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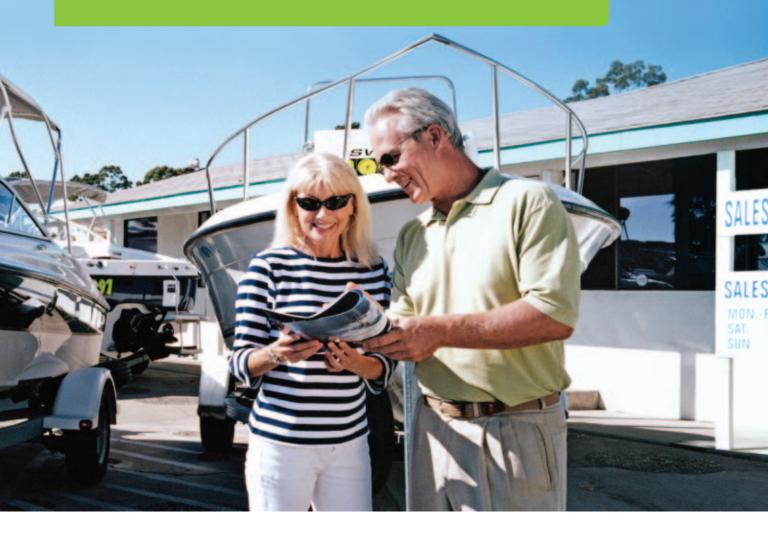
> **Coastal Craft** Paul Gartside Boats Norseboat

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BY ANDY ADAMS

### Celebrating C&C Yachts Legacy

IN THIS ISSUE of Boating Industry Canada we have devoted a lot of space to three exceptional Canadian boat builders: Coastal Craft from BC, and Norse Boat and Paul Gartside Boats from Nova Scotia. We believe it's always good business to do business with your fellow countrymen and Canada enjoys a rich and worthy boat building history that deserves to be celebrated.

One of the best known and most influential Canadian boat brands was C&C Yachts. While the original company came to an end, the brand lives on and so too, do large numbers of high-quality C&C yachts. Fortunately, many of the original staff are also still around. However, the industry recently lost Erich Bruckmann and his passing seems to have stimulated the other alumni to re-unite. Perhaps you may be able to attend the reunion.

The Marine Museum of the Great Lakes at Kingston is organizing this C&C Yachts Reunion and Conference, which will be held at the Royal Hamilton Yacht Club on Saturday, April 14 and Sunday, April 15.

On Saturday, the event will be open to all past C&C employees, and those dealers, sailmakers, and industry people most closely associated with the company from its original founding in 1969 (to its loss of public status in 1981).

The C&C Reunion will be followed by a C&C Conference on Sunday, April 15, featuring panel discussions by past members of the C&C Design Group, C&C Production, Sales and Marketing, and a group of yachting industry professionals discussing the legacy of C&C Yachts.

While attendance to the reunion will be restricted to past C&C personnel and associates, attendance to the conference will be open to everyone interested in the history and development of C&C Yachts. The conference will be moderated by Maurice Smith who is Curator Emeritus of the Museum of the Great Lakes. Working with George Cuthbertson, Maurice is largely responsible for compiling the C&C Collection at the Museum.

However, space is at a premium, since the audience will be restricted to 225 people. Royal Hamilton Yacht Club was chosen as the site of this reunion and conference because of its central location between the C&C production facilities in Niagara-onthe-Lake, and custom shop and design offices in Oakville, and its proximity to the large boating population of the Golden Horseshoe.

The Marine Museum of the Great Lakes at Kingston currently holds the C&C collection in its archives. This collection consists of all George Cuthbertson's personal and industry papers and the drawing files of Cuthbertson and Cassian and C&C Yachts to 1973, as well as all the design drawings and a large number of files of C&C Yachts from 1973 to well into the '90s, when the assets of the company were acquired by Fairport Marine, builders of Tartan Yachts. It is through the generosity of Tim Jackett, formally of Fairport and Novis Marine, that these later drawings were donated to the Museum. We expect there will also be attendance from the former C&C Rhode Island facility as well as a number of past Canadian and U.S. C&C dealers and sailmakers.

We encourage all past employees and associates of C&C to bring old photographs and memorabilia of the company for scanning, donation, or photographing, to add to the C&C collection at the Museum. The names of all past C&C employees will be also added to the Museum archives, and oral histories may be recorded at a later date.

The entry fee for the Conference will not only cover the cost of the room, continental breakfast, coffee breaks, and lunch, but also a one year membership to the Marine Museum of the Great Lakes in Kingston. Attendees will be encouraged to make additional donations to go towards preserving, digitally copying, and making available this vast collection of over 25 years of Canadian yachting history and legacy.

For more information as it evolves, and to register to attend either the Reunion, Conference, or both, please contact Doug Cowie, manager of the Marine Museum of the Great Lakes (manager@marmuseum.ca), or C&C Alumnus Rob Mazza (robertl-

Let's help preserve and celebrate the great yachting legacy our builders have created!



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On the Cover:
Dave Foxcroft (left) with his dad Ron Foxcroft are both sports referees. Ron's experience as a ref in the Gold Medal Basketball final in the 1976 Montreal Olympics was the catalyst for an idea that is now a global business, totally run out of Canada. Read this amazing Canadian success story starting on page 18.



#### **PUBLISHER**

John Kerr johnkerr@kerrwil.com

#### **MANAGING EDITOR**

Andy Adams aadams@kerrwil.com

#### **CONTRIBUTORS**

Andy Adams, Robert Buller, Glen Cairns, Barbara Fountoukos, Dave Gerr, John Morris and David Spader

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#### ADVERTISING SALES

John Armstrong johnarmstrong@kerrwil.com 905-330-4837

> lan Gilson igilson@kerrwil.com

• 905-719-5152 Greg Nicoll

gnicoll@kerrwil.com • 416-620-9373

Mary Nicoll mnicoll@kerrwil.com • 905-535-2866

#### SALES ADMINISTRATION

Lynn Lortie lynnlortie@kerrwil.com • 705-527-7666 X221

#### CIRCULATION

Elissa Campbell elissacampbell@kerrwil.com • 705-527-7666 X224

#### ART DIRECTOR

Allan S. Bates asbates@kerrwil.com

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538 Elizabeth Street Midland, ON L4R 2A3 Tel: 705-527-7666 Fax: 705-527-7662 www.kerrwil.com

Elizabeth A. Kerr President
Greg Nicoll Vice President
John W. Kerr, Jr Chief Executive Officer



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# Two East Coast Canadian Boat Builders "Finding Your Niche"

BY GLEN CAIRNS

IN THE RECREATIONAL BOAT BUSINESS, going after the volume market means a large capital investment in design, engineering, plant and material, to say nothing of a large scale marketing campaign. At the other end of the market are small specialty builders and designers. One advantage the small builder has is low entry-level cost, but this also makes for a large number of competitors chasing a relatively small number of customers. So how do you stand out from the crowd and reach potential customers?

Today, as in the 1930s, tough economic times have hit the

boatbuilding industry hard. Builders confront a market saturated with product left over from the boom years of the 70s and 80s as well thousands of nearly new inventory boats.

Enter the "Classic" design. Unlike much of the product mentioned above, these designs, while updated for modern construction techniques, have been shown to hold their value. This is important since today's construction costs make even a small project fairly expensive. In this article, we'll look at two men who have carved out a high profile for themselves in their niche markets



#### **Paul Gartside**

Growing up on a family owned boatyard in Cornwall, England, Paul Gartside has a love of boats in his blood. Indeed, Paul's first boatbuilding project was a 24' William Atkindesigned schooner, which he built while still in his teens. After completing his yacht design studies in Southampton, Paul headed north to work for the famous Scottish yard, McGruers. While there, he was able to participate in wooden yacht building at its finest. McGruers was followed by a stint with Holman & Pye well-know designers of cruising and racing yachts where Paul was able to hone his design skills. Although he had plenty of opportunity to sail aboard some of the most modern racing yachts, Paul realized his heart was not in racing, or in designing the latest rule beater. Early on Paul knew he had to make it on his own and that he was, in his words "not really employee material".

In 1982, the whole Gartside family decided to move to Canada's west coast. It is never easy to start new without contacts, especially in a new country; in their early days in BC, the Gartsides were greatly helped by commissions from the well-known designer, William Garden. Garden's high profile and reputation provided Paul and his father credibility with potential clients.



In his new Shelburne, Nova Scotia boat shop, Paul continues to pursue his lifelong passion for wooden boats.

Paul's power boats also have a traditional English style.



