

U.S. Department
of Transportation

United States
Coast Guard



March 2001

Boating Safety Circular 82

COAST GUARD ADVISORY ON CARBON MONOXIDE HAZARD CAUSED BY GENERATOR EXHAUST GAS ACCUMULATIONS

Owners and operators of boats equipped with gasoline-powered generators with exhaust ports which exit through the transom beneath or near a swim platform should turn off their generators when passengers are on the swim platform or swimmers are in the water.

A September 2000 National Institute for Occupational Safety and Health (NIOSH) study of carbon monoxide deaths on Lake Powell in Arizona over the last 10 years showed seven fatalities involved houseboats with through-transom generator exhaust systems. A similar National Park Service (NPS) investigation found dangerous accumulations of carbon monoxide gases on houseboats with through-transom exhaust systems when the generator was running and exhaust fumes became trapped beneath the swim platform.

Carbon monoxide is a colorless, odorless and tasteless gas that accumulates rapidly. Carbon monoxide in high concentrations can be fatal in a matter of minutes. Unless the symptoms are severe, carbon monoxide poisoning is often misdiagnosed as seasickness; however, lower concentrations must not be ignored because the effects of exposure to carbon monoxide are cumulative and can be just as lethal.

Some houseboat transom designs consist of a recessed area amidships forward of the swim platform creating a cavity for engine and generator exhaust ports. When the generator is running the carbon monoxide gas buildup in this cavity, on or near the swim platform, and near the rear deck space is so high, that there is an imminent danger of death for anyone in or near the cavity for even a very short period of time.

The Coast Guard has conducted a preliminary investigation into the problem and has sent a letter

to all known houseboat manufacturers informing them of the hazard and soliciting their ideas for reducing the danger.

The National Marine Manufacturers Association has published a pamphlet, "Carbon Monoxide Poisoning -- Know More About It," which is reprinted in this issue of the **Boating Safety Circular**. Pamphlets such as this, as well as other boater educational materials, have historically concentrated on carbon monoxide hazards created by the exhaust of the main engines while underway. Although these hazards still exist and need to be addressed, new educational materials need to be developed that include more emphasis on the additional carbon monoxide hazards of gasoline powered generators especially while a vessel is not underway.

While the NIOSH study and the NPS investigation were limited to houseboats, the problem can exist on any boat with a gasoline-powered generator exhaust port located adjacent to a swim platform on the transom. A common practice of running gasoline-powered generators to power air conditioning, entertainment centers and galley appliances while anchored or moored exacerbates the problem.

For that reason, all owners and operators of boats equipped with swim platforms and gasoline-powered generators with exhaust ports on the transom are advised to turn off their generators when their boats are at anchor or moored and passengers are on or near the swim platform or swimmers are in the water.

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RECREATIONAL BOAT FACTORY VISIT PROGRAM

On August 21, 2000 the Coast Guard Recreational Boating Product Assurance Division awarded a contract to Resource Network International (RNI) of Silver Spring, Maryland to train 14 Compliance Associates and to have them conduct approximately 1,000 factory visits annually.

The training, which was completed on December 14, 2000, covered Federal regulations and safety standards, voluntary standards such as those published by the American Boat and Yacht Council (ABYC) and Society of Automotive Engineers (SAE), compliance testing, procedures and policies, and manufacturer liaison. The purpose of the factory visit program is to emphasize the need to comply with Federal safety standards and regulations, to ensure each manufacturer understands the regulations and to assist manufacturers in certifying compliance with the regulations.

The first factory visit was conducted on January 8, 2001 and authorized Compliance Associates from RNI will be contacting and visiting all recreational boat manufacturers and importers on a scheduled basis.

The factory visit program should lead to a heightened understanding of both Federal and voluntary safety standards and regulations, and thereby provide the public with safer recreational boats.

DEFECT NOTIFICATION AND RECALL CAMPAIGNS

Problem Descriptions:

Basic Flotation: Most inboard, inboard/outdrive and jetdrive powered motorboats less than 20 feet in length are required to contain sufficient flotation so that some portion of the boat remains above the surface of the water if the boat is swamped. Boats with “Basic Flotation” problems will sink if they capsize or swamp.

Level Flotation: Most outboard powered motorboats less than 20 feet in length are required to float level when they are swamped and to support a certain percentage of the weight which they are rated to carry. Boats with “Level Flotation” problems do not float level when swamped.

Capacity Label Missing, Maximum Persons Capacity Overrated, Maximum Weight Capacity Overrated or Horsepower Capacity Overrated: Almost all motorboats less than 20 feet in length are required to bear a “U.S. Coast Guard Maximum Capacities” label. If the label is missing or the values are overrated, an operator who is unfamiliar with a particular boat may try to carry too much weight or, in the case of outboard powered boats, too much horsepower. Some insurance companies will not insure a boat that lacks the label or bears a label with incorrect information.

The recall list includes new campaigns as well as old ones. The new campaigns begun since December 1999, follow:

AMERICAN SUZUKI MOTOR CORPORATION

(Brea, CA)(990116T)

Year: 1998 and 1999

Models: DF60 and DF70

Units: 1,769

Problem: Shift rod connecting pin and clip may fall out; potential loss of shifting control

ARCTIC CAT, INC.

Thief River Falls, MN (010003T)

Year: 1999

Models: Tigershark 1100 LI

Units: 522

Problem: Throttle bodies may wear/corrode causing stiff throttle operation and return; may result in throttle remaining in open position; danger of collision

Carbon Monoxide Poisoning

Know More
About It!



**Boating Safety
Awareness Series**

A Public Service of the
National Marine
Manufacturers Association

ARCTIC CAT, INC.

Thief River Falls, MN (000201T)

Year: 1997

Models: Tigershark:

Daytona 770 and 1000,
Monte Carlo 640, 770 &
1000

Units: 9,436

Problem: A crack may develop in base of fuel filler neck permitting liquid fuel or vapor leakage; possible fire/explosion if ignition source present

BACK COUNTRY BY CHAMPION

(Sarasota, FL)(991626S)

Year: 1996 - 1999

Models: 151 Pro Guide

Units: 55

Problem: Level Flotation

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(000069T)

Year: 2000

Models: Speedster, Challenger & Islandia

Units: 1,216

Problem: Throttle may stick at high RPM; possibility of collision; fuel pickup neck may be too thin; possible fuel leakage may lead to fire/explosion

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(000124T)

Year: 2000

Models: Sea Doo RX 5513 and 5514

Units: 1,112

Problem: Sponsons may loosen and fall reducing steering ability at high speed; possible danger of collision

Each year, boaters are injured or

killed by carbon monoxide. Most occur on older boats and within the cabin or other enclosed areas. Virtually all of the poisonings are preventable.

