

The ANTIQUE OUTBOARDER



Sandy Simmons, Antique Outboard Queen, Dick Jones, undisputed winner of most everything, and Dave Reinhartsen, President of the Antique Outboard Motor Club. The picture was taken following the Dallas Meet.

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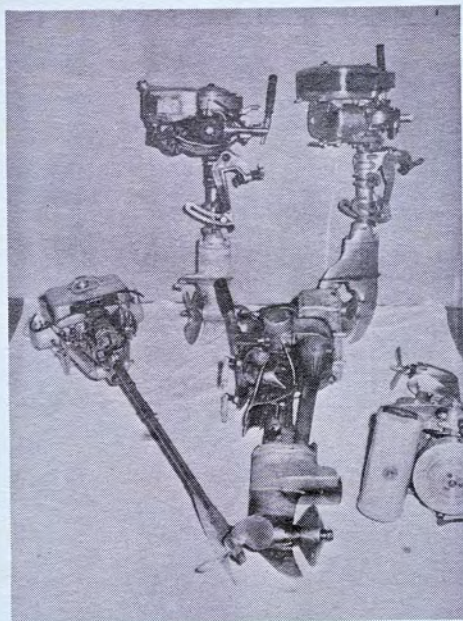
The Antique Outboard Motor Club

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THE PARSONS COLLECTION



Johnson A-45
Caille Liberty Twin
1930 EItto

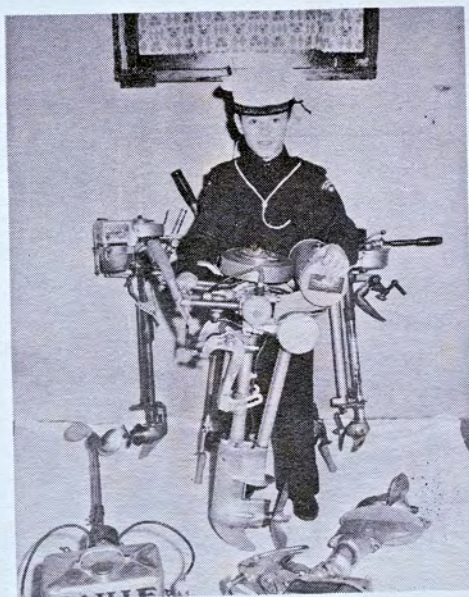
Johnson KA-37
Johnson OA-55



Charles Parsons and chief mechanic.

John Parsons and the OA-55 Johnson which backfired in his face.

Debbie Parsons, Charles Parsons, and OA-55 Johnson.



INCORPORATION HONOR ROLL

The following have contributed toward our Incorporation Fund:

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Anthony Cagalone
Lloyd C. Craver
Charles Gurney
John Harrison
Dick Hawie
Charles Kunapfel
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Fred Lucas
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The Antique Outboarder

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Outboard Motor Souping

W. J. Webb

I don't know much about souping before 1926, because I wasn't around the outboard business until that January. All I can say about what happened in the 'teens and early 'twenties is what Ole Evinrude and his brother-in-law, Rob Cary, told me. Rob was Service Manager then.

Probably the first big time outboard race to be held in this country was sponsored by the Pewaukee Yacht Club at Pewaukee Lake, some 20 miles west of Milwaukee. Pictures available indicate that there were 18 or 20 entries. Boats were all of the easy rowing, round bottom, displacement type of that time. The pictures show the motors were the old single cylinder Evinrude, 1-1/2 horsepower; real high speed jobs they were, too. A real greyhound would turn 1200 RPM. Most of them hit around 1000 RPM.

There was one elated and exultant winner, his name long forgotten, and a number of disappointed losers. Ole Evinrude told me that early the very next day, he was visited by a couple of the boys who begged him to tell them what they could do to increase their chances of winning the next race. And so the fun began.

Ole said that if he had known what he was starting, he would have kept his mouth shut. But he recalled that he told the boys to sharpen the edges of the propeller blades, cut holes in the mufflers, and run the motors a lot to be sure they were well run in. He also told them that their greatest chances for improvement lay in proper trimming and loading of the boat and motors, with a real slicking up of the bottom. "Make 'em as slick as a racing sailboat bottom", he told them. These boys fought it out for first place the next Sunday. More of the boys visited Ole.

The racing bug had bitten some fellows with sound, if unschooled, engineering ideas about increasing power and speed delivery.

It was Johnson which brought the real awakening of the outboard racing game. In 1925, Johnson briefly removed the wraps from their Big Twin and achieved the impossibly high speed of 16.15 MPH, thus unveiling the modern outboard racing game.

The first step was to remove mufflers. This did away with the back pressure present in the highly restrictive mufflers. While this increased power and speed, it was later found that complete exhaust relief actually reduced power slightly from the achievable peak by permitting over scavenging, which resulted in expelling of more unburned gas and air mixture than necessary or desirable. This also led to some nice fires since some of the boys weren't too careful with how they handled gas or where the exhaust ports were pointing, especially in a turn. Streamlining and polishing of lower units, filing propeller edges, and filling spaces between gear housings with washers came at the same time.

Then, someone took a look at the parts of the motors. Light parts take less energy to turn than heavy parts, and the boys began to drill out flywheels and chisel away on pistons, connecting rods, crankshaft cheeks, etc.

At the same time, Johnson and Lockwood went to aluminum pistons, permitting a sharp increase in engine speed and power. Evinrude and Caille followed at once. To illustrate the advantage of aluminum pistons over the then conventional iron, the 1928 Elto Quad with iron pistons turned between 3500 and 3750 RPM. The same motor with aluminum pistons turned from 4000 to 4300 RPM.

Drivers who had access to, and had the money to hire expert machinists, began to increase compression by planing off cylinder skirts and/or crankcase cylinder faces, as well as filling in cylinder heads by spot welds or brazing. This led to all kinds of trouble along with increases in speed. Many a cylinder flange, planed too thin, broke. Many a piston or cylinder burned. Many a connecting rod buckled and broke, and many a bearing both on crank and piston pin gave up the ghost. Until prohibited by rules, cylinders were bored out and oversize pistons installed.

Mostly, it was cut and try without much pre-experimental thought or analysis. The boys began to fill crankcases with everything from plastic wood to welds in the hope of increasing volumetric efficiency. The plastic wood usually came loose and wrought havoc. The welding, if properly cleaned up and not overdone and if arranged to insure even distribution to both cylinders, sometimes helped, but not often.

Early in the game, exhaust and by-pass ports were drilled out or widened. By-passes were cleaned out, polished, and in some cases filled in the hope of decreasing effective crankcase volume, permitting the by-passing of more gas and air mixture. Intake ports and manifolds were cleaned up and out, polished, and sometimes replaced by manifolds of the driver's own design. I remember seeing one exaggerated V shaped intake manifold which extended outward from the motor at least a foot. It was a nice looking job, polished like a mirror inside and out. The driver got nowhere.

Until prohibited by rules, drivers began to install special carburetors, some of American and some of foreign make. Some of these worked better than the original equipment and were adopted by manufacturers.

All of this work was designed to get more burnable fuel and air mixture to the combustion chamber, where more troubles happened and fast. Spark plug preignition broke out in a rash. Pistons burned. Champion spark plug came to the rescue the best it could, followed by others. But at first the plug companies and manufacturers were treating symptoms, not causes. Colder plugs were developed and brought some relief from burning, but woe to the man who didn't get his motor started right away or had to idle it too long. He fouled out, and the only remedy was to change or clean the plugs.

