



# Boating Safety Circular 70

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## BACK TO THE BASICS — HIN 101

The HIN regulations are simple when compared to some of the more complex regulations with which everyone involved in boating must comply. Yet we continually receive calls and letters on the subject. Therefore, we'd like to offer this refresher course - HIN 101.

The regulations requiring Hull Identification Numbers (HINs) for recreational boats are intended to provide a uniform positive identification of each boat manufactured in or imported into the United States. The Coast Guard uses the HIN to identify the safety standards that apply to a particular boat and in identifying specific boats involved in a defect notification campaign. The States use the HIN to identify boats for State registration and titling. State marine police units and Federal law enforcement agencies such as the FBI and National Crime Information Center use the HIN to trace stolen boats.

Coast Guard regulations require manufacturers to affix two identical Hull Identification Numbers (HINs) on every recreational boat used or intended to be used on waters subject to Federal jurisdiction. Each Hull Identification Number consists of 12 continuous characters at least one-quarter of an inch in height, uninterrupted by spaces, slashes, hyphens or other symbols.

### MANUFACTURER IDENTIFICATION CODE

The first three characters in every HIN are a Manufacturer Identification Code such as **ABC**.

The only way to obtain a Manufacturer Identification Code is to request one from the Coast Guard. The Coast Guard will issue a Manufacturer Identification Code only to U.S. builders of recreational boats and to U.S. importers of foreign-built boats.

U.S. builders and importers may obtain a Manufacturer Identification Code by sending a letter to Commandant (G-NAB-6), U.S. Coast Guard, Washington, D.C. 20593-0001 and requesting one. The letter should briefly describe the types and sizes of boats the company will manufacture or import.

Occasionally companies are purchased and re-named. A corporation is a legal entity which does not cease functioning with a change in its ownership. Therefore, it is responsible for its past production and the Coast Guard will not issue a new Manufacturer Identification Code. On the other hand, if a corporation goes out of business and someone merely "buys" its name and manufacturing assets, then a new business is created. The new business is not obligated to take responsibility for the past production of the defunct corporation, and we will issue a new Manufacturer Identification Code.

In the case of boats imported from Canada, the U.S. importer does not need to obtain a Manufacturer Identification Code or affix the HIN. Manufacturer Identification Codes issued by Transport Canada and HINs affixed to Canadian-built boats are compatible with the U.S. system.

For boats built or imported by an individual for his or her own use, the entire 12 character HIN is assigned by the State boating authorities in the State of principal use.

The HIN regulations do not apply to sailboards; however, we do not prohibit builders of sailboards from applying for Manufacturer Identification

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### Inside:

Navigation Lights - Sidelights	6
Overcurrent Protection	7
Fuel Filters and Strainers	7

See Note on Page 8

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Codes and affixing HIN's if they so desire, but there is no enforcement of the HIN regulation.

The HIN regulations also do not apply to commercial boats. However, with increased emphasis on State registration and titling (many undocumented commercial vessels are registered), and tracing of stolen boats, the Coast Guard encourages manufacturers of commercial boats to affix Hull Identification Numbers.

Again, there is no enforcement of the HIN regulation or enforcement of compliance with the other safety standards applicable to manufacturers of recreational boats. However, this exception to enforcement is dependent upon the builder's proving to the Coast Guard's satisfaction that the company does, in fact, build commercial boats, and is not attempting to circumvent compliance with applicable regulations.

#### PROBLEMS IN THE FIELD

1. "The Amalgamated Boat Company" decides it's going to start building boats. Amalgamated decides it's going to use "ABC". Unfortunately, the Coast Guard previously assigned "ABC" to the "Allegheny Bateaux Corp." in November 1973. Amalgamated's assigning itself a Manufacturer Identification Code is illegal. **Only the Coast Guard may assign a Manufacturer Identification Code.**

2. "The Three Brothers Canoe Company" applies for a Manufacturer Identification Code and specifically requests "TBC" or "BCC". We will make every effort to accommodate builders with the codes they desire; however, the Coast Guard has been issuing the codes since 1972. Therefore, we can't always issue codes corresponding to every company's initials.

3. Some State boat registration authorities have been unwilling to register boats with a Hull Identification Number in which the third character is a number. They mistakenly assume the HIN regulations prohibit the use of a number in the Manufacturer Identification Code and that someone is doing something illegal.

