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BOATING SAFETY CIRCULAR

BOATING SAFETY CIRCULAR / SPRING 2022

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Boating Safety Circular

The *Boating Safety Circular* is a product of the United States Coast Guard's Office of Auxiliary and Boating Safety — Boating Safety Division — Recreational Boating Product Assurance Branch, Commandant (BSX-23), 2703 Martin Luther King Jr Ave SE, Stop 7501 Washington, DC 20593-7501
Email: rbscompliance@uscg.mil

The *Boating Safety Circular* is for information only. No Federal Statutes or Regulations are established or changed in this circular.

www.uscgboating.org
www.safeafloat.com

U.S. Coast Guard Boating Safety is on Facebook; check us out at Facebook.com\USCG Boating Safety.

New Email

We have updated our contact information. To get in touch with us, please use one of the two following email addresses.

micapp@uscg.mil: For all issues related to Manufacturers Identification Codes (MIC), including obtaining a MIC, updating MIC contact information and informing the Coast Guard if your company is going out of business.

rbscompliance@uscg.mil: For any other issue related to recreational boat manufacturer compliance with U.S. Coast Guard safety requirements. ■

Mudboat and Airboat Flotation Exemption to End

The U.S. Coast Guard's Office of Auxiliary & Boating Safety has notified all active mudboat and airboat manufacturers who possess an exemption from USCG flotation requirements in 33 CFR 183 Subchapter F and/or G that the exemption(s) will end on July 31, 2024 and will not be re-issued. No new exemptions from flotation requirements found in 33 CFR 183 Subchapter F and/or G will be issued to mudboat and airboat manufacturers. The notification letter states "Based on our review of the available data, the Coast Guard has determined that it is no longer appropriate to grant these exemptions, and we will be discontinuing the practice."

Below is the text of the letter:

"As you are aware, the Coast Guard has been reviewing the status of exemptions from flotation regulations granted on the basis of where the manufacturer claims the boat would be used.

Based on our review of the available data, the Coast Guard has determined that it is no longer appropriate to grant these exemptions, and we will be discontinuing the practice. We understand that it may take some time for boat manufacturers to come into compliance with applicable flotation regulations found in 33 CFR 183 Subchapter F and/or G, so we will grant one last exemption through the conclusion of model year 2024, which ends on July 31, 2024.

If you have any questions about compliance with flotation regulations, We recommend that you consult the flotation section of the Boatbuilder's Handbook, which can be found here: https://safeafloat.com/wp-content/uploads/2021/04/F-_-G-_-H-Flotation-Final-4-14.pdf

If you still require assistance after reviewing the Boatbuilder's Handbook, please send an email requesting assistance to rbscompliance@uscg.mil and a member of my staff will be happy to help.

Thank you for your cooperation in ensuring the safety of our nation's boaters." ■

Best Manufacturing Practices in Quality Controls for Flotation Foam in Recreational Vessels

"Polyurethane foam is comprised of two parts: Isocyanate, which is typically referred to as Side A, or ISO (sometimes listed as MDI for emissions tracking) and Polyol, referred to as Side B. "

Two-Part Polyurethane Foam is both a versatile and crucial substance found in a wide variety of products including insulation & thermal protection, sound dampening, and marine flotation applications.

Manufacturing Process Controls and Materials Testing is critical when managing the quality of a vessel's flotation foam. Quality Control (QC) is a procedure or set of procedures intended to ensure that a manufactured product or performed service adheres to a defined set of quality criteria or meets the requirements of the manufacturer or foam supplier. QC is similar to, but not identical with, Quality Assurance (QA). While QA refers to the confirmation that specified requirements have been met by a product or service, QC refers to the actual inspection of these elements.

It is important to follow the manufacturers' product specifications when storing and using foam products. Material storage, shelf life, operating temperatures, and procedures are critical to the success of your use of flotation foam materials and your end users' safety while using their recreational vessel.

Material control temperatures are important in any weather, but for polyurethane foam, colder months are particularly important times to pay attention to chemical temperatures and their controls. Foaming with chemicals that are too cold can adversely affect final foam performance, sometimes significantly. It's important to keep your polyurethane chemicals within a consistent temperature range, especially when temperatures drop below freezing. Properly storing your polyurethane chemicals is also critical to maintaining optimal shelf life.

Here are some important facts to remember:

- Do NOT store chemicals at temperatures below 50°F.
- Pre-heat chemicals to 75° – 85/90°F prior to use (85° or 90°F – Depending on Foam Supplier Recommendations). Depending on vessel size, pre-heating will take a minimum of 12 hours and up to 48 hours in an 85°F temperature-controlled room.
- Maintain chemical temperatures of 75° – 85°F during use.