Carbon monoxide is a potentially deadly gas

produced any time a carbon-based fuel, such as gasoline, propane, charcoal or oil, burns. Sources on your boat include gasoline engines and generators, cooking ranges, space heaters and water heaters. Cold or poorly tuned engines produce more carbon monoxide than warm, properly tuned engines.

Carbon monoxide is colorless, odorless and tasteless

and mixes evenly with the air. It enters your blood stream through the lungs and displaces the oxygen your body needs. Early symptoms of carbon monoxide poisoning—irritated eyes, headache, nausea, weakness and dizziness—are often confused with seasickness. Prolonged exposure can lead to death.

Carbon monoxide can collect within a boat

in a variety of ways. Exhaust leaks, the leading cause of death by carbon monoxide, can allow carbon monoxide to migrate throughout the boat and into enclosed areas. Even properly vented exhaust can re-enter a boat if it's moored too close to a dock or another boat, or if the exhaust is pushed back by prevailing winds. Exhaust can also re-enter boats when cruising under certain conditions—the "station wagon effect"—especially with canvas enclosures in place.

Regular maintenance and proper boat operation are the best defenses against injury from carbon monoxide.

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(0000125T)

Year: 2000

Models: Sea Doo RX DI and GTX DI

Units: 3,272

Problem: Possible fuel leak between direct air injector and fuel rail assembly; possible fire or explosion if ignition source present

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(000087T)

Year: 2000

Models: GTX and GTX RFI

Units: 10,273

Problem: Fuel fill is adjacent to ventilation system opening and operator could inadvertently fill engine compartment with fuel; possible fire/explosion if ignition source present

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(000145T)

Year: 2000

Models: GTX, XP, RX DI, GTX DI,

AND LRV (5513, 5514, 5544, 5545,

5646, 5649, 5651,

5653, 5655, 5656, 5659, 5669 and 5688)

Units: 3,476

Problem: Clip securing air intake silencer could release and allow gaskets to fall into throttle bodies; for DI (direct injection) models only, fogging tube inside air silencer could also be drawn into the rear throttle body; resulting in loss of speed control and possible collision

FACT SHEET

WHAT TO DO

1 Schedule regular engine and exhaust system maintenance inspections by experienced and trained technicians.

2 Be aware that dangerous concentrations of carbon monoxide can accumulate when a boat, generator or other fueled device is operated while the boat is at a dock or seawall or alongside another boat. Do not run the boat or equipment for an extended time under these conditions or without continuous monitoring.

3 Keep forward-facing hatches open, even in inclement weather, to allow fresh air circulation in accommodation spaces. When possible, run the boat so that the prevailing winds will help dissipate the exhaust.

4 Do not confuse carbon monoxide poisoning with seasickness or intoxication. If someone on board complains of irritated eyes, headache, nausea, weakness or dizziness, immediately move the person to fresh air, investigate the cause and take corrective action. Seek medical attention, if necessary.

5 Install a carbon monoxide detector in each accommodation space on your boat. Check the detectors periodically to be sure they are functioning properly.

BOSTON WHALER, INC.

(Edgewater, FL)(990185T)

Year: 1998 - 2000

Models: 28-foot Conquest w/ HINs:
BWCAN003A898 -

BWCAN155F900

Units: 184

Problem: Main electrical distribution panel not ignition-protected; possible fire/explosion if fuel or vapor source present

HAMILTON JET

(Seattle, WA)(000197T)

Year: 1998

Models: HJ 212 steering assemblies with serial nos.: 0001-2114

HJ 213 steering assemblies with serial nos.: 0001-0299

Units: 1261

Problem: Cracks in steering nozzle; possible steering failure and danger of collision

HAMILTON JET

(Seattle, WA)(000085T)

Year: 1998 & 1999

Models: HJ 212 with serial nos.
964 - 1774

HJ 213 with serial nos.
001 - 234

Units: 676

Problem: Flange inserts on some jet units are oversized and may become stiff or stick under certain circumstances; possible steering failure and danger of collision

CHECKLIST

Each trip

- Make sure all exhaust clamps are in place and secure.
- Look for exhaust leaking from the exhaust system components, indicated by rust and/or black streaking, water leaks, or corroded or cracked fittings.
- Inspect rubber exhaust hoses for burned or cracked sections. All rubber hoses should be pliable and free of kinks.
- Confirm that water flows from the exhaust outlet when the engines and generator are started.
- Listen for any change in exhaust sound that could indicate an exhaust component failure.
- Test the operation of each carbon monoxide detector by pressing the test button.

**Do not operate the vessel
if any of these problems exist.**

At least annually

(performed by a qualified marine technician)

- Replace exhaust hoses if any evidence of cracking, charring or deterioration is found.
- Replace each water pump impeller and inspect the condition of the water pump housing. Replace if worn. *(Refer to the engine and generator manuals for further information.)*
- Inspect each of the metallic exhaust components for cracking, rusting, leaking or looseness. Pay particular attention to the cylinder head, exhaust manifold, water injection elbow, and the threaded adapter nipple between the manifold and the elbow.
- Clean, inspect and confirm the proper operation of the generator cooling water anti-siphon valve *(if equipped)*.

HUNTER MARINE CORP.

(Alachua, FL)(000083T)

Year: 2000

Models: H410, P420, P450 and H460 w/

HINs:

HUN41224D900-HUN41270C000

HUN42135E900-HUN42153B000

HUN45217F000-HUN45245B000

HUN46115E900-HUN46166C000

Excluding HUN46165C000

Units: 146

Problem: Ignition switch may stay in cranking position; possible electrical fire or engine wiring harness failure

KAWASAKI MOTOR CORP., U.S.A.

(Santa Ana, CA)(990186T)

Year: 1998 & 1999

Models: 1998 JT1100-B1 (7,986 units)

1998 JH1100-A3 (5,982 units)

1999 JT900-B1 (3,097 units)

1999 JT1100-B2 (4,193 units)

1999 JH1100-A4 (1,982 units)

Units: 23,240

Problem: Engine backfire can rupture the fuel pump diaphragm causing fuel leakage; possible fire/explosion if ignition source present

KAWASAKI MOTOR CORP., U.S.A.