Art is a big part of yacht design and this is especially true for classics. A designer's passion and knowledge of certain styles of boats shows in their work. Designing traditional craft takes a certain "eye" that some never master. Paul's designs, while they have a traditional look, are not slavish copies and his work covers a wide range of small- and medium-sized yachts as well as some major projects. While much of his work reflects the style of working boats of his native Cornwall, 30 years in North America have had an influence and Paul has turned out several designs based on traditional American models such as the Maine Lobster boat. (Paul is an associate member of the Royal Institute of Naval Architects.)

Marketing is as much about selling yourself as it is about selling a product; this is particularly true with something

as personal and subjective as choosing a boat designer or builder. Paul has developed a high profile in his niche by teaching at the Wooden Boat School in Maine and by writing for publications in both the US and the UK. Paul also currently submits a design per issue for a major British traditional boat publication. New technology has made it much easier to sell plans, as digital files are easy and cheap to send. However, Paul still designs his boats on paper and the results speak for themselves. Somehow, boats designed entirely on a computer seldom have the truly sweet lines of a classic. Selling plans for both amateur and professional builders presents its own special challenges. Paul notes that, "for some builders, especially amateurs, you have to pack in the detail while more often than not, a good yard will give you back a better boat than you gave them".

Recently Paul made the move from Canada's west coast to Shelburne on Nova Scotia's south shore. This historic town provides a suitable setting for Paul to continue designing and building yachts and small craft that are both elegant and unique.

www.gartsideboats.com



### **Kevin Jeffrey and NorseBoat**

With his background as an engineer, sailor and author, Kevin Jeffrey brings a wide range of experience to his boatbuilding company, Norse-Boat Ltd. This experience includes raising twin boys on a 26' catamaran while sailing the East Coast and Bahamas for 15 years. Once Kevin had moved ashore, he became interested in a boat that could explore the shallow bays and estuaries of his new home in Prince Edward Island For this he needed a boat that was small enough to be easily towed behind a small vehicle and could be propelled by sail, oar or small outboard. Kevin started looking for a suitable boat but could only find designs, nothing in production.



15 years of attending boat shows promoting electrical systems and his multihull publication allowed Kevin to conduct informal market research for his idea of a multipurpose small boat. He believed there was a market for his concept and a meeting with Chuck Paine convinced Kevin that he was a designer who could bring his ideas to life. Kevin had already made good contacts in the boating press and an affiliation with a famous designer meant his boat would get noticed.

As Kevin points out, to make an impact in a niche market you have to have something that catches people's attention and fires their imagination.

Kevin's goal was always a beautiful boat at a price people could afford. Classic styling has instant appeal and in recent years classic boats have been one of the bright spots in a tough market.

One of Kevin's goals was always to build a community of owners and

This NorseBoat 17.5 is now sailing the waters of Spain.

enthusiasts. He admired the way some large companies, such as Harley Davidson, or very large in case of Apple, have successfully created a dedicated almost cult following. This, in a small-scale way is what he has been able to do with NorseBoat. Examples are now sail-

ing in Europe and Australia as well as all over North America. Since the boats are designed and built for adventure, experiences of existing owners inspire new customers to create their own, be it local puttering or something more extreme.

Such is the case with a pair of Royal Marines who spent two summers transiting the Northwest Passage in Canada's high arctic in a NorseBoat 17.5. Most NorseBoat owners will never attempt anything remotely as challenging, but it is all part of the boat's appeal and something that gets small boat enthusiasts talking about NorseBoat on web sites, blogs and social media.

To meet the challenges presented by the current economy, Kevin has worked to diversify NorseBoat's product line with a 21.5 trailer/cruiser and kit versions of his 12.5 and 17.5 models. The company has a showroom and boat shop at its Small Boat Centre in Lunenburg, as well as a relationship with York Marine in Maine where the 21.5 is built and with Rosborough Boats in Nova Scotia, where fiberglass parts are manufactured.

www.norseboat.com

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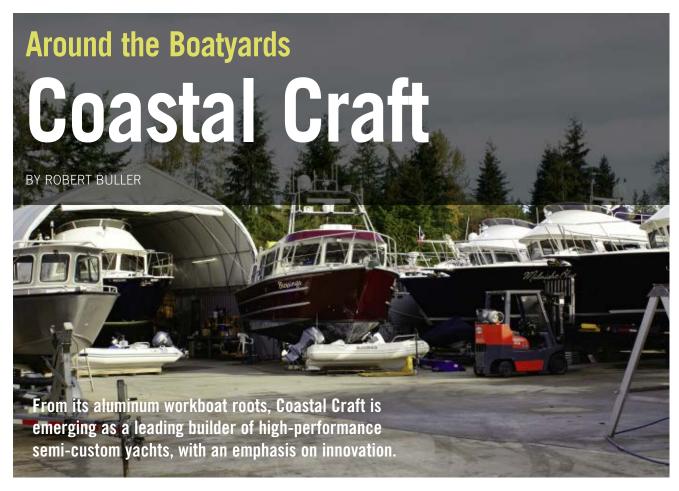
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**FROM ITS MODEST START** in 1996 as a builder of welded aluminum crew boats, Coastal Craft has emerged as an industry leader in high-performance, high-tech semi-custom yachts. There are probably more than a dozen manufacturers of aluminum workboats on the British Columbia coast – but Coastal Craft has moved far beyond that original niche.

The Coastal Craft team once comprised just founder Jeff Rhodes and three employees – but now numbers 50 and growing. Rhodes is quick to explain that he did not set out with a grand vision to become a manufacturer of premium yachts. Instead, he grew into the role by listening carefully to his customers, then building what they wanted.

"I came from the towboat side of the marine business, and started building welded aluminum work and crew boats," Rhodes explains. "After a couple of years, a customer wanted the warmth and charm of a real wood interior. I said we'd build him one. Then I had to learn how. And that led us into building yachts, not workboats."

#### Innovation

Learning is a continuous process at Coastal Craft and it never really stops. CY West had a recent tour of their growing manufacturing plant in Gibsons, a town of 4,200 on B.C.'s Sunshine Coast. With an 18-month backlog of orders, the plant is full of high-tech production equipment and busy workers, components and parts being assembled, and boats being finished. Two of Coastal Craft's newest 56-footers were under construction, a 45-footer was ready for the paint shop, and several customers' boats were in the yard awaiting system upgrades. The largest Coastal Craft to date, a 74-footer, is on the design table and it's gorgeous.

While the company offers a full product line, more recently it has concentrat-

The Coastal Craft yard holds customer boats returned to the factory for system upgrades or major servicing. Though available in any number of colours, their signature blue is the most common.

ed on the larger sizes that today's customer is asking for, the 40, 45, 56 and soon the 74. Thirty and 34-foot models are also available but it is the larger boats that are selling these days.

Coastal Craft has built an enviable reputation throughout the industry for innovation in construction and performance. The company was one of the first aluminum boatbuilders to fit Volvo Penta Inboard Performance System (IPS) units into a new design. That early step got a lot of attention from Volvo engineers and the partnership has flourished, while Coastal Craft's success with IPS is becoming recognized worldwide.

IPS mates high-performance Volvo Penta common-rail six-cylinder diesels to steerable drive pods with forward-facing, counter-rotating propellers.

Operating in clean water, the IPS delivers high cruise speeds and excellent low-speed maneuverability. IPS is now the default propulsion system for the entire Coastal Craft line.

High-speed cruise is just that - 30 to 35 knots standard at a reasonable fuel burn. The fuel consumption curve is almost linear – close to one nautical mile per gallon at almost any speed using ISP600 power packages in the 40 and 45-footers. These are planing hulls, with clean hull forms and strong construction that make these speeds routine.

Finger-tip maneuverability while docking comes from a simple joystick control – just tip the stick in the intended direction of travel and the boat moves that way. Thrusters, bow or stern, are not necessary. The system works so easily and directly that boating couples report that both partners can dock with confidence. That alone - to say nothing of domestic harmony aboard - could justify the investment.

### **Quality and Performance**

This kind of innovation is matched elsewhere on the boats, as well as in the plant. Coastal Craft specifies only LEDs for interior lighting, taking advantage of their low current draw. Helm chairs in the wheelhouse and on the flying bridge are Stidd, while Diamond Sea Glaze supplies the windows throughout.

"It's not that these are just wellknown brands," says Rhodes. "They are well-known for the same reason that we specify them – they provide us with the quality and performance that our customers expect."

Gensets are Northern Lights or Fischer-Panda; the latter have a smaller footprint that leaves room for other accessories. US Watermakers are standard, as are Miele washers and dryers on larger models. All interior wiring is highquality marine-grade from Vertex.

