100 Years Since Johnson Outboards Were Born - PART II

By: Ken Kirk **Images from: Ken Kirk Collection**

It has been 100 years since the Johnson brothers introduced their first outboard motor at the 1922 New York Boat Show. Through more than 85 years the Johnson brand had been a major player in the outboard industry until its final year of production, 2007.

In the April Issue of the MLAOC NEWSLETTER we traced the early exploits of the Johnson brothers thru to the introduction of the Johnson Model A outboard in 1922.

The Johnson Model A entered an already crowded marketplace. There were more than 30 companies making an outboard motor. However most had followed the successful template established by Ole Evinrude in 1909 but there had been little design advancement since. They were mostly single cylinder, low RPM motors turning 700 to 900 RPM. They were heavy, 90 lbs. and more, being made primarily of cast iron and brass. They had either cumbersome battery ignition systems or unreliable flywheel magnetos. Few had a reliable reversing mechanism.

The Johnson Model A had many innovations and distinct advantages over other outboards in 1922. It weighed only 35 lbs. due to the use of aluminum alloy. Its two-cylinder opposed firing configuration produced 2 HP at a smooth running 2200 RPM. The flywheel magneto developed by Warren Ripples Quick Action Magneto Company was waterproof and delivered easy reliable starting. The Johnson also had a full pivot functionality which allowed it to turn 360 degrees on the back of the boat delivering maximum maneuverability and reverse. This was an industry first.

The only motor coming close was the Elto Ruddertwin designed by Ole Evinrude. First introduced in 1921, Ole had seen the advantage of lightweight aluminum alloy and opposed firing twin cylinder design. However, the Elto had a battery ignition and a fixed power head with independent rudder steering. Reverse was achieved by stopping the motor and restarting the motor so it would run backwards.

The Johnson was a much more compact and user-friendly set up. As production and sales of the Model A went forward the only significant modification from the original design was the addition of an anti-cavitation plate. First offered as an accessory it quickly became a standard feature. Another industry first.

The Johnson Model A was given the name “Water-Bug” in advertising materials in 1922 & 23. However, this name never appeared on the motor decals. Over 10,000 motors were sold in these first two years. The Johnson brothers were on their way to being an innovative and dominant brand in the outboard industry.

The first Johnson line extension came in 1925 with the introduction of the single cylinder Model J-25, delivering 1.5 HP and weighing only 27 lbs.

The next Johnson introduced was the 6 HP, Model P-30 designated the “Big Twin”. This motor was an industry game changer. It was the spark that ignited the horsepower race and initiated boat racing as a major influence, increasing consumer awareness and interest in outboard boating in general and in brand selection when buying.

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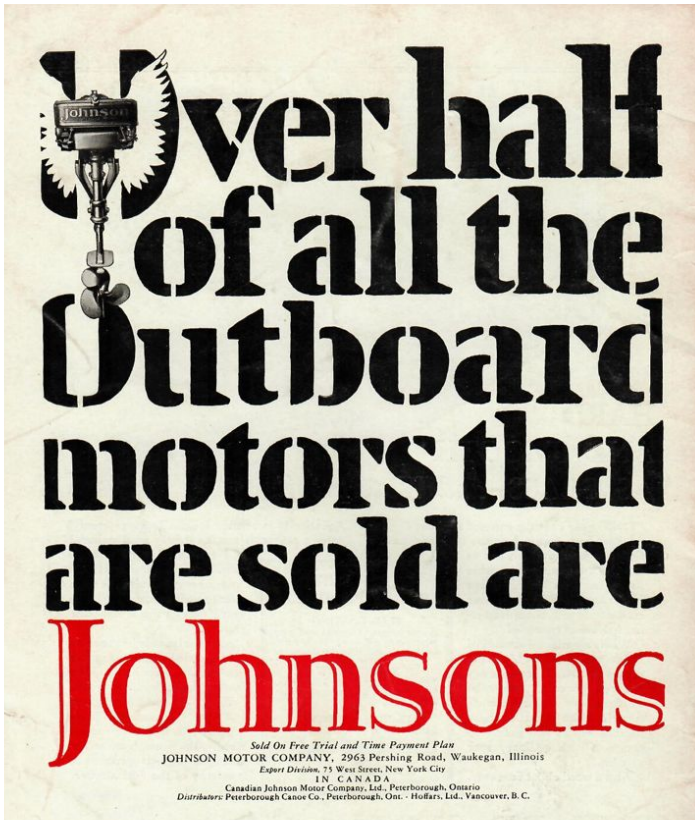
The P-30 was the first outboard that could actually plane a boat. The APBA had established an Outboard Classification and the P-30 set the Outboard World Record in 1926 at 23.38 MPH.

