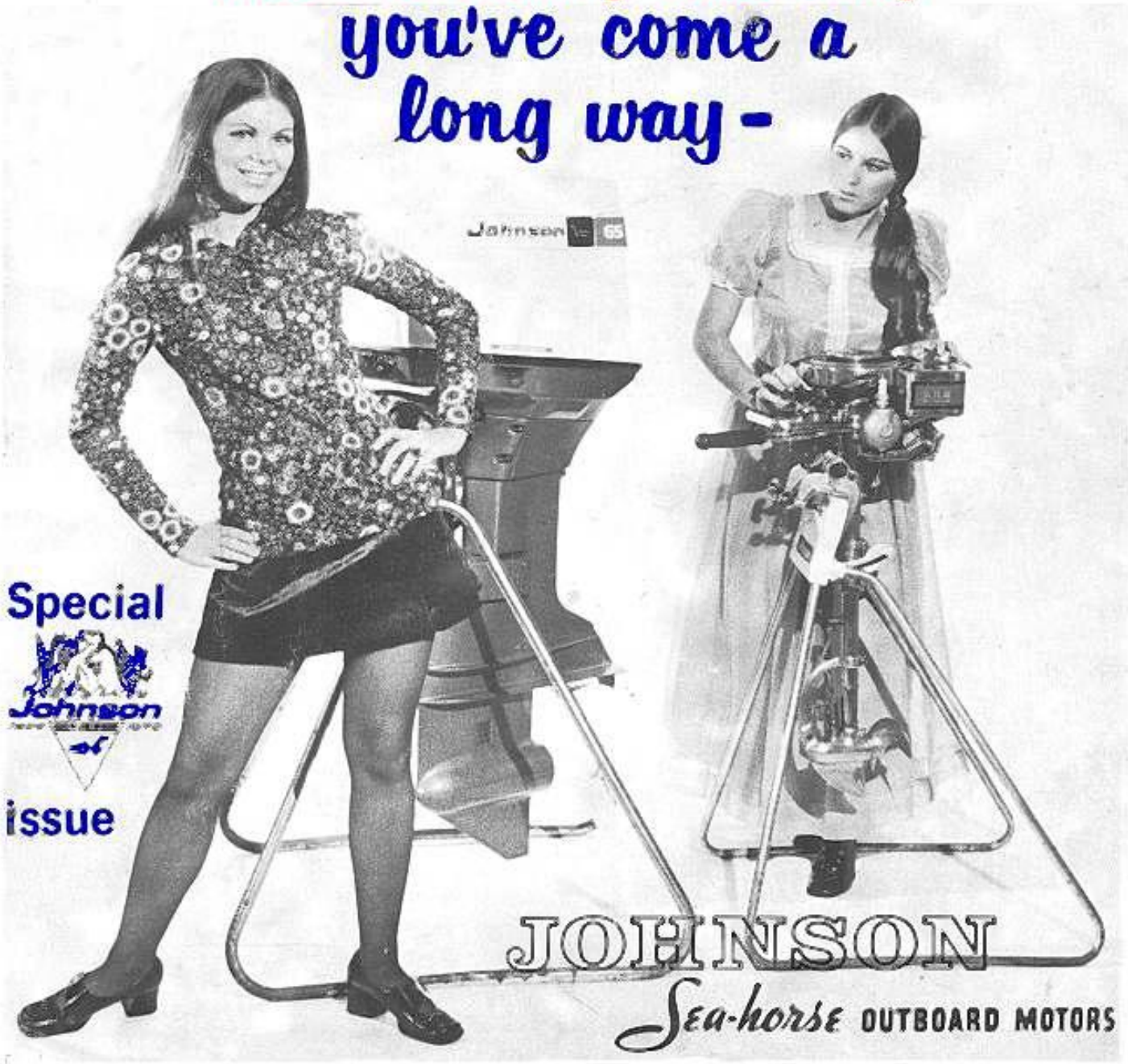
The ANTIQUE OUTBOARDER

The Pioneering Authority



April 1972

The Antique Outboard Motor Club Inc. is incorporated in the State of Texas as an Educational Institution. The Club is devoted to people all over the world who are interested in the search for, restoration and preservation of old time outboard motors. Regular membership dues are $9.00 per year. Other membership information available on request. Address membership requests to A.O.M.C., Inc., 20505 NW 3rd Av., Miami, Florida 33169.

AOMCI NEW MEMBERS

George W. Genevro
9592 Orangewood Av
Garden Grove, Ca 92641

Steve Matisek
130 Windsor Court
San Bruno, Ca 94066

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Dover, De 19901

Ronald C. Baker
121 Oakwood Av
Danville, Ill 61832

C.U. Bradley Dept 606
Sears, Roebuck and Co.
3245 W. Arthington St
Chicago, Ill 60607

Richard Ernat
1226 Calhoun St
Peru, Ill 61354

Bob Lyon
Box M
East Setauket, N.Y.11733

Russell H. Schubeck
905 Madison Av
So. Milwaukee, Wi 53172

Bernard G. Suchy
5265 West 102 St
Oak Lawn, Ill 60453

Fred Panckeri
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Pine Beach, N.J. 08741

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106 Boundary Av.
Elkins, W.V. 26241

Willaim C. Cook
66 Dover St.
Brockton, MA 02401

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Rt 6 Box 85
Edgewater, Md 21037

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1055 Brown Blvd
Verdun, Quebec, Canada

James C. Webster
80 Cobbles Dr
Penfield, NY 14526

James H. Jost
Evinrude Motors
4143 27th St
Milwaukee, WI 53216

John W. Porter
P.O. Box 247
Odessa, Ontario, Canada

A cordial welcome is extended to all newcomers. Other members are asked to make contact either by writing or visiting. Let's show these new members how to really participate in chapters, meets and special interest groups. Maybe one of these new men will have a rare engine to show you!!

CHAPTERS

YANKEE CHAPTER- Peter Hunn, 124 Old Farms Road, Simsbury, Conn., 06070

KNUCKLE BUSTERS CHAPTER- Tom Luce, 760 Boulevard, Westfield, N.J. 07090

FLORIDA CHAPTER- John C. Harrison, 1000 N.W. 54th St. Miami, Fla. 33127

TEXAS CHAPTER- D. Reinhartsen, 720 Pinehurst, Richardson, Texas, 75080

LONG ISLAND CHAPTER- John Enright 10 Worcester Dr., Eaton's Neck Northport, New York 11768

SAN FRANCISCO CHAPTER- Eric Gunderson, 57B Mt. Hamilton Road, San Jose, California 95114

TWIN CITIES- Glenn Ollila, 9646 Pleasant Av. Bloomington, Mn 55420

SEATTLE CHAPTER- Bill Kelly, 10201 114th Pl. N.E. Kirkland, WA 98033

THE ANTIQUE OUTBOARDER
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April, 1972

Credits: Cover picture and photo on page 21, by John Hancock.

Front Cover:

Miss Kathy Smith at right, dressed to complement her 1922 Model A Johnson, in contrast to swinger Miss Margie Carlson and her 1972 sixty-five horse Johnson.

This issue of The Antique Outboarder is dedicated to The Johnson Motor Company in recognition of its 50th anniversary and as an expression of our gratitude to the Company and its employees for the help provided to AOMCI through the years

R Brautigam

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The Antique Outboard Motor Club Inc

CLUB BRIEFS

THE AOMCI 1st NATIONAL MEET TO BE HELD IN ASSOCIATION WITH JOHNSON MOTORS IS SCHEDULED For July 14, 15 and 16, 1972 near Waukegan (exact place to be announced later). Many activities are planned including exhibition, action on the water, cruising, a tour and other fun things enough to last all three days from early morning to late afternoon. PLAN TO ATTEND- WE NEED A GOOD SHOWING as the meet should receive national attention. Get your gear in shape and bring a trailer full of boats, motors and antique paraphernalia. No need to bring only Johnson motors either! Bring anything you want from the smallest to the largest! Boats are expected to be available at the site for those who need them. Bring the family! Or anyone who's interested!

OUR THANKS TO BOB ZIPPS FOR HIS GREAT ARTICLE CALLED "THE SEA HORSE STORY" APPEARING IN this issue. Bob did a fantastic amount of research and spent many hours of his time while preparing the story. SALUTE!!!

THE NEXT ISSUE OF THE MAGAZINE WILL FEATURE ELTO MOTORS AS A TRIBUTE TO ELTO'S 50th birthday with a story by Jim Webb, written with the able assistance of Ralph Evinrude. Bob Zipps will hoist the pen again with Part 1 of the Light Twin Magneto story and a yarn covering the 1972 Hartford Boat Show.

BECAUSE THIS ISSUE IS A SPECIAL ONE DEVOTED MOSTLY TO JOHNSON MOTORS, THERE WASN'T ROOM enough for all the regular features and contributions submitted so these will have to be included in the July magazine.

BILL SALISBURY HAS MOVED TO 71 CARDINAL DRIVE, TOMS RIVER, NEW JERSEY 08753. EFFECTIVE April 1, 1972, ERIC GUNDERSON takes the helm of the San Francisco Chapter. OK you guys - make Bill at home in an eastern chapter and you western members, make up for the loss by growing stronger. Recruit!

BOB ZIPPS HAS FOR SALE A MIGHTY FINE, EXACT REPLICA OF THE EARLY JOHNSON LIGHT TWIN DEcal. It also fits the A-35 size tank. Dress up your Johnson restoration with one of Bob's decals - see more details in the Decals Section, back cover.

JOHN HARRISON HAS FOR SALE EVINRUDE BIG FOUR CRANKSHAFTS (NEW) AT $25 EACH. ALSO NEW pistons, finished, standard dimensions, with rings, at $5 each. Write John at 1000 N.W. 54th St. Miami, Florida, 33127.

DON PETERSON NEEDS A SENIOR QUAD TIMER, A MODEL 605 SUPER C TIMER AND A MAGNETO PLATE for a Big Quad. Don has flathead 4-60 parts to trade too. 2884 S.E. Francis, Portland Oregon, 97202.

LARRY HEALEY OF 122 MAGNOLIA AVENUE, SCARBOROUGH, ONTARIO, CANADA HAS NEW AND USED parts for most Martin motors. write him with your parts needs. Larry's name will appear in the next issue of the AOMCI Manual of Part Sources.

HEY! A MEET! THE NEXT KNUCKLE BUSTERS CHAPTER MEETING WILL BE HELD AT WOODPORT BOAT Basin, Lake Hopatcong, N.J., starting at 10:00 on Saturday morning, May 6th, 1972. This will be an informal meeting similar to the on we had at the same place two years ago. There will be a slight reduction in the Basin's usual head charges and launching fees. Also, just for Club members, the Basin will rent boats by the hour. Woodport Boat Basin is located at the North end of Lake Hopatcong, where Route 15 runs right by the Lake. Plan to bring your families and some outboards to run. If you want more information, contact Tony Caglione or Tom Luce. Tony lives at 140 Elm Street, Dover, N.J. 07801; Tom's address is 760 Boulevard, Westfield, N.J. 07090.

1st National Meet - Waukegan, July 14 - 16

OF HISTORICAL INTEREST

.....W J Webb

THE PICTORIAL HISTORY OF OUTBOARD MOTOR WOMEN, Part II, 1932 to 1942.

Last issue we saw how the ladies were introduced to outboard motor advertising and how they could easily lift, start and operate an outboard - not to mention using them in the various femminine pursuits of swimming, aquaplaning, etc.. As you noticed, the gals were usually dressed in a swim suit, and the years after 1931 didn't change that aspect at all. In fact, the bathing suit models seemed to be upgraded each year, just as were the motor models.

Anyway, here's a few more pictures, mostly from the late 30's. Hope you recognize one of your favorite -- er, a-- motors.

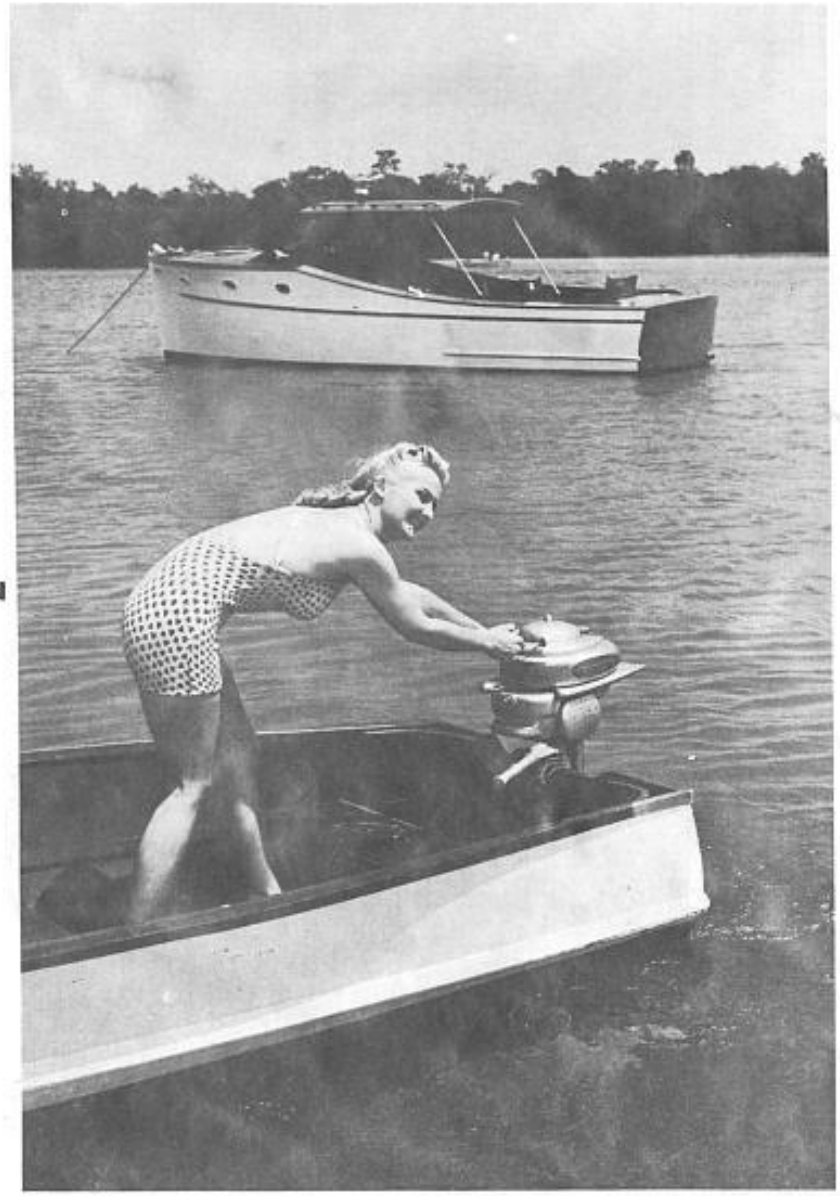
Notice the 1941 Sportfour hiding back there, guided by a pretty lass. The motor was a 17.4 HP quad. On the proper boat, these engines turned up a respectable speed of over 20 mph.

Motor at right is a 1937 Evinrude Scout rated at 1.1 HP. Engine weighed only 18 pounds and was made only 1 yr.

Photo above shows the trusty 1937 Scout propelling a pretty good sized boat with three passengers - not bad for 1.1 HP. Photo below shows the 1939 Ranger, also 1.1 HP.

Here's the 1939 Speedifour under full throttle which produced about 35 mph on the right boat.

Photo above is of the .5 HP Elto Cub which sold for as low as $26.50 in 1940. They are highly prized today. Photo below shows the 5.4 HP Evinrude Zepher of 1940 - a quad!



The picture at left shows off the 1940 Zepher a little more - in a scene sure to appeal to the average boatman. The above photo aptly ends our brief review of Outboard Motor Women by showing a boy, his girl and his motor. What else could a 'feller want? The motor is a 1942 Sportsman, 2.0 HP single, the guy is about a 20 year old sportsman himself and the pretty girl- well, she sold a lot of motors! end.

AOMCI
SPECIAL Feature

Johnson KR

FACTORY RACER

AOMCI Special Features Editor
James L. Smith

In 1931 a new sound broke on the outboard racing scene. The high pitched, mosquito-like whine of the Johnson KR-55 turning at 7000 RPM ushered in a concept of A Class hydro racing which was destined to last 25 years. It was patterned after the service version introduced the preceeding year, the Sea Horse 12, Model K-50 - but here the resemblence ended. Inside, the iron was an entirely different breed. From the time the original factory version KR-55 hit the racing circuits, until the prime of its career in the early fifties, the ultimate performance of which this engine was capable, had been completely wrung out of it. When the KR was eventually defeated in competition, it was not because it was lacking in excellence, but because it had reached the end of its road in terms of possible refinement. With its heavy flywheel, long connecting rods and other shortcomings it represented an obsolete design and just could not compete with the Konigs and new Anzanis which were at least five miles per hour faster - out of the box. Johnson would have had to develope a complete new motor to stay with competitive engines.

After the KR-55 of 1931 and '32, production continued in 1933 and 1934 with the KR-65 and KR-70. Then, in 1936, 1937 and 1938, with the KR-80 and KR-38. These, together with the last, turned out in 1940 -the KR-10- were little changed from the first, fast moving KR-55. The earlier models had a Lynite hub in the flywheel which tended to break out at high speed. This flywheel had a tapered hole with the outer taper I.D. of the hole measuring 3/4". Starting about 1936, the factory equipped the flywheel with a hub made of steel. The outer I.D. hub hole was 7/8", designed for heavy crankshafts.

Following the war, many of the A Class racing engines were built up from parts salvaged from the U.S. Navy Type NY portable fire-fighting and bilge pump. Sold as surplus after the war, these engines (nicknamed "Handybilly) were designed on the plans of the KR powerhead and with certain changes, afforded an excellent start at low cost for building up an A Class engine. This enabled active continuation and expansion which would otherwise would have been severely curtailed since production of the KR was not resumed after the war.

The factory KR-55, an alternate firing twin, had a cylinder bore of 2-1/8" and a stroke of 1-31/32" making a cubic inch displacement of 13.96 with a total weight of 60 pounds. The whole package had a suggested retail price of $225 and this amount of cash in the depression -for many young, starry-eyed drivers- was very hard to come by.

During this period, A Class rules required a minimum 100 pound hull, a 250 pound overall weight (driver and boat, but not including engine) and an engine of from 7.5 to 14.0 cubic inches piston displacement.

Gil Peterman of Malverne, Long Island, displays the fine, prop riding style which made him Class A Outboard Hydroplane National Champion in the summer of 1952.

Now, let's take a look at a few of the basic differences of this powerplant to the K-50. To begin with, one might say that the only similar parts were the gas tank, mounting bracket, flywheel and magneto assemblies. Also, the steering bracket and handle. Yes, the original motor came with a steering handle and muffler, the latter having a short, above water exhaust deflector tube. These parts were promptly removed for competition since wheel steering was a must and mufflers would tend to cut down RPM. To permit adequate flow of fuel at all times, tanks were usually set up about 1" higher than the original by means of special exhaust brackets.

Since the motors came with Johnson carburetors for gasoline, a Tillotson carburetor was installed, usually a model E-626J, and the fuel line increased in size to 3/8" or 1/2" I.D. The gooseneck air horn intake was discarded in favor of a 2" long stainless steel intake of straight, tubular design. In this way, the driver could inspect for rotor opening in order to squirt-prime the case with benzol for starting purposes.

There were major differences in the powerheads. Racing pistons were different than for service engines and tapered to give more clearance at the firing end, where expansion would be greatest. Two 1/16" rings for each piston were recommended to be changed after every regatta. Best ring end gap was .005". Detachable cylinder heads were used with copper, asbestos filled gaskets. It was important to balance the volume in each firing chamber for an approximate 10:1 compression ratio. Some drivers set up the ratios as high as 12:1 but this often brought starting troubles and the possibility of burned pistons. Of great importance also was to have each set of rods, pistons and wrist pins

weighing exactly the same as the other. This was done by removing small amounts of metal from inside the piston skirt of the heavier component set after first inter-mixing the parts for closest balance. Final result was checked on a pharmacist's scale.

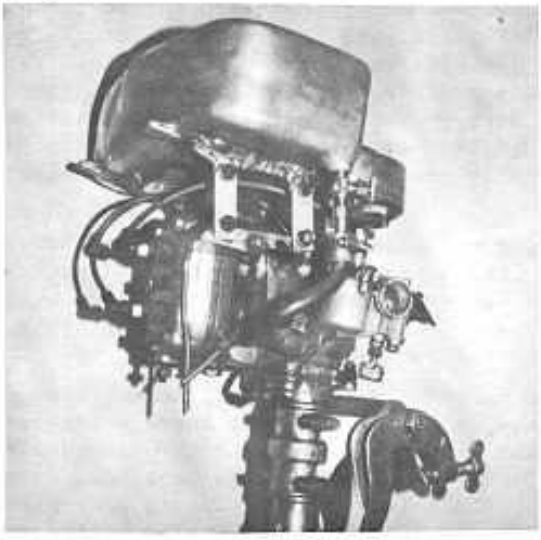
The crankshaft was different from the service K-50 and had a total of 48 rollers at top and bottom mains. At the rotary valve there was a center bronze seal with a clearance of only .0005" for good case compression. The ports of the rotary valve were carefully cleaned up and the intake passages of the blocks opened, smoothed and polished. Each connecting rod had 29 needle bearings at the crankpin end.

While the magneto was similar to that in a K-50, drivers knew that all components had to be in top shape - particularly the points - and that correct timing was essential. This had to be regulated not only from the standpoint of the break of the points, but with regard to the compression ratio for the particular engine. Basic timing established a make-and-break 180° apart at the time when coils reached their peaks. Since attention to detail won races, many drivers had their flywheels balanced, being sure to include the pulley plate and screws. Racing spark plugs used were in the cool to warm range, usually Champion R-2 or R-2S.

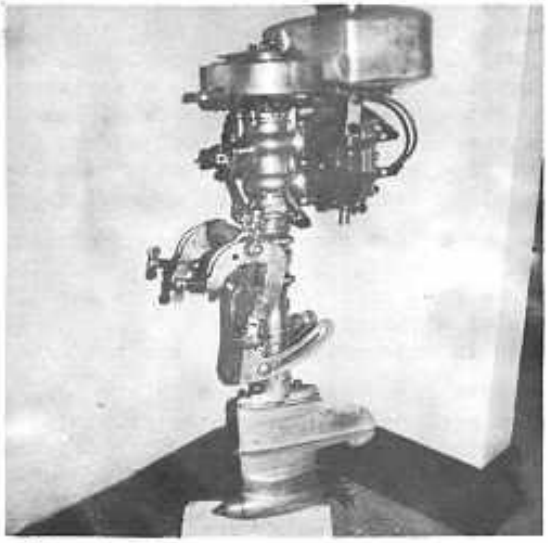
The 14" driveshaft housing was only 1" shorter than the K-50. It had no reverse lock and of course, no internal exhaust passages. Cooling water picked up by a scoop behind the propeller on the lower unit, passed up a channel within the driveshaft housing, and then by way of a branched copper tube, passed to the top and bottom portions of the cylinder head. Above water exits for the coolant were usually provided at top and both sides of the cylinder block.

The lower unit itself was a far cry from the service K-50. Specially streamlined and polished, it had a gear ratio of 12:19 and shafts were all set up on ball bearings, both front and back of the propeller shaft and lower end of the pinion shaft. Some drivers even installed a ball bearing on the top end of the pinion shaft which normally had a bronze bushing. Careful drivers drained and flushed out their motor's lower unit with gasoline after every regatta, then refilled with fresh lubricant - usually Lubriplate 105 to prevent rust or damage to the fine moving parts. The factory units came with skegs and although many drivers removed them, others left them on, claiming better stability on the straightaway and better turning characteristics without undue drag.

In contrast to the K-50 which swung a 3 blade, large area propeller, 9-1/2" X 7-3/4", the KR used a two blade, bronze racing propeller - each driver selecting dimensions of diameter and pitch which he felt best suited to his rig. The props were short diameter ranging from 7-1/2" to 7-3/4" and had a coarse pitch ranging from 11-1/2" to 12".



Note raised gas tank, large fuel hose and Tillotson carburetor.



The steering arm and carrying grip have been removed, as has skeg.

Propellers were always kept in top condition of balance and pitch. Striking a foreign object in the water, or even a heavy patch of weeds, would call for reconditioning. Besides the factory make, propellers used included the Oakland Hi Johnson, Michigan and Stannus.

The factory KR's were set up for gasoline, but to be competitive, one had to convert to alcohol fuel. There were dozens of commercially blended racing fuels on the market, but many drivers made their own. A simple mix would contain for every five gallons, two quarts of benzol, one and one-half quarts of castor oil and the balance of methanol. The mix had to be shaken up before each race. By 1955, the bulk of the fast moving alcohol equipment achieved much of its speed by use of nitrated fuels. These premixed fuels were best secured from fuel specialists.

Prominent racing hydro hulls, or "Sea Fleas" as they were commonly called, included such makes as Van Pelt, Jacoby, Neal, Fillinger and Swift. The field in Class A Hydro was not monopolized entirely by men. Two outstanding women drivers of this period included Ruth Herring of Fort Worth, Texas, and Ethel Wiget of Concord, California.

In May of 1952, the record for Class A was 50.281 mph for the one mile straightaway. By February, 1953, this had been raised to 52.109 mph by Bob Cramer of Detroit, Mich. In August, 1953, Bill Tenney of Dayton, Ohio, racked up his sixth speed title mark for 1953 with a scorching 53.746 mph in Class A Hydro. He was assisted in perfecting his engines by one of the nation's best known motor builders for the alky burners, Walt Blankenstein of Mission, Kansas. In August, 1954, Jack Leek of Tacoma, Washington, had upped Bill Tenney's mark to 61.069 mph driving a Mercury powered hydro for the mile record, and it became apparent that the KR's would face serious competion, at last, in this field. By October of the same year, Leek had set a new Class A, five mile competition mark. During that winter in the Florida circuit, at least 50% of every Class A alcohol burning hydro field was made up of modified stock Mercury motors. The conversions were not generally of the Leek caliber and still could not compete seriously with the fast A Johnsons jockeyed by such long time alky stars as Bill Tenney, Doug Creech and Orlando Toriagini.

By mid-1955, the British Anzani was presented in Class A version and by September of the same year, Konig-Motorenbau of Berlin had filed specifications with the N.O.A. for acceptance of the Konig A (actually 244 cc displacement) which reportedly developed 22 HP at 7000 rpm. It had a 14:1 compression ratio. By September of 1952, this motor held the European and World's Class A Outboard Hydro mark at a scorching 64.84 mph. It had not yet raced in the U.S. or Canada. In January, 1956, Doug Creech of Charlotte, N.C., was still driving and winning in the Citrus Circuit at Miami with his KR. Doug was to lose his KR when it caught fire during a race held the following September. In October, 1956, at the N.O.A. Nationals, Konig motors were supreme, finally defeating the perennial winner and KR driver, Orlando Toriagini. The winning Konig established an N.O.A. straightaway speed of 59.211 mph at the same regatta. At the A.P.B.A. Nationals in September, 1957, Toriagini did not appear and Bill Tenney had switched to Konig. Six KR's competed and among them, the best finishing spot was seventh. It was now clear that a well set up KR was unable to outrun the field. Konigs and modified Mercurys held down the top money positions.

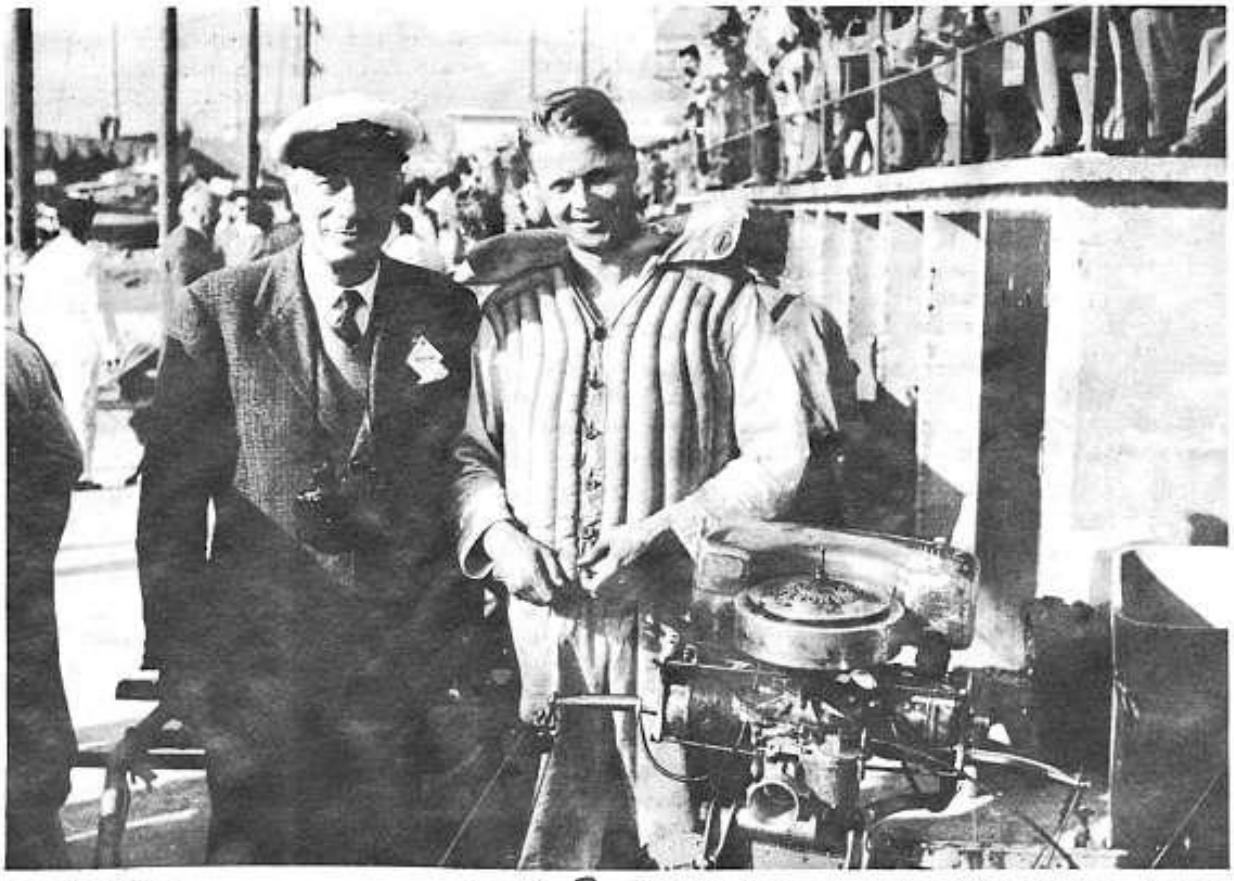
This marked the end of its career and the Johnson KR was never again a force to be reckoned with in Class A competition. But like old soldiers that never die, this pioneer of A Class Hydro racing will live on in the memory of many driver and spectators of yesteryear, and in the AOMCI.

PLEASE REMEMBER....

Check your date of membership renewal and forward your dues before a notice has to be sent; you'll save the Club time & money

Send to..

Mr Richard M. Jones
20505 N.W. 3rd Av.
Miami, Florida 33169

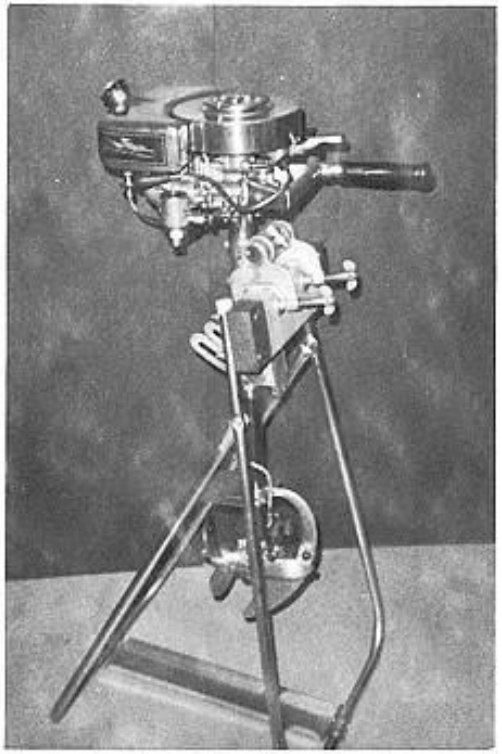


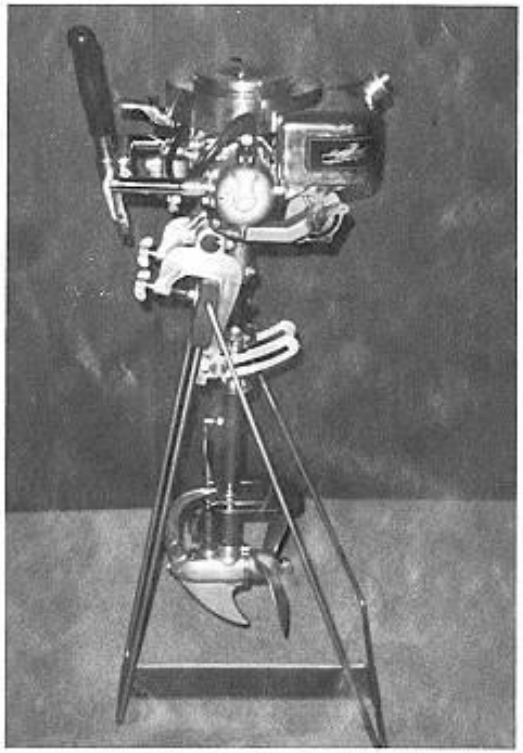
THE JOHNSON SCRAPBOOK

Above: Carrara, Italy- Bill Tenney, winner in "500" Class and Mr. Cani, President of Technical Race Commision. SR engine is a record setter, capable of more than 67 mph Below: Class A racing at Long Beach, California about 1936. Motors are KR's.

WORLDWIDE

RACING-PLEASURE-FISHING





Above: Talk about beautiful motor restoration! Left to right- 1933 J-65 Johnson single, 1.4 HP; 1930 A-50 Alternate firing twin Johnson 4.0 HP; and 1925 A-25 Johnson 2.0 HP Light Twin.

Photo at right: Unidentified boat and driver with early PR racer. Engine has factory exhaust manifold and stock steering handle.

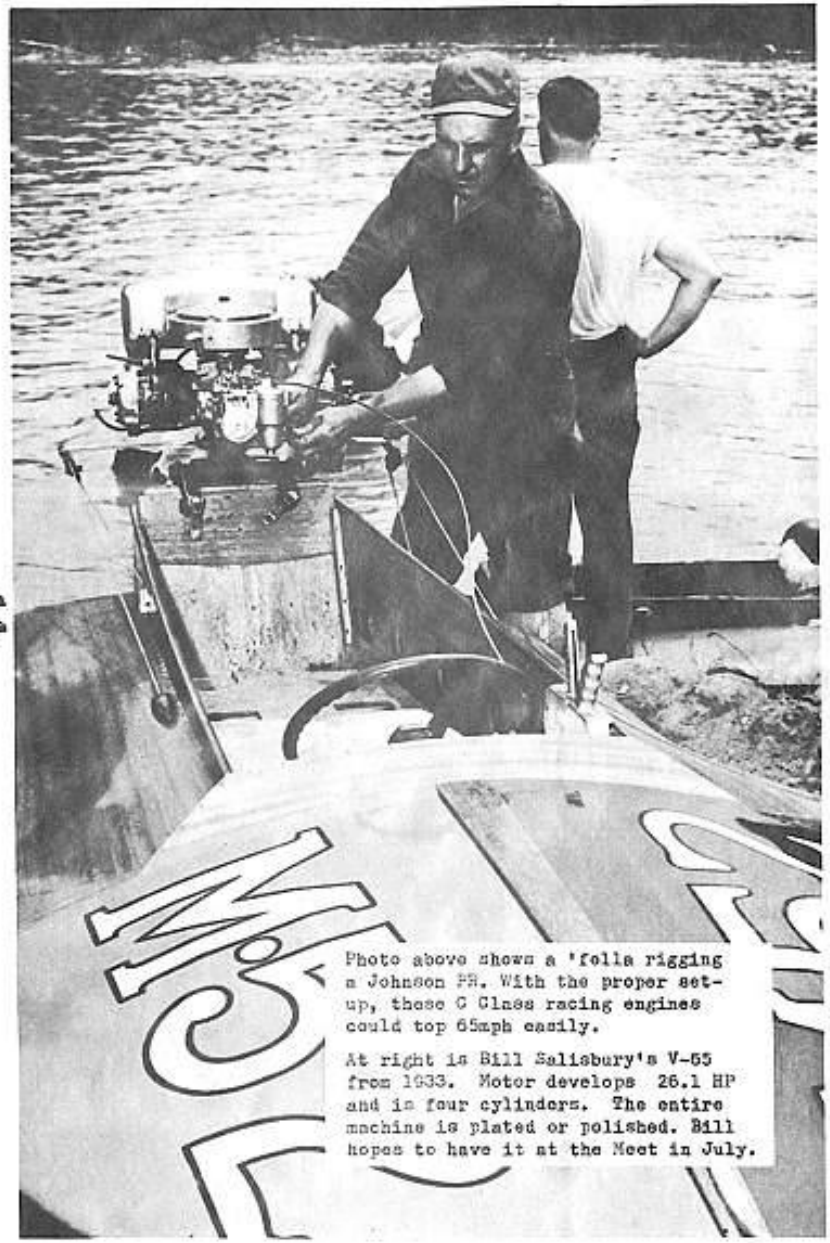
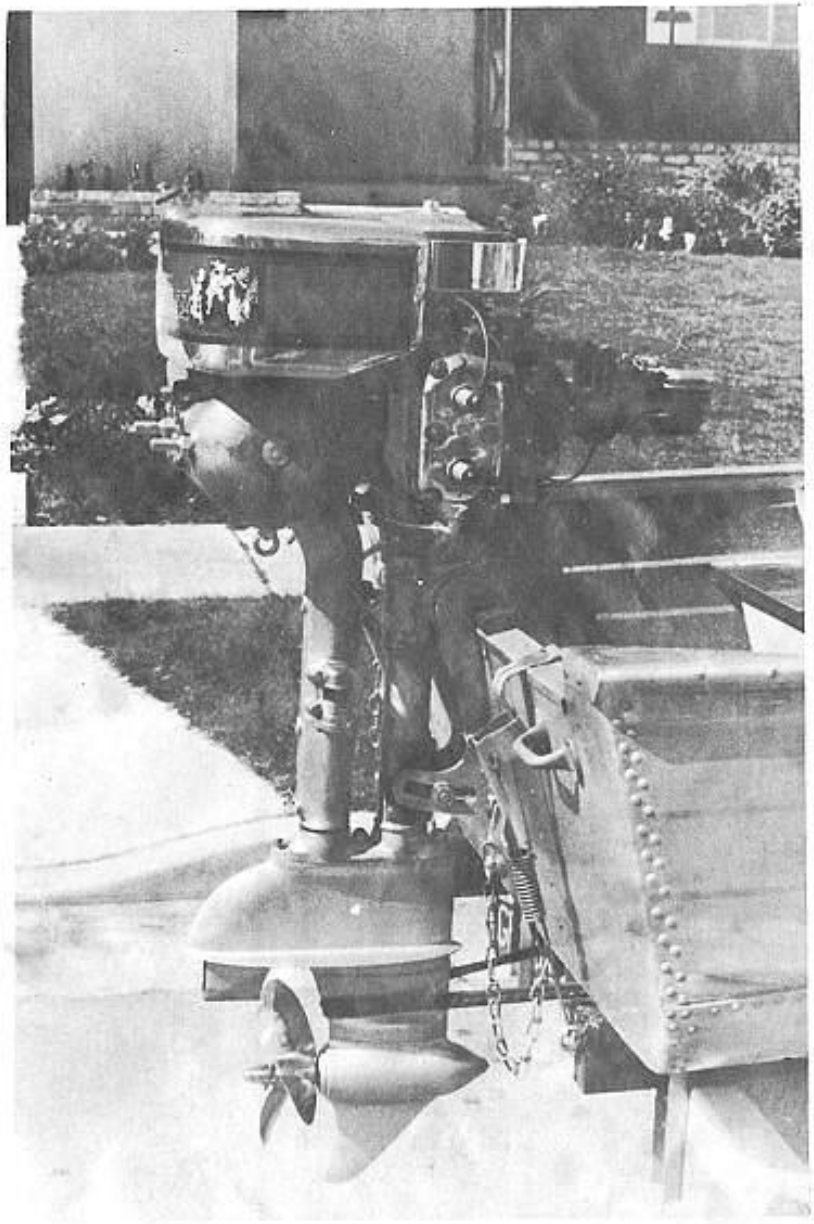
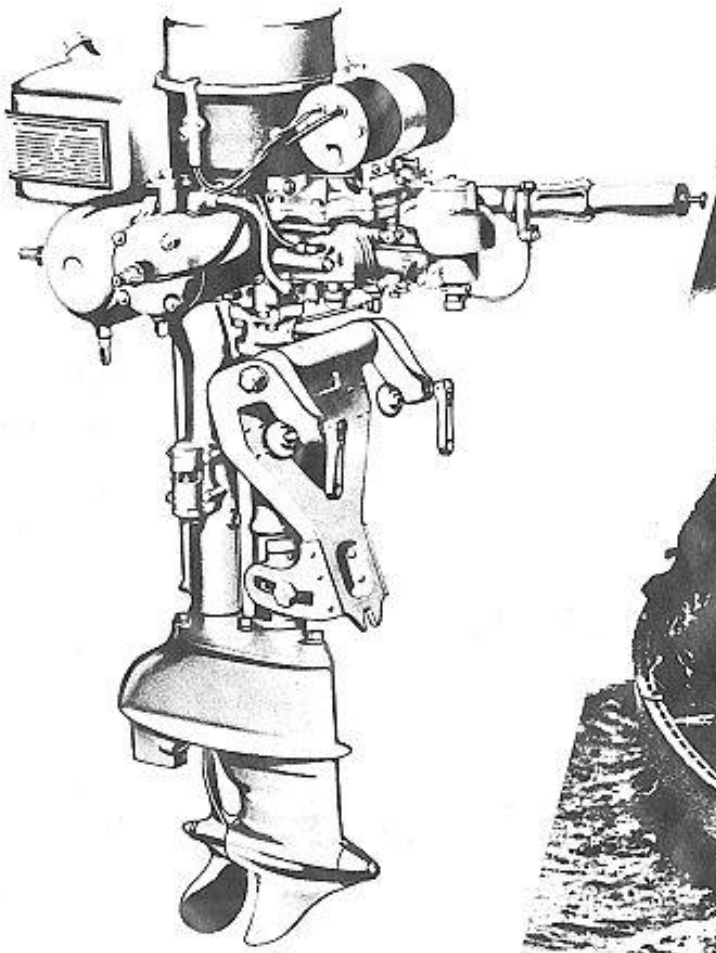


Photo above shows a 'fella rigging a Johnson PR. With the proper set-up, these C Class racing engines could top 65mph easily.

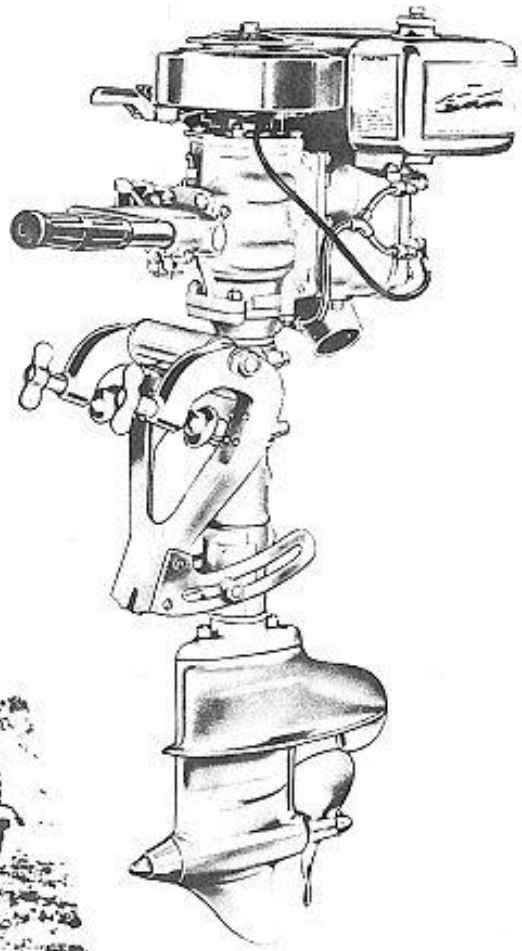
At right is Bill Salisbury's V-65 from 1933. Motor develops 26.1 HP and is four cylinders. The entire machine is plated or polished. Bill hopes to have it at the Meet in July.