We saw a 56-footer being fitted out with a five-area in-floor heating system, complete with plenums and controls in a high-quality installation more usually found in upscale homes.

Component choice requires a never-



ending search for quality and performance, says Rhodes.

"Not many boat builders are prepared to invest in the R&D necessary to be on top of technology, but we are."

This is reflected in the boats' electrical systems, too. Twenty-four-volt systems are now standard, saving weight and cost of wiring. An Eplex low-voltage control system is completely wired throughout; it controls all lighting and other electrical systems – genset, watermaker, heaters, air conditioners – from keysets in the wheelhouse, salon and master stateroom. Surprisingly, lithium-ion cells are now standard in house batteries.

"No other battery gives us the performance we want. It's worth the premium price to get a battery system where we can use the entire capacity of the cells, and it will fully recharge in minutes, not hours" explains Rhodes. "Boaters want to minimize the amount the generator is needed and we're down to less than a half-hour, twice a day on average, to

Pictured here is the Coastal Craft's 400/IPS that offers impressive performance and fuel economy.

keep fully charged."

In the galley Coastal Craft installs Sub-Zero refrigeration and the latest magnetic induction coil cooktops. These will heat only a metal container, not a hand, so safety and performance is packed inside, too. An impressive integrated electronics package is fitted on the bridge and at the main helm station.

### **High-Tech Plant**

As one might expect, Coastal Craft builds its advanced boats in a similarly modern and well-equipped plant. Though crowded with production now, it's as up to date as any factory we have visited.

The sprawling facility is located off the main highway in an industrial area of Gibsons. Covering 20,000 square feet, it's divided into five main areas: hull fabrication (mostly welding); wood shop (where interior cabinetry is cut and pre-assembled); paint shopP (a few steps away); and, mechanical preparation area. Offices are located on the second floor. Immediately next door is a new semipermanent tent that houses the final fitting-out area for the 56 and the 74.

Bustling with activity and workers everywhere, the entire facility was well organized, neat and clean. There is a gen-



In the engine room of a new 56, the mounts for the IPS drives are newly welded in place and the central bench of the engine room receives final installation welds.



A fully-welded 45' hull and house awaits the paint shop immediately to its stern. The smaller craft to the right is an early model workboat in the yard for repowering.

eral air of "busy-ness" and a quick pace to everything; spirits are obviously high. Employees are clearly proud of their work and were quick to show it to us.

Nowhere was this more evident than in the carpentry shop. About \$500,000 has been invested recently in the latest computer numerical-controlled (CNC) woodworking equipment. We watched as a 4' by 8' sheet of marine-grade okoume plywood was loaded on the flat bed of the CNC cutter. The layout and design of the side table and drawer unit for the 56's master stateroom had just been downloaded directly from the design office computer-aided design (CAD) system.

After a quick adjustment, the CNC unit proceeded to cut rabbets and mortises, and drill the cross-holes. The CNC operator then flipped the sheet over and the machine cut all the rest of the components. Waste was minimal and the resulting pile of pieces was neatly stacked and labeled for correct assembly. Quality cabinet-making has never looked so easy - this process saves countless hours and ensures a perfect fit.

Rhodes is particularly proud of his team's consistency of build. Matching the strength of welded aluminum and the precision of CAD designs with precise assembly creates a boat that retains its stiffness, strength and integrity. Ten-



The flying bridge on a 56-footer under construction shows the layout for components to be added later. It's pre-wired with the NMEA 2000 "backbone" (in black) for navigation electronics which are installed last.

year old boats in the shop for upgrades still show precision fit of interior components with no flex or degradation. Our inspection of one 56-footer found remarkable quality of fit and finish even in areas that would remain forever sealed and hidden. Quality of work was evident everywhere we looked.

As part of their progression to producing premium high-performance yachts, Coastal Craft now builds to Transport Canada, US Coast Guard and American Boat and Yacht Council standards.

#### **Performance**

We rode on a Coastal Craft 42 fitted with IPS last summer and were astounded with the performance. At well over 30 knots (max is closer to 40 knots for newer models), the deep-vee hull kept the ride soft, dry and flat even in a fair chop. Floating debris is a hazard but Coastal Craft has found that the forward-facing props are not as vulnerable as one might imagine. The company has designed and installed a protective Drive Guard, a small skeg that is precisely sized and sited just ahead of the props to help protect against log hits. However, the operator at the helm still needs to be attentive at speeds of 30-plus knots.

With a growing international sales and dealer network. Coastal Craft is now attracting customers from far afield. The company exhibits models at major boat shows and is always ready to show prospective customers around the factory to demonstrate their build process.

A semi-production shop, Coastal Craft offers standard model configurations but finishes each boat to the customer's particular needs. This creates a lot of interaction with customers as layouts, specs and equipment are developed or modified. The latest CAD technology makes this process much easier -and produces happy owners.

With a full order book, a growing international customer base, and a reputation for innovation and quality in yacht construction, Coastal Craft is building on its enviable success story.

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# **Building Bench Strength**

### Three Criteria to Use When Selecting Future Leaders

BY DAVID SPADER



WHAT HAPPENS when you don't have a strong bench? The Indianapolis Colts found out this season. Quarterback great Peyton Manning did not lead his team onto the field at the start of this season for the first time in 227 consecutive games. Apparently the coaches were caught off guard. The Colts were left scrambling and had to bring 38-year-old Kerry Collins out of retirement; they were scrambling again to find another replacement when Collins was injured early in the season! The result? The Colts finished the year 2-14! Unfortunately, we see this same pattern played out in business every day.

"How strong is my bench?" It's a question that every business leader should be asking, and one that we recently presented at the Toronto International Boat Show. It is an area that is easy to put on the backburner

during the day-to-day firefighting that engulfs most businesses. The result is that less than 15% of companies in North America believe they have the bench strength to fill key positions in the future. The actions you are taking today to nurture your future leaders will: (1) determine how quickly and strongly they develop; (2) dramatically affect the growth of your business; and (3) significantly affect your succession planning process. Given what you are doing today, how well are you growing your next level of leaders? STOP and seriously answer that question before going on.

One of the toughest questions when looking for the future leaders in your business is, "How do we determine which employees are best suited for leadership roles?" In order to better select those who have future potential we suggest evaluating them in three areas.

#### **Culture Fit**

First, your future bench needs to demonstrate a strong culture fit. The people you select for your leadership bench should be inspiring models of alignment with the values that are critical to the success of your business. If they don't model these behaviours now, what makes you think they will do so when they have more influence, power and control? Don't think that promoting a high-producing salesperson who operates in gray areas of integrity will get better in a management position because they are good at hitting his or her numbers. Great individual performers are often not great leaders. As much as 70% of the environment and culture in your business is directly shaped by the actions of its leaders. Therefore, it's critical that you build your bench with people that are models of the values and



behaviours that your company needs to survive and thrive in the future

#### **Performance Fit**

The second criteria for developing your bench is performance fit. This means having a system to ensure the employee has the right capabilities and motivations to perform at a high level. When considering performance fit, remember that the best predictor of future behaviour is past behaviour in similar situations. Is the person a team player even when they don't directly benefit? Or, do they "look out for #1," especially under stress or pressure? Are they someone who is open to new ways of doing things? Or does it always have to be their way?

One tool we often use when helping businesses is called the Talent Balance Sheet. It is created by assessing high potential employees through a series of capability and motivation assessments. This gives the business a balance sheet of the key motivations and capabilities needed and those available to aid in deciding who to promote and develop. It also allows you to intentionally build your bench with complementary skill sets. And, like a financial balance sheet, it allows you to identify liabilities (gaps in needed capabilities).

### **Satisfaction Fit**

The last of the three criteria is satisfaction fit. This is a combination of personal preferences, values and work interests. The level of satisfaction fit often determines a person's longer-term motivation. A few important questions to determine satisfaction fit are: Will this person be truly passionate about their new role? Will they enjoy the new responsibilities of leadership more than the rights and authority it gives them? Will they be energized by the type of work they will be required to do on a daily basis? Again, the right assessment process can help determine this with up to 80% accuracy before putting a person into a position.

We recently saw a real-life example while working with one dealership. The most likely successor realized that, while they were capable of running the business, their passions were truly elsewhere. Realizing that before starting the succession process saved a lot of time, money and frustration for everyone involved.

Putting the right people in the right seats is critical for both the ongoing success of your organization and for the fulfilment of its people. Organizations that use these three "fits" can build a bench that will be ready when the time comes. It is also a useful guide to help determine in whom you should invest.