(Santa Ana, CA)(990167T)

Year: 1999

Models: Ultra 150

Units: 2,859

Problem: Overtightening of steering cable mounting nut may cause nut to fail causing loss of steering control

MASTERCRAFT BOAT COMPANY

(Vonore, TN)(990151T)

Year: 1999

Models: Maristar 205V, ProStar 205 V & X-Star

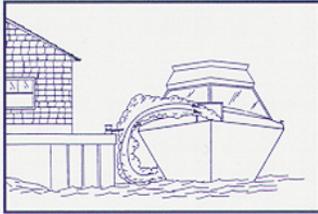
Units: 554

Problem: Possible friction between fuel tank and shaft coupler may damage fuel tank; possible fire or explosion if ignition source present

WARNING

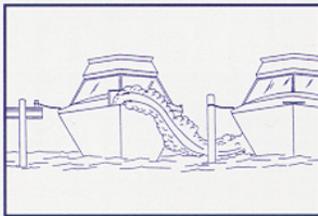
These Conditions May Cause Carbon Monoxide to Accumulate

Blockage of exhaust outlets



can cause carbon monoxide to accumulate in the cabin and cockpit area — even when the hatches, windows, portholes and doors are closed.

Exhaust from another vessel



that is docked or anchored alongside your boat can emit poisonous carbon monoxide gas into the cabin and cockpit of your boat.

The "station wagon effect," or backdrafting,



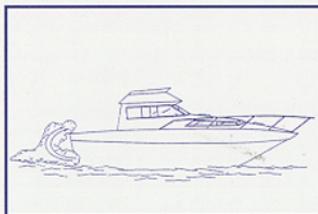
can cause carbon monoxide to accumulate inside the cabin, cockpit and bridge when operating the boat at a high bow angle or with improper or heavy loading.

The "station wagon effect," or backdrafting,



can also cause carbon monoxide to accumulate inside the cabin, cockpit and bridge when the boat is underway using protective weather coverings.

Slow speeds or having boat stopped (idling)



in the water can cause carbon monoxide gas to accumulate in the cabin, cockpit and bridge. A tail wind (force of wind entering from aft section of yacht) can also increase accumulation.

MERCURY MARINE

(Fond du Lac, WI)(000077T)

Year: 2000

Models: MerCruiser inboards and sterndrives:

MCM 4.3L w/ serial nos.:
0L647917 - 0L658366

MCM 4.3L w/ serial nos.:
0L654815 - 0L658152

MCM 5.0L w/ serial nos.:
0L654187 - 0L658223

MCM 5.7L w/ serial nos.:
0L654116 - 0L658145

MCM 5.7L w/ serial nos.:
0L654602 - 0L658145

MCM 350 MAG MPI w/ serial nos.:
0L654350 - 0L656214

MCM 7.4L MPI w/ serial nos.:
0L644495 - 0L655222

MCM 454 MAG MPI w/ serial nos.:
0L604282 - 0L632796

MCM 502 MAG MPI w/ serial nos.:
0L632682 - 0L632764

MIE 5.7L w/ serial nos.:
0L393670 - 0L395314

MIE 350 MAG MPI w/ serial nos.:
0I395246 - 0L396029

MIE 7.4L MPI w/ serial nos.:
0L395656 - 0L395724

MIE 454 MAG MPI w/ serial nos.:
0L395915 - 0L396234

MIE 8.2L MPI w/ serial nos.:
0L395753 - 0L395767

Units: 2,108

Problem: Stainless steel electric fuel pump could crack causing fuel leakage; possible fire/explosion if ignition source present

To find out more about making boating safer—including how you can prevent carbon monoxide poisoning on recreational boats—contact:

National Marine Manufacturers Association

200 East Randolph Drive
Suite 5100
Chicago, IL 60601-6528
www.nmma.org
312.946.6200

United States Coast Guard

Office of Boating Safety
CG Headquarters G-OPB-3
2100 Second Street SW
Washington, DC 20593
www.uscgboating.org
202.267.0984

American Boat & Yacht Council, Inc.
3069 Solomon's Island Road
Edgewater, MD 21037-1416
www.abyc.com
410.956.1050

MERCURY MARINE

(Fond du Lac, WI)(990173T)
Year: 1998 and 1999
Models: Mercury and Mariner 225/250 HP, 3.0 Litre (Carb/EFI) XL, CXL, XXL and CXXL
3.0 Litre (OptiMax) XL, CXL, XXL and CXXL with serial nos.: 0G644802 thru 0G870075
Units: 6,830
Problem: Steering arm attaching bolt may fail; possible loss of steering control

MERCURY MARINE

(Fond du Lac, WI)(000078T)
Year: 1999
Models: MerCruiser High Performance 900 SC engines w/ serial nos.: 0L640007 and below
Units: 57
Problem: Fuel line between fuel filter and carburetors could crack causing fuel leakage; possible fire/explosion if ignition source present

PRO-LINE BOATS

(Crystal River, FL)(990192T)
Year: 2000
Models: All boats with breaker box manufactured by ESI South, Inc.
Units: 147
Problem: Breaker box may contain non ignition-protected circuit breakers; possible fire/explosion if fuel or vapor source present

PURSUIT/S2 YACHTS, INC.

(Fort Pierce, FL)(000106S)
Year: 2000
Models: 2260 Denali w/ HINs:
SSUF2099G900 - SSUF2107K900
2460 Denali w/ HINs:
SSUF4362F900 - SSUF439IL900
Units: 39
Problem: Blower warning label missing

RIVIERA CRUISER

(Columbia City, IN)(990117S)

Year: 1999

Models: Pontoon Boats equipped with built-in Fikes Plastics Fuel Tanks w/ serial nos: 904001 - 905159

Units: 97

Problem: Fuel tank leakage; possible fire or explosion if ignition source present

TRACKER MARINE

(Springfield, MO)(990157T)

Year: 1999 and 2000

Models: MH 170 w/ HINs: BUJ35957F900 - BUJ40702H900
MH 180 w/ HINs: BUJ19949B999 - BUJ40703H900

Units: 188

Problem: Bow structure may crack in rough water conditions; possibility of flooding

YAMAHA MOTOR CORPORATION

(Cypress, CA)(000150T)

Year: 1994 - 2001

Models 115 - 250 HP outboard motors equipped with fuel management system

Units: 102,965

Problem: Sender units (aka fuel flow sensors) could leak fuel; possible fire or explosion if ignition source present

The following are the other campaigns still in progress that began before December 1999, the date of the last issue of the Boating Safety Circular:

ALUMACRAFT BOAT CO.