MODEL SE-50
ELECTRIC START

RETURNING HOME
Johnson 1T-37, 4.2 HP



MODEL KR (RACING)

BEST WISHES TO JOHNSON MOTORS ON THEIR 50TH ANNIVERSARY

TO COMMEMORATE THE OCCASION

AOMCI PRESENTS

The Sea Horse Story

BY BOB ZIPPS

PART 1:

THE FORMATIVE YEARS

Johnson For Dependability!!! Surely everyone who is even remotely connected with boating has heard this phrase. And even the most staunch believer in a competitive brand will readily admit that it is true.

How did this all come about? It is as a result of the visions of three young men, Lou, Harry and Clarence Johnson, who were inspired by their desire to travel on the river near their home.

The river was the Wabash at Terra Haute, Indiana. Here their Danish-born father Soren, settled with his family in 1903. Soren immigrated to America with his parents at the age of six and like the majority of people who came from the old country, Soren possessed both resourcefulness and a respect for hard work, which he instilled in his sons. He also kindled a keen mechanical ability in them as a result of his trade which was blacksmithing.

At this time, the haze of the dawn of outboard history was beginning to clear. Experimenters had been tinkering in various parts of the world for a generation now. Fruitless attempts were made at marketing various gasoline and electric models. However, only the electric models went into the production stage, but they had a negligible effect on the boating world.

As fate would have it, the Johnson Brother's first attempt in making marine engines was an inboard. Lou at 21, designed it and made a full size model from a block of wood, which was used as a guide during the fabrication phase. After the engine was built and installed in their boat, life was certainly a lot easier for the Johnson Brothers as they cruised along the river that had been their inspiration.

From this experimental model, the Johnson Brothers eventually went on to build a whole line of inboard marine engines. In addition their interests expanded into aviation for in 1909, they built an aircraft engine.

Not just satisfied with designing and building their incredibly light (for that time) "V" type engine, they were also pioneers in the field of aircraft building. In those days the aircraft industry was more of an art than a science, and after

Johnson

Johnson Motor Company

WAUKEGAN, ILLINOIS

The World's Largest Manufacturer of Outboard Motors

CLARENCE JOHNSON, LEFT,
BORN AUG. 15, 1895 & J. G. RAYNIAK

HARRY JOHNSON
MAY 14, 1884 - MAY 28, 1967

applying the basic aerodynamic principles that were known at that time, the rest was left to the inventors imagination. Parts were sized and shaped because in the inventor's mind that is what should work best.

The Johnson Brothers' first airplane was fitted with wooden structural members. Unfortunately, because of the size of both the airplane and the engine, their total weight was too great and therefore, it would not fly. Trial and error was the custom of the day, so Lou "went back to the drawing boards" and redesigned the plane, replacing the fuselage members with aluminum and steel and wing members of wood. The redesigned airplane weighed 750 pounds.

The Johnson built plane powered by the Johnson built engine, piloted by Lou made the first successful monoplane flight on August 8, 1911. This event paved the way for the formation of the Johnson School of Aviation in the town of Terra Haute.

The Johnson Brothers were good engineers and not being satisfied with the status quo, continuously redesigned and improved their products in both the marine and aviation fields. By 1914, they had built marine engines for over 10 years, and had a line of two, four, six, eight, and twelve cylinder engines. A pair of the "V" twelves were used to power a racer named "Black Demon III". Each engine had 180 horsepower and weighed three and a third pounds per horsepower.

A tornado put an end to the Johnson School of Aviation and apparently the public wasn't beating a path to their door for marine engines. However the Johnson Brothers were very enterprising individuals and they designed a bicycle motor in 1917. The bicycle motor was not designed similar to the two cylinder inboard marine engine, as the former had 1.5 horsepower and the inboard had 30 horsepower.

The Johnson Motor Wheel Company was formed to manufacture the bicycle motor. Because the Johnson Brothers lacked sufficient funds to adequately market their motor, their company was acquired by Warren Ripple who was at the helm of the Quick Action Magneto Company.

Under Mr. Ripple's direction, the manufacturing and assembly functions were relocated from Terra Haute to South Bend, Indiana. However, their fledgling company was doomed because of both the recession following World War I, and the decline in popularity of motorized bicycles.

MISS KATHY SMITH WITH 1922 MODEL A

PART 2: 1921-1928

THE LIGHT TWIN BLOSSOMS

The Johnson Brothers were natural born tinkerers and experimenters from the word go! And they worked relentlessly to build an outboard motor based on their bicycle motor. The Johnson Motor Company was formed on April 1, 1921 at South Bend, Indiana with Warren Ripple as president. The Johnson Brothers assisted by the young Finn Irgens, made several preproduction prototypes based on their first experimental model.

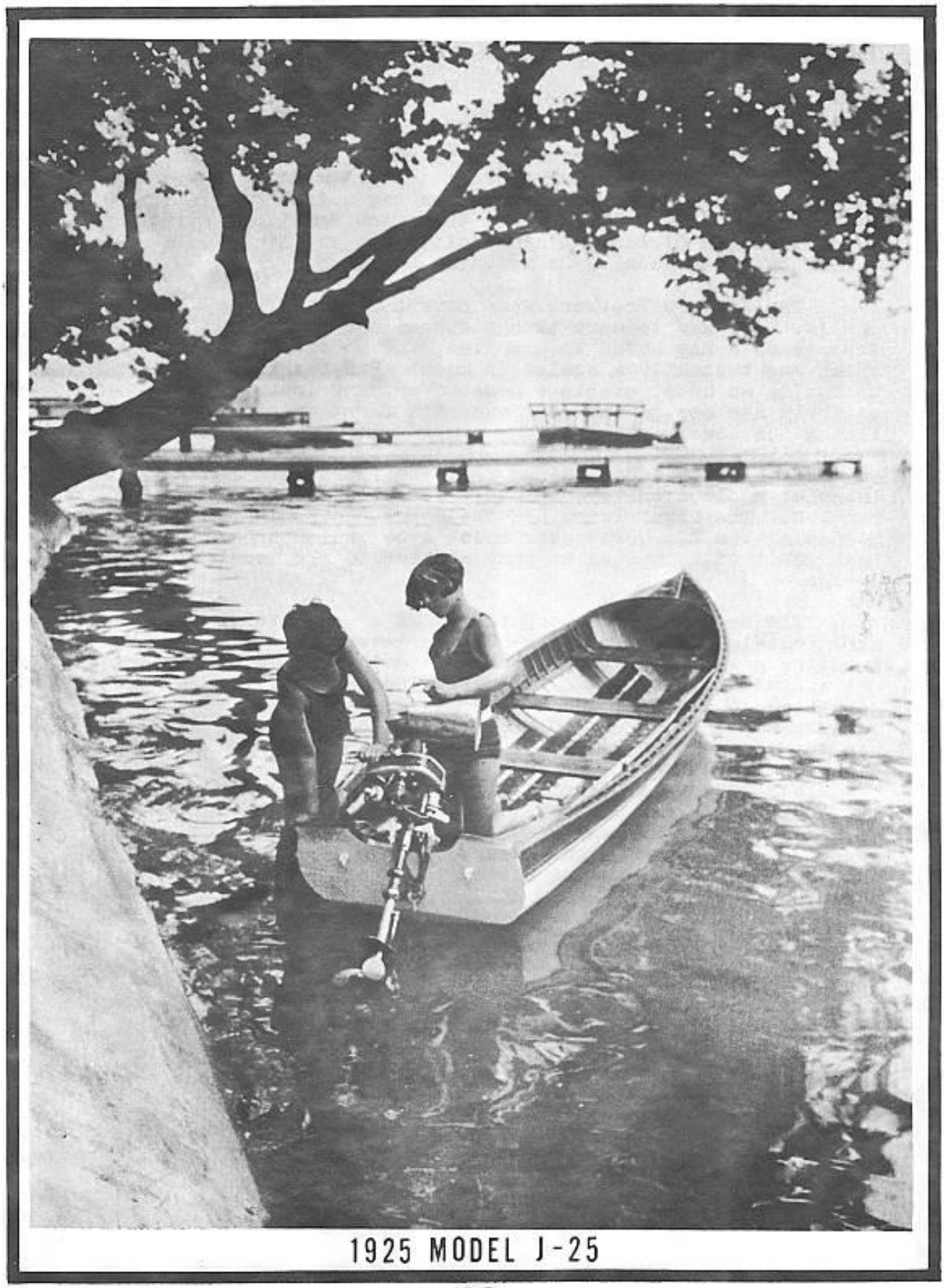
The Light Twin was the result of their efforts and it was placed into production in December of 1921. It made its debut at the New York Boat Show (now National Boat Show) in January of 1922.

The Johnson Light Twin or Waterbug as it was also called was a success from the start because of the many advanced features it had compared to other outboard motors of the day.

It had a float feed, aluminum body carburetor that was of very simple construction while the majority of the industry had either the stone age type metering valve or the very expensive float type carburetor of complicated design and with a brass body. The motor was light and the steering rail made it one of the easiest motors in history to carry and mount on a boat. The motor was self contained (except for the starter rope) with no battery connectors to hook up or steering lines to put in place. The motor was the first in the United States with three hundred and sixty degree steering which made a boat highly manuverable, plus made it easy to fill the gas tank.

Thanks to the Quick Action Magneto from Warren Ripple's company, and to the forgiving carburetor settings, the Johnson Light Twin was fantastically dependable. The first Johnsons were built without an anti-cavitation plate as were most of the motors of the day. One was sold as an accessory later for all previous motors.

From 1922 through 1924, Johnson made three basic outboards, the models A & B called Standard motors and the model C canoe motor. The brass lower unit model BN was introduced in 1923. All models produced 2 horsepower and all had long shaft versions. In these first important years, Johnson became an accepted outboard motor and its reputation started to spread far and wide.



1925 MODEL J-25

In 1925 Johnson revamped its entire line of Light Twins. They redesigned the powerhead and came out with an improved lower unit whose design was based on the model BN. Three basic models were made: A-25, AB-25 & the canoe model AC-25 with long shaft versions of each. A new addition to the line was a single cylinder model J-25 weighing 27 pounds.

The Johnson Brothers were never satisfied with well enough. They had to make things bigger and better. In 1926 they added a new motor to the line, the model P-30 "Big Twin", which was basically a scaled up model A-25 powerhead producing an unbelievable 6 horsepower. The lower unit was an entirely new design and was Johnson's first attempt at streamlining the lower unit.

With experience gained from the impressive P-30, Johnson launched a campaign to completely redesign their entire line for 1927. The Light Twins had their powerheads improved producing the 2.5 horsepower model A-35, which also had a new lower unit without a water pump similar to the model P-30 design.

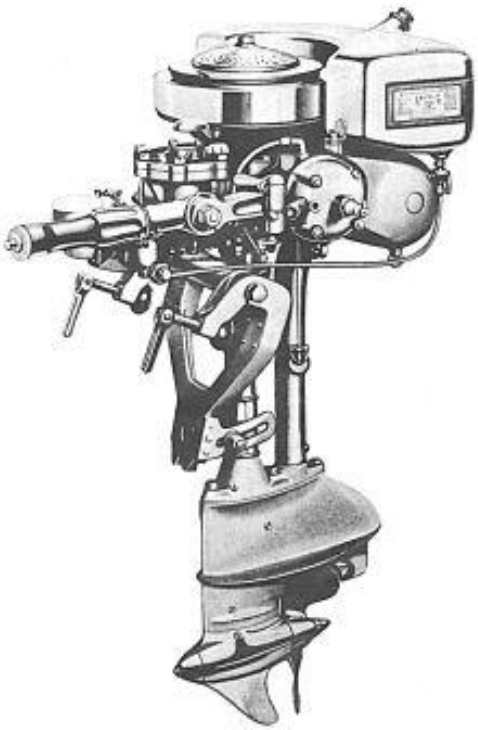
The model P-35 was the result of a complete flywheel to skeg redesign of the model P-30. The lower unit was made with a better proportion of parts size, and the piston displacement was increased from 22.7 c.i. (cubic inches) to 27.5 c.i. resulting in a horrendous 8 horsepower. To fill in the gap between 2 and 8 horsepower, the model K-35 "Standard Twin" was introduced with 17.32 c.i. and 6 horsepower.

For 1928, the scale factors had no limits. Johnson beefed up the P series to 29.78 c.i. whomping out 13.15 horsepower for the model P-40 "Big Twin". This was the first year that Johnson came out with factory made racing motors and the PR-40 (R denoting racing version) produced 16.5 horsepower.

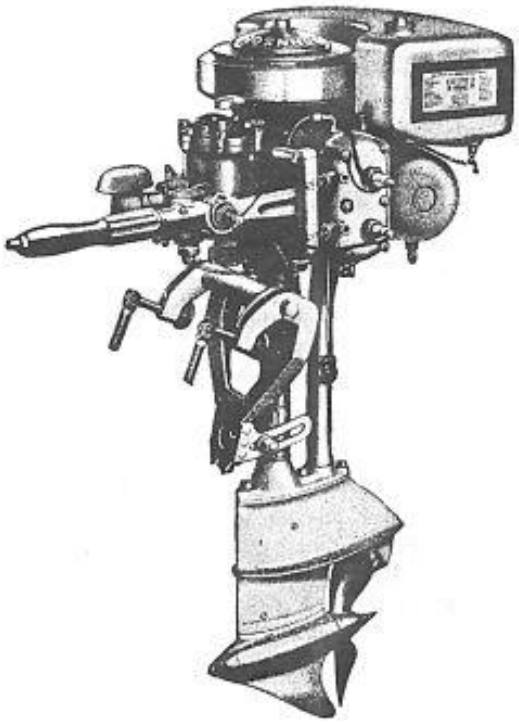
The K series was upped to 19.93 c.i. at 7.15 HP for the model K-40 "Standard Twin", and in turn 9 HP for the KR-40. The A-35 was continued through 1928 unchanged. Now with the no holds barred attitude at the Johnson factory, they produced the largest two cylinder outboard motor ever made displacement wise. With its 49.48 c.i., it was of titanic proportions although it weighed only 110 pounds. It was justifiably called the "Giant Twin" and pounded out 25.75 HP. The model designation was the TR-40.

1926 MODEL P-30

1928 MODEL TR-40



1929 MODEL S-45



1929 MODEL V-45

PART 3: 1928-1935

THE LEGENDARY MOTORS

As the saying goes, records were made to be broken. And this was the attitude at the Johnson Factory where frontiers in the state of the art were constantly pushed forward, and not by dribs and drabs but by leaps and bounds. This was especially true in the 1929-1935 segment.

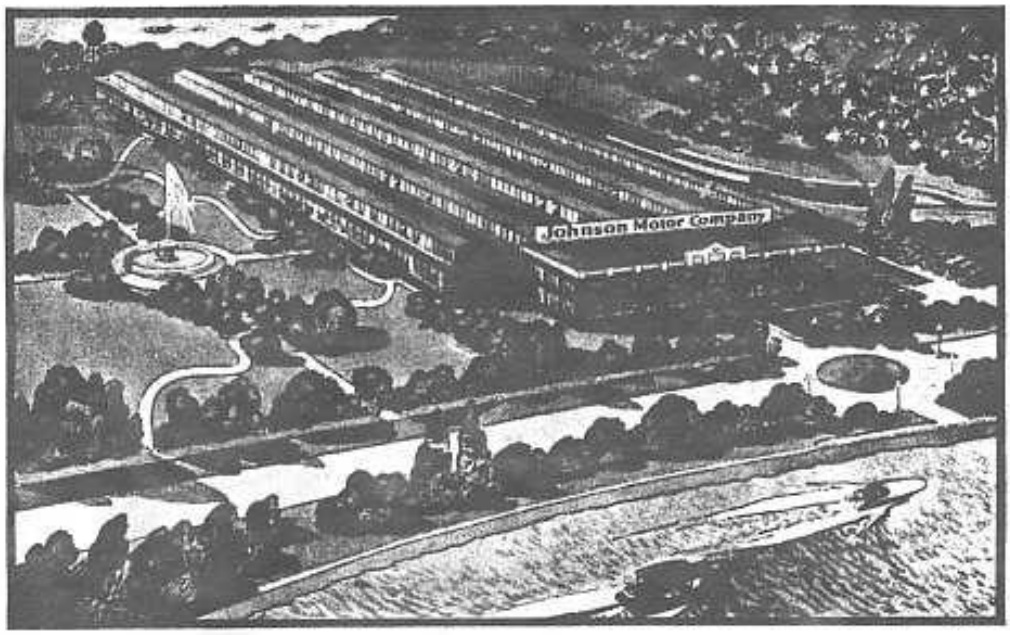
The year 1929 saw the introduction of two totally new models that ushered in the revolutionary external rotary valve. They were the 19.93 c.i. twin cylinder model S-45 and the big 39.86 c.i. four cylinder model V-45. These models were equipped with the one to one (also known as the full speed rotary valve) rotary valve, which gave performance never even dreamed of just a few short years before. Up to this time all Johnson Outboards were of the three-port two cycle design.

Racing versions of the "S" and "V" series motors set record after record during the year.

In 1929, the name "Sea Horse" was first used and was coined by Carl Prell, who worked for the Indiana advertising agency that handled the Johnson account.

Unfortunately the end of 1929 was also the beginning of the end of what was then the Johnson Motor Company. Looking at the record at the end of the decade in which they started, Johnson quickly rose to take command of the industry by becoming the outboard sales leader of the world and selling more outboards than all other brands combined. Because of their engineering excellence there seemed to be no end to the great motors that Johnson could produce. However, the storm warnings of the depression were not read correctly as the following paragraphs on the 1930-1935 era will show.

Entering 1930, Johnson introduced one of the most significant contributions to outboard motoring and that is the alternate firing twin, in two models. They were the 8.28 c.i. model A-50 and the 13.96 c.i. model K-50. The "P" series motor was completely redesigned for 1930 and was fitted with a half speed rotary valve. Half speed meaning that the valve revolved once for every two revolutions of the crankshaft.



Leadership ~ The Heritage of the Sea Horses

TO the leaders in every American industry society owes an obligation never repaid. For the leaders are responsible for advances, refinements, improvements, in design and economies in manufacture that make living worthwhile.

Johnson long ago stepped into the coveted position of leader in the outboard motor industry. Today more Johnson Motors are bought than all other motors combined.

And anyone versed in outboard motor manufacturing knows that Johnson guards this position in its field most jealously.

Witness the forward strides made in Johnson design. The many exclusive features of superiority which make the unmatched Johnson performance records possible.

A corps of skilled marine engineers are kept constantly at work designing, studying, testing, in the interests of betterment of Johnson Sea Horses. Their ingenuity—oneness of purpose—insure Johnson leadership in design in the future—and has made possible the advances and stanch dependability of Johnson Motors in the past.

The great plant of the Johnson Motor Company, on the shores of Lake Michigan at Waukegan, Illinois, embraces every modern device for the precise manufacture of high quality motors.

All raw material which enters into production is given a rigid inspection before it is placed in work to make sure it measures up to standard.

In manufacturing processes Johnson takes every known step to assure Sea Horse owners of unfailing service. Each individual part is carefully inspected before it is put into the assembly of a Sea Horse. If a flaw escapes the eyes of these trained engineers—from the raw material to the finished product—Johnson stands ready to make it good.

Johnson guards its position of leadership jealously. Johnson Sea Horses are as perfect as are humanly possible to produce.

PAGE 32 OF 1930 CATALOG

Johnson also brought out advanced racing versions of both the twin cylinder S and P series, and the four cylinder V series. They were designated the SR-50, PR-50 and VR-50 and all were equipped with the half speed rotary valve that had a steel gear on the valve rotor shaft rather than a fiber material gear that was provided on service motors. The racing motors also had a special lower unit without under water exhaust. The original 1930 racing motors all had Johnson made carburetors. The PR had the Giant Twin carburetor, and the VR had a special rotor case to accept two carburetors.

Johnson also equipped special versions of the S, P and V series models with electric starting. Besides these models Johnson also sold motors that had been designed the previous year, including the single cylinder J-25, the twin cylinder A-45, K-45, S-45 and the four cylinder V-45.

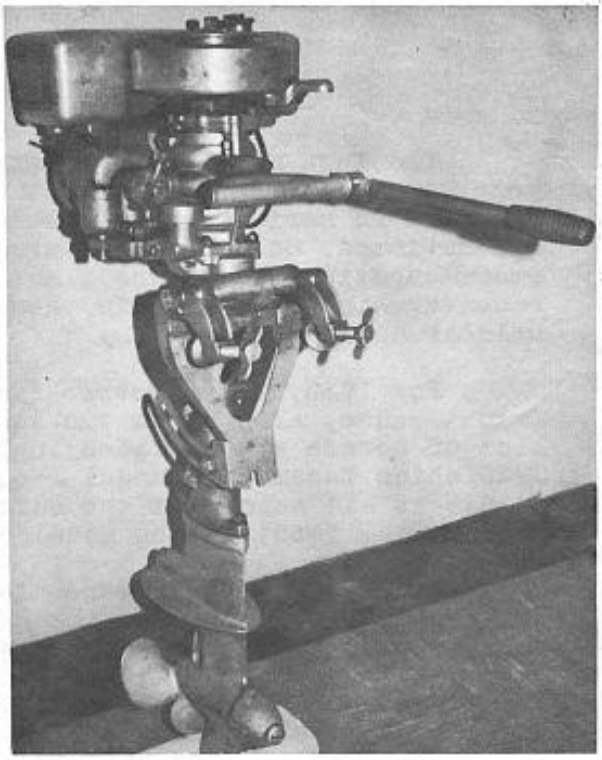
To top off this impressive line of motors, Johnson also offered a line of boats called Aquafliers which were specifically made for special motors, the model PA-50 and the model VA-50. Both these motors had electric starting and did not have an integral gas tanks but were fitted with special carburetors that could draw gasoline from a tank in the boat.

Besides pouring all the money required to put this really impressive line of motors and boats into production, fantastic sums were also spent on advertising. The Johnson Motor Company was geared for another record breaking year; however, as the season wore on sales plumeted. The hand writing was clearly on the wall.

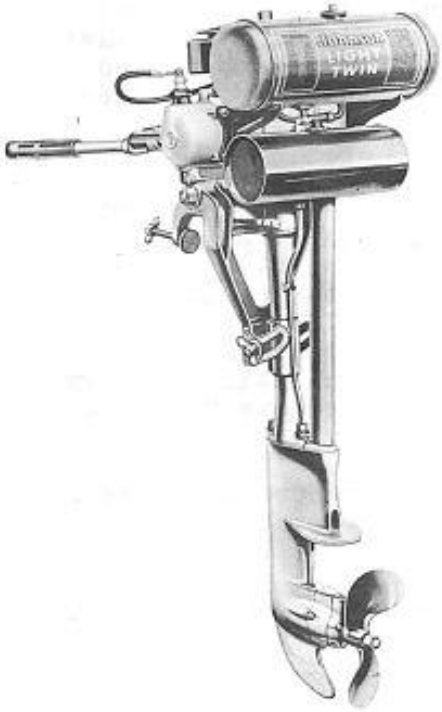
Instead of a complete austerity program, Johnson redesigned their SR, PR, and VR models for 1931. The A & K series opposed twins of 1929 were redesigned and improved for 1931 and were designated the OA-55 and the OK-55. Plus to top it all of two additional racing models were offered. They were the 13.96 c.i. model KR-55, alternate firing twin, and the fabled 49.87 c.i., four cylinder model XR-55. The remainder of the service was essentially the same as what was offered in 1930.

Before the end of 1930, Warren Ripple who was president of the Johnson Motor Company since its founding was replaced by David Stratton, who in turn was replaced by H.G. Delabar. In 1931, conditions went from bad to worse. Sales were pathetically bad. The depression was taking its toll.

1930 MODEL A-50



1930 MODEL K-50



1931 MODEL OA-55

1933 MODEL OA-65

The 1932 model year essentially the same as the previous year with minor changes to the OA & OK models, and up grading the SR & PR series racing models. The VR-55 and the XR-55 were discontinued. Sales dropped even further and at Mr. Delabar's recommendation, the Johnson Motor Company was placed into receivership, resulting in the formation of a new company with Delabar again at the helm.

For 1933, the electric starting motors were abandoned as a lost cause, along with the Aquaflier motors. The resulting line of motors was upgraded including the single cylinder model J-25 which became the model J-65. This was the first time since 1925 that all motors of the current model year had the same dash number (-65) in the model designation.

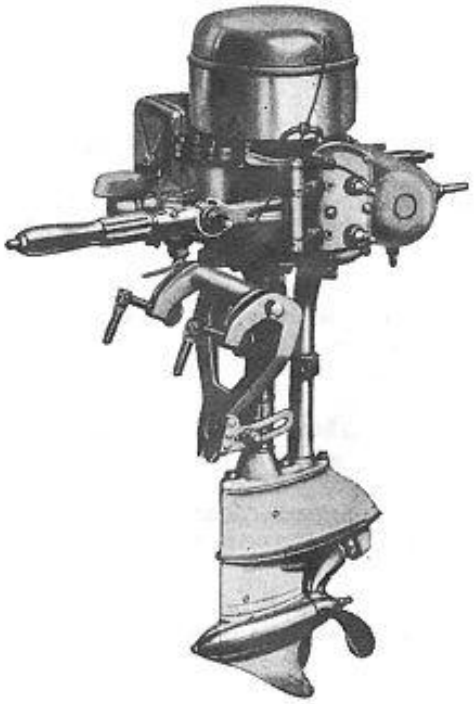
The racing models were also improved and were designated the KR-65, the SR-65, and the PR-65. Sales were now on the increase only to go back down again in 1934.

For the 1934 model year, the OA opposed twin along with the "Great" class C model PR racer was dropped. However, the model F-70, an opposed twin with the same 9.42 c.i. displacement as the OA series, was introduced. As in the previous year, all motors had the same dash number model designation (-70) for 1934. Both the 19.93 c.i. opposed twin "S" series and the 39.86 c.i. four cylinder "V" series service motors, reached their most advanced form this year, their last year to be made. The models S-70, P-70, and the V-70 marked the end on the line for the external rotary valve for service motors.

Although the external rotary valve was a performance asset to the motors that were equipped with one, the cost of producing such an exotic piece of machinery put it at an economic disadvantage when compared to motors with the internal rotary valve. The Johnson external rotary valve continued to be used in racing motors made by Johnson and later by Hubbell, and also on the racing speeditwin made by Evinrude. The fact that these motors were raced until the very late '50s indicates how great the external rotary valve feature was.

By 1935, the end of the Johnson Motor Company was close at hand; however, the entire line was again updated to the (-75) dash number model designation.

A totally new opposed twin with 7.59 c.i. producing 3.7 horsepower with an internal rotary valve was introduced



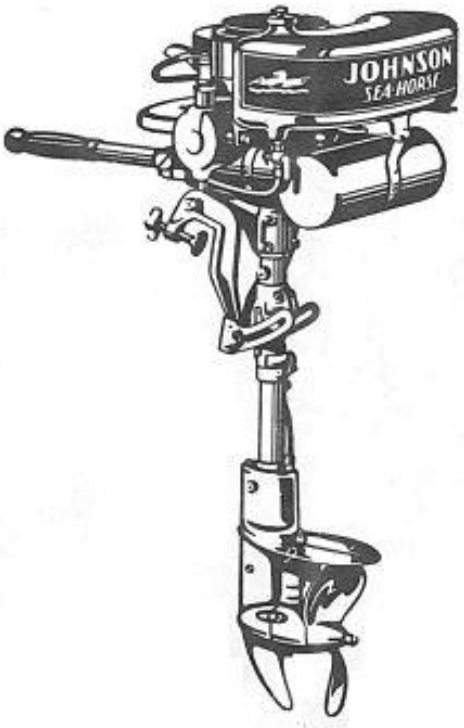
A Johnson
Sea Horse "32"
equipped
with electric starter
is pictured
here

«»

The motors
of all Aquaflyers
are
electrically
started
SEA HORSES

1930 AQUAFLYER MOTOR

1935 MODEL 300



1935 MODEL F-75

as the model "300". The top of the line for service motors, was the model P -75 which was the result of a completely redesigned powerhead when compared to the previous "P" series. The P had the same 29.92 c.i. displacement but was built around the internal rotary valve.

Now only two racing models were being made. They were the alternate firing twin model KR-75 and the external rotary valve equipped opposed twin model SR-75.

The devastating effects of the depression were so bad that the Johnson management still could not shake loose from its strangle hold. Therefore in November 1935, control of the Johnson Motor Company was taken over by what was then called the Outboard Motors Corporation when they purchased 80,000 of the 120,000 outstanding shares of Johnson stock.

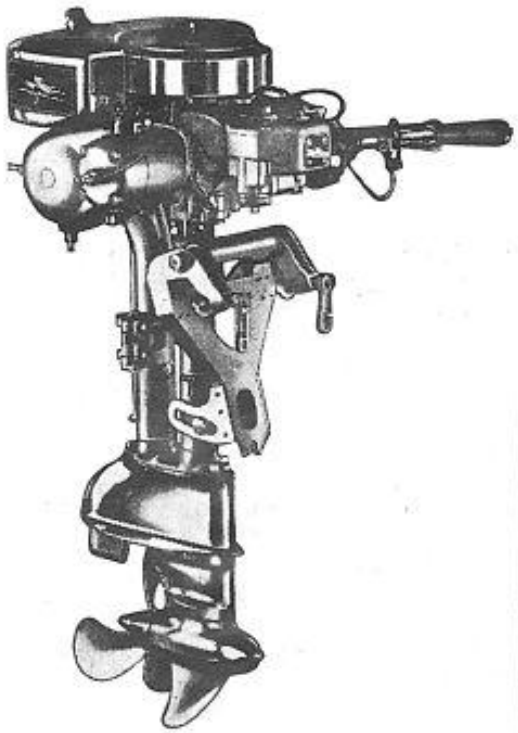
Priscilla Doyle

Miss

Connecticut 1971

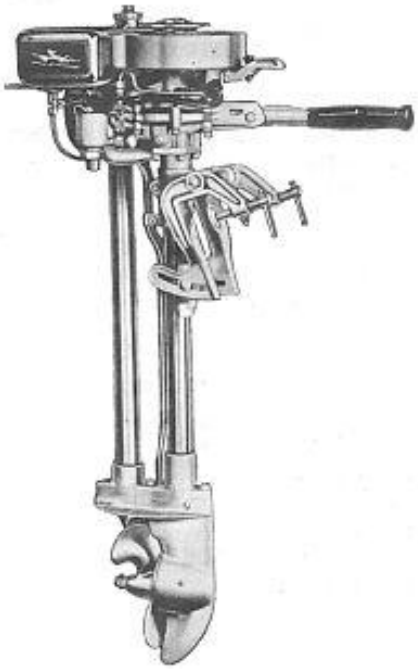
with

1922 Model A

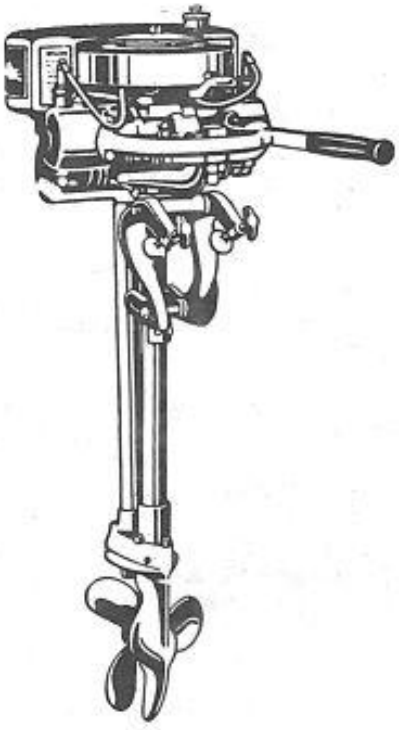


1935 MODEL P -75

1935 MODEL J-75



1936 MODEL 100



1936 MODEL 200

PART 4: 1936-1948

OMC TAKES CONTROL

When OMC assumed control of Johnson, its management was realigned with Stephen Briggs becoming president and Jake Stern becoming both vice president and treasurer.

The model year for 1936 was already established when OMC took over. Two new models were added, a 4.71 c.i., 1.7 horsepower, single cylinder model 100, and a 9.4 c.i. opposed twin at 3.3 horsepower, model 200.

It was clear that the former management at Johnson had completely changed their thinking as to what model to make although they put it into effect too late. In 1935, Johnson had only one model over 10 horsepower and this was the P -75 at 22 HP, but they had six models under 10 horsepower, and four of the six were under 5 HP. So what it amounted to was that Johnson was putting their name on the line in concentrating their efforts on the fisherman and by building the best fishing motor on the market.

The motors had to be inexpensive because of the economic conditions but they also had to be dependable and the words dependability and Johnson were linked together since the company's first decade. These various fishing models would prove themselves and enhance that word relationship.

The 1936 modelshad five completely different motors under 5 HP. What a selection the fisherman had. On September 30, 1936 Johnson was made a division of what had become the Outboard Marine and Manufacturing Corporation.

Over the years 1937 through 1942, many models under 5 HP were made but only one model over 5 HP (model SD) was added to the two larger models (KA and PO) made previously but still continued.

The most successful of the 5HP and under category of motors was the "LT" series. This alternate firing twin that produced 5 HP, has got to be one of the most dependable motors ever made. It (along with its variations, the "AT" and the "DT" series) trolls beautifully and was relatively inexpensive to buy. For example the model AA-37 which evolved from the 1930 model A-50, sold for $175, but the LT-37 sold for $125. Both of these motors had the same displacement.

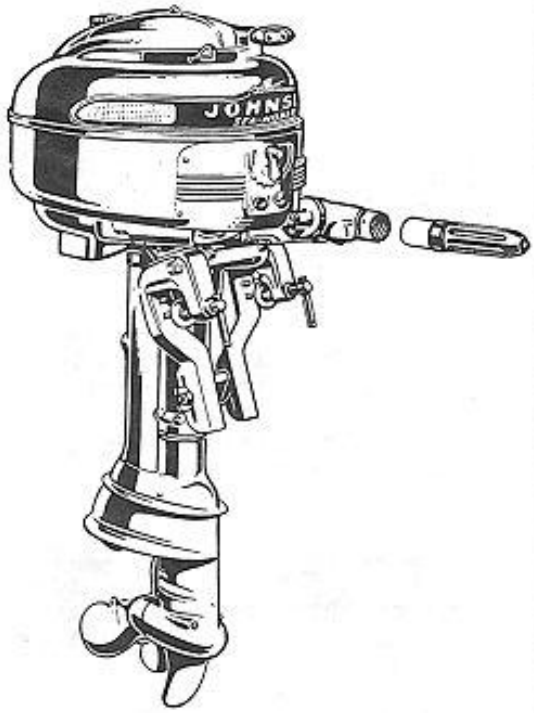
Johnson Sea Horse

OUTBOARD MOTORS

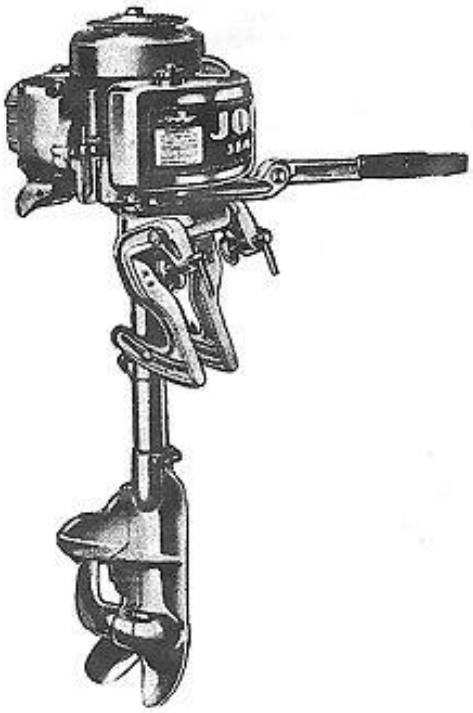
In March 1942 the production of Sea Horse outboard motors was discontinued by government order. Beginning then, all Johnson facilities were devoted to war and essential products. Many Sea Horses have "gone to war" where their traditional DEPENDability and built-in stamina have admirably served the needs of our fighting forces.

The Sea Horse motors shown on the following pages are those which will be manufactured after the war is won. They are substantially the same as those which were discontinued in 1942; fine motors backed by more than twenty years of experience and by a long established, steadfast policy of "high quality only."

JOHNSON MOTORS
WAUKEGAN, ILLINOIS



1940 MODEL SD-10



1937 MODEL LT-37

1940 MODEL MS-15

Another example is as follows: The model J-80 at 1.7 HP sold for $90 in 1936, the model 100 (which was a newer series) at 1.7 HP sold for $62.50, and two years later the model MS-38 at 1.1 HP sold $49.50 in 1938.

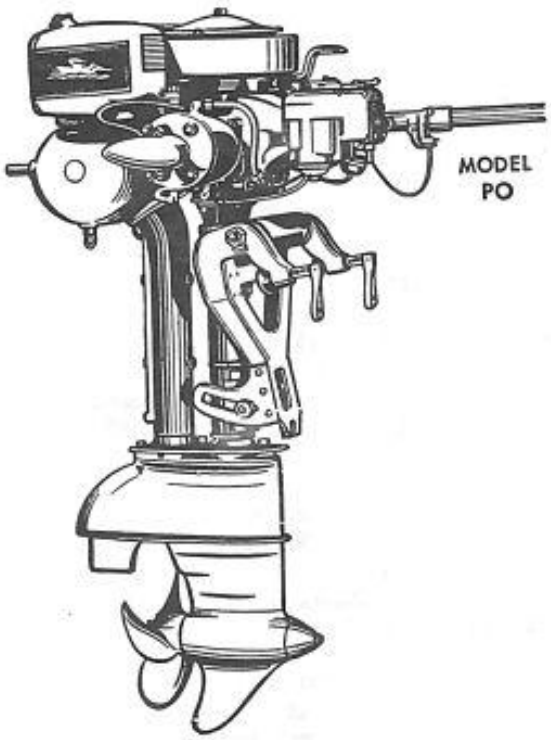
Just before the War, Johnson had decided on three basic fishing motors. They were: the 1.5 HP MS series (with its MD variation with rewind starting), the 2.5 HP "HS" series (with its "HD" variation with rewind starting), and the 5 HP "TS" series (with its TD variation with rewind starting). The "TS" series had evolved from the super dependable "LT" series. These three fishing models were completely restyled for the 1941-42 model years.

After the War, the 1.5 HP "MS" series was dropped and all thoughts relative to fishing motors were concentrated on the remaining "HD" and "TD" motors. Johnson did not forget the larger motors entirely but gave cosiderably less importance to them during this period.

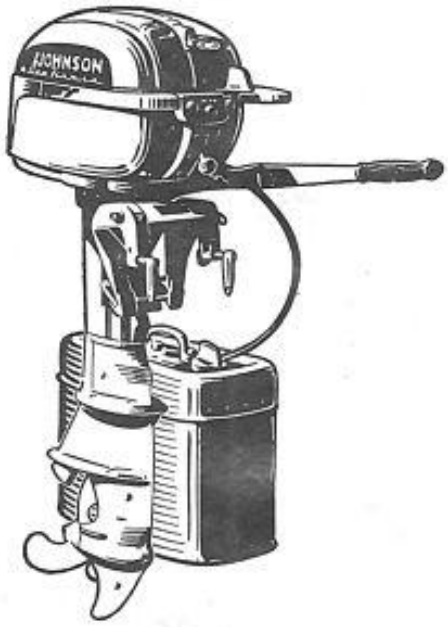
The unamimous acceptance of the fishing motors prevented Johnson from fading into the sunset the way Lockwood did. The models KD-15 and PO-15 remained unchanged since before the War when they were introduced in 1941.

The 22.09 c.i., 16 HP model "SD" brought out in 1940, was Johnson's first attempt to bridge the gap between the mechanical looking motors and the sleek, style setting motors, in the larger horsepower size.

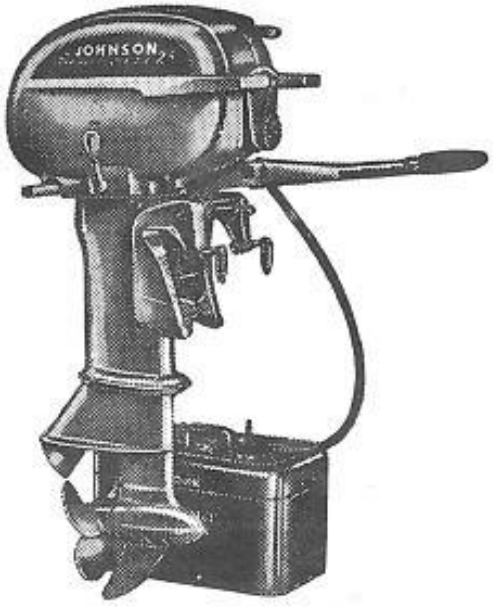
The motor really suffered style wise because of its tanky looking appearance, and this outcome was obvious when two and a half gallons were wrapped around the powerhead. This would be like Carol Burnett trying to hide a fully inflated inner tube from a Mack truck under her baby doll P.J.'s and trying to do it gracefully.



Model PO 15



Model QD 10



Model RD 10

Model JW 10

PART 5: 1949-1967

THE GEAR SHIFT ERA

The year 1949 marked the turning point, I believe, not only for Johnson Motors but also for the entire outboard industry, for this was the year that the mechanical shift, a truly excellent basic design, was introduced on a brand new model, a 16.6 c.i., 10 HP, model QD-10. The Evinrude influence was spreading for it used reed valves which were introduced by them in the thirties.

The past was now ancient history, the model QD-10 marked the beginning of the future. The short comings of the internal rotary valve were now more apparent, and the model SD was discontinued at the end of the 1950 model year, as was the relatively heavy PO-15 opposed twin.

To take their place, another brand new and very successful motor was introduced in 1951. This was the 35.7 c.i., 25 HP model RD-10. This was a reed valve equipped large alternate firing twin with twist grip control and a mechanical shift based on the 10 HP model QD-10 design.

Johnson now had two aces again in the 10 HP and over bracket.

The two fishing favorites were the 2.5 HP model HD which was continued until 1951, and the 5.0 HP model TD that became the model TN with a neutral clutch, which was continued to 1953. The 2.5 HP model HD was replaced by the 3 HP reed valve equipped model JW in 1952. The internal rotary valve died with the 5 HP model TN series and was replaced with the 5 1/2 HP model CD series. Now the whole Johnson line was equipped with reed valves and all were alternate firing twins.

Electric starting was reintroduced to the Johnson line in 1954 with the RDE series. This feature combined with the gear shift allowed boating to be as easy as driving a car, and at a cost within reach of just about anyone, and they came in droves. Sales in the mid-fifties were beyond anyone's expectations. It took Johnson from 1922 to November 6, 1952 to sell 1,000,000 motors. But just seven years later their 2,000,000th motor was produced in 1959.

1968 JOHNSON

SEA-HORSE

55

In 1954, Johnson brought quiet to boating by spring mounting the powerhead on the 5 1/2 HP model CD-10, and thereby isolating it from the boat. For this, Johnson was honored by the National Noise Abatement Council. In 1958 Super Quiet was introduced on the 35 HP model RDS series and on the new 50 HP model V4-10.

The "V" age of outboarding was heralded by Johnson. The initial model was a real power house that when wide open sounded like a swarm of bees; however, top end performance on light hulls was disappointing plus the fuel consumption was poor.

By 1960, Johnson made up for it all by coming through with a wild V-4 at 75 HP with an exceptionally sleek lower unit, that could go like the wind. The "RD" series went from 25 HP in 1951 in 5 HP increments over the years to 40 HP in 1960 where it has remained to this day.