Remember, quarterback Tom Brady came off the bench and subsequently led his team to five Superbowl appearances, winning three titles (and possibly one more by the time this goes to press). Does your bench have someone like that on it, or do your backups look more like those ready to replace Peyton Manning? The good news is you still have time to act.

If you have more questions about hiring/selecting key employees, developing your leaders or succession planning please give us a call at 800-772-3377. Boating Industry Canada and our partners in the Toronto International Boat Show presentations on January 17, GE Commercial Distribution Finance, want to thank David Spader and Spader Business Management for sharing this article with our readers. For further support contact your GE CDF representative.

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CYNN IS ON THE AIR! The Canadian Yachting News Network/Boating Industry Canada team set up a pop-up TV studio at the 2012 edition of the Toronto International Boat Show. Over the course of the nine-day show, we conducted more than 40 interviews with key people involved in the marine industry. It was not a scientific process -CYNN guests were interviewed right at the booth, some well known and some less so. Our aim of reading the tea leaves was well served and collectively these are the conclusions looking forward at the boat market for the upcoming year.

Making a prediction is no easy task in a climate that is poked and prodded by a US recession, various Euro monetary flip-outs and capsizing cruise ships, the Canadian consumer's purchasing mood is a hard animal to corral.

Let's start with the bottom line of our interview schedule: 1) Buyers are refreshingly enthusiastic. 2) They are coming to the shows armed with more info than ever and know what they want 3) What they want is pontoon boats in surprising numbers.

Here's a sampling of what we heard and where it all is pointing. I was surprised, although maybe I shouldn't have been, by the consistency in what this wide variety of interviewees had to say. Not just pontoon boats, but midsize outboards, white sail racing, and large brokerage boats (both sail and power) are seeing upticks on the graph throughout the country. The supply of

panic sale boats in the US is on the decline. Perhaps most importantly, consumers are either bored with all the bad economic news, or choose to live life now and ignore it, so they are cautiously eager to enter, upgrade and return to boating.

### Pat Sturgeon, Broker, **New Boat Dealer**

"In 2010 we found people a little scared. By 2011, people were a little more relaxed about the recession, so we found new boat sales as well as brokerage picked up considerably.

"In 2011 some buyers realized you only live once and maybe it's time to live that dream. At a recent North America wide meeting of dealers, everyone reported positive sales except for California. Large boats, 40+, particularly."

"If Europe doesn't fall apart, the trends will continue and we'll see an even better 2012."

### Rick Layzel, Yamaha Motor **Canada and Outgoing Chair of** NMMA Canada

"The ease of getting on the water with a pontoon boat has been apparent for the last couple of years.

We're still in that cautious optimism phase.

Younger families are coming into boating - to me that is so important. The banking community is seeing that.

Baby Boomers are looking at their next boat - some of them are looking at larger pontoons even. A 50 mph pontoon is not an unusual sale.

Mid-range cruisers are selling again the industry was quite soft there last year.

### Terry McLaughlin, Olympian and **Importer of Dubarry Marine and Country Footwear**

More activities today for kids to choose from. To attract 20s and 30s to sailing there has to be good racing and good entertainment afterwards. Something to invite spouses and friends to.

### Wendy Loat, Chairman, Lake **Ontario Racing Council**

Sail racing is undergoing a lot of changes.

While fleet racing has been steady for the last few years, shorthanded white sail racing is incredibly popular and growing. Although that doesn't do the job of introducing young crew, the participation level is great news.

### Dave and Sharon McPhail, BoatCan

When we started 13 years ago, people were unfamiliar with the Internet. Today, they post their own listings eagerly.

A 48-50' boat still takes longer to sell. A 28' will move very quickly.

2011 was a little flatter than 2010. In 2011 there's just not as many boats since builders no longer build on spec.

Deals in the US are dead. This year, people came to the show with their homework done, and then looked at the boats they want to buy.

It's amazing how many people are looking for their first boat. In sail, many buyers are looking at used boats to save some money.

### **Drew Robertson**, **Skippers Plan Insurance**

Here in Canada, we're very lucky we haven't experienced the downturn they've seen south of the border.

Brokerage has continued strong but the health of the industry depends on new boat sales. We're seeing the corner turned at this boat show.

A lot of my long-term clients have become more adventurous, taking their boats south. 10-15% of "our book" would take an extended cruise.

I'm seeing people leaving sailboats and entering the power market because of the physical demands. It's not to downsize. Trawlers are popular.

It's been felt for the last couple of years, but at this show the mood is on a definite upswing. For 2012 we're very optimistic.

We're going to see an increase in new boat sales. Not a huge increase but we're trending in the right direction.

### Adrian Rushforth, Mercury Marine

Pontoon is a segment that's really growing in the marketplace right now.

In past years, our 40/50/60 hp was the big segment. But for these larger pontoon boots, you need a 70 up to a 150.

The cruiser sector looks positive at the show. People at the show appear to really know what they're after - they come with their research done.

I'm going to guess that 50% are new boaters, 50% are moving up.

Strongest show we have seen in four years. Toronto is a strong indicator of the market to come.

### **Jared Chartrand, Northstar Marine Insurance**

Right from the beginning the show has been strong. Small cottage boats, pontoons and small fishing boats always sell first at the show.

The fishing market is on fire. Fishing as a family pastime has never been more popular. TV exposure helps.

### Carly Poole, Buckeye Marine

Demographics of pontoon boaters - a somewhat older demographic but always with family - kids, grandkids and even great-grandchildren works well on a pontoon. Everybody together in their floating living room.

Some families now have one parent who stays at the cottage all summer while the breadwinner commutes on the weekends the way people did in the 1950s.

So, what does it all add up to? The Magic 8-Ball points to a better year in 2012 but the variables continue to exist.





# Ron Foxcroft and the Fox 40 Whistle

### A Sensational Canadian Success Story

BY ANDY ADAMS

I DON'T CARE how good the product is, how could anyone build an entire corporation on the strength of just one simple product?

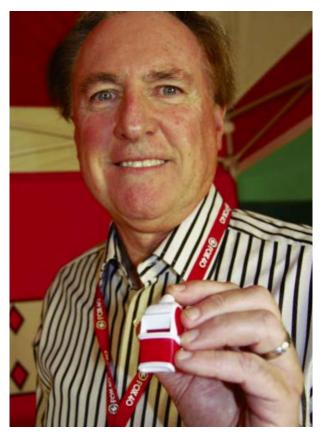
Well, that is exactly what Canadian entrepreneur Ron Foxcroft did and we wanted to meet him in person to share his story with you.

The Fox 40 story started when Foxcroft - who had become an experienced and respected basketball referee was invited to referee the Olympic Gold Medal game in 1976 in Montréal.

The event attracted the largest audience ever in Canada for a basketball game - approximately 18.000 people. Foxcroft had never refereed in front of 18,000 people. Then, during the game, he was in the "trail position" when he saw a foul on Adrian Danley that left the US player injured and bloodied. The other referee did not see it. Foxcroft blew his whistle hard - so hard that the pea got stuck, no sound came out and no foul was called

Luckily, the United States won the game anyway and on a personal note, Foxcroft's performance attracted the attention of the NCAA league that recruited him to be a referee. Foxcroft was only 30 years old.

From there, he went on to referee basketball games in Los Angeles, at the Astrodome, at Duke University and through those and many other experi-



Ron Foxcroft holds a new "Sonik Blast CMG Safety" pealess Fox 40 whistle with lanyard. It can produce a 120 dB sound and has a cushioned mouth grip.

ences, occasionally the pea would get stuck and a potentially critical call could be missed.

A pea-style whistle gets its shrill from the movement of the small cork pea in its interior, which alternately covers and uncovers the hole through which air is released. This produces a rapid alternation of sound and silence, the characteristic whistle vibrato - until the pea gets stuck in the hole.

The Fox 40 Pealess Whistle is much like a harmonically tuned instrument, because it produces three slightly different frequencies simultaneously. The different frequencies are superimposed on one another out of phase, and thus alternately reinforce and cancel each other out. The result is a loud, piercing vibrato that has no moving parts to get stuck.

The problem always has been that occasionally the pea becomes stuck when the user blows really hard and at times of great excitement or danger, users can blow very hard!

the Brazil Later. at Olympics, Foxcroft was a referee in the final game. The score was tied and with only 9 seconds to go, he went to whistle down the play and again the pea got stuck. Foxcroft was genuinely concerned that he wouldn't survive the experience if his accidentally missed call cost Brazil the game, but fortunately, Brazil did win and Foxcroft made it safely onto a

Varig Airlines flight home.

