

**Thunderboat Throwback Thursday**  
**Norm Berg and Dave Knowlen --**  
**The Norberg Custom Boats.**



Bill Osborne Photo - SD 79-02 -- Used with permission

A few months back, I received a private message from one of the regular contributors/commenters on the Diamond Cup Hydromanics Facebook site asking me to look into writing a piece about Tacoma's Norm Berg and his brief, but highly successful, involvement in building unlimited hulls.

I have to admit that the name Norm Berg meant little to me when the story idea was first suggested, but it didn't take long to realize how important a place the man holds in the history of the piston era boats.

I also learned that the credit for the success of Berg's boats must also be extended to his collaborator, and that to do proper justice to the story of Berg's boats, one had to also include the story of his close cohort in those endeavors, Mr. Dave Knowlen.

My digging for facts on the partnership revealed that the two appear to have come from rather diverse backgrounds, but that they possessed highly developed skill sets that particularly complimented one another when it came to designing and building race boats.

My sources show that Berg grew up as part of a commercial fishing family in the Puget Sound area and that as he grew into adulthood he became a skilled woodworker and boat building craftsman.

Knowlen was educated as a mechanical engineer, eventually becoming part of the development team at the Boeing Company, guiding the designing and building of commercial aircraft while using advanced design principles and space-age materials.

Berg learned the rudiments of his boat-building prowess primarily while in the employ of Tacoma's Peterson Boat Building as a woodworker for a firm known for its building of many of Puget Sound's large fishing boats, tugboats, and a variety of other ships under government contract.

While working at the Peterson boat shop, Berg was contacted by Ron Jones Sr., who at the time had his build team working out of a shop in Mountain View, California. Tired of the work he was doing in Tacoma, especially with the noise that came from the boilermakers' hammers, Berg jumped at the chance to work for the son of the legendary Ted Jones building race boats.

Upon arriving at Jones' shop in the Bay Area, Berg became part of the team creating what would become the cab forward 1966 Miss Bardahl. Among those working with Jones at the time was Bob Mackey, another skilled woodworker. Berg and Mackey would develop a strong working relationship that would later bring Mackey into Berg's employ.

Berg's time with Jones' ended when Norm, like many of his generation, received his draft notice. He left Jones' employ after less than a year to serve his active duty time

with the Navy in 1964, leaving behind the incomplete Miss Bardahl for others to finish. His commitment with the military lasted two years, serving honorably on a destroyer off of the coast of Vietnam.

After Berg's military commitment was complete, he returned to the employ of Peterson Boat Building for approximately two years time. The opportunity again arose for him to return to work for Ron Jones Sr. in 1969. By this time the Jones' operation had moved to Costa Mesa, which is southeast of Los Angeles.

"I had just bought this El Camino in 1969. The El Camino was brand new, and it was the summertime. It was big enough to put my Honda motorcycle on the back of it and tow my ski boat, and I towed them both down there."

Jones had a contract with Mercury Marine at the time of Berg's return and he assisted with the building of several outboard-powered tunnel boats that Jones had signed on to build for that season's Lake Havasu race.

"I guess Bob (Mackey) and I both rode off-road bikes," said Berg, "and we spent some time out riding, but I had this ski boat that had a big outboard on it, but I never used it. Another guy did the painting down there, he had some extra space and it stayed in his garage. He let me store it there."

Tiring of California and suffering a bit from not being able to use his ski boat, Berg chose to return to the Puget Sound area after less than a year.

"I loved boating and I liked being up in the Pacific Northwest, so I told Ron I was leaving and came back up here (to Tacoma)."

Back home again, Berg reassumed his position at the Peterson boat yards, but his marriage in 1972 moved him to put down roots and establish his own business.

Berg based his new boat building operation in the Tacoma suburb of Spanaway where he had built a custom designed building after returning from his first trip to California. He called the new operation Norberg Custom Boats (NCB). He had gathered enough tools to branch off on his own by that time, using them to complete some small repair jobs for others in his spare time. It just made perfect sense to the young boat builder to try to make a go of it on his own, so he did with a stated vision and purpose of building quality race boats.



**Norberg Custom Boats Logo – Bob Bolam Collection**

"I had always had the plan to build my own shop. That was my goal. The first shop I built out there was a nice little building of 2200 square feet. It was big enough to (later) build the two unlimiteds and everything else in it."

"After I finished working during the day at Peterson boat, I went out there after I ate dinner and worked hammering nails until it got dark and on the weekends."

"The building wasn't even complete when I did my two years in the Navy, but it was up and was painted and floors around and everything else, and when I came back I finished it."

"I got really hot on starting my own business, and eventually we bought commercial property down on Highway 167 which we still have – it's an industrial park now – and built a 7,200 foot building with 20 foot ceilings. We had good places to paint the boats and it was just beautiful."

About the time that the new business opened in early 1973, a visit occurred from Dave Knowlen and a local boat racer named Bob Read on recommendation from Joe Trembly, a well-known wooden boat-building instructor at the Bates Industrial School in Tacoma where Berg had attended.

The story goes that Knowlen had been contracted to design an experimental flat bottom race boat for a couple of local boat racers, Bob Read and Don Due. Trumbly's recommendation to Knowlen of Berg as a reliable boat builder led to the project being brought to Berg's boat shop.

While discussing the creation of a working model of a race boat from one of Berg's plugs, Knowlen saw Berg's SJ Class tunnel boat sitting in the shop. He didn't say anything at the time of the visit, but according to Berg's memory of that day, Knowlen called him later that evening and suggested that the two build some hydroplanes together.

Knowlen thus became a subcontractor of Berg's NCB operation, and as an outgrowth, the two men became very good friends. Knowlen was paid for his services as designer of Norberg hulls, but was a collaborator rather than business partner in the new organization.

After several additional meetings, the two agreed to form their collaborative work relationship. Under the informal agreement, Berg retained full ownership of NCB and Knowlen agreed to design his high performance racing boats for him, all of them being limited and unlimited hydroplanes. They both brought different skills to the table, but perhaps because they did, the relationship was able to work quite well.

"We were a friendly partnership, not a legal one," said Berg of their teamwork together."

For his part, Berg built carefully constructed racing machines with great attention to detail and fine workmanship. Knowlen for his part provided highly functional designs from which to build the boats and then provided the Norberg boat buyers with technical support if it were needed.

“(Dave) was also really good at doing PR work which I wasn’t that good at.”

Dave Knowlen recently described the partnership this way:

“Looking back I still believe that Norm’s craftsmanship was unparalleled and we enjoyed a lot of immediate success with our boats.”

“We did some unusual things in all of our basic NCB hydroplane designs -- everything to improve the ground effects in Norm’s boats that critically affect boat stability and performance.”

“We made a good partnership, as one alone could not achieve what we both did as a team.”

It appeared to be the perfect symbiotic boat-building relationship...and for all intents and purposes it was.

### **THE EARLY YEARS – THE LIMITEDS AND THE “WHITE LIGHTNING”**

The first Norberg-created three-point hydroplane was the "Spirit of '76" which the record shows was completed in 1974. It was a 280-class boat and had a fair amount of success.



**E176 – Spirit of '76 280-Class Norberg hydro – Phil Kunz Photo – Used with permission**



Several more limited hydros followed from the NCB build team consisting most of the time of the peripatetic Berg and his co-worker from the Jones days (and now employee), Bob Mackey. Others craftsmen were added from time to time to the team as needed including a local wood worker named John Watkins.