Between 1956 and 1967 various sizes of "fill in" motors too numerous to mention were made, but almost all were variations of the basic CD, QD, and RD series. An exception to this is the low profile "MQ" series rated at 9 1/2 HP brought out in 1964 and replaced the 10 HP model QD series.

A book could be written about the V-4 models made by Johnson, along with the various methods of shift actuation reed valve design, and carburetion. In a nut shell, by 1967 Johnson offered three V-4's, a 100 HP and 80 HP both at 89.5 c.i., and a 70.7 c.i., 60 HP motor which was an uprated version of their original 1958 V-4.

The fishermen were not forgotten, for starting in 1964 they had a choice of lower units on the long time favorite 3 HP motor. A high thrust lower unit was provided on the JH series and the standard "angle drive" lower unit was continued on the JW series.

In 1967, the 3 HP motor had the option of a folding lower unit and a fiberglass carrying case. Fishermen now traveled first class on the water or away from it.

Johnson GT 115

PART 6: 1968-1972

THE LOOP CHARGED ERA

The year 1968 marked the beginning of a new era of design for Johnson. The idea revolved around an advanced cylinder breathing system called looped charging and was incorporated on a brand new three cylinder motor, the model "TR" series. "TR"!!! What a beautiful letter combination. This isn't the first time that Johnson used the same model letter for completely different motor designs, but of course the dash numbers are different.

The powerhead was completely new but so was the lower unit which did away with the "Super Quiet" style of design, and also featured through hub exhaust.

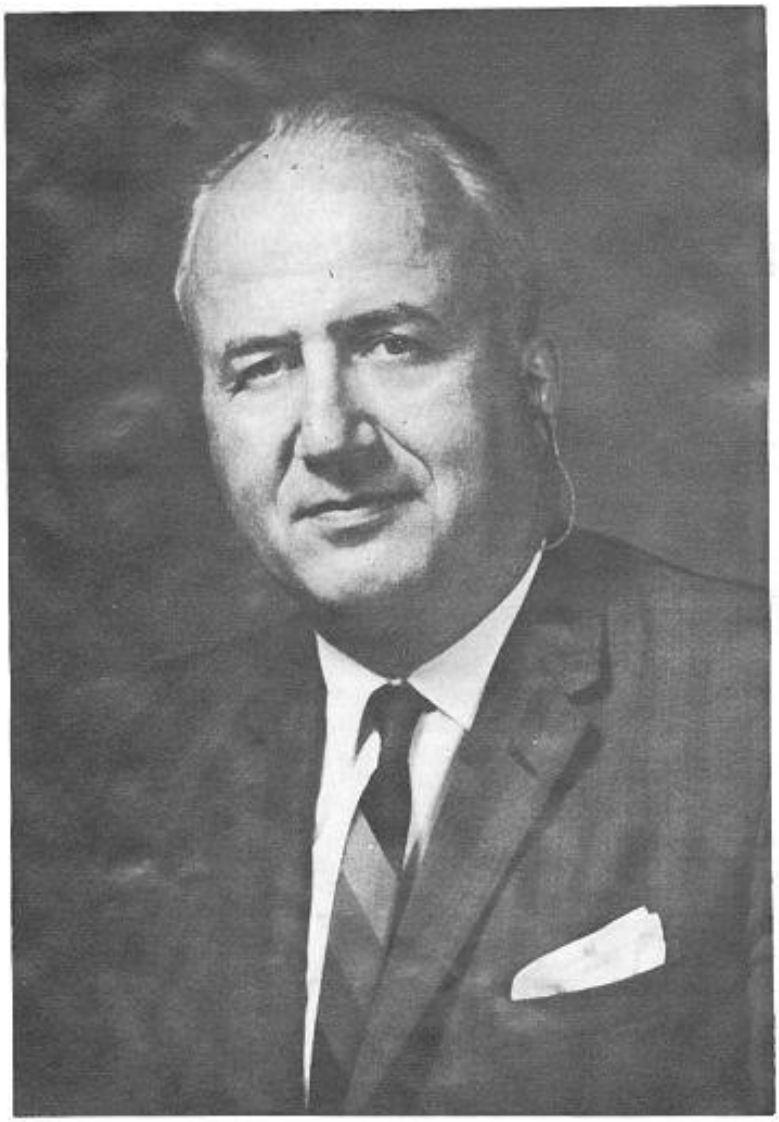
Johnson made their 3,000,000th motor in 1968 and it was a model "TR".

By 1972, the loop charged three cylinder motor had grown to 65 HP. A two cylinder engine rated at 50 HP from 41.5 c.i. with loop charging was introduced. The more powerful 50 HP motor has a smaller displacement tha the 43.9 c.i. 40 HP motor.

The V-4's have all been transformed to the lower unit design initiated by the 65 horsepower model "TR". Three V's are offered: a 99.6 c.i., 125 HP which tops the line; and a 100 HP and a 85 HP motor both at 92.6 c.i.

Johnson re-entered racing in 1968 with a record smashing 89.5 c.i., 115 HP model GT-10S. This motor had a complete shift in an out-of-this-world lower unit.

By 1972, Johnson was bolting unbelievable racing machines to lightning quick tunnel hulls. These motors are dubbed "Stingers" and from 99.6 c.i. get 150 plus HP. They have won in major events all over the world.



W. C. CONOVER

JOHNSON MOTORS DIVISION MANAGER

PART 7: THE SECOND FIFTY YEARS

Where does Johnson go from here? Not even a clairvoyant would dare to guess because she would be thinking in today's terms and by tomorrow those terms at Johnson are obsolete. The problems are slightly different from the good old days when the truly inspired, red headed Johnson Brothers produced motors that stunned their competitors and completely won over their customers so much so thay outsold all their competitors combined.

One of the biggest problems confronting Johnson is also the country's biggest problem and that is noise, water and air polution. Johnson has fought it religiously in the past, is fighting it now and I'm sure will continue to fight it in the future.

Another problem which may come about is the Japaneese imports. In just about every field Japan has entered, they have made a great impact with high quality products such as Honda & Yamaha motorcycles, Nikon camera, Toyota cars and the list goes on. The days are long gone when "made in Japan" automatically means junk. However, when and if this happens, Johnson will tackle them and send them the way of Bundy and Perkins, because to outboarders, having a Johnson is not merely owning a motor, it is being a part of the Johnson tradition. A tradition that ensures First in Dependability and the finest in service, backed by engineers and skilled craftsmen at the factory level, and factory trained mechanics at the dealer level.----- And this is so because of the impact three brothers had on the outboard world: Lou, Harry, and Clarence Johnson.

CREDITS:
The cover was photographed by John Hancock. In setting up the cover, I am grateful to: the Barbizon Modeling Agency of Hartford, Nap & Paul's Marine, and Steve Patterson for their assistance.

References: The Pictorial History of Outboard Motors-Jim Webb, The Encyclopedia of Outboard Motorboating-Hank Bowman, Outboard Motor and Boat Book-Bob Whittier and the 50th Anniversary Edition of Johnson Jottings.

Thanks go to Jim Smith and Tony Caglione for sending photos of their motors.

Plan to attend .... July 14, 15, 16 - 1972

GO & SHOW

the AOMCI 1st National Meet

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- 1896-1942 Outboard Motors
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Race Engines: Models ZR, PR, KR, SR, VR, XR

Special Engines: Models OA, OK, SD, PO, LT, LS, HA, AT

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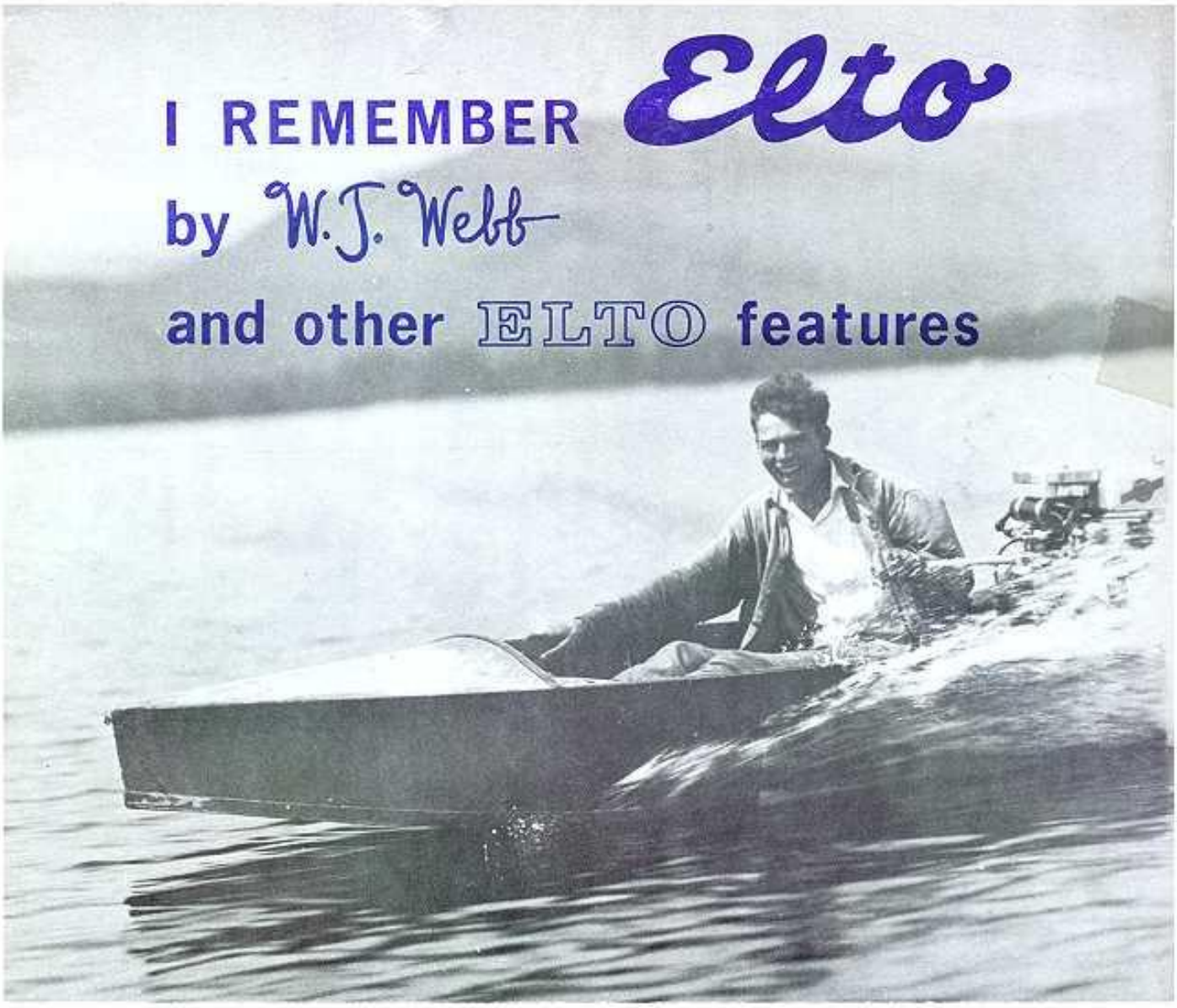
AOMCI 7TH YEAR

The ANTIQUE OUTBOARDER

The Pioneering Authority



I REMEMBER Elto

by W. J. Webb

and other ELTO features

July 1972

The Antique Outboard Motor Cub Inc. is incorporated in the State of Texas as an Educational Institution. The Club is devoted to people all over the world who are interested in the search for, restoration and preservation of old time outboard motors. Regular membership dues are $9.00 per year. Other membership information available on request. Address membership requests to A.O.M.C., Inc., 20505 NW 3rd Av., Miami, Florida 33169.

CLUB OFFICERS & PUBLICATIONS STAFF

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Vice President and Editor.....	Robert W. Brautigam 2316 West 110th Street Bloomington, Minn 55431
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Newsletter Editor.....	William G. Motley II 20804 Hart Street Canoga Park, Ca. 91306
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Curator.....	Richard A. Hawie 31 Hillside Drive Easton, Conn. 06612
Special Features.....	James L. Smith 330 O'Connor Drive Toronto 6, Ontario Can.
Motor Registration.....	Donald Peterson 2884 S.E. Francis Portland, Oregon 97202

THE ANTIQUE OUTBOARDER
CONTENTS

July, 1972

Front Cover:

The fun of outboarding can be seen from this 1932 picture of Allan Bucher and his Elto Speedster on Lake Ossippee, New Hampshire.

Back Cover:

Whoops! Here's Allan a few moments later-man and motor escaped with a dunking.

Photos by
Les Stevenson

This issue of The Antique Outboarder is dedicated to the people of the Elto Outboard Motor organization which began 50 years ago

The Antique Outboarder Volume 7 • No. 3 July, 1972

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Change of address should be forwarded two weeks in advance and zip code numbers should be included.

The Antique Outboard Motor Club Inc

CLUB BRIEFS

THE ELTO OUTBOARD WAS FIRST PUT ON THE MARKET 50 YEARS AGO. TO COMMEMORATE THE OCCAISion, The Antique Outboarder is pleased to present "I Remember Elto", by Jim Webb. Jim doesn't mention himself much in the story, but we all know he played a mighty big part too. Our thanks also to the other contributors who helped furnish material for this special Elto issue of the magazine.

DAVE'S DONE IT AGAIN! DAVE REINHARTSEN HAS A NEW ADDRESS! 7417 WHISPERING PINES, DALlas, Texas, 75240.

EFFECTIVE JUNE 1, 1972, RICHARD M. JONES HAS RETIRED AS AOMCI MEMBERSHIP CHAIRMAN AFTER 4 years of dedicated service. Dick and his wife Jean have done a fine job for us. I talked with Jean the other day and she says they're both having trouble finding something to do with all the free time they now have.

Temporarily until a new Chairman is named, please send all dues payments, address change notices and other membership correspondence to Dave Reinhartsen at his new address as shown above. Dave might appreciate your offer to help with this most important job -- ASK HIM!

THE 4th ANNUAL ANTIQUE TRANSPORTATION MEET WILL BE HELD AUGUST 12-13, 1972, AT LA RUE, Wisconsin. Old outboards have been added to the program this year. Sounds like a lot of fun and a darned interesting time. Plan to attend if possible. More details and a registration blank are printed later in the magazine.

JOHN W. HUNT WILL HAVE LIMITED OPERATING HOURS THIS SUMMER FOR HIS OUTBOARD MOTOR MUSeum on Lake Winnipesaukee at Wolfeboro, New Hampshire. The Museum will be open from 1 to 4PM each Saturday and Sunday through August. John hopes to open up from 1 to 4PM on Wednesdays to, but can't be sure. He plans a special display of his motors for Johnson's 50th Anniversary -- he may even take a trip around the Lake with a Johnson "Waterbug" outboard.

MORE NEW DECALS ARE AVAILABLE! ERIC GUNDERSON REPORTS THAT JOHNSON SEA-HORSE 16 and 24 decals are now available from him at 57B Mount Hamilton Road, San Jose, Calif., 95114. Price of the "like original" decals is $7.00 each.

BILL SALISBURY WANTS ALL PO OWNERS TO KNOW THAT PO HEAD GASKETS AND PROP SHAFT SEALS are still listed in the parts catalogs as being available from the factory.

SUPPORT THE AOMCI NEWSLETTER WITH YOUR MOTORS AND PARTS ADS AND NEWS OF UPCOMING EVENTS as well as member stories or experiences. Write Bill Motley, Newsletter Editor, 20804 Hart Street, Canoga Park, California, 91306.

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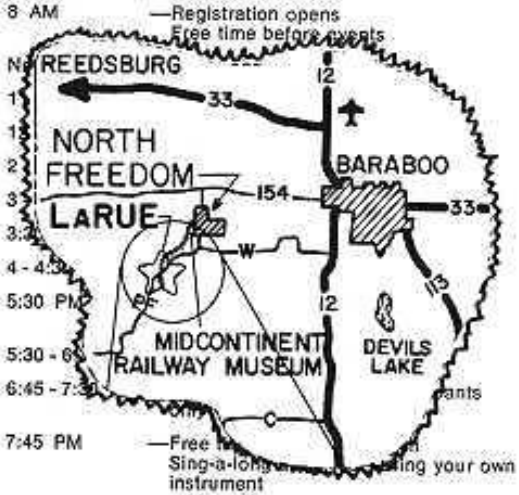
PROGRAM

SATURDAY — August 12

8 AM —Registration opens
Free time before events



5:30 PM

5:30 - 6

6:45 - 7:

7:45 PM —Free
Sing-a-long
instrument

SUNDAY — August 13

8 AM	—Registration and grounds open Free time before events
9:30 AM	—Gates open to public
10 - 12:30 PM	—Muzzle-Loading Shoot
9:30 - 1 PM	—Hill climb and car games
10:30 - 1:30	—Outboard Motor Events
11 - 12 AM	—1900 Highway Obstacle Course (Pre 1925 Autos and Horse-drawn Vehicles)
12:30 - 1 PM	—Starting Contest (Gas Stationary Engines)
1:15 - 1:30 PM	—Vintage Bike Finals Race LaRue to Aerodrome
1:30 - 3:30 PM	—Air Games
3:30 - 4 PM	—Fashion Show
4 - 4:30 PM	—Trophy presentations
5 PM	—Meet closes

The Fourth Annual Antique Transportation Meet

August 12 - 13, 1972

LaRue, Wisconsin

10 mi. West of Baraboo • 3 mi. South of North Freedom
Near Mid-Continent Railway Museum

ANTIQUES IN ACTION!

AOMCI Member Gale Urbainzick is on the big Transportation Show Research and Development Committee. Gale himself has arranged for outboard motors and boats to have a place in the Show.

ALL AOMCI MEMBERS ARE URGED TO ATTEND!

The outboards can be displayed at the Show grounds Saturday and Sunday except for the scheduled outboard motor events which will be held at nearby Seeley Lake. You can reach the Lake by traveling east from the town of LaRue on County Road F 1.6 miles. Make a sharp right (south) and go .3 mile over steel bridge. Turn right again, .3 mile to Lake. There is a paved parking area and paved boat launching ramp, plus rest rooms and picnic area.

YOU ARE INVITED TO...

You are cordially invited to participate in the Fourth Annual Antique Transportation Meet on Saturday and Sunday, August 12 and 13, 1972. Come for a week-end of fun with games to test your skills with your machine. Have a good time with friends. There is something of interest for everyone. Make sure you make this meet — IT IS THE ONLY ONE OF ITS KIND.

MEMBERSHIP APPLICATION

(Tear off and return with membership fee)

NAME: _____

ADDRESS: _____

CITY: _____ PHONE: _____

STATE: _____ ZIP: _____

PASSENGERS: _____

_____

_____

WILL YOU BE CAMPING? YES_____ NO_____

TYPE OF ANTIQUE TRANSPORTATION:

BOAT ☐
Name: _____ Yr.: _____
Style: _____
Engine: _____ H.P.: _____

MISCELLANEOUS ☐
_____
_____
_____

LICENSE NUMBER: _____

CLUB AFFILIATION: _____

INSURANCE CARRIER: _____

(All equipment must have public liability and property damage insurance to take part in the events)

SEND YOUR MEMBERSHIP FEE: $5.00 TO:

The Antique Transportation Committee
Box 395, Windsor, Wis. 53598
Phone: 846-5124 Area Code: 608

RICHARD A. HAWIE

NOTES FROM THE CURATOR

One of the nicest things in life is being honored by one's associates. Thank you all.

I'd like to use the excellent foundation that Mark Wright has built regarding the various valving systems and look at them from a motor identification point of view.

Two-cycle engines must have some sort of valve between the crankcase and carburetor or the piston will pump the charge of air fuel out of the crankcase through the carburetor on the engine downstroke, the charge having been previously sucked into the crankcase on the upstroke of the piston.

Basically valving systems can be separated into two categories: pressure activated and mechanically activated.

The poppet valve carburetor and the reed valve are pressure activated. When the piston approaches top dead center a suction (or negative pressure) builds up in the crankcase; and when this pressure exceeds the force that the spring is holding the poppet valve with, then the valve lifts and air-fuel mixture enters the crankcase. When the crankcase suction drops as the piston reaches top dead center, the force of the spring closes the poppet valve. The pressure activated valving systems are excellent for service motors as the valve timing varies with engine speed. They idle well, are good at mid-range and high speed.

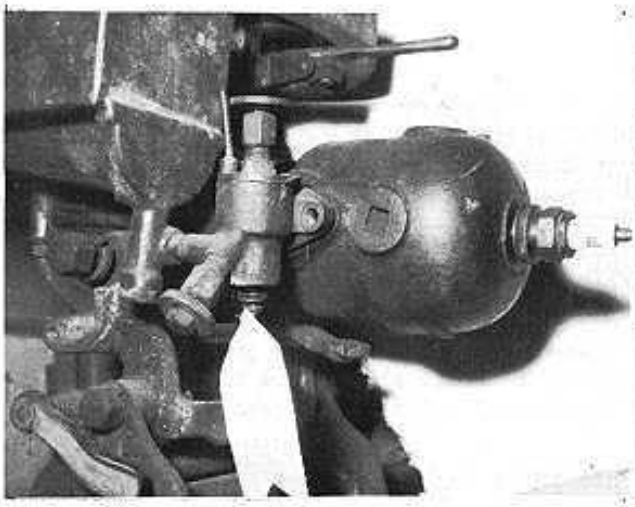
Theoretically at least they are not as efficient at racing speeds as the mechanically activated valve systems, but if you've looked at the racing records lately you'll realize that reed valve engines are mighty fast. Sometimes good engineering can close a theoretical gap.

The Elto motors from 1922-1929 were all of the poppet valve carburetor type. Look for these large screw-type caps on the carburetors. Some models made by Elto after the O. M. C. merger also used the poppet valve carburetor. The Senior Speedster and the Special Speedster are two that come to mind.

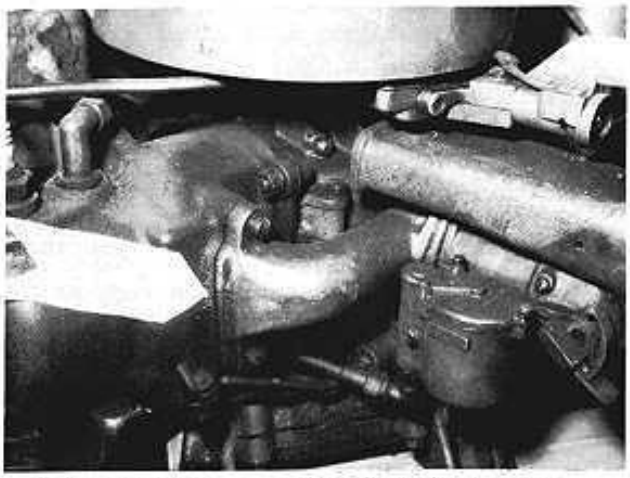
The Hi-Speed Speedsters and Hi-Speed Quads had an auxiliary air manifold on the rear of the cylinders and this was mechanically activated. The piston uncovered a port in the rear of the cylinder allowing air warmed by the exhaust muffler can to enter the crankcase. Our picture of the auxiliary manifold is taken with the gas tank off. You will need a strong flashlight if you want to see the manifold with the tank on. It's a good idea to make sure that it is there if you are buying a Hi-Speed Elto as the manifold can be taken off and the ports sealed with a plate.

Most of the early single cylinder motors used a poppet valve type carburetor. You will find a spring-loaded shaft on the carburetor somewhere. The Koban Twins used poppet valve carburetors too.

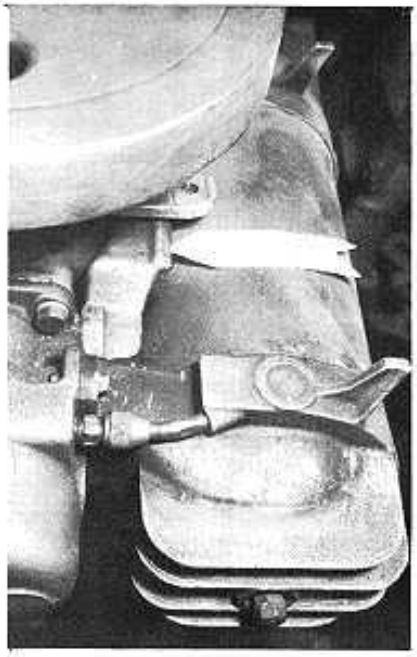
The reed valve was introduced in 1935 by Evinrude so any reed valve engine you have or find will be 1935 or newer. In my whole collection I think that I have only one reed valve engine because I have concentrated on pre-1936 motors. Not wishing to climb over a dozen other motors to get to the reed valve engine which is not apart anyway, I in-

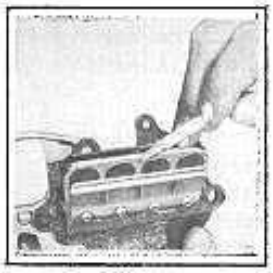


Above photo shows an early Evinrude single with poppet valve carburetor. The arrow notes the spring loaded valve shaft.



A 3 port twin, a 1928 Speeditwin with battery ignition plug and night light socket on magneto handle. Arrow notes manifold feeding into cylinder port.



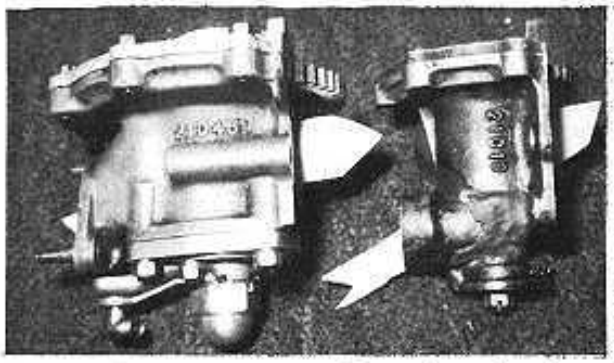


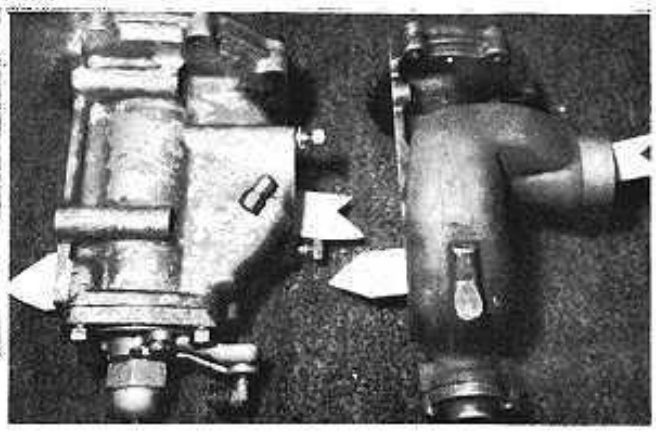
Above: A modern '71 50 HP Evinrude reed plate.

Left: Auxiliary air manifold on 1929 Hi Speed Speedster. Gas tank is removed for photo. Ever present arrow notes air intake.

Above: Elto 1929 Hi Speed Quad noting poppet valve carburetor.

Below left: Johnson rotary valves, half speed on left, full speed on right. Air/fuel flow noted by arrows.





Right: Johnson rotary valves from 4 cylinder models VR-50 & V-45 (right). Air/fuel arrows feeding bottom cylinders.

clude a picture of a modern reed valve plate. If you've never seen one, this is basically what they look like.

Mechanically activated valve systems include piston valved (or three-port) engines and rotary valve engines. The piston valved or three-port engine is the simplest of systems because there is nothing added to the engine to accomplish the valving. The cylinder has an exhaust port, intake port and by-pass port -- hence the term "three"-port engine. The carburetor on a three-port engine feeds directly into a port in the cylinder which is uncovered by the bottom of the piston skirt. This allows the air fuel to be sucked into the crankcase via the cylinder space under the piston.

Twin cylinder opposed engines such as the early Speeditwin models pre-1931 have a manifold which branches to each cylinder intake port. Most of the pre-1931 Twins were three-port engines. Included in this group would be all the Caille Twins, Johnson "Waterbugs", Standard Twins, Big Twins, Giant Twins, all the Lockwood Twins, Evinrude Fastwins and model N Sportwins.

During the 1930's three-port engines were not built in the numbers or horsepower range that they were in the 1920's. Though simple to build, three-port engines were not as flexible as reed valve or poppet valve carburetor engines nor as efficient as rotary valve engines.

Caille's last big three-port engine was the 1933 23 hp models 48 and 51. Muncie produced a 16 hp three-port Twin up to World War II. Their 16 hp Army Stormboat model 13A12 of 1942-43 was the last of the large horsepower three-port Twins. Imagine calling a 16 hp motor large in 1972! The bulk of the three-port engines produced during the 1930's were small fishing motors.

Rotary valves can be classified as external gear-driven and internal or crankshaft rotary valves. Rotary valves are very efficient for they can be timed to close much after the piston has reached top dead center hence taking advantage of the inertia of the air/fuel column racing through the carburetor to ram more air fuel into the crankcase. The only drawback is that the optimum timing of the rotary valve closing varies with engine speed, but of course the actual timing must be constant. At 4000 rpm the rotary valve should close about 52 degrees after top dead center, while at 2000 rpm it should close about 28 degrees after top dead center. If you set the rotary valve to close for 4000 rpm operation, you or the rear quarter of the boat get a bath of fuel, mostly oil at a pint per gallon mix, at any speed below 4000 rpm. For racing it's okay; racing drivers don't know any better. If they did, they wouldn't be racing drivers; but for a Sunday pleasure drive don't wear white ducks while running the old P-50.

The Johnson S-45 and V-45 of 1929 were the first rotary valve motors made. They were driven at crankshaft speed. The gear was small and the passage through the valve was circuitous. By turning the rotary valve at half crankshaft speed a nearly straight through passage was possible. The depression interfered with good engineering practice so we find the full crankshaft speed rotary valve on the models V-45 and S-45 through 1932. The 1930 racing models and the new 30 cubic inch P-50 had the half speed rotary valve as did the electric start models VE-50 and SE-50. The S-65 and V-65 of 1933 were made with half speed rotary valves. The last service models to have an external rotary valve were the 1934 S, V and P-70's. The racing models SR and PR continued to be made with external rotary valves until production was stopped by World War II. The only motors to be made with external rotary valves that weren't Johnson motors were the rare and weird Evinrude Speedibee and the Evinrude racing Speeditwin models 6038 and 6042-3.

Internal rotary valves can be placed in three categories: the crankshaft web type, barrel type and drilled hole type. In the crankshaft web type, a pie-shaped cut is made in the crankshaft web which allows the air fuel mixture to pass into the crankcase. Motors which used this type of rotary valve include all of the Evinrude-Elto four cylinder motors made from 1930 on, the Elto Super A and C, the Evinrude Speeditwins model 601 and up, and the Johnson P-75 and up. It's hard to tell whether a motor has an internal rotary valve or not from casual glance. If the carburetor feeds into the crankcase directly and has no reed or poppet valve behind it, then it must be a rotary valve engine or the wrong carburetor is on the motor. This can happen! We

have a couple of motors which have standard carburetors on them but should have poppet valve carburetors. I have gotten enough letters to indicate that it's possible to have a motor on which someone erroneously put two valving systems. A three-port Caille will not work with an Elto poppet valve carburetor on it, for instance.

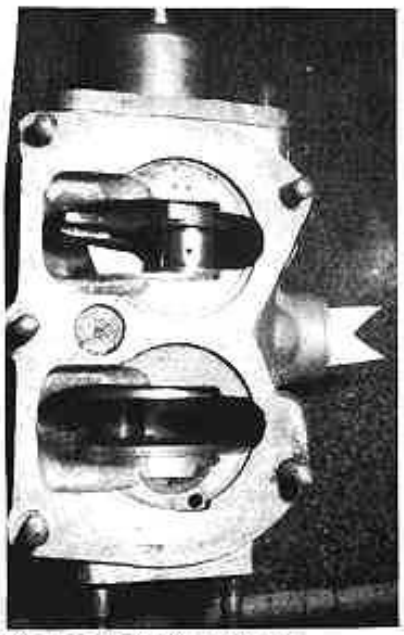
The barrel type rotary valve consists of a very thick disc of steel which has a hole machined through it to direct the air/fuel mixture from the carburetor to the crankcase. It was used on alternate firing Twins usually; I don't know of it being used on singles or opposed Twins. Johnson alternate firing Twins models A-50 and K-50 and succeeding A and K models used this type rotary valve as did the racing models KR-50 and up.

The drilled hole type of rotary valve is a small hole drilled in the center journal of the crankshaft. Because the journal is rarely more than one inch in diameter, the rotary valve hole is necessarily quite small; and this type rotary valve was used on the low speed circuit of the Johnson dual type carburetion systems such as the LT-10. This system, as you may recall, uses a three-port type for high speed operation and a fixed Venturi on the crankcase at the center main bearing for low speed operation. Though complicated, this results in fantastic idling. Other Johnson motors which used this system include the LT, T3, TD and H models of all years.

The Johnson models SD-10 and 15 (the SD-15 is a post-World War II motor) used the drilled hole rotary valve for low speed operation and the pie-cut crankshaft web for high speed operation -- an interesting combination. In fact, the SD is an interesting motor for several reasons. It was the transition motor between the depression era motors, when staying in business was the most important thing for the manufacturers, and the engineering marvels which were produced after World War II's long interruption. The SD-10 was the largest alternate firing Twin when it was introduced -- 22 cubic inches. It had a check valve type fuel pump, not gravity feed. It was streamlined and cowled well enough to pass as a "72" model if you could hide the automatic rewind starter handle.

Bendix used this type of drilled hole rotary valve, too, with the difference being that the crankshaft was hollow from the crankcase to the port in the crankshaft rather than being a small drilled hole.

Next time we'll delve into rare models and have some pictures of the Class A motors of the 1930's.



Upper left: Evinrude crankshaft rotary valve from a 16.2 HP Sportfour. Pie-shaped cut is chalked white to show shape.

Left: Johnson barrel type rotary valve. This is a KR crankcase. Air/fuel route is more direct than in S-45 type rotary valve.

Right: Crankshaft from KR, square port is rotary valve opening for top cylinder. Round hole is blind balancing hole. Port opening for bottom cylinder is 180° from top cylinder port. Barrel is about 1-3/4" thick. Crankshaft is made of 3 pieces, unusual in American engines.

-Dick Hawie-

OF HISTORICAL INTEREST

.....W J Webb

Although the name of Elto did not come before the public before April of 1921, the Elto idea of a lighter, easier starting, twin cylinder outboard was certainly hatched in Ole Evinrude's mind by 1917.

Because of her failing health, Ole and Bess Evinrude had sold out their interest in the Evinrude Detachable Rowboat Motor Company to partner Chris Meyer in 1913. At that time Ole agreed not to have any connection whatever with any other outboard motor for a period of 5 years.

After the sale had been completed, the first objective was to get Bess rosy-cheeked and healthy again. To this end Ole bought and completely rebuilt a huge Packard touring car into something that had most of the features, if not the appearance, of today's campers.

So they climbed into the Packard and with son Ralph, then 8 years old, they headed westward to the Pacific Coast. Transcontinental motor travel was rugged in those days. Outside of occasional varicolored stripes on fence posts and telephone poles and the Lincoln Highway, highways were unmarked. (Any of you remember the old "Red, White and Blue" trail?) Hard surfaced highways were few and far between. Some roads were gravel topped - if there happened to be a quarry, mine tailing pile or gravel pit close by. Otherwise they were dirt - dusty when dry, axle deep when wet, unbelievably rough when frozen. There were motorists' guide books which told the driver how and where to go... "Turn left at red barn, continue about six miles and turn right on dirt road where new silo stands". Or..."The Missouri River can be forded at this point if gravel banks can be seen in midstream. If banks cannot be seen, it is advisable to wait for low water or proceed upstream until a shallower place can be found."

The Evinrudes were in no hurry and, eventually, they arrived at the World's Fair in San Francisco. Bess's health and strength had picked up week by week and by now she was vigorous and rosy-cheeked.

In the fall of 1915, they went to Florida where Ole bought a small cabin cruiser and they enjoyed a wonderful winter cruising Florida's lakes and rivers. It wasn't big enough for open water so Ole designed a 42 footer - the first of three "Bess Emilys". He designed the engine also, a powerful V-8, highly advanced for its day.

The Evinrudes returned to Milwaukee. Ole and Russ Cary, Bess's brother, like Ole a Master Pattern Maker, made the intricate patterns required for the V-8 themselves. Ole did a lot of the machining himself in the shop of J. C. Busch, a good and always remembered friend from the early days when Ole wasn't always sure of the whereabouts of his

next meal. Together, Busch, Ole and Russ Cary assembled and installed the new engine. It ran perfectly. With this able boat, the Evinrudes cruised the Great Lakes in the summer of 1917.

All the time he was designing and building the new V-8 engine, Ole was making sketches of a new twin cylinder outboard motor that would be lighter, faster and more powerful than the famous single which he had developed. Besides, there was this relatively unknown metal, aluminum, which was light, strong, easily cast and machined - maybe more costly then than bronze or iron - surely, this had a great future in Ole's eyes.

That fall, the Evinrudes headed the "Bess Emily I" south toward Florida via the Mississippi. Russ Cary went along as crew. Caught in the ice at Memphis, they laid up the boat and continued by train to New Orleans for the winter. Meanwhile, Russ Cary was drafted into the Army for World War I, and went back home from Memphis.

Ole was not a bit bored in New Orleans. Now he had time to do some real thinking about that new twin cylinder outboard. So he set up a drawing board in the hotel room and went to work - hard, long hours, just like always. The next spring when the family returned to Milwaukee, Ole had a big sheaf of drawings for a whole new kind of outboard.

Ole Evinrude, Master Machinist, Master Pattern Maker and Master Tools Maker, set to work. Patterns first, then castings, tooling and finally machining of the new pieces. Here it was that Ole learned how to handle aluminum. After his discharge from the Army, Russ joined Ole and the fur began to fly.

In 1919 they began to test this new outboard. In his spare time, Rob Cary, another of Bess's brothers, who later became Elto Service Manager, joined the group and helped with the assembly and testing of the experimental models.

Finally, Ole was satisfied. His new twin was lighter, faster, more powerful and started far more easily than anything else in the outboard field. This exceptionally easy starting was due in part to Ole's clever adaptation of the Atwater-Kent dry battery ignition and also to the best (up to that time) method of delivering a consistent, readily ignitable mixture of gasoline and air to the cylinder head and spark plug.

Naturally, Ole and Bess thought first of their old company, The Evinrude Motors Company, as the most likely marketing outlet. So Ole took his new motor to Chris Meyer, to whom he had sold out back in 1913. But Chris wasn't interested. His Evinrude Company was doing right well. Such competition as existed was far behind. Besides, Chris had little confidence in this new aluminum that Ole had used so extensively. Nothing could do better than the old reliable bronze and iron. Also, Ole had some old fashioned ideas about the necessity of accurate tooling which would have required an outlay for some new machinery and tools. Chris was firm in his "No".

While keenly disappointed at Meyer's refusal, Ole and Bess were far from down hearted. Their decision was couched in about these words, "All right, we'll make it ourselves - we have the patterns, many of the tools, we have learned about aluminum. We'll set up a shop and office. Ole will make it and Bess will sell it."

Capital was limited, so Ole designed and made nearly all of the special tooling required. Russ converted the experimental patterns for production. Rob Cary left his full-time job with Industrial Controller to help with assembly plans and testing. Herb Moering, who married Bess's sister Florence, came in after hours and handled the purchasing and helped with production planning. Later when Elto was ready for the market, Herb left a promising full-time job and came to Elto. Undoubtedly strong family loyalty played a large part in the successes that Ole and Bess enjoyed.

In 1920, factory and office space was rented in the Manufacturers' Home Building at 62 (now 104) East Mason Street, right on the Milwaukee River in the heart of downtown Milwaukee. (With the heart of Milwaukee's fine shopping district no more than five minutes from the Elto office, we never had a bit of trouble hiring female helpers.)

Bess, meanwhile, was just as busy as Ole. There was much careful planning to be done. Banking and financing had to be arranged - a sales and advertising campaign had to be primed and ready to go on signal - a dealer sales and service organization had to be planned and activated through personal contact and effective direct mail - top grade

OLE and BESS EVINRUDE

descriptive literature laid out - an effective office organization prepared - order writing, shipping, billing, accounting service procedures to be worked out - details by the hundred to be tied down. And Bess guided all of it.

Early in the game, Bess decided that it was high time that this new child be given a name. It should be short, easy to say and remember and resemble nothing else. She came up with ELTO - the initial letters of the four words, EVINRUDE'S LIGHT TWIN OUTBOARD. A man with an international merchandising reputation told me that the selection of the name ELTO was an act of merchandising genius. Like KODAK, the name Elto meant nothing by itself, yet it had everything that a good brand name should have, and the excellent product back of the name gave it greater value.

Late in 1920, Bess's sister Dorothy Cary, now a super secretary, left a fine job with O. R. Pieper to come to help Ole and Bess. Dorothy eventually became office manager besides handling all sales correspondence; but at first everyone wore several hats. I was hired in January of 1926 to take the place of Dorothy, who was planning to be married in September. Her husband-to-be was Jake Stern, of whom, more later. Dorothy taught me plenty about sales correspondence and office procedures.

Meanwhile, economic storms were brewing. The post World War I recession was beginning in 1920. It didn't seem to be a good time to start a new business. The big downtown bankers were so unwilling that Ole and Bess had to go out to one of the smaller, outlying banks - The Park Savings. Later, the big boys came, hat in hand, soliciting Elto business. But, characteristically, Ole and Bess remembered who had stood by them in time of need, and Park Savings remained Elto's main banking connection for years.

A financial expert once said, "Every single day, some where in this great country, a small shoe string business with but small chance for success starts up and somehow, by courage and brains and hard work makes it big; and every single day sees some successful business lose its courage and its brains and its industrious habits and start its downward slide". Ole and Bess had courage, brains and industry. I could add another ingredient - integrity, or to put it another way, strict unadulterated honesty.

Finally, in January of 1921, Ole told Bess that by the time she could get the first ad in print, the first Elto would be ready to ship. Bess had it all ready, and the first Elto ad appeared in the April issues of the Boating magazines.

The response was instant and enthusiastic. From the first day orders came in faster than shipments could be made, and before summer, the small factory at 62 Mason was sold out. Excellent field performance of this new motor generated new business and brought dealer and distributor inquiries by the dozen.

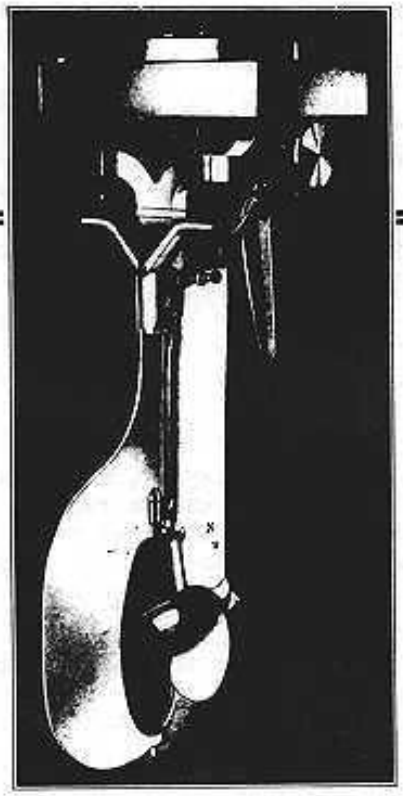
Late in that first year Bess came up with another of the many right moves that had brought success. She decided that Elto needed merchandising help, and hired young Jake Stern, then Export Manager for another successful Milwaukee firm, Briggs and Stratton. Jake proved to be immensely capable in many areas. As Elto Sales Manager, Jake built a strong dealer and distributor organization both at home and abroad. One of his export appointees, Jack Shillan of London, soon made Elto the top outboard name in Europe.

Jake became Assistant General Manager in 1926, and when Elto, Evinrude and Lockwood merged in 1929, he became Executive Vice President of merged group, but more of that later.

Ole rented more space, all he could in fact, bought more machines, hired and trained more men. Yet, even with increased facilities, Elto was sold out for the whole year early in 1922. And so it went. Ole was renting additional space as fast as the management of the Manufacturers' Home Building would turn it loose, but still Elto was sold out for the year by early summer in 1923, '24 and '25.