Traveling with him was Jay Toriano who later became a Toronto Raptors coach. Foxcroft told Toriano that he was going to design a "pealess" whistle. Jay said, Don't tell anyone, Mr. Foxcroft; they'll all think you've gone goofy!

So, he kept the idea to himself, but he certainly wasn't deterred. Foxcroft went to Dan Bruno who was a mould maker in Stoney Creek, Ontario. He told Dan Bruno he wanted to make the first pealess whistle. Bruno said he couldn't do that, but he could make a mould. That was his business. To get the design organized, Dan Bruno sent Foxcroft to visit Chuck Shepherd in nearby Oakville, Ontario. Chuck Shepherd was an inventor of some note.

While Shepherd was very nice to him the first time they met, he didn't see a future for a pealess whistle. Still not deterred, Foxcroft said. "If you change your mind, just call me – here's my card."

Shepherd looked at the card which was from a Hamilton company called Fluke Transport. Their slogan was, "If it's on time, it's a Fluke".

Shepherd was obviously taken with this and when Foxcroft said yes, that he owned the company, Shepherd said, "Well, you sound like a neat guy alright, let's do it!"

Foxcroft responded that this was great, but that he had no money!

Again, Shepherd moved the project ahead saying, "Alright, I'll give you credit."

Foxcroft clearly understood the referee's point of view and emphasized to Shepherd that, "It's gotta look like a whistle! You get it to work, I'll do the marketing". Between 1984 and 1986 the two men met frequently, sometimes every day, as they developed prototypes; by 1986/1987 they had two ultrasonically welded prototype whistles...and Foxcroft was now \$150,000 in debt!

Then came the breakthrough. In June of 1987, Foxcroft was called to be a referee at the Pan American games in the



This Fox 40 employee is packaging a Coaching Board.

United States and he took the two prototype whistles with him. That night in the dormitory, he put them under his pillow and at 2 AM he woke up and blew the whistle

The dormitory was full of other referees who came running at full speed saying. "What was that?!!"

"It's a Fox 40", Foxcroft answered. By the time the event was over. Foxcroft had taken literally thousands of whistle orders even though he didn't yet have a mould!

demand began to grow for Fox 40 whistles in team colours and other colours as this new type of whistle began to conquer different markets. One group approached them for a Fox 40 in a hunter's orange colour and they took that to the Sportsman's Show.

An amusing story is that while it was intended as a safety signaling device, some people misunderstood that it was intended to call a 'fox'!

Roy Grunnell who was an Olympic



The staff at Fox 40 International Incorporated in Stoney Creek, Ontario carefully packages and ships up to 10,000 whistles per day.

As soon as he returned home, he put Dan Bruno and Chuck Shepherd together to figure out how to make a mould for the very complicated shape of the Fox 40 whistle. They approached Walsh Manufacturing in Oakville who had the technology to ultrasonically weld the plastic pieces together. Three pieces become one and, in fact, the Fox 40 whistle is now classified as a musical instrument.

It is obviously much more than a mere whistle and you can blow as hard as you want – the Fox 40 just whistles louder.

They began by packaging three together in a plastic bag and selling them for \$14.95. The NCAA began to use them. Soon after, the NBA made the Fox 40 a mandatory piece of equipment for the referees. They began manufacturing black plastic whistles for the referees and went through a lot of development effort to find the right type of plastic. Then the

Water Polo referee wanted a blue whistle. Competition events held at indoor pools with so much reflected sound were very loud venues and he discovered that the Fox 40 whistle would cut through the din and work effectively even when it was wet - another benefit of being pealess.

Seeing it in use, lifeguards realized the benefits. John Blaicher who was then the executive director of the Lifesaving Society started to take it into the marine industry.

Throughout this entire time, Foxcroft, his family, Chuck Shepherd and all the other people involved with the development and manufacture of the Fox 40 were all Canadians and in fact local to Hamilton and area.

Chuck Shepherd passed away almost a decade ago but before he died, he said to Ron, "We have developed the best whistle in the world. I want you to ded-



At the Stoney Creek, Ontario headquarters, even the blister packs and labeling are all done in Canada.



The Fox 40 Boaters Safety Kit and the new football-shaped Rescue Throwbag are products that have been developed around the strength of the original Fox 40 pealess whistle.

icate yourself to always making it better and to marketing it better.

Ron and his son Dave have absolutely embraced that.

From their first whistle, the Fox 40 line has expanded to include whistles specially designed and adapted to a wide range of uses in sports, education, marine and search and rescue.

One of the most impressive things about the Fox 40 whistle is that one single product, [stock keeping unit-SKU] can expand into such a broad business. When I interviewed Ron and Dave, we spoke about the amazing challenges of having just one product to build the company on.

That one marketing hurdle would normally shut a company down but Foxcroft

is not somebody who takes no for an answer. He pursues his goals with the determination of a professional athlete.

He's always thinking, he's always open and he emphasizes to his people that there are no stupid ideas.

There have been some great ideas though. In the early days, they began to produce coaching boards to augment their line of whistles. Western Marine who distributes their products has brought them many ideas for the marine industry. More good ideas have come from the SAR community and especially from the Canadian Tire Corporation.

Boaters are required to have a sound signaling device on board and a Fox 40 whistle has both range and reliability equal to almost anything on the market.

Although they are very expensive whistles, they are still the best value for safety.

Canadian Tire wanted more of their suppliers to incorporate Fox 40 whistles into their boating safety packages but when those suppliers preferred to use their own ordinary whistles, Canadian Tire said to Foxcroft, "Why don't you make the safety kits?"

With customary innovation and their made-in-Canada level of quality, Fox 40 safety kits are now on the shelves in Canadian Tire and on board thousands and thousands of boats.

More recently, the SAR people approached them to develop a better rescue-throwing bag. Naturally drawing on their interest in sports and athletics, the Foxcroft team came up with a footballshaped throwing bag that can deliver impressive accuracy and effectiveness in emergencies.

His experience as a professional referee gave Foxcroft the idea leading Fox 40 whistles into incredible penetration into all levels of sports, yet the marine industry now accounts for 30% of their sales and almost 50% of their dollar volumes.

Some 10,000 Fox 40 whistles a day are produced - all in Canada - and then exported to countries all over the world.

We asked Foxcroft if he had a competitor. "Counterfeiters", he answered immediately.

While 97% of people respect the many patents Fox 40 has now earned, perhaps 3% are in the business of counterfeiting legitimate products and every year Fox 40 has to pay to defend those patents.

More impressively, today the Fox 40 whistle has been granted status as a "famous trademark" protecting the look and shape of the whistle the way a Coke bottle is.

In the coming year, they will be working with Les Stroud, television's "Survivorman" to develop and market a Fox 40 Survival Kit. This has just hit the market and taken the company into yet another new direction, but as always, on the strength of Foxcroft's original idea for the pealess (or is that peerless?) Fox 40 whistle.

It's a great Canadian success story and a great marine marketing success as well.

### The New Era of Gasoline Fuel-System Regulations:

# ABYC H-24 & H-25

BY DAVE GERR

(from information provided by John Adey and the ABYC Technical Department)

**NEW EPA REGULATIONS** have made significant changes to gasoline fuel systems on boats. Here's what you need to know.

After several years of discussion, investigation and review, the US Environmental Protection

Agency (EPA) has introduced completely new regulations governing fuel installations on boats with gasoline engines or equipment. Most of these new regulations have been implemented starting in 2009 and through 2011. (A few final aspects are scheduled for implementation in 2012.) New regulations and requirements mean added cost and complexity, but they are the law and must be followed fully. Requirements in Canada follow suit, which simplifies things a bit.

In fact, the new requirements could well have been still more onerous, but various boating industry organizations (such as NMMA) helped to explain industry concerns and work out acceptable solutions. No organization was more instrumental in assuring that the new regulations were as sensible and reasonable as possible than the Technical Department of ABYC. Under the direction of ABYC vice president and Tech Department director, John Adey, ABYC not only worked with the EPA regulators, but assisted in research and in conducting tests to demonstrate that where possible - simpler and more costeffective solutions would be acceptable.

We'll review here what the new EPA regulations are and explain some of the practical approaches for implementing them. These regulations are now law under the Code of Federal Regulations, specifically 40 CFR Part 1060.

They will affect the way you design,



build, repair or inspect gasoline boats from now on.

The new rules cover three ways that the EPA identified in which hydrocarbons can enter the atmosphere from a gasoline boat's fuel system:

- 1) Evaporative Emissions
- **2)** Diurnal Emissions
- **3)** Fueling Spitback

Evaporative emissions are fuel that escapes from the fuel system through permeation through the walls of hoses or of plastic tanks or, as a result of ventilation. On small gasoline fuel systems, the primer bulb can also be a source of evaporative emissions.