One of those hulls was a twin to the “Spirit of ’76,” which was built for a California boat racer named Leo Ortalan. That boat raced as the E-130 “Top Wop”

#### **E-130 Top Wop**

**Owner: Leo Ortalan.**

**--Photo Credit: Used with Permission – Phil Kunz Photography**



Perhaps the most notable of the early Knowlen-Berg collaborations was the project that followed the Spirit of ’76. It was the designing and building of a hull for a young Seattle boat racer named Steve Reynolds. That project would become the highly successful 225-class N-10 “White Lightning.”

Reynolds had enjoyed moderate success with “Sundance Kid.” Dave Knowlen had built that hull and raced it as a conventional 280-class limited in the mid-to-late 1960s. Dave sold it to two gentlemen who in turn sold the boat to Steve after altering it to race as a 225-class hull. Perhaps too heavy to compete well in the lower classification, the “Kid” failed failed to win any trophies for Reynolds, and left him wanting more.

Focused on eventually moving up to the unlimited class, the young driver decided to upgrade his ride after a particularly frustrating day of racing. He arduously saved his money over the course of a year to have a new, more competitive boat constructed.

When he had assembled the needed funds, he at first contacted Ron Jones to design and build the craft, but an anticipated wait of seven to eight months to begin construction of the Jones-crafted hull led the young racer to look elsewhere.

As luck would have it, Reynolds ran into Dave Knowlen, who had heard that Reynolds had been looking to have a boat built. Knowlen showed Steve his latest design prints and then took him to the NCB shop to meet with Berg.

Impressed with Berg's craftsmanship, it is said that Reynolds reportedly declared aloud that Berg's wood working was every bit as good as that done on Ron Jones' hulls, to which Berg reportedly responded by telling Reynolds of his years spent working in the Jones' shops in California.

Subsequently, Reynolds and the NCB partners settled on a price, and Norm began construction from Knowlen's plans. The result was a bright blue and white cabover powered by a Buick engine – emblazoned with a big N-10 and the name "White Lightning". Notably, one of the major innovations that Knowlen applied to the design of that boat was a horizontal stabilizer wing -- the first ever to be used on a 225-class hull.



**U-10 – White Lightning**

**Owner: Steve Reynolds**

**--Photo Credit: Used with Permission – Phil Kunz Photography**

"I kept the boat in my Parents Garage/Workshop on Mercer Island," Reynolds recalled of his new acquisition. "My first sponsor was actually an old friend of mine and my fathers who owned the Shell Gas Station on Mercer Island."

The boat became a front-runner almost immediately, winning six races in a row while winning every preliminary heat that the boat entered. It was about this point that the team was to become even better.

The catalyst for that improvement would be the addition of Jim Harvey to the "White Lightning" team as crew chief.

Harvey and Reynolds had a mutual friend who saw the potential in the two joining forces to race Steve's new boat. A meeting was soon arranged, and Steve and Jim hit it off almost immediately. After taking Harvey to see the boat, Reynolds invited him to head his crew.

While Reynold's father was a big help, the grind of Reynolds having to race the boat, put it back on the trailer, refuel it for the next heat, put it the water, race it again, put it back on the trailer, tie it down, load the truck with equipment, tow the boat to the shop, go through the hull and check for needed repairs, put away all support equipment (i.e. tools, gas cans, slings, ropes. etc.), and then to drive home for work the day after a race was wearing young Reynolds out. He needed help to carry the load so he could focus on winning.

Reynold's made it clear that night that he felt that Harvey was the man to provide that help. He could be that someone that was needed to manage and take care of the boat—that someone who would become Reynolds' crew chief.

Harvey accepted the position and quickly made it clear that Reynolds had made the correct choice.

"Jim was definitely the RIGHT MAN for the job! He'd stop by my folks' garage after work everyday. He and my Dad babied the White Lightning, treating her with kid gloves", Reynolds said. "In the process Jim became like a second son to my Dad. They got along so well, and he was there so often."

Harvey, Reynolds, and Reynolds' father then joined forces with another of Steve's friends -- engine builder Bill Grader -- to set two world competition records and to remain undefeated in competition for two and one-half years, dominating the 225 class in Region 10 if not the entire West Coast.

Through it all, the centerpiece of the success was the 18' cab over limited hydro with the innovative large rear wing crafted by NCB, and this was not lost on Reynolds. He recently commented on the "White Lightning" and his perspective on the work of Berg in a Facebook posting about another of Berg and Knowlen's other hulls:



“Norm's boats were pieces of finely built works of art.” Reynolds said. “He was truly one of the finest craftsman in boat building. His craftsmanship was second to NONE!” Reynolds then embellished that observation with a smiley emoticon to further emphasize his pleasure with Berg's work.

Perhaps by chance, Reynolds drew a new, more influential sponsor to the N-10 camp with his success.

“Dave Heerensperger, owner of the Pay n' Pak unlimited, was living on Mercer Island at the time, and he saw a picture of the White Lightning on the wall in the gas station,” said Reynolds of the origins of the new sponsor arrangement.

“Heerensperger then told the station owner that if I was interested in him sponsoring me that I was to contact him at his office in Kent for a meeting, and we'd discuss sponsorship.”

“I called Dave, set up a meeting, and then met him at his office. I walked out two hours later with a Pay n' Pak sponsorship. I believe that was the first limited hydroplane, in Region 10 anyway, to have a contending unlimited hydroplane sharing sponsorship with a limited hydroplane.”

Reynolds said he ran the N-10 hull four or five races as the Pay n' Pak previous to a flip on Green Lake that nearly destroyed the boat and injured Reynolds.

Norm Berg rebuilt and repainted the boat while Reynolds was recuperating from the Green Lake accident. After the repairs were completed, Heerensperger contacted Reynolds, and told him that he wanted the boat to run in an exhibition race featuring local limited boats during Seattle's unlimited Seafair race.



**A view of part of the damage done to the N-10 Pay n' Pak from its blow over on Green Lake. – Photo Credit: Bob Bolam Collection**

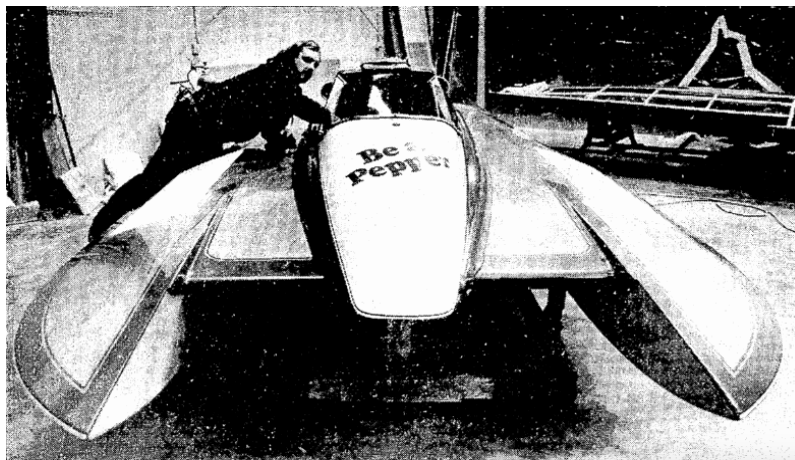
"I was on crutches for Seafair and couldn't drive," Reynolds said of the situation. "I told Dave I thought the water conditions on Lake Washington were far too rough for my little 18' boat. Dave wanted it to run anyway, and he told me that if I couldn't drive it myself then I was to find another driver...but he wanted it there!"