Then came careful balancing of all parts, one side against the other. Some of the boys who could afford it had their motors dynamically and statically balanced. Walt Everett, who did about as well as anyone in racing in the 20's and 30's, told me that he and George Coleman had their motors balanced every which way. But he couldn't say that performance was much improved over a good static balance.

Caille Motor Company led the way among outboard manufacturers in working on propellers. The later Henry Masoner of Cailler used to sit up nights filing, balancing and shaping props. At the National Championships in 1928, Ben and Genevieve Atwood, those scrappy little redheads, showed up with real toothpick props developed by Masoner and made a great showing. Michigan Wheel Company helped a great deal. Prior to 1928, outboard propeller pitch and balance didn't get much attention. This is still a most important and not-too-well understood part of any outboard driving mechanism.

About 1927, drivers began to realize that factory finishes, while adequate, could be improved upon. The practice of lapping all parts of motors, especially the power-head began. The favorite compound was Bon Ami and oil. The motor had to be cleaned carefully afterward because the Bon Ami tended to collect under the piston rings. More than one engine came to grief with Bon Ami caked under the rings.

Some drivers attempted to chrome plate crankshafts, piston pins, and cylinders. By and large, this was not successful since the platers of those days did not have the equipment or knowhow of today.

Boat builders helped a lot. Step planes came on the scene in 1927, and made possible the fullest speed development with powers then available. The first step planes were open boxes, but soon designers with airplane experience recognized the drag of an open box at 20 miles per hour and closed in the front of the cockpit with a more or less streamlined hood which, besides looking good, decreased wind drag and increased speed. The sharp boys did all sorts of things to keep the boat bottom slick. Bottoms were carefully varnished, sanded, steel woolled, and rubbed with flake graphite. All sorts of fancy bottoms were designed.

For a while, strips of wood which were supposed to act as runners were in vogue. Planing angles of all sorts were tried. Ventilators were installed to cut down on the suction at the step. In 1929, one boy showed up in Detroit at the Harmsworth regatta with oilers installed at the step. The oilers were supposed to break surface tension. The only trouble was that he had not tried it out previously. The oil collected in streaks on the rear step, changed the performance characteristics of the boat and slowed him down greatly. Another boy showed up at Madison in 1928 with a two step boat with both steps facing forward. It was revolutionary. It ran slightly slower than a barge.

As far as I can recall, fuel, other than ordinary gasoline and oil, did not appear until 1928. Then some wild ones came out. The first to be tried was ether. Many a cylinder was lifted off the crankcase by an overdose of this little understood fuel. Alcohol combinations came next. Benzol was used to cut the alky so that it could be mixed with gasoline. A number of eastern drivers began to use compounds with TNT. Casing head gasoline, which could only be bought in sealed cans, was widely used for a time. Later on, DuPont's Dynax took over the fuel market, but in the 20's there were scores of secret and private fuels. Quite a few of the boys had little bottles, the contents of which would be added to the tank. Some of them were pretty smelly. I don't know how much good they did. Eldon Travis set a world time trial record of 41.748 MPH with straight gas and oil in 1928. And he was up against some hot fuel users. Ralph Harrington won the Free-for-All at the National Championships in 1928 with straight gas and oil. Bill Frey won the Class D Nationals that year with the same.

As is usually the case with a new idea, there were some pretty funny occurrences. Some of the boys thought surgical ether would do just fine. Others tried to mix ordinary drinking alcohol with gasoline. It won't mix.

It is, or should be, an engineering axiom that when trying to improve a product's performance, only one new thing should be tried and evaluated at a time. But back in the 20's, we were all prone to try more than one new thing at a time. So if there was an improvement, what really caused it?

Here and there was a driver who knew exactly what he had to start with - the accurately timed speed over a measured distance, the RPM, and exactly the combination which produced the known result. So he went to work cutting and trying, but just one thing at a time. Those boys made the greatest contributions.

Quite probably, more motors were ruined by souping than were helped. Some of the work was very crude. Most of the souping ideas were unsound. There were break ups by the score. But the good work and the good ideas succeeded, were adopted and copied, and thus helped the outboard industry become what it is today.



Bob Eiring and son, Rob, have built this step boat according to 1929 plans in order to run their restored 1928 Elto Quad.

THE SEATTLE MEET



The engines on display at the meet - people on display, left to right: Mrs. Seibel, Doug Wickel, Rob Eiring, Bill Kelly, and Bill Seibel. Ken Shaver is in the "Bananna Boat" working on his 1940 Handitwin..and working.. and..and.....

Rob Eiring and Bill Kelly take a spin in the step boat with Bill's 1929 S-45.



Doug Wickel is the butt of some good-natured ribbing as he dons his "Antique outboarding" goggles and hat.



Doug Wickels' "J" wouldn't run. Will too many cooks spoil the broth? That's Mrs. Bill Seibel in the club sweatshirt. "Hardware" in foreground.

Yep! Doug is towed in by Bill Seibel with a 1934 Sea King single.



Part of "The Pits" at the '68 Meet. S-45 on the stand, "PO" Johnson on step boat, '34 Sea King on Bill Seibel's boat.

TWIN CITIES CHAPTER PICNIC OUTING

R. W. Brautigam

Looking back, I can only laugh. The planning for September 8 promised a day of getting acquainted, boating, outboard display and family picnic fun.

Rau's Resort on Prior Lake where the Twin Cities Chapter of the Club had its fall outing includes a sheltered cove for boat launching, a picnic grounds on a point overlooking the lake, a tackle shop and a small tavern. The small tavern proved to be a popular place.

I know John Koonce worked almost steady for three days on his Elto Quad - getting only three or four hours sleep a night. John suffered several setbacks - stiff cranking, spark trouble and a cracked gas tank - more tough luck than a fella needs just before a meet.

Even myself, with all preparation done a week early, at the last minute discovered a cracked intake manifold on my direct drive Gopher. A quick change of manifold and carburetor was followed by an anxious hour of hand-spinning the fly wheel to determine the exact needle valve setting. Like most early Evinrudes, the Gopher needle valve position needs gnat's eyebrow fine tuning before the engine will run at all. My right arm is still sore.

I suppose we all had our problems getting ready. Bob Peterson brought a nice 1914 Model B Evinrude. Don Carlson brought his Elto Cub and Model N Evinrude. Ron Johnson brought a dandy 17 HP Sportfour Evinrude and a business-like OK 65 Johnson. John Koonce brought his 1928 Elto Quad, and Elto Service Twin, a Model OA 65 Johnson and his boat. I showed up with a 50 HP Big Four Evinrude on an aluminum ski boat, a P0-15 Johnson on a molded plywood runabout and 5 smaller motors, a 1929 Lockwood Chief, a 1930 2 HP Gopher, a 1935 Champion Single, a 1923 Johnson and a 1915 Model A Evinrude. At last all the preparation, the motors, the boats, the picnics, the friends, the relatives and the Press were ready.

Promptly at 2:00 PM it rained; sometimes hard, sometimes drizzle, but all afternoon it rained.

Some of us got to know the inside of the tavern pretty well. Others spent a couple of hours in their cars with the kids and their picnic lunch. At 3:30 PM, the rain changed to a mist. Inspired, John Koonce cranked up his OA Johnson which proved to have a little rod clatter while Ron Johnson started his Sportfour and I got the P0 Johnson underway. We proved the Sportfour with two passengers is a little faster than the P0 with three passengers. At least it appeared so through the rain.