Publicity from racing results and speed records proved to be cheap advertising for Johnson and their competitors. Caille, Evinrude, Elto and Lockwood all jumped into the horsepower race and into aggressive racing programs. In 1926 the largest outboard you could buy was 6 HP. Three short years later, 1929, maximum horsepower had risen to 32 HP. Incredible growth largely motivated by fierce racing competition.

It became evident to Johnson President, Warren Ripple, that the Johnson plant at South Bend Indiana was no longer adequate to meet consumer demand. A new 138,000 square foot manufacturing facility was built at Waukegan Illinois and all Johnson outboard production moved there in 1927.

In 1928 it was generally acknowledged within the outboard industry that Johnson were selling more outboards than all other brands combined. In Canada Johnsons market share was estimated to be as high as 70%.



July 1928 Ad in Water Motoring Magazine

In 1928 Johnson expanded further establishing the Canadian Johnson Motor Company Limited in Peterborough, Ontario. The manufacturing and assembly operation, on the present-day site of the Canadian Canoe Museum on Monaghan Road, originally occupied 30,000 sq. ft. and employed 17 people. By 1959 the Canadian facility, by then named Outboard Marine Corporation of Canada Ltd., had grown to over 400,000 sq. ft. and employed 1,600 people.

The Peterborough Canoe Company had been the Eastern Canada Distributers for Johnson Outboards from the early 20's. With logistics, distribution and a strong Canadian Johnson Dealer network already established, with Peterborough as the epee centre, it seemed only logical that Peterborough be selected as the location for Johnsons first manufacturing and assembly operation outside the United States.

On the product development side, the Johnson brothers continued to move forward at an unbelievable pace with a number of significant innovations in both outboard motor and outboard boat design.

As discussed in Part I of this history, Johnson had established a unique corporate structure when they had forged a relationship with Warren Ripple and the Quick Action Magneto Company to manufacture and market the Johnson Motor Wheel. Lou, Clarence and Harry Johnson along with brother-in-law Warren Conover, had formed the Johnson Brothers Engineering Company. They were the only four shareholders. This Company had a patent and design agreement with Warren Ripple and operated as the sole research and development arm for the Johnson Motor Wheel Company and subsequently the Johnson Motor Company, manufacturing the Outboards.

Ripple was President of Johnson Motors and ran the corporate structure including HR, production, finance and marketing. The Johnson Brothers could focus on what they enjoyed doing best…. engineering, research and development of their Outboard.

The Johnson Brothers Engineering Company received royalties and licensing fees on the pattens they had registered over the many years of marine and aero engine development as well as the pattens they were now registering in development of the Johnson outboard.

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The Johnson Brothers Engineering Company also received a $5. per motor royalty on every Johnson outboard sold. From time to time one or more of the Johnson brothers were also employed directly by the Johnson Motor Company to work out production and manufacturing issues. The Johnson brothers worked very well together in a collaborative way. They also had a secure and trusting relationship with the man they had agreed to be President of Johnson Motors, Warren Ripple.

The flurry of design and engineering development by the Johnson brothers, stimulated by the success of their outboard motors, accelerated significantly in the late 1920's.

In 1928 Johnson published the "Johnson Boat Manual" with building plans for five race boats designed by Lou Johnson. Three of these were revolutionary single step hydroplanes for Class "B" and "C" racing. Lou called them "Standard Stepper", "Big Stepper" and "Giant Stepper". Also designed by Lou were the 16' & 18' "Baby Buzz" runabouts. Johnson did not build these boats but encouraged boat builders and boat racers to build boats from these plans and use Johnson motors for best performance.

For 1928 the Johnson brothers designed the infamous TR-40 "Giant Twin". This monster opposed firing motor was just under 50 cu. in., weighed 110 lbs., and developed 25 HP. The motor was not a sales success and was discontinued after 1929. It was one of Johnsons few mis-steps in the outboard field. However, the difficulty in starting the larger displacement opposed firing TR-40 during the development stage led Harry Johnson to design the "release charger" which facilitated easier starting.

Compression could be released on the port side cylinders of two- and four-cylinder Johnsons during the starting process. Once running on half of the cylinders, the "release charger" was closed and the motor then ran on all cylinders. In 1929 all Johnson opposed firing multicylinder motors had the "release charger" feature, even the small 3 HP model A-45.