(St. Peter, MN)(950114T)

Year: 1995

Models: Trophy 190

Units: 31

Problem: Attwood Fuel Fill Recall

AMERICAN BOAT MANUFACTURING

(Alma, MI)(950117T)

Year: 1995 & 1996

Models: 20' Raven, 24' Raven, 24' Stinger, 24' Ultra

Units: 12

Problem: Attwood Fuel Fill Recall

AMERICAN SUZUKI MOTOR CORPORATION

(Brea, CA)(990116T)

Year: 1998 and 1999

Models: DF60 and DF70

Units: 1,769

Problem: Shift rod connecting pin and clip may fall out; potential loss of shifting control

ATTWOOD CORPORATION

(Lowell, MI)(various campaign nos.)

Year: Boats manufactured by various companies since May 2, 1994

Models: Various model boats equipped with angled vented and non-vented deck fuel fills

Series Description

No.

- 3660 Non-Vented Black Angled Deck Fill
- 3660 Non-Vented White Angled Deck Fill
- 3660 Vented Black Angled Deck Fill
- 3660 Vented White Angled Deck Fill
- 3660 Vented Off-White Angled Deck Fill
- 3660 Vented Black Angled Deck Fill With Rotated Graphics

Problem: Under abusive conditions (such as exerting extreme pressure or force on the gas fill nozzle during fueling), **Angled** deck fills may break causing fill tube to separate from deck flange resulting in fuel discharge into bilge; potential fire/explosion if ignition source present

BACK COUNTRY BY CHAMPION

(Sarasota, FL)(991626S)

Year: 1996 - 1999

Models: 151 Pro Guide

Units: 55

Problem: Level Flotation

BAJA BOATS INC.

(Bucyrus, OH)(970122T)

Year: 1997 & 1998

Models: 1997: 232, 252, 272, 302,
192 Islander, 212 Islander,
232 Islander, 252 Islander,
272 Islander, 24 Outlaw,
32 Outlaw, 38 Special,
29 Outlaw (Single),
29 Outlaw (Twin), Hammer,
36 Outlaw
1998: 272, 322, 212 Islander,
232 Islander, 252 Islander,
Hammer, 29 Outlaw (Twin),
38 Special, 36 Outlaw

Units: 88

Problem: Captains Call exhaust wiring routed too close to engine; insulation may melt causing a short circuit; possible fire/explosion if fuel or vapor source present

BAJA BOATS INC.

(Bucyrus, OH)(940199T)

Year: 1993 & 1994

Models: Blast and Splash

Units: 483

Problem: Missing ignition-protection of positive battery cable connection at starter solenoid terminal; possible fire/explosion if fuel or vapor source present

BAYLINER MARINE CORP.

(Everett, WA)(950285S)

Year: 1995

Models: 1903 Trophy

Units: 28

Problem: Level Flotation

BAYLINER MARINE CORP.

(Everett, WA)(990014S)

Year: 1998

Models: 1804 PC Capri

Units: 173

Problem: Level Flotation

BAYLINER MARINE CORP.

(Everett, WA)(990015S)

Year: 1999

Models: 2350 BC & BD Capri and 2352 BF Capri

Units: 20

Problem: Engine compartment does not ventilate properly

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(970033T)

Year: 1993 - 1995

Models: 1993 XP (5852) 1994 XP (5854)
1995 XP (5857) 1994 SP (5870)
1995 SP (5873) 1994 SPX (5871)
1995 SPX (5874) 1994 SPI (5872)
1995 SPI (ALL) 1995 XP800 (5856)
1995 GTS (5815) 1995 GTX (ALL)

Units: 126,228

Problem: Potentially defective fuel filler necks may cause fuel leakage; possible fire/explosion if ignition source present

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(980165T)

Year: 1998

Models: Speedster and Challenger 1800 jetboats

Units: 2,265

Problem: Seat swivel plates may crack or break; operator or passengers may fall; potential for injury

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(970087T)

Year: 1997

Models: Sea Doo GSX LTD

Units: 2,785

Problem: Potentially defective intake grate screws may loosen; possible loss of steering control

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(970058T)

Year: 1997

Models: Sea Doo Speedster Jet Boat

Units: 1,963

Problem: Steering cable nut may loosen and cause a non-steer condition when turning to port

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(970032T)

Year: 1997

Models: Sea Doo GTS

Units: 779

Problem: Fuel tank pressure relief valve may separate causing fuel leakage; possible fire/explosion if ignition source present

BOMBARDIER MOTOR CORP. OF AMERICA

(Benton, IL)(960075T)

Year: 1996

Models: 5620 GTX

Units: 8,896

Problem: Potentially defective seat hooks; seat may come off; water may enter hull

BOSTON WHALER, INC.

(Edgewater, FL)(950129T)

Year: 1995 & 1996

Models 18' Rage w/ HINs:

BWCNA002F596 - BWCNA038H596

17' Dauntless w/ HINs:

BWCWA093A595 - BWCWA531H596

Units: 465

Problem: Attwood Fuel Fill Recall

BUMBLE BEE BOATS

(Tullahoma, TN)(981606S)

Year: 1994 - 1999

Models: 180SS

Units: 36

Problem: Level Flotation

CHAMPION BOATS

(Olive Branch, MS)(950138T)

Year: 1995 & 1996

Models: 140 Evolution, 156 SC Cont, 168 SC Cont, 171 DC Cont, 171 SC Cont, 176 F/H Elite, 176 SC Cont, 176 F/H Cont, 176 F/S Cont, 181 DC Cont, 181 DCX Elite, 181 SCX Elite, 181 SC Cont, 181 DC Tourn, 181 SX Cont, 186 Bass/Bay, 186 DCX Elite, 186 F/S Tourn, 186 SC Cont, 186 SCX Elite, 186 F/S Cont, 190 DC Cont, 190 DCX Cont, 190 Fishhunter, 190 SX Cont, 190 DCX Elite, 190 F/H Elite, 190 SCX Elite, 190 SCX B/O, 201 DCR Elite, 202 DC Cont, 202 DCX Elite, 202 F/S Cont, 202 F/S Elite, 202 SC Cont, 204 DCX B/O, 204 DCX Elite, 221 DCX Elite

Units: 1,763

Problem: Attwood Fuel Fill Recall

CHAPARRAL BOATS

(Nashville, GA)(950161T)

Year: 1994 & 1995

Models: 1935 SS, 2135 SS & 2335 SS

Units: 438

Problem: Attwood Fuel Fill Recall

COBALT BOATS

(Neodesha, KS)(990027T)

Year: 1997 - 1999

Models: 293

Units: 152

Problem: Engine compartment bulkhead not sufficiently sealed; danger of carbon monoxide poisoning

DURACRAFT MARINE CORP.