Polyurethane foam is comprised of two parts: Isocyanate, which is typically referred to as Side A, or ISO (sometimes listed as MDI for emissions tracking) and Polyol, referred to as Side B. Reference the products' Safety Data Sheets (SDS) for the proper and safe handling of materials, including the use of personal protective equipment (PPE) like safety glasses, protective gloves, and respirator protection where needed.

NOTE: Manufacturing and process control quality checks should always be performed daily before production. It is imperative to verify both the environment, equipment, and foam materials being used to ensure you have a good foam yield. Marine foam suppliers may have their own unique reference guides that can help you create a daily QC log to make procedures and documentation easy. If your supplier does not have this information, then consider the following to develop your company's own daily QC procedures.

Housekeeping – Ensure you have the recommended PPE, plastic bags to hold chemical of timed shots, scale and box for weighing chemical bags, calculator for computing ratios, stopwatch for timing reactivity, thin sturdy wire (or similar) for checking reactivity (string test), a small designated "Foam Test" box for holding dispensed chemical.

Manufacturing and Process Control Measures and Quality Control Logs

Quality Control logs can help you stay organized and ensure that all critical items are verified. However, not all QC logs are equally effective, and they are not always properly used. One common problem is that checkpoints are often qualitative

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(vague) such as “Looks good” or “Ok it’s right”. This leaves the inspection open to interpretation and inconsistency. Since the QC log is focused on measurable metrics the QC process becomes quantitative.

Your QC log can be shared with the team before the manufacturing starts and prior to each inspection task to communicate critical requirements and outline what needs to be done right.

The inspection process for a task concludes when all acceptance criteria have been met and all elements of a checklist, including high-risk items, have received sign-off.

QC logs should at a minimum measure and track the following:

- Ratio
- Reactivity
- Disposal of Chemical (Foam) Bag Samples

NOTE: If using a dispensing pour or spray unit, you will want to measure the Throughput or Yield. Check with your foam supplier to determine these metrics.

Ratio

Ratio is the weight comparison for ISO (A) output to the Polyol (B) output. Having the proper ratio is critical to dispensing good foam.

- Check and Record Operating Parameters in your log for the following:
  - Ambient Temp:
  - Foam Temp A (75-85/90°F):
  - Foam Temp B (75-85/90°F):
  - Dispensing Time A:
  - Dispensing Time B:

Dispense a predetermined timed quality sample of ISO (A) into a bag (i.e., 5 or 10 second pour/shot). Now in a new bag, dispense the same predetermined timed quality sample of Polyol (B) into a bag. Make sure to tie off the bags and place them so that the chemical does not run out.

Weigh Chemical Ratio Bag Samples and Check Ratio. With both tied off/sealed bags, you are now ready to weigh the chemical and calculate the ratio. Only record the weight of the chemical itself, not the box or plastic bag. Ensure that the scale tare weight (or zeroed out) with an empty plastic bag.

Remove the empty bag and place the bag of ISO chemical on the scale and record the weight in the QC daily log. Remove the ISO bag and replace it with the Polyol chemical bag and record the weight. Now, divide the Polyol (B) by the ISO (A) to calculate the ratio. Record this value in the B ratio column of the daily log. If the ratio is in the desired range, you can move on to the throughput or yield quality check, but if the ratio is not in the desired range adjustments may be necessary.

ISO Rich vs. Polyol Rich: If the ratio dropped below 100 to 70, the foam would be ISO rich. If the ratio rose to over 100 to 75, the foam would be Polyol rich. If the ratio is not correct, poor foam qualities will result. ISO rich foam can be crunchy, have glassy cells, and result in less yield. Polyol rich foam can be soft and spongy, can shrink and can also result in less yield. Ratios are system specific and provided upon initial setup.

NOTE: If you’re not sure of the proper ratio for your system, please contact foam supplier or foam representative for technical service assistance.

Reactivity

After obtaining your Ratio samples and recording the data in your QC log, Reactivity must be measured and then compared to your foam supplier’s profile in the chemical product information sheet for the two-part foam system. The reactivities can be determined using the String-Gel time and Tack-Free time. The reactions are usually measured in seconds, with the time beginning as soon as the ISO and Polyol components are first mixed together. String-gel and tack-free times can be recorded from the same shot if the string-gel is observed first and tack-free is further observed. It is important to keep the plastic bag off cold floors because it will affect the reactivity times.

Reactivity characteristic times of foam are measured in terms of:

- cream time,
- string-gel time,
- rise time, and
- tack-free time.

Cream time corresponds to the amount

“Ratio is the weight comparison for ISO (A) output to the Polyol (B) output. ”

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of time it takes for the start of bubble nucleation, physically characterized by a change in the mixture's color from a translucent dark brownish liquid to one that is cream-like. String-gel time is the amount of time it takes for the foam to start to polymerize or gel. It can be recognized by the thin strands or strings that can be pulled out of the foam when touching its surface with an object (i.e., tongue depressor or similar apparatus). Rise time is the amount of time it takes for the foam to reach its maximum expansion. Tack-free time is the amount of time it takes for the foam's surface to lose its tackiness. It can be considered as the surface cure time of the foam.