For 1929 the Johnson Brothers had also developed the gear driven rotary valve system to improve volumetric efficiency and increase the crankcase compression ratio. This was another industry first. The gear driven rotary valve was a key component of two new Johnson models introduced for 1929, the Model S-45 opposed firing twin at just under 20 cu. in. and the breakthrough Model V-45, opposed firing 4-cylinder, at just under 40 cu. in.

In 1928, recognizing the importance of racing to sales success, Johnson embarked on a strategy of factory-built racing engines. All of these models had an "R" in the model number. Many years later Mercury would use the "H" designation to their model numbers, (Mark 20H, 30H, 55H etc.) to identify their factory-built racing outboards.

In 1928 Johnson had introduced the TR-40 plus the KR-40 for Class "A" racing and the PR-40 for Class "C". In 1929 they added the SR-45 for Class "B" competition and the VR-45 for "D" Class. An XR-50 for "E" Class was added in 1931. This was a one-year motor. These R motors had enhanced carburation, shorter towers and low drag, high speed gear foots right from the factory.

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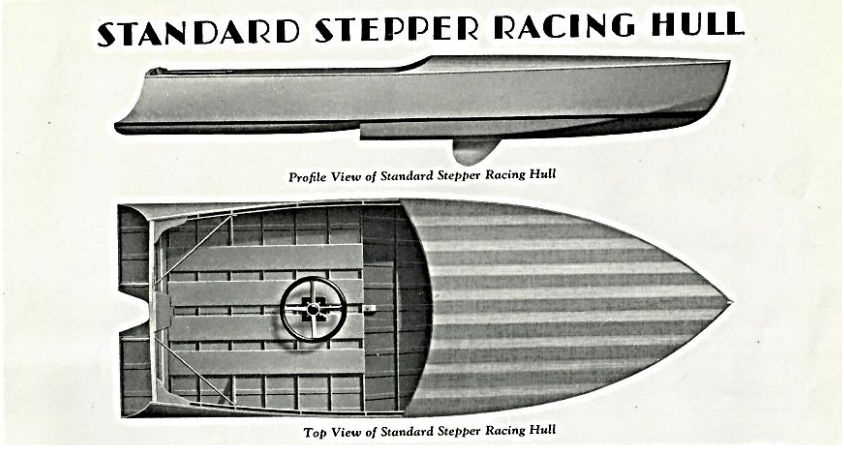
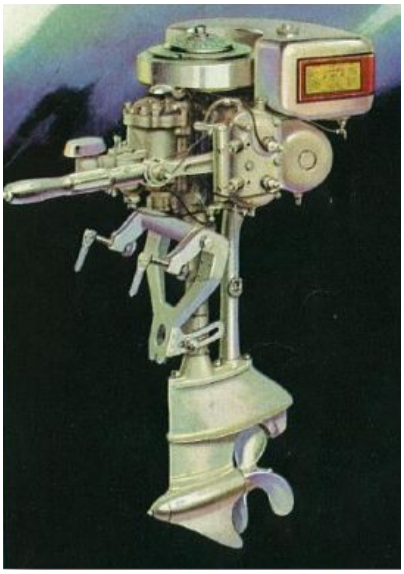


Step Hydroplane designed by Lou Johnson in 1928



1929 Johnson V-45, 32 HP, 4 cyl. with gear driven rotary valve

The Johnson racing program was very successful. The competition also built some factory racing models but no one had all the various classes covered as well as Johnson. They continued to build the KR and SR models thru 1938. Many of the legendary Johnson PR's continued to be raced in the very competitive "C" Service classification into the 1980's, modified and converted to run on a fuel mixture of alcohol and castor oil.

Jeffrey Rodengen, in his book, "Evinrude, Johnson & the Legend of OMC" claims that, "Johnson Motors raced to more victories in the 20's and 30's than all other brands combined".

Sales sheet promoting Johnson KR & SR factory-built Racing Motors for Class "A" & "B".

In 1929 the name "Sea Horse" was first used in Johnson Advertising and as a brand identifier on all Johnson Outboard decals. The "Sea Horse" logo icon evolved over the years but stayed with the Johnson brand until the very end.

For 1930 the Johnson Brothers developed the alternate firing Model K-50, 12 hp and the Model A-50, 4 hp. This would be the first in a series of alternate firing Johnsons that would lead the way in the transition from opposed firing to alternate firing as the dominant power head configuration for all outboards.

In 1930 Johnson also introduced the electric starting option on their two-cylinder Model SE and Model PE and four-cylinder Model VE motors. Evinrude, Elto and Lockwood also introduced electric starting the same year.

The electric starting units all came from the same supplier who would not give an exclusive to any one outboard manufacturer. Johnson separated itself from the pack by introducing a line of six different boats, two of which were specifically designed by Lou Johnson to be sold as matched units with the electric starting motors. These were called "Aquaflyers".