"I got another driver for Seafair, and my boat ran in the exhibition race. But as I feared and predicted, it cracked open a sponson in that rough water and had to be towed back to the pits. As can be imagined, I was NOT happy about it, and that ended my sponsorship arrangement with Pay n' Pak right on the spot!"

As Reynolds transitioned into the unlimited ranks shortly after the Pay n' Pak accident (he said that he was still quite stiff when he assumed that role), he divested himself of the "White Lightning", selling the engine to Brad Mosure and the hull to Roby Ottwell. It then became the "Honey Hush" according to Reynolds, and Ottwell ran the boat for a season before destroying it in a blow-over accident on Green Lake.

[Note: Parts of the "White Lightning" reportedly still remain, however. The nose cowl of the N-10, with Reynold's name on it, is currently part of the Hydroplane and Raceboat Museum collection in Kent and is in currently in storage for possible display at a later date.]

Another Norberg hull was the N-1 Dr. Pepper constructed for Chip Hanauer's classmate at Bellevue's Newport High School, Loren Sears. It was the 225-Class National High Point Champion for 1982, winning 13 of 25 events it entered, while piling up 8,265 national points. That total was nearly twice the points compiled by the nearest competitor.



**Loren Sears posed for a Seattle Times photo to accompany an article about his successful Norberg hull. --Photo Credit: C. Porter**



**Loren Sears and the N-1 Dr. Pepper give chase to the N-22 Bolam's Express. –  
Photo Credit: Bob Bolam Collection**

[Note: Our Hydromaniacs friend Jeff Richards was also a Newport High grad, and he has driven, crewed, and helped build boats during his life time as well. There truly must have been something in the water on the east side of Lake Washington that seemed to draw young men into the sport of hydro racing.]

The record shows that Berg and Knowlen also collaborated on Dave McCabe's 145-class hydro, S-201 "Hot August Night" from Olympia, Washington, another highly competitive hull.

With the, Berg and Knowlen success of the Norberg limited class hulls, particularly the one owned by Reynolds, seemed to turn some important heads in the unlimited ranks in their direction. In fact, a quick note in the Seattle Times amid the coverage of the 1975 Seafair Trophy race revealed that Miss Budweiser owner Bernie Little was giving serious consideration to having Norm Berg build his next Miss Budweiser hull. The article cited the recent success of some "swift inboards," perhaps referencing the White Lightning and the Bandit.

A year later, Berg would make his first actual foray into the unlimited ranks, but it would not involve Little and it would also be outside his partnership with Knowlen.

Norm was approached by Pay n' Pak Crew Chief Jim Lucero with a proposition. The young Lucero had come up with a new cab over design he wanted to try, and he asked Berg to construct the hull for Dave Heerensperger's race team.

Berg was, of course, appears to have been a logical choice to build the boat. Heerensperger's sponsorship of the White Lightning hull in '76 Berg made him more than familiar with the quality of Norm's workmanship, If that were not enough, the NCB shop had done repair work on the existing Pay n' Pak hull, so in that respect the Norberg team was a well-known commodity. This was confirmed in a quote by Norm Berg about the arrangement: "I had done repair work on the Pay N Pak and Miss Budweiser unlimiteds, so a lot of people in the unlimited ranks knew of my work."

During a brief interview with Lucero that I had recently in Chelan, he told me that Berg was selected purposely because he and the Pay n' Pak team were looking for a boat builder that had not as yet built an unlimited hull. Perhaps because of the proposed use of cutting edge building materials, there was a need for someone willing to try new approaches.

Beyond that, Berg was an easy choice because Lucero was also familiar with Berg's reputation for fine craftsmanship and his attention to detail. Jim's decision to hire Norm was borne out by the quality of workmanship Norm and his NCB team brought to the project.

Lucero also confirmed that the boat was constructed at Norm's shop in Spanaway. He commented on the cramped quarters of that facility and challenges it presented to the build team. He said that boat had to be taken out of the shop in order to turn the hull over during construction because the size of the shop wasn't adequate to easily accommodate rotating the roughly 13' wide boat.

Lucero revealed that Berg's attention to detail often mildly aggravated him because if the delays it would sometimes cause. But in the end Berg's insistence of "getting it just right" was worth whatever slight setback to the schedule that the extra time fashioning a part of the boat might have caused.

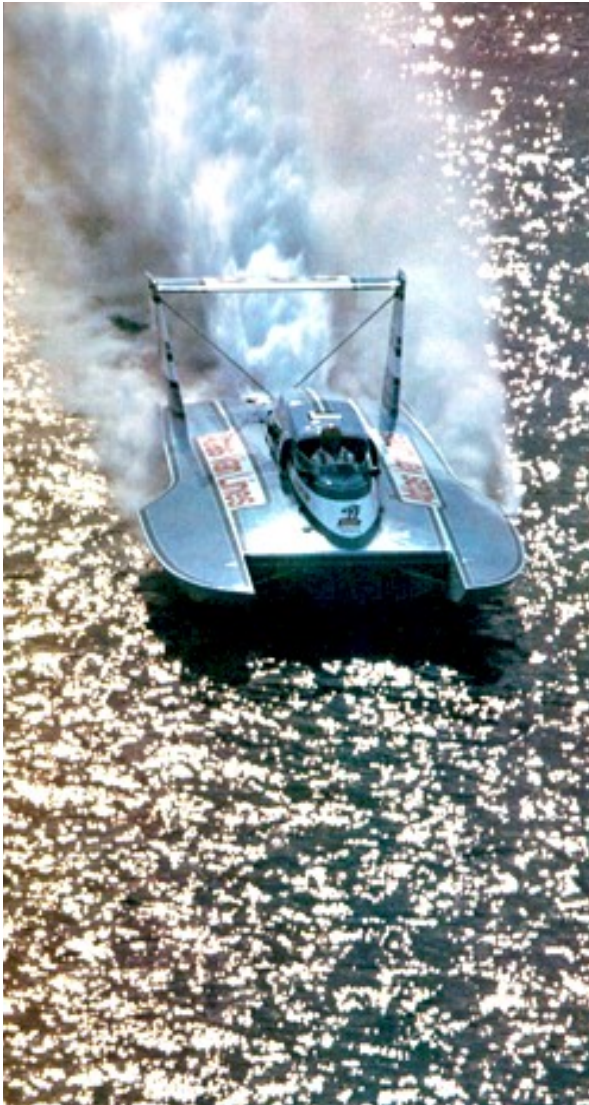
Berg told me that to build the Atlas Van Lines that he brought in a graduate of a Tacoma boat building school and another woodcraftsman that he knew from having sold the young man a 5-litre hydro. The three did most the work on that hull.

As noted earlier, Knowlen was not involved in the Pay n' Pak project with Berg, but he shared with me recently that he had realized at the time of its potentially positive impact on their partnership.

"Lucero designed this boat and I had no role with this project but I realized it did help Norm's visibility as a quality boat builder," Knowlen said.



Much of the hull was constructed of a new material that had been developed for the aerospace industry called Hexcel. Resembling a honeycomb made of aluminum, the new material was strong and rigid while at the same time being lightweight and somewhat pliant, providing a quality replacement for the much heavier plywood used in the construction of most race boats at that time.