Some boat manufacturers have more than one plant and need more than one Manufacturer Identification Code. Therefore, the Coast Guard will occasionally assign a code to a builder which has a number in it.

4. Private Label Merchandisers (PLMs) and foreign manufacturers have tried to obtain a Manufacturer Identification Code. The Coast Guard uses the Manufacturer Identification Code to identify the company responsible for defect notification. A

**ABC2AB41G091**

Private Label Merchandiser is not the physical manufacturer of a boat and the Coast Guard has no legal recourse against a foreign manufacturer whose boats fail to comply with Federal regulations. Therefore, we do not issue Manufacturer Identification Codes to PLMs or foreign builders (only importers).

5. Boat builders frequently change their company names and addresses and continue to manufacture boats using a specific Manufacturer Identification Code. Correspondence with such companies is frequently returned marked "Moved - Left No Address". Builders who change their company names or relocate to new addresses are required to report such changes to the Coast Guard (see 33 CFR 181.33(b)).

#### HULL SERIAL NUMBERS

Characters four through eight are the hull serial number which must consist of letters of the English alphabet, Arabic numerals, or both, except the letters "I", "O" or "Q" (because of their similarity to the numbers "0" and "1"). The boat manufacturer or importer chooses a boat's hull serial number. This is a typical Manufacturer Identification Code and hull serial number, the first eight characters in a Hull Identification Number: **ABC2AB43**.

#### PROBLEMS IN THE FIELD

1. Some manufacturers separate the hull serial number from the manufacturer identification code with a space, a slash or a hyphen. A person with criminal intentions can alter a space, a slash or a hyphen to make it a letter or number and create a different hull identification number. Therefore the regulations require 12 characters which run consecutively.

2. Some builders use symbols or lower case letters. The regulations specifically require the use of letters of the English alphabet and/or Arabic numerals and therefore the use of symbols is prohibited. Although the regulations do not specifically require the use of block capital letters of the English alphabet, lower case characters should be avoided, again, because lower case characters can be altered to look like upper case characters. We will consider the need for a change in the regulation if we continue to encounter HINs using lower case

**Persons convicted of the alteration of a Hull Identification Number are liable for civil penalties of \$2000.**

letters.

## THE DATE OF CERTIFICATION

The ninth and tenth characters in each Hull Identification Number indicate the month and year of the date of certification. **In all other cases characters nine and ten must indicate the date of manufacture, which can be no earlier than the date construction or assembly began and no later than the date the boat leaves the place of manufacture or assembly or is imported into the United States for the purposes of sale.**

Character nine, the month of certification, must be indicated using letters of the English alphabet starting with January as “A” and ending with December as “L”:

<b>A</b>	<b>=</b>	<b>JANUARY</b>
<b>B</b>	<b>=</b>	<b>FEBRUARY</b>
<b>C</b>	<b>=</b>	<b>MARCH</b>
<b>D</b>	<b>=</b>	<b>APRIL</b>
<b>E</b>	<b>=</b>	<b>MAY</b>
<b>F</b>	<b>=</b>	<b>JUNE</b>
<b>G</b>	<b>=</b>	<b>JULY</b>
<b>H</b>	<b>=</b>	<b>AUGUST</b>
<b>I</b>	<b>=</b>	<b>SEPTEMBER</b>
<b>J</b>	<b>=</b>	<b>OCTOBER</b>
<b>K</b>	<b>=</b>	<b>NOVEMBER</b>
<b>L</b>	<b>=</b>	<b>DECEMBER</b>

A boat is considered certified to comply with safety standards in effect on the first day of the month shown in the ninth character of the HIN. Character ten is the last digit of the year of certification (or manufacture). This is a typical Manufacturer Identification Code, hull serial number and date of certification of July 1990, the first 10 characters in an HIN: **ABC2AB41G0**.

## PROBLEMS IN THE FIELD

There are still some manufacturers who are using the old date of certification format in the HIN. Between 1972 and 1984, a date of December 1972, for example, could have been indicated by either ABC000011272 or ABC00001M73E. **The current regulations covering Hull Identification Numbers apply to boats built on or after August**

**1, 1984.** Use of either of the old formats for indicating date of certification is no longer legal.

## MODEL YEAR

Characters 11 and 12 are the model year of the boat and must be indicated using Arabic numerals for the last two numbers of the model year. Selection of the model year of a boat is up to the boat manufacturer. This is a complete Hull Identification Number with a Manufacturer Identification Code, Hull Serial Number, Date of Certification of July 1990 and 1991 model year: **ABCAB41G091**.