Diurnal emissions are the daily emissions of fuel that escape through the vent. They are daily or diurnal as the cycles in temperature from day to night (during a 24-hour period) cause regular expansion and contraction of the fuel. This results in gasoline vapour and droplets escaping through the vent. (Diurnal means recurring every day, or having a daily cycle.)

Fueling spitback or wellback is spitting or splashing of fuel back out of the fill pipe past or around the fill nozzle.

### **Evaporative Emissions**

Fuel-line hoses were identified as one of the ways in which gasoline vapours could escape into the atmosphere.

The EPA determined that only 15 grams per square meter per day of evaporative emissions was acceptable. Look for fuel hose marked "A1-15".

Standard USCG/SAE marine fuel

hose was rated A1 or A2, or B1 or B2. The A and B indicate fire rated or not. The 1 and the 2 are USCG perme-

ability ratings. Under SAE (Society of Automotive Engineers) standard J-1527, the 1 equals 100 grams per square meter permeation rate per day, the 2 equals 200 grams per square meter permeation per day. The EPA determined that only 15 grams per square meter per day was acceptable.

After extensive testing, it was found that most (but not all) standard A1 USCG fuel already in use actually met the 15 g/m<sup>2</sup> per day requirement. New marine fuel hoses must now all meet the 15 g/m² per day standard.

These new hoses must be marked A or B and 1, plus "-15" for the EPA standard. Compliant fuel hose marking is:

- USCG TYPE A1-15 J1527 (or ISO 7840)
- A = USCG fire test
- 1 = USCG permeation test rating
- -15 = EPA permeation requirements.

A "B" instead of an "A" would indicate that the hose did not have a fireresistant cover to pass the 2-1/2-minute burn test.

Traditionally, marine fuel hose with the "1" rating was expected to have fuel in it a good portion of the time, while a "2"-rated hose was not intended to have

fuel in it. Hose rated 2 will not meet the -15 EPA requirement, so A2 and B2 hose can now primarily only be used on diesel boats. In fact, you will not find an A2 or B2 hose that had the additional "-15" marking required for use on gasoline systems. The exception is A2 fill hose for fill lines. If it can be demonstrated that the fill hose will not contain or hold fuel itself, A2 can be used. (This brings us to auto fuel-nozzle shut-off, covered below.)

Metal fuel tanks do not suffer from permeation, but plastic gasoline fuel tanks can. ABYC began a working group to identify the challenges of creating a tank that meet the EPA permeation rating while still maintaining the safety and reliability of cross-linked polyethylene. After several meetings, it became clear that technology was becoming available to meet the permeation ratings while passing the current test and maintaining the current properties of plastic tanks. All tanks must now meet the traditional tests as well as the EPA permeation requirements.

One nice aspect of this is that the new permeation rate falls well below the threshold for the ventilation required of spaces containing gasoline equipment. It will no longer be necessary to vent a space containing a plastic gasoline tank once these tanks meet the EPA permeation requirements. As with hoses, many tanks (though not all) met the EPA threshold for years even though there was no requirement to do so.

#### **Carbon Canisters**

In order to reduce the hydrocarbons escaping into the atmosphere as a result of diurnal emissions, it was found that a carbon canister should be added to the gasoline vent line. In fact, this is the



Adding a carbon canister to the vent line is a significant change aboard gasoline boats.



Attwood has supplied this useful diagram showing a correctly installed fuel filler, tank, vent line, carbon canister and P-trap valve.

same as automotive carbon canisters. Adding a carbon canister to the vent line is an entirely new component—a significant change aboard gasoline boats.

The expansion of the fuel in the tank during the day sends vapour through the vent and thus through the carbon canister and the carbon absorbs much of the hydrocarbons. When the cycle is reversed during cooling at night, air passes back into the vent and through the carbon canister. This purges the carbon of most of the hydrocarbons returning them to the tank.

Carbon canisters are nothing more than a sealed container filled with activated charcoal. It is usually most convenient to fabricate them in roughly cylindrical shapes out of pipe or tube, with inlet and exit barbs at each end.

Minimum canister size is calculated as follows:

- For boats less than or equal to 26 feet, the canister size in litres = 0.04 x fuel tank capacity in gallons. EXAMPLE: An 18-foot boat with a 25-gallon tank would require a canister of 0.04 x 25 = 1.0 litres
- For boats greater than 26 feet the canister size in litres = 0.016 x fuel tank capacity in gallons. EXAMPLE: A 30-foot boat with a 250-gallon tank would require a canister of  $0.016 \times 250 = 4.0$  litres

If convenient for some reason, two or more canisters can be strung in series to meet the required minimum volume. Perko and Attwood are two manufacturers producing carbon canisters.

The reason there are different

requirements for boats less than and greater than 26 feet is that the EPA determined that boats larger than 26 feet would usually spend more time in the water. The water moderates the cooling and heating effect driving diurnal emissions, so - on average - larger boats can be expected to have proportionally lower diurnal emissions, which can be handled by smaller carbon canisters.

An enormous amount of testing was done by NMMA, simulating the worstcase heating and cooling cycle. The results enabled NMMA to negotiate a more realistic number than was originally offered by the EPA.

Installing the required carbon canister creates some new issues of its own. The carbon is very sensitive to liquid immersion - water and fuel. Liquid has to be kept from entering the canister. In fact - on many vessels - typical boaters determine when their tank has been topped off during fueling by watching to see when gasoline starts spilling out of the vent. If this happens with a carbon canister in the vent line, the canister will, obviously, be completely flooded

Finally, the canister itself is an interesting component. Does it need to meet the 2-1/2 minute burn test? (Yes, if inside the engine compartment; no, if outside.) How should it be mounted? Can it handle boat shock and vibration? How about prolonged low (or high) temp winter storage? How do we measure its effectiveness? All of these items are addressed in a new ABYC standard to be published in 2012.

Gasoline boats must not only comply, but the boatbuilder must install certified components and affix a label visible from the helm with the company's name and the following statement: Meets U.S. EPA Evap Standards Using Certified Components.

#### **Auto Fill Shutoff**

The other really big change is the requirement for auto fill-nozzle shutoff. The fuel-fill nozzle is to shut off in compliance with SAE J 285, Dispenser Nozzle Spouts for Liquid Fuels Intended for Use with Spark Ignition and



The new EPA regulations take into account that some boats may be stored on trailers in driveways, or in yards at a steep angle.

Compression Ignition Engines.

Many have asked why this is included with all of the other changes that boatbuilders will be facing, and the reasons are as follows:

- a) It was determined early on that liquid fuel is detrimental to the canister (and allows fuel in a place we did not intend it to be). Activation of the nozzle auto-shutoff feature was a way to ensure the liquid level in the tank remained where it was supposed to.
- b) There has always been a ullage space (air space at the top of the tank) required for expansion, the auto shut-off ensures this. (Ullage is specifically the amount of volume in a tank that is not filled with liquid. Ullage can be quantified as an absolute quantity in gallons or cubic feet or it can be quantified as a percentage of maximum tank capacity.)
- c) We needed a way to keep the fill hose free of fuel (in order for it NOT to have to meet the 15g/m2/day permeation) so auto shut-off became the answer. (A1-15 hose is not manufactured in diameters large enough for fuel fills, so standard A2 hose needs to be employed here.)
- d) Fuel system manufacturers agreed that this is the time to tackle this problem and not wait for another regulation that would cause this change.
- e) This is NOT part of the new EPA regulation but is something that the industry decided to do through ABYC's H-24 and H-25

PTCs (project technical committees), which are a good representation of the industry as a whole through ABYC's ANSI rules.

All gasoline boats now have to be tested to demonstrate that their fuel systems do cause the fill nozzle to shut off when the tank is filled to the proper level or ullage amount. For boats 26 feet and under, the testing is done at the following angles of heel and trim:

- 4 degrees list to starboard
- 4 degrees list to port
- 4 degrees down by the bow
- 4 degrees down by the stern

For boats over 26 feet, the fuel shutoff test is conducted only for the normal static floating position.

### **Testing the Emissions Components**

When the nozzle-shutoff test is complete with the tanks filled to their maximum level at nozzle shutoff - the emissions components (the vent and carbon canister) and other portions of the fuel-storage system (such as A2 fuel-fill hose) must be shown not to have accumulated or hold gasoline. This is after fuel a temperature rise of 60° F (33° C) over the ambient temperature. (This can be from actual temperature increase or maintaining temperature and simulating volumetric thermal expansion.)