The Johnson boats built in the US were from 14' to 20' in length. Five of the models were V bottom design and built of compressed wood materials Johnson referred to as "Sealite" and "Prestite" construction. Only one model, the 15' "Knockabout" was cedar strip.

Starting in 1931, three Johnson boat models were also built at the Canadian Johnson Motor plant in Peterborough. All Canadian built Johnson boats were cedar strip. The 17' "Imperial" had a concave bottom, a hull design concept favored by Lou Johnson. In 1936 all Johnson boat production stopped in Canada and the US.

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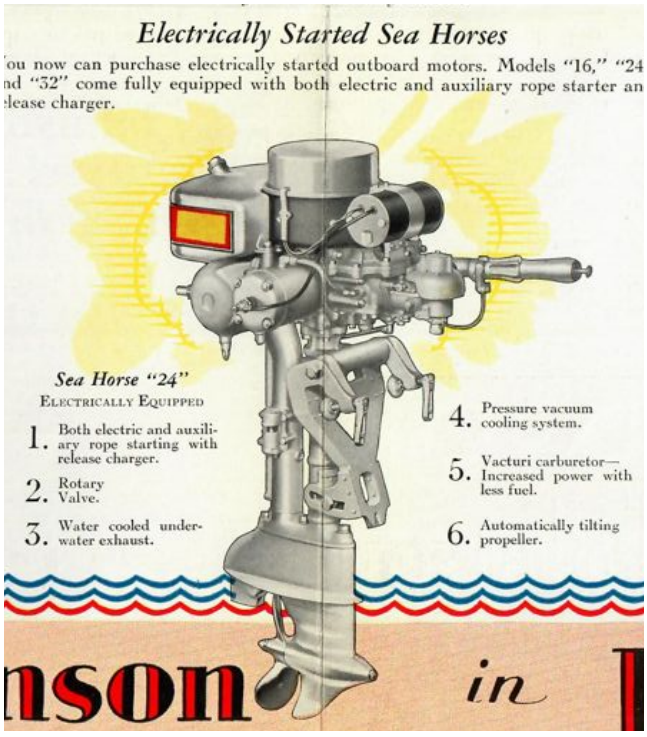

1930 introduction of Electric start Johnsons. Electric starting was available on 16HP, 24HP & 32HP Motors.

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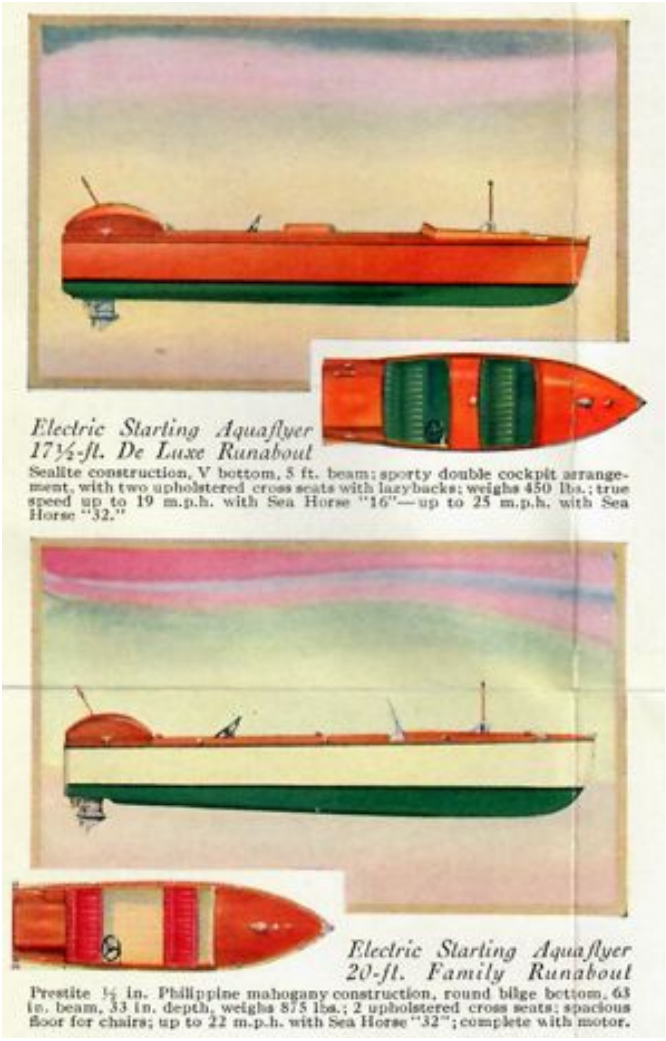

Electric Starting Aquaflyer 17½-ft. De Luxe Runabout

Sealite construction, V bottom, 5 ft. beam; sporty double cockpit arrangement, with two upholstered cross seats with lazybacks; weighs 450 lbs.; true speed up to 19 m.p.h. with Sea Horse "16"—up to 25 m.p.h. with Sea Horse "32."