## PROBLEMS IN THE FIELD

1. Reports to the Coast Guard indicate that individuals, some of them dealers, are altering the last two characters in the Hull Identification Number to make it appear that a boat is newer. Alteration of a Hull Identification Number without the specific written permission of the Commandant, U.S. Coast Guard is specifically prohibited by Federal statutes and Coast Guard regulations. Persons convicted of the alteration of a Hull Identification Number are liable for civil penalties of \$2000.

2. Periodically, we are asked to comment on apparent discrepancies between the date of certification of a boat and the boat’s model year. An HIN such as ABC00001H790, for example, indicating a date of certification of August 1987 and a 1990 model year, would appear to be fraudulent. However, there is no violation of Coast Guard regulations with the display of such an HIN.

While the Coast Guard understands the desire to establish a definitive model year for each boat manufactured, date of certification is still the major consideration as far as the last four characters in an HIN and determining compliance with standards is concerned.

Because the HIN regulations require the HIN to be affixed to **the hull**, manufacturers are given maximum flexibility in determining date of certification.

The assembly of a large boat, involves first the hull manufacturer, then subsequent manufacturers of other components subject to Coast Guard safety standards. Thus assembly of a large boat may span several years and an HIN of ABC00001H093, for example, would not involve attempts by a builder to deceive the public.

Also, for many boat manufacturers, hull designs do not change from year to year. A company will use **the same hull design** in 1993 that it uses in

1990 and change other features such as the boat's interior design or type of propulsion unit from model year to model year. If a hull manufactured in 1990 is completed in 1993 with other features consistent with other 1993 boats, the builder has manufactured a 1993 model boat and an HIN of ABC0001H093, for example, should not be considered fraudulent either.

Date of certification must be no earlier than the date on which construction or assembly began and no later than the date on which the boat leaves the place of manufacture or assembly or is imported for the purposes of sale. Determination of model year is left to the boat manufacturer.

### ADDITIONAL CHARACTERS

If additional information is displayed on the boat within two inches of the primary Hull Identification Number, that information must be separated from the HIN by means of borders or must be on a separate label so that it will not be interpreted as part of the Hull Identification Number:

**ABC3AB43G091          EXTRA INFO**

### LOCATION

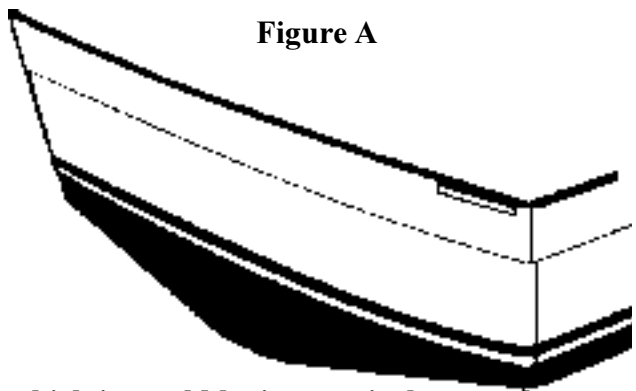


The regulations require the boat manufacturer to affix two identical Hull Identification Numbers, a "Primary HIN" and a "Duplicate HIN" in different locations.

The **Primary Hull Identification Number** must be affixed:

(1) **On boats with transoms**, to the starboard outboard side of the transom within two inches of the top of the transom, gunwale, or hull/deck joint, whichever is lowest (See Figure A).

(2) **On boats without transoms or on boats on**

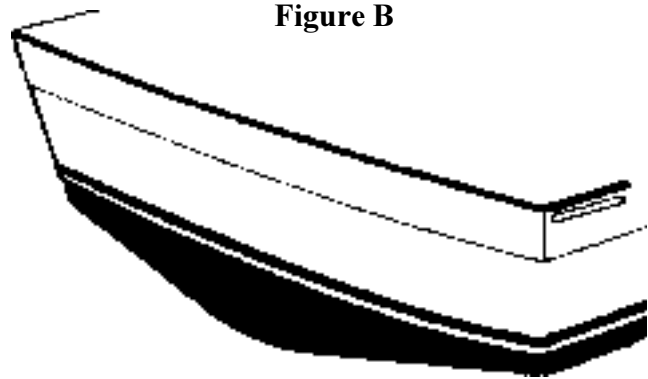


**Figure A**

**which it would be impractical to use the transom**, to the starboard outboard side of the hull, aft, within one foot of the stern and within two inches of the top of the hull side, gunwale or hull/deck

joint, whichever is lowest (See Fig. B).

