	North American Model Boat Association	Update #	**2022-3**
	Official Rule Book – Update	Date	**5/22/22**

Enclosed you will find the latest Rule Book updates. To keep your Rule Book current and up to date, please make the page replacements listed below. If you feel that you have missed any updates please call the Executive Secretary to get an additional copy and/or for clarification of current revisions. Proposals

Section	**Summary of changes**
Table Of Contents Remove pages: 5 - 6 *(dated 6/5/21)* Insert pages: 5 - 6 *(dated 5/22/22)*	Updates needed for below changes
27 - Gas Remove pages: 1 - 10 *(dated various)* Insert pages: 1 - 10 *(dated 5/22/22)*	Updates from proposal sent out in March 2022 Propwash: - Proposal 1: Allow thread repairs and clarification of induction systems allowed (rules B.1.a.iii and B.1.a.iv) - Proposal 2: Addition of items allowed for G-Limited (rules B.3.a.vii and B.3.a.xiii-B.3.a.xvi) - Proposal 3: Fuel specification updates for white gas (rules B.1.b.i, B.2.b.i, and B.3.b.i)

A. GENERAL RULES

1. Gas racing rules are intended as a supplement to the general racing rules of NAMBA. In the case of a conflict, the Gas racing rules will prevail.

B. CLASS SPECIFICATIONS

1. G Class Rules

a. General Engine Specifications

i) Engines in this class shall be highly mass-produced as evidenced by the process used to manufacture the major components. The cylinders and crankcases shall be die-castings, with cylinder and head as a one-piece unit. Examples of such engines are Zenoah, Chung Yang, Kawasaki, Homelite, and U.S. Engines.

ii) Secondary parts such as water jackets, nose cones, drive components, shim plates, intake manifolds, carburetors, headers, pipes, etc. do not come under the "highly mass produced" rule. Major components such as cranks, rods, pistons, cases, ignition systems, cylinders, and cylinder heads do fall under the rule and must be parts of the original motor manufacturer. Interchanging of major parts from one engine series to another is legal as long as the parts used were available on another engine from the same manufacturer

iii) Modifications are allowed to major and minor components. However, major components may only be modified by removing material. Adding material or parts to modify an engine's major components will be illegal, the only exceptions to this rule are:

(a) a cylinder may be modified to accept (add-on) a water jacket

(b) a wire thread repair insert (i.e., HeliCoil) may be used to repair stripped thread, but must retain factory thread diameter, pitch, and length.

iv) Induction systems must be piston-ported. Modifications incorporating induction systems other than piston-ported systems are illegal. Engines must be naturally aspirated.

v) Engines in this class must employ spark-induced combustion. Glow plug or compression-induced combustion is illegal.

vi) Recoil starters must be included on the original engine and must be retained on engines in this class.

vii) Displacement is the swept volume of the engine, which is the cross sectional area of the cylinder multiplied by the stroke of the engine and two displacement ranges will be offered within this class:

(a) G-1 will include engines from 15 to 25.99 cubic centimeters.

(b) G-2 will include engines from 26 to 35.99 cubic centimeters.

b. Fuel Specifications

i) Gasoline or white gas (i.e., Coleman or Crown camp fuel) having an octane rating no higher than 100 must be used in this class. It can be mixed with oil in any proportion for lubrication, but no other additives are allowed that were not in the fuel as originally manufactured.

ii) To enforce this rule, a protest may be made to the contest director any time during the contest. Protests must be accompanied by a $10.00 protest fee that will be awarded to the sponsoring club. The offending racer will be made to use the protesting racer's fuel for the duration of the contest. If the fuel is unacceptable to the offending racer, fuel from a neutral party must then be used by both the offending racer and the protesting racer. In this situation, the neutral party would be awarded the protest fee in payment for the fuel.

2. GX Class Rules

a. General Engine Specifications

i) Engines running in this class will not be required to fall under the “industrial” rule. Displacement is the swept volume of the engine, which is the cross sectional area of the cylinder multiplied by the stroke of the engine and three displacement ranges will be offered within this class:

(a) GX-1 will include engines from 15 to 25.99 cubic centimeters.