From 1921 through 1925, the Elto Light Twin developed three horsepower with a bore of 2¼" and a stroke of 2". In 1926 this was increased to 4 hp by increasing the bore to 2½" while leaving the stroke at 2". Improvements were made each year. In 1924 Elto became the first outboard to discard the plunger pump as a cooling mechanism. The plunger pump was fine in clear fresh water, but cut out quickly in muddy or silty water and usually froze up after use in salt water. In 1924, Elto brought out the Propello

Here Is Ole Evinrude's New Motor



OLE EVINRUDE, the man who made possible the outboard or detachable row-boat motor, again is receiving enthusiastic expressions of appreciation from old friends and new everywhere as a result of the announcement of his new Light Twin Outboard Motor now being manufactured by the Elto Outboard Motor Co., of which he is President.

As a fellow sportsman and master engineer, it therefore pleases him much to present the **ELTO,** ideal motor for sportsmen and all outdoor people.

The **ELTO** motor in structure and finish is distinctly different from all of Mr. Evinrude's earlier models. Its highly polished aluminum and nickeled parts identify it in appearance as the "silvery motor."

Its clever design has made possible a twin-cylinder motor, which, weighing but 46 pounds, develops full 3 H.P. Its sturdy and substantial construction suggests dependability and years of service.

Free from vibration, because of its perfect mechanical balance—quiet and smooth with not a particle of back pressure, the result of its new underwater exhaust principle—the **ELTO** motor stands alone for comfortable operation.

Its well-thought-out ignition—an Atwater Kent combination—has produced an easy, quick and positive starting. Its bracket arrangement allows it to be raised instantly and easily above the water line in dangerous or unusually shallow waters, and motor will tilt automatically when striking an obstruction, protecting both itself and boat from possible harm.

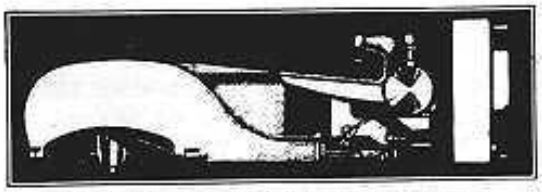
The propeller and housing design of the **ELTO** together with its splendid tilting arrangement, make it altogether weedless.

Its balanced method of steering gives freedom from the urgent necessity of holding constantly to the steering handle and after motor is shut off, control of the boat is still to be had by the use of the rudder.

Most noticeable are the clean-cut stream lines of its lower frame, free from unnecessary protrusions and forming the least resistance to the water; while its broad, smooth surface permits of easy cleaning. Its remarkable compactness for carrying is brought about by the rudder swinging back against main frame where it is securely caught. Its spark plugs, placed where they insure safety from shocks or breakage, is a point much to be appreciated.

Altogether, the **ELTO** motor is a strictly 1921 product and the best guarantee we can give of its excellence is the natural genius and big experience of its designer and builder, Ole Evinrude.

Truly, the **ELTO** Light Twin Outboard Motor is a skillful piece of mechanism of exceptional quality in every detail.



Weight 46 lbs. Dimensions 34" x 9½" x 13½" Folded "Comfortably Portable."

Our Attractive Catalog Is Now Ready

ELTO OUTBOARD MOTOR CO.

OLE EVINRUDE, President

MANUFACTURERS' HOME BLDG. Dept. F MILWAUKEE, WIS.

Pump, a simple, absolutely wear and freeze free system which used the wash from the propeller to push cooling water through the cylinder water jackets.

Meanwhile, quality was improving inside the motor as well as out. Every motor powerhead was lapped for an hour in a mixture of jewelers rouge and oil, then disassembled, all rouge washed out, reassembled, and run on a break-in tank under load for two hours. After this, it underwent a final test, was finish polished and cleaned, wrapped in paper, carefully packed in a wooden box made of really good lumber throughout and shipped. Box lids and packing supports were screw fastened, not nailed. Many a dealer's shed and pier, some still standing, by the way, were made from Elto packing boxes.

Another high quality item was the tool kit. This was no jerry-packaged thing. Any man with mechanical savvy sufficient to change a spark plug, could assemble and disassemble any Elto with just the tools supplied in the tool kits. I remember that we received several letters complimenting Elto on the high quality evident throughout, from screw fastened box lid to Rolls Royce type tools. I think it paid.

Elto sales held up well in 1926, with a sellout by fall. In those days the active selling season didn't start before April in the South and the middle of May in the North, and it usually dropped through the floor by October 1. We didn't have year round production then as a rule, although, with our smaller capacity, Elto production was on a more even keel than that of most of the competitors. While some seasonal layoffs were necessary in the factory, Ole and Bess did everything they could to keep layoffs to a minimum. I have heard them discuss the problem many times. Both were well aware that the solution was even year round production.

Ole Evinrude was an even-tempered, calm individual. I knew him from January 1926 until his death in 1934 and in all that time I saw him angry only once. A Factory Superintendant at Elto had deliberately short cut production instructions. This resulted in lowered quality. The man tried to lie out of it. Ole believed him at first, but when the extent of the deception became evident, he really lost his temper. He gave the man a firing and a telling that had to match the best chewing out ever delivered by any top kick to a dumb recruit. Characteristically, Ole paid the man his regular salary until he found another job.

It was as a result of this that I got my first lesson in Evinrude integrity. Without hesitation Ole, Bess and Jake decided to write every dealer who had received motors in a certain series and offer an immediate, free prepaid replacement. This involved several hundred motors. We received many letters from dealers and owners who were amazed and pleased at our action. The fact that we came right out and told the whole truth and offered an honest remedy made us many friends. I never knew the Evinrudes to follow any other than a policy of the strictest honesty in all dealings.

A fine team themselves, Ole and Bess naturally inspired fine teamwork in their organization. On most summer weekends many of us in the Elto organization were at the Evinrude's summer home on Oconomowoc Lake with wives or husbands as the case may be, taking pictures for next year's advertising program. No

Another type early Elto advertisement probably mid-1921.

This picture was taken by Jake Stern at the close of two days of taking camping and hunting shots. Locale was the Evinrude's summer home at Oconomowoc Lake, about 25 miles west of Milwaukee. From left to right: Mrs. Bill Kiss; Bill Kiss, Elto Advertising Manager; Ole Evinrude; Mildred (Mrs. W.J.) Webb; Mrs. Evinrude; W.J. Webb; neighbor's dog, Kent; Bob Burns, President of Burns-Hall, Elto Advertising Counsel; Ralph Evinrude and N.L. Telander, Vice President of Burns-Hall and Elto Account Executive. With the exception of about three months in 1929-30, Telander was Principal Account Executive for Elto -and then Evinrude- for some 40 years. A real record in the advertising jungle. Ralph, Burns, Telander and I had not yet changed back into civvies, while the rest were ready to hit the Sunday traffic back to Milwaukee.

one expected, asked for, nor received any extra pay for this. I have fond memories of office mailing bees when all of us from office boys on up pitched in and worked for 2 or 3 hours in an evening to get out an announcement mailing. And always, there was Bess with a sheet of brown wrapping paper pinned over her dress folding and enclosing mail in the middle of a group of office girls. We always had a supper sent in, but that was all.

In 1927 Elto sales had noticeably slacked off. For the first time Elto had motors in stock in mid-June. At this time Elto still had only the rugged, fine performing 4 hp Service Twin and that was no longer what most of the public wanted.

The reason was that Elto did not have a motor that could go out and race. The public preference had turned to speed, that is, what passed for speed in 1927. In 1925, the Johnson Motor Company then of South Bend, Indiana, brought out its famous Big Twin, a 6 hp, 85 pound monster that made nearly 15 miles per hour on a stepless hydroplane, the Baby Buzz. Unbelievable. This was available in quantity and Johnson grabbed the sales lead with it. Johnson, followed by Lockwood-Ash of Jackson, Michigan, made speed the big issue. Outboard racing became immensely popular overnight.

Ole had not been asleep. In 1923 he had built two or three four cylinder motors by putting two of the 3 hp Light Twins together. This early quad ran well enough. It had been shown and demonstrated to a few of the more knowledgeable distributors and dealers and all were enthusiastic about it. But there just didn't seem to be any reason to go ahead with it. Besides, the production of the highly popular and profitable 3 hp Light Twin was requiring every available inch of factory space.

By September 1927, Elto had finished developing the now famous Service Speedster, now a collector's item. This was a 7 hp, 19.6 cubic inch displacement motor based on the 4 hp Service Twin powerhead. It was by long odds the easiest starting fast motor on the market and the best load puller in its class.

One individual's contribution to Elto's success in the fast motor field stands out and is to be especially commended. That person was Ralph Evinrude. From my years of close association with him, I know that Ralph inherited generously the abilities of both parents. He understood mechanical things just as well as his father. He had his mother's nose for the news - and salesworthy - and all of the whys and wherefores. He had tremendous drive and the physical strength to go with it. It was Ralph's tremendous drive that did much to bring the 1928 Quad to market readiness in time and brought the first Elto Speedster to the market in September of 1927 in time to give a much needed boost to the sagging morale of Elto dealers and distributors.

This same drive took Ralph and me up to the Milwaukee River Test Station at the North Avenue bridge to boat test the first Speedsters before shipment. Every one of the first thousand motors was given a searching boat test by either Ralph Evinrude or me. We used two boats of practically identical performance characteristics, either a Thompson or a Pen Yan step plane. After a warmup run, the motors were checked for starting, pickup, general handling and finally they had to make 22.5 miles per hour over a measured course or they were rejected. Ralph and I were just about the same weight so the tests were quite fair all around.

Meanwhile Ole, under son Ralph's continued day and night prodding, had brought the 1923 Quad up to date, using two Speedster powerheads as a base along with one of the best lower units ever devised for that power range - 18 claimed but more than that delivered in last analysis.

The new Quad was truly revolutionary. We wanted to keep it as secret as possible so we did all of the developmental running in out of the way places and at Oconomowoc Lake west of Milwaukee after all of the summer residents had closed their places for the winter, in October and November. Ralph, Bob Cary and I worked as far into December as ice conditions would permit. We frequently worked until it was too dark to see. Mrs. Evinrude ordered me to get Ralph off the water and back to the office before dark. Sometimes I was able to do it. Sometimes we all got scolded for coming home too late. We enjoyed the work but not the scolding. Mrs. Evinrude and Jake Stern did the scolding - neither of them ever "bawled out" anyone. I have a picture of Ole sitting back

during one of these sessions with a slight smile. He didn't say a word, but he knew quite well why Ralph just had to keep going.

Ralph is still very close to all testing and development. He still likes to run motors of every size. It wouldn't surprise me a bit to hear one day that he has joined the 100 Mile-An-Hour Club.

Ads announcing the 1928 Quad were not put in the hands of the magazines until the last possible hour of the last possible day so that our competitors might be taken as much by surprise as possible. Evidently our efforts at secrecy were successful as none of the competitors was aware of what was coming until just before the New York Motor Boat Show held in January. Traditionally, the New York Boat Show was the kickoff for the next boating year. In those days people came by the trainload from the 4 corners of the country to get the first glimpse of what was new at New York. The 1928 Quad was the outboard hit of the Show. The year's production was sold out before spring.

In 1928 Elto began to support racing for the first time. We sent a service crew to the Albany - New York Marathon, then the biggest marathon show of the year, but the Quad drivers did not have the right boats for the water conditions of that day, and, more importantly, did not know how to run the course. About the same thing happened in the Milwaukee - Chicago Marathon. An Elto Speedster took first place in its class, but the Quad showing was just "respectable".

June of 1928 saw Ole Evinrude step up the speed of the Quad by replacing the iron pistons and bronze rods of the early Quad with tempered Lynite pistons and connecting rods. Things took a turn for the better in June and Elto won its first big victory in the 205 mile Peoria - St. Louis Marathon on July 4th. Eldon Travis of Peoria won by quite a margin. Art Sauerberg of St. Louis actually finished second with another Quad, but through some weird timing procedures at the up river locks, was pushed back to third. Rob Cary, Charley Keller and I service-crewed that event. In fact from that time on, Elto had a service crew at all the big races. We adjusted ignition points, carburetors and gave away sets of spark plugs and that was all.

By the end of the 1928 racing season, the Quads were on top of racing everywhere and finished with a grand flourish, winning the Class D and Free For All at the Harmsworth in Detroit, the Midwest MVPBA Championships in Peoria and at the National Championships at Wilmington, North Carolina. It was at Peoria that Eldon Travis set a new Worlds Time Trial record of 41.748 mph with his Quad and Boyd Martin Bullet Boat.

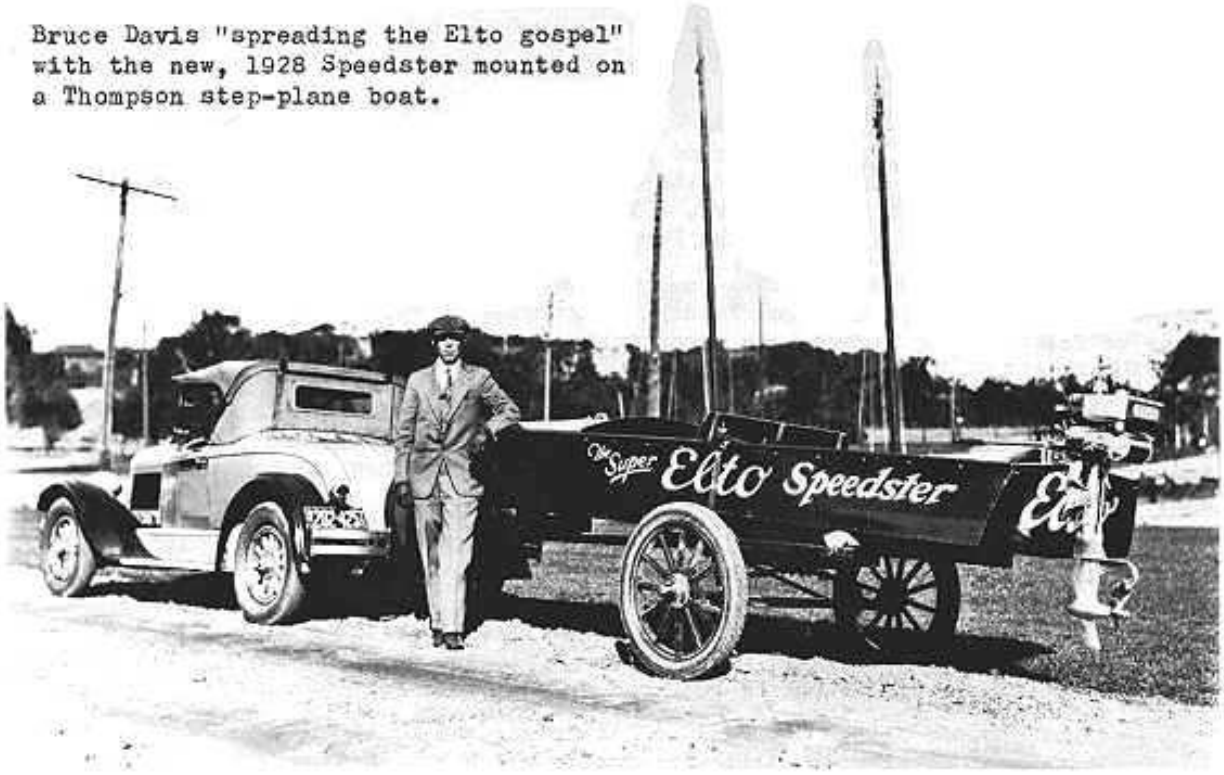
During the period, Elto scored a number of "Firsts" in effective outboard motor merchandising, ideas that were widely copied in the marine industry. One of these came in September of 1927 when Elto gave the just-announced Elto Speedster a mighty boost by equipping two good men with Thompson Step Planes driven by the new Speedster, mounted on sturdy trailers, and sent them southward to spread the gospel.

These men were Bruce Davis of Duluth, Minnesota, then the Elto distributor from Minnesota and Northern Wisconsin, and Herb Parker of Boston, Massachusetts, then the Elto distributor for New England.

The picture shows Bruce Davis with his Chrysler Roadster/Convertible. Herb had a similar outfit. That trailer was whacked together in the Elto shop. It consisted of a Model T Ford front axle and spring, with steering arms welded. Ole Evinrude designed it and supervised the construction. Outside of a couple of cases of tire trouble, both trailers travelled from Milwaukee to Southern Florida and Texas, and most points in between, and arrived back at the plant in perfect shape shortly before Christmas. Ole built trailers to last also.

Bruce covered the area mostly west of the Mississippi. Herb covered mostly east of the Mississippi. Dealers along the route were alerted and encouraged to get out as many customers as possible to watch and run the Speedsters. It was a long tough grind, with both Herb and Bruce averaging better than five demonstrations per week. As both of them reported, getting the boat in the water was a cinch, as there were many willing hands. But when it came time to quit and pull out for the day, the willing hands, for the most part, vanished.

Bruce Davis "spreading the Elto gospel" with the new, 1928 Speedster mounted on a Thompson step-plane boat.



The idea was a great success and was widely copied in following years. In the early thirties, Outboard Motors Corporation, which took over Elto, Evinrude and Lockwood in 1929, equipped all its salesmen with house trailers, each of which carried a full line of Evinrude and Elto motors, a travelling showroom, in fact.

Bruce Davis went to work for us in 1930 and travelled territories west of the Mississippi for the next 30 years. Bruce retired in 1960. He and his wife, Bee, plus the dog, Patrick, and the cat, Bootsie, are living most happily in Leesburg, Florida. Bruce still takes in all the dealer meetings in Florida.

Herb Parker continued as our distributor in Boston for a number of years until ill health forced him to retire. A heart attack finally claimed him.

The end of 1928 saw Elto at the top of the heap. It was, by quite a margin, the top profit maker in the industry. None of this was lost on Steve Briggs, Board Chairman of the highly successful Briggs and Stratton Corporation, also of Milwaukee.

Briggs and Stratton now owned Ole's old company, the Evinrude Motor Company, which had also had a very successful year in 1928. Another successful but smaller outboard maker was the Lockwood Company, formerly Lockwood-Ash of Jackson, Michigan.

Briggs saw great possibilities through the combination of these three. Evinrude had a good plant with plenty of room for expansion. Elto had strong engineering and production capabilities, and in Ole and Bess Evinrude and Jake Stern, excellent top management. The Lockwood Company had the superb engineering talent of a young Norwegian, Finn T. Irgens, who had gone to Lockwood from Johnson in 1925, plus a top marketing man in Pat Tanner.

Briggs approached Ole and Bess. They were at the top of the heap and had no thought of selling. But for Ole it was a chance to head up three of the top companies of 1928 and more importantly, to stop competing with his own name. Lockwood was ready to sell, and so on March 6, 1929 the merger of the three companies was announced. The new company was named Outboard Motors Corporation. Steve Briggs was Chairman of the Board, Ole Evinrude was President and Jake Stern was Executive Vice President.

With fine talent available for all the top jobs, Bess saw and took the opportunity to retire and enjoy some real leisure without having to shoulder any more business burdens. She was ready with fine advice at all times, but was content to let others take over.

For 1929, Ole had developed a larger Quad which gave the outboard world the very first motor with spark plugs fully protected by polished aluminum shields against rain, spray or breakage. This was the start of the complete shielding of the outboard powerhead, now standard throughout the industry. Ole lived to see his powerhead protection idea brought to full flower in the Hooded Power motors introduced to the industry in 1934.

Also for 1929, Ole had developed a real shocker for the small motor field - a motor that folded - the 4 hp, 38 pound Folding Lightweight. Before the northern lakes were clear of ice, Folding Lightweight production was sold out for the year.

On the first of November, 1929, the merger was completed when Elto and Lockwood personnel, supplies and equipment were moved into the Evinrude plant at 4143 North 27th Street in Milwaukee. After the merger was announced, the Evinrude facilities had been improved by the building of a new 2 story office building as well as a substantial addition to plant manufacturing space.

Rough times were immediately ahead. The stock market had crashed in October 1929. Few realized the magnitude or effects of the world-wide Depression then upon us. 1930 sales of all lines plummeted. By mid-summer of 1930, Ole and Jake had correctly assessed the storm signals and had started the belt tightening that was to see the new Outboard Motors Corporation safely through the Depression during which all competitors either dropped outboard motors or sold out or went into receivership.

Lockwood was dropped at the end of 1930. Evinrude and Elto continued to operate with two separate and competitive sales departments which supplied two separate and competitive dealer and distributor organizations. Elto stuck with battery ignition while Evinrude sold about the same models with the more popular magneto ignition. There was good reason for this popularity. The flywheel magneto which had not been too great in 1921 had been improved so that it was fully as reliable as the dry battery in producing an adequate starting spark. Elto had a good name and a loyal following of Elto users, but a new buyer faced with the choice between a motor with the good, completely satisfactory, built in magneto ignition and an identical motor of the same weight and performance that also required a dry battery, was likely to choose the magneto ignited Evinrude. In recognition of this, it was decided that in 1934 Evinrude and Elto sales organizations would be consolidated with both brand names being handled by the top dealers and distributors of both organizations.

This worked out very well, being helped along greatly by the introduction of the first outboard motors ever to have the powerhead completely protected with nicely styled good looking aluminum hoods. This new development, an extension of what Ole Evinrude had started in 1929, was called Hooded Power, and set a style and standard that the rest of

the outboard industry has come to copy. Only two models were so treated that first year, the 5.5 hp Alternate Firing Lightwin Imperial and the 4 cylinder 9.2 hp Lightfour Imperial. The Hooded Power idea had been ready since 1930, but the company lacked the capital to invest in the new tooling required for the two new motors and Imperial treatment until 1934. Hooded Power was eventually extended to all models over the years.

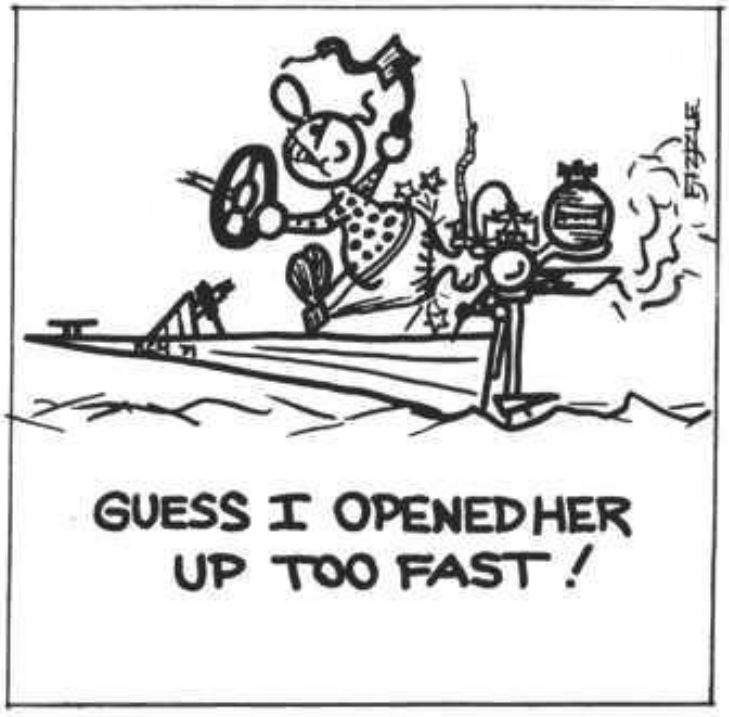
In 1935 all Elto models, except the new 1½ hp, 24½ pound Sportsman, which was the first outboard to employ the reed valve intake, had battery ignition. But battery was rapidly sinking. Elto had the same number of models as Evinrude - 9, plus 3 racing models.

In 1936, the Elto line was down to 4 models, the 1½ hp Ace, the 2.5 Handitwin, (both of these models now collector's items), the 4.3 hp Service Twin and the 22.5 hp Super CEE - a battery ignited Class C motor - all plain, without the Imperial treatment. Only the Service Twin and Super CEE were available with battery. The plain Elto line was a few dollars lower in price than the more elaborate Evinrude line.

In 1937, Elto had a six model line, without the Hooded Power treatment - the now famous Pal, Ace, Handitwin, Service Twin, Handifour, a plain version of the Lightfour Imperial and the Super CEE. Battery ignition was available but almost never called for on the Service Twin and Super CEE. Prices were lower than the comparable Evinrude.

In 1938, all Eltos were magneto ignited. The line was back to 4 models - Pal, Ace, Handitwin and Super CEE. Elto continued as a brand name for plain motors without trimmings until 1951, when the name was dropped, marking the end of 30 years' influence of the fine Elto tradition on the Outboard Motor Industry. I know Mr. and Mrs. Evinrude would want the Elto tradition of honesty, integrity and excellence to be remembered as well as the classic engines of the line and the personal achievement of those persons who made the Elto organization real.

Jim



EAST MEETS WEST..... Paul Strot, left and Sam Vance prepare to package-up a Senior Quad in Don Peterson's shop. Paul and Don live in Portland, Ore., while Sam comes from Unadilla, N.Y. Sam had just bought the Quad.

The Scrapbook of Antique Ads

FEDERAL

2-Cylinder, 3 H. P.

ROWBOAT MOTOR

can be attached with the greatest ease, either before you launch your boat, or while you are on board.

Extraordinarily powerful—3 H. P. guaranteed.

Absolutely vibrationless and almost noiseless.

Easiest of all motors to start. Controlled from any part of the boat. Reversed instantly.

Equipped with Bosch high tension magneto.

Propeller adjustible so that it is not necessary to remove engine before beaching boat or running in shoal water.

Write for your catalogue.

FEDERAL MOTOR & MFG. CO.

Office, 620-32 F St., Washington, D. C.

Factory, Newark, N. J.

A big opportunity for agents and dealers. Some territory still open. Write

-ALL 1915-

By Don Peterson

Campbell Marine Motors

ABSOLUTELY GUARANTEED

Baby Campbell Row Boat Motor

2½ to 125 Horse Power

IMMEDIATE SHIPMENTS

SPECIAL PRICES AGENTS WANTED

CAMPBELL MOTOR MFG. CO.

Main Office—102 South Third Street

MINNEAPOLIS, MINN.

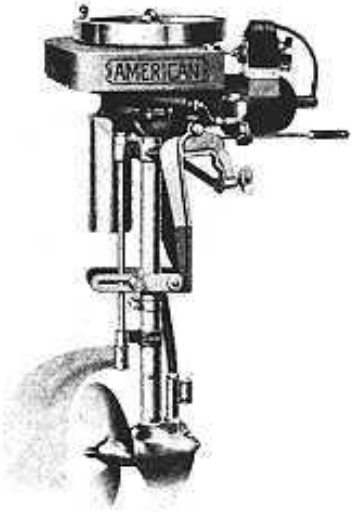
BLAKELY

Save Money

$39.50

While they last

these motors while they last for the ridiculously low price of **$39.50**



The American

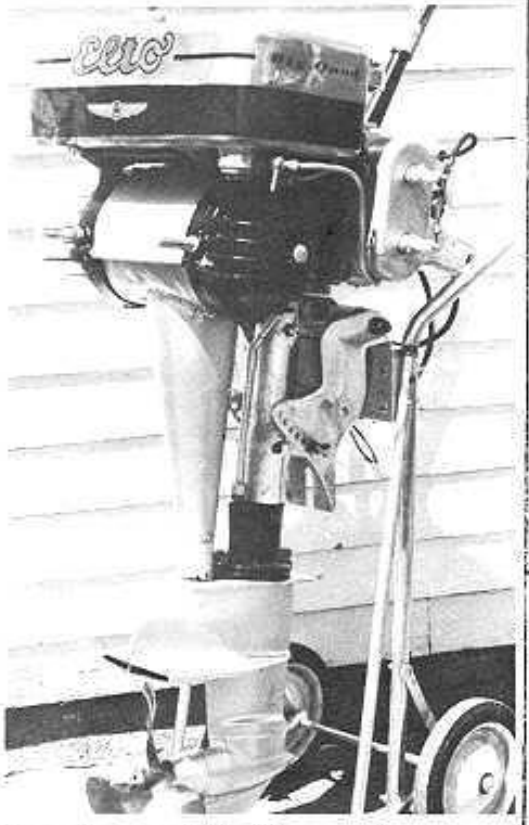
With magneto and rudder

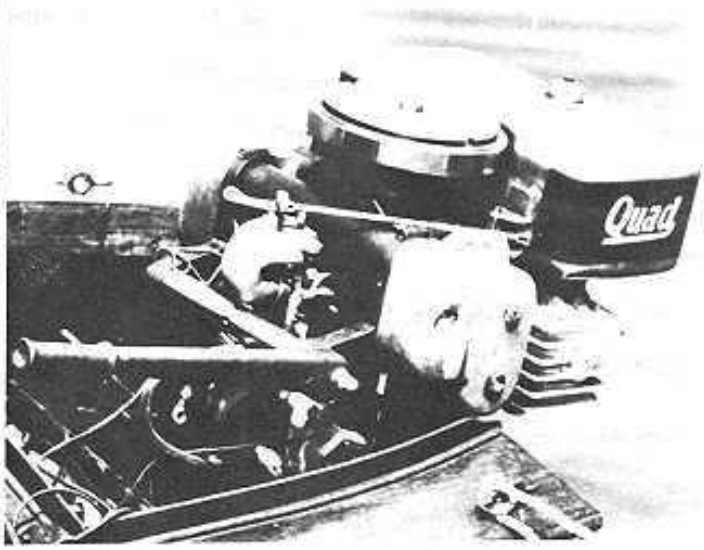
Presents

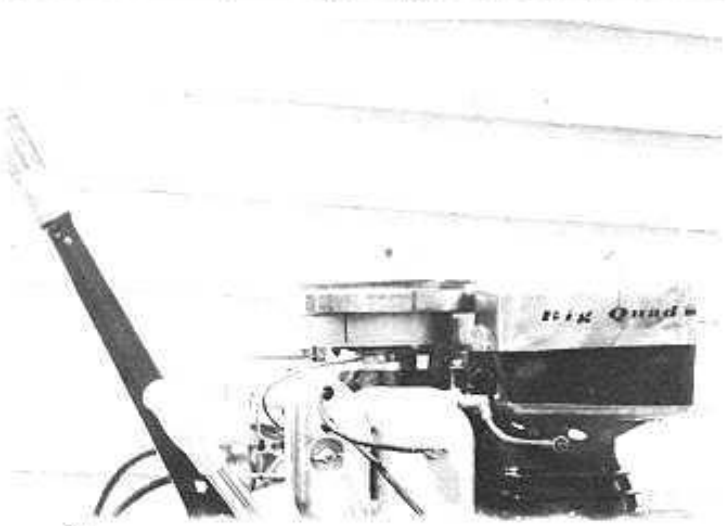
The COLLECTOR'S GALLERY

By Don Peterson

ELTO QUADS





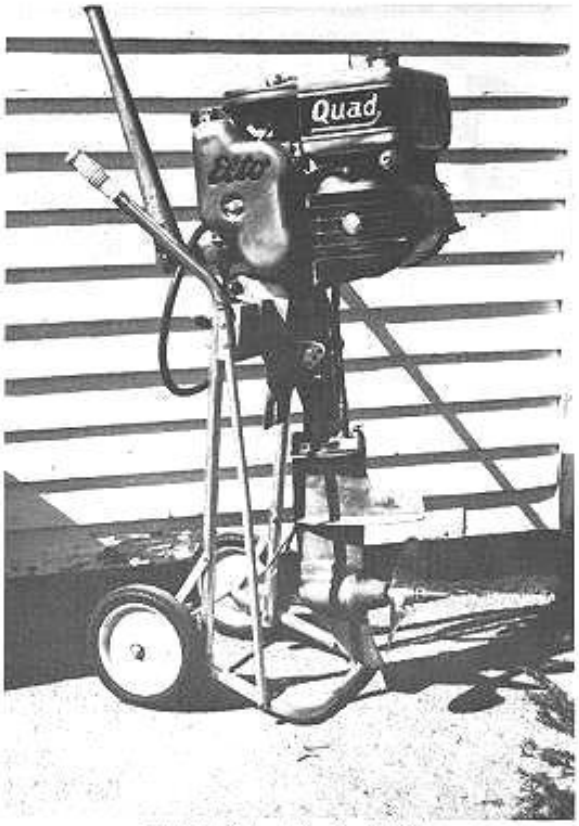


Above: 1931 Big Quad Model 800, 40 HP and 59.5 cubic inches. Rope start version sold for $375. $425 bought the electric version.

Upper right: Rope start 1930 Senior Quad, 33.4 HP, 49c.i., $325

Right: 1931 Big Quad powerhead -- rare manual start version photo.

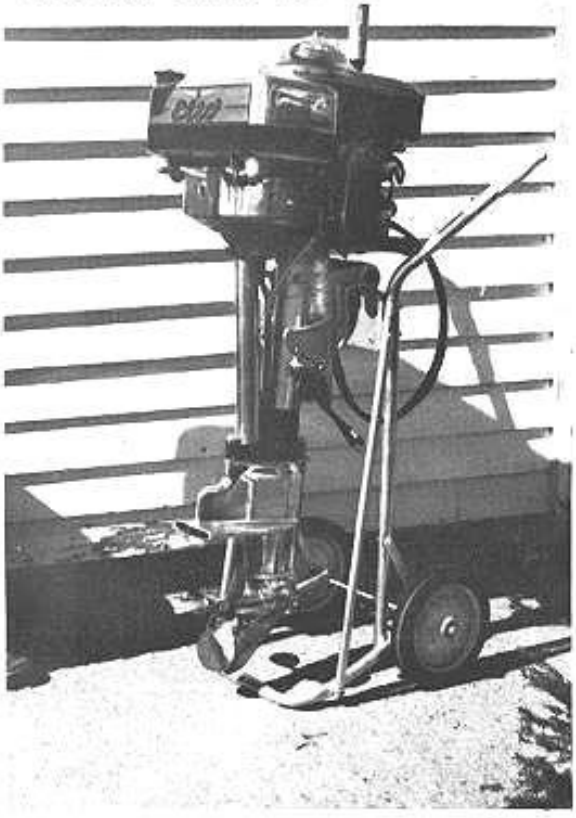
1928 Elto Quad 18HP



1929 Elto Quad 25HP

Photos by Sam Vance & Jim Webb

1933 Elto Junior Quad 18HP Electric



1931 Elto Junior Quad 18HP Manual

Quad

The Debut of the Elto Quad — By Sam Vance

The Elto Quad was developed in 1923 by Ole Evinrude, as Jim Webb reflected in his April, 1968 article in the Antique Outboarder. I am quoting many of Jim's words in this story of the "Great Quad". Ole secretly built three 4-cylinder motors using the same cylinders, pistons and rods that worked so well in the 3 horse power rudder twin. The cubic inch displacement of this 4 cylinder version was 31.808. Due to ignition problems and the lack of suitable boats, Ole never gave the early Quad a real try, but always kept it in mind. The motor had a 2¼ inch bore and 2 inch stroke using iron pistons and bronze rods. The crank case was sand cast from a temporary pattern and the crank shaft was milled out of a solid billet. It was generously oversized, as all of Ole's designs were. Jim recalls that Ole and Rob Carey had carefully welded two crank shafts together for the first experimental Quad and then hogged two or three more crank shafts out of a solid billet of steel. They cut off the top of one crank case, added a big welded boss and used a split brass center bearing just like the later Quads. Welding two-cylinder crank shafts together to make a four cylinder crank has been tried many times but because of the stresses involved in a four cylinder opposed motor it has never worked successfully. The fly wheel had two knobs for starting rather than the usual one found on the rudder twins for 1923.

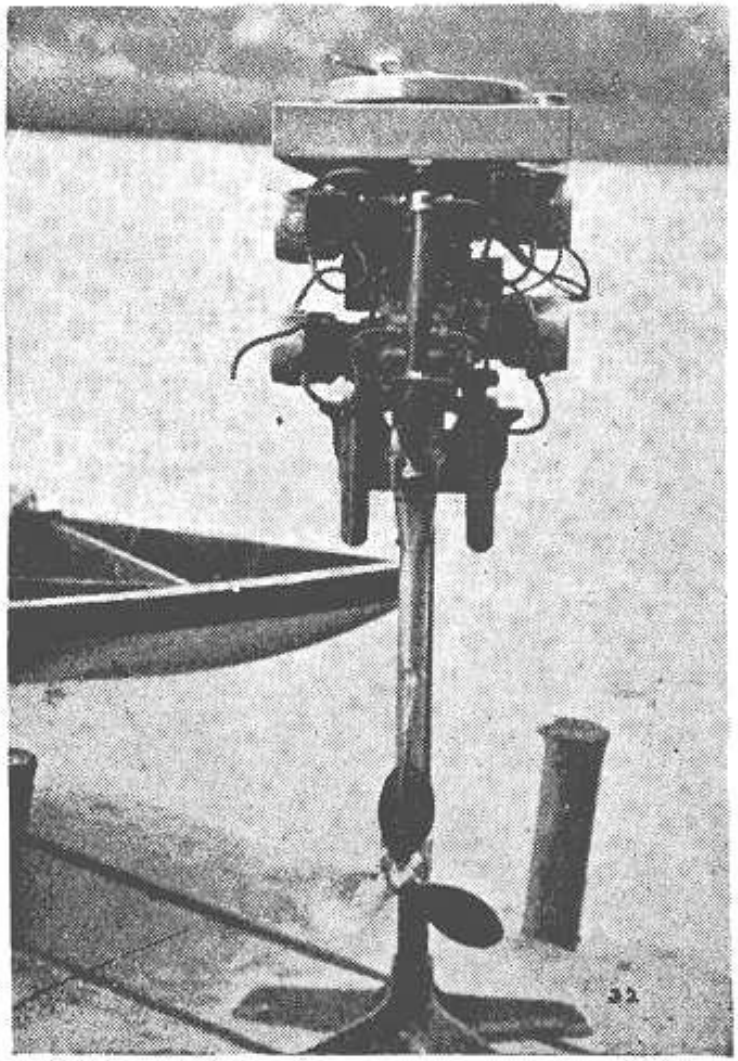
The ignition was a simple, battery, make and break, with a cam on the crank shaft controlling the point action. Atwater Kent had no part of this ignition. The make and break was not a very good ignition as it resulted in severe point burning. This was roughly the same ignition that Ole used on his first single cylinder Evinrudes. However, a different coil and condenser set was used to increase the rapidity of build-up needed for twice as many sparks per revolution.

About the time Ole was building the 1923 Quad he had also decided to use the propello pump on the Service Twin for 1924. This utilized water under propeller force for cooling. The first 1923 Quad used a plunger pump then a standard cooling mechanism for all outboards. However, Ole suggested later to S. V. B. Miller, Elto's Seattle distributor at the time, to use a tube pick up to augment the plunger pump which was prone to fall behind at high speeds due to the slowness of the pump plunger return spring action. The cam operated plunger water pumps usually failed for lack of lubrication. The 1923 gear housing was used on the first Quad and it was filled in and cut away here and there.

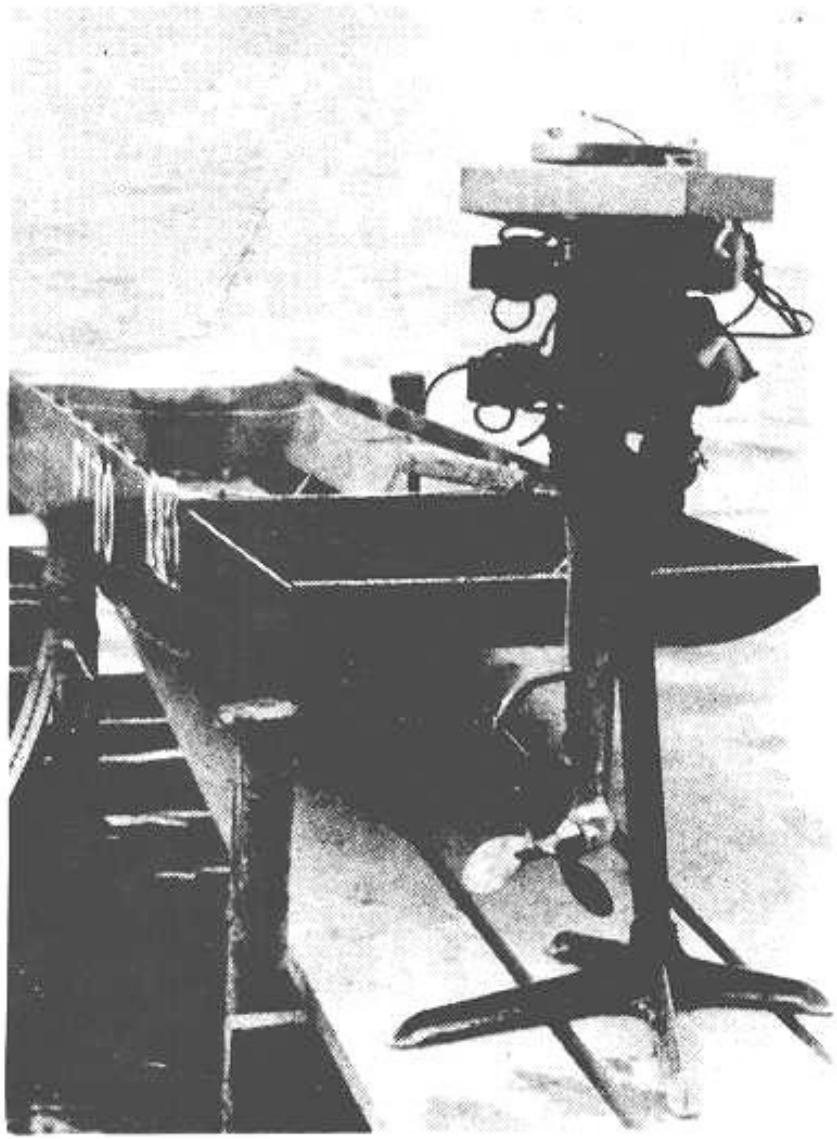
The rudder was standard at first. Then the bottom strut was cut away and the upper swivel fastener was strengthened. Steering was difficult with a rudder at the speeds of those days since speeds of 20 to 23 miles an hour were achieved. S. V. B. Miller put two rudders on the boat, separate from the motor. This helped a little. The steering was not good because of the fixed, non- pivoting housing. Pivot steering was never tried with this old Quad.

There was no muffler, just square shaped stacks. They tried cutting off the 3 horse power exhaust manifolds but never got as far as actually trying to muffle it, although Ole had a muffler of sorts designed.

The motor was strictly an experimental job which Ole whipped up. He never made any attempt to improve it. The total running time on all three motors came to about 10 hours. The project was put on the shelf in late 1923 and stayed there until Ole showed it to S. V. B. Miller in 1926. Miller was wild about the motor. When the Evinrudes agreed to loan one of the experimental 1923 Quads to Mr. Miller, it was done with the strict understanding that there would be no publicity and that Miller would only experiment with it on different types of boats. Instead Miller sought to force the Evinrudes' hand by racing the motor and getting all the "ink" he could. This is what happened in the first trial race which Miller tested the Quad. On July 25th, the annual sportsman show was held on Green Lake, Seattle, and brought out an interesting variety of outboard motors and boats. The feature of the outboard races was the performance of



The Miller Special Engine



a 12 foot, 125 pound, scow type racer, designed and built by S. V. B. Miller and powered by a 4 cylinder "Miller Special" outboard motor. Miller, piloting the boat himself, got a speed of 23.41 miles per hour racing against time and a speed of 20.23 miles per hour in competition. The free for all race brought 4 entries: Miller with his Elto, Leland Clark with a 6 horse power Johnson, Gail Roose with a 6 horse power Johnson and Jim Bleitz with a 4 horse power stock model Lockwood twin. Miller easily took the series with a total of 36 points, although Gail Roose came out ahead in two races and finished the series with 25 points. Five points were awarded to the boat finishing first, 3 for second and 1 for third. Miller also had an attractive display at his Elto booth including a cut away of a model showing the mechanism. Also shown were very special light weight design boats.