**1979 photo of the '77 Atlas Van Lines – From Leslie Field's Hydro History website -- Photo Credit: Unidentified, but I am guessing that it is Bill Osborne**

With the exception of the sponsons, the construction of the Pay n' Pak was nearly all done with the one-inch thick honeycomb. The sponsons had to be constructed of wood battens, plywood, and aluminum to give them the needed strength, but the rest was wrapped in Hexcel.

Jim Lucero told me that the construction of the boat was slowed a bit by the fact that the use of the Hexcel for this purpose was groundbreaking. Therefore, the extrusions and other connectors had to be created from scratch to connect the sections of Hexcel together.

While Berg was in the late stages of building the Pay n' Pak hull, Dave Heerensperger decided to walk away from boat racing and unexpectedly pulled the plug on his team ownership.

The entire race team, including the new hull, was then sold to Bill Muncey. The boat was subsequently christened as Atlas Van Lines and made its initial testing runs in April of 1977. It made its racing debut at the Champion Spark Plug Regatta in Miami in late May of that year with a win in its very first unlimited competition.

The Atlas hull would go on to score victories in five of the next eight races that season following the initial win. It also racked up a second place in the '77 National High Point Race behind Bernie Little's Miss Budweiser – not bad for a first year hull.

The “Blue Blaster”, as it would become known, followed up with a 1978 sophomore season that saw Muncey and the Atlas Van Lines team winning six of seven races and the National High Point race, arguably making it one of the most successful race boats ever constructed. With its success, Berg’s reputation continued to blossom.

When the Pay n’ Pak/Atlas project came to a close, Berg laid off the two woodworkers he had hired, and began working on repairs to an Italian-built Molinari tunnel boat and some other smaller projects.

It was about this time, that Berg reconnected with Bob Mackey, his friend from the Jones Boat Works years. He hired him to work full time for NCB, and according to Berg, that relationship lasted for quite some time.

Berg also attracted some work during this time from the Budweiser team.

“Jim Harvey heard about me, and he was on the Budweiser crew,” Berg said of the arrangement that brought him to Bernie’s Boeing Field shop to work. “He called me and had me come up and work on the Budweiser.”

“I was driving up there and working on that boat (the ’76 hull) and Bernie Little also had the Natural Light, and they were bringing them down to Spanaway to that shop out there. Bob Mackey was working for me by then. We repaired them, we modified them, and we painted them.”

Despite hiring Norberg to work on the existing boats, Little appeared to still be in somewhat of a quandary over whether to finally commission a Norberg hull.

An article in the October 5, 1977 Seattle Times revealed the anticipated sale of the Little’s 1977 National Champion Miss Budweiser to Norman Putt of Australia. In the article, Little again revealed his intention to build a new boat, indicating that he had contacted four Northwest builders about building it. Heading a list that also included the likes of Ed Karelson, Ron Jones Sr., and Don Kelson, was the name Norm Berg of Tacoma.

From what I can gather the sale of the boat to the Australian stalled, as did the building of a new Miss Budweiser. Periodically, the media revisited the pending sale, and Berg continued to be rumored as the possible builder.

For example, in a tidbit from the media coverage of the July 1978 Gold Cup race at Owensboro, Kentucky, the story was revived that the Bud was being sold to the Australian. Berg was quoted as saying at the time that despite the rumors “nothing had been finalized” about building Little’s boat. He said that he had “the materials and everything” on hand to build the new boat, but that his latest conversation with Little had come months earlier, prior to the 1978 season and during spring testing of Little’s older hull.

There was also conjecture that surfaced in the media that a non-compete clause was posing as an obstacle to the Budweiser build, and it had thus stopped Berg from being involved. But while Berg had reportedly built the successful Atlas Van Lines hull with an agreement that he wouldn't use the same construction techniques on another boat for two years, three years had in fact passed since that agreement had been reached. Besides, Berg was quoted as saying that the proposed new Budweiser hull was "to be nothing like the Atlas," supposedly negating one of the rumored non-compete clauses anyway.

In another media piece that followed Owensboro race, it was disclosed that Little and the Budweiser camp had decided to give the final go-ahead for construction of a new cab over for the 1979 season, affirming again that Norm Berg would be the builder.

"I really thought I was going to build a new Budweiser," Berg said. "I can remember flying down to San Diego to meet with Bernie. I talked to him again. This came at a time when I didn't have anything else going, but he just couldn't make up his mind...and somebody else did."

The record shows that Little never followed through on having the Norberg boat designed and built. He did continue, however, to publicly discuss a possible move to do so, but there was apparently more to that story, one that leads us directly to the story of the building of the Squire Shop and Circus Circus hulls.

As I was writing this piece, I came across a recollection of the situation from sometime Hydromaniac's contributor, respected hydro writer, and former unlimited crewman Brad Haskin.

Haskin recently wrote a contribution to the Squire Shop restoration page, saying that Bernie Little had actually come to Dave Knowlen in 1978, and had asked him to come up with a Griffon-powered Bud design.

"But there were some issues in that Dave wanted the boat built exactly as he had designed it, and Bernie's crew wanted to make changes to the design," Haskins said. "This ultimately led to Bernie going to Ron Jones in the off-season of '78-79 and coming up with the "Juggernaut" Griffon Bud design."

"After that happened, Knowlen still had a 'ready-made' boat design that was shopped around, and Bob Steil (Squire Shop owner) and Bill Bennett (Circus Circus owner) both bought off on it, but with the Rolls-Royce Merlin's instead."

Norm had this take on what happened when I spoke with him recently:

"Bob Steils and Chip Hanauer came down and ordered a boat. Bernie had been heehawing about it (purchasing a hull). He had a brand new boat about that time. David created a set of plans for a boat with a Griffon engine in it, but Bernie couldn't make

up his mind. Then he heard that I had sold a boat to Bob Steils, and he called me up from Florida and said he wouldn't be 'second in line.'"

"Shortly after that, the Nevada casino owners of Circus Circus ordered a hull from me."

I also ran across a quote from Dave Knowlen with his recollections of how the Norberg U-2 Squire Shop boat had its beginnings. According to Knowlen, the purchase was initiated on an August evening during the week following the '78 Seattle Seafair race.

"Bob Steil and Chip Hanauer visited me at my home in Tacoma," said Knowlen. "I recall that Chip had been impressed with the performance of a Norberg limited hydroplane, Steve Reynold's "White Lightning" 225, and both were looking for a new boat that could compete with the Atlas."

"I laid out the design drawings on my living room floor and after some discussion they agreed to purchase the boat. They concluded the deal a few days later with Norm Berg."

"Ironically it was just two weeks later we sold Bill Bennett his Norberg Circus Circus (U-31). Norm had his challenges with building both boats for the 1979 season."

Berg described the sequence of events that led to the agreement to build the Circus Circus:

"A week or two later (after the Squire Shop purchase) I got a call from a guy – I guess he called Dave first – He called from his Lear jet – he was going from Las Vegas to La Habra, California and he was interested in getting into hydros and unlimiteds, and that was Circus Circus. It was Bill Bennett and Bill Pennington."

"They bought a used boat from Bernie Little, and we fixed things and did a little work on it. We painted it up with the three colors of pink, and then we met will Bill Bennett. He flew into Boeing Field and we signed a contract to build a new boat for him."