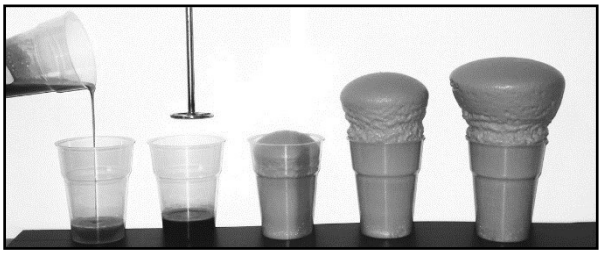
Of these four characteristics, string-gel time and tack-free times are the two criteria upon which performance metrics of the foam are measured. Balance is needed between reaction of the isocyanate and the polyol (gel reaction) in order to produce a polyurethane foam in which the cells are relatively uniform and the foam has specific properties. In practice, the balancing of these two reactions is controlled by many of the parameters being measured on your QC log.

Should string-gel time or tack-free times be out of parameters established by your foam supplier, the result will be "bad" foam and not sufficient to produce the intended floatation characteristics required for the vessel. In any given degradation of the foam composition, the resulting products may not achieve a suitable density (approximately 2-2.5 lbs./ft3) required by polyurethane foams as flotation material.

NOTE: As the percentage of closed cells increases, the product density decreases. The water vapor resistance factor and short-term water absorption also decrease. It can be concluded that water and water vapor more easily migrate in the structure with a relatively lower percentage of closed cells than at higher values of said parameter.

Unbalanced gel and tack-free reactions will produce foams in which carbon dioxide evolves too quickly, forming foams that tend to collapse. A gel reaction that proceeds too rapidly reduces foam-rise, resulting in a high density foam.

"Rise time is the amount of time it takes for the foam to reach its maximum expansion."



Standard laboratory cup mix of a polyurethane foam going through its various stages. Shown for informational purposes only.

NOTE: Only one bag sample is needed to obtain both times. It is easiest to take this bag shot in a large designated "foam" box receptacle. It is important that the foam is not subjected to a cold surface which will cause a heat sink and will provide misleading reactivity times.

Record the following reactivity times in the QC log for the following metrics:

- String-Gel Time
  1. Simultaneously mix the two ratio samples together and start a stopwatch to record the string and tack times.
  2. Allow the foam to rise. When the time elapsed is about ten seconds (obtained from your foam supplier) prior to the target gel time.
  3. "Poke" the rising foam four to twelve inches deep with a sturdy wire. After the initial poke, repeat five-second intervals in a fresh area of the foam surface until the foam sticks to the wire and becomes stringy, like the consistency of gum.
  4. Record the elapsed time once stringy. Allow the stopwatch to continue to run to measure the tack free time.
- Tack-Free Time
  1. Typically, tack-free times are usually about double the string gel time.
  2. Start tapping the top of the foam gently with a tongue depressor or similar apparatus until the foam is no longer sticks.
  3. Record the elapsed time.

NOTE: Ensure both the string-gel and tack-free times are within ten percent of your foam supplier established target times

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for the manufacturing foaming operations.

Once your QC processes have been taken, measured, and verified, daily production can begin. Performing the daily quality control procedures will help assure you maintain high quality foam, resulting in high quality products. Appropriate foam sampling times for different parts are typically determined in the initial setup.

NOTE: This can be accomplished with the assistance of your foam supplier technical service representative.

Disposal of Chemical (Foam) Bag Samples

Before engaging in chemical handling, ensure that your company's process complies with all Local, State, and Federal regulations when handling and disposal of chemicals. Check with your company's management for authorized personnel to handle the chemicals at this stage of the process. DO NOT Engage in this process if you are not trained and qualified to do so. Your company's designated chemical handler should have a defined process to pour the contents of the Polyol bag into the ISO bag and mix the two chemicals thoroughly and quickly pour a small amount of the mixed bag back into the residue Polyol bag to initiate residue reaction for cure. The foam samples bags must be allowed to cure, and then be placed in a designated "Hot Box" or "Hot Area". DO NOT place the curing foam in a dumpster or trash can until the bag has had 24 hours to cool down and become a solid Non-Hazardous Waste. *NOTE: Before engaging in chemical handling, ensure that your company's process complies with all Local, State, and Federal regulations and that your company has trained/qualified personnel to carry out this process*. ■

References

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Disclaimer: *The information included in this article is for informational purposes only and should not be taken as legal, financial, or manufacturing methodology. It is highly suggest consulting your flotation foam supplier before implementing any manufacturing continuous improvements or repairs. It is not intended to replace or define any USCG flotation material regulations and post saturation when subjected to testing as prescribed by CFR183.114.*

"Once your QC processes have been taken, measured, and verified, daily production can begin."

