPENDIX D

Sample Format For Multiple Ownership

A. The following is a sample format to document the authorization to use multiple owned facilities.

ASSENT AND AUTHORIZATION FOR USE

The undersigned, being a partial owner of the vessel/ aircraft/radio station described below and in the attached United States Coast Guard Offer For Use form as an Auxiliary facility/ operational facility (hereinafter referred to as "the Facility"), in accordance with the provisions of Title 14 U.S.C. 826 and applicable regulations, assent to the Facility being utilized and operated by the attached list of Coast Guard Auxiliarists who may use the Facility for any authorized Coast Guard or Coast Guard Auxiliary purpose, provided the Coast Guard issues reimbursable or non-reimbursable patrol orders. The undersigned understands that the Facility may be used in circumstances which could result in loss or damage to the Facility and/or third party claims, which under Title 14 U.S.C. 830 and applicable Coast Guard regulations may not be paid for or reimbursed by the Coast Guard. The undersigned has determined that there is adequate insurance to cover this risk or that they are prepared to assume this risk.

DESCRIPTION OF FACILITY OFFERED FOR USE

Boat _____ Aircraft _____ Radio _____
Year, Make, Model _____
ID/Registration/Documentation Number _____

OWNERS ASSENT AND AUTHORIZATION

[**add enough date, name, address, percent owner, signature lines to cover ALL owners**]

Date: _____ Name (type or print): _____

Address: _____

Percent Owner: _____ Signature: _____

Date: _____ Name (type or print): _____

Address: _____

Percent Owner: _____ Signature: _____

APPENDIX E

Information Requirements For A Corporate Owned Facility

A. The following is the minimum information required by corporations to submit to identify the legal ownership of the facility.

1. Name of Corporation: _____

2. Address of Corporation: _____

3. State and Date Incorporated: _____

4. Purpose of Corporation: _____

5. List Name and Title of all officers and directors. Use as many sheets as needed. _____

6. Is this a flotilla, division, or district related Corporation? Yes___, No___. If yes, specify which: _____

7. Are all members of flotilla, division, or district members of Corporation? Yes___, No___. Percent: _____

8. Percent of Corporation owned by Auxiliarist(s): _____

9. Relationship between Corporation and Auxiliary: _____

10. Relationship of Non-Auxiliary stockholders or members to Auxiliary: _____

11. How was facility acquired by Corporation?

(a) Purchased___ Date: _____;

(b) Donated___ Date: _____ Name of Donor: _____

12. Attach Corporate Resolutions.

THE FOLLOWING TO BE ANSWERED FOR OPERATIONAL FACILITY STATUS.

1. Is facility dedicated to Coast Guard and Auxiliary use only?

Yes____ or No____.

2. Is facility only used when under Coast Guard orders?

Yes____ or No____.

3. Primary use of Facility: _____

4. Attach authorization for non-owner use of Auxiliary facility (make sure all person(s) authorized to operate facility while under Coast Guard orders are listed) as outlined in CHAPTER 2, paragraph I.

Primary Auxiliary User:

Corporate Facility Owner

Signature

Name (print or type)

Name (print)

Signature of Officer

Member Number

Name & Title of Officer

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