The initial build team included Berg and Bob Mackey. Norm brought in John Watkins to add another wood worker and the team began the challenging task of building two unlimiteds simultaneously. Berg also remembered employing some other boat builders from the Olympia area to fill in when needed.

Although very similar in their design, the two unlimiteds contained some notable differences in construction according to Berg.



"The Squire Shop was a regular plywood and lumber hull with an aluminum skin on it. The Circus Circus (team) wanted to have a lot of additional honeycomb aluminum on it."

Since the Circus team was open to using a few new and different ideas on their hull, they chose to incorporate the Hexcel plating which made the boat lighter in weight than the Squire version.

"The bottom of the whole boat was all one-inch honeycomb and probably the aft non-trips were honeycomb also," said Berg of its construction.

When word got around about the use of large amounts of Hexcel in the Circus Circus build, Berg was told that he might be sued if he used the extrusion design that had been used to attach the one-inch Hexcel to the Pay n' Pak/Atlas hull, this coming even though he had never gotten around to signing a contract for that build with that team.

The problem was solved when the Circus Circus group found a company that was able to make its own dies and create a new extrusion. Berg's team was then able to build the boat with its honeycomb parts and the threatened lawsuit never materialized.

[Note: Jim Lucero told me during our brief discussion in Chelan that he didn't consider suing Berg at the time.]

Berg said he had no preference as to which construction materials were used because the results were so similar. He acknowledged that the honeycomb made the Circus Circus a slightly lighter boat, but other than that they were identical.

"They (both) somewhat resemble my "White Lightning" limited boat," Berg was quoted as saying of the two craft. Both of the unlimiteds boats had the low profile cab over look of the "Lightning" along with similar rear wings.

Despite the challenges of having two boats under construction at the same time, with the help of his shop crew, Berg was able to finish both boats within weeks of one another in April of 1979.

It is perhaps no coincidence that the team that Circus Circus owner Bill Bennett brought together to create and race the new Circus Circus unlimited had also fashioned the White Lightning/Pay n' Pak limited into an unqualified success.

"While still recovering from my Green Lake accident, I was contacted by the Circus Circus Casino's owner, and was offered the job of driving his new unlimited hydroplane being designed (by Dave Knowlen) and built by Norberg Custom Boats, along with the entire White Lightning crew.

Joining Reynolds in the deal was Jim Harvey. And of course, Harvey had been Reynold's crew chief with the "White Lightning".

The Norberg Circus Circus hull made its debut on April 21, 1979 with an unannounced test on the Columbia River in Pasco. The successful run was described in the media as a "shakedown cruise", with the team focused on making sure everything was "ship shape" for the christening of the new hull in Seattle's Stan Sayres pits.

"For a run right out of the box, we were pleased," driver Steve Reynolds said of he test. He was particularly pleased with the boat's cornering ability, reportedly pushing the boat to speeds near 130 mph during the initial trial run.



**Driver Steve Reynolds and the U-31 Circus Circus crew in 1979. -- Photo Credit: Hydroplane and Raceboat Museum – Again possibly Bill Osborne.**

I found no mention of the actual christening run of the Circus boat in Seattle, but it is well documented that the U-31 made its racing debut at the Champion Spark Plug Regatta in Miami on June 10, doing so with a flourish.

The boat qualified solidly at 110.092 mph, nearly six miles per hour slower than Bill Muncey and the Atlas Van Lines, but still near the top of the ladder. The boat then finished a strong second to Muncey and the Blue Blaster with a first and second place in the preliminaries and a second place in the final. Both second place finishes came when matched with Muncey.

Similar results came in the second race entered by Reynolds and the Circus team, the Thunder on the Ohio at Evansville on June 24. This time out though, the U-31 set a qualifying record of 122.449, pushing Muncey and the Atlas off the top of the ladder by 2.048 mph.

When the racing in Evansville was complete, the U-31 had finished second again to Muncey and the Atlas, this happening despite a Did Not Finish in the first heat that complicated things more than a bit. Fortunately, the rest of the field suffered more performance problems than the Circus, opening the door for the team to make the final and to score a strong finish.

Three days later, the Squire Shop hull hit the water for the very first time. A Seattle Times article that ran in the paper the day after the test on June 27, 1979, told of the first run of the new hull.

The short piece mentioned that the Squire would be making its debut on July 8 at the Gold Cup in Madison, Indiana.

The article also expanded a bit on the reasons for the structural differences between the new Squire and the Circus Circus hulls. The Squire was wood and the Circus Circus was largely aluminum. It was explained that Squire Shop Crew Chief Bob



Espland preferred wood rather than a metal-bottomed boats, so the U-2 had opted for wood planking.

"I've had bad luck with honeycomb," Espland said, referring to the aluminum Hexcel material. He further justified his decision to use wood, saying that he saw it as being easier to repair.

**Chip Hanauer, driver of The Squire Shop, rested inside the hydro camp's equipment truck before the successful testing of the new hydroplane. – Photo Credit: Seattle Times Staff Photo by Bruce McKim from June 28, 1979.**

As the Squire was smoothing the kinks out back home in Seattle, the Circus Circus was headed to Detroit for the Spirit of Detroit Trophy where Reynolds put the boat into the show with a seemingly incredible 134.495 qualifying attempt.

[Note: It was later determined that the qualifying speeds for the Detroit race were off by more than three miles per hour. It seems that the race course had been poorly surveyed, thereby inflating the qualifying speeds. Even then, a lap in excess of 130 mph was still quite impressive.]

In the race, the Circus scored a third place finish in the first preliminary heat, and was leading Muncey and the Atlas through turn one when a blade flew off the Circus' propeller. Reynolds had outmaneuvered Muncey and had grabbed the inside lane, taking the lead at the start. Coming out of the turn, however, the young driver heard a loud "boom" and the boat immediately slowed to a stop.

Reynolds got out of the cockpit and peered into the engine compartment to see what had happened to the power train.

"I looked through the vents of the cowling and said 'Good God!'" Reynolds recalled. "There was no shaft and half the gearbox was missing. There was a hole, 3 ½ to 4 feet long, in the bottom. It was like you'd taken a can opener and ripped out the bottom of the boat."

"That's when I jumped in the water," Reynolds said, thinking the boat was sinking. Miraculously, the hull stayed afloat all the way to the pits and didn't sink.

A damage survey by the crew showed that pieces of the prop had also flown into the engine area, causing the supercharger to explode. The resulting shrapnel tore numerous holes in the engine cowling leaving the boat with the appearance that it had been heavily strafed with machine gun fire.

A Seattle Times article, in summarizing the Detroit race, noted that Circus Circus owner William Bennett had quickly dispatched his Lear jet to Seattle to transport Norm Berg to the Motor City to oversee the boat's repair. With the builder on site, it was hoped that the team (along with some volunteers from the Atlas Van Lines crew) could make the repairs in time to make the Gold Cup race in Madison less than a week later.

With only third place points from one heat earned for the day, the Circus placed a disappointing sixth and last in the Detroit race.

While the repair crew was attempting to work their magic on the Circus, the Squire Shop team successfully made its way to Madison, Indiana for its inaugural race, and on Friday of race week, young Chip Hanauer averaged 107.272 to make the Gold Cup field.