(3) **On catamarans or pontoon boats** which have readily replaceable hulls, to the aft crossbeam



**Figure B**

within one foot of the starboard hull attachment.

**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. Many builders believe that this implies a requirement for a hidden location for the second HIN.

The Coast Guard recognizes that on some boats there is no place to hide a duplicate HIN. Manufacturers of dinghies with no removable fittings can affix the duplicate HIN to the inboard surface of the hull side beneath a thwart or support for a seat. Manufacturers of small boats which do not have seats should affix the duplicate HIN somewhere on the inboard surface of the hull.

### PROBLEMS IN THE FIELD

1. The intent of the regulations is for the Primary HIN to be visible when the boat is in the water. Yet many builders appear to have design teams working day and night trying to find ways to make the Primary HIN invisible to all but the most persistent sleuths. Part of the problem lies in the present popularity of tumblehome sterns, inverted transoms and swim platforms.

These days, just about everybody seems to offer at least one model with an "integrated swim platform". Many designs result in a stern devoid of a vertical plane which one would associate with a definition of the word, "transom," or, if there is a vertical plane, "within two inches of the top" means somewhere underwater (see Figure B.). Owners who needed to physically verify the characters in a Hull Identification Number on one of these boats would have to go for an unplanned swim or haul their boat from the water just to read the HIN.

Some variations on the integrated swim platform are bolted to the transom (optional equipment) and

fit so snugly that they appear to be part of the original hull structure. The only telltale signs to their later addition are the through-bolts in the

**Figure C**



transom. Once installed, these swim platforms are difficult to remove. Verification of the characters in an HIN affixed to the transom on the hull beneath the bolted on swim platform becomes an even trickier proposition.

The optional location for the Primary HIN on the starboard outboard side of the hull was developed, in part, because of some builders' aesthetic concerns. They felt the HIN location on the transom detracted from the beauty of a traditional varnished mahogany transom. All builders are free to use the location illustrated in Figure B.

2. We frequently receive calls from individuals and from people involved in law enforcement asking us for the location of the Duplicate HIN. The Coast Guard does not record the locations of duplicate Hull Identification Numbers. The only persons who would know are the builders of the boats. We hope that manufacturers who receive such questions try to verify the bona fides of the questioners and thereby thwart boat thieves and other criminals who may be attempting to cover all the bases.

## **PERMANENCY**

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.

The words “otherwise permanently affixed” and “in such a way that alteration, removal, or replace-

ment would be obvious and evident” are subject to interpretation by the courts. The Coast Guard considers these words to mean that ordinary and reasonable methods must be used which will allow the HIN to remain intact and legible for the useful life of the boat and in a way that would discourage anyone but a skilled boat thief from altering or removing the number.

Our present policy is to accept any reasonable means of affixing a number until such time as its performance indicates that it is not permanent.

## **PROBLEMS IN THE FIELD**

Methods of affixing Hull Identification Numbers which have been found to be unacceptable are:

Use of common embossed plastic marker tape, either stuck on the hull or riveted.

Use of metal plates riveted to the hull. The rivets can be drilled out and a new plate riveted in its place. The metal plate should be fastened by some additional means such as with an epoxy.

Use of individual characters so that individual characters can be removed and replaced.

Use of only screws or bolts to attach a plate. Again, the plate should be fastened by some additional means such as with an epoxy.

## **MINIMUM SIZE**

The characters in each Hull Identification Number must be no less than one-quarter inch in height.