(Delhi, LA)(950152T)

Year: 1994, 1995 & 1996

Models: 1648 Bass, 1648 SV-C, 1648 SVCRC,
1648 SVCRS, 1648 Bass, 1750 Bass,
1754 Bass, 1860 Bay, 1860 Com,
1860 DC, 1860 DLX, 1860 FNS,
1860 MP, 2060 Bay,
2060 Com, 2060 DLX, 2060 FNS

Units: 161

Problem: Attwood Fuel Fill Recall

EUROSPORT MARINE PRODUCTS INC.

(Panama City, FL)(981576S)

Year: 1998

Models: Center Console

Units: 10

Problem: Level Flotation

FABRO MARINE GROUP, INC.

(Milton, FL)(950158T)

Year: 1995 & 1996

Models: CH-16 with HINs:

FAB16434B595 - FAB16470G596

CH-17 with HINs:

FAB17547L495 - FAB17630G596

Units: 130

Problem: Attwood Fuel Fill Recall

FOUR WINNS

(Cadillac, MI)(950226T)

Year: 1995 & 1996

Models: 170 Horizon I/O with HINs:

FWNMS032G495 - FWNMS205H596

170 Horizon O/B with HINs:

FWNMT020G495 - FWNMT134H596

190 Horizon I/O with HINs:

FWNMA060G495 - FWNMA113H596

192 I/O with HINs:

FWNMC002G495 - FWNMC030E595

190 Horizon O/B with HINs:

FWNMB009G495 - FWNMB033H596

200 Horizon I/O with HINs:

FWNMD025G495 - FWNMD079H596

200 Horizon O/B with HINs:

FWNME005G495 - FWNME008H596

FOUR WINNS (cont'd)

(Cadillac, MI)(950226T)

Year: 1995 & 1996

Models: 140 Fling with HINs:FWNMR051G495
- FWNMR110H596

214 Candia with HINs:

FWNCW003H495 - FWNCW019H596

220 Horizon I/O with HINs:

FWNCF006G495 - FWNCF047H596

240 Horizon I/O with HINs:

FWNCG006G495 - FWNCG067H596

195 Sundowner I/O with HINs:

FWNMH003H495 - FWNMH017H596

195 Sundowner O/B with HIN:

FWNMJ001G596

205 Sundowner I/O with HINs:

FWNCK006G495 - FWNCK052H596

205 Sundowner O/B with HINs:

FWNCL070K495 - FWNCL014H596

225 Sundowner I/O with HINs:

FWNCM009G495 - FWNCM042H596

245 Sundowner I/O with HINs:

FWNCN005G495 - FWNCN049H596

199 Horizon with HINs:

FWNMP001E596 - FWNMP009H596

191 Unlimited with HIN:

FWNMU001G596

171 Unlimited with HINs:

FWNMV001A596 - FWNMV062H596

203 Coast Runner with HINs:

FWNCY002J495 - FWNCY023H596

Units: 8,551

Problem: Attwood Fuel Fill Recall

GLOUCESTER FIBERGLASS

(Gloucester, VA)(981571S)

Year: 1996 - 1998

Models: Eagle 164

Units: 22

Problem: Maximum weight and maximum persons
capacities overrated; Level Flotation

GLOUCESTER FIBERGLASS

(Gloucester, VA)(981570S)

Year: 1996 - 1998

Models: Eagle 180 and Eagle 196

Units: 20

Problem: Level Flotation

GODFREY MARINE

(Elkhart, IN)(950171T)

Year: 1995 & 1996

Models: FD196 OB w/ HINs:
GDYM1646A595 - GDYM3042G596
FD206 IO w/ HINs:
GDYT7351G495 - GDYT2517F595
FD206 OB w/ HINs:
GDYG7381G495 - GDYG3003G595
FD216 IO w/ HINs:
GDYV1023G495 - GDYV2561G596
FD226 OB w/ HINs:
GDYP1719A595 - GDYP3053G596
FD230 IO w/ HINs:
GDYZ1692A595 - GDYZ2464F596
FD230 OB w/ HINs:
GDYY1027G495 - GDYY3017G596
FD236 IO w/ HINs:
GDYK7385G495 - GDYK2308E595
FD246 IO w/ HINs:
1995 & 1996
GDYF1018F495 - GDYF3016G596
FD246 OB w/ HINs:
GDYD7322F495 - GDYD2582G596
SD176 OB w/ HINs:
GDYA1034H495 - GDYA3059G596
SD185 IO w HINs:
GDYE1076H495 - GDYE2410E595
SD2000 IO w/ HINs:
GDYC7331F495 - GDYC3069G596
SD205 IO w/ HINs:
GDYH1045H495 - GDYH3075H595

Units: 979

Problem: Attwood Fuel Fill Recall

**GRUMMAN BOATS DIV. OF
OMC ALUMINUM BOAT GROUP**

(Waukegan, IL)(961488S)

Year: 1992 - 1995

Models: 15' Sportboat

Units: 544

Problem: Level Flotation

HARRIS-KAYOT, INC.