Electric Starting Aquaflyer 20-ft. Family Runabout

Prestite ¼ in. Philippine mahogany construction, round bilge bottom, 63 in. beam, 33 in. depth, weighs 875 lbs.; 2 upholstered cross seats; spacious floor for chairs; up to 22 m.p.h. with Sea Horse "32"; complete with motor.

Johnson designed & built these "Aquaflyer" Boats specifically for their Electric Start Motors. These were marketed as "Matched Units".

In 1930 the Johnson brothers came forward with yet another innovation, the Johnson "Tilting" Stern Drive, the forerunner of today's Inboard/Outboard. Spearheaded by Harry Johnson, several working prototypes were built. Both the Penn Yan and Ludington boat companies tested the Johnson Stern Drive units, but the onset of the great depression and lack of R&D funds halted further development and no units were commercially produced.

The Johnson I/O. An idea that was thirty years ahead of its time. A Penn Yan boat with a rare prototype of the Johnson Stern Drive is on display at the Glenn H. Curtiss Museum at Hammondsport, N.Y in the Finger Lakes region. Well worth a visit.

In 1930 however the stock market crash of 1929 was quickly taking a significant toll on all sectors of the world economy. The outboard motor industry was no exception. Although Johnson had been the industry leader in sales, product innovation and engineering development they were suddenly under the same severe financial pressure as all of their competitors. Late in 1930 Johnson Motors President Warren Ripple lost financial control of the Company. He was ultimately forced out of the Company by the investors. Tragically he died a short time later largely due to the pressures and stress he faced in trying to save the Johnson Motor Company. In 1932 Johnson was placed in receivership by the underwriters.

After struggling to regain solvency under several different Presidents the underwriters decided to sell Johnson Motors. In November of 1935 the newly formed Outboard Motors Corporation with Steve Briggs as Chairman of the Board and Ralph Evinrude as President bought 66% of Johnson Motors stock. Briggs had previously, in 1929, formed the Outboard Motors Corporation by bringing together the Evinrude, Lockwood and Elto outboard companies and positioning Ralph Evinrude as President. The Lockwood brand was discontinued in 1931 but now with the Johnson brand, the Outboard Motors Corporation was the world's largest producer of Outboards.

The consolidation of the Johnson, Evinrude and Elto brands under the OMC corporate umbrella and the oversight of Steve Briggs allowed all three brands to survive the depression and to flourish once again in the post WWII era.

The Johnson brothers were somewhat protected from the financial difficulties of the Johnson Motor Company. I am sure they owned some Johnson Motor Company stock, but their primary income had come from their Johnson Brothers Engineering Company which they owned outright. Their income came largely from royalties on motor sales and patent license fees from Johnson Motors and others. The Johnson Brothers had made a lot of money from their arrangement with Johnson Motors and although sales and engineering development work was far reduced in the early 1930's the Johnson Brothers Engineering Company continued to earn revenue and was debt free.

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The 1930 Johnson Sea Horse logo

However, by 1935 Lou, Clarence and Harry Johnson and Warren Conover had all decided to retire. With little or no capital, the Johnson Motor Company could not afford to invest in new product development, or the tooling required to put new products into production. There was little work for the Johnson brothers to do so in 1935 the Johnson Brothers Engineering Company ceased to function. The corporate entity however continued to exist until it was dissolved in 1956, earning royalties and licensing fees on patents, largely from OMC, and paying out dividends to the Johnson brothers.

It had been a roller coaster life for Lou, Clarence and Harry Johnson but in the end, they had made out very well financially and had lived productive and exciting lives designing innovative products and significantly contributed to the advancement of the outboard motor.

We will continue to track the history of the Johnson Brand thru the post depression era in our Sept. 2022 Newsletter. Watch for PART III of the Johnson story.

To read more about Johnson Outboards in Canada go to our website mlaoc.ca and our Historical Archives Section. Find the article "OMC Canada Part II – the C. B. Neal Era"

Reference Material for this article includes:

-The Four Men From Terre Haute by J.M. Van Vleet
-Evinrude, Johnson & The Legend of OMC by Jeffrey Rodengen
-The Pictorial History of Outboard Motors by W. J. Webb