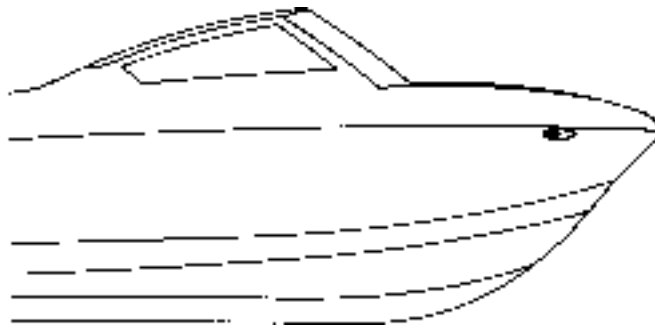
## NAVIGATION LIGHTS- SIDELIGHTS

During factory and boat show inspections we have observed that many manufacturers of recreational boats do not have a good understanding of the navigation rules governing proper installation of navigation lights. The requirements are found in the Navigation Rules, International-Inland, and in Parts 81, 84 and 89 of Title 33, Code of Federal Regulations. The problem appears to be particularly prevalent for manufacturers located in the western States. Since most manufacturers routinely equip the boats they produce with navigation lights, navigation light installations are routinely inspected and discussed during factory visits and boat shows.

One problem which has increased recently is the installation of flush mounted sidelights in the boat hulls, usually below the rub rail. The illustration shows an example of this type of installation. Many manufacturers build boats using similar sidelight fixture installations. This is a dangerous trend which is likely to end up costing somebody a pile of money when a plaintiff's attorneys go after everyone who might have been liable for a serious collision.

Sidelights which meet the rules are designed to cover an arc of the horizon, or sector, of 112.5 degrees. Intensities are required to attain a visible range of 1 mile for vessels less than 12 meters (39.4 ft.) and 2 miles for vessels 12 meters or longer. These fixtures are designed for intensities to decrease and reach practical cut-off between 1 and 3 degrees outside their prescribed sector. Sidelight fixtures must be installed parallel with the fore and aft centerline of the vessel and arranged to show an unbroken light from right ahead to 22.5 degrees abaft the beam, a total sector arc of 112.5 degrees.

Sidelights that are installed in the contour of the bow without providing a mounting surface tooled to be parallel with the fore and aft centerline of the vessel are not in compliance with the Inland or International Navigation Rules. Depending on the breadth of the vessel near the bow and how far aft from the vessel's stem the lights are mounted, this shift can be more than 20 degrees in some cases. Installing the fixtures too far aft of the vessel's stem may result in the sidelights not being visible from a position dead ahead.



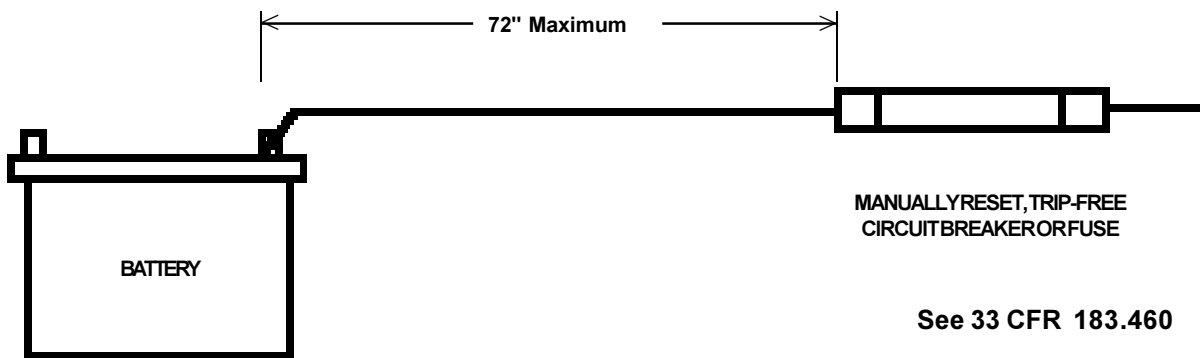
Another factor in proper installation of sidelights is that they must maintain their required minimum intensity in a vertical sector from 5 degrees above to 5 degrees below the horizontal. They must also maintain at least 60 percent of their minimum required intensity from 7.5 degrees above to 7.5 degrees below the horizontal. Installing flush mounted sidelights, designed to be mounted to a vertical surface in the hull contour, without providing a mounting surface tooled to be vertical, shifts

the vertical coverage sector. This also results in a noncompliance with the Inland or International Navigation Rules.

Additionally, most of these flush mounted sidelights are installed below the vessel's rub rail. International Navigation Rules require that sidelights be installed above the uppermost continuous deck. Therefore this configuration would not be in compliance with International Navigation Rules.

When separate red and green sidelight fixtures are used, the masthead or all-round white light, whichever configuration is installed, must be located as close as practical to the vessel's fore and aft centerline. For vessels less than 12 meters in length, the masthead or all-round light may be displaced from the fore and aft centerline providing that the sidelights are contained within a common fixture and mounted on the vessel's fore and aft centerline. The masthead or all-round light must be installed at least one meter (3.3 ft.) above the sidelights.