(Fort Wayne, IN)(950101S)

Year: 1995

Models: Harris Legend and Kayot UltraCat

Units: 92

Problem: Insufficient blower capacity in powered ventilation system

JAVELIN BOATS

(Old Hickory, TN)(961493S)

Year: 1990 - 1993

Models: 1993 - 1996 360FS Fish & Ski

1996 369 Bass

1993 - 1996 370A Bass

1993 - 1996 379 Bass

1990 - 1996 389 Bass

Units: 3,270

Problem: Level Flotation

JETCRAFT OF OREGON

(Medford, OR)(950187T)

Year: 1994 & 1995

Models: 1872CC, 2S1972TC, AT1972TC

BL-AT2172TC	BL-H2272TC	BL-3S2072TC
BL-3S2172TC	BL-3S2372TC	BL-OB2072TC
BL-OB2172TC	BL-OB2272TC	BL-SD2172TC
BW-30326840P	CW-AT1960TC	CW-OB1860CC
CW-OB1760OP	CW-OB1760TC	CW-OB1860CC
CW-OB1860TC	CW-2S1866CC	CW-2S1960TC
CW-3S2066TC	FW-2S1866CC	FW-2S1966CC
FW-3S2066CC	FW-3S1966CC	FW-3S1966TC
FW-3S2066TC	FW-3S2166CC	FW-3S2166TC
FW-AT1966TC	FWOBR1766TC	FW-OB1866CC
FW-OB1766TC	FW-OB1866TC	FW-OB1966TC
FW-OB2066TC	FW-GO1766OP	FW-GO1866OP
FW-GO2066OP	JB-OB1572OP	JB-OM1572CC
JB-OB2072OP	JS-AT1556FC	JS-AT1764FC
JS-L1256FC	JS-L1556FC	JS-L1566FC
JS-L1764FC	OB1760TC	OB1860TC
WH-3S2172CC	WH-3S1972TC	WH-3S2072TC
WH-3S2172TC	WH-3S2272TC	WH-OB2072CC
WH-OB2072TC	YU-OM1760CC	YU-OM1766CC
YU-OM1766TC	YU-OM1860CC	YU-OM1860TC

Units: 234

Problem: Attwood Fuel Fill Recall

LANDAU BOATS, INC.

(Lebanon, MO)(971531S)

Year: 1995 - 1997

Models: Crappie 150

Units: 135

Problem: Level Flotation

LOGIC MARINE CORP.

(Durham, NC)(961495S)

Year: 1995 - 1996

Models: Logicraft 2.7 and Logicraft 9
with HINs 124 and below

LogiCraft 3.6 and Logicraft 12
with HINs 320 and below

Logic V15 with HINs 120 or below

Units: 280

Problem: Level Flotation

MASTERCRAFT BOAT COMPANY

(Vonore, TN)(950282T)

Year: 1994 - 1995

Models: Maristar 200 VRS

Units: 318

Problem: Chafing of fuel tank may cause leakage;
possible fire/explosion if ignition source present

MASTERCRAFT BOAT COMPANY

(Vonore, TN)(990151T)

Year: 1999

Models: Maristar 205V, ProStar 205 V & X-Star

Units: 554

Problem: Possible friction between fuel tank and
shaft coupler may damage fuel tank; possible fire
or explosion if ignition source present

MERCURY MARINE

(Fond du Lac, WI)(980044T)

Year: 1997 & 1998

Models: Sport Jet 175XR2 pump units with serial
numbers: OE151580 through OE289626

Units: 4,396

Problem: Nozzle assembly screws may lose clamp
load; possible loss of steering control

MERCURY MARINE

(Fond du Lac, WI)(980158T)

Year: 1998

Models: Mercury & Mariner 15 (4 strokes) with
serial nos.: 0G590000 - 0G736819

Units: 4,355

Problem: Reverse lock link rod defective;
potential unexpected boat stoppage

MERCURY MARINE**QUICKSILVER ACCESSORIES DIV.**

(Fond du Lac, WI)(990037T)

Models: Galvanic isolators (Part No. 18478A 2)
sold as Quicksilver accessories shipped between
November 1998 and February 12, 1999. The
units have a four character Julian date code that
indicates the date the unit was manufactured. The
first three characters identify the day of the year,
and the fourth character is the last digit in the year
(therefore, 3028 indicates the 302nd day of 1998,
and 0409 indicates the 40th day of 1999). Any
galvanic isolators with date codes between 3028
and 0409 should be returned to the manufacturer
immediately.

Units: 1,117

Problem: Improper diode in galvanic isolator
may cause failure of grounding function;
possibility of fire or electrical charge transmission
throughout boat or into water around the boat

MERCURY MARINE

(Fond Du Lac, WI)(940307T)

Year: 1994

Model: Mercury High Performance MCM V-8
sterndrives with 2 BBL carburetors with
serial numbers: OF213347 to OF374181
MerCruiser MCM V-6 and V-8
stern drives with serial numbers:
OF353000 to OF421726
MerCruiser MIE V-8 Ski and inboard
engines with serial numbers:
OD798385 to OF419755

Units: 27,999

Problem: Fuel filter susceptible to corrosion and
could cause fuel leak; possible fire/explosion if
ignition source present

MERCURY MARINE

(Fond du Lac, WI)(990173T)

Year: 1998 and 1999

Models: Mercury & Mariner 225/250 HP,
3.0 Litre (Carb/EFI)
XL, CXL, XXL and CXXL
3.0 Litre (OptiMax)
XL, CXL, XXL and CXXL
with serial nos.: 0G644802 thru 0G870075

Units: 6,830

Problem: Steering arm attaching bolt may fail;
possible loss of steering control

MERCURY MARINE

(Fond du Lac, WI)(970059T)

Year: 1997

Models: 2 barrel carbureted stern drive engines:
MCM 3.0LX with serial nos:
OKO37386 - OK155525
MCM 4.3LX with serial nos:
OKO24742 - OKO24773 and
OKO38575 - OK156789
MCM 5.7L with serial nos:
OKO24816 - OKO24967 and
OKO38516 - OK156871

Units: 5,975

Problem: Potentially defective backfire flame
arrester; possible fire/explosion if fuel/vapor
source present

MERCURY MARINE

(Fond du Lac, WI)(980159T)

Models: 1998 15 (4-Stroke) Mercury/Mariner
outboards w/ serial nos.:

0G590000 - 0F737315

1999 9.9/15 (4-Stroke) Mercury/Mariner
outboards w/ serial nos.:

0G765003 - 0G772553

Units: 5,039

Problem: Motor mounts could separate; engine
might fall off boat

MERCURY MARINE

(Fond du Lac WI)(960077T)

Year: 1994 and 1995

Models: Commander 3000 remote controls

Units: 129,839

Problem: Improperly hardened gear in
Commander 3000 remote controls built between
June 1, 1994 and September 1, 1995 could fail;
possible loss of throttle and/or shift control

MERCURY MARINE

(Fond du Lac, WI)(980122T)

Year: 1998

Models: 20/25 (2-Stroke) & 20 Jet outboards with
serial nos.: 0G683156 - 0G686362

Units: 1,376

Problem: Possible loss of flywheel; danger of
personal injury

OUTBOARD MARINE CORP.