We also proved that "old salts" with spray in their faces can't compare with dedicated antique outboarders in a mist which turned into a driving rain while we were

in the middle of the lake. Later we discovered a Big Four Evinrude, after standing in the rain for three hours, can run in a circle on two cylinders for as much as 15 rainy, wet minutes before the other two start firing. This tends to produce lots of exciting blue smoke too.

Of the nearly 2,000,000 people in the Twin Cities area, we had one spectator. Actually, I think he was more interested in displaying a small 3 HP antique inboard engine which was in his automobile trunk. Many of the outboards brought to the outing never left their owner's auto. In lieu of setting up a display, our group just passed from one trunk to another.

Most of us got soaking wet from the rain, and cold from the 58-degree temperature; but in the sanctity of the small tavern, we decided the Twin Cities Chapter would meet regularly beginning in October. We hope to stimulate our own outboarding interest and make the hobby a richer, more rewarding association for each of us.

Our thanks to the patient kids, relatives and friends who worked and endured along with us. Our special thanks to the wives who prepared the food and managed to keep smiling all afternoon. I guess the old outboard spirit is pretty strong since we all decided it would be fun to have another outing some warm, sunny day.



I DON'T THINK THEY GIVE TROPHIES FOR THIS

EVINRUDE - ELTO CUB MODEL 4624

Jim Smith

The Sensational, New ELTO "CUB"

The World's Lightest, Handiest Outboard Motor
... Weighing only 8½ pounds... operating for
less than 2¢ per hour and costing only \$29.50.

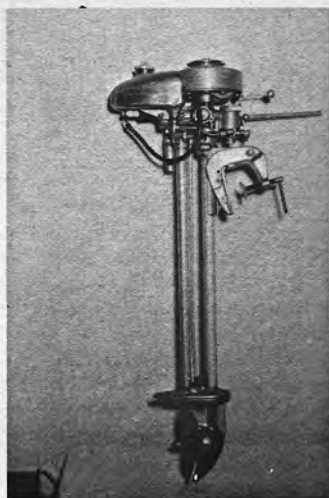
The new "Cub" is so light you can lift it with one fingered ease, but the instant it is clamped on the stern of your boat you can quickly outpace the most energetic carsman... travel in speed and comfort to distant fishing grounds... steal softly along at trolling speed... or maintain an hour-after-hour speed of from 4 to 4½ miles an hour with a good sized boat... at a cost of less than 2¢ per hour.

The "Cub" starts so quickly and easily that you are underway almost before you realize it. It is amazingly quiet, with exhaust noises and fumes discharged into the wake of the boat. Simple controls give finger-tip ease of operation... a child can quickly become an expert at running it. All in all, the "Cub" is the biggest bargain in outboard motor values.

With this glowing description in its 1939 folder the Evinrude Motor Company presented the new lightweight "Cub" to the boating public. Numerous attributes including portability, economy, ease of operation and low initial cost (\$29.50) made what appeared to be a very attractive outboard motor. High hopes prevailed for substantial sales. After all was this not the ideal motor for fishermen, youngsters and in fact all boating individuals active in the small motor field?

Alas! Instead of the solid response anticipated, the motor drew only amused glances and serious buyers were few. Undaunted, the Evinrude Company submitted the "Cub" in its catalogue the following year, 1940, and then it was dropped quietly and ignominiously.

The reason for its failure was apparent from the first and could be summed up in one word—performance. In short, the people were interested in buying an outboard motor, not a toy. If the favourite spots were distant,

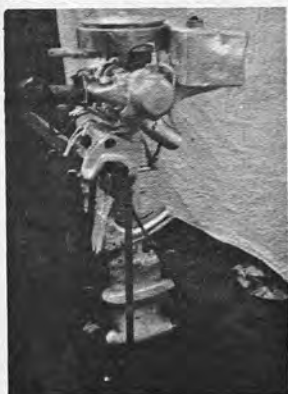


the fishermen were not prepared to spend the greater part of their time getting there and back. Other boatmen found at times little or no headway could be made in the face of a wind, particularly in a loaded boat. The little egg beater on the transom was definitely underpowered for almost any boating task.

Of course it was never intended as a super performer. A single cylinder motor with a bore of one and one-eighth inches and a stroke of one inch, it had a piston displacement of only one cubic inch and developed $\frac{1}{2}$ NOA certified brake horsepower at 4000 RPM. Although it weighed only $8\frac{1}{2}$ pounds the manufacturer claimed speeds of up to 4 or 5 miles per hour on average light row boats. The endurance was surprising. With a full tank containing one pint the motor would run about an hour and fifteen minutes or ten hours on a single gallon of gasoline.

Turning to features of construction we find that the "Cub" had an aluminum alloy cylinder with grey iron sleeve and copper lined cooling jacket. Its piston and connecting rod were also of aluminum alloy. Magneto ignition was provided and a float feed, check valve carburetor with lever fuel adjustment for the mixture. Bronze gears were used in the underwater unit.

From a practical standpoint, the "Cub" was an exercise in futility. For the collector however, it is a natural, being undoubtedly one of the smallest and lightest outboard motors ever made. For a novelty and startling contrast one need only place it beside one of the monsters of 100 H.P. plus being made to-day. And of course when it comes to a trip the driver of the "Cub" will get there too --- like maybe next year!



Two views of Don Peterson's 1928 Speeditwin, and (center) his Model 310 Senior Speedster.

THE DALLAS MEET



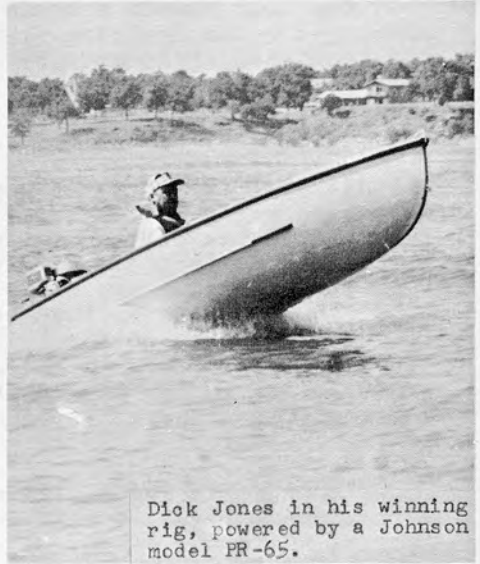
Innovation at the Dallas meet - A Le Mans start Bang and Go Back race.



Carole Reinhartsen holds the boat while husband Dave hopes to catch Dick Jones.



They're Off-Dave Reinhartson
in the lead, followed by
Dick Jones and Dan Richter.



Dick Jones in his winning
rig, powered by a Johnson
model PR-65.



Victory Dinner at
Cattlemans Restaurant.

NOTES FROM THE CURATOR

Oh, that ARGOSY article! Since June 20 when the fat little envelopes began arriving from our Texas President, I have answered 302 inquiries about motors. Some had more than one motor that they wanted identified, so I have really had an exercise in identifying motors. I think that I can quote model years and horse-powers in my sleep.

If just 10% of those who have written join the Club, it will have been worth-while; but I am not too optimistic. Unfortunately the article was written in such a way that everyone with a battered old Waterwitch suddenly sees gold in that old piece of iron. I don't know which was worse -- the mention of \$500. as the value of a Johnson TR-40 or the picture of the TR-40 with nothing near it for comparison in size. That \$500. kept flashing in people's eyes, and owners of Model A Johnsons (2½ HP weighing 35 lbs.) wrote secure in the hope that they had a Giant "\$500." Twin. Even Johnson PO-15's were mistaken for TR-40's, and they are at least 10 years newer!

In an early issue I gave my thoughts in length on motor prices and values, so I'll just say quickly that I consider \$500. for any old motor as not only unreasonable, but utterly ridiculous.