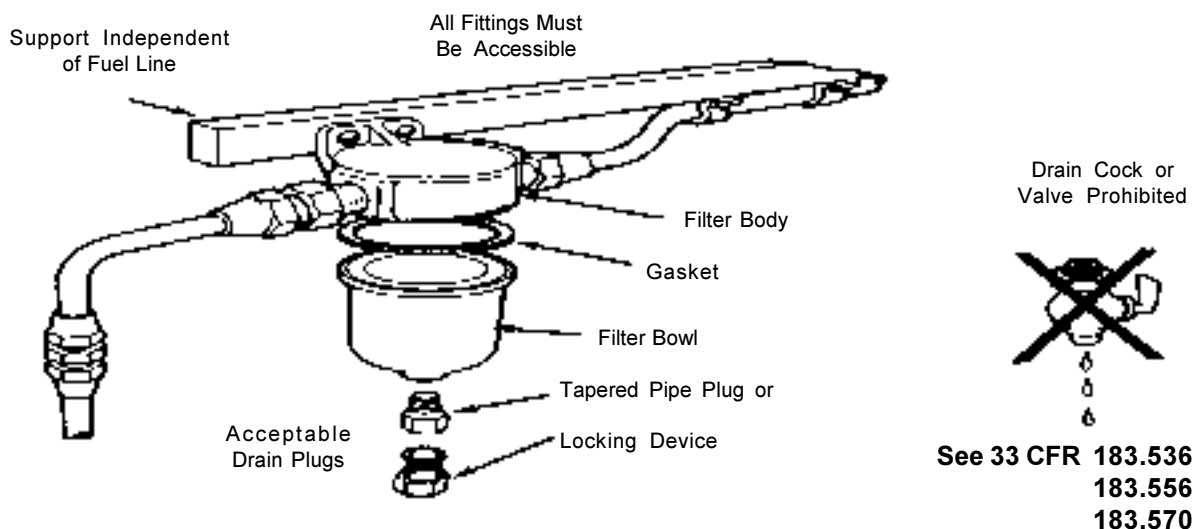
This article was written by the Coast Guard Short Range Aids to Navigation Division (G-NSR)



Reports from the Coast Guard Marine Safety Office, Puget Sound indicate that several boat manufacturers are installing marinized engines which do not have a main trip-free circuit breaker or fuse installed anywhere within 72 inches of the storage battery. The marinizers of the engines formerly installed a main circuit breaker, but then ceased doing so (leaving responsibility for compliance to the boat manufacturers). All boat builders are reminded that Section 183.460 of the Electrical System Standard states, in part,

**"Each ungrounded output conductor from a storage battery must have a manually reset, trip-free circuit breaker or fuse, unless the output conductor is in the main power feed circuit from the battery to an engine cranking motor. The circuit breaker or fuse must be within 72 inches of the battery measured along the conductor,"**

The purpose of the requirement is to protect conductors from excessive current loadings to remove potential fire hazards.



Reports from the Coast Guard Marine Inspection Office, Los Angeles/Long Beach indicate that several manufacturers of inboard jet drive model boats are installing in-line metallic fuel filters which are not independently supported. All builders are reminded that according to Section 183.570 of the Fuel System Standard,

**"Each fuel filter and strainer must be supported on the engine or boat structure independent from its fuel line connections, unless the fuel filter or strainer is inside a fuel tank."**

The purpose of the requirement is to minimize failures of fuel line connections due to vibration.



# **U.S. Coast Guard**

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## ***Boating Safety Hotline***

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- ***For Boating Safety Recall Information***
- ***To Report Possible Safety Defects in Boats***
- ***For Answers To Boating Safety Questions***
- ***For Information On USCG Boarding Procedures***

• ***Call, Toll Free!***

**800-368-5647**

Note: The stock of original copies of **Boating Safety Circular 70** is exhausted. This is a revised version of **Boating Safety Circular 70**. The original version contained a Defect Notification and Recall Campaign list; a table showing Causes of Boating Accidents in 1989; safety suggestions for boat operators; and a Consumer Fact Sheet covering "Disposal of Plastics and Other Garbage in Waters of the United States". Those articles have been removed because they are no longer considered current or are available from other sources.

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