SPEEDS IN M.P.H. MADE IN OUTBOARD FREE-FOR-ALL RACES
Sportsmen's Show, Green Lake, Seattle, July 25th to Aug. 1st
Course 2,387 Feet, Surveyed

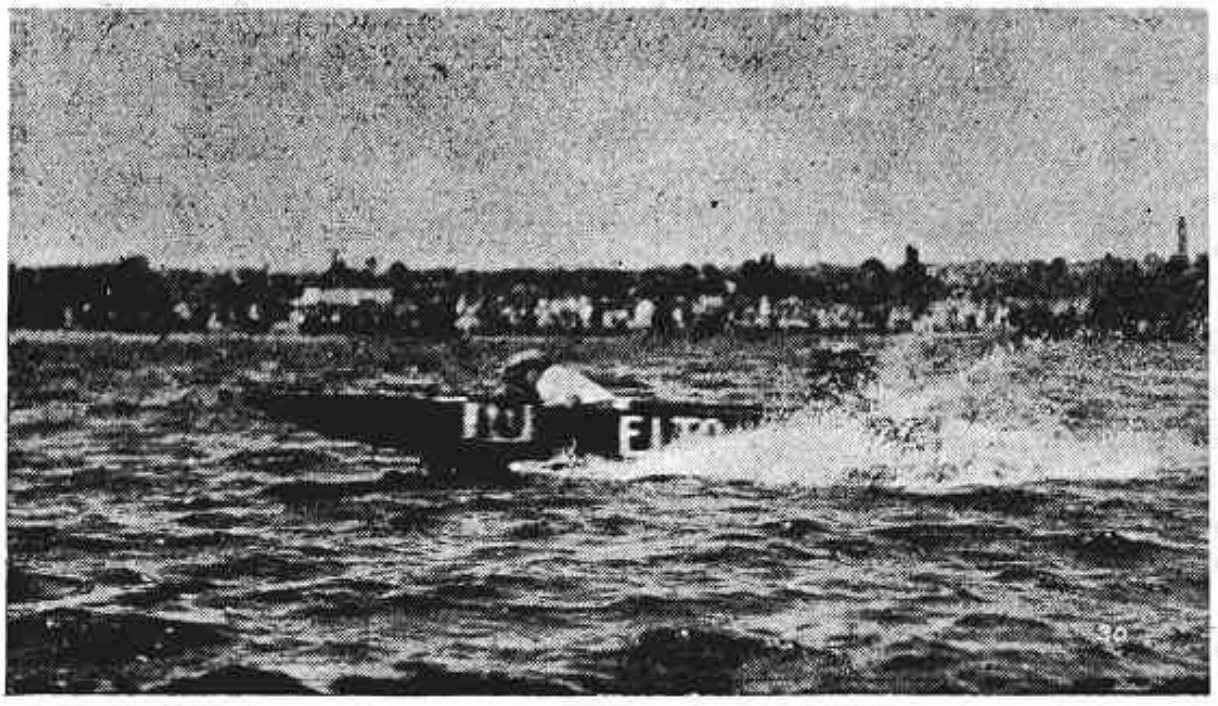
Boat	Motor	July 25	July 26	July 27	July 28	July 29	July 30	July 31	Aug. 1	*Tot. Pts.
No. 10	Miller Special	19.44	18.22	16.55	16.55	16.46	18.43	20.23	18.64	36
No. 11	Johnson, 6 h.p.	14.89	16.72	16.22	16.92	13.82	15.89	16.17	.....	25
No. 13	Johnson, 6 h.p.	14.03	12.32	.....	.....	.....	12.03	11.88	12.72	8
L. A.	Lockwood-Ash, 4 h.p.	.....	.....	.....	.....	13.37	.....	12.39	12.03	3

*Note: Five points awarded for first place, three for second and one for third in each day's race.

Thus this version of the Elto Quad was a success and no doubt convinced Ole Evinrude that he had something in this 4 cylinder design. S. V. B. Miller went back to Milwaukee and got Ralph Evinrude interested in promoting the up-dated Quad and the result was the 1928 Quad that is desired by most members of the Antique Outboard Club. Ole never did get really interested in further development until Ralph began to "bug" him early in 1927. Ralph got his mother in on the act too. The rest of us, as Jim indicates, did what we could and the result was the highly successful, 1928 Quad which Ralph, Rob Carey and Jim Webb experimented with all during the fall of 1927. These three did almost all of the experimental running which included actually dodging chunks of ice during the last of the runnings in December of 1927. Without the tremendous effort of Ralph and his crew, the four cylinder Elto Quad might not have been a reality today for those of us in the Antique Outboard Motor Club to enjoy.

Credits:

W. J. Webb, Antique Outboarder, April 1968.
Pacific Motor Boat, August 1926, Page 24-25.



'72 HARTFORD BOAT SHOW

BY BOB ZIPPS

Above: National Miss Let's Go Boating Kathy Mullen was a real eye-catcher at the Hartford Show.

Last year the Hartford Boat Show had only one Antique Outboard on display, and the effect it had on showgoers was great.

This year four Club members each with a different exhibitor, had a total of 8 completely restored motors on display.

The effect the motors had was terrific!!! People would stop and examine the motors from flywheel to skeg. Most would asks many questions about the motors. Others would comment how the motors brought back memories of days long since past. Many people said they had old motors and this is how we got our long list of leads. To those who were interested, we handed out membership applications.

I'd like to see the day come when members all over the country would have a restored motor in their local show. If you like to talk about old motors, get leads, spread the word about the Club, and recruit new members; you can do it to your heart's content and you'll have a ball. Try it; you'll like it.

Above: Official Greeter Rosemary Guiliano shown with my completely restored dual carb, model 92-BR Lockwood Racing Chief

Above: Kathy with Brad Snow's super nice 1955, 18 HP, Mark 25 Mercury. Brad also had a mint Mark 20H class B stock racing motor on display.

Right: Dynamic Sue Marrs of the "Soundings" Newspaper is shown with a completely restored 1926 model NS Evinrude Sport Twin. This motor took the First Place Trophy at the Lake Hopatcong (New Jersey) Meet for Mint Condition. This was the motor that was used to power the escape boat in the movie "A Change In The Wind".

Below: Kathy is shown with my completely restored 1922 Model A Johnson. The decals that I had made really dress up the motor. This motor had a special place in the exhibit since Johnson is celebrating their 50th anniversary this year. Showgoers were extremely curious to see what their first model looked like.

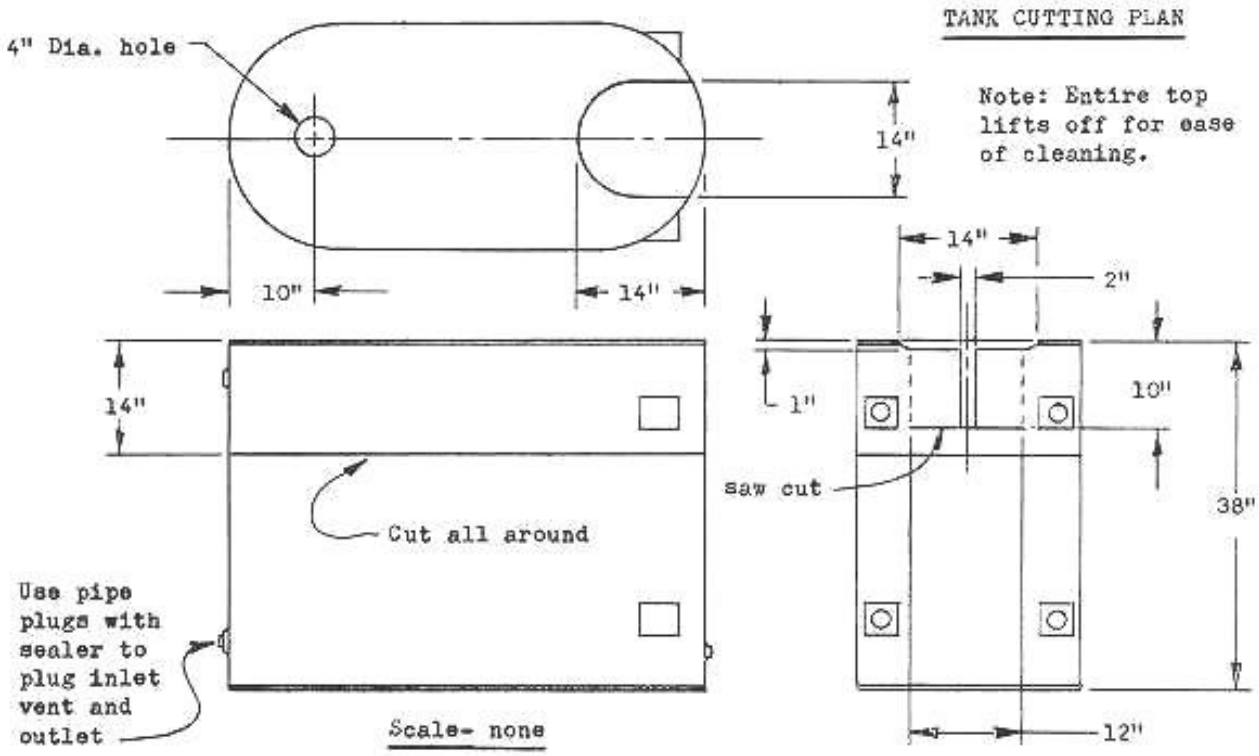
Above: Miss Nancy Larson is shown with a 1923 Model A Elto that was restored by Bill Andrulitis. And when I say restored, I mean restored! He started with sorriest looking motor you could ever imagine and did a terriffic job restoring it to ultra-nice condition.

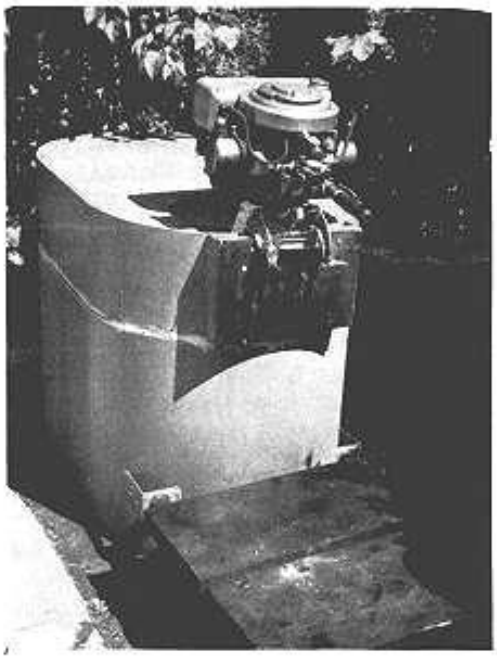
Left: Rosemary with a restored 1935 Model 4091 Evinrude Sportsman owned by Tommy Hines of New Haven, Conn. Tom finished his restoration at the Boat Show when I brought him a brand new steering arm for motor. In his teens, Tommy is living proof that even the younger generation can get the Antique Outboarding bug.

MOTOR TEST TANK

by Fred Emerson, 627 Illinois Av. Elgin, Ill

MADE FROM A NEW OR USED 250 GALLON FUEL OIL STORAGE TANK, THIS TEST TANK MAKES A USEFUL ADDITION TO YOUR SHOP. THERE IS A BAFFLE INSIDE THE MOTOR OPENING TO KEEP WATER FROM SPLASHING ALL OVER THE FLOOR OR GROUND AS WHEN USING A PLAIN, 55 GALLON DRUM.





Tools needed include a cutting torch or a saw such as the Skil Recipro-saw.

Welding can be done by yourself or a local shop.

Materials List:

One 250 gallon oil tank
2 pieces 12"x10" 3/4" marine plywood for motor boards
4 carriage bolts- 3/8" x 2" for motor boards
1 piece 1/8" strap iron, 3" wide, about 11 feet long, for guide
1 piece 1/16" steel, 14" wide x 36" long for motor well baffle
1 piece 3/4" plywood, 16" x 16", for cover
Miscellaneous plugs to seal holes in tank

Continued on page 35.

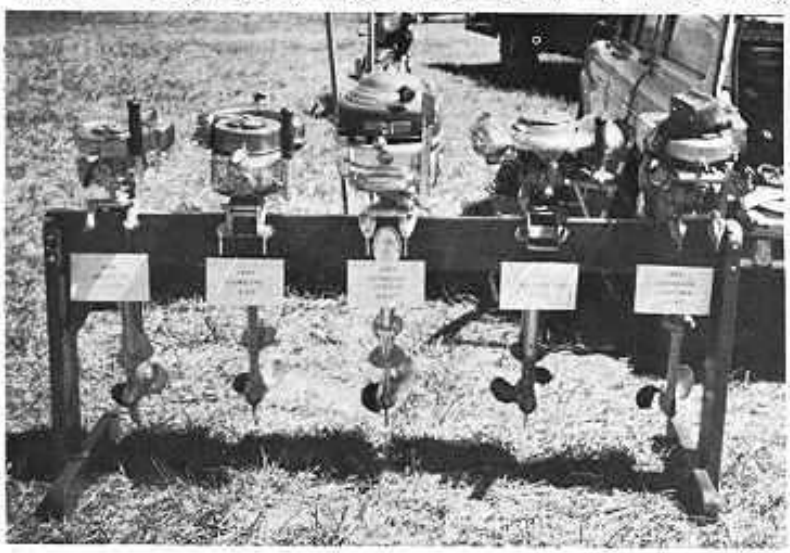
The picture shows the original tank with a different type motor board -- take your choice -- and showing how the optional foot platform looks. The tank cover (not shown) should be shaped to fit over the motor well and should be "child-proof".

LETTERS TO THE EDITOR

ENGINE PEOPLE ARE ENGINE PEOPLE ....

The seven engines in these two photos were shown at the Missouri Valley Steam Engine Association show at Booneville, Missouri, in August, 1971. Bill Motley mentioned these engines in the November Newsletter.

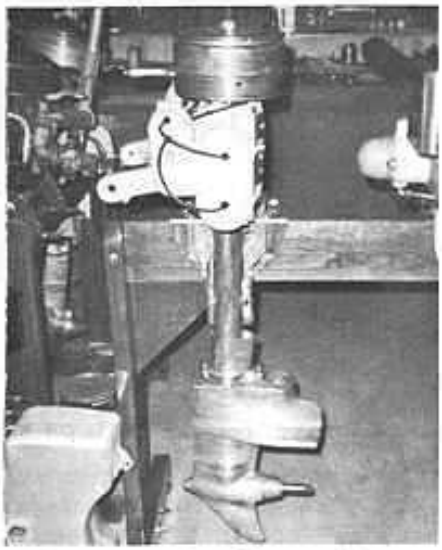
Clarence Sitton, our good member in St. Charles also showed a number of his engines at a steam engine show in his area and was deluged with questions, as I was at Booneville. "Engine people are engine people", be it steam, diesel, propane or gas!



Left to right: 1936 Model 100 Johnson, 1947 Hiawatha, 1940 Evinrude Zephyr, 1936 Waterwitch & 1933 Evinrude Lightwin. The neat signs and motor rack sharpen up the display.

My two unique models, a 1939 Clarke Troller and a newer, 1942 special production model (my wife, Lynda).

Here's the Clarke Troller again, a TP model with adjustable pitch prop. Elto is a 1926 model G.

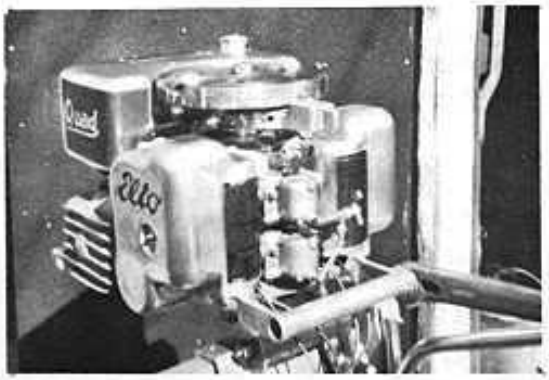


My mystery Big Four. Note the spark wire arrangement.

Don Peterson has suggested that he, Sam Vance and I get together and send you some photos of our "mystery engines". I believe Dick Hawie has identified mine as a "Big Four". Anyway I am sending you the only photo I have at present. I have the exhaust headers but I was working on them when the picture was taken. Ron Ellis, Missouri

BEAUTIFUL QUAD RESTORATION ....

Am enclosing pictures of my '29 Quad, finished, at last, but not yet run.



Would like to point out to everyone that had I not belonged to the club, this engine would still be nothing but a piece of junk.

Among all those who helped me were Mark Wright (advice), Don Miller, Jere Sairs, John Harrison, Bob Brautigam, and my local machine shop. If it weren't for all those above, I'm sure I'd still be looking. It took me 2 years as it was to get it "all together".

Gene E. Yonker, Illinois

OLD PICTURES STIR THE IMAGINATION ....

These two pictures were given to me by Mr. George Kuenzel of Friday Harbor, Washington. The driver of the racing hull is Mr. Kuenzel shown on Lake Crescent, the Olympic Peninsula, Washington. Power was a 1930 Hi Speed Elto Quad and, according to Mr. Kuenzel, was capable of about 42 mph. Picture was taken in 1931.

The other picture was taken before 1920 when Mr. Kuenzel was a boy, in Illinois. The outboard on the boat in the foreground looks like a Waterman, but I can't be sure.

Ron Duckworth, Washington

NEW MEMBER WANTS INFO ON CLUB ....

I'm a new member to the AOMCI and would like to get as much info on the Club as possible. I have just spent quite a while talking with Bob Zipps and he said to write to you.

I don't have any pictures as of yet, but I would like to send out a call to all those who need help. I am a Motorcycle Mechanic by trade and can get my hands on just about any kind of seal, bearing, bushing or fitting. I also do light machine work. I have made many of my own parts, so if somebody somewhere needs help on a sticky problem, have them get in touch with me. Larry Davenport, 4104 E. Young St. Tulsa, OK 74115.

A NEW IDEA ON MOTOR STANDS ....

I have looked and looked for motor stands that were good and yet not worth a small fortune. Used stands seem to be nearly non-existent and the new stands are about $25.00 for a good one. I designed and built myself about 5 or 6 of them, using conduit (3/4" and 1" and ½"). They came out real well and can be made to collapse by loosening 2 bolts and removing 2 others. The approximate cost was less than $6.00 and the only tools required are a ½" drill and bit, a punch, a borrowed tubing bender and a couple of wrenches. On two of the stands I left two ends of conduit longer for handles, put cheap wheels and an axle in and they are extra handy for moving motors around. (2 wheels & an axle were about $4.00)

If you think there would be enough interest, I could do an article. If so, let me lay out the drawings for the magazine.

Ron Duckworth
304 Rainbow Drive
Burlington, Washington 98233

O.K. men, let Ron, or the magazine know!

WHO CAN ANSWER THIS ONE?

While reading the January issue of the Antique Outboarder, I have come up with a question no doubt that many of our members have wondered about at some time. On page 39 is a picture of Bill Salisbury with one of his motors in his family room. After running your motor or motors in the summer time, many of us would like to show them off in the homes during the winter months too. Now, has any of our members any suggestions on how to get rid of the fumes and smell from the gas tanks, making it safe to have these motors indoors for the winter?

Perhaps an article in the Antique Outboarder requesting help in this matter could be published, and maybe some of our members have overcome this problem.

I have written a couple of articles for the Antique Outboarder in the past, and now I am on the asking end of the line. Well, that's what a club is all about. I believe this January issue of the magazine is the best yet, or maybe it's just because I used to be an Evinrude and Elto dealer.

George Harness
574 Clifton Street
Winnipeg, Manitoba
Canada

MR. BROWN, WE THANK YOU ....

The other day I wrote to Mr. Marcus Wright about acquiring some parts for my motor. In the same letter I mentioned that I was dropping my membership temporarily because I have been recalled to active duty in the Army for nine months. Mr. Wright suggested I write you as he said, "If I'm not mistaken, there may exist a moratorium on dues while a member is in the military".

If he is mistaken, this is fine also. I will start my membership again when I return from active duty.

I do want to say, that I have enjoyed the Antique Outboarder! I only have one engine that I've been trying to restore, but I certainly think you have been doing a mighty fine job with the magazine. I really enjoyed reading it over.

While I'm at it, I want to say that Mr. Marcus Wright is a very fine staff member and is very quick to render any help a member might need. I've had the opportunity to write to him on several occasions and he is superb. A staff member such as Mr. Wright is certainly an asset to the club.

Robert F. Brown, Pennsylvania

MR. GURNEY REALLY BELONGS TO THE "200" CLUB ....

In reply to your letter, I do have a collection of over 200 motors that I have picked up during the past 6 years. Most of them are in an overcrowded basement where I have a

small tank and as a winter hobby, I try to get some of them running again. I have 1 Koban, 4 Cailles, 2 Bendix, 10 Champions, 2 Lausons, 1 Lockwood, 1 Flambeau, 2 Chris Crafts, 2 Martins, 2 Thors, 3 Mercurys, and the rest a mixture of Johnson, Evinrudes and Neptunes. I doubt if any of these are very rare.

In horsepower they range from a 1.1 Evinrude Pal, to a 26 hp Johnson V-45. I believe that they all date from 1950 back to the Koban. Probably the best motor I have is a PR30 Johnson. However, this motor is too big to run in my tank and as yet I have no boat.

I started collecting by buying a Johnson A-50 from a local dealer. This motor is probably my favorite and that's where I should have stopped! I regret that I am not mechanically talented in any particular field that might help the club, but perhaps I can find some time to take some pictures later.

Charles Gurney, New York

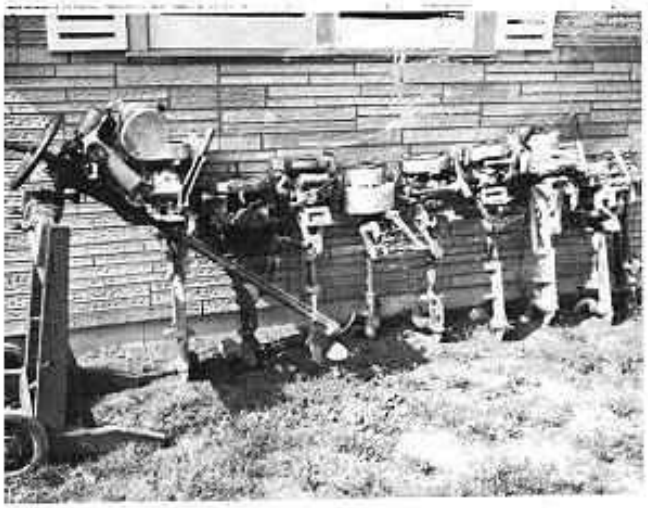
THIS ANTIQUE OUTBOARD BUSINESS IS BUSY AND EXCITING WORK ....

We had an old engine show here and I showed some of my outboards and my inboard. One of the outboards and the inboard I purchased just recently.

Had on display a 1915 Evinrude, 1917 Caille 5 speed, 1919 Caille Liberty single, 1924 Caille Liberty twin, a 1923 Johnson and a Nadler inboard - also a teenager. Sure were a lot of people asking questions.

One fellow gave me a running Waterwitch and another one gave me a tank and tank bracket for a Liberty single.

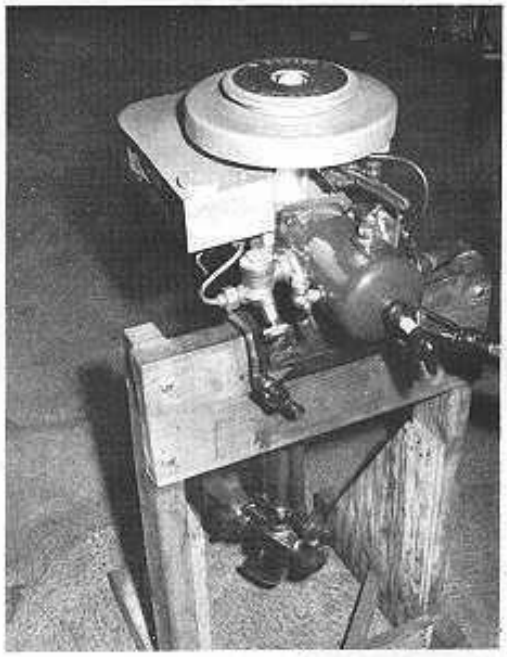
Picture #1 is a collection I recently bought. Had to buy whole collection to get the Liberty single. Bought 10 motors to get one. Have sold two already. Tank on the Caille was in a sad shape but with a couple hours cleaning the carb & mag, it took off and ran. Have a nice new copper tank on it now, with the cast iron painted grey except cylinder - this is Chinese red. Polished all the brass & aluminum. Only part missing was control cable from steering handle to mag.



(1) (2)

Picture #2 is of my Nadler inboard. Have a manual with it - believe it or not, I got the manual from an entirely different source about a year before I knew about the engine.

This is the 4 hp model. Has a home made timing device and a non-original carb on it but it starts and runs fine. Originally it had a 1 inch Schebler carb. Also had a piston water pump on the back and a gear driven timer at the top. Four inch bore and 4 inch stroke.



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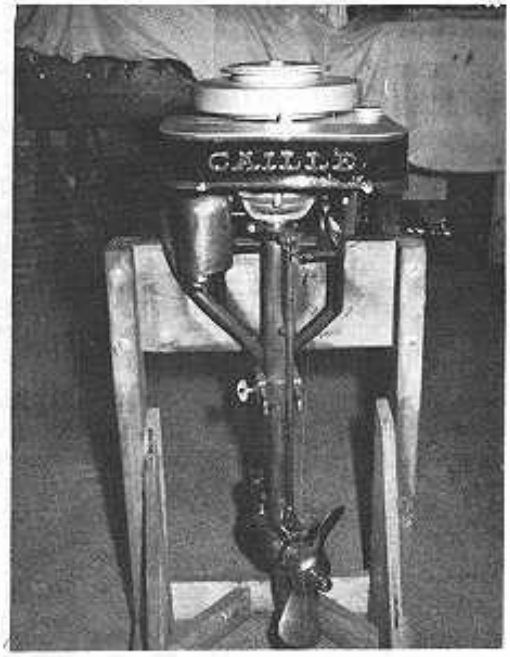

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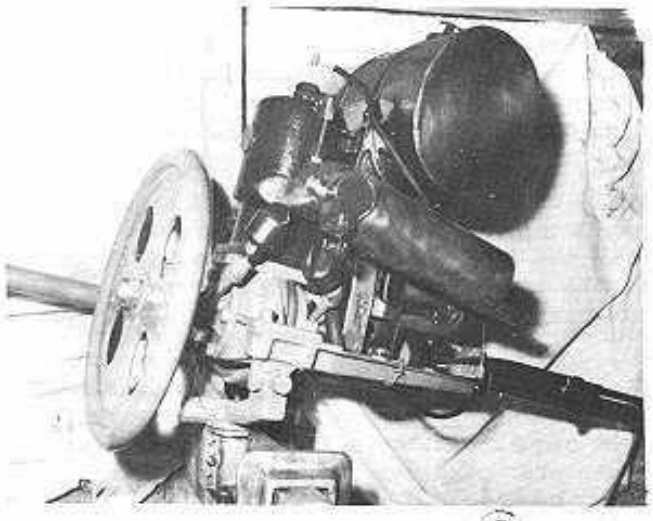
The Nadler Co. is in Plaquemine, La. They now manufacture sugar processing equipment. When in the motor business they built 4 models - 2½ and 4 hp singles, and 6 and 8 hp twins.

Now I have the motor staked down so I can test run it. I started it the first time without securing it in any way and it took both me and my wife to keep it from running around in the yard. Now that I know where to set the controls I can start it any time, without problems. The motor is now painted and mounted on wheels. My wife says every boy should have a wagon and I have mine under this old Nadler.

Pictures #3 and 4 are of my 1917 Caille, Five Speed single. This motor was one of the first models with a rewind starter but it was missing. Flywheel is stamped "Evinrude Magneto" under rope sheave but is not lettered outside of this. Have a feeling Caille bought some mags from Evinrude.



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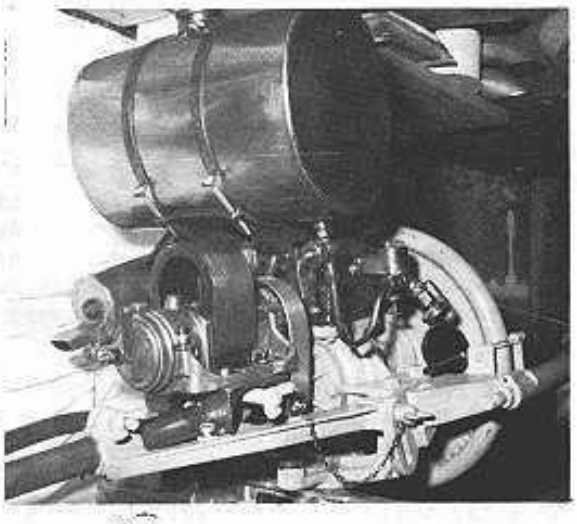

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Pictures #5 and 6 are of my Liberty single.

Only made it out on the water 3 times this past year. One time in the early spring with Ron Ellis. Later on, took my Giant Twin and my V-45 along. Had problems with the Giant but ran V-45 two days. Memorial weekend we took 4 days at the lake along with my daughter and her family. This time I had one of my PC Johnsons and my V-45. We ran them both a lot of hours every day. Had no problems with the PO but about 3 o'clock on the 4th day, the V-45 threw a rod. Put a rope on the boat with the PO on it and pulled it back to camp. Sure hated this because it was a good running motor. Started easily and ran well.

Clarence Sitton, Missouri

ON PAGE 26 OF THE OCTOBER, 1971 "OUTBOARDER" ....

A while back I think I remember that someone sent in a picture showing an Elto Service Twin with an extra long shaft mounted over the side of a Norwegian Viking ship. I looked it up and here is the word as copied from a write up which was clipped from the October 25, 1927 issue of Motor Boat:

> "An interesting example of the use of the outboard motor is the recent installation of a Super Elto on the Viking ship, LEIF ERIKSON. This replica of the old time "serpents" followed the Viking Trail from Bergen, Norway, and reached Boston Harbor after 80 days at sea. Later the vessel was taken to the Great Lakes and was bought by a Duluth firm and donated to that city. It was decided that before placing her in her permanent mooring, she should be taken on a cruise to Lake Superior and Lake Michigan ports, and through the Chicago Drainage Canal and on to Minneapolis and Saint Paul. To save towage in calm weather and on river passage, it was decided to install auxiliary power and a 4 hp Elto Service Twin with a 42 inch drive shaft was hung on a detachable bracket on the starboard side. According to the report of Captain Gerhard Folgero, the motor drives LEIF ERIKSON from 3½ to 4 mph. The boat is 42 feet long, 12 feet 9 inch beam and 4 foot draft."

The picture shown was taken in Milwaukee Yacht Club harbor in the summer of 1927. It was circulated quite widely to the press and got considerable coverage.

Jim Webb

THE OLD MOTOR SEARCH....

In April of 1952 I resigned as Night Editor of The St. Louis Post-Dispatch to become the first Public Relations Director of Johnson Motors, at Waukegan, Illinois. The outboard boating boom was in its infancy and the major development of that year was the introduction (in September) of a factory pre-engineered remote control system for the larger motors by Johnson and Evinrude.

I was informed that a major event was to be upcoming-- production of Johnson's millionth motor. 'Twas up to me to design a publicity campaign. As I became familiar with the outboard field, it dawned on me that there were a helluva lot of old Johnson motors still in use -- and this gave rise to the idea of the old motor search.

Briefly, we were looking for the oldest Johnson motors still in use -- offering prizes, as I recall, new 3's or 5's to owners of the 10 or 20 oldest reported; and a larger motor (10? 25?) in exchange for the oldest as established by serial numbers. We took gag photos of two shapely gals, one dressed in the antique swimming attire of 20 years previously and holding an A-model old motor; the other in a revealing modern suit (this was, however, before bikinis took over) either seated, or with one foot on a 25HP prone on the floor.

With a publicity release explaining the old motor search in the year of the upcoming Johnson millionth motor, we sent these to daily newspaper outdoor writers over the country, to the boating and other outdoor type magazines (including such as Popular Mechanics), and to weekly papers in strong outboard areas through news syndicate groups.

To enter their motors, owners had merely to take their outboard to a Johnson dealer, who would register the number, verify its "in use" serviceability and report same to us on pre-addressed mailing cards we had provided. Also, the dealer was provided with a

large picture-poster announcement on the search; and newspaper matrixes on same for his advertising. We really got the publicity, and we really got the entries! In fact, all of the prize winners came from among the first 50 Johnsons sold (and I don't recall the exact number of prize winners)!

One raw autumn day, I received an excited phone call from our Madison, Wisconsin dealer. He had registered what he understood was the first motor sold -- A-507. And it was! I phoned photographer Bud Toomey at Zion, picked him up, and sped to Madison; took the appropriate photographs (including the young owner and his wife).

At this point, a hitch developed. The owner's family persuaded him that he should be able to sell the motor to Johnson for a whopping big price... the exchange for the big motor wasn't sufficient. I told him I was in no position to bargain on that, and as I recall, we came up with a compromise whereby he'd receive a "10" and keep his old motor; but would lend it to us for a factory overhaul and "shiny finish" replating job, for display at boat shows (New York, January, would be the first).

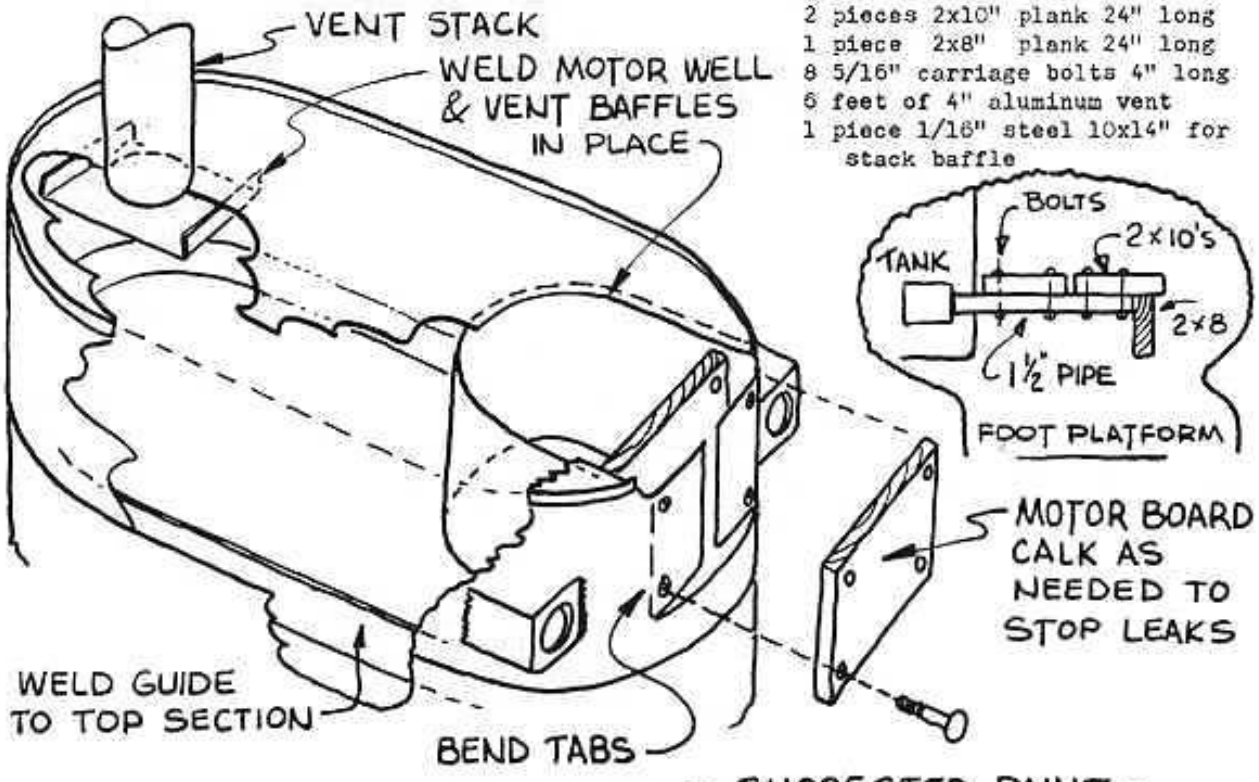
The motor, as I recall, originally had been sold by Johnson's Chicago dealer who was still in business at the time of its discovery -- a large firm whose name escapes me. I believe I heard that this dealer subsequently bought old A-507 for display, but I cannot verify this.

The millionth motor came off the line in November of '52 and the event sure received publicity in a campaign which certainly emphasized the dependability and durability of Johnson outboards.

Don G. Cullimore Ed. note: Don is a past executive director of The Outdoor Writers Association of America and is currently engaged in free-lance outdoor and historical writing.

Continued from page 28.

MATERIALS LIST, CONT.
2 pieces 1-1/2" pipe 18" long
2 pieces 2x10" plank 24" long
1 piece 2x8" plank 24" long
8 5/16" carriage bolts 4" long
6 feet of 4" aluminum vent
1 piece 1/16" steel 10x14" for stack baffle



CONSTRUCTION DETAILS
MOTOR TEST TANK

— SUGGESTED PAINT —
INSIDE: GALVANIZING TYPE
OUTSIDE: 2 COATS GREEN

SMALL INBOARDS REVISITED

By P. S. Brooke, Jr.

In the April issue of Motor Boat for 1909, the W. H. Mullins Company of Salem, Ohio, announced the "Mullins 1909 Special." The ad further stated that this was the "Greatest launch offer ever made"--price $110. What did the customer get for his $110? The "special" consisted of a 16-foot steel launch with a beam of 4 feet 2 inches pushed to the startling speed of nine miles an hour by an "improved" 3 h.p. two-cycle reversible engine. The prospective buyer was further advised that the Mullins new line of 1909 models was designed by Whittelsey and Whitaker of New York, "the most successful naval architects in America."

If a 16-foot steel launch did not appeal to you, perhaps something in the way of small engines suitable for a canoe or rowboat would be of interest. The Northwestern Machine Co. of East Detroit, Michigan was looking for "live agents" for "The Little Tiger." This was a 2-cylinder 2-cycle engine of 2½ h.p. weighing 65 lbs. Its makers claimed that it would swing a 10-inch 17-pitch propeller from 200 to 900 revolutions per minute. Nearby the Detroit River Canoe Works of Detroit, Michigan, was busy building power canoes equipped with 2-cylinder engines giving a speed of ten to twelve miles per hour.

An interesting motor advertised at this time which appeared to be archaic in appearance but which was touted to be the design of the future was the Moore made by the Palmer-Moore Company of Syracuse, New York. This 2-cycle single cylinder engine featured an open base as found in steam engines. The advantages claimed were "getatability, no leakage, and four cycle reliability with two cycle simplicity." Apparently the makers mistook the past for the future as the open crankcase was soon a curiosity on small gas engines for marine use.

A novel approach to the business of furnishing marine engines to the boat minded was that of the firm of Maxwell and Fitch of Rome, New York. Their 1½-2 h.p. engine called "Paradox" was offered for the sum of $41.75 complete with certain boat fittings. The bare engine was offered at $21.75. But if the customer wished to build his own engine, the company would furnish castings and blue prints for only $11.00!

The Pennsylvania Iron Works of Eddystone, Pennsylvania, ran a half page ad in the April 1909 issue of Motor Boat stating that over 4,000 of their engines were in use. This concern was turning out both two and four cycle engines in horsepower from three to one hundred and in one to six cylinder configuration.

The Fox Reversible Gasoline Engine Company of Newport, Kentucky, offered an unusual proposition. This firm would ship one of their engines, freight prepaid, for a 30-day free trial. The Fox was made in 18 sizes from 2½ to 50 h.p. This must have been the forerunner of the current modus operandi--play now and pay later.

Walter E. Dunn of Ogdensburg, New York claimed in his advertising that he had seven years experience in building four cycle engines, which fact should be of interest to the purchaser. He claimed that the crankshafts on his engines were sawed from bar steel and could be relied upon to furnish "lots of power on little dead weight." A one-cylinder engine having a bore of 3-3/4 inches and stroke of 4 inches put out 1-3/4 h.p. and weighed 80 lbs. The price was $42.50 f.o.b. Ogdensburg.

An ad that was about sixty years ahead in point of time was that of The Continental Natural Gas Alcohol Co. of Wheeling, West Virginia, proclaiming the merits of denatured alcohol as a motorboat fuel. The ad stated that the "navies of the world have adopted Tax Free, Denatured Alcohol for Smokeless Motive Power." Enormous saving is perfected by utilizing vegetable waste and natural gas, sawdust, wood syrup and lime." This concern was hep to smog control and recycling back in 1909! The purpose was to attract a "progressive fellow who would go into the business of distillation and produce this fuel at a cost of only eight cents per gallon.

In the January issue of Country Life in America for the year 1910, the Boating Editor made some observations in a short piece entitled "The Passing

of the Auto-Boat." In view of what has transpired in the boating scene in the past sixty years, it would appear that the trend contemplated in 1910 did not quite continue. The writer stated in part, "One of the most promising signs of the times in the smaller classes of launches is the demand on the part of users for those essentials which make a safe, able and seaworthy boat, however small, and the selection for power installation of certain old types of established reputation. Barely five years ago the popular demand was for the so-called 'auto-boat,' a racing hull of limited freeboard and stability, lightly built of two thicknesses of veneer, equipped with a costly and delicate automobile engine unfit for marine use, the whole outfit being unseaworthy, unreliable, lacking in durability and extravagant in cost. Such boats were advertised, built and sold in quantities to beginners, who were taught to believe that speed was the end and aim of pleasure afloat." Quite an indictment! Apparently we still have a lot of "beginners" with us as the horsepower of marine engines, particularly outboards, and the speed produced keeps soaring.

Other issues of Country Life in America for the year 1910 carried articles on how to carry out certain boating projects. One gave the details on the construction of an engine bed of teak to accomodate a one-cylinder inboard engine stating that the bed should be about 1/3 the length of the hull and that the ends should be tapered for best results. Another article set out the procedures necessary to install a small inboard engine in a rowboat and other hulls not originally intended to be power driven.

Fairbanks-Morse and Syracuse both were advertisers in this publication. Syracuse stated that they were "the Great Middle Price-High Grade Engine" in horsepowers from 4 to 120 suitable for light, heavy duty and speed boats.

Hard-cover books began to appear on the market written by various and diverse persons, some of whom claimed to have engineering degrees, full of advice to the landsman bent on taking to the water in an "auto-boat" or gasoline launch. Some contained a long list of admonitions directed toward the boat engine operator, such as, "Don't try to run engine without gasoline in tank," "Don't use lighted match to examine contents of gasoline tank," "Don't cast off until engine is started," "Don't blame the manufacturer or the motor for every little thing that happens," "Don't run at too high speed just to show off, as you might burn out bearings," "Don't wear yourself out cranking an engine; if it does not start after three or four turns after priming, something is wrong," and on, ad infinitum.

A description of the steel boats built by the Michigan Steel Boat Company of Detroit, Michigan, equipped with small inboard engines is interesting. These boats were built clinker fashion of heavily galvanized steel, cut in pattern strips, lock seamed and welded together by pneumatic hammers. The seams running from stem to stern would thus have four thicknesses of steel. The strength of the hull was obtained by the lapping and seaming of the metal strips. A 16-foot steel launch built in this fashion would be equipped with a 2 h.p. 2-cycle Detroit engine with a speed-controlling lever. This engine would be capable of running the launch up to a maximum of seven miles per hour. An 18-foot automobile boat made by the same concern could be equipped with engines ranging in size from 2 to 6 h.p.

An eye-catching ad in a boating publication for 1909 headed "For Worn-Out Bores" proved to promise a solution to the hapless boater with a scored or gouged cylinder or cylinders. The Wille Piston Works of Brooklyn, New York, claimed to have developed a piston that would fit any worn-out cylinder, restore compression and save the cost and trouble of a rebore job. And all for the small price of $10.00 and upwards!

AOMCI SPECIAL Feature

ONE MAN'S QUAD- THE ELTO MODEL 307

AOMCI Special Features Editor
James L. Smith

In this issue, Sam Vance and others are presenting particulars about the early Quads; and as in other earlier issues, many interesting facts have been written about these fascinating motors. At the risk of repetition, some comments will be made about this unique motor, the model 307, its acquisition and features.