Calendar of Events

ABYC Online Training: https://abycinc.org/events/event_list.asp		
ABYC Standards Week	New Orleans, Louisiana	01/09/2023 – 01/13/2023
National Marine Manufacturers Association (NMMA) Meetings		
International Boatbuilders Exhibition and Conference (IBEX) Trade Show	Tampa, Florida	09/27/2022 - 09/29/2022
Boat and Trade Shows: Worldwide Boat Show Calendar (nmma.org)		
National Association of State Boating Law Administrators (NASBLA)		
Annual Conference	Manchester, New Hampshire	09/27/2022 - 09/30/2022

Websites of Note:

uscgboating.org — U.S. Coast Guard's Boating Safety Division

Facebook.com/USCG Boating Safety — U.S. Coast Guard Boating Safety

rbscompliance@uscg.mil to contact CG-BSX-23

safeafloat.com — Recreational Boating Product Assurance Branch Boat Building Compliance Website

abycinc.org — American Boat and Yacht Council

nmma.org — National Marine Manufacturers Association

nasbla.org — National Association of State Boating Law Administrators (NASBLA)

U.S. Coast Guard Boating Safety is on Facebook; check us out at Facebook.com\USCG Boating Safety.

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Recalls

2022

VOLVO PENTA
Campaign # 22MF0035
Year: 2021
Model(s): D8, D11, D13 and D16 engines
Problem: ?

VOLVO PENTA
Campaign # 22MF0034
Year: 2021
Model(s): D8, D11, D13 and D16 engines
Problem: Software issue involving the Helm Control.

KAWASAKI MOTORS CORP USA
Campaign # 22MF0029
Year: 2020, 2021. 2022
Model(s): JT1500RLF, JT1500RMFNN and JT1500RNFNN
Problem: Front Hatch Cover

WHITE RIVER MARINE GROUP LLC
Campaign # 22MF0005
Year: 2022
Model(s): Various
Problem: Electrical

2021

VOLVO PENTA
Campaign # 21MF0213
Year: N/A
Model(s): Various
Problem: Transfer case may not have correct torque

YAMAHA MOTOR CORP USA
Campaign # 21MF0343
Year: 2021
Model(s): KPT/KXT1800
Problem: Fuel System

RHINO MARINE INC
Campaign # 21CG0014
Year: 2021
Model(s): 14 Lil Bull
Problem: Capacity and Flotation

RANGER BOATS
Campaign # 21MF0381
Year: 2021
Model(s): Ranger 622
Problem: Fuel System

DOMETIC
Campaign # 21MF0428
Year:
Model(s):
Problem: Fuel pump leak

STARCRAFT
Campaign # 21CG0023
Year: 2022
Model(s): Stealth 166 DC
Problem: Capacity Label

VOLVO PENTA
Campaign # 21MF0507
Year: 2021
Model(s): R0040 Schrader Valve
Problem: Fuel System

YAMAHA MOTOR CORP USA
Campaign # 21MF0509
Year: 2022 and 2021
Model(s): TX1800A (AR190), TX1800B (SX190), TP1800A (AR195), TP1800B (SX195), TP1800C (195S), UX1800A (190FSH SPORT), UX1800B (190 FSH DELUXE), UP1800A (195 FSH SPORT), UP1800B (195 FSH DELUXE), KXT1800A (252 FSH SPORT) AND KPT1800A (255 FSH SPORT E) BAOTS
Problem: Fuel System

MERCURY — MOTOGUIIDE
Campaign # 21MF0547
Year: 2021
Model(s):
Problem: GPS system

VOLVO PENTA
Campaign # 21MF0560
Year: 2021
Model(s):
Problem: Control lever

VOLVO PENTA
Campaign # 21MF0561
Year: 2021
Model(s):
Problem:

WHITE RIVER MARINE GROUP LLC
Campaign #: 21MF0574
Year: 2022-2021
Model(s): Bass Tracker Classic, Bass Buggy 16, Bass Buggy 18, Fishing Barge 20, Fishing Barge 22, Fishing Barge 24, Super Guide V16, Super Guide V165, Pro Team 175, Pro Team 190, Pro Team 195, and Pro 170
Problem: Seat

YAMAHA MOTOR CORP USA
Campaign # 21MF0575
Year: 2021
Model(s): GP1800A-W (GP1800R SVHO), GP1800B-W (GP1800R HO), VX1050A-W (VX LIMITED), VX1050B-W / VX1050C-W (VX CRUISER), VX1050D-W / VX1050E-W (VX DELUXE), VX1050F-W (VX), VX1800A-W (VX LIMITED HO), AND VX1800B-W / VX1800C-W (VX CRUISER HO) WAVERUNNERS
Problem: Engine shut-off switch