(b) GX-2 will include engines from 15 to 35.99 cubic centimeters.

(c) GX-Twin will include two engines or an engine with two cylinders with a maximum displacement of 64.00 cubic centimeters.

ii) Engines in this class must employ spark-induced combustion. Glow plug or compression-induced combustion is illegal.

iii) Induction systems may include piston port induction, reed valve induction, rotor-valve induction and drum valve induction

b. Fuel Specifications

i) Gasoline or white gas (i.e. Coleman or Crown camp fuel) having an octane rating no higher than 117 must be used in this class. It can be mixed with oil in any proportion for lubrication, but no other additives are allowed that were not in the fuel as originally manufactured.

ii) To enforce this rule, a protest may be made to the contest director any time during the contest. Protests must be accompanied by a $10.00 protest fee that will be awarded to the sponsoring club. At this point the offending racer will be made to use the protesting racer's fuel for the duration of the contest. If the fuel is unacceptable to the offending racer, fuel from a neutral party must then be used by both the offending racer and the protesting racer. In this situation, the neutral party would be awarded the protest fee in payment for the fuel.

3. G-Limited Class Rules

a. General Engine Specifications

i) Engines will be a Zenoah G260 PUM with no modifications allowed except those noted below.

ii) All replacement parts must be from the original manufacturer and the same type engine (Zenoah G260 PUM to Zenoah G260 PUM). No part swapping from other manufacturers or engine types is permitted.

iii) The carburetor must be one of the following: Walbro WT-257, Walbro WT-644 or Zenoah WT-1027.

iv) All carburetors will be stock with no modifications other than those noted below:

(a) The velocity stack/Air Funnel (part #848ES08300) may or may not be used.

(b) Any type of bolts may be used to mount the carburetor.

(c) The idle stop screw may be removed.

(d) A needle stop device may be used, to keep needle from turning/vibrating lose (i.e. fuel tubing, an aluminum clamp, etc.).

(e) The exterior length of the needle may be shortened to fit under cowlings when necessary.

(f) Any fuel pump diaphragm may be used.

(g) Any metering diaphragm may be used

v) Any exhaust manifold, header, and pipe may be used.

vi) The spark plug must be one of the following: Champion RZ7C spark plug or a NGK CMR7H spark plug. Both must retain the factor seal washer.

vii) Zenoah EZ Starter Kit (part #GR26099) will be allowed. The pulley assembly (part #848-ESZ-7520) of the pull starter may be modified by facing the standoff length for the purpose of not using the spacers (part #848-8Y4-6100) or the space plate (part #580-44-79-01)

viii) The Mount Plate (part #1155-74110) may or may not be used.

ix) Any standard type of shaft collet nut may be used. No geezer wheel, belt starting pulley, or extra weighted shaft collet nuts are allowed.

x) The Zenoah water jacket (part #T2076-12210) may be modified on the outside by changing the color, and/or machining in a design. Stock M5 x.8 water fitting thread must be retained.

xi) Any type of water jacket cooling nipples are allowed (i.e. 90 degree, drilled out, etc.).

xii) Any type of replacement engine bolts may be used (i.e. stainless, chrome, etc.).

xiii) Thread sealant or thread locker may be used on any engine bolts.

xiv) The ignition coil (gray, part # 2629-71311) may be relocated using any type of bracket, but no shortening of the plug wire and no ground straps allowed.

xv) The primary coil (red, part# 1160-71211) may have the black wire removed.

xvi) Engraving on the outside of the cylinder is allowed for identification purposes only

xvii) If any updates are made to the standard G260 PUM motor by Zenoah, the Board of Directors can vote to allow or disallow the additional parts to the above rules by a simple majority vote.

b. Fuel Specifications

i) Gasoline or white gas (i.e. Coleman or Crown camp fuel) having an octane rating no higher than 100 must be used in this class. It can be mixed with oil in any proportion for lubrication, but no other additives are allowed that were not in the fuel as originally manufactured.