By 1952 my interest in vintage outboards had been awakened. I knew of Johnson, Evinrude and Mercury, but beyond this my knowledge of other makes was indeed scanty. In the case of Johnson my personal experience in actual running was confined to the Light Twin model OA-55, the Sea Horse 12 model K-50 and the four cylinder V-45. Before this period, odd or unusual motors were seen or heard of with only passing interest - or even suspicion; the thought at the back of my mind being that I was glad not to be the one stuck with them.

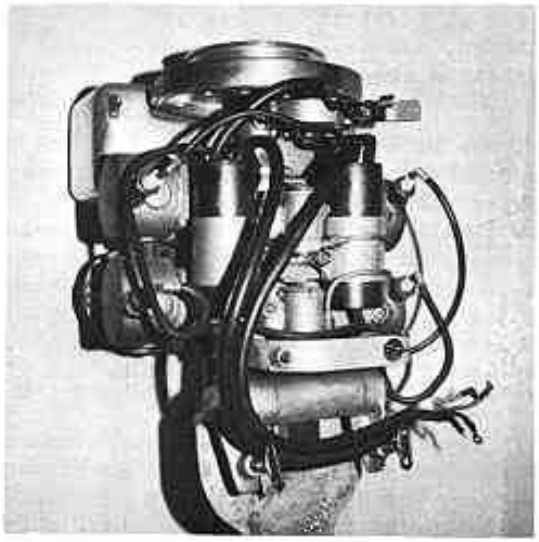
During the three year period subsequent other types began to be of more than casual interest to me. Possibly the one motor most responsible for this was a 1921 Elto rudder twin acquired from the elderly owner of a boat livery, who was retiring. By the time I had acquired two more rudder twins of somewhat later vintage, knowledgeable individuals had hinted at the existence of larger, four cylinder Eltos known as Quads and having two carburettors.

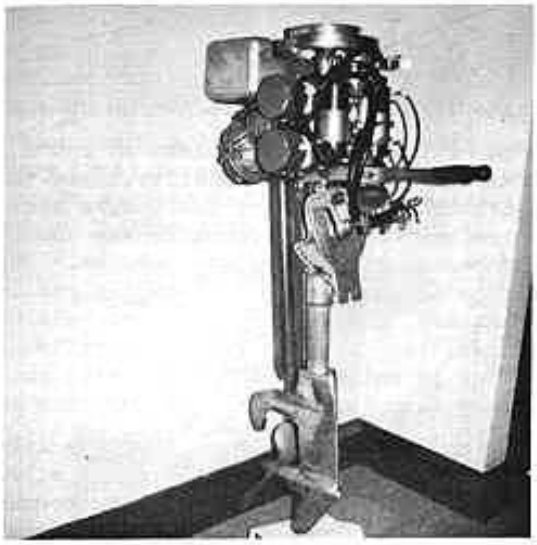
From that time I was determined to have or at least see an Elto Quad. The search consisted mainly of inquiries by word of mouth to both individuals and shops. This went on intermittently for a period of two years to no avail. Most did not even know of such a motor and showed even less interest. Meagre clues eventually ended either in a lost trail or some entirely different machine. Then one day, in June, 1956, a contact whose name has been lost in the mists of time told me that he had a friend at work who had a friend that had an old motor that "had to be started with a battery" and was pretty sure it was called Elto. He said he would try to get the man's name and phone number.

Sure enough in a couple of days he had the info, a Ted Bailley along with the number. That very evening a phone call found Mr. Bailley home. Yes, his motor was a battery ignition Elto... a moment's hesitation, then the all important question. Has it one or two carburettors? Now it was his turn for hesitation. The answer was subdued and rather apologetic and was only one word... two. Eureka! I tried to hide my excitement as I told him I would be interested in a purchase and would pay $50.00 Soon expectation turned to dismay when he announced that he was going to "fix it up" to use himself. However he would consider the offer and let me know. An agonizing week followed with no word from Mr. Bailley. Finally, unable to stand the suspense longer, I called him once more.

He said I could go up that evening and give the money to his wife since he would not be there. I had bought an Elto Quad sight unseen.

Needless to say, promptly after work, I was at the address in suburban Toronto and Mrs. Bailley showed me to the garage where I saw the dirtiest, greasiest and longest motor I'd ever set eyes on. It was standing upright in one corner with its divided banks of cylinders and massive vertically mounted coils. The wiring, while complete, was in a shambles and the knuckle busting starting knobs had been replaced with a drum for rope starting. With a bit of Kleenex I wiped clean the inscription on the cast aluminum gas tank.."The Super Elto" No. 70,988. My spec sheet revealed it to be the model 307, year 1928, H.P. 16 at 3600 R.P.M. Mrs. Bailley received her money, I received a pair of dirty hands manhandling the iron (92 pounds) into the car and happily started my trip back home.





After noting the unusual height of this motor, 4' 1", the most striking feature is the electrical system. The front of the powerhead appears to be draped with high tension leads, coils and spark plugs. These together with the Atwater-Kent timer and the six volt battery provide excellent spark for starting. The same hot spark is produced at all engine speeds. There is no throttle but the timing mechanism acts as a governor to maintain the speed the operator sets.

The powerhead appears to be made up of two Service Speedsters one above the other complete with their Elto made carburettors. Cylinders are all separate but bolted to a one piece aluminum alloy case. Each cylinder has a bore of 2 1/2" and pistons have a stroke of 2". The gearcase is finely streamlined and supports the water scoop for water cooling of cylinders and muffler and plates. The muffler itself and exhaust pipe is of sheet metal. It would be hard to imagine very silent operation as the muffler has many vent holes. Perhaps this contributes to the unmistakeable sound of the Elto Quad when in operation. The two blade bronze Columbia propeller has an 11" diameter and 14" piten. The engine had a selling price of $275. in the pre-depression heyday.

To the pioneering genius, Ole Evinrude, this Henry Ford of the outboarding industry, is owed an immeasurable debt of gratitude. The many new ideas which he brought on returning to motor production in 1921 were in a sense revolutionary and resulted in giant steps forward. The development of the Quad marked a high point in his career and later made possible the thrilling racing "460". Probably the finest way in which we can honour the memory of this great man is in the preservation and restoration of these early examples of his engineering and inventive skill.

J.L. Smith

RACING

Probably the most exciting facet of owning and operating Antique Outboards is running the antique racers. All of the racers have unique sounds and very exciting performance. With its hornet-like sound, the Class "M" Midget racer has gone nearly 50 mph and the thundering 460 is capable of close to 90 mph. Running a hydroplane at 65 mph with the engine screaming like a super chain saw, the hydro airborne, and no one else on the lake will have you saying, "wow", to yourself for at least three days after a good run. A strong, Alky 460 will out accelerate any outboard, and on short courses where acceleration matters most, they are still very competitive even though they haven't been made for 30 years.

One of the biggest problems in running a racer once it is correctly set up is the fuel that is used and the modifications that are necessary to make the engine run correctly with that fuel. Many fuels have been tried in the past, some extremely toxic or explosive. Hydrogen peroxide was used, but it is highly explosive and extremely corrosive to cast iron cylinder blocks. Ethyl ether was used as a starting additive, but its low latent heat offsets the cooling effect of alcohol, when they are used in combination, and acetone works as well. Nitromethane is still often used in racing engines, but its use should be limited to extremely competent racers, and it has no place in antique outboards. With too much compression it causes detonation, and if it comes into contact with copper, the salts produced are highly explosive.

Gas and oil was the fuel that the antique racers were made to use. If such a thing as a factory stock racer exists, it will probably run perfectly well on gas and oil as long as the rpm is held to the recommended maximum. The big problem with gas/oil fuel is that when they are mixed together the octane rating is lowered to the point the engine will ping. This ping will erode the deflector of the piston in a very short time and if it continues, may burn all the way through the crown of the piston. Detonation can be detected by aluminum deposits on the spark plug, since the ping can't be heard because of the loud exhaust. Another problem with gas and oil is that the engine runs so fast that instead of dropping out of suspension as it does at lower rpm's, the oil is carried with the fuel mixture and out the exhaust, without lubricating correctly. The pistons should have a coat of oil on the skirt as looked at through the exhaust ports, after a flat out run. If they don't have much oil, or look dry, more oil is needed. The factory recommended 1 quart of oil per gallon of gas and often this may not be enough. Another minimum must for running on gas is at least .006 inch piston to cylinder clearance - and more is better. Any less will stick the pistons as soon as 5000 rpm is reached. The combustion chambers on a gas engine should have no less than 40 cc's of volume. This is checked with a 50 cc burette available at any biological supply wholesaler. Rotate engine to top dead center with the cylinder being checked pointing up. Fill the chamber to the top of the plug hole and read the remaining cc's on the burette.

Be sure all cylinders are equal, and if they are not equal, machine .006 in off for each cc needed to equalize. Spark advance should be at a maximum of 3/8 inch before top dead center. This is set by connecting a timing light to the magneto leads with all plugs removed. Bring the engine to tdc and rotate backwards until ruler through the plug hole goes down 3/8 inch. Set up a pointer (see photo 1) to any mark on the flywheel without moving it. As you rotate the flywheel the light will flash and by advancing or retarding the magneto the pointer and mark can be aligned. A stop should be made that will prevent the magneto plate from being advanced beyond that point (see photo 2). This method gives an exact maximum timing and prevents accidental overadvance. The final point to check is the carbureter. Through the years most carbs have been converted to alcohol use and are not satisfactory to use on a gas engine. The problem is that the passages must be enlarged for alcohol and this makes proper adjust-

Racing Fuel

by Eric Gunderson

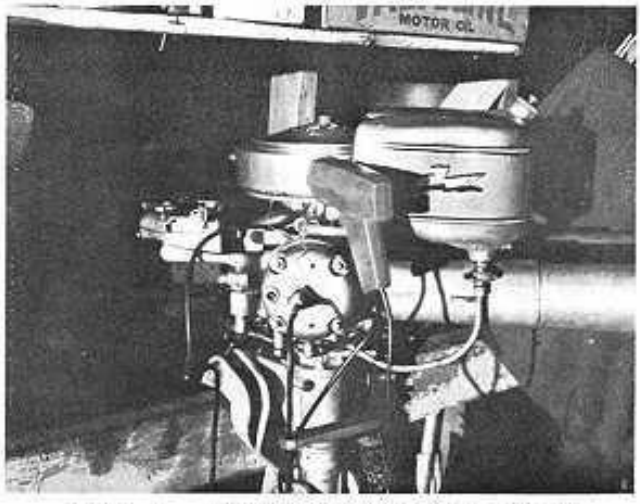


Photo 1. PO Hotrod with timing light and pointer set to determine maximum spark advance.

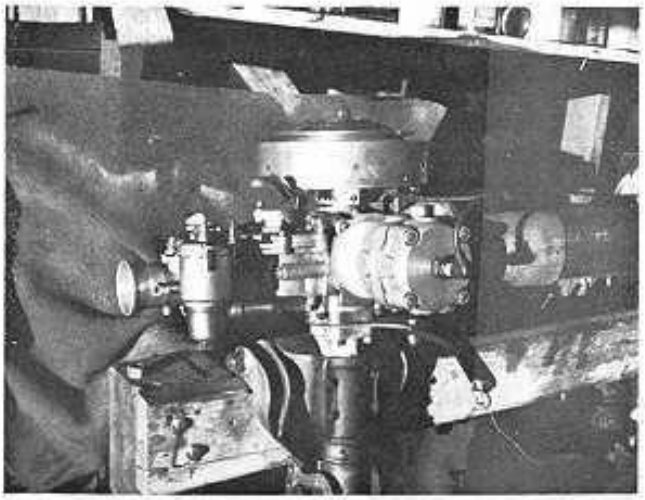


Photo 2. Above- Super Alky PR-65. Note the spark advance stop. Photo 4 Below- PR-65 showing extra fuel tube to Venturi chamber.

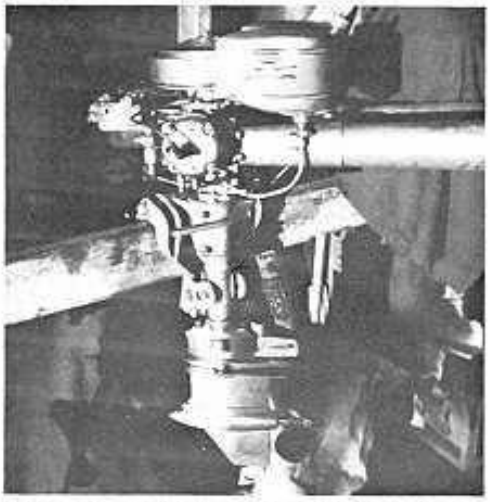
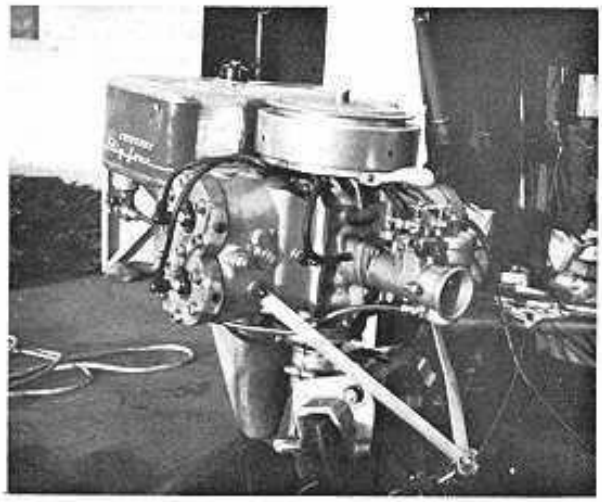
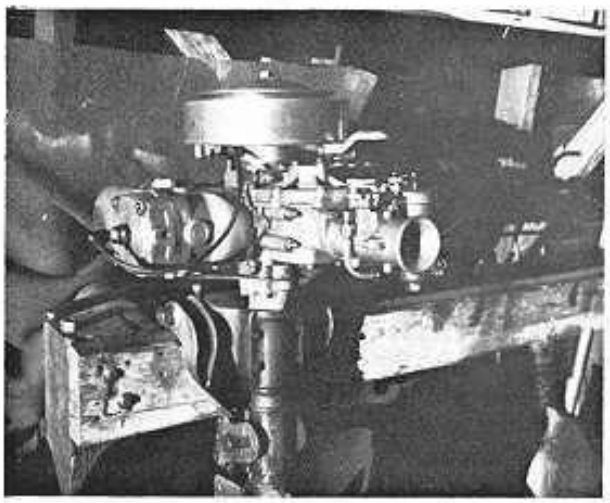


Photo 3. Above- PO-10 Hotrod, set up to run on gas. Photo 5. Below- Big Four set up to run on gas.





ment of the high speed metering jet impossible. One notch is too rich and the next is too lean, when an alky carb is used with gas. If the engine is run on the lean side it will burn pistons; and on the rich side, the plugs foul easily. Photo 3 is of my PO-10 Hotrod, a gas engine set up for high speed. Photo 4 shows a Big Four set up for gas.

The solution to the problem of fuel for racers is Methanol, more commonly known as alky. The reason that methanol makes such a good racing fuel is that it contains a latent heat of evaporation of about three times that of gasoline. When the liquid is changed to a gas, or evaporated, a lowering in temperature is involved. This is called the latent heat of evaporation and results in the temperature of the incoming fuel charge to be heavier and denser producing a much cooler burning fuel with an increased volumetric efficiency. This increased volumetric efficiency usually produces about 5% more horsepower with no other changes. When adaptions are made to take full advantage of alcohol a 5 mph increase in speed is usually the result. This is a lot at 65 mph.

The biggest advantage to the use of alcohol is the absence of detonation problems and excessive heat that gasoline produces. This allows the use of much higher compression ratios (30 cc for 30 and 60 cu. in. engines, 18 cc for 20 cu. in. engines, and 12 cc for 14 cu. in. engines). Twelve-to-one ratios are common and the new looper PR setup that Mr. Hubbell is experimenting with, uses a 16:1 ratio that puts out 67 hp from 30 cubic inches. That's volumetric efficiency. The usual horsepower of an alky PR in good shape is from 40 to 50 hp.

There are a few disadvantages to alky too. The fuel system must be enlarged to accommodate the higher viscosity of alcohol. The fuel line should be at least 3/8 inch, the main metering jet in the carb must be enlarged and a larger needle installed. In addition, an extra line should be run from the metered chamber at the bottom of the carb to the venturi tube chamber at the top (see photo 5). The castor oil gets gummy if left on the engine and can be removed with lacquer thinner or acetone, but engines that have been allowed to stand for a long time with castor in them should be completely disassembled to be sure that none of the rollers are stuck. One stuck roller can ruin a fine engine very quickly.

Fuel consumption is about twice that of gasoline, but usually 2 gallons is plenty to run a race for 5 minutes. The expense per gallon is less than gas with one quart of oil per gallon but the engine uses twice as much. Chemical supply wholesalers can provide bulk quantities of alcohol or it can be purchased at motorcycle shops in small quantities.

The standard formula for alcohol fuel is:

4 gallons Methanol
½ gallon benzol
¼ gallon castor oil (Bakers)

There are a few additional points on running a racing engine. Keep the rpm below 6000. According to Mr. Hubbell, these engines will run forever at 6000 rpm and are on borrowed time above that. Magneto flywheels may explode from centrifugal force if revved above 6500 rpm. Higher rpm requires a steel flywheel and battery ignition, and there is a substantial decrease in engine life as rpm is increased. Pistons for alky engines are usually fit at .004 in and are OK to .008 inch. Connecting rod retainers should be checked often for cracks. Broken retainers have demolished many a fine engine. Plug insulators should be dry and a light brown color to indicate proper heat range and fuel mixture. Fouled plugs can be cleaned with carbon tetrachloride or benzol.

Running a racer is often a great deal of work, but when that engine finally roars to life and there is the aroma of burned alky wafting across the lake, then all of the checking, fitting, spending, and just plain work becomes worth it. Even the racers of the new Konigs and Anzanis when asked about the old PR's will say, "That was quite an engine", and usually if they have raced one they still have it around somewhere. "There ain't nothin' like a PR."

Eric

YOUR FELLOW AOMCI MEMBER.....

Garage? Cars Evicted So He Can Handle His Hobby

Eric Gunderson has evicted his automobiles from his garage. It's been taken over by his hobby — collecting antique outboard motors. The Northern California chapter of the Antique Outboard Motor Club, to which he belongs, will hold its spring meet Sunday at Anderson Reservoir.

The above picture and the article on the following page appeared in a San Jose, Calif. morning paper. Eric has shared it with us and so our thanks go to him, and to the news-paper. Eric writes: " One of my customers is in charge of the local morning paper, and in talking to him I mentioned the Club, and that we were going to have a meet in the near future. He had a reporter out to see me the next day, and the article you see was the result. The public response was quite good and I had a pile of calls from folks requesting information. As far as I know, the Club has five new members now, which ain't bad.

The meet turned out well, despite a strong wind all day and a huge crowd at the only useable lake for over a million people."

continued on next page--

MOTORS SEEN...

Early Wisconsin - Willard Krsiean North Highway 15, Hutchinson, Minnesota

1930 Speeditwin - Dennis Golden, 819 North Minnesota Street, New Ulm, Minnesota

1939 Model 7031 Speedifour - Excellent tank and prop. Good shape. Asking $75. Don Lemmerman 36 So. 6th Street, Sauk Rapids, Minnesota 56379

Small Waterwitch single $10 - Walter Anderson 3500 West 90th St. Bloomington, Minnesota, 55431

Early Neptune, 3 or 4HP - Mr Erling Olberg 6532 Standish Av. Minneapolis, Mn 55423

Neptune OB-12A - Robert Thompson 5649 Oliver Av So. Minneapolis, Minn.

1936 Evinrude fishing motor, about 3HP - $20. Runs, needs prop. Frank Froelke's Marine, Rush City, Minnesota

Overboard For Outboards

By FRANK SWEENEY
Staff Writer

Eric Gunderson doesn't exactly fit in with today's outboard motor boat crowd.

That's because today's average runabout is a sleek, fiberglass creation pushed along by a neat, chrome-trimmed motor with a fancy paint job.

Gunderson more or less fits in with yesterday's crowd. His boats are wood; his motors are neither trim, nor painted.

Their lines are cluttered with angular gas tanks, exposed flywheels, cylinder heads and spark plugs. Bulky above-water mufflers hang astern.

To Gunderson, they're a thing of beauty — all 23 of his antique outboard motors.

They're not the run of the mill antiques destined to sit in the corner of a garage, or on a dusty museum shelf.

Nineteen of Gunderson's polished aluminum motors are in running condition. And he uses them.

"They sound like they mean business, and when you open that throttle, they mean business," he said.

Gunderson, an entomologist who operates his own pest control business in San Jose, caught the outboard motor bug from one of his customers three years ago.

His first motor was a four-horsepower 1937 Neptune. He bought it complete. Some of the others didn't come along that easy.

"Usually they come from people who are trying to get rid of them," Gunderson said. He finds motors and parts at boat shops, flea markets and through the Antique Outboard Motor Club's newsletter.

One of his prize possessions — a 25-horsepower 1928 Johnson — was assembled from parts gathered from a variety of sources.

The project began when he found a gas tank and carburetor at a Lodi boat shop. Gunderson finally tracked down enough parts to put it in running order.

Not exactly an easy task, either. Only nine of these motors are still known to exist, said Gunderson.

"It was more or less a mistake by Johnson," Gunderson explained. Advanced designs hit the market shortly after this model, rendering it obsolete.

Gunderson's oldest motor is a 1927 Johnson with all of 2½ horsepower; his newest a 50-horsepower 1943 Evinrude.

The start of World War II is the usual cutoff date for antiques, he explained. Prewar outboards were either two-cylinder or four-cylinder opposed designs, while those produced after the war were inline-cyclinder engines.

"There's nothing really exotic about them ... simplicity is the whole thing," said Gunderson.

"They have so few moving parts," he explained. Most were "handcrafted" in the factory.

"To someone who is familiar with their operation and knows how to run them, they're more reliable than today's motors," Gunderson observed.

He pointed out a 1929 Johnson on a stand in his garage. It has never been overhauled in 43 years, yet still runs prefectly.

"I'm sure you could run one of these things all your life and never wear it out," he said.

For someone used to today's key-started outboards, the oldtimers could be a little frustrating. It takes a hard yank on a starter cord to get things turning.

"I remember cranking myself across the lake the first time," Gunderson recalled.

They're not lacking in power, however. One of Gunderson's engines, a special racing job, has propelled his boat across the water at 57 miles an hour.

Outboard propulsion devices have been around a long time. The first one was patented in 1866. In 1902, a French inventor adapted the internal combustion engine to an outboard device.

Collecting is a relatively new thing, however. The Antique Outboard Motor Club was formed in 1965, and now has more than 200 members in the United States, Canada, Mexico, England and New Zealand.

Gunderson, of 57-B Mt. Hamilton Road, is a leader in the Northern California chapter. Part of the club's purpose, he explained, it is to keep the prices down for collectors.

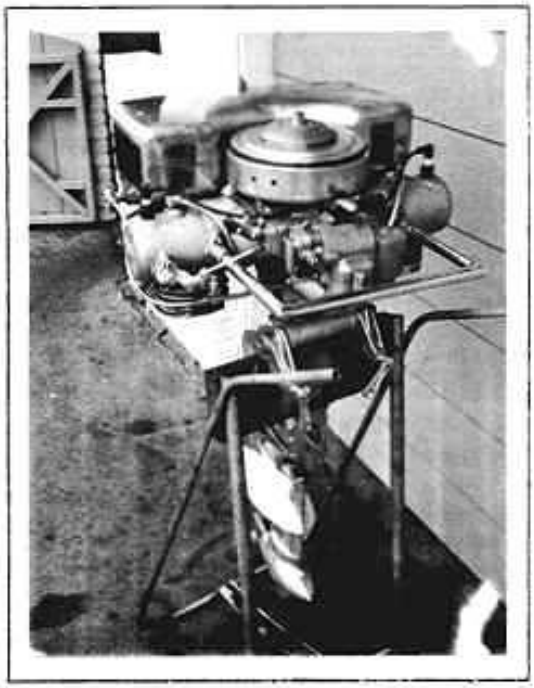
The average old outboard will sell for about $35, he said. If its flywheel turns freely and the cylinder heads aren't rusted or cracked, it's probably in good condition, Gunderson explained.

However, he advised beginning collectors to seek advice from someone who knows the subject. "There's an awful lot of junk floating around that isn't worth working on," he said.

A good time and place to find out more about the hobby will be Sunday at Anderson Reservoir.

The club is holding its spring meet at the Holiday Lake Estates Marina from 10 a.m. to 3 p.m. that day. Take Dunne Road east from Morgan Hill to get there.

It's open to the public, but no coffee-grinder jokes, please.



At the right is one of Eric's nicely restored engines, a Johnson T Giant Twin.

It's all ready for the water! Don Peterson, take special note.

AOMCI NEW MEMBERS

Michael K. Cope
1778 Findley Drive
Milpitas, California 95035

Matthew W. Kowalski Jr.
1935 Poquonolk Ave.
Windsor, Connecticut 06095

Raymond Hatton
P.O. Box 78
Lake Villa, Illinois 60046

Daniel R. Houfek
5 Sunset Street
Keansburg, New Jersey 07734

William J. Kline
15 Wyndale Avenue
Maple Shade, N.J. 08052

Philip Titone
Rt 13 Box 72
Tulsa, Oklahoma 74107

Donald L. Brown Jr.
16518 1st Ave. SE
Bothell, Washington 98011

Dudley Davidson
4117 NE 107th
Seattle, Washington 98125

Bradford Snow
Middle St.
Middletown, Conn 06457

John Vechione
127 Madison Street
Waterbury, Conn 06706

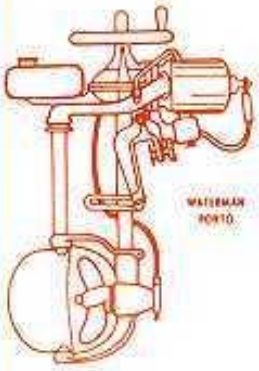
Ray E. Ekblad
290 No. Commonwealth Av
Elgin, Illinois 60120

Arthur Spindler
468 Touraine
Grosse Point, Mich. 48236

Larry N. Davenport
4104 E. Young St.
Tulsa, Oklahoma 74115

A cordial welcome is extended to all newcomers. Other members are asked to make contact either by writing or visiting. Maybe one of these new men will have a rare engine to show you, or is anxious to join a Chapter!

The Antique Outboard Motor Club Inc.

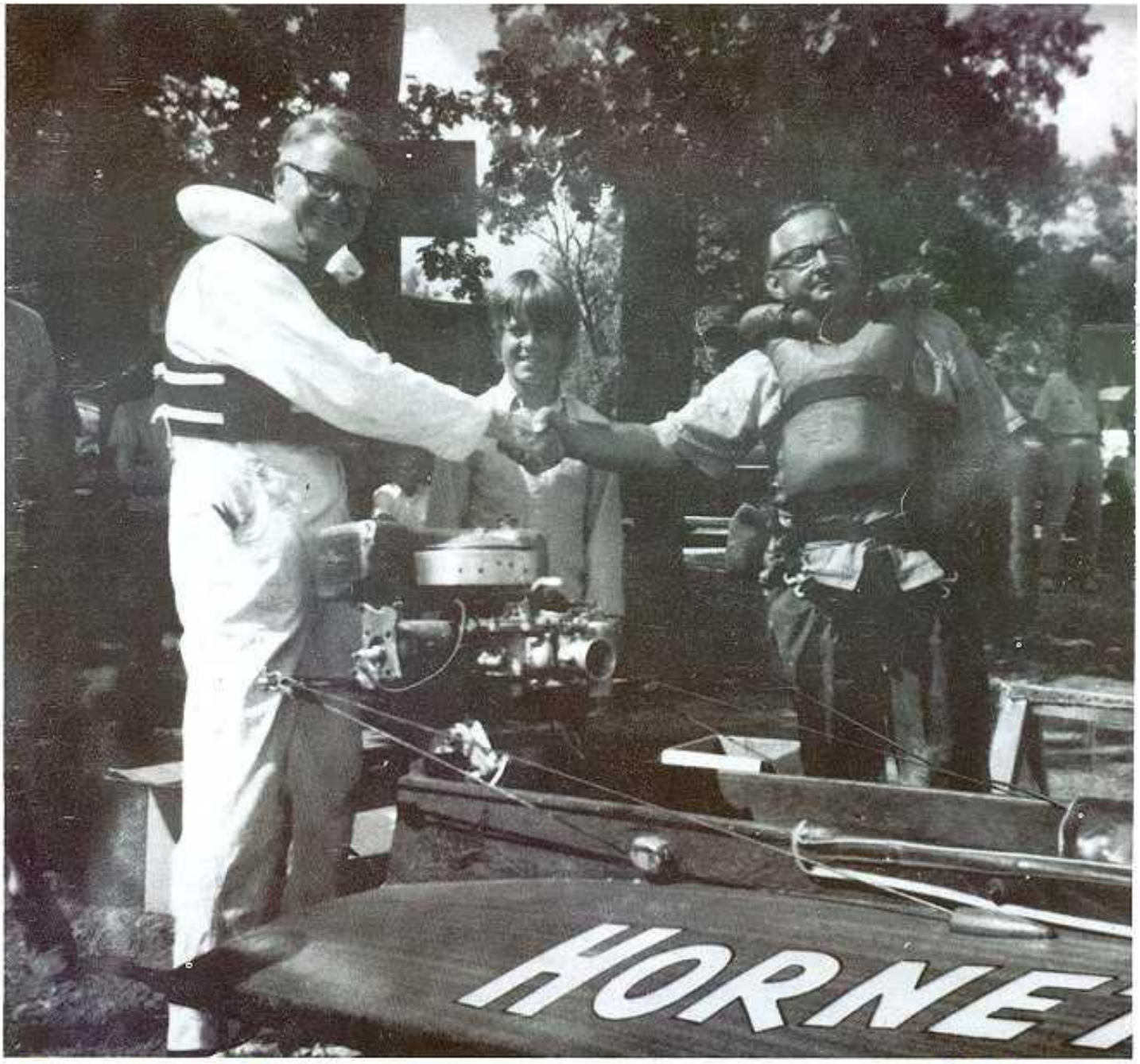


Publishing Office: 2316 West 110th St., Bloomington, Minnesota 55431

AOMCI 7TH YEAR

The ANTIQUE OUTBOARDER

The Pioneering Authority



October 1972

The Antique Outboard Motor Club Inc. is incorporated in the State of Texas as an Educational Institution. The Club is devoted to people all over the world who are interested in the search for, restoration and preservation of old time outboard motors. Regular membership dues are $9.00 per year. Other membership information available on request. Address membership requests to A.O.M.C., Inc., 20505 NW 3rd Av., Miami, Florida 33169.

CLUB OFFICERS & PUBLICATIONS STAFF

President	**Robert W. Brautigam** **2316 W. 110th Street** **Bloomington, Mn 55431**
1st Vice President	**Bill Salisbury** **71 Cardinal Drive** **Toms River, NJ 08753**
2nd Vice President	**Dave Reinhartsen** **7417 Whispering Pines** **Dallas, Texas 75240**
V.P. Technical Services	**Sam Vance** **RFD 2** **Unadilla, NY 13849**
V.P. Publications	
Treasurer	**John C. Harrison** **1000 NW 54th Street** **Miami, Florida 33127**
Membership Chairman	**John D. Gould** **4707 Massachussetts Av** **Indianapolis, Ind 46218**
Newsletter Editor	William G. Motley II 20804 Hart Street Canoga Park, Ca. 91306
Historian	W. Jim Webb 2560 N. 97th Street Wauwatosa, Wis. 53213
Curator	Richard A. Hawie 31 Hillside Drive Easton, Conn. 06612
Special Features	James L. Smith 330 O'Connor Drive Toronto 6, Ontario Can.
Motor Registration	Donald Peterson 2884 S.E. Francis Portland, Oregon 97202

THE ANTIQUE OUTBOARDER
CONTENTS

October, 1972

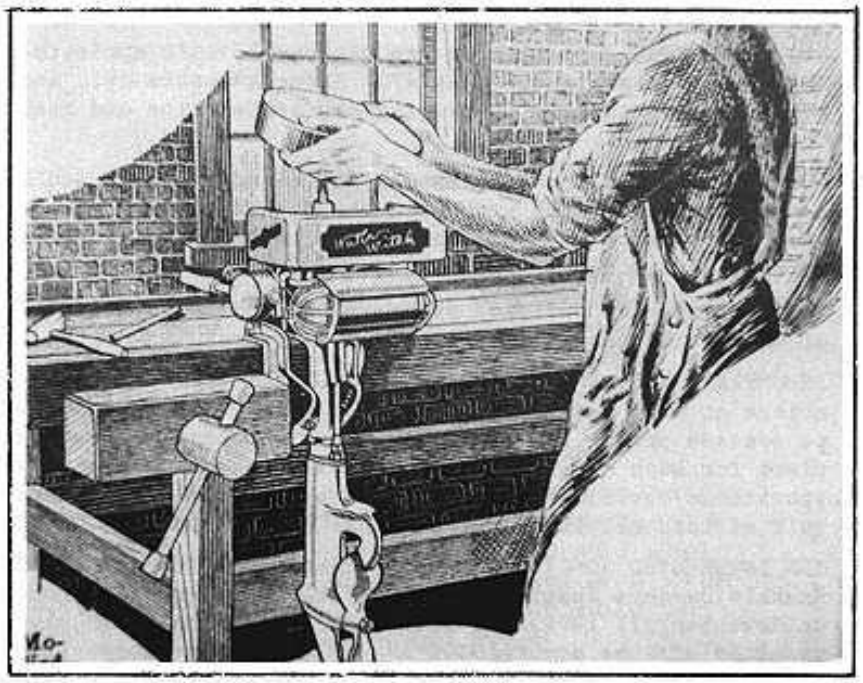
Front Cover:

Bill Tenney and Bob Thornton, competitors once, renew friendship at the 1st National Meet.

Back Cover:

Bill Salisbury's prize winning V-65 Johnson

Photo at right is from Eric Gunderson. It appeared in a Popular Mechanics Boat Book in 1931. The sign on the tank says Water Witch



Watch for the Dec issue of Popular Mechanics. It will contain a write-up on the Antioch Meet. Should be on sale in November

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The Antique Outboard Motor Club Inc

CLUB BRIEFS

IMPORTANT NOTICE: EFFECTIVE JULY 15, 1972, A NEW SLATE OF CLUB OFFICERS HAS ASSUMED THEIR duties as follows:

President	Robert Brautigam, 2316 W. 110th Street, Bloominton, Minnesota, 55431. This is the new, formal Club Address.
1st Vice President	Bill Salisbury, 71 Cardinal Drive, Toms River, New Jersey, 08753. Bill heads up the Chapter presidents and is responsible for chapter developments.
2nd Vice President	Dave Reinhartsen, 7417 Whispering Pines, Dallas Texas, 75240. Dave will handle major meet details and Club public Relations.
V.P. Technical Services	Sam Vance, RFD 2, Unadilla, New York, 13849. Sam is heading up the Special Interest Groups and has charge of the Parts Source Manual.
V.P. Publications	R. Brautigam, acting. Edits magazine.
Secretary	None named at this time.
Treasurer	John Harrison, 1000 N.W. 54th Street, Miami, Florida, 33127. John has charge of the financial affairs of the Club.

Also effective July 15, 1972, The AOMCI Corporate By-laws were updated to reflect a trimmer, more flexible and more workable organization. The new by-laws describe the responsibities of the above named official jobs/officers. These officers only, now form the AOMCI Executive Council, superseding any previously named Executive Council.

Other new Club jobs include the October 1, 1972 appointment of John Gould as Membership Chairman. John's address is 4707 Massachussetts Av., Indianapolis, Indiana, 46218. John has the reponsibility of keeping our memberships and records up to date. All dues should be paid to John.

As of this issue, no further classified ads are planned for inclusion in the magazine. Instead, all ads will appear in the Newsletter - Club and Chapter schedule data too! Send your motor/parts for sale/wanted ads to the Newsletter Editor, Bill Motley, 20804 Hart Street, Canoga Park, California, 91306. There will be no more Classified Editor job.

These offices as outlined above are to remain in effect for a two year period, at the end of which, new candidates will be duly named.

IMPORTANT INSURANCE REMINDER: ALL MEMBERS WHO OPERATE ANTIQUE BOATING EQUIPMENT INCLUDING motors at Club sponsored or private events are reminded of their personal responsibility to possess proper personal liability insurance. Your homeowner's policy is a logical place for such coverage and you should make sure that any necessary riders or special provisions covering your operation of a motor(s) are a part of your policy. Assure yourself of this all important personal protection right now!

ALL INTERESTED AOMCI MEMBERS AND THEIR FAMILIES ARE INVITED TO AN INDOOR MEETING OF THE Knuckle Busters Chapter to be held at the home of Tom Luce, 760 Boulevard, Westfield, NJ on November 11, 1972. The meet will be informal with plenty of time for visiting. Starting time will be about 10:00 AM. Plan on some horse trading and the viewing of pictures of AOMC activities. Everyone is encouraged to bring slides or movies of antique outboarding. Please let Tom know how many are coming, as lunch will be provided.

JOHN T. MORGAN 6602 USTICK ROAD, BOISE, IDAHO 83704, WOULD LIKE TO HOLD A MEET IN THE future. Let John know if you can join him and work out the details with him about when and where. Maybe you can schedule your vacation in Idaho!

ANTIQUES IN ACTION....AND HOW! THE ANTIQUE OUTBOARD MOTOR CLUB WAS REPRESENTED AT THE annual Antique Transportation Meet held August 12-13, 1972, by members Gale Urbainzick,

The old outboards drew a steady & interested croud. Bill and Luci Rose can be seen in the center.

Some of the antiques in action. A 1910 Buick and a pair of high Wheel bikes wait for a Steamer to pass.

Bill Rose and Bob Brautigam. Gale, who is also a Model A Ford fan, was on the show committee and worked hard to make outboards a part of the show. In full dress for the two day event were antique aircraft, autos, motorcycles, trains, buggies, bicycles and you name it - all operating, to the delight of those attending.

The meet was held at La Rue, Wisconsin, a quiet and picturesque heavily wooded area with many hills. Several square miles criss-crossed by country roads were blocked off and devoted to the show. An airstrip was provided for the dozen or so vintage planes from which they performed their aerobatics and air games. A Ford Tri-motor was the largest to appear and could be seen circling the grounds with a load of sight-seers almost any time.

Dozens of antique cars - all kinds - could be seen travelling the country roads with costumed riders on high wheeled bicycles and horse drawn buggies in between. No awards were given for restoration, just operation.

Bill Rose won a trophy for having the oldest outboard motor at the show - a 1914 Ferro. The outboards were run a little bit on the rack only, as the planned lake running was cancelled because of weedy water. But maybe next year!

HERE"S A FUN EVENT TO CONSIDER FOR YOUR NEXT OUTDOOR MEET. IT'S THE OLE EVINRUDE RELAY. The story says Ole got his idea for an outboard motor while rowing across the lake to get Bess an ice cream cone. Now, that part sounds reasonable; but just how much favor Ole gained with Bess in terms of getting back quicker after he invented the motor, is a good question. The relay is to see what really happened. Here's how it goes:

Set up a mock "store" to be run by one of the gals at the meet, where ice cream cones are available (Cheerios or the like will do as well) . See to it that the store is at least a half-mile from the point at which each member will leave to fetch the ice cream. Motors used should be 2 hp or less. Each fellow should travel to the store, pick up a cone and return to the starting place with the treat for his wife or girl friend or..

The winner can be the fellow who does the best (or worst) job of bringing back the ice cream. The fellows must carry the cone in their hand - no artificial means or tricks to protect the ice cream are permissible. On a warm day, it can be seen that Ole's new invention probably didn't do much to save the ice cream - or impress his lady friend. The event's lots of fun!

LETTERS TO THE EDITOR

ANTIQUE MOTORS MAKE THE POLITICAL SCENE.... (Picture on next page)

Just for fun, here's a campaign photo from the Catalina Islander when I was running for Councilman of Avalon, in April. That's my best PO-39 (with one of Bill Salisbury's decals) which attracted some real interest. I was elected to the City Council, and at my first meeting, the Council elected me Mayor. So here's another reason for joining AOMCI. This mayoring business takes up a lot of my time; the summer season is the busiest time of the year. But, I still have some time to run my other PO-39 on a British Day 13 - a great combination. In the fall, I'm going to replace the PO with a Big Four.

My specialty is Johnsons, I now have 23. I'm still looking for a late V, a TR and a Quad. I've been running Johnsons all my life - mostly on the big water. I've just finished a boat house for my collection and will send in a picture of it later.

Ray Rydell, Avalon, California

ONE OF THE EARLIEST EVINRUDES....(Picture on next page)

I'm enclosing a photo of my serial #3233 Evinrude. Mr. W. J. Webb said it was produced either in December, 1911, or January, 1912. It is in mint condition; no dents or scratches.

I bought the engine after I had placed an ad in our local Advertiser, for old outboards. How the gentleman from Chicago obtained my phone number, I'll never know, as we are located 50 miles North of there. He called and said he had an old Evinrude motor which he brought out for me to see, and then sold it to me.

The little engine is the "MATE" EVINRUDE ELTO - Model 4263, .5 hp, Serial #00228. The boy holding it is my youngest son, Mark, one of four boys. We also have a 9 year old girl, Laura.

The engine to the right of my son holding the Mate is a Caille, 5 speed twin - Model 12. It runs well. I have the original shipping crate it came in, as shipped to M.L. Masters & Company, Chicago, with the tag still on the crate.

Ray Hatton, Lake Villa, Illinois

MORE ELTOS THAN WE THOUGHT....

In Jim Webb's story in the July '72 Antique Outboarder, he mentions that the Elto was produced until 1951 in U.S.A. As a follow up to this story, it was produced in Canada until 1958. If some of our members come across Elto models starting with ser. nos. 3D10E, 5D10E, etc., they are then likely to be Canadian models. These were made as 3, 5, 12, 22, and 25 hp models until 1958, then renamed Gale until 1963 when the line was dropped.

I think Ron Duckworth's story about motor stands on page 31 of the July Antique Outboarder was interesting, and the club should give in a future magazine the drawings for his stands.

Geo. Harness, Canada

SMALL WORLD DEPARTMENT AT THE ANTIOCH MEET....

During one of several talks with Antiquer Bob Zipps, who has contributed so many fine articles to this magazine, we found to our mutual surprise that he knew my nephew, Owen Broders, very well. Owen and Bob are engineers in the employ of Pratt and Whitney in Hartford, Connecticut.

On the opening day of the AOMC meet at Antioch, Illinois, Stan DuBois of New York, came up to me and asked if I knew Harry Santana and what had become of him. It turned out that Stan DuBois had attended the World War II Evinrude Service School for the U.S. Engineers back in 1943. Harry Santana, who had been the Evinrude dealer in Miami

RAY RYDELL

CANDIDATE for COUNCILMAN

(With one of his antique outboard motors)

Education

University of California, Los Angeles,
B. A. (Political Science), M. A. (History),
Ph. D. (American History)

Academic Status

Executive Vice Chancellor, Emeritus,
California State Colleges

Avalon residence

Summer residence since 1915
Homeowner since 1965
Permanent resident since 1969

City of Avalon service

Planning Commission, Vice-Chairman, since 1970
Capital Improvement Committee, Member since 1970

Avalon organizations

Catalina Island Museum Society, Secretary, Member Board of Directors
Red Cross
Rotary Club
Catalina Men's Golf Club
Catalina Island Gun Club
Descanso Beach Club

Paid Political Advt

Ray Hatton's early Evinrude Motor

Ray's son Mark with shorty Mate

before the war, was the head instructor at the school. Normally school sessions lasted four weeks during which the enlisted men were given an intensive course in servicing the Evinrude Storm Boat Motor as well as Zephyrs and Light Fours, then in service in all theaters of WW II. At the end of the four weeks' course, a few of the best men were held over for an additional period during which they acted as assistant instructors. These were called the Super Men. Stan DuBois was one of these, in fact was rated as one of the very best men out of the 1500 odd graduated from the Evinrude U.S. Engineers Service School.

I was sorry to have to tell Stan that Harry Santana had succumbed to a heart attack several years back. Harry's was a typical American success story - ran a borrowed dime and a broken shoe string into half a million dollars by nothing but intelligent, 16 hours per day, hard work.