(Waukegan, IL)(980020T)

Year: 1998

Models: Johnson & Evinrude Crossflow
V4 outboards:
90TSLEC, 115TSLEC, 115HLEC,
115TSXEC, 115HXEC

Units: 1,942

Problem: Use of incorrect steering connector kit
may cause excessive wear on steering system
components

OUTBOARD MARINE CORP.

(Waukegan, IL)(960042T)

Year: 1996

Models: Johnson and Evinrude outboard motors
equipped with electric start

Units: 36,669

Problem: Potentially defective engine stop switch;
engine might not stop if operator ejected

PREMIER MARINE

(Wyoming, MN)(950217T)

Year: 1994 & 1995

Models: All pontoon boat models manufactured between Oct. 1, 1994 and July 31, 1995 equipped with built in fuel tanks

Units: 370

Problem: Attwood Fuel Fill Recall

PRO-LINE BOATS

(Crystal River, FL)(950219T)

Year: 1995 & 1996

Models: 192-S with HINs:

PLCST025J495 - PLCST060F595

201-S with HINs:

PLCWC002A595 - PLCWC049G595

210-S with HINs:

PLCSA033J495 - PLCSA005G596

240-S with HINs:

PLCSG028J495 - PLCSG038H596

251-W with HINs:

PLCWA021J495 - PLCWA030H596

Units: 774

Problem: Attwood Fuel Fill Recall

PRO-LINE BOATS

(Crystal River, FL)(980233T)

Year: 1997 - 1999

Models: 1997: 2810 W/A, 2700 Sport, 251 W/A

1998: MM2810W/A, SJ2700 Sport,

WA251 W/A, WW2610 W/A

1999: MM2810 - W/A, SJ2700 - Sport,

WA251 - W/A, 2610 W/A

Units: 651

Problem Sea Land sani pump used to drain cockpit deck fish boxes may have a circuit board subject to corrosion/short circuit

PURSUIT FISHING BOATS DIV. OF TIARA YACHTS

(Ft. Pierce, FL)(980041T)

Year: 1995 - 1997

Models: 2870 Offshore & 2870 Walkaround

Units: 185

Problem: Novatron 110 V shore power units wired incorrectly; possible shock hazard

RANGER BOATS

(Flippin, AR)(950163T)

Year: 1995 & 1996

Models: Rebel 158, Rebel 1585, 397S, 397XT, 461S

Units: 556

Problem: Attwood Fuel Fill Recall

REGAL MARINE INDUSTRIES

(Orlando FL)(940247T)

Year: (see below)

Models: Commodore 290/300 with hull nos.: JJ011 through JJ178

Units: 167

Problem: Hull to deck joint separation between swim platform and sheerline; under some conditions hull leakage may occur

REGAL MARINE INDUSTRIES

(Orlando, FL)(950223T)

Year: 1996

Models: 182 with HINs:

RGMA B547F596 - RGMA B610H596

176 with HINs:

RGMA S988F596 - RGMA S999F596

176 with HINs:

RGMA T011F596 - RGMA T081H596

202 with HINs:

RGMA B C032F596 - RGMA B C079H596

202 with HINs:

RGMA B E226F596 - RGMA B E236H596

222 with HINs:

RGMA D A212G596 - RGMA D A215H596

222 with HINs:

RGMA D P074F596 - RGMA D P076H596

222 with HIN: RGMDE095F596

Units: 199

Problem: Attwood Fuel Fill Recall

RIVIERA CRUISER

(Columbia City, IN)(990117S)

Year: 1999

Models: Pontoon Boats equipped with built-in Fikes

Plastics Fuel Tanks w/ serial nos:
904001 - 905159

Units: 97

Problem: Fuel tank leakage; possible fire or explosion if ignition source present

SEA RAY BOATS

(Knoxville, TN)(970080T)

Year: 1997

Models: 190BR & 210BR

Units: 1,259

Problem: Abrasion of fuel vent line by alternator; possible fire/explosion if ignition source present

SEASWIRL BOATS

(Waukegan, IL) (970108S)

Year: 1992 - 1997

Models: 182CC O/B w/ HINs:

BRCJ001AH293 - BRCJ086BF494

1730 CC O/B w/ HINs:

BRCJ001CH495 - BRCJ046EA797

1850CC O/B w/ HINs:

BRCP001DG596 - BRCP024DK697

1850DC O/B w/ HINs:

BRCK001DG596 - BRCK072EB797

200WA O/B w/ HINs:

BRCS001AH495 - BRCS198AG595

1850WA O/B w/ HINs:

BRCS001BG596 - BRCS062CB797

180BR I/O (V6 & V8) w/ HINs:

BRCD001BH394 - BRC0156BB797

188 SPYDER I/O w/ HINs:

BRCX001AH192 - BRCX200CF494

198 SPYDER I/O w/ HINs:

BRCX002DH495 - BRCX016FA797

Units: 2,190

Problem: Insufficient flotation

**SKI CENTURION DIV. OF
FINELINE INDUSTRIES, INC.**

(Merced, CA)(970084T)

Year: 1997

Models: Ski Centurion: Elite Lapoint,
Elite Bowrider, Elite V Drive,
Falcon Sport, Sport Bowrider, Wave,
Pro Am, Pro Am Closed Bow
Ski Supreme: 210 Medalist,
Competition Series, V-Drive

Units: 154

Problem: Potentially defective rudder may break; possible loss of steering control

SMOKER CRAFT

(New Paris, IN)(961478S)

Year: 1995 - 1996

Models: 17' Northwood Pro Tourney

Units: 190

Problem: Maximum weight and maximum persons capacities overrated; Level Flotation

STARCRAFT MARINE LLC

(Topeka, IN)(980210T)

Year: 1999

Models: Seville 240, Seville 241, Stardeck 200 E,
Stardeck 240 E, Stardeck 241 E,
Stardeck 261 E