SEA HUNT BOAT MFG CO INC
Campaign # 21MF0577
Year: 2022
Model(s): Ultra, BX and GameFish
Problem: Fuel System

VOLVO PENTA
Campaign # 21SD0005
Year: No model year
Model(s): D3, D4, D6, V6, and V8 engines
Problem: Lanyard Safety Strap Housing

LIPPET
Campaign # 21MF0212
Year: No model year
Model(s): N/A
Problem: Seat

PARKS MANUFACTURING LLC
Campaign # 21DL0938
Year: 2010-2023
Model(s): 1900 STL
Problem: Capacity Label

SEA PRO BOATS
Campaign #: 21CG0005
Year: 2016-2021
Model(s): 172 Bay
Problem: Flotation

WHITE RIVER MARINE GROUP
Campaign # 21MF0381
Year: 2020-2021
Model(s): Ranger 622
Problem: Fuel Tank

NOVAK ENTERPRISES
Campaign # 21CG0013
Year: 2020-2021
Model(s): Dorado 14
Problem: Capacity Label

YAMAHA MOTOR CORP USA
Campaign # 21MF0344
Year: 2021
Model(s): KPT/KXT 1800
Problem: Electrical and/or Fuel Tank

SKEETER PRODUCTS, INC.
Campaign # 21MF0279
Year: 2021
Model(s): Various Models
Problem: Steering Tiler Arm

NAUTIC STAR, LLC
Campaign #: 21DL0926
Year: 2019-2021
Model(s): 191 Hybrid, 193SC, 215 XTS, 215 XTS SB, 227 XTS, 243 DC, 2102 Legacy, and the 2602 Legacy
Problem: Capacity Label

SEA RAY BOATS
Campaign # 21MF0200
Year: 2021
Model(s): SDX250
Problem: Electrical

YAMAHA MOTOR CORP USA
Campaign # 21MF0187
Year: 2021
Model(s): GP1800A, GP1800B, VX1050 and VX1080
Problem: Electrical

MERCURY
Campaign #: 21SD0004
Year: 2021
Model(s): 85-115 HP 2.1L and 150 HP 3.0L
Problem: Outboard Engines

MALIBU BOATS LLC
Campaign # 21SD0001
Year: 2020-2021
Model(s): Wakersetter
Problem: Electrical

MARLON RECREATIONAL PRODUCTS
Campaign # 21CG0002
Year: 2021
Model(s): SP12
Problem: Flotation

NOVAK ENTERPRISES
Campaign #: 21CG0013
Year: 2020
Model(s): Panga Corvina 14
Problem: Capacity Label

2020

COMPOSITE RESEARCH INC
Campaign #: 20CG0019
Year:
Model(s): Sundance K168D
Problem: Capacity Label and Flotation

MARATHON BOAT GROUP INC
Campaign #: 20CG0007
Year: 2020
Model(s): Otisco 14 Jon
Problem: Capacity Label and Flotation

WARRIOR MANUFACTURING LLC
Campaign #: 20CG0016
Year: 2020
Model(s): Warrior 198
Problem: Capacity Label and Flotation

SEA RAY
Campaign # 20SD0025
Year: 2018-2017
Model(s): 230SLW and SLW230
Problem: Weakness within the supporting fiberglass structure at the rudder

SCOUT BOATS INC
Campaign #: 20CG0021
Year: 2017-2021
Model(s): 175 Sport Dorado
Problem: Flotation

PELICAN INTERNATIONAL INC
Campaign # 20CG0026
Year: 2020
Model(s): Predator 103
Problem: Capacity Label and Flotation

RECREATION UNLIMITED LLC

Campaign #: 20CG0013
Year: 2019-2020
Model(s): Key Largo 1800
Problem: Flotation

LEGEND CRAFT BOATS LLC

Campaign #: 20CG0027
Year: 2015-2021
Model(s): Ambush 1548
Problem: Flotation

TITAN MARINE LLC

Campaign #: 20CG0029
Year: 2019-2021
Model(s): 1656MR
Problem: Capacity Label

RHINO ROTO MOLDING

Campaign #: 20CG0034
Year: 2010-2021
Model(s): Beavertail Final Attack
Problem: Capacity Label

HONDA

Campaign # 20SD0007
Year: No model year
Model(s): Honda Marine accessory key panel kit
Problem: Electrical

SIERRA INTERNATIONAL

Campaign #: 200001T
Year: Not Built by Model Year
Model(s): QI Auto
Problem: Fuel System

SEA RAY BOATS

Campaign # 20SD0019
Year: 2016-2021
Model(s): 250SLN, 250 SLX, 280SLN, 280SLX
Problem: Electrical

MASTERCRAFT

Campaign # 20SD0026
Year: 2019-2021
Model(s): Aviara: 2020 AV32, 2020 AV36 (Stern Drive Versions only)
MasterCraft: Model Year 2019, 2020 and 2021; ProStar, NXT20, NXT22, X22, X24, X26, XT20, XT21, XT22, X-Star; also Model Year 2021 NXT24.
Problem: Fuel System