I haven't tried to run my Johnson Giant Twin yet, so I am not as critical of it as Jim Smith was in the July issue. I must admit though that I would be tempted to take off the coil heels and run it on battery ignition.

The 1928 Johnson catalog I have lists a model T-40 and TL-40 as well as the TR-40. Whether they were produced or not I don't know. The picture in the catalog as well as a picture in the February, 1928 MOTOR BOATING Magazine does not show a release charger on either cylinder, yet the Giant Twins I am familiar with all had release chargers. The carburetor which was called a Model T carburetor was used on some PR models. I have a PR-50 with one fitted on, and there is a picture of Mulford Scull with a PR with a Model T carburetor in the April, 1931 RUDDER Magazine. I wonder what would have resulted if Johnson had put a rotary valve on the Giant Twin and shortened up the fuel passages with ported pistons like the PR-50's?

Incidentally, the catalogs put out by Johnson in 1927 and 1928, the only ones I have, were very good. They even included horsepower curves for the various models. There was a curve for the motor fully equipped and one for the motor with hot air tube removed and the muffler cutout open. The figure 25.75 HP for the Giant Twin was for the motor in racing trim, in other words, without hot air tube and with muffler off. Curiously some of Johnson

1928 motors are listed in the service manual with horsepower figures in racing trim and some fully equipped.

Although I've mentioned it before, I keep running into Johnson motors that aren't the model you think they are, so I think that the subject bears some repetition. The problem is that the model and serial number of Johnson motors was stamped on the rope sheave on top of the flywheel. The serial number was often stamped on the crankcase too, but the model number was not repeated anywhere on the motor. Unfortunately these rope sheaves are interchangeable from model to model and from year to year in many cases. Of the Johnson motors I am familiar with more of them than you might suspect have wrong rope sheaves on. For instance, it is not unusual to find a four cylinder Johnson with a sheave reading S-45 #112757. Now the S was a two cylinder model, so that a four cylinder model can't be an S-45; but what happens when you run into a two cylinder motor with a sheave that says model P or S, both of which are two cylinder motors? The first thing I suggest is check that the serial number on the rope sheave is the same as the serial number on the crankcase which is usually on the starboard side of the case right near the cylinder. The only Johnsons I've run across without the serial number there had welded crankcases; in which case, you have a damaged engine. Beware and bargain for a lower price. If the numbers check, you're O. K.; if they don't, you're going to have to be a detective.

While it may be repetitious to older members and the Johnson experts, let's delve a little deeper into the Johnsons again. The opposed cylinder Johnsons can be divided into three port models, external rotary valve models, and internal or crankshaft rotary valve models. Johnson used a letter and number model system. The letter designated the model and usually the number the year. Some models were produced in more than one year with the same number, especially if the model was not changed any. For instance, the PO-15 was produced from 1941 through 1950 excluding the war years when no civilian models were made.

From 1922 through 1928 all Johnsons were three port models. These are easily spotted because the carburetor is mounted directly on the crankcase. Models produced in 1928 were A, K, P, T and the single cylinder J. In 1929 Johnson made four externally geared rotary valve models -- the two cylinder S-45 and SR-45 and the four cylinder V-45 and VR-45. The R in all cases was a racing model. The external rotary valve is mounted on the crankcase and the carburetor mounts on it. The models A-45, K-45, P-45, T-45 and J-25 were also made in 1929; all were three port engines. The 1929 rotary valve engines were all full speed valves. The gear on the crankshaft and the gear on the rotary valve had the same number of teeth and ran at the same R.P.M. The gear case measured about $4 \frac{3}{4}$ inches in diameter.

There is no problem telling the three port models from the full speed rotary valve models; the problem comes when you try to tell if you have a racing model or a service model. The VR and SR did not have underwater exhaust. They had the familiar Johnson

muffler and a short exhaust pipe which was water-cooled. The lower unit on the VR and SR did not have a hole for the exhaust pipe. But you may have a racing power head on a service lower unit (They were interchangeable) which the previous owner had had done so that he wouldn't have the sheriff chasing him for excess noise. All is not lost for you can check two more things. The racing pistons had two rings, the service pistons three rings. The external gear on racing models was steel, the gear on service motors was fiber. You can check on the material of the rotary valve gear by taking out the large flat screw on top of the gear cover. You can look in on the gear then. The screw hole is there for setting the valve timing, but it makes it easy to see if the gear is steel or fiber.

Still with us? 1930 gets real confusing. The depression really mixed up the stew. The service models S-45 and V-45 were continued through 1932. Some 1932 models of S-45 and V-45 had Vacturi carburetors; otherwise, they were the same as the 1929 versions, and they were called S or V-45 through 1932.

Now in 1929 when Johnson made these two new models they made it easy for us collectors because they used new letters for the models, ones they hadn't used previously, S and V. There are 26 letters in the alphabet, but Johnson stuck to those six letters even though they produced three new, entirely different models in 1930.

Pre-1930 A and K models were opposed piston three port Twins. In 1930 Johnson made two alternate firing Twins with internal rotary valves -- a four HP and an eight HP model, but they called them A-50 and K-50. Even the bore and stroke of the pre-1930 A and K's were not the same as the post-1930 A and K's. The life of a motor identification specialist is not an easy one. If only they had used N and M! So an alternate firing Twin is post-1930 no matter what the name plate says.

In 1930 Johnson produced another external rotary valve which ran at half crankshaft R.P.M. -- the so-called half speed rotary valve. The gear on the rotary valve has twice the number of teeth as the crankshaft gear. The gear housing is about $6\frac{1}{2}$ inches in diameter so it's easy to tell a "half speed" from a "full speed" rotary valve; the half speed is much bigger in diameter.

Then to continue our tale of woe, they built a brand new opposed Twin, 2 $\frac{3}{4}$ " bore, 2.52" stroke, of 30 cubic inches displacement; and they put this half speed rotary valve on the motor and called it P-50! Of course, the pre-1930 three port P's had nothing in common with the P-50 and later models; but then even the three port P's, P-30, P-35 and P-40, had different bores and strokes.

The half speed rotary valve was also put on electric starting models PE-50, SE-50 and VE-50. As far as I can determine the half speed rotary valve was not put on rope start models V or S so that

there were no V-50 or S-50 models without electric start. The crankcase for a half speed rotary valve is different from the crankcase for a full speed rotary valve so that it's not just a case of a numbers game. The V-45 differs from a VE-50 in more than the electric starting feature.

The half speed rotary valve was also fitted on racing versions of the S, P and V models. There was an SR-50, SR-55 and SR-60, a PR-50, PR-55 and PR-60, and a VR-50 and VR-55, but no VR-60. Externally it is hard to tell a 50 from a 55 or 60 racing model; the differences were internal. The 50 had bronze bearings while the 55 and 60 had ball and roller bearings, but you can't usually discover this unless the owner will let you tear the motor down. That doesn't happen too often.

Some of the early VR-50's had dual carburetors - hence a different rotary valve. This is an extremely rare motor; perhaps they were all updated with single carburetor rotary valves. There were quite a few of them pictured in the boating magazines of the early 30's and they are something to see. With those twin air horns they looked like a Paul Bunyan size shot gun. The carburetors used were the standard Johnson barrel valve carburetor; later models used the Vacturi carburetor. The VR-50 was the only dual carburetor model that Johnson ever made.