Units: 106

Problem: Aqua Signal blue navigation lights conflict with Navigation Rules; increased danger of collision

STARCRAFT MARINE LLC

(Topeka, IN)(990017S)

Year: 1999

Models: Aurora 2000, Aurora 2015, Aurora 2415,
Sun Lounger 200, Sun Lounger 205,
Sun Lounger 245

Units: 104

Problem: All-round navigation light fails to display 360° visibility with canvas top installed; increased danger of collision

STRATOS BOATS

(Old Hickory, TN)(950127T)

Year: 1995 & 1996

Models: 1600 Sportsman, 1700 Sportsman,
1900 Sportsman, 2100 Sportsman,
Hydra Sports 16 Skiff,
Hydra Sports 17 Skiff,
Hydra Sports 19 Skiff,
Hydra Sports 21 Skiff,
Quest 160 CC, Quest 170 CC,
Quest 190 CC, Quest 220 CC

Units: 154

Problem: Attwood Fuel Fill Recall

SUGAR SAND MARINE

(Fargo, ND)(940224T)

Year: 1994

Models: Mirages equipped with Mercury
Sport Jet 90

Units: 182

Problem: Missing ignition-protection of positive
battery cable connection at starter solenoid
terminal; possible fire/explosion if fuel or vapor
source present

TIARA YACHTS

(Holland, MI)(980003S)

Year: 1997 & 1998

Models: 2900 Coronet, 3500 Open, 3500 Express
&
3400 Express w/ gas engines

Units: 60

Problem: Non-ignition protected circuit breakers
in areas open to engine room; possible fire/
explosion if fuel or vapor source present

TRACKER MARINE

(Springfield, MO)(990157T)

Year: 1999 and 2000

Models: MH 170 w/ HINs:
BUJ35957F900 - BUJ40702H900
MH 180 w/ HINs:
BUJ19949B999 - BUJ40703H900

Units: 188

Problem: Bow structure may crack in rough water
conditions; possibility of flooding

TRACKER MARINE L.P.

(Springfield, MO)(940141T)

Year: 1994

Models: Pro 18 equipped with Mercury Sport Jet
90

Units: 223

Problem: Missing ignition-protection of positive
battery cable connection at starter solenoid
terminal; possible fire/explosion if fuel source
present

TRACKER MARINE L.P.

(Springfield, MO)(961490S)

Year: 1996

Models: Super GV14T with HINs:
BUJ16639H596 - BUJ36157E696

Units: 87

Problem: Level Flotation

TRACKER MARINE L.P.

(Springfield, MO)(980078T)

Year: 1998

Models: Tahoe Q5S with HINs:
BUJ72128I798 - BUJ91457D898

Units: 132

Problem: Fuel fill hose abrasion may cause fuel
leakage; possible fire/explosion if ignition source
present

VOLVO PENTA OF THE AMERICAS, INC.

(Chesapeake, VA)(980145T)

Year: 1997

Models: BY engines w/ serial nos.:
4110155491 - 4110159682

Units: 2,000

Problem: Improperly machined fuel pump inlet
fitting may cause fuel leakage; possible fire/
explosion if ignition source present

W.E. CONNERY BOAT BUILDER

(Cape Coral, FL)(941332S)

Year: 1995

Models: Flats King

Units: 12

Problem: Level Flotation

DEPARTMENT OF TRANSPORTATION
Coast Guard
[USCG-2001-8680]

Coast Guard Advisory to Recreational Boaters on Carbon Monoxide Hazard Caused by Generator Exhaust

AGENCY: Coast Guard, DOT.

ACTION: Consumer advisory notice.

SUMMARY: The Coast Guard advises owners and operators of boats to turn off gasoline-powered generators with transom exhaust ports when the swim platform on the stern is in use. The Coast Guard further advises that swimmers should not enter the cavity of a boat designed with a generator emitting exhaust into the cavity between the swim platform and the transom of the vessel. The Coast Guard is concerned about the serious health risk from carbon monoxide poisoning and seeks to prevent loss of life and personal injury.

FOR FURTHER INFORMATION

CONTACT: Philip Cappel, Chief, Recreational Boating Product Assurance Division, Commandant (G-OPB-3), 2100 Second Street SW., Washington, DC 20593, telephone (202) 267-0988, e-mail pcappel@comdt.uscg.mil. Documents mentioned in this notice as being available in the docket, are part of docket USCG-2001-8680 and are available for inspection or copying at

the Docket Management Facility, U.S. Department of Transportation, room PL-401, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also find this docket on the Internet at <http://dms.dot.gov>.

SUPPLEMENTARY INFORMATION: The Coast Guard was made aware of the deadly combination of generator exhaust and swim platforms through a September 2000 National Institute for Occupational Safety and Health (NIOSH) study of houseboat carbon monoxide deaths on Lake Powell in Arizona. The study showed that the particular design of the stern swim platform on certain models of houseboats created a cavity between the hull of the vessel and the swim platform where the gasoline-powered generator exhaust port is located. When the generator is running the carbon monoxide buildup in this cavity, as well as the swim platform and rear deck space, is so high that it creates an imminent danger of death for anyone who enters the cavity even for a very short period of time. The common practice of keeping generators running to power air conditioning, entertainment centers, and electronic suites while moored or anchored has exacerbated the problem.

The Coast Guard has conducted a preliminary investigation into the

problem and has issued a letter to all known houseboat manufacturers informing them of this hazard and soliciting their plans for reducing the danger.

The problem may not be confined to houseboats, however, since any boat with the generator exhaust located in the transom and a swim platform could present the same lethal hazard. The Coast Guard is expanding its investigation of this problem to include all types of boats.

Previous carbon monoxide warnings and educational materials have concentrated on the hazards created by the exhaust of the main propulsion engines while underway. Although these dangers still exist, the Coast Guard will develop new educational materials to emphasize the additional hazards of using a gasoline-powered generator, especially while not underway.

The Coast Guard warns all boaters that this is an extremely dangerous matter that could result in serious injury or death and advises all boat owners to heed this warning.

Dated: January 12, 2001.

John W. Whitehouse,
Captain, U.S. Coast Guard, Acting Assistant Commandant for Operations.

[FR Doc. 01-1666 Filed 1-19-01; 8:45 am]

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