DOMETIC / SEASTAR SOLUTIONS

Campaign # 20SD0002
Year: 2020
Model(s): Sea Hunt, AXIS, Malibu and Forest River
Problem: Steering

HEYDAY BOATS

Campaign # 20SD0006
Year: 2018-2020
Model(s): 2019 and 2020 WT-2DC and 2018 and 2019 WTSURF
Problem: Ventalation

THUNDER JET BOATS

Campaign # 20SD0011
Year: 2020
Model(s): Various Models
Problem: Electrical

AVIARA BOATS LLC

Campaign # 20SD0024
Year: 2020 and 2021
Model(s): AV32 (Outboard), AV36 (Stern Drive and Outboard)
Problem: Fuel System

MERCURY MARINE

Campaign # 20SD0027
Year: 2020
Model(s): 4.5L, 6.2L, and 8.2L Sterndrive
383 MPI Inboard, and Quicksilver 8.1L Horizon
Mercury Racing 520 and 540
Problem: Water Failure leak

YAMAHA MOTOR CORP
Campaign # 20SD0018
Year: 2019-2020
Model(s): FPT1800A
Problem: Steering

G3 BOATS
Campaign # 20SD0014
Year: 2018-2021
Model(s): 18CCJ/CCJDLX
Problem: Level Flotation

TRITON BOATS
Campaign # 20SD0009
Year: 2018-2020
Model(s): 18 TRX, 189 TRX, 19 TRX
Problem: Level Flotation

KRASH INDUSTRIES
Campaign # 20DL0869
Year: 2020
Model(s): VARIOUS
Problem: Safe Loading and Hull ID Number

MERCURY
Campaign # 20SD0017
Year: 2019-2020
Model(s): 35-60 EFI 75-115 SEA
Problem: Engine: Gasoline

THUNDER JET BOATS
Campaign # 20SD0010
Year: 2012-2019
Model(s): 176 ECOJET, 180 ECOJET
Problem: Flotation

HIGHWATER MARINE
Campaign # 20SD0021
Year: 2016-2020
Model(s): Various Godfrey models
Problem: Electrical

NAUTIC STAR, LLC
Campaign # 20SD0020
Year: 2020
Model(s): 32 XS
Problem: Structural Integrity

CAROLINA SKIFF LLC
Campaign # 20SD0004
Year: 2017-2019
Model(s): 22 HFC, 24 HFC
Problem: Electrical System

BRP
Campaign # 20SD0008
Year: 2018-2019
Model(s): MANTOU RFX/RFXW
Problem: Hull Cracks

SEA RAY BOATS
Campaign # 20SD0003
Year: 2015-2018
Model(s): VARIOUS
Problem: Electrical System

MALIBU BOATS
Campaign # 20SD0012
Year: 2017
Model(s): Wakesetter
Problem: Fuel System

2019

MERCURY
Campaign #: 190048T
Year: Not Built by Model Year
Model(s): Some 4.5 L and 6.2 L
Problem: Fuel System

TITAN MARINE LLC
Campaign # 19CG171S
Year: 2018-2020
Model(s): 450 RDB
Problem: Capacity Label

SEA RAY BOATS
Campaign # 190053T
Year: 2018-2020
Model(s): SLX250 and SLX280
Problem: Electrical

VEXUS BOATS
Campaign # 190046T
Year: 2018-2020
Model(s): VARIOUS
Problem: Fuel System

SEA RAY BOATS
Campaign # 190051S
Year: 2020
Model(s): 310SXO
Problem: Electrical System

SEA RAY BOATS
Campaign # 190052T
Year: 2015-2020
Model(s): SDX290, SDO290
Problem: Electrical System

SEA RAY BOATS
Campaign # 190053T
Year: 2018-2020
Model(s): SLX250, SLX280
Problem: Electrical System

HURRICANE BOATS
Campaign # 190050S
Year: 2019-2020
Model(s): 196, 198 FUNDECK
Problem: Level Flotation

LUND BOATS
Campaign # 190027T
Year: 2019
Model(s): 189 TYEE GL, 189 PRO-V GL
Problem: Engine Mount

LUND BOATS
Campaign # 190003S
Year: 2019
Model(s): SSV-16
Problem: Level Flotation

MERCURY MARINE
Campaign # 190022T
Year: Tech Bulletin 2019
Model(s): V-8 200-300, V-6 175-225, V8 250
Problem: Engine: Gasoline

MARLON RECREATIONAL PRODUCTS
Campaign # 19CG152S
Year: 2019
Model(s): WVI4L
Problem: Level Flotation

PIRANHA BOATWORKS LLC
Campaign # 19CG170S
Year: 2019
Model(s): P140T RASO
Problem: Level Flotation and Safe Loading Max Person Weight