The Circus also made it to Madison, arriving the next day. Showing no signs of being the worse for wear from the Detroit accident, the U-31 negotiated the two-lap qualifying run on the Ohio River course with a strong 116.959. That time was bettered only by the setting of a course record by the brand new Ron Jones designed, Rolls-Griffon powered Miss Budweiser driven by Dean Chenoweth at 118.110, and that record was later bettered by Muncey in the Atlas at 121.212 mph.

By the luck of the draw, the Squire made its racing debut in the same section as the Circus. The two Knowlen-Berg hulls were placed into Heat 1-A along with the new Miss Budweiser and an aging Dr. Toyota hull.

It looked like disaster for sure for the NCB contingent when both the Squire and the Circus joined the Budweiser in jumping the gun to start the heat. A short while later, however, the Bud went dead after its engine cover flew off. This left the two Norberg hulls to chase down Dr. Toyota to gain the lead. They finally caught Bob Maschmedt in the U-8 on the backside of Lap 4 and both passed him to get back the one-lap they had been penalized for the jump. The Circus then held on for the heat win, holding a near seven-mph lead at the finish.

Both NCB hulls scored wins in the second section of heats with Hanauer winning a hotly contested battle with Jack Schaefer Jr. in the Tri-City Tile and Masonry in Heat 2-A. Reynolds got his 400 points by edging Muncey and the Atlas Van Lines in Heat 2-B.

Hanauer and Schaefer battled all six laps of their section with the Squire finally pulling out to a 100-yard lead at the finish while the boats averaged 102.099 and 101.694 respectively.

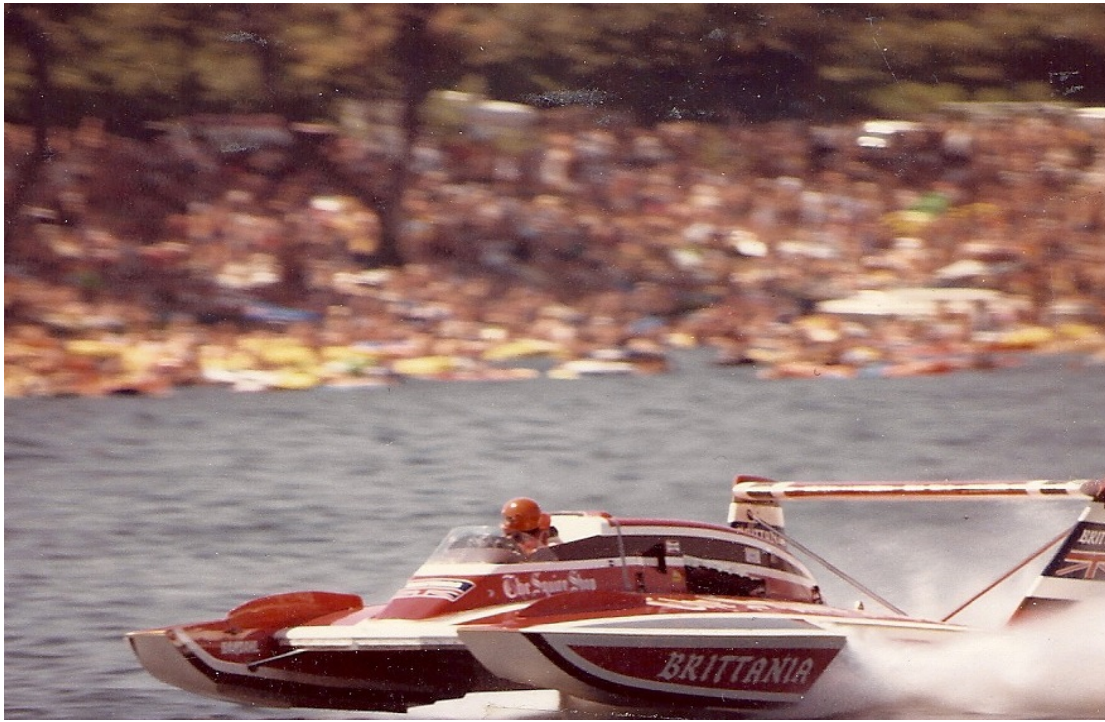
Reynolds finessed his way into Lane 1 with the U-31 and then jumped into the lead at the start over the Budweiser in Lane 2 and Miss Madison in Lane 3. Muncey trailed the field on the far outside, but finally caught everyone with the exception of the Circus Circus.

The Circus Circus was not to be headed, however, and rode a one-lap record of 117.188 on Lap 1 to forge a six-lap average of 113.636, also a course record. The margin between the Circus and Atlas was nearly 400 yards at the finish.

The two Norbergs were drawn together again into Heat 3-B, but the Squire was a no-show when racing got underway. That left Reynolds and the Circus to do battle with Schaefer and the Tri-City Tile for nearly six full laps before the U-31 drew away to a slight lead coming off the final turn. Only .187 mph separated the two at the finish line.

Following the finish of the Heat, Chief Referee Bill Newton assessed a \$200 fine on the Squire Shop team for "conduct unbecoming a professional race team" for having sat out Heat 3-B in a purposeful effort to save their best racing engine. The first and

second place points from the first and second sections and attrition suffered by several other boats had safely put the U-2 into the final before 3-B got underway, so the team had opted to stay on the beach and save their equipment.



**U-2 Squire Shop – Photo Credit: Bob Bolam Collection**

There was more than a bit of irony in that Norm Berg built three of the five boats in the Gold Cup final and that Dave Knowlen had a hand in the design two of them. That and the fact that the two Norberg hulls had taken four of the available six first places that were up for grabs in the preliminaries reinforced the growing prominence of NCB in the sport of hydroplane racing.

The stage was set for an epic battle of design factors, but predictably a patch of bad water put a quick end to what started out to be a tightly contested battle between the Circus and the Atlas. The rookie, Reynolds, again led the veteran, Muncey, through the first turn on the inside. Having emerged in the lead, Reynolds appeared to have control of things when the Circus suddenly hit a patch of rough water on the back straight.

The Circus briefly took flight and then landed hard back on the water. With the sudden drop in speed, the U-31's big Merlin overloaded with fuel and momentarily belched fire from the exhaust stacks before things cleared and Reynolds was able to regain speed. In those few brief seconds, Muncey had securely gained control and led for the remainder of the contest.

"I hit a hole," Reynolds said afterwards referring to the water conditions. "I had skipped over two (rollers), but came down in the third. I went from 115 miles an hour to 15."

The Circus Circus would slowly regain some of the ground that it lost and would finish second to the Atlas while averaging 102.195. The Atlas would average 108.000 for the thirty miles and Hanauer would finish solidly in third with the Squire at 94.193 in its maiden race.

Historically, the outcome of the '79 Gold Cup was immensely important to fan interest in the sport of hydroplane racing. Where once Muncey seemed to walk away with every race, suddenly there were three (and potentially four when you add in the debut of the Little's new Griffon Bud) boats in position to challenge for a win. Although Muncey had picked up his fourth straight win of the season by taking the final while compiling his 54<sup>th</sup> overall career victory and tenth win in the past eleven races, it was lost on no one, I am sure, that the field had become decidedly more competitive and that the Atlas team would now have to work hard for each and every win – there would be no more walkovers for Muncey and the Blaster.

The sport had quickly become much less predictable.

Mechanical issues would relegate Reynolds and the Circus Circus to the middle of the pack or lower in the next four races, with the boat scoring a fifth, a seventh, a fourth, and a seventh in successive weeks. The drought wasn't without its highlights, however. Reynolds established a new world qualifying record for a 2 ½ mile course with an average of 133.136 mph on the Columbia Cup course in the Tri-Cities, but another thrown prop left the boat on the beach after a first heat win there.