C. HULL SPECIFICATIONS

1. General

a. All hulls will be limited to a maximum length of 60" and a maximum width of 30".

b. Primary propulsion must be by a propeller making contact with the water. No air drive or jet drive propulsion is permitted.

2. Monoplane

a. Mono hulls must have a single riding surface at planing speeds. This planing surface may be flat or a V configuration.

b. No lateral side to side breaks are permitted.

c. Lap strakes may be used. If used, they must be parallel to the keel for a minimum of 60 percent of the hull length, measuring from the transom forward. The strakes may merge to the keel after the 60 percent minimum has been exceeded.

d. Lap strakes on hulls 46" long and under and with a beam width of 15" and under may have a maximum lap strake width of ¾ inch and depth of ¼ inch.

e. Lap strakes on hulls over 46" long and with a beam width over 15" may have a maximum lap strake width of ¾ inch and a depth of ½ inch.

f. The depth of the lap strakes is measured from the bottom (primary running surface) to the lowest point on the lap strake.

3. Outrigger Hydroplane

    a. Outriggers may have more than two planing surfaces.

    b. General design will consist of two forward sponsons connected to the tub by booms.

    c. This class is an open design class.

4. Sport Hydroplane

    a. Sport hydroplanes may have more than two riding surfaces touching the water at planing speeds.

    b. This class will include both three-point hydros and canards.

    c. All sport hydros must resemble full scale racing boats and may be of current or historical design.

    d. The sponsons may have pads or breaks that contact the water at planing speeds.

    e. Exposed exhaust systems are allowed.

5. Catamaran

    a. Catamarans have two sponsons that normally run the full length of the hull.

    b. Sponsons are separated and connected together by a tunnel.

    c. Sponsons may have lateral breaks.

6. Crackerbox

    a. All boats will be models of full sized crackerboxes.

    b. The letter “P” must precede or follow the NAMBA number on each side of the hull.

    c. The minimum length will be 43.5 inches and maximum length will be 49 inches.

    d. Minimum beam width will be 16.5 inches.

    e. The bottom must be generally flat with a maximum of a three-degree V across the full width of the transom and refer to rule C.6.a. There may not be any pads or lap strakes.

    f. The deck and hatch must resemble that of a full sized crackerbox.

g. Two drivers of ¼ scale size and appearance, wearing helmets and life preservers must be used. A steering wheel, instrument panel, and other detailing is encouraged.

h. No parts (rudder, prop, plates, etc.) may be more than four inches behind the transom.

i. The exhaust system must be enclosed by the hull. No part of the exhaust system may extend beyond the transom with the exception of a small pipe muffler or transom exhaust flange.

j. No servo adjusted trim tabs are permitted.

7. Classic Crackerbox

a. All general Crackerbox rules apply with the following exceptions:

b. The hull must be made completely of wood. It is permissible to cover the hull with fiberglass and resin. The minimum running weight will be 15 pounds.

c. Classic Crackerboxes may run in the general Crackerbox class but not on the same day.

D. SPECIALITY CLASSES

1. CLASSIC THUNDERBOAT

a. Hull Specifications

i) The boat may be of wood or fiberglass construction.

ii) The hull length will be between 48” – 56”.

iii) The hull width will be a minimum of 24”.

iv) The transom will be a minimum of 10” in width.

v) The hull design will only be one of the following types: round nose, step deck, or chisel nose.

vi) Nothing on the boat may be further than 5 1/4" behind the transom.

b. Motor Specifications

i) Engines must confirm to NAMBA Class G-Limited specifications, see rule B.3.a in this section.

ii) The pipe and muffler must be inside the boat and exit through the transom.

c. Appearance

i) The boat must have a sponsored paint scheme with sponsored IDs and U numbers on the boat.

ii) The boat must have a human driver figure in a front or rear cockpit. The driver must be a scale of 1/8 to 1/6 in relationship to the size of the boat and wearing a life vest and helmet.

iii) The boat must run with an engine cowling or dummy engine to cover as much of the boat's engine as possible.

d. Race Format

i) At the discretion of the Contest Director, races will be run either under the NAMBA Heat Racing Format or the "Love Plan" which is run as follows:

(a) The event must consist of four preliminary rounds of heats and one final round of concluding heats. The concluding round of heats must consist of one final heat and a consolation heat.