Harry, who finally wound up as the top Marine dealer in Florida, emigrated from Spain in 1934. He opened a bakery in New York City and did quite well for a while. Then, a Baker's Union stepped in with demands that he run a closed shop. Harry, always an independent guy, refused. The Union picketed him, broke his windows, terrorized his customers and finally broke him.

Harry found his way to Florida in 1937 with his wife Pepita, and little daughter Pepita, whom everyone called Pepita, Junior. He ran onto a rotting, broken down small dock in the south end on Miami, went to work, cleaned it up, repaired it as best he could, working night and day to be ready for his first Saturday in business. "Seminole Docks" was thus launched.

Bright and early that first Saturday morning, Harry was out on Highway #1 which ran right by his dock. He waved down the first car that came along with a boat on top. Said Harry - "I will put your boat in the water, take it out, wash it out, and watch your car for 75 cents". Harry's smile and personality turned the trick. Right after he got the first customer going, Harry was back on the highway flagging down any car with boat on trailer or top. It worked. Within weeks Harry had so many repeat customers that he no longer had to go out on the highway. Soon he had to hire help and put in fishing tackle, bait and similar accessories. In 1938 he came to Milwaukee and convinced me that he could sell a lot of Evinrude motors. He did.

Harry was strong on service. If a customer had trouble with a motor, Harry did not quibble. He gave the man another to use while the old one was being repaired, or, if the troublesome engine was a new one, he would replace it and once and then argue with Evinrude, if need be, about the replacement. It was small wonder that his repeat and customer referral business kept him growing by leaps and bounds.

During World War II, when there were neither motors nor boats nor much else available, Harry answered Evinrude's invitation to come to Milwaukee and be head instructor in the U.S. Engineers' Service School which Evinrude ran, at a loss, for the U.S. Engineers as well as other branches of the service which might have occasion to use Evinrude motors.

Success didn't come easy. Harry and Pepita worked hard, seven days a week. Harry had the continental European's distrust of insurance and so was badly hurt by a fire caused by a defective electric sign and again by a hurricane that put Seminole Docks under 8 feet of salt water. But he fought back and when he sold out some 15 years ago Seminole Docks was a big thriving business, which it still is today.

Harry was more than a businessman. He branched out into public service of all kinds and for several years before his death, ran the Orange Bowl Regatta, as well as participating in many other local projects. He was a title holding, deep sea fisherman with a number of trophy catches.

And all he started with was a borrowed dime, half a shoe string, an idea, and the willingness to work.

While I was at the AOMC meet held at Antioch, Illinois, during July, several questions were asked of me about the Owens-Dyneto Electric Starter Unit which was put on

outboard motors by Evinrude, Elto, Lockwood and Johnson for the first time, back in 1930. I couldn't answer all of them.

Later, I dredged up a sort of service manual on the Owen-Dyneto starter put out by Owen-Dyneto Corporation of Syracuse, N.Y. early in 1930 plus a later supplement. I will be glad to send anyone who sends me $2.00 in cash or stamps, a Xerox copy of the 15 pages involved. And said cash or stamps must be in advance. I do not guarantee that this manual will answer any and all questions.

Jim Webb

ELTO IGNITION TIPS AND IDEAS....

The Elto battery ignition has been covered in both the Outboarder and the ignition manual, but I wonder if the newer or less experienced members would benefit if it were repeated that the condenser was built into the coil, and that a new condenser can, in some cases at least, be installed into the circuit without digging into the coil. I had a weak spark on a Ruddertwin and proceeded as follows: obtain an automotive ignition condenser, the smaller the better. Remove the flywheel and the timer cover (if a system with an Atwater timer). Ground the condenser case to the timer case, connect the condenser lead to the battery lead at the points.

Test for a spark by holding a plug lead near the timer case and flip the timer lever to activate the points. The battery has to be connected, of course. In my case, I was rewarded with a big, fat spark. I used a Chevrolet condenser, mounted on top of the timer cover with the cover screw. The condenser lead was lengthened and run into the timer through the hole in the bottom of the timer case and soldered to the plus battery lead at the points.

Also worth repeating, I think, is that the proper prodecure to bounce-start the Ruddertwin is to place the starting knob to the rear of the motor and bounce the flywheel from right to left, (counter-clockwise). To start in reverse, move the timer lever to the nearly high speed position and bounce left to the right. Mine will start on the first flip and really impresses the peasants. Also, the shear-pin on my model C appears to be common, quarter inch round brass stock. (I have no idea if a special alloy was used by Ole.) A widely available source for this stock is the brass rod used to connect a toilet valve float to the valve. They cost around a half a buck, and several can be cut from one rod.

Bill Horst, Ft. Thomas, Ky.

THIS TIP MAY GET A MOTOR IN YOUR LIVING ROOM!....

In letters to the editor, July issue, there was a letter from George Harness on page 31, asking about how to get an engine cleaned up so that it can be displayed inside the house during the winter. My answer to the problem follows:

> To clean an engine for the winter so that it can be displayed in your house without annoying your wife - too much - is a simple task. Wash down the engine with a mild solution of gunk after draining the fuel tank, lines, and carburetor. Then dry the engine and polish all bright metal parts and put a coat of wax on the painted parts. The last few drops of fuel can be removed from the tank by using a piece of old fashioned cotton clothes line as a wick, leaving the gas cap off for a week or so with the clothes line extending into the bottom of the tank and hanging out the filler opening. A final precaution after the engine is located in its position of honor is to put down a small drip pan to prevent any accidental oil spots on the wife's new broadloom!

By the way, a local Mercury dealer called me the other day and told me that he had a copy of "Boat and Motor Dealer" (August '72) that featured an article on the Waukegan National. My name and address, along with a picture of David and me launching the aluminum boat with V-50 on it was in the article and that is how he located me. The article features several pictures and the cover has a color picture of the dock area at Smith Marine with many people looking over some of the old engines. Bob

Zipps and Tom Luce are pictured on the scene. The dealer gave me the magazine and we may have a future member as he is the proud owner of a '25 Johnson Water Bug.

Bill Salisbury, New Jersey

TANKS 'N TRADIN'....

Enclosed is a picture of two tanks which I restored. The procedure is simple, and described in several issues of The Antique Outboarder.

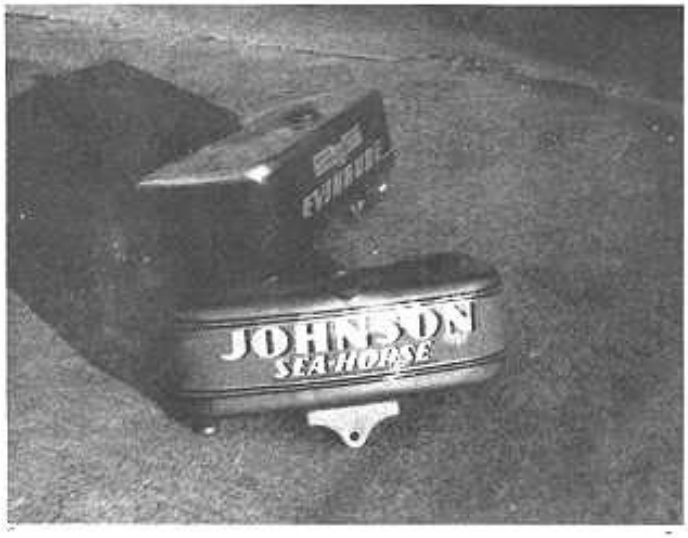
Cut a fist-sized, U shaped slot in the bottom, or flywheel side of the tank where it won't show, then use body and fender tools to pound the dents out. The tools are available from J. C. Whitney 1917 - 1919 Archer Ave., Chicago, Ill. 60616, Stock #74-2834; cost is $5.59 for a complete set.

The Johnson tank was an experiment - I took the worst tank I could find and proceeded. No body filler was used, just patience. I was so pleased that I did the Evinrude Tank which was badly mashed by fall when a stand collapsed - again beautiful results!

After all the dents are out, and the tank is sanded, bend the flap back over the hole, and have the tank welded. Cost is approximately $3.00. Be sure to check for leaks so that the Welder can fix those at the same time.

I'll include also a photo of Travelin' Jim Murphy on his recent trip to Oklahoma via Dallas, Texas. It was a real pleasure to have Jim stop by, and resulted in some top level horse trading. I swapped a Lockwood Chief, in a box, for Big Four Parts, in a box. Jim carried them back on the plane with him. Following Jim's visit I visited with him and his wife Marge at their home in Flosmoor, Ill. A wonderful evening with wonderful people - - - and, of course, more trading of parts. Jim has quite a collection, and tells a hilarious story about running a 4-60 in the basement while his wife was having a sorority meeting upstairs.

Dave Reinhartsen, Dallas, Texas



The Safety-Plane—A Husky Racer-Runabout

OF HISTORICAL INTEREST

.....*W J Webb*

AMPHION HISTORY

Clarence J. Allen was said to have operated a successful jobbing tool shop in Milwaukee in the early years of this century. He is said to have known Ole Evinrude, in fact, at various times did tool room jobs for Ole.

Like many others of the early teen years he was attracted by the spectacular success of the Evinrudes. Being a pretty good practical engineer himself, Allen thought he would give the marine engine business a try. He started with single and in-line twin cylinder heavy duty inboards. These were said to be good reliable engines of great durability.

In 1915 he converted his in-line twin inboard to an outboard mounting. This was on the market from 1915 until 1919. It never created much of a stir, principally because Allen had no one to develop a sales organization. Had there been a good Amphion marketing organization, Amphion might well have become a strong figure. As it was, it seems that most of Amphion's business was done through mail contacts, although it was not a direct mail outfit. Also, it was said that one enterprising free lance salesman, name unknown, would load up his light Model T truck and go out to nearby Wisconsin lakes and peddle the Amphions. Production was discontinued after 1919.

In the mid-twenties, Allen's business was bought by A. J. Machek of Milwaukee. This included all of the pattern equipment, tooling and a supply of production parts for the Amphion. Machek assembled a few motors from these parts and sold them locally through hardware stores, nearby lake liveries and a few dealers in the midwest. The number of motors so produced is not known, but could not have been more than a few hundred.

I remember hearing about the Amphion and seeing one on Oconomowoc lake about 1927. This phase of Amphion lasted from 1926 until the end of 1929. Machek continued in the tool business, but like everyone else in the thirties, had tough sledding. Machek's present whereabouts are not known, but he is believed to have died after WW II.

In 1945, Ray Menne and Ed Grote bought the Machek business. Ray Menne ran a tool shop. Grote was in real estate and other lines of business. They assembled a few inboard and outboard motors out of available parts and sold them.

Ray Menne, now running a very fine tool shop of his own in East Troy, told me they were not interested in the motor end of the business, but bought the business for its tool possibilities. Ray doesn't remember what they paid, but said it was only a few thousand dollars at best.

Ray gave all of the pattern equipment and outboard tools to the East Troy High School Manual Training department. He kept one of the light inboards for himself and said it was a great one. He recently sold it to someone whose name he has forgotten, a collector from the East. Hopefully, it was a member of our club.

Ray Menne is one of a fast vanishing breed - a master tool maker, proud of his ability and skill. He has all of the work he cares to do strictly from referrals from satisfied customers. Besides that, he is a gun fancier and has some of the finest guns, hand tooled by himself, that I have ever seen. I would say he is a master gun smith, not just a fancier.

Ray's partner, Ed Grote, to whom Ray referred me for exact information about the Amphion purchase died on August 15, 1972 in a Milwaukee nursing home before I could get to interview him. Ed, who was of Scandinavian descent, lived to be 80 years old. He had no children and got his start with the Cutler-Hammer Company in Milwaukee. Ed was primarily a tool maker, and a very good one. He developed the machinery for wire forming and patented it. He made billions of coat hangers and made quite a bit of money at it. He also did some real estate dabbling, during the Depression. Made some money at that too, but mostly became well off through his coat hangers and tool shop.

So ends the Amphion saga.

BATTERIES FOR OUTBOARD IGNITION

by Dave Reinhartsen

At the recent National Meet several members were using batteries to power the ignition systems on their engines. Each of them was having starting problems, and each was using a battery which was too small.

Only three batteries should be considered for ignition systems* - others do not have enough capacity to handle the current drain. These are the common lantern battery (4, #F single cells), the hot shot battery (or 4, #6 single cells) and a motorcycle battery. Approximate lifetimes under the intermittent service characteristic of Antique Outboarding are as shown in Table 1.

Lantern Batteries are recommended only for testing. If you use one on a boat, be sure you take oars.

Hot Shot Batteries are recommended for Elto Systems, short runs with Ford "T" Systems, and testing of Big Four or 4-60 systems.

Motorcycle batteries are highly recommended for all applications for many reasons; they can be recharged many times, giving them the lowest cost per hour of operation with any system. They can be recharged anywhere. They are light, reliable, rugged, and available almost anywhere. Be sure to shop around, for prices vary widely.

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* Of course automobile batteries can be used with great success; however, they are heavy and bulky.

TABLE 1 - SERVICE LIFE OF BATTERIES

IGNITION SYSTEM	LANTERN BATTERY ~ $2. - $3.	HOT SHOT BATTERY ~ $6. - $9.	MOTORCYCLE BATTERY (without recharging) ~ $12. - $15.
ELTO 1 (ATWATER-KENT)	1 - 3 HRS.	8 - 25 HRS.	24 - 50 HRS.
FORD "T" COIL	1/2 - 1-1/2 HR.	4 - 15 HR.	12 - 35 HRS.
BIG FOUR & 4-60	1/4 - 1 HR.	3 - 10 HRS.	4 - 15 HRS.

I GOT TROUBLES !

By Don Peterson
2884 S.E. Francis
Portland, Oregon 97202

A REPORT FROM MOTORS REGISTRATION (M. R.)

In evaluating the Motors Registration files, I find that 40% of the information is outdated, due to trades, sales, and owners' lack of information on M.R. forms. This plagued Bob Hampton, our previous registrar, and is doing the same to me.

By going through all my old magazines and newsletters and using that info, the files reflect a little better of what we have, yet it needs much more info. What I need to update the files and keep them reasonably current, is a yearly registration drive.

Being that January is generally a slow month, and with no one's objection I designate January as "Registration month".

To help in the identification of motors, which really is also big problem for M.R., and to assist newer members, the following information is available on model, year, hp, etc.

The model year guide for Mercury is featured in April '69 Outboarder, pg. 23; Lockwood, July '69, pg. 27; Neptune, Oct. '69, pg. 20; Elto, July '70, pg. 24; Champion, Oct. '70, pg. 32; and Caille, Jan. '70, pg. 27. A Johnson model year guide may be obtained from Marvin Howell, 906 Winthrop, Joliet, Illinois, or copies could be made from a local dealers guide. Evinrude's model year guide 1909-1959 is still available through Evinrude dealers.

It would seem that a combination of all year guides mentioned above might be a marketable item for A.O.M.C.I.

You can imagine my frustration when receiving an M.R. form with the single word, "Johnson", written on it, so please give me the <u>year model</u>, <u>horsepower</u> and serial number.

Above all, please don't forget that model number. That alone, at times has helped.

To give you an idea of the benefits that can result from Motors Registration, here's several of them.

1 - Assistance to members in locating owners of the same or similar motors.
2 - Information such as parts and info wanted, etc. on M.R. forms are forwarded to the Newsletter (this info is generally taken from M.R. forms from new members, so as to give them some help and contacts).
3 - Registration helps locate photos and info on rare motors for the Collectors Gallery, and articles for members.
4 - M.R. plans future comparisons and analysis to help determine motor rarity which will help your buying knowledge.

In the January, 1972 Outboarder we tried something new, The Scrapbook of Old Ads, which is a pet project of Bob Brautigam's and mine. We would appreciate your comments, and any help in locating any old ads.

Possibly this next year, Motors Registration will have stick-on emblems for registered motors; this is still in the planning stage.

In summation, I need your help, I need to have all of you register your motors, and if you enjoy the Collectors Gallery and the Scrapbook of Ads, the one way of showing your support is to register those engines!

In closing, I have enclosed a photo of a motor recently registered by Dudley Davidson of Seattle - notice, it's a Walnut! (Photo on next page)

PLEASE REMEMBER....

Check your date of membership renewal and forward your dues before a notice has to be sent; you'll save the Club time & money

Send to..
Mr. John D. Gould
4707 Massachussetts Av.
Indianapolis, Ind 46218

The Antique Scrapbook of ADS

By Don Peterson

Motor at left is Dudley Davidson's 1907 Walnut outboard. It has to be one of the half-dozen oldest on record.

"Northwestern" Row Boat Motor

A High Grade Motor at a Moderate Price

2 H.P. $50

In placing on the market the Northwestern Rowboat motor it has been our endeavor to furnish the best motor regardless of cost or price. Everything entering into its construction is of the very best, and we have added a number of valuable improvements not found on other lines. Castings are made of the highest grade semi-steel and malleable iron. All parts below water are bronze except cut gears which revolve in oil, aluminum exhaust pipe, nickel-plated fly wheel, rubber-covered spark plug, convenient steering lever with notched ratchet so boat can be set to go straight ahead or at any angle, making it easy to handle in wind or waves, under-water exhaust or muffler at the option of buyer, water cooled cylinder, furnished either with battery ignition or Bosch magneto, painted in a beautiful dark maroon color with piano finish,—there is no motor to be compared with it in beauty, design and high grade equipment.

PRICE

We realize that outboard motors are largely used by pleasure seekers, working men, boat liveries, etc., who cannot afford to pay the fancy prices heretofore asked for these articles and we have made the price with complete equipment as described above at $50.

Write for 1915 Catalog.

NORTHWESTERN MOTOR CO., Eau Claire, Wis.

Sold on 30 days' free trial!

1914

HARTFORD

REG U.S. PAT. OFF.

Sturdy Twin

The Ideal Combination of Speed, Dependability and Light Weight

Write for folder describing this new Sturdy Twin—The latest thing in superior out-board motor design.

The Gray & Prior Machine Company

BUILDERS OF HIGH GRADE MARINE MOTORS FOR OVER A QUARTER OF A CENTURY

104 Suffield Street, Hartford, Connecticut
Branch at 117 Commercial Street, Portland, Maine

'28

WATCH CAILLE *this* YEAR

Quick Get-Away · Speed · Power
Long Life · Dependable · Smooth

See our nearest dealer or write

CAILLE MOTOR COMPANY
DETROIT, MICH., U. S. A.

CAILLE

OUTBOARD MOTORS

1928

YOU NEED ONE ON YOUR BOAT

EVINRUDE DIVISION
Outboard Motors Corporation
1233-27th Street Milwaukee, Wis.

Hunt 'em with Folding Sportwin!

There are fewer good aims in arms tired by rowing. Get to the blind early and fresh, with an Evinrude. Sportwin is the model to choose — as trusty as your pet gun but a point better in the means by which it is made portable. Instead of taking it apart, you simply *fold* Sportwin into a compact, easy-to-pack and easy-to-carry package only 23½" x 12" x 14" and weighing only 43 pounds.

1930

RACING

THE RACING GIANT TWIN

The Giant Twin began its short life in outboarding history in 1928 and by 1929 the end was in sight. The models were T-40, TL-40, TR-40-1928, and T-45 and TL45-1929. The R designated the racing version and the L designated the long shaft version. The following quote is from the Johnson catalog of 1928 supplied by Mr. Lou Eppel of Johnson Motors.

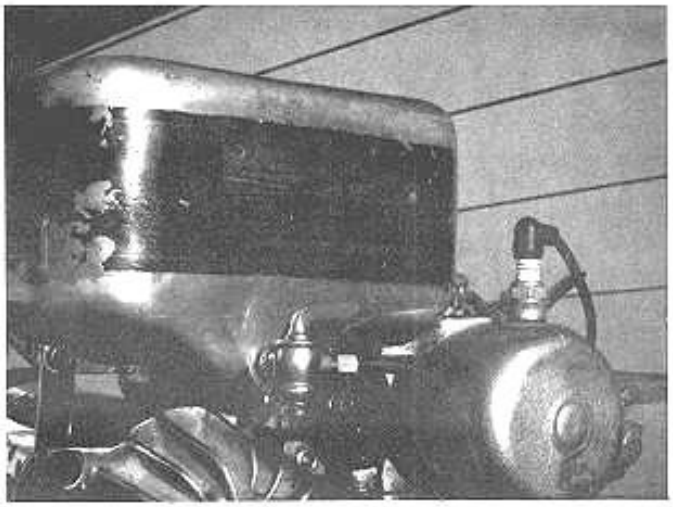
> "Just as Johnson led the field in producing the first high speed, Class C motor, so Johnson is the first to develop and announce a motor with over 30 cubic inches. The new Giant Twin has a cubic inch displacement of 49.48 and weighs only 110 lb., and develops 25.75 HP at 3500 RPM in the racing model in racing trim. The Special Giant Twin racing model has been developed to meet the requirements of those demanding the maximum speed in Class D. (Subsequently changed to class E-50 cubic inches or less.) Measurements are identical with the regular Giant, however compression has been increased and ports suitably arranged for extreme high speeds. A specially designed two blade racing propeller is provided. Power curves show the difference between the racing and regular models. The TR model is recommended for racing only and not for general purposes."

The Figure 1 graph shows the power outputs for the Giant Twin in standard and racing trim.

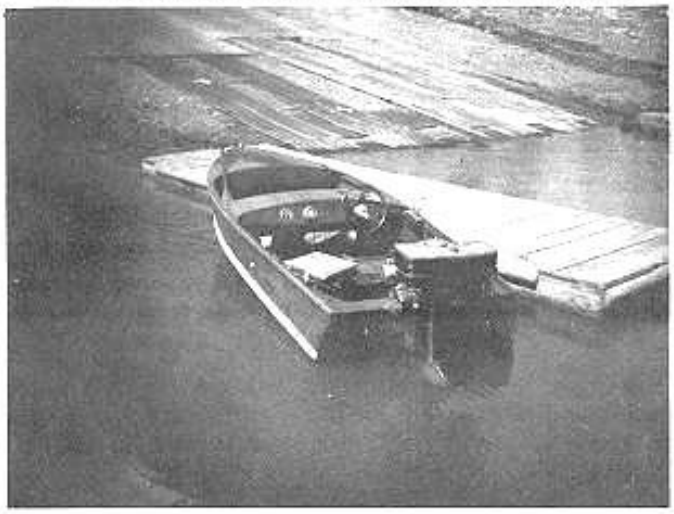
Mr. Raymond Rydell, of Avalon, California, bought a new TR-40 in the summer of 1930. The decal said "Sea Horse 25", so it was probably the 1929 model. Mr. Rydell ran the motor on a 14-foot Mahogany runabout made by a local builder in Los Angeles. The following is part of what Mr. Rydell can remember from the four years he owned the Giant.

> "The motor and boat always performed very well through the four years that I owned it. It had a lot of low speed torque and would accelerate with a big Chris-Craft. It would also idle well without getting hot. We believe we could run at about 35 MPH flat out. At any rate I could pull away from a friend of mine who ran a Lockwood Racing Chief on an eight-foot racing sled. The motor is easy to start even when hot if you remember that it is almost impossible to flood. I always started it by flooding the carburetor bowl, retarding the spark, throwing over the release charger, and rocking it against compression about four times, than pulling like hell and holding on. If you don't pull very hard the motor can pull you right into the flywheel."

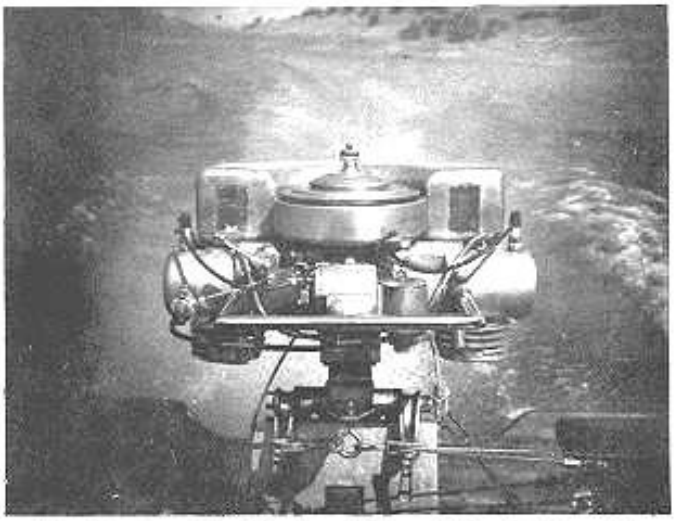
My Giant Twin began as a basket case. I found a carburetor, tank, flywheel and magneto plate and that was my start. John Harrison supplied cylinders, crankcase, crank, rods, and pistons, and also a few small parts. The clamp bracket/lower unit are from a PO hulk, adapted through the use of a 1½ X 5 X 3 inch block of aluminum with appropriate holes to mate the two differing assemblies. The driveshaft is ½ Speedifour and ½ PO, welded together. The main bearings in the crankcase were wallowed out as is often the case with the Giant. Rather than make new bronze bushings for the mains and have a problem in the future, Mr. Hubbell installed a ball, and a needle bearing on each main with a seal to maintain crankcase compression. Should the bearings wear or need replacement it is now a simple matter to order new ones. Mr. Hubbell suggested that this setup would make the Giant run like a modern engine. That it does. Since I had no rod bearings of any kind, something had to be adapted. Luck was with me at this point. Two SR cage pairs, side by side, fit the Giant crankpin perfectly using SR rollers. That's 24 rollers per rod. The crank and rods are drop-forged steel, case hardened to file hardness. The rods are about a foot long and the pistons are 4 3/4 tall and use 3- 5/32 rings. Naturally, I matched all ports, and balanced all reciprocating parts



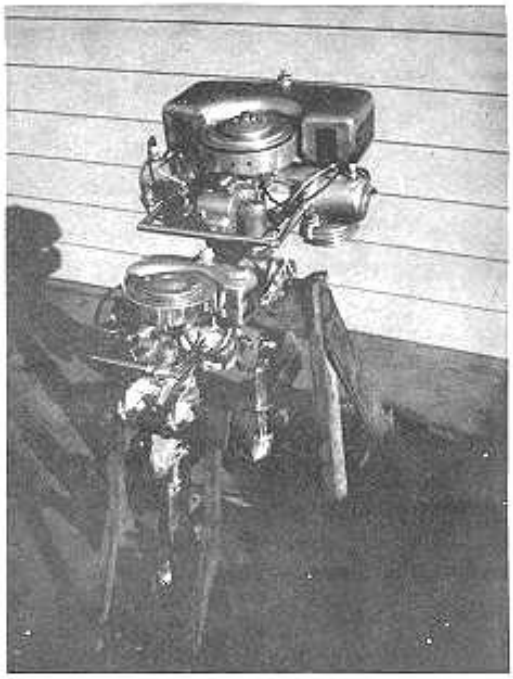
Gas tank detail of the Giant Twin showing oiling instructions & rugged construction



The Giant at rest after a day of excercise



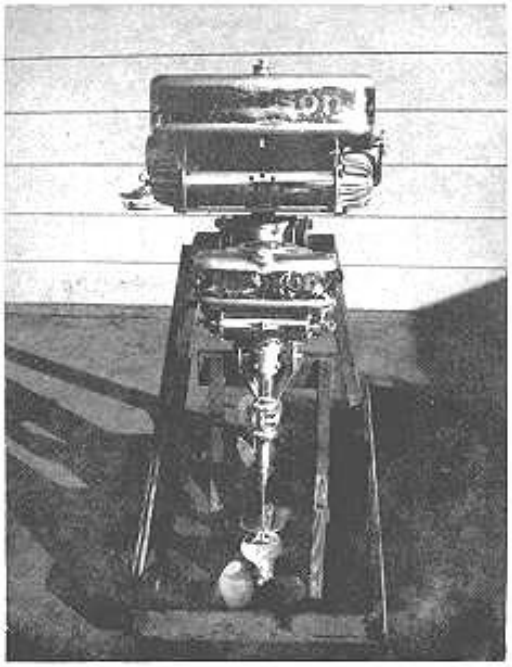
The Giant at half throttle - 27 mph! Proof that a Giant will run.



Maxi and mini motors. 1928 TR-40 Racing Giant Twin and 1928 A-35, Light Twin.

THE GIANT

The maxi and mini motors as seen from the rear.



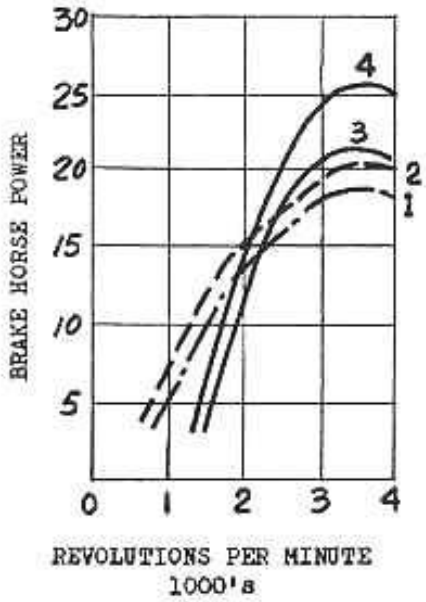
during assembly.

After 2½ years of parts gathering and a bit of money spending, the time came to "hit the pond" last July 12th. The Giant started on the fifth pull. (It's 36 inches from the carburetor intake to the sparkplug.) Using the recommended 1½ pints of oil per gallon created quite a smoke screen. I think a pint would be satisfactory for a broken in engine. Once warm it starts on the first vigorous pull. Anything less than vigorous means barked knuckles when the engine backfires and smashes them into the tank. Remote steering is a definite advantage in running an engine the size of the Giant. It holds the engine from turning when the starter cord is pulled and allows a great deal more control over the boat, than when a steering handle is used. The engine idled perfectly and never fouled a plug. At low speeds it ran very cool, as at high speeds. Acceleration is as fast as anything except a 4-60, and top speed was 34 MPH at 3700 RPM, on my venerable, Whirlwind moulded plywood boat using a 11 X 15 Stannus racing prop. Removing the hot air tube and muffler would increase those figures. High RPM could be very destructive to the Giant because of the long rods and the high mass of the reciprocating parts. The factory tests were run to 4000 RPM but the power peak occurs at 3500 RPM in all cases. The engine is a pleasure to run and once the operator is familiar with its operation, it isn't much different than running a PO; except that it will "blow the doors off" of any V-70 that may be around.

According to Mr. Lou Eppel of Johnson Motors, "This model was somewhat less than successful and was manufactured only in 1928 and 1929". The advent of the external rotary valve, and the high horsepower per cubic inch ratio of engines using it probably meant the end of the Giant. The P-50 of 1930 was 30 cubic inches and put out as much power as a Racing Giant in standard trim. Beyond that there were the famous PR racing engines that dominated Class C racing for 20 years. They often put out twice the power of a Giant Twin. The advantage of the smaller short stroke engines is that they can withstand much higher RPM which gives a great deal more flexibility to an engine. Current racing practice for a PR is around 8000 RPM in competition, which gives a great deal more flexibility than an engine like the Giant Twin with a top RPM of 3700.

The members of the Antique Outboard Motor Club who have owned Giant Twins can appreciate this technological experiment. The Giant was a fine, carefully made engine representing the most advanced technology of the time. The twelve or so examples in the hands of Antique Outboarders will serve to preserve this landmark in outboarding history.

FIGURE 1- Giant Power Output



LINE

1. Regular Giant, fully equipped.
2. Regular Giant, Cut-outs open & hot air tube removed.
3. Racing Giant, fully equipped.
4. Racing Giant, Cut-outs open & hot air tube removed.

Piston on the left is from a Giant Twin. On the right is a PO Johnson piston.

51 FROM 18

AOMC 1st National Meet

by David Reinhartsen

Nothing - absolutely nothing expresses the success of our first national meet better than "51 MEMBERS - 18 STATES". From as far away as Washington State, Texas, Georgia, and Connecticut, we met in Antioch, Illinois for 3 glorious days of Antique Outboarding, Check the lists.

Minnesota - 7
Illinois - 7
Wisconsin - 7
Indiana - 5
Missouri - 4
Ohio - 3
New York - 3
New Jersey - 3
Connecticut - 2

Pennsylvania - 2
Maryland - 1
Georgia - 1
Washington - 1
Texas - 1
S. Carolina - 1
Lousiana - 1
Idaho - 1
Kentucky - 1

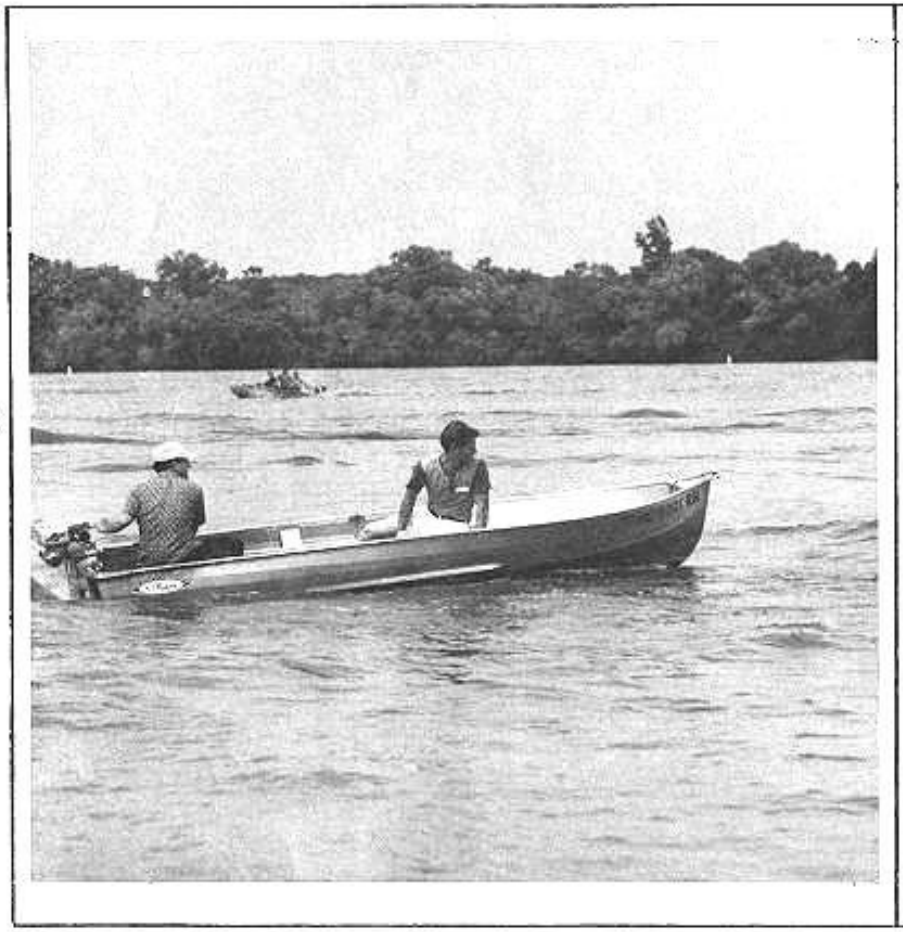
Attendees:

Bob Brautigam
P. S. Brooke, Jr.
Robert Burdell
Tony Caglione
Richard Choyce
Stan DuBois
Ed Diederick
Peter Economos
Ron Ellis
Walter Ellis
Dick Frantz
John Gould
Phil Graen
Bob Grubb
Raymond Hatton
John Herberg
Skip Hight
William Horst
Peter Hunn
Byron Jaqua
Ron Johnson
Ed Kant
Phil Kranz
Charles Loshe
Fred Lucas
Tom Luce
Don Miller
Milt Moos
John Morgan
Don Murin
Glenn Ollila
Walter Otto
Leonard Pangburn
Bob Peterson
Peter Reinertson
Dave Reinhartsen
Bill Rose
Jere Sairs
Bill Salisbury
Frank Schlachter
Clarence Sitton
Les Stevenson
Bob Surgeon
Bill Tenney
Bob Thornton
Sam Vance
Jim Webb
Rod Webb
Casey West
Gene Yonker
Bob Zipps

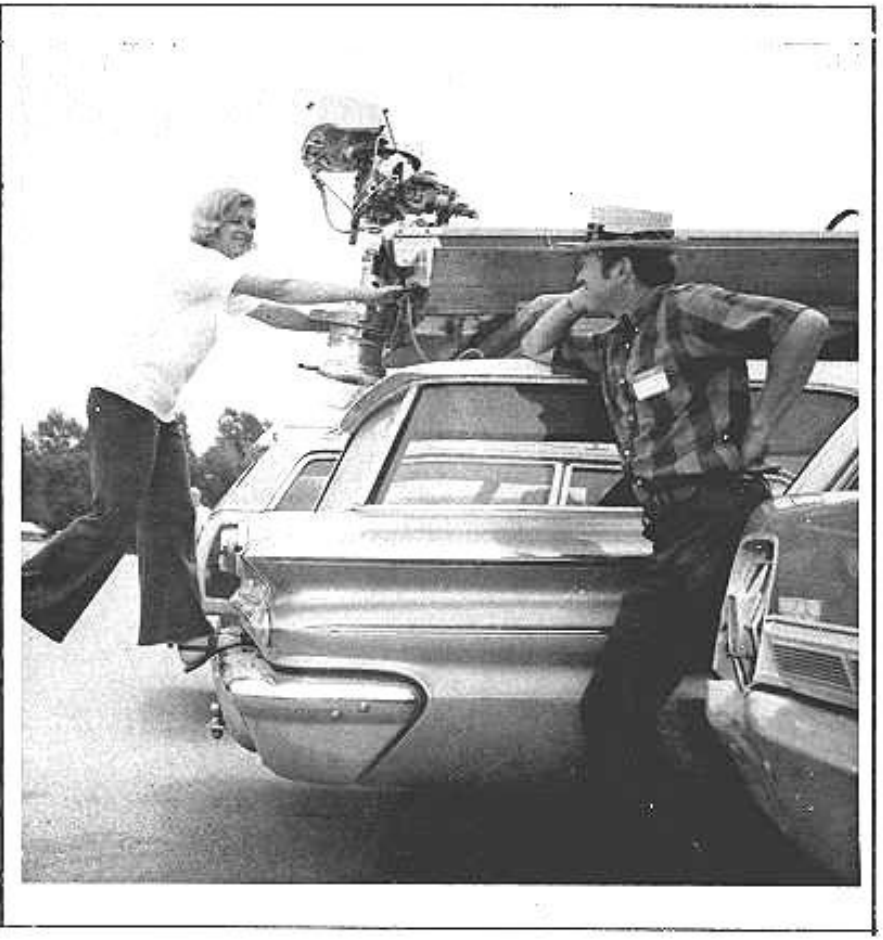
The old and the new - Special thanks to Johnson Motors for allowing us to participate in their 50th Anniversary celebration. Yessir! There's something for everyone at these meets!

FAMILY BOATING

No sport can be enjoyed by a family as much as water sports. And no hobby can be more fun than cruising about, powered by a beautifully restored antique outboard. The highlight of our meet was the Family Cruises, taken each afternoon. Everyone went - Mom, Dad and the kids. All enjoyed the journey back to the 20's and the powerful sound of these beautiful machines.



Jere Sairs of Milwaukee pilots his beautifully restored 1928 Speeditwin during one of the family cruises. Looks like Ron Ellis acting as observer. The water was pretty rough!

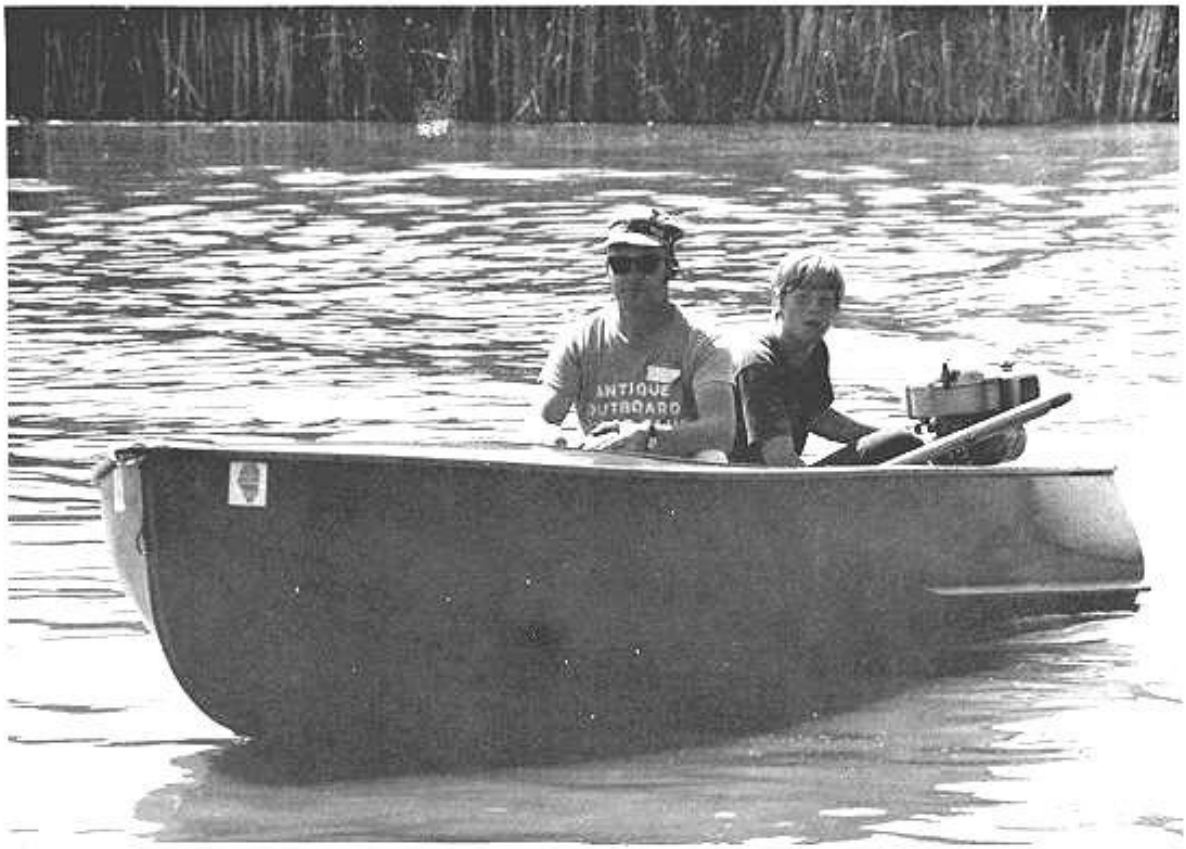


Gayle Salisbury demonstrates the proper way to take a hydro from the top of the Salisbury station wagon. Husband Bill gives advice. Engine is a PR Johnson completely polished and a real hot performer.

The pit area at the Smith Marine Dock. Bill and David Salisbury and AT-10 motor are at left. At center is Bob Zipps and his S-70. Sam and Ginny Vance, their family and Johnson PR-40 from 1928 complete the picture.

Above: All the way from Texas, Scott Reinhartsen takes his father for a spin. Scott did all the restoration on that LT-37. Below: The Ollilas and Brautigams.

Above: Bob and Pat Zipps with a 1922 A Johnson. An expert on Johnsons, Bob told Johnson Motors the true story. Below, Milt and Caryn Moos with family and AC-25.



Above: Ronald Johnson takes a ride from a friend with a KD Johnson. Below: Bob and Joran Brautigam and 5hp OMC Lightwin. Joran "fell in" several times.

Bob Brautigam and one of the Johnson Motors participants. Bob's wife was watching from just behind photographer.

Anyone notice the boat and motor in the photo? The beautiful gal is model Linda Knodel.

More family outboarding above. The Luce, The Vance and the Zipp families on a cruise. No one was towed in! Below: Bob Grubb and 1913 Evinrude, and Sam Vance

The oldest running motor contest. Judge Zipps tried every trick, trying to make one fail but alas - the prize went to Bob Grubb on a technicality.

THE OLD TIMERS

Each member of this unique and wonderful club has their special "thing". For some, it is restoring and running the very old engines. Here we see some of the old-timers in action. They all ran perfectly, never missing a beat, and powering their owners to speeds approaching 7 mph.

Bob Grubb and the oldest running motor - a 1913 Evinrude.