The Sea Horse "50" which was called model XR-55 is probably the rarest of Johnson models, though I know of three still in existence. This is the 50 cubic inch Class E racing motor which Bud Cowdery mentioned in the July issue. Racing articles of the era cause confusion because they sometimes referred to the Johnson Class F engine; this was actually the 50 cubic inch XR-55 which was raced in Class F when E and F were combined. To an official or reporter it ran in F Class, so it was a Class F engine; but it was actually a Class E engine in size. Johnson may have experimented with an F engine, but they didn't produce any for general sale.

Racing engines which were used much were often updated with factory parts or parts made by specialty manufacturers, and they become a special subject all their own. If you are lucky enough to meet Bud Cowdery, Buddy Streat or Bob Thornton at any of our meets, they can fill you in much better than I on the racing model variations.

Well, I've tried to cover the easily seen differences in the Johnson models through 1932. There are, of course, differences internally in the models, but you usually can't check on them til you have bought the motor; and then it may be too late.

In 1957 the first motor that I bought through the mail was a Koban owned by Mr. David V. Uihlein of Milwaukee, Wisconsin. It was a pleasant surprise to discover that Mr. Uihlein is listed among the new members in the July issue. It truly is a small world.

1936 neptune model OB-64

MARCUS WRIGHT

This interesting service engine was purchased new as a Christmas gift for Mr. James Hardie by members of his family. Mr. Hardie was a Senior Passenger Conductor on the Chicago, Milwaukee and St. Paul Railroad which ran between Des Moines and Spirit Lake, Iowa. His work schedule gave him a full day at Spirit Lake between trips, so this Neptune was used there for fishing.

Upon Mr. Hardie's passing in 1940, his sons, Lionel and William, used the Neptune on trips to Minnesota. In 1955, Mr. Hardie's grandson, Mark Hardie Koll, came into possession of this 6-HP motor.

Through an Intermediary, the writer was contacted by Mr. Koll who wished to have the Neptune preserved by a Collector or Museum. Received complete with Parts List and Instructions, but in inoperative condition, the Neptune was overhauled with some good used parts and a few new ones surprisingly obtained from the builder, Muncie Gear Works of Muncie, Indiana.

Upon testing this engine, we were pleasantly surprised at the power output of this rather small displacement 32 year old outboard. The reason is the crankshaft and propeller shafts are mounted in ball bearings. The Neptune pushed onto a plane an 11' Skimmar fiberglass cathedral hull weighing 165 pounds, plus operator, to an 8.37 MPH speed.

All of the larger castings are aluminum except the cast iron cylinders and detachable cylinder heads. The pistons are aluminum and equipped with two rings at the top and one on the skirt for better crankcase compression sealing. The connecting rods are bronze, offset. The crankshaft is forged steel.

The cooling pump impeller is located above the cavitation plate. The muffler runs dry and has two small relief holes in the main body, which results in quiet enough running in the boat and gives off a modest volume and healthy exhaust note when listening from the beach.

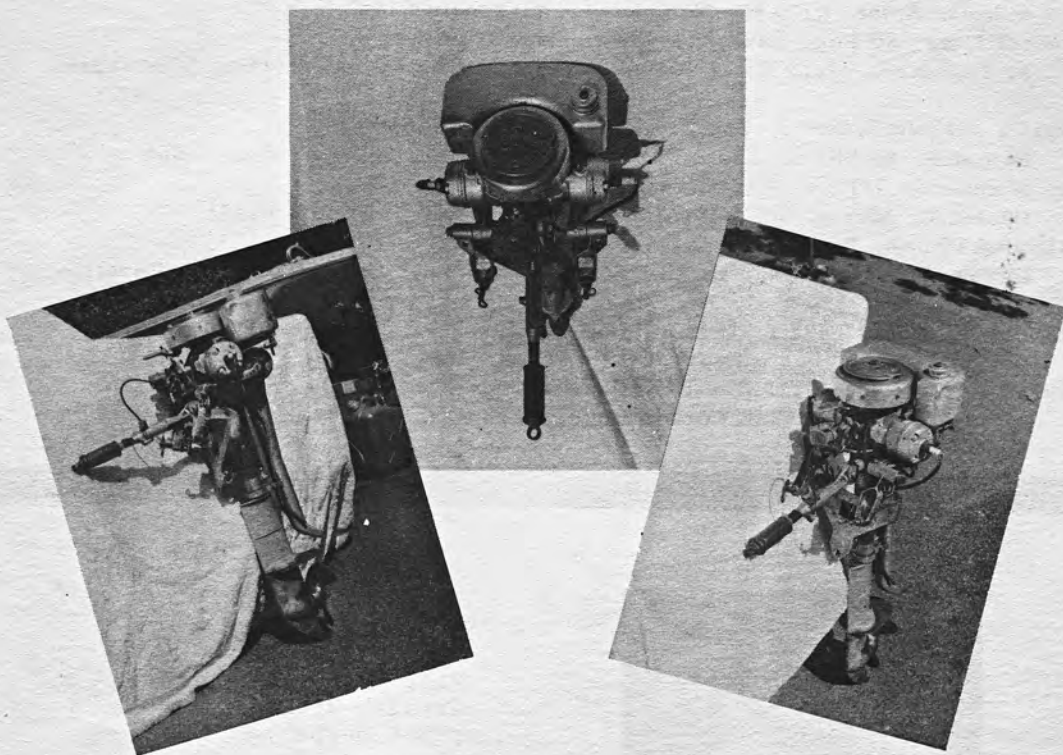
Modern engines have nothing on this Neptune for starting, as two pulls cold or one pull hot does the job. Idling is rough but reliable with the fixed carburetor idling yet. Acceleration to full RPM is not unlike a modern engine's due to those ball bearings. The Neptune runs wide open indefinitely without complaint.

Mr. Hardie's Christmas present must have been well received, as his hardy Neptune still shows excellent manners a third of a century later, 1000 miles from it's original home.

SPECIFICATIONS

1936 NEPTUNE, OB-64

Original Price:	\$89.50
HP and RPM:	6 @ 3400
Engine:	2 Cyl opposed, 3 port, simultaneous firing
Bore, Stroke, Displacement:	2-1/16 X 1-1/2; 10.0 cubic inches
Carburetion:	Tillotson MS45A, Float chamber, fixed idle and adjustable main jets
Ignition:	Eisemann 72A flywheel magneto, 0.20" point gap
Spark Plugs:	Champion 6M, 0.025" gap
Propeller:	2 blade aluminum 9" diameter X 9" pitch
Gear Ratio:	1-1/2 engine to 1 propeller
Weight:	53 pounds
Best Speed:	8.37 MPH
Slowest Speed:	2 MPH (estimated)
Oil/Gasoline Mix:	Average running - 2/3 pint to 1 gallon; Constant high speed - 1-1/2 pints to 1 gallon



NEW MEMBERS

Vernon R. Ahlstrand, 310 Sunset Court, Northbrook, Illinois 60062
Frances W. Branstiter, 15 Bass Circle, Boards Mobile Home Park,
Winterhaven, Florida 33880

T. M. Bliss, 4616 Crestview Road, Sylvania, Ohio 43560
Edward DuBrevil, 216 5th Avenue, Apt. 1, Kitchener Ontario, Canada

Robert Fachini, Sr., 3414 Sargent, Detroit, Michigan 48211
Edgar Fielding, 35 Ohio Avenue, West Springfield, Massachusetts 01089

John D. Gould, Jr., c/o J. D. Gould Co., 4707 Massachusetts Avenue,
Indianapolis, Indiana 46218

Thomas R. Hagloch, 209 NW 6th Avenue, Aledo, Illinois 61231

Harry L. Holden, Jr., 273 Burningtreet Drive, Groton, Connecticut 06340
Harry G. Ingersoll, Box 26, Bethel Island, California 94511