For boats under 26 feet long, the test should be conducted with nozzle flow rates of 4 and 10 GPM at:

- 7 degree list to starboard
- 7 degree list to port
- 17 degree down by the bow
- 17 degree down by the stern

These large angles simulate a trailerable boat parked on land in/on a driveway or storage lot with a significant grade.

For boats 26 feet and over, the test should be conducted with nozzle flow rates of 4, 10 and 18 GPM and the test angles are:

• 2 degree list to starboard



- 2 degree list to port
- 4 degrees down by the bow
- 4 degrees down by the stern

The lower nozzle flow rates for smaller boats are because it is expected they will frequently be refilled on their trailer at automotive filling stations, which are limited to a maximum of 9 GPM fill rate.

### **Watertight Vent Fitting**

Because the carbon canister cannot be allowed to get wet (either from fuel or water), the vent fitting exiting the hull must be watertight. It must resist a direct nozzle spray for at least 15 minutes at least 2 inches per hour at 5 psi, with no measurable water anywhere in the fuel system after the spraying.

It must also resist a stream of direct water from a one-inch nozzle, at a pressure of 15 psi at the nozzle, with the nozzle 10 feet away, for a period of 5 minutes. Again, there must be no measurable water anywhere in the fuel system after this test.

One method of meeting these requirements is with a P-Trap vent fitting available from manufacturers such as Perko and Attwood Where the distance from the tank to the vent outlet is short, you may want to install a P-Trap with a built-in surge chamber, which is available from Attwood and others.

Prior versions of ABYC H-24 specified a minimum 7/16-inch diameter vent line. Because of the requirements for a watertight vent fitting this requirement has been changed to read that the vent system must prevent the pressure in the tank from exceeding 80% of the tank test pressure. This actually returns to the wording of the original 33 CFR.

### **Methods of Compliance**

Several companies already offer gasoline-fuel-system components to meet the new EPA regulations. Other companies are offering entire fuel systems.

The grade and vent valves ensure that the fuel rises up in the fill line and shut off the nozzle at all the various angles of heel, with the correct ullage in the tank.

Keep in mind that the "new" valves

aren't new. They have been used in automotive applications for over thirty years.

### **Inspection and Maintenance**

Don't forget that all the fuel-system components must be accessible for inspection, maintenance and repair. This may mean installing additional access ports or panels to access some of the new required items.

### **Portable Tanks and Primer Bulbs**

Under the new EPA regulations portable gasoline tanks must have vents that remain closed until at least 5 psi internal pressure. This creates enormous pressure in a tank, resulting in both fuel leaking through the hose and overflowing a connected engine and creating surging fuel (a geyser) when the cap is loosened under pressure.

ABYC's new H-25 standard addresses the venting options for portable tanks. A manual relief or automatic relief of pressure is allowed and accepted by the EPA. The EPA has indicated that they will reference ABYC H-25 regarding portable tanks.

Primer bulbs used on smaller gasoline engines, are subject to the same emissions requirements as hoses and plastic tanks and any other fuel-system component. Final details on primer bulbs are due out in 2012.

### **Meeting the Standards** on Custom Boats?

What do you do if you're a custom builder and you're building a gasoline boat? You can purchase a complete gasoline fuel system (such as those from Perko or Attwood). This may be the simplest way to comply.

Alternately, for most installations, creating a 5% to 8% ullage at the top of the tank will ensure that fuel will not remain in the fill hose. A "forced" ullage will thus be created by extending the vent pipe (and the fill) down into the tank below the tank top to the height of the desired ullage. When the fuel reaches the level of the extended vent pipe, pressure will build and the fill nozzle will auto shutoff. If the vent pipe is located at the geometric centre

of the tank top, it should cause proper shut-off and proper venting at the required angles, particularly for boats over 26 feet.

A carbon canister can then be added to the vent line, to meet diurnal emissions requirements, and a P-Trap vent fitting to ensure water doesn't enter.

All these new requirements are performance based. Accordingly, you can try simple approaches as above, but remember the word "performance." You can't just build a fuel system like this and assume it will work. You MUST test it to demonstrate it actually complies with all the requirements.

Home-built boats must meet these criteria as well. with the homebuilder as the builder of record on the compliance label at the helm.

### **Not Applicable to Older Boats**

New tanks and fuel lines are not subject to the new EPA requirements when installed in older boat built prior to the implementation of the standard.

### The Last Word

ABYC's standards H-24 and H-25 cover all the requirements for a installed or portable gasoline fuel system. ABYC's publication, EPA Regulations for Recreational Boats, covers the full range of EPA regulations applicable to pleasure boats.

This article was made possible by information provided by ABYC vice president and Tech Department director, John Adey, and by the work of the ABYC PTC committees, which, in coordination with industry and the EPA, produced the latest versions of H-24 and H-25.

This article originally appeared in the online quarterly journal of the Westlawn Institute of Marine Technology, The Masthead. You can read all back issues of The Masthead online by going to www.westlawn.edu and clicking on the link Journal/Newsletter.

Boating Industry Canada wants to thank Dave Gerr and the Westlawn Institute of Marine Technology for giving permission to share this article with our readers.

# ICOMIA:

### The International Council of Marine Industry Associations

BY BARBARA FOUNTOUKOS

WITH THE SUPPORT of 34 national marine industry associations representing the vast majority of the industrialized countries from Canada across to Japan and from Finland down to New Zealand, the International Council of Marine Industry Associations (ICOMIA) has addressed challenges facing the global marine industry since 1967.

The leading light of the non-profit organization is Secretary General Tony Rice.

"Coming into this job wasn't a learning curve, it was vertical", says Mr. Rice, who joined ICOMIA nine years ago.

"What struck me back then, and this remains true, is that we are truly blessed in this industry with having so many nice people to work with. People have a genuine interest in others."

But not all has been smooth sailing. Leading ICOMIA through the recession proved to be a challenge as all sectors of the marine industry were affected. In response to falling revenues challenging its members, ICOMIA has significantly reduced its subscriptions for 2012.

Many other serious issues, including reducing numbers of boaters, environmental legislations and developing new markets, continue to challenge the marine industry.

"This is why ICOMIA is absolutely crucial for the future of our industry", explains Mr. Rice.

"We need an organization to address all the issues that in any way deny or restrict the free flow of our industry's products into world markets. This is not just confronting hostile regulation but also developing standards that have universal recognition and acceptability."

Numerous beneficial improvements



within the marine industry are results of ICOMIA's hard work and dedication. ICOMIA championed the development of the EU's RCD (Recreational Craft Directive) in the 1990s, which was fundamental to opening the EU market and other markets agreeable to accept EU certified boats. Linked to RCD is the development of over 60 ISO Standards for small craft. ICOMIA funds ISO TC 188 secretariat, which manages these standards.

ICOMIA continuously publishes documents and guidelines to facilitate the growth of the global recreational marine industry. One of ICOMIA's on-going projects is the Global Conformity Guidelines, which are produced in association with The American Boat & Yacht Council (ABYC), British Marine Federation (BMF), National Marine Manufacturers Association (NMMA) and International Marine Certification Institute (IMCI). The purpose of the Global Conformity Guidelines is to assist boat builders who comply with either ABYC or ISO standard systems, but are looking to start exporting to countries using the opposite system. So far, ICO-

MIA has published seven guidelines including Fuel Systems, Powering and Windows, Portlights and Hatches in the ICOMIA Online Library. The final goal of the Global Conformity Guidelines is to resolve the differences between the two standards and achieve one global technical specification.

Equally important to mention are the annual ICOMIA industry statistics, which are produced annually with numbers from their global membership. ICOMIA's statistics are widely acknowledged as the only authoritative and reliable source of information available on the worldwide recreational boating industry. Members of ICOMIA, and members of ICOMIA members, can purchase the annual publication for a special membership price.

Other ICOMIA projects include the recent launch of the Scantlings Calculator, which uses a series of easyto-use spreadsheets in order to provide a calculation method to help and encourage builders to comply with ISO (Small Craft) Scantling standard 12215 Part 5. ICOMIA's Technical Committee initiated a study (sponsored by the IMCI), and upon approval from ISO, commissioned Southampton Solent University to develop a series of Excel spread sheets designed to be used in conjunction with the ISO standard and specifically for use by self-certifying builders for whom 12215 Part 5 may be too daunting or time consuming. Another ICOMIA innovation is the Keel-Checker; a tool for assessing whether keel designs are within the parameters of the new standard ISO 12215 Part 9, which recently has gone into Final Draft International

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- NMMA Canada Releases First Recreational Boating Statistical Abstract
- Campion Marine Introduces Four New Chase Models and Two New Allante Models to its Line Up
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- MarineMax Vacations Announces New 38-Foot Power Catamarans
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Secretary General Tony Rice

Standard (FDIS) voting. Although the new standard has still a few months to go until publication, many organizations already require compliant keel designs.