MERCURY MARINE
Campaign # 190037T
Year: 2016-2019
Model(s): DESIGN 2 JOYSTICK
Problem: Dynamic Instability

MARLON RECREATIONAL PRODUCTS
Campaign # 19CG152S
Year: 2019
Model(s): WV14L
Problem: Level Flotation

GREGOR BOAT COMPANY
Campaign # 19CG156S
Year: 2018-2019
Model(s): CH-45CL CH-51L
Problem: Basic and Level Flotation

CUSTOM FIBERGLASS PROD INC
Campaign # 19CG169S
Year: 2019
Model(s): MITZI SKIFF 17 CC
Problem: Basic Flotation and Navigation Lights

BRP USA INC
Campaign # 190043T
Year: 2019
Model(s): PW GTX 230 LBBM
Problem: Dynamic Instability

YAMAHA MOTOR CORP USA
Campaign # 190025T
Year: 2019
Model(s): SAT1800E/F
Problem: Engine Shift Control

SMOKER CRAFT INC
Campaign # 19CG153S
Year: 2010-2019
Model(s): VOYAGER 14 BENCH
Problem: Level Flotation and Safe Loading Persons

SEA RAY BOATS
Campaign # 190031S
Year: 2019
Model(s): SXO400
Problem: Ventilation

SEA RAY BOATS
Campaign # 190038T
Year: 2019
Model(s): DA320 DA350 DAC350 DAC320
Problem: Electrical System

SEA RAY BOATS
Campaign # 190039T
Year: 2019
Model(s): DA320 DA350 DAC350
Problem: Steering

KLAMATH BOAT CO LLC
Campaign # 19CG157S
Year: 2019
Model(s): 152 WESTCOASTER
Problem: Level Flotation and Safe Loading Maximum Persons Weight

INDMAR PRODUCTS
Campaign # 190032T
Year: 2019
Model(s): SUPRA 400, 450, 575 and MOOMBA 450
Problem: Electrical

CENTURION & SUPREME
Campaign # 190040T
Year: 2019
Model(s): ZS232
Problem: Dynamic Instability

BOSTON WHALER INC
Campaign # 19X047AS
Year: 2019
Model(s): 190OR
Problem: Safe Loading Maximum Weight

LUND BOATS
Campaign # 19CG151S
Year: 2019
Model(s): SSV 14
Problem: Level Flotation

BOMBARDIER
Campaign # 190034T
Year: 2019
Model(s): SEA-DOO FISH PRO
Problem: Not Specified

TORQUEEDO
Campaign #: 190042T
Year: 2010-2018
Model(s): TRAVEL AND ULTRALIGHT
Problem: Electrical System

BLACK RIVER CANOES
Campaign # 190054T
Year: 2016-2018
Model(s): LEGACY, XT, LT, X-PLODE
Problem: Hull Cracks

ALUMAWELD BOATS
Campaign # 19CG155S
Year: 2018
Model(s): 16 SPORT SKIFF
Problem: Level Flotation

SEA RAY BOATS
Campaign # 190024S
Year: 2018
Model(s): SLX400
Problem: Electrical System

2018

DRAGONFLY BOATWORKS LLC
Campaign # 18CG141S
Year: 2010, 2012-2019
Model(s): MARSH HEN
Problem: Capacity Label and Flotation

FISH-RITE BOATS
Campaign # 18CG127S
Year: 2016
Model(s): FISHMASTER 15
Problem: Capacity Label and Flotation

SEA RAY
Campaign # 180012S
Year: 208-2014
Model(s): 260 DA
Problem: Fuel Tank

MALIBU BOATS INC
Campaign # 180015T
Year: 2016
Model(s): Malibu and Axis boats (Excluding Malibu TXi Response)
Problem: Electrical System

CAROLINA COMPOSITES LLC
Campaign # 18X042CS
Year: 2019
Model(s): BULLS BAY 2000
Problem: Capacity Label

LUND BOATS
Campaign # 180005T
Year: 2019
Model(s): 189 TYEE, 189 PRO-V
Problem: Engine Mount

DOUGLAS MARINE CORP
Campaign # 18R6022S
Year: 2019
Model(s): ’380’ INBOARD
Problem: Full System and Hull ID Number

TEAM WARD INC
Campaign # 18CG143S
Year: 2019
Model(s): 1542
Problem: Level Flotation and Basic Flotation

CAROLINA SKIFF LLC
Campaign # 18CG123S
Year: 2018
Model(s): 16 JVX CC
Problem: Hull ID Number and Label: Certification

SANTEE BOATS LLC
Campaign # 18CG122S
Year: 2018
Model(s): 160 CC
Problem: Label: Certification and Navigation Lights

DRAGONFLY BOATWORKS LLC
Campaign # 18CG141S
Year: 2018
Model(s): MARSH HEN
Problem: Basic Flotation and Safe Loading Maximum Persons Weight