The Circus team picked up its first win in the season ender -- the Jack-in-the-Box Regatta in San Diego. The San Diego win came when both Atlas Van Lines and Miss Budweiser faltered in the final, but it was arguably the best showing of the year for the U-31 as it averaged 119.225 for its three heats of competition.

[Note: In a side note to the '79 season, Steve Reynolds shared the following: "During the first season with Circus Circus, as a complete lark, Jim Harvey had Norm Berg repainted the White Lightning hull as the Circus Circus. We ran it in one race on Lake Samammish."

I have included this photo of the hull with that rare paint scheme from my friend Bob Bolam's collection, showing the boat in the pink-and-white livery of the Circus for your enjoyment. Interestingly, I had more than one source tell me that Circus owner Bennett was not pleased with the repainting of the N-10, and that for that reason it didn't run again in the Circus colors.]



**Rare photo of the N-10 in Circus Circus colors – Photo Credit: Bob Bolam Collection**

Hanauer and the Squire Shop competed in four more races during the '79 season, placing eighth at its hometown Seafair Trophy race and taking second places at the Columbia Cup in the Tri-Cities and the Jack-in-the-Box Regatta in San Diego. The team's breakthrough first win came at Utah's Golden Spike Regatta, when Miss Budweiser, Atlas Van Lines, and the Circus Circus all faltered at one time or another during the day. This opened the door for a first and a second in the prelims for the U-2 and a solid first place in the final while recording a 114.416 mph average for the three heats.

A look back at the '79 season shows that Berg had crafted boats that had finished the season in first, second, and sixth in that year's National High Point race, and because of the young driver's strong showing all season in the U-31, Steve Reynolds was designated as the Unlimited Rookie of the Year.

With two wins and several second place finishes between the two Norberg hulls, it definitely was a better than average first season for the collaboration.

## **Was It A Second Season Swoon or the Sophomore Jinx?**

Where the 1979 season might generally be considered “highly successful,” the 1980 season for the Norberg unlimiteds could best be described as a “somewhat disappointing”.

The Squire Shop failed to make the finals in the first seven races it entered, failed to start the Gold Cup in Madison, and then failed to finish any of the heats it entered at the Columbia Cup in the Tri-Cities.

It wasn't until the seventh race of the season before the Squire team registered even as much as a heat win, and not until the ninth race was Hanauer able to finally finish a complete race program, with that race ironically being the boat's only win of the season -- the Utah Governor's Cup near Ogden. The team did finish the season strong with a second place in the Circus Circus Thunderboat Regatta in San Diego, but the inconsistency left the team in fifth place when the National High Points were totaled.

The Circus Circus was a bit more consistent, but could not overcome the effects of off-season modifications to the hull or the incredible start to the season that was enjoyed by the Bernie Little's new Griffon-powered “Juggernaut” Miss Budweiser.

Where the Circus' inaugural season had been had been Cinderella-like, the boat's sophomore year seemed to be unsettled and chaotic by comparison. As noted earlier, changes had been made to the hull resulting in balance and stability issues. The handling problems in turn appear to have contributed to a string of blown engines and thrown props, and as the season progressed it resulted in a succession of “Did Not Starts” and “Did Not Finishes” that far outnumbered the firsts and seconds enjoyed the year before.

Little's newly minted U-12 meanwhile scored wins in five of its first six races before placing second to the Blue Blaster at the Columbia Cup. The Circus scored second places in five of the ten races it entered, as well as third in another, but the team was unable to break through to the winners circle, even when the “Juggernaut” flipped in Seattle, ending its season.

The post season report card for 1980 saw the three Berg-built boats still ranked in the top five, placing second, third, and fifth overall, with both Norberg boats acquitting themselves reasonably well considering the record setting performances that had been put up by the “Juggernaut” and the “Blaster.”

## **The “Canard” May Also Have Had An Effect On The Circus Circus**

One major player on the Circus Circus squad was apparently not satisfied with his team's '79 level of success, however. And it appears that his discontent had a palpable impact on the performance of the team in 1980.



On the heels of his team's first win at San Diego, Bill Bennett announced that the Circus Circus camp was planning a brand new boat for the 1980 season. A brief tidbit that surfaced in the news media after the '79 San Diego race about the announcement stated that the new boat was to be a Dave Knowlen design and would be built by Norm Berg, but that information turned out to be only partially true.

Bennett did commission the construction of a new boat, but it wasn't Dave Knowlen whom he chose to design it. The Circus owner had somehow been exposed to a radical new four-point design that a Seattle-area radio controlled custom boat builder named Ed Fisher had created. Although it had only been used in a scale hydro with any success, the Circus owner had chosen to experiment with that design rather than go with a conventional (and proven to be successful) Knowlen design.

One source I uncovered suggested that Bennett had somehow become a fan of radio controlled boat racing. I could not confirm that assertion via more than one source, but it appears that the casino owner had connected with Fisher in that way.

Fisher's four-point concept was truly radical and featured three forward riding surfaces – point one was the bow portion of the fuselage, points two and three were on the sponsons positioned at the ends of a rear aerodynamic wing, and point four was one blade of the boat's propeller when the boat was at speed. Four points thus contacted the water when the boat was on plane rather than the three of conventional hydros of the time, making it basically a flying wing; hence some wags and fans at the time referred to it as the "canard" design.

From what I could find, Fisher's design had been a consistent winner on the R/C circuit, but that didn't necessarily mean that the success would translate to a boat the size of an unlimited hydroplane.

As news of the proposed design broke on the hydro community, there was immediate push back. In the eyes of the majority of the cognoscente' of the sport of hydro racing, the Fisher design was doomed before it was even built. It was said, that like the "Miss University District" before it, the engineering/design physics of the model boat version of the hull did not translate to a workable concept for a boat 28-feet long and weighing thousands of pounds.

As it was explained to me by John Watkins, former unlimited driver, crew member, and sometime member of the NCB build team, R/C hydros have a tremendous weight to horse power ratio and really don't rely on much aerodynamic lift. When scaled up using an unlimited's horsepower and no aerodynamic lift, such a boat would become what is best characterized as a sluggish "barge" rather than a competitive "race boat".

Although I found nothing in my research as to who took on the building of Fisher's canard design, Dave Knowlen shared with me that Norm Berg was in fact the

builder. He also revealed that although the design of the four-point Circus boat was emphatically not his, he did do some of the structural engineering on the craft while working as a design consultant for Bill Bennett during its construction.

Skepticism of the design by the hydro community persisted even as the canard-Circus project progressed, and warnings found their way into print from a variety of sources that Fisher's concept would simply not work. Despite the atmosphere of negativity, the Circus Circus camp persisted in developing the new design, and at the same time hedged their bets a bit by starting the 1980 season with the '79 boat representing the team until the new "rocket ship" hull could be completed.



**The Rolls-powered four-point Circus Circus. – Bruce Menz photo – Hydroplane and Raceboat Museum collection.**

As work progressed on the canard Circus Circus, word was that less and less focus was placed on the three-point team as ownership concentrated on finishing the four-point project. The future of the Circus Circus team, said the team's upper management, lay strictly in the futuristic looking experimental hull.