The Scantlings Calculator and Keel-Checker can be downloaded free of charge from the ICOMIA website.

In addition to publishing guidelines and other valuable documents, ICOMIA is directly involved with a number of international events. In partnership with Amsterdam RAI, the annual marine equipment trade show METS has become the global market place for equipment manufacturers.

Above all, ICOMIA continues to provide a strong and united voice influencing environmental legislation in key markets that may adversely affect the industry.

But despite its many achievements, Mr. Rice prefers to look forward instead of back:

"My goal as Secretary General is to ensure that ICOMIA remains relevant to its members and the wider industry, to continue growing the association and the global market. Hopefully we will witness the recreational marine industry restored to a sustainable and strong position soon."

He adds:

"I have always believed in the strength in numbers. If we work side by side, together we can overcome any obstacle challenging our industry."

www.icomia.com

# **New Research**

### on Canada's Recreational Boating Market

**NEW RESEARCH** based on the broader Transport Canada Vessel Registration data and Stats Canada information augmented by research throughout the marine industry and among NMMA members provides the data for the new NMMA Statistical Abstract on Canada's Recreational Boating Market.

The data includes statistics on Canada's recreational boating retail sales, participation and boater demographics, the overall retail market, imports/exports and economic factors which impact the industry.

Overall, in 2011, 38 percent of Canadian adults went boating at least

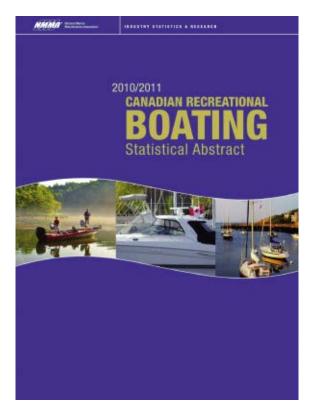
In terms of boat sales, the study reveals that in 2011, sales of new and pre-owned recreational boats and new outboard engines totalled \$2.8 billion, down 21 percent compared to the previous year.

There were 44,400 new boats sold during 2011 with an estimated retail value of \$1.6 billion. These figures represent a 22 percent decline in unit sales and an 18 percent decline in dollars from 2010.

According to the registration data, 54,247 pre-owned boats were sold in 2011 with an estimated retail value of \$1.0 billion. These figures represent a 33 percent decline in unit sales and a 25 percent drop in dollars from 2010.

The picture for Canadian Import and Export Units was led by rowboats and canoes and 2010 exports of recreational boats from Canada increased by 26% compared to the previous year. There were 215,000 boats exported from Canada of which rowboats/canoes comprised 81% of the total.

In 2010, Canada exported 6,823 outboard boats with value of \$9.6 million.



Outboard boats comprise 3% of Canada's exported dollar and unit volume. In the same time period Canada imported 14,466 outboard boats with a value of \$98 million. Outboard boats comprise 16% of imported boat dollars and units.

The estimate that 38 percent of Canadian adults went boating at least once during 2011, translates to 10.5 million boaters.

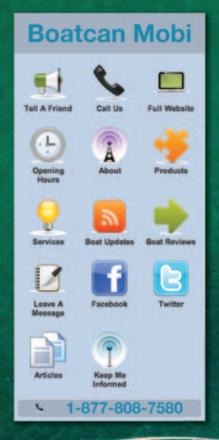
The NMMA reported that current boating participants tend to be married, have children living at home, are university educated and work full time, but the data showed a household income of less than \$80,000.

"Despite a decrease in sales of new and pre-owned boats in 2011, largely a result of the global economic recession, the boating industry in Canada is resilient," noted Sara Anghel. "Given the immense access to water across the country and a passion among residents for the outdoors, boating remains a top recreational activity for Canadians."

One free copy of the Abstract will be available to all NMMA members, both Canadian and U.S., to download from the Centre of Knowledge on nmma.org. If members wish to have a printed copy they will be available to order for \$70. Non-members can purchase the Abstract for \$750 (U.S.).

For more information about the abstract contact Sara Anghel, Executive Director at sanghel@nmma.org or at 905-951-4048. For more information visitwww.nmma.org or www.nmma.ca.

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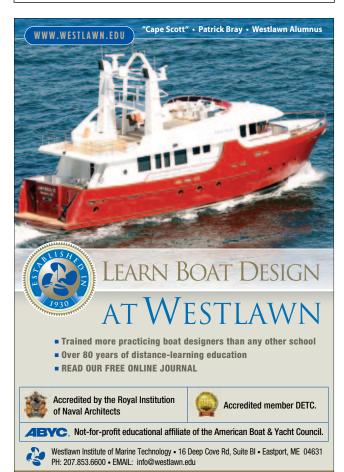
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## **Marine Trade Associations Update**

THE PURPOSE OF our "Across Canada" column in Boating Industry Canada magazine is to provide a communications platform for all of Canada's marine trades organizations and associations to share ideas and initiatives with the industry on a national basis.

While we ordinarily give space to each of these organizations in every issue, virtually all of these marine trades organizations are united in one common activity - the development of a nationally agreed-upon set of technical standards for marine technician training.

The initial meeting was a strategy development session that took place in April of 2011. The purpose of the meeting was to address the shortage of qualified marine technicians. The shortage is universal across Canada and job vacancies exist from the smallest little cottage country communities to the biggest and most important major market marine employers. Top-quality marine technicians are needed in every corner of our country.

The need is growing as well, perhaps driven by demographic shifts in Canada's population and certainly complicated by similar shortages in other industries.

The first meeting of all interested stakeholders was arranged through NMMA Canada. During the meeting, Timothy Martin volunteered to serve as the chairman.

The most recent meeting of the technical standards subcommittee took place during the 2012 Toronto International Boat Show, again with Timothy Martin as chairman. Every marine trades associations and the major engine manufacturers had representation around the table and all agreed that the industry is grappling with changing demographics,

shortages of technicians in many competing industries, rising technological product sophistication and additionally, an accompanying expectation on the part of our customers for service excellence. Every corner of Canada's marine industry is impacted by the shortages.

Cooperation levels are high as you would hope. The first issue was to address the question of

regional differences in marine technician training and required skills, especially for differences like salt versus freshwater settings. It was generally agreed that while regional differences exist, to move the process forward, the group needs to focus on the common knowledge elements required across all regions of Canada.

The ultimate goal would be to create a nationally recognized set of standards that would make a marine technician a recognized career.

Some other industries that are competing for skilled technicians have developed a set of training guidelines and applied for recognition through the government for what is called Red Seal certification, which is nationally recognized standard of skills.

Red Seal certification facilitates interprovincial relocation opportunities for technicians and a more common value for the technician's work.

Discussions touched on issues such as education versus certification and licensing and that the standards need to be relevant and responsive to the industry and recognize and embrace the various training programs that are currently being offered (by engine manufacturers, in particular).

A side note that cropped up was that some dealers seem to view their own service departments as a liability rather than a vitally important profit centre.

Other questions included how ABYC training might possibly fit into a new

Georgian's Robbert Hartog Midland Campus has received funding from the Ontario government to offer the Women in Skilled Trades (WIST) Marine and Small Engine Technician pre-apprenticeship program.



Students getting handson experience while enrolled in Georgian College Marine Technician program.

program and also what mechanisms can be used to recognize

the existing knowledge and skills level of people already in the business.

That discussion focused on "competency-based" testing which could give recognition to present top-rated technicians, while weeding out those who lacked the knowledge or the skills.

Rob Davidson represented the interests of Georgian College who offer a Marine and Small Engine training program. They currently have a Level 2 Apprenticeship program with 33 people. Hopefully, more members of the industry will actively seek out Georgian College to bring more apprentices into the industry.

It's essential that we provide a suitable career opportunity for those who've already committed to entering the marine business.

The idea surfaced that the future may require a different type of candidate one with different personal talents and interests. We not only need to find ways to identify what those talents and interests are, but also to develop ways to attract those people.

In a Boating Industry Canada video interview after the meeting, Tim Martin noted that we need to make being a marine technician an attractive career option for people who have many different career paths open to them. We also need to recognize and work to correct the marine industry's reputation as seasonal employers without career consistency or competitive rewards.

The whole industry has a need to support this and the best way is through your local marine trade association.



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