HEY DAY
Campaign # 180009S
Year: 2018
Model(s): WT-SURF
Problem: Electrical System and Fuel System

LEISURE PROPERTIES (DBA) CROWNLINE
Campaign # 180003S
Year: 2018
Model(s): E30
Problem: Label: Certification

MARQUIS-LARSON
Campaign # 180013S
Year: 2018
Model(s): LARSON LXH AND LX
Problem: Ventilation

TRACKER
Campaign # 180016S
Year: 2018
Model(s): DEEP V GRIZZLY HELM
Problem: Loose Hydraulic Steering Hose

ULTRA BOATS
Campaign # 18R5916S
Year: 2018
Model(s): 28 SHADOW DECK INBOARD
Problem: Electrical System and Fuel System

HARBOR COTTAGE LLC
Campaign # 18R5970S
Year: 2018
Model(s): 84x16 HOUSEBOAT
Problem: Electrical System and Label: Certification

COBALT BOATS LLC
Campaign # 180010S
Year: 2017-2018
Model(s): UNIDENTIFIED
Problem: Undersized Bolts to Hold Down Seat to Deck

LUND BOAT COMPANY
Campaign # 180004S
Year: 2016-2018
Model(s): 2075, 2175 PRO-V
Problem: Electrical System

LUND BOAT COMPANY
Campaign # 180005T
Year: 2017-2018
Model(s): 189 TYEE GEL, 189 PRO-V GL
Problem: Engine Interface

MERCURY MERCRUISER
Campaign # 180019T
Year: 2018
Model(s): STERNDRIVE
Problem: Steering Pump

THUNDER JET BOATS
Campaign # 180023T
Year: 2018
Model(s): T186RS, SARS18
Problem: Steering Interface

WELD CRAFT MFG INC
Campaign # 18CG134S
Year: 2018
Model(s): 1242 RS
Problem: Safe Loading Maximum Weight and Safe Loading Maximum Persons Weight

WHITE RIVER MARINE GROUP LLC
Campaign # 180011S
Year: 2017-2018
Model(s): PT195
Problem: Hydraulic hose fittings may not be secured at steering cylinder

HQ SERVICES
Campaign # 180005S
Year: 2017
Model(s): KOKUSAN VOLTAGE
Problem: Electrical

2017

WACO MFG INC
Campaign # 17CG089S
Year: 2016
Model(s): EDGE 553
Problem: Capacity Label

PIRANHA BOATWORKS LLC
Campaign # 17CG096S
Year: 2016
Model(s): F1400
Problem: Flotation, Capacity Label and Hull Identification Number

GODFREY MARINE CO
Campaign # 17CG111S
Year: 2010-2018
Model(s): SS 188 OB, SD 187 OB
Problem: Flotation

TRACKER
Campaign # 170012T
Year: 2017-2018
Model(s): SBB18, RP200C
Problem: Electrical System

YAMAHA MOTOR CORP USA
Campaign # 170003T
Year: 2017
Model(s): F90
Problem: Engine; Gasoline

RIVERPOINT BOAT WORKS INC
Campaign # 17CG116S
Year: 2017
Model(s): 144 CC
Problem: Level Flotation and Hull ID Number

PLEASURECRAFT ENGINE GROUP
Campaign # 170010T
Year: 2015-2017
Model(s): 6.0LM 6.0L HO
Problem: Electrical System

ALWELD COMMERCIAL BOATS INC
Campaign # 17CG095S
Year: 2017
Model(s): 1648 DSLW
Problem: Flotation and Stability

GLASSTREAM INC
Campaign # 17CG099S
Year: 2017
Model(s): FIBERGLASS FISH
Problem: Ventilation and Capacity Label

COBALT BOATS LLC (DBS)
Campaign # 170013T
Year: 2017
Model(s): CSI BOWRIDER
Problem: Electrical System

MERCURY MARINE
Campaign # 170008T
Year: 2017
Model(s): VERADO 200/300 AND HI-PERF 400R
Problem: Engine: Gasoline

NAUTIC STAR LLC
Campaign # 17CG090S
Year: 2017
Model(s): 1810 BAY CC
Problem: Level Flotation

KAWASAKI MOTORS INC
Campaign # 170006S
Year: 2003-2017
Model(s): JT1200, JT1500
Problem: Fuel System

THUNDER JET BOATS
Campaign # 170002S
Year: 2014-2017
Model(s): V 186 ECO
Problem: Level Flotation

XTREME BOATS

Campaign # 17CG097S
Year: 2017
Model(s): BRUTE 1654 SC
Problem: Level Flotation and Navigation Lights

AMERICAN HONDA MOTOR CO

Campaign # 170016T
Year: 2016-2017
Model(s): BF 115 to BF 250
Problem: Fuel System