There were also reports circulating that tension and discontent were rising amongst the crew of the conventional hull's team, and when the four-point made a less than stellar debut at the San Diego race by failing to even qualify and the conventional hull failed to finish, most of the crew including Reynolds and Crew Chief Harvey were either fired or quit the team.

At the end of 1980 season, Bennett also rid himself of the conventional U-31, and as the canard hull began its slog through the 1981 race circuit, it was revealed that the new owner, Al Letcher of Lancaster, California, had named Dave Knowlen team manager of his new team. The rumored purchase price of the hull had been \$75,000 sans engines.

One media source also revealed that Knowlen had made the move after having been “fired” from his position as the Circus Circus team’s design engineer by owner Bennett. According to the report, Knowlen had disagreed with Bennett over the designer’s suggested changes in the unconventional four-point. At the time of the firing, however, the media was told by the Circus owner that Knowlen had been put on an “indefinite leave of absence” to “rest and get away from the pressure of the sport.”

A follow-up article proposed that the likely cause of the “leave of absence/firing” really dated back to a June 25, 1980 confrontation between Knowlen and designer Ed Fisher at that four-pointer’s first testing on Lake Washington.

The Seattle Times report revealed that Knowlen had been heard to yell an obscenity at Fisher, leaving no doubt that he had had enough of the other man. The Times article also indicated that Knowlen had then supposedly “squared off” as if to throw a punch before he was escorted away.

Knowlen was later quoted as saying that he blew his cool at the wrong time, and that the confrontation grew out of a personality conflict with the other boat designer and that it wasn’t a dispute over design factors at all.

After the sale of the boat to Letcher, the hull was transported from the Circus Circus team base in Las Vegas to Letcher’s base of operation in Tacoma. Letcher was a mint owner and jet pilot by trade and was based in that community.

Knowlen was quoted at the time of the boat’s purchase that Letcher was considering building a new boat out of graphite composite and powering it with a helicopter turbine engine – perhaps foreshadowing a trend that would soon totally change the unlimited hydro landscape.

The former Circus attempted its debut for the 1981 season at Thunder On the Ohio in Evansville, Indiana as the U-77 Spirit of the Air Force. Driven by owner Letcher, it was the only boat that failed to make it onto the water for a qualification run for the Indiana race. The boat was then a no-show for both the Columbia Cup in July and the Sea Galley Gold Cup in Seattle.

The Squire Shop team also debuted its ’81 season at Evansville. Several reports said that the boat had undergone extensive modifications in the off-season and that the team had first passed up the Miami race to get things ready, and then had also skipped the Silver Cup in Detroit and the Governor’s Cup at Madison when the hull

experienced too much lift during testing on Lake Washington. The lifting action was slowing the boat about 20 miles per hour in the chutes, so Crew Chief Jerry Zuvich had kept the boat in the shop to tune out the flightiness.

It appeared the changes and the time that had been taken to fine tune them had paid immediate benefits as Hanauer and the Squire posted a qualifying speed of 127.208 on the Evansville course, placing it third on the ladder behind the record setting run of Dave Heerensperger's new turbine Pay n' Pak (131.627) and a near record turn of the course by Dean Chenowith and Miss Budweiser (131.148).

The Squire then swept both its preliminary heats, dispatching the Pay n' Pak in Heat 1-A by over five miles per hour and then edging by Miss Madison in Heat 2-A. The second section win wasn't without cost, however. On Lap 4, the horizontal wing began to deconstruct and the stabilizer and its supports ended up floating down the Ohio River as the boat eked out the win.

The patrol boats retrieved the wing and uprights, but because the mounting brackets had broken off it could not be reattached between heats. Without the wing, the Squire still managed to place a strong second to Muncey and the Atlas in the final after Miss Bud expired on the final lap to move everyone up.

As Hanauer returned to the pits, however, a loud explosion occurred, blowing a 10-foot-square hole in the Squire's deck while tossing wood splinters high into the air. The U-2 then burst into flames, causing Hanauer to quickly jump ship while rescue teams and the Squire crew fought the fire. Hanauer was uninjured, but the boat suffered extensive damage.

The team was able to make the needed repairs in time for the Columbia Cup two weeks later, with Hanauer qualifying a strong fourth on the ladder this time with a speed of 126.582 mph. Ahead of them were John Walters and the Pay n' Pak at 133.136, Bill Muncey and the Atlas Van Lines with a run of 134.731, and the record setting effort of Dean Chenowith and Miss Budweiser with a time of 137.195.

Receiving some timely racing luck, the Squire avoided head-to-head match-ups with the three other hot boats and managed to make it to the final with an unblemished record, tied with Miss Budweiser with 800 on two heat wins while averaging 114.943 mph.

In the final, Bill Muncey dominated the first four and one-half laps while tying the Columbia Cup 2.5 mile record of 133.730 mph in the process. On the backstretch of the final lap, the Blaster suffered a fuel-system problem and shut down, seemingly leaving Miss Budweiser in position to take the win.

But Hanauer had worked himself into position to take the win away from the Beer Wagon...and did.

As the Bud came out of the final turn, Hanauer had moved from a quarter lap back on Lap 3 to a position on Chenoweth's outside hip. As the Bud drifted out a bit at the exit pin, Hanauer suddenly shot inside with the Squire and took away Lane 1. The U-2 then blew past the Bud in the final hundred yards and took the win by less than one-half second. The closeness of the finish is reflected in the speeds posted – 120.968 for the Squire and 120.579 for the Bud.

The Squire Shop qualified in the fourth position on the ladder for the Sea Galley APBA Gold Cup in Seattle a week later with a run of 126.090. Chenoweth and Miss Budweiser again led the way with another record run, this time at a blistering 139.212, followed by Walters and the Pay n' Pak (134.632), and Muncey and Atlas Van Lines (132.177).

The Squire's speed put it in the "Gold Cup Flight" of Seattle's modified Seafair/Gold Cup fan plan and assured the team of having a better than average chance of making the final as long as the equipment held together. Joining the Squire and the big three in that group were Jack Schaefer Jr. and Thousand Trails (125.702) and Scott Pierce and Oh Boy! Oberto (119.602).

The first Gold Cup Flight heat saw all six boats sprinting at full tilt towards the tight first turn, presenting the potential for high danger and potential collision. Caught in the conflagration was Muncey, who was trying to stay wide of Pierce and the Oberto. He was forced to cross the roostertails of the Budweiser, Pak, and Squire in that order to avoid a sponson-bender. While passing through the wall of water, he washed down the Atlas' electrical system, and the boat went dead in the water at the apex. By the time Muncey had the Blaster back up and running, it was far out of contention.

At about the same time as Muncey took his thunderboat bath, Walters and the Pak found themselves between the Budweiser on the inside and the Squire on the outside with space for his boat narrowing rapidly. Crowded by the Squire and with nowhere else to go, Walters took the Pak into the Bud's rear wing, taking on water as he did so. The Pak suffered structural damage from the bumping and went dead after one lap.

When things finally settled down, Schaefer and the Thousand Trails led for one lap before Chenoweth and the Bud caught them. The Bud wasn't challenged for the duration of the heat, averaging 115.850 for the five laps. Behind him, Hanauer and Schaefer battled it out for second, with the Squire finally surging ahead on the final turn for 300 points and second place.

The Budweiser's margin of victory over the Squire was only 1.663 miles per hour, while the margin existing between the Squire and the third place finisher was even smaller -- .293 mph.