John Jensen, 62 Warner Street, Fords, New Jersey 08863
Neely Johnson, 3932 Gulfway Drive, Port Arthur, Texas

Richard H. Johnson, 141 SE Birch Street, New London, Minnesota 56273
Mike J. Kolat, RFD #2, Tomahawk, Wisconsin 54487

Vincent Loss, 60 Pond Lane, Levittown, New York 11756
F. H. March, Jr., Rt. 2 Box 678, (March's Point), Anacortes, Washington
98221

John F. Marshall, RR 3, Box 729, Walkerton, Indiana 46574
Daniel P. McIntyre, Rt. 2 Box 602, Asheville, North Carolina 28805

Ned Mohrman, 3719 S. Main Street, Akron, Ohio 44319
Donald R. Murin, 301 Hamilton Street, Lockport, Illinois 60441

Raymond Plumb, Buyck, Minnesota 55771
Edward P. Ryan, 1302 E. 14th Street, Apt. 2H, Greenville, North Carolina
27834

Charles R. Rymal, 922 S. Bishop, Dallas, Texas 75208
Elmer Sanduik, South Heart, North Dakota 58655

David L. Stanfield, Rt. 1 Box 109, Brawley, California
Elmer A. Wendt, 6248 Corwin Road, Lockport, New York 14094



Phil Kranz and a Clarke
Troller with adjustable
pitch propeller.

MOTORS FOR SALE

BENDIX- 1937, Mod SB, Ser 8A-6685,
 single cyl, runs, complete, Dennis
 Smith, 631 North 13th Street,
 San Jose, California
CAILLE- 1917 ?, Single Cyl, runs,
 variable pitch prop, Carlton
 Reed, Route 4, Coffeyville, Kansas
 (battery ignition)
CAILLE- Single cyl, runs, gas cap
 missing, Joseph Streb, 2637 Orchard
 Park Drive Northwest, Canton, Ohio
 44718
CAILLE- Liberty Drive, Single, coil
 missing, spoke in flywheel cracked,
 Glenn Wyville, 455 Lamson Avenue,
 Bedford, Ohio 44146
CAILLE- Mod 79, Ser SN2271, Single
 cyl, runs, complete, Russell Blevins
 520 55th Avenue Northeast, Saint
 Petersburg, Florida 33703
CAILLE- Opposed Twin, Mod 26001, Ser
 48678, runs, complete, Robert Sine,
 219 East Washington, Hartford City,
 Indiana 47348
CAILLE- Large opposed twin, Mod Kl-
 306, Steering handle missing, Fair
 cond, George Keleman, 19367 Braile,
 Detroit, Michigan 48219
CHAMPION- Ser SlF 26142, single cyl,
 runs, complete, good cond, Ray
 Runyan, P.O. Box 186, Bondurant,
 Iowa 50035
CLARKE- Ser TP 23315, Single cyl,
 coil missing, good cond, T.D. Cade,
 Box 186, Chandler, Texas
 75758
CLARKE- Ser F38 207 H, Single cyl,
 runs, complete, almost new cond,
 Gari Waldo, 24802 East Jefferson,
 St. Clair Shores, Michigan 48080
CLARKE- Ser T39 1457, Single cyl,
 runs, spark plug cover & clamp
 missing, R.K. Stephens, 602 1/2
 Court, Bedford, Iowa
CLARKE- Ser TP 39 1531, Single cyl,
 complete, good compression & spark,
 Jerry Walker, 714 Avenue H,
 Lipscomb, Alabama
ELTO- Mod JA, Ser 7680, Opposed
 Twin, runs, complete, has rudder,
 Donald Lemmerman, 36 South 6th St.
 Sauk Rapids, Minnesota 56379
ELTO- Mod A, Ser 10582, opposed
 twin, runs, complete, fair cond,
 Joseph A. Smith, Taylor Avenue,
 Wyalusing, Pennsylvania
ELTO- Mod C, Ser 24824, opposed
 twin, gas cap missing, should run,
 Roy P. Jensen, 4 Joan Avenue
 Novato, California
ELTO- Mod G, Ser 31128, opposed
 twin, complete, runs, fair cond,
 Harold E. Weiss, One Armstrong
 Avenue, Wilmington, Delaware
ELTO- Mod G, Ser 36892, opposed
 twin, complete, runs, good cond,
 J.H. Orr, 126 Trelawne, Sault
 Ste Marie, Ontario, Canada
ELTO- Mod G, Ser 37127, opposed
 twin, complete, runs, good cond,
 Dennis Caruthers, Rt. 4, Box 103,
 Edgerton, Wisconsin
ELTO- Mod E, Ser 38598, opposed
 twin, complete, runs, very good
 cond, M.W. Keith, 2946 River road
 West, Minneapolis, Minnesota
ELTO- Mod J, Ser 47725, opposed
 twin, should run, complete, good
 cond, J.R. Jolley, 11630 Genesee
 Street, Alden, New York
ELTO- Mod J, Ser 50076, opposed
 twin, complete, runs, good cond,
 David M. Griffith, 118 Myrtle St.
 Stroudsburg, Pennsylvania
ELTO- Quad, Ser 73516, 1928, 18
 HP, Mechanically excellent, has not
 run in 25 years, Donald Mathews,
 2117 Grant Avenue, Rockford, Ill.
ELTO- Ace, single cyl, Ser 102017,
 runs, complete, good condition,
 George W. Wallace, 1208 Seminole
 Drive, Fort Lauderdale, Florida
ELTO- Ser 4091, Ser 5246, single
 cyl, motor frozen, Loyd's Garage
 113 North Monte Vista, San Dimas
 California
ELTO- Mod 4203, Ser 0457, single
 cyl, motor frozen, complete, R.H.
 Larimore, 389-P Avenida Castilla,
 Laguna Hills, California
ELTO- Mod 4145, Ser 01294, single
 cyl, runs, complete, good cond,
 William F. Rainey, Jr., Box 24
 Columbia, Tenn.