(b) The maximum number of boats in the final heat is six. The top five boats with the highest points after the four preliminary rounds will be eligible for the final heat. If a frequency conflict exists between two or more boats eligible for the final heat, preference goes to the boat that has accumulated the most points in the preliminary rounds, or to the boat with the fastest time should a tie in points occur. The other boat will have the option to change to any other available frequency.

(c) After the final heat field has been set, boats accumulating points in the four preliminary rounds after the fifth position will be used to fill the consolation heat. The winner of this heat will be used to fill the six boat final heat.

(d) The outcome of the consolation heat will not affect the overall standings or points for the day.

(e) Final race standings will be determined by order of finish in the final.

2. JERSEY SKIFF

a. General Specifications

i) Prop shaft and tube must pass thru the bottom of the boat.

ii) No fairing on top of prop shaft tube.

iii) No hardware will extend beyond 4" from transom.

iv) No skegs or turn fins.

v) Strut must be rounded on bottom.

vi) Tuned pipes are allowed. Exhaust must exit thru transom and not extend more than 1 ½" past transom.

vii) Motor will be covered; hood scoops and air vents are allowed.

viii) Trim tabs allowed. No trim tabs with fins or skegs on bottom. Trim tabs can be angled up to prevent hooking.

ix) Engines must confirm to NAMBA Class G-1 specifications, see rule B.1.a in this section.

x) Boat must have numbers on both sides of hull in the following format - JS followed by NAMBA number. Minimum height of 3 inches.

xi) Strakes or riding pads are NOT LEGAL. No keels or chines on bottom, bottom of hull is flat and smooth.

xii) Must have two scale like drivers located at or near transom. Minimum height 3 ½" and maximum of 4". Drivers must have life jacket and helmet.

xiii) Wood/scratch builds are permitted, must simulate the lap strake construction.

b. Hull Specifications

i) The hull length will be between 49"-51".

ii) Minimum width at center of hull 17".

iii) Maximum width of bottom at transom 11".

iv) Hull bottom maximum degree of at center of hull 1 degree.

v) Hull bottom maximum degree of V at transom 1 degree.

vi) Minimum transom height 5 ½" from bottom of hull to top of deck.

vii) Minimum height of freeboard (bottom of hull to top of deck) at center of hull 5 ½".

viii) Minimum height of freeboard (bottom of hull to top of deck) at 10" from bow 5 ½".

3. GAS SCALE UNLIMITED HYDROPLANE

   a. General

      i) Gas Scale Unlimited Hydroplane racing will follow Scale Unlimited Hydroplane rules in Section 21 with the exception of items listed below.

   b. Hull Specifications

      i) All boats will be models of past or present Unlimited Hydroplanes that are listed on the Gas Scale Unlimited Hydroplane Master Hull Roster. The true scale dimensions of any Gas Scale Unlimited Hydroplane will be derived from the unlimited dimensions listed on the Gas Scale Unlimited Hydroplane Master Hull Roster.

      ii) Boats are to be built on a scale of 1.80 inches equals 1 foot of the actual boat (1/6.667 scale).

      iii) Boats will measure within the following tolerances of the true scale size, excluding appendages.

         (a) Overall Length……...± 1 1/4 inches

         (b) Beam……..± 12%

         (c) Maximum Depth…….± 10%

         (d) Afterplane Length (three point design)…..± 10%

         (e) Tunnel Width…….± 10%

      iv) Motor belly pan for motor and flywheel only. If applicable, the dimensions will not exceed five inches in width, nine inches in length, and one inch in depth. The belly pan can not exceed the depth of any riding surface or recovery surface. If the real boat had a full length belly pan, the model must conform.

   c. Engine Specifications

      i) G or GX Class engines from 15 to 31 cubic centimeters.