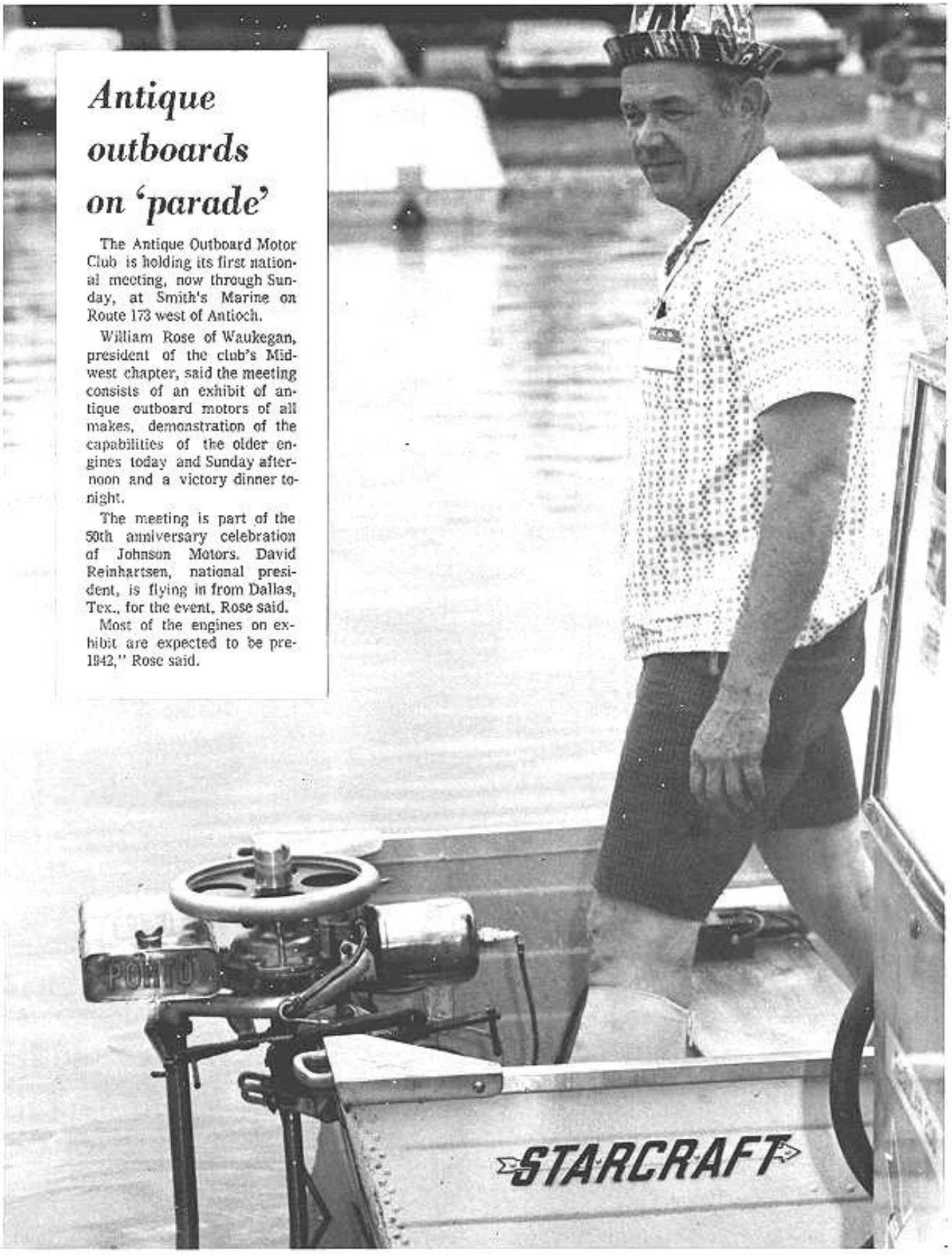
Antique outboards on 'parade'

The Antique Outboard Motor Club is holding its first national meeting, now through Sunday, at Smith's Marine on Route 173 west of Antioch.

William Rose of Waukegan, president of the club's Midwest chapter, said the meeting consists of an exhibit of antique outboard motors of all makes, demonstration of the capabilities of the older engines today and Sunday afternoon and a victory dinner tonight.

The meeting is part of the 50th anniversary celebration of Johnson Motors. David Reinhartsen, national president, is flying in from Dallas, Tex., for the event, Rose said.

Most of the engines on exhibit are expected to be pre-1942," Rose said.



Sam Vance and his beautifully restored Waterman Porto.

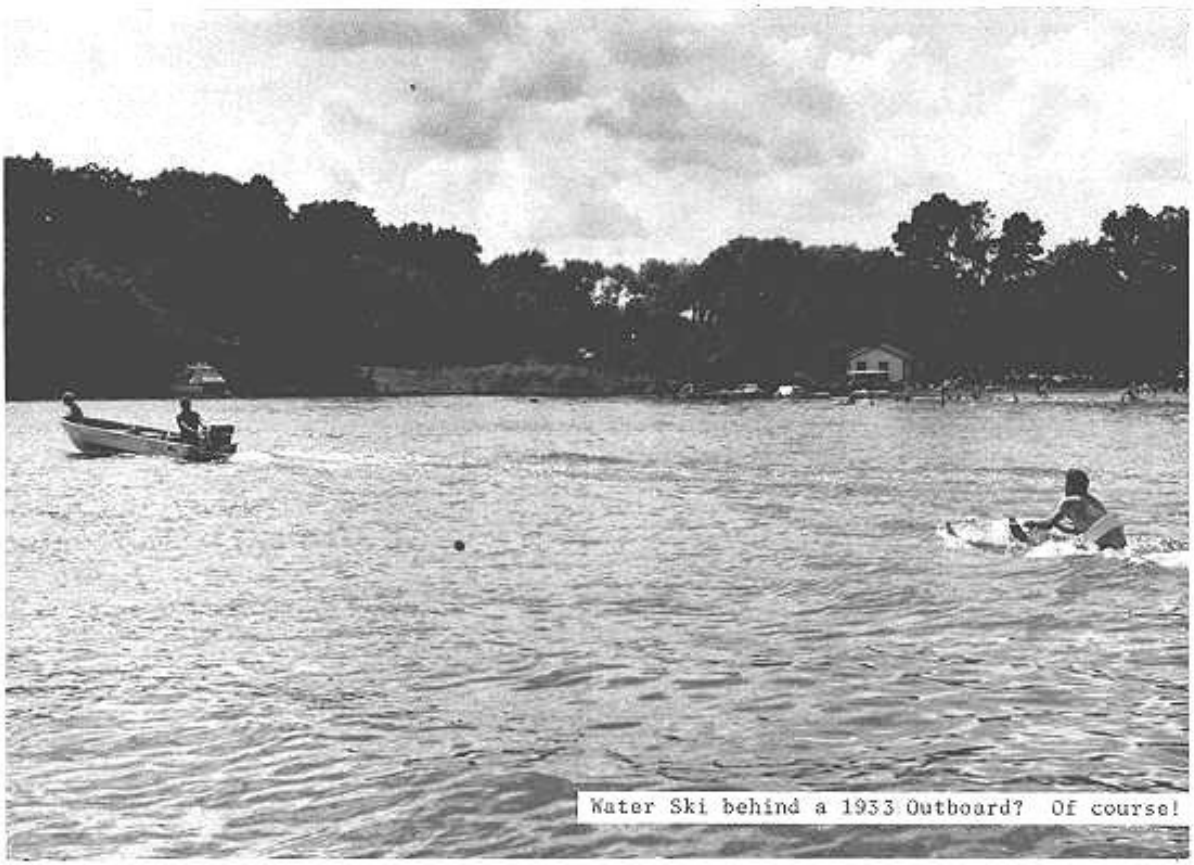
Tom Luce getting ready to start his 1927 8 hp Johnson model P-35.

Smiling Tony Caglione and his 1916 Motorgo - the same one with which he won the Oldest Running Sparkplug contest. The motor runs better than new.

BETTER THAN NEW

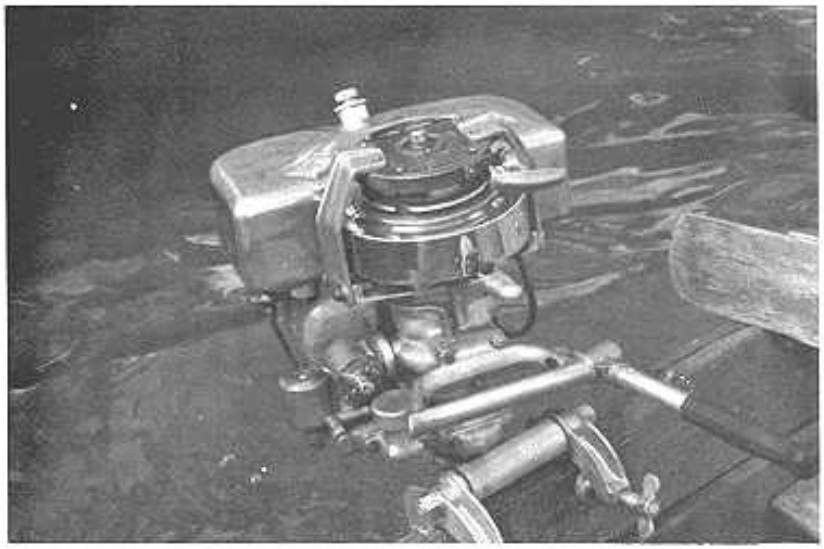
If it's old - it's no good any more. Right? Wrong! These antiques are just as powerful, just as reliable, and just as easy to use as the new outboards. Besides, they have something the new ones lack - the bark and the feel of something that has withstood the severe test of time. We are indeed proud of our restorations.

Bill Salisbury shows Hal Stewart of Johnson how the old ones run. Says Hal, "The new ones are good too!"



Water Ski behind a 1933 Outboard? Of course!

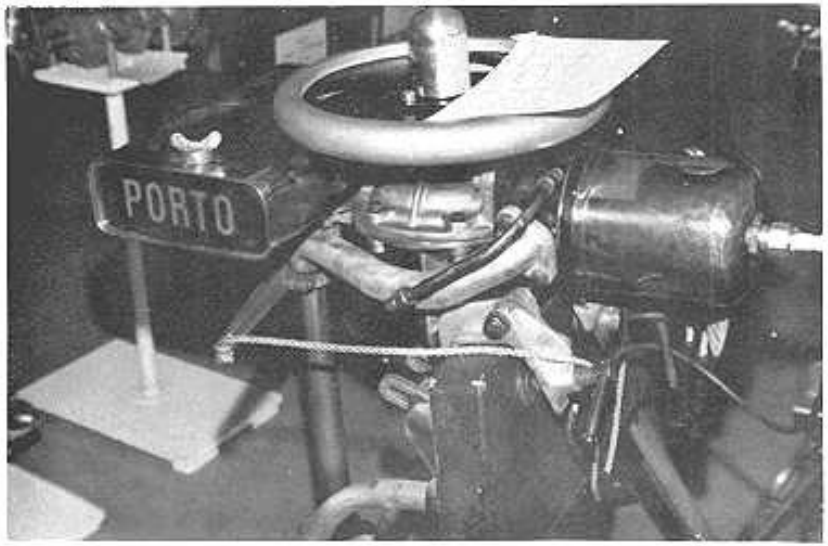
Zoom! These old engines have all the power and speed that you need. Thats Bill and Gayle Salisbury.



No ordinary K-50, this one! Phil Kranz brought one with an early model rewind starter.

John Herberg tries his A model Johnson on a Penn Yan boat. Some of the Johnson collection in back.

A close-up of Sam Vance's 1913 Waterman. The paper on the flywheel says "hot". The motor was!



Bill Salisbury gets his 1933 V-65 ready to pull a ski buff- Dave Reinhartsen. Engine had to go some!

Tom Luce's 1927 Johnson P-35 in a high speed run. Is that a certain Johnson Motors representative holding on for dear life?

Bob Zipps tows in a new outboard rig with his 1934 Johnson We are all grateful to Bob for this act of charity.

RACING DEMONSTRATION

Some of our members have raced outboards for many years, and hate to lose touch with the feel of a powerful motor behind, and a light, almost flying boat beneath. Two of our members, Bill Tenney and Bob Thornton gave us a real treat by showing what racing was like in the late 40's. Bob also sponsored a Racers School which acquainted many of us with the tricks of the racers. After attending the school, Tom Luce was heard to say something about souping up his 1910 Evinrude.

Three veterans of the racing game, Skip Hight, Bill Tenney and Bob Thornton check a detail on Bill's SR

John Herberg of Moline, Illinois brought his racing trailer loaded with neat boats and engines.

Bull session, l. to r., Bill Tenney, Ron Johnson, Stan BuBois, Ed Diederick, Dave Reinhartsen and R. Peterson

Here's the trailer brought by Bob Thornton. Bob brought a full house of A through F equipment.

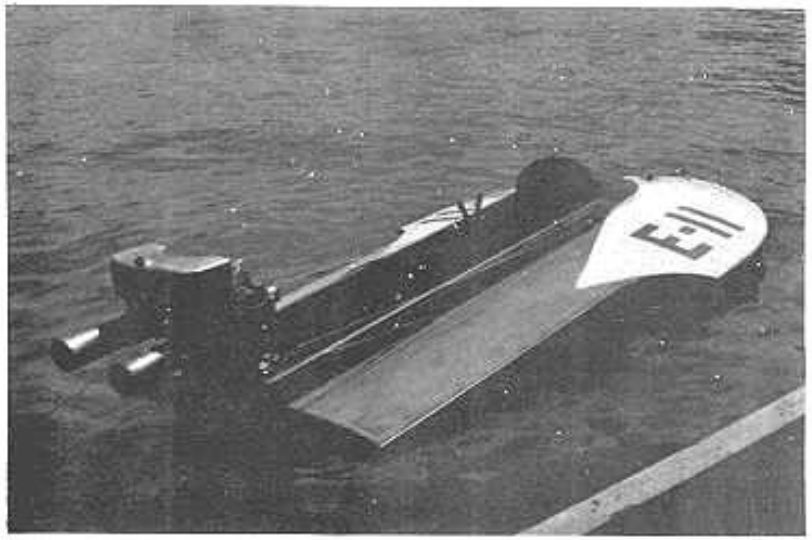
Bill Tenney at speed with his record setting Neal hydro and SR Johnson combination. Engine won a World Championship for Bill - over 68 mph.

Bob Thornton of Chevy Chase, Maryland, with a PR Johnson. Bob is travelling over 60 mph when the picture was taken. A big thanks to Bob from us all.

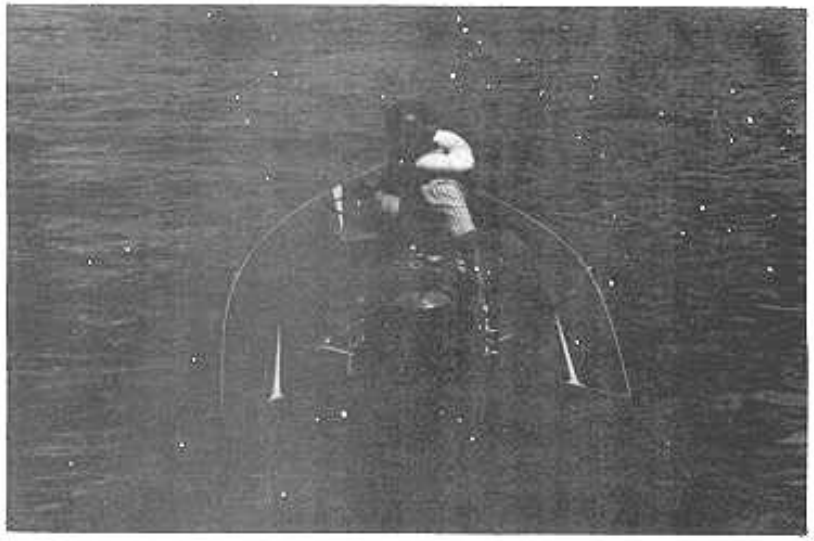
This is the dock at "Mr. Wonderful's Resort", the scene of the high speed demonstrations and races.

Bill Tenney (left) and Ron Johnson pose for the camera fan at right. Cover is off the lower unit and the purple nitro fuel is ready to go in.

Here's one of Bob Thornton's hydros. This time a PR Johnson for power. Looks harmless enough!



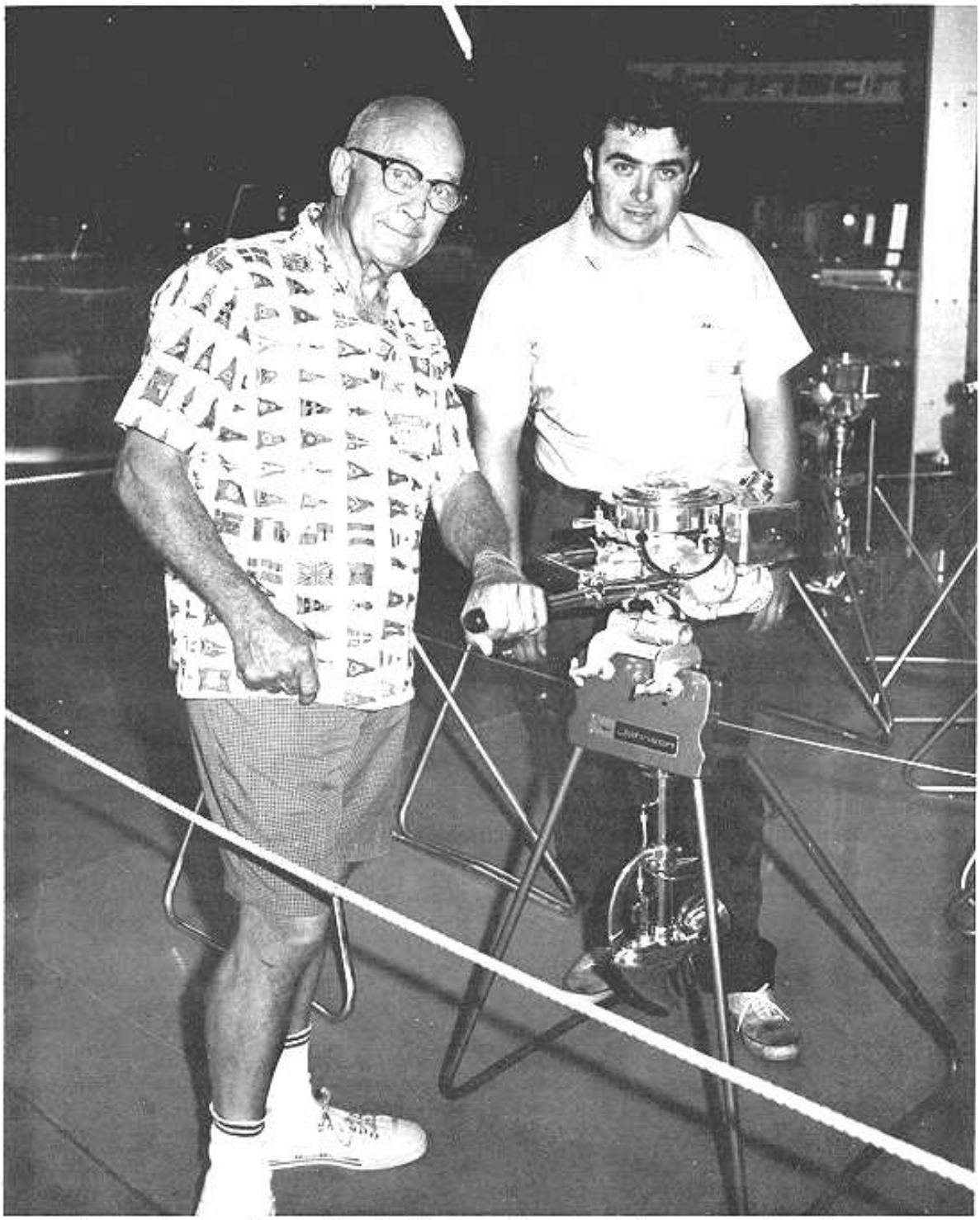
Bob Brautigam pulling the starter on a modified Big Four, mounted on a 13' Connors Craft runabout.



Bill Tenney (S111) and Bob Thornton (E11) demonstrate Antique Racing Hydroplanes.

SHOWING

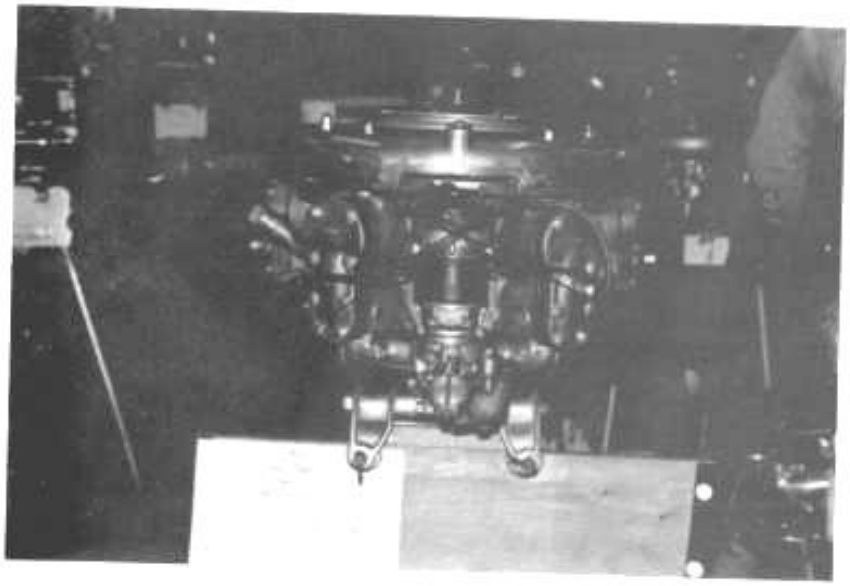
No Antique Outboard Meet would be complete without a show of engines, restored to first class condition. Those 51 members displayed eighty seven engines - count 'em.



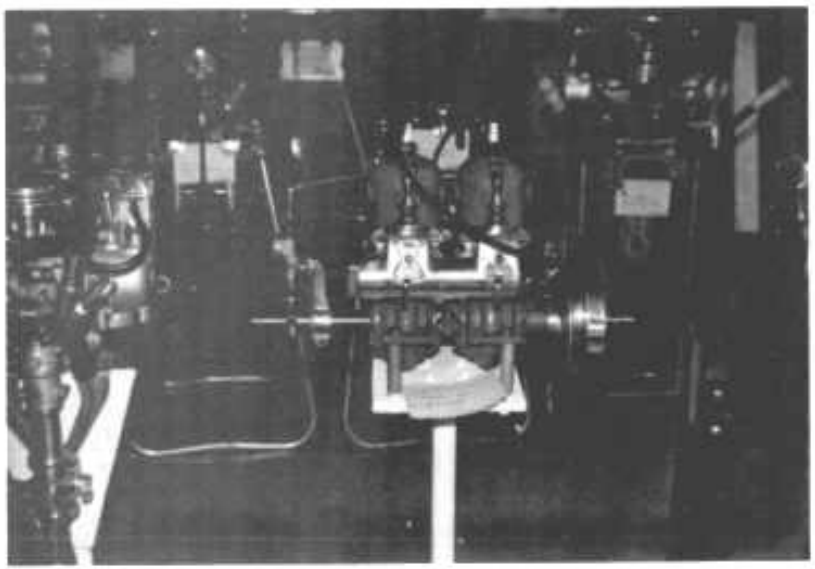
Rare photo shows Jim Webb touching a Johnson outboard. Bob Zipps talked him into it.

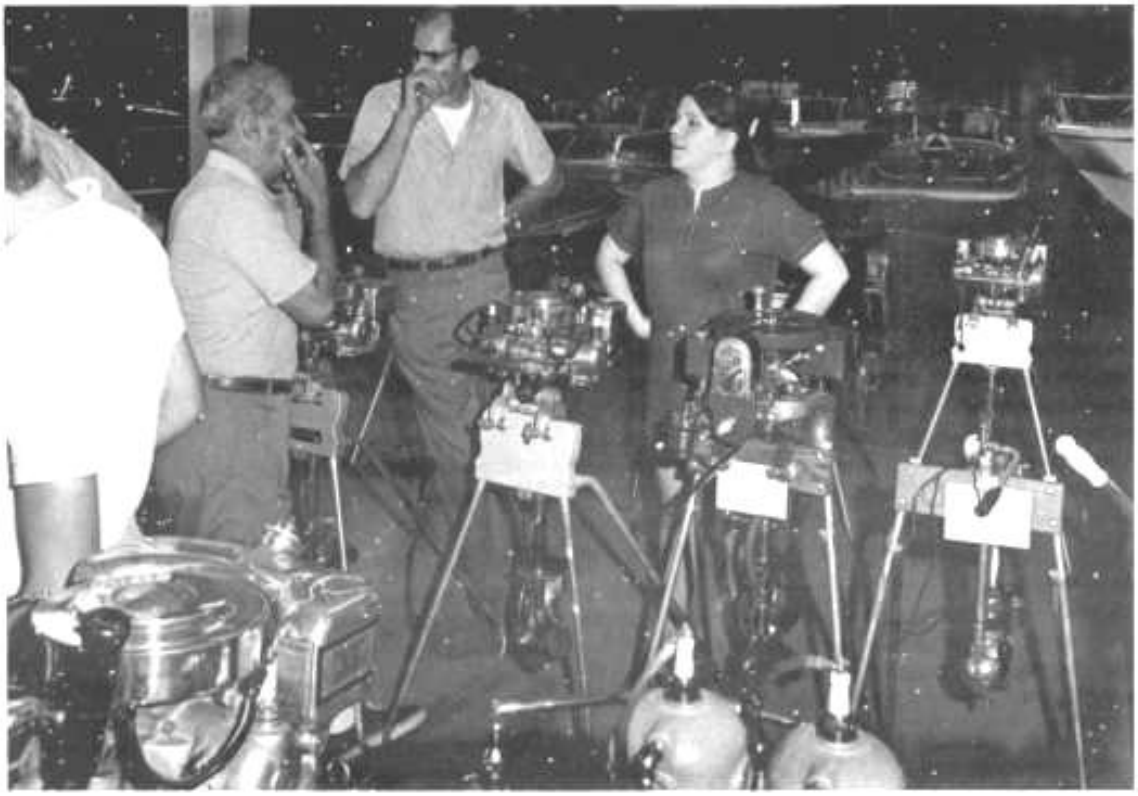
Part of the line-up in the display area. L to R, VR-55; Pete Economos' PO-15; and Skip Hight's KR.

More of the display area in Smith's Marine. The full color photos better show how really swell the engines looked.

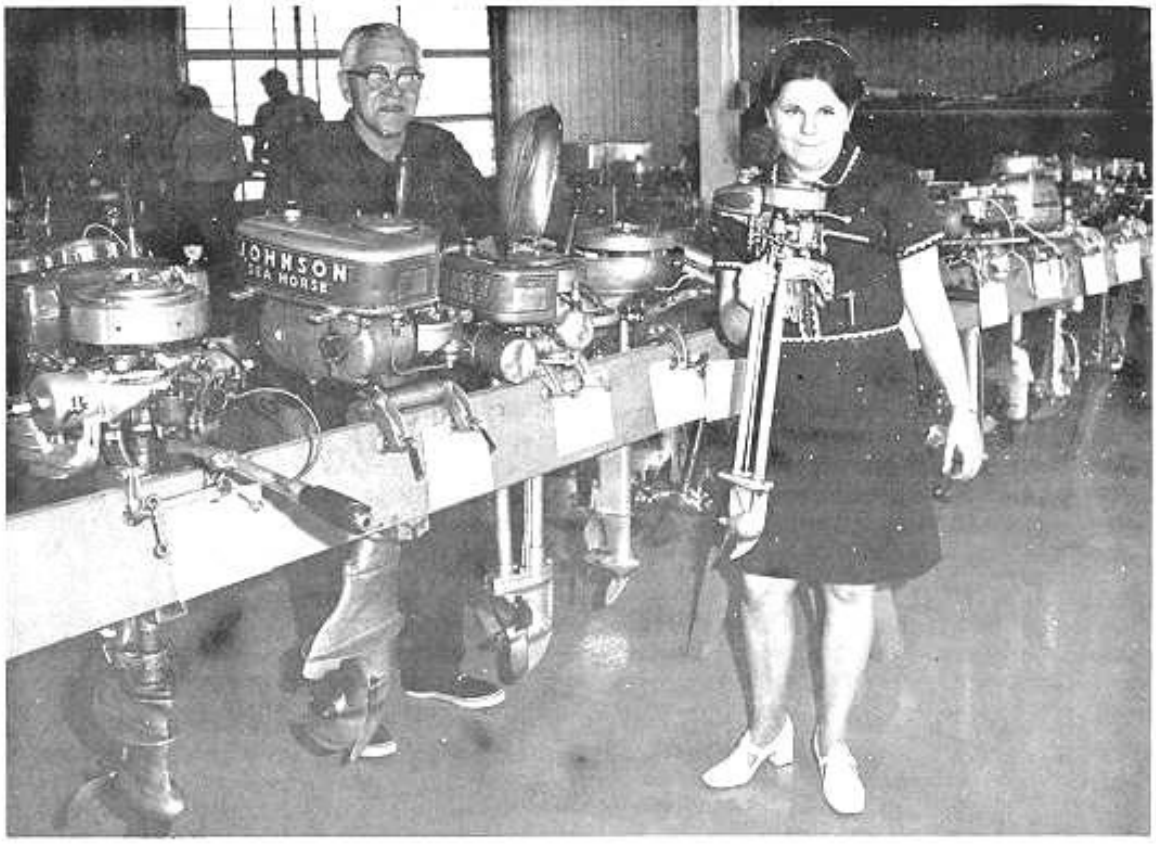


Len Pangburn's beautifully restored 1917 Evinrude

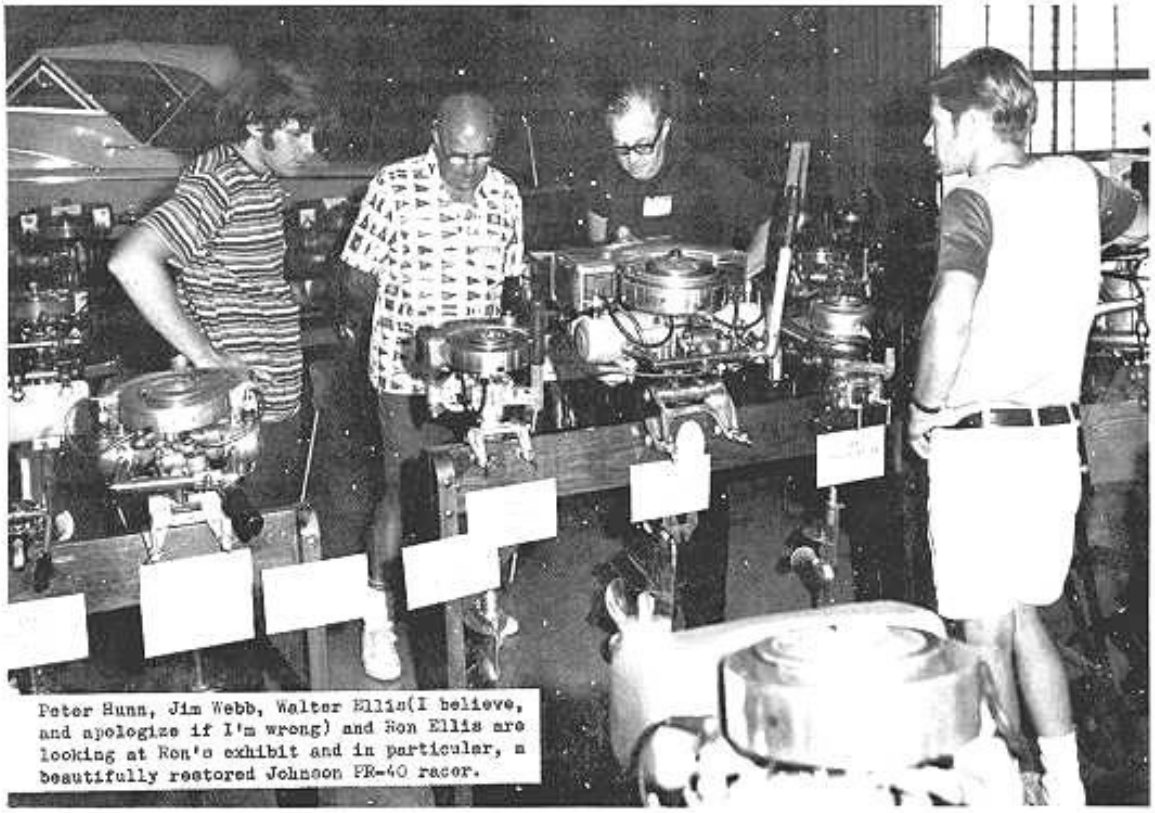




Above: Tony Caglione and Ed Diederick take a lesson from Luci Rose. Below, The fantastic display of 87 motors. Phil Graen and Donna are behind the shotgun.



Bill Rose and Daughter Luci, with their exhibit. The Roses were like whirlwinds - helping, organizing and planning. We all owe them a special thanks.



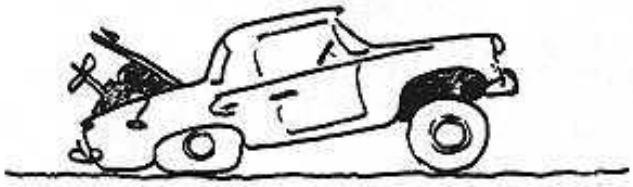
Peter Hunn, Jim Webb, Walter Ellis(I believe, and apologize if I'm wrong) and Ron Ellis are looking at Ron's exhibit and in particular, a beautifully restored Johnson PR-40 racer.

SWAPPING

Sorry - but no pictures were taken of this popular pastime. Seems the money and motors exchanged hands so fast that no camera could photograph it. The author was so busy that he missed out on a '29 Quad and '46 Big Four, both high on his want list. Oh well, next year. Special thanks to Gene Yonker and Bob Surgeon for the truckloads of parts that they brought to sell at most reasonable prices.

The trading was fast and furious all right, one fellow got caught up in the spirit and bought back the same motor he had sold earlier - and paid three times what he had sold it for in the beginning! You just had to see to believe the humor in some of the pained expressions upon hearing a price -or an offer. It was downright funny to see the moths fly out when a wallet was opened. All in all, an estimated 40 motors changed hands, along with a good many parts. A number of engines were brought in by residents of the area too. Included in these were a Ferro, a Motorgo, several old Evinrudes and a Lockwood Chief or two.

HOMEWARD BOUND—



PRIZES

You bet we had prizes -

Oldest Running Motor - 1913 Evinrude - Bob Grubb

Oldest Running Johnson - #A563 Johnson Water-Bug, Tom Luce

Best Restored Motor - 1915 Lockwood - Fred Lucas

Best Restored Johnson - 1930 Johnson "V" - Bill Salisbury

Bang & Go Back-Nonplaning - "A" Johnson - Bob Zipps

Bang & Go Back - Planing - Elto Big Quad - Sam Vance

Speed Demonstration - Nonplaning - John Herberg

Speed Demonstration - Planing - P0-15 Johnson - Dick Choyce

Frayed Starting Rope Award - A-25 Johnson - Milt Moos

Oldest Spark Plug Afloat - Tony Caglione

Hard Luck Award - Phil Graen

Members Favorite Motor - Cross Radial - Fred Lucas

Bob Brautigam presenting John Herberg with his trophy for winning the non-planing speed race. Speed is no stranger to John but usually his boats plane a little.

Here's Phil Graen receiving his award called "The Hard Luck Trophy". Phil pulled the rope for 3 days before being able to start his 9.8 hp "K" Johnson.

Fred Lucas receives the trophy from Dave for "Members' Favorite Motor".

Tom Luce receives his award for "The Oldest Running Johnson".

Sam Vance receives the award for "Bang And go Back - Planing".

Here's Bob Grubb getting his award for winning "Oldest Running Motor".

VICTORY DINNER

On Saturday night, 78 members and their families attended a delicious family-style dinner, arranged by Bill Rose. We had a wonderful meal, followed by some words by Dave Reinhartsen. Dave's message was great, except he had borrowed trousers for the occasion, several sizes too big. And he didn't have a belt - so he used a starting rope - which didn't hold - but Dave did!

Bill Rose was warmly applauded for all of his efforts in arranging for the meet. He and his daughter, Luci, are truly remarkable.

These photos show part of the dining room at Steve's River Inn where the dinner was held. The gentleman resting on his elbow in the left picture is special guest Charles Strang. The outstanding folks in the right photo are the Vances' with their brightly striped shirts. Tom Luce's son couldn't take the excitement and fell fast asleep on Tom's lap.

Bob Brautigam received special award for the wonderful job that he has done on this magazine, and all agreed that Bob certainly deserves our thanks and appreciation.

Some organizational changes were announced, but the big message was clear to all of us. Isn't this fun? --- AND IT WAS!

APPRECIATION

The author (who was also chairman of the meet) wishes to express his appreciation to all those who did such a wonderful job in making our first meet a success - a success beyond our wildest dreams. Hal Stewart, Bill AuCoin, and others from Johnson Motors deserve a big thanks from all of us members. Bill Rose was the person who made everything go so smoothly.

Biggest thanks of all goes to those 51 members who loaded car, boat motors and journeyed to the meet. We hope that these photos show what a wonderful time we had, and make you want to come to the next one. It will be bigger, better and even more fun. The big question is when? Should it be held in Summer '73 or Summer '74? Let Bob Brautigam know.

SUMMARY FOR THE RECORD

The first National Meet was held July 14, 15 and 16, 1972 at Smith Marine, Sequoit Harbor, Antioch, Illinois. The Manager of Smith Marine is Wayne Sanford whose warm hospitality added much to the success of the Meet. The races and other high speed events were held at Mr. Wonderful's Resort on Channel Lake. The site of the Victory Dinner was Steve's River Inn, located on the highway between Sequoit Harbor and Channel Lake. **-continued.**

The Meet was held, in part, in celebration of Johnson Motors' 50th Anniversary, 1922 to 1972, and again our thanks to Johnson Motors for their fine support in providing excellent photographic coverage, the trophies and good people for us to work with. The oldest sparkplug afloat trophy was provided by Champion Spark Plug Company.

Bud Toomey and Randy Beem took the professional pictures while advertising consultant Mr. Earl Hilligan made up the professional text for Johnson. Johnson Public Relations Dept. people on-site were Hal Stewart, Bill AuCoin and Wally Jones.

AOMCI on-site coordinator during Meet preparation was Bill Rose. The Registration Girls were Janet Brautigam, Pat Zipps, Jean Luce and Louisa Grubb. Presiding events judge was Bob Zipps assisted by Casey West, Les Stevenson and John Gould. The Meet Safety Officer was Bill Salisbury, while the Headmaster of the Special Racing School was Bob Thornton. Overall Meet Chairman was Dave Reinhartsen.

AOMCI people supplying photographs used in the preparation of the meet story "51 from 18" were Peter Economos, Les Stevenson, Janet Brautigam, Dave Reinhartsen and Dr. Walter Otto.

Our warmest appreciation to all!

Antique Outboarding is for the wives too - Gayle Salisbury

AOMCI NEW MEMBERS

J. Daniel Techentin
4111 Grand Prairie Road
Kalamazoo, Mich 49007

David M. Bono
2 North Drive
Westerly, R.I. 02891

S.A. Westrom
Rt 3 Box 618B
Olympia, Wn 98506

John L. Erion
5562 S. Buner
Hinsdale, Ill 60521

Robert W. Leamy
1520 Richard Drive
Westchester, Pa 19380

Warren L. Wagner
2080 Shopiere Rd
Beloit, Wisc 53511

Karl J. Windberg
335 Pioneer
Waukegan, Ill 60085

Frank L. Schultz Jr.
RR 5 Box 144B
93-3rd Av Antioch, Ill 60002

Duane Wolf
1615 Wilson Court
Zion, Ill 60099

Bill Tenney
Crystal Bay, Minn 55323

Tom Johnson
Milwaukee Sentinel
Milwaukee, Wis 53201

Thomas E. O'Rourke
257 Cedar Pine Drive
Glastonbury, Conn 06033

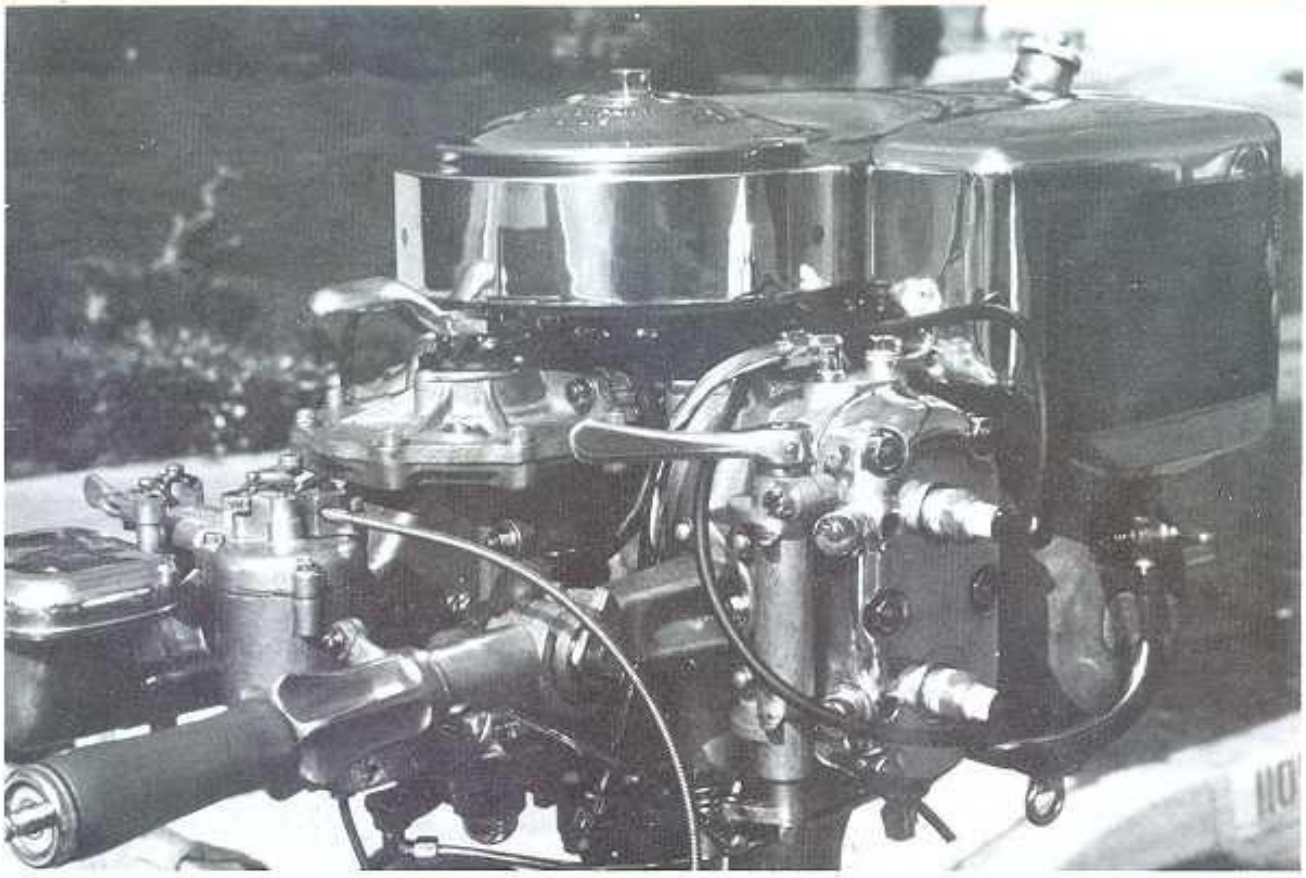
J. Allen Miles
427 Oakmont Lane
Charleston, S.C. 29407

Gene Crook
20394 San Miguel
Castro Valley, Cal 94546

Everette F. Hunnicutt
228 E. McKinley Street
Owatonna, Minn 55060

The Antique Outboard Motor Club Inc.

Publishing Office: 2316 West 110th St., Bloomington, Minnesota 55431



AOMCI 7TH YEAR