MOTORS FOR SALE

ELTO- Pal, Mod 4203, Ser 05538, single cyl, runs, almost new cond, Alvin L. Jensen, Rt.1, 1791 Norns Corners Rd., Cedarsburg, Wisconsin
 ELTO- Mod 4264, Ser 05098, single cyl, runs, complete, good cond, J.M. Webb, Star Route Box 306A, Jacksonville, Florida
 ELTO- Mod 4301, Ser 04259, single cyl, runs, complete, fair cond, S.F. Taylor, Route 1, Box 64, Westville, Okla. 74965
 ELTO- Fleetwin, Mod 4335, Ser 01414, opposed twin, runs, complete, almost new, LaMont B. Anderson, 2003 Limekiln Pike, Dresher, Penn. 19025
 ELTO- Mod 4351, Ser 06406, single cyl, runs, complete, good condition, I.G. Brady, 116 East Hamilton, Edwardsburg, Michigan 49112
 ELTO- Mod A, Ser 9878, Opposed twin, runs, needs coil, fair condition, William Rainey, 1203 Gable Road, Saginaw, Michigan 48601
 ELTO- Mod J, Ser 46472, Ser 46533, two motors, opposed twins, both run, both complete, T.M. Devine, 215 South Jackson, Pierre, South Dakota
 ELTO- Mod 4266, Ser 13506, Single cyl, runs, complete, good condition, Robert Windgassen, 29 Sherman Street, New Hartford, New York 13413
 ELTO- Ace, Mod 4301, Ser 04192, Single cyl, runs, complete, good cond, A. Gray Baker, 1542 East 55th Street, Cleveland, Ohio 44103
 EVINRUDE- Row Boat Motor, Mod K, Ser 1418, should run, complete, has rev'se, Donald Casler, 116 Richmond Road East, East Syracuse, New York
 EVINRUDE- 1915?, Mod E, Ser 7087, single cyl, runs, complete, good cond, Robert Frederick, 504 North Cedar St. Luverne, Minnesota
 EVINRUDE- 1915?, Mod ?, Ser ?, runs, complete, (poor info, but this must be a rowboat motor), Jack O'Connor, 1025 Elizabeth Rd., Winnipeg, Manitoba, Can.
 EVINRUDE- Row Boat Motor, Mod A, Ser 92543, runs, complete, good cond, Cartier Oil Company, 901 East Tinkham Avenue, Ludington, Michigan
 EVINRUDE- Row Boat Motor, Mod A, Ser 118688, Mint Cond, has never run, George Hehner, 1714 Kimball Street, Brooklyn, New York
 EVINRUDE- Row Boat Motor, Mod A, Ser 123973, runs, good condition, Robert C. House, Box 36, Montgomery Creek, California
 EVINRUDE- Mod R, Ser 1368, opposed twin, runs, complete, converted to battery ignition, Harold Morgan, Box 204, Anthony, New Mexico
 EVINRUDE- Mod TU, Ser 529, opposed twin, prop & gas line missing, Grant Todd, Box 45, Auburn Lake, Clementine, California
 EVINRUDE- Mod NS, Ser 6102, opposed twin, runs, converted to battery ignition, John Barnes, R.R. 2, Wagoner, Okla.
 EVINRUDE- opposed twin, Mod ?, Ser ?, (# given is 10H574?? sounds like part #) complete, Leo Chase, 8067 Sheridan Road, Kenosha, Wisconsin
 EVINRUDE- Scout, single cyl, Mod 201, Ser 00650, runs, complete, Mrs. Ben Luebke, 215 North Washington, Elkhorn, Wisconsin
 EVINRUDE- Mod 409-410, Ser 4093572, opposed twin, complete, good cond, Frank Ceustard, Box 162, Trumbull, Connecticut
 EVINRUDE- Mod 601, Ser 0169, opposed twin, runs, prop missing, good cond Rufus Kelly, 1002 Clay Street, Minden, Louisiana
 EVINRUDE- Mod 4145, Ser 01083, single cyl, runs, complete, good cond, C.E. Bewalda, Route 4, Box 635, Traverse City, Michigan
 EVINRUDE- Mod 4146, Ser 04248, single cyl, runs, complete, fair cond, E.J. Evans, 5513 Southwood Road, Little Rock, Arkansas
 EVINRUDE- Fisherman, Mod 4148, Ser 1320, opposed twin, runs, complete, good cond, Edward Helmann, Box 645, Dunsmuir, California
 EVINRUDE- Pal, Mod 4266, Ser 00095, a Single cyl, runs, complete, good cond, Paul Coleman, Box 4610 Yuma, Arizona
 EVINRUDE- FISHERMAN, Mod 4267, Ser 02241, opposed twin, runs, complete Lee Rickes, 108 Mountainside Lane Somerville, New Jersey
 EVINRUDE- Mod ?, Ser ?, approx 7.5 hp, opposed twin, runs, complete, Meredith Smith, RR 4, Fowler, Indiana

MOTORS FOR SALE

EVINRUDE- Pal, Mod 4266, Ser 11263, runs, complete, tank dented, Comp & spark O.K., Leslie H. Nelson, Mark Mobile Park, Leesburg, Florida
 EVINRUDE- Sportsman, Mod 4285, Ser 02532, Cingle cyl, runs, complete, broken skeg, Merrill A. Nixon, 725 North Davis St. Enid, Oklahoma
 EVINRUDE- Mod 4322, Ser 03748, 4 cyl, does not run, complete, fair cond, Gordon Motley, 5 Linden Street, Ipswich, Massachusetts
 EVINRUDE- Mod ?, Ser ?, 1938, 4 cyl, 5 HP, runs, complete, good cond, Willis Clark, 110 Benton, Boone Iowa
 EVINRUDE- Mod 4303, Ser 00578, twin opposed, runs, complete, Sportwin, Jap Reece, Star Route C, Box 77 Camdenton, Missouri
 EVINRUDE- Mod 4309, Ser 01107, twin opposed, runs, complete, good cond, Nelson Collins, 400 West 22nd Sedalia, Missouri
 EVINRUDE- Mod 4319, Ser 94530, 4 cyl, 9.7 HP, runs, complete, long shaft, Charles Knechtel, 3345 21st Street Southeast, Auburn, Washington
 EVINRUDE- Mod 4335, Ser 00931, twin, not original gas tank, runs, fair cond, William Comber, 4265 Luna Pier Road, Luna Pier, Michigan
 EVINRUDE- Zephyr, Mod 4359, Ser 01976 T, 4 cyl, runs, complete, good cond, Mrs. Marilyn Hartman, 516 7th Street, Camanche, Iowa
 EVINRUDE- Zephyr, Mod 4362, Ser 2372-0, 4 cyl, 5.4 HP, runs, complete, good cond, Achileas M. Doussa, 804 Cougar Drive, Arabi, Louisiana
 EVINRUDE- Speeditwin, Mod 6039, Ser 06336, opposed twin, runs, throttle handle cracked, Russell Steinle, 176 Kissel Avenue, Staten Island, New York
 EVINRUDE- Mod 6039, Ser 12319, opposed twin, runs, flywheel loose on shaft?, Andrew Martin, Route 4, Box 71, Snilford, Delaware
 EVINRUDE- Mod 7031, Ser 07236, 4 cyl, did run some ??, prop nut missing, gas shut off valve broke, Leon Martin, Rt 2, Box 797, Tallahassee, Florida
 JOHNSON- Mod A, Ser 4327, 2 HP, 1923, opposed twin, runs, complete, good cond, H.C. Huebner, 400 Beers Port Huron, Michigan
 JOHNSON- Mod A-25, Ser 21847, 2 HP, 1925, opposed twin, runs, complete, E.G. Newbill, 1502 South Owyhee, Boise, Idaho
 JOHNSON- Mod A, Ser 10958, 1924, 2 HP, opposed twin, easy starting, R.M. Sigerfoos, Mc Kinley Highway, Mishawaka, Indiana
 Johnson- Mod A-25, Ser 46876, 1925-26, opposed twin, runs, 2 HP, complete, H.C. Huebner, 400 Beers, Port Huron, Michigan
 JOHNSON- Mod AB, Ser 23652, opposed twin, 1925-26, 2 HP, runs, complete runs, complete, Tom Wilson, 5733 Southeast Tolman, Portland, Oregon
 JOHNSON- Mod A-35, Ser 51556, 2.5 HP, 1927-28, opposed twin, runs, complete, Leo J. Podd, East 10801 12th, Spokane, Washington
 JOHNSON- Mod K-35, Ser 55735, 6 HP, 1927, opposed twin, runs, complete, L.C. Becwar, 3631 Fyffe Avenue, Cincinnati, Ohio
 JOHNSON- Mod K-35, Ser 61955, 6 HP, 1927, opposed twin, runs, missing prop, Herman Heller, 808 South Section, Nekeosa, Wisconsin
 JOHNSON- Mod A-35, Ser 61749, 2.5 HP, 1928, opposed twin, runs, missing piece of muffler pipe, L. Jolly 4624 Ridge SE, N. Industry Ohio
 JOHNSON- Mod K-40, Ser 78303, 7.15 HP, 1928, opposed twin, runs, compl William Emerson, 952 Avenue D, Traverse City, Michigan
 JOHNSON- Mod K-40, Ser 83737, 7.15 HP, 1928, opposed twin, complete, runs, Jimmy Collier, Rt. 3 c/o Poeboy's, Corsicana, Texas
 JOHNSON- PR-40, Ser 72037, approx 16 HP, 1928, opposed twin, runs, complete, Robert Bedard, 320 Cayuga Iron River, Michigan
 JOHNSON- Pr-40, Ser 80197, approx 16 HP, 1928, opposed twin, runs, muffler outer housing missing, C.M. Shimonek, Box 441, Wilbur, Nebr.
 JOHNSON- PR-40, Ser 80221, approx 16 HP, 1928, opposed twin, missing balance wt in flywheel, runs, W. Hiland, 154 Harrison, DeKalb, Ill.
 JOHNSON- P-40, Ser 88449, 13.15 HP, 1928, opposed twin, last ran in '53 complete, Thomas Stanford, 424 Daly Ave. Hamilton, Montana

MOTORS FOR SALE

JOHNSON- Mod PR-40, Ser 89564, approx 16 HP, 1928, opposed twin, runs, Lawrence Goben, R.R. 2, Lafayette, Indiana

JOHNSON- Mod J, Ser 96641, single cyl, runs, missing exhaust pipe, fair cond, D.W. Hellriegel, 2026 Alki S.W., Seattle, Washington

JOHNSON- Mod A-45, Ser 104801, 3 HP, opposed twin, runs, complete, good cond, Frank Paskvan 2326 East 35th Street, Lorain, Ohio

JOHNSON- Mod A-45, Ser 122732, 3 HP, 1929, opposed twin, complete, runs, Dennis Powell, 3008 N. Murray Ave. Milwaukee, Wisconsin

JOHNSON- Mod A-45, Ser 124567, 3 HP, 1929, opposed twin, runs, Darrell Anderson, 3011 Twin City Drive, Council Bluffs, Iowa

JOHNSON- Mod K-45, Ser 101831, 7.15 HP, opposed twin, no spark, good compression, complete, Verner Wickoren 6600 Fairview N. Minneapolis

JOHNSON- Mod K-45, Ser 115372, 7.15 HP, opposed twin, runs, complete, Donald Berg, 3010 West 67th Street, Davenport, Iowa

JOHNSON- Mod S-45, Ser 125148, 13 HP, 1929, opposed twin, runs, fair cond, John Pokorny, La Crosse, Kansas, 67548

JOHNSON- Mod V-45, Ser 115798, 1929-32, 4 cyl, runs, complete, restored, George Carter, 3902 Denwood Drive, Indianapolis, Indiana

JOHNSON- Mod A-50, 2 motors, one complete, one missing flywheel & prop, Lawrence Goben, RR 2, Lafayette, Indiana

JOHNSON- Mod A-50, Ser 166424, 1930-32, alternate twin, runs, complete, Homer Cunningham, 1312 Lakeview Parkersburg, West Virginia

JOHNSON- Mod ?, Ser 153658, runs, alternate twin, complete, good cond, Arnold Bentley, 2203 Princeton Way, Colorado Springs, Colorado

JOHNSON- Mod A-50, Ser 166615, 1930-32, alternate twin, runs, complete, Carl Hiatt, 410 Keller, Waukegan, Illinois 60085

JOHNSON- Mod KD-15, 1941-48, 9.8 HP, Alternate twin, runs, complete, W.G. Lense, Box 891, Harrison, Arkansas 72601

JOHNSON- Mod K-50, Ser 145451, 1930-32, alternate twin, 8 HP, runs, complete, Earl Ealy, 1473 Franklin Ave. Marengo, Iowa

JOHNSON- Mod PR-50, Ser 143984, 1930, opposed twin, runs, steering handle missing, B. Sinkora, 65 Linden St. Schenectady, New York

JOHNSON- Mod KR-55, Ser 160834, 1932, 1.2 HP, alternate twin, runs, complete C. Fisher, 120 West 64th Street, Cincinnati, Ohio

JOHNSON- Mod ?, Ser 207863, opposed twin, 1933 ?, runs, good condition, Fred Kaphingst, Rt 2, Box 363, Coeur d'Alene, Idaho

JOHNSON- Mod K-70, Ser 213674, 1934 alternate twin, 9.2 HP, runs, good cond, Burley Marsh, 3680 Ranfield Road, Kent, Ohio

JOHNSON- Mod V-70, Ser 215780, 1934, 26.1 HP, 4 cylinder, runs, complete, Bert Matous, 13424 Spring Street, Grandview, Missouri

JOHNSON- Mod J-75, Ser 219858, 1935, 1.4 HP, single cyl, runs, complete, N. Hubbard, 1287 Wayland, Springfield, Missouri

JOHNSON- Mod F-75, Ser 222702, 1935, 3.3 HP, runs, carb air intake missing, Laurence Aigner, 28-21 215th Street, Bayside, New York

JOHNSON- Mod K-75, Ser ?, 1935, 9.3 HP alternate twin, runs, complete, good cond, John Hord, 81 Owen Blvd, Willowdale, Ontario, Canada

JOHNSON- Mod P-75, Ser 222580, 1935, 22 HP, opposed twin, runs, steering arm missing, G.M. Mack, Box 71, Grass Valley, California

JOHNSON- Mod J-80, Ser 250514, 1936, 1.7 HP, single cyl, runs, complete, John Roush, Box 476, Bethel Island, California

JOHNSON- Mod 100, Ser 235893, 1936, 1.7 HP, runs, complete, fair cond, E. Giffords, 206 Pennsylvania Ave., Island Park, New York

JOHNSON- Mod 100, Ser 242289, 1936, 1.7 HP, single cyl, runs, complete, Robert Brinker, 67639 Gleason, Richmond, Michigan

JOHNSON- Mod K-80, Ser 243902, 1936, 9.3 HP, alternate twin, runs, complete Frank Kane, 300 Westlind Road, Syracuse, New York

MOTORS FOR SALE

JOHNSON- Mod 300, Ser 241208, 1935
opposed twin, runs, complete, good
cond, Thomas Zipprich, Box 292,
Kampsville, Illinois

JOHNSON- Mod 300, Ser ?, 1935-36, --
opposed twin, runs, complete, fair
cond, Bernard Sampson, Box 87,
Kearns, Ontario, Canada

JOHNSON- Mod 200, Ser ?, 1936, 3.3 HP
opposed twin, runs, complete, good,
cond, Lester Rhoads, 335 Pamela
Circle, Brooklyn, Michigan

JOHNSON- Mod 200, Ser ?, 1936, 3.3 HP
opposed twin, runs, complete, good,
cond, Kenneth Watts, 34356
Greentrees, Warren, Michigan

JOHNSON- Mod 210, Ser 276047, 1937, --
opposed twin, runs, complete, 3.3 HP
Ed McGrath, 302 Coventry Road,
Kenmore, New York

JOHNSON- Mod LS-37, Ser 258030, -- --
1937, single cyl, 2.1 HP, complete,
Walter Johnson, 4533 North Seeley,
Chicago, Illinois

JOHNSON- Mod LS-37, Ser 278524, 1937
single cyl, 2.1 HP, runs, complete,
Dick Moran, Box 41A, Rt 2,
Prudenville, Michigan

JOHNSON- Mod KA-38, ?, Ser 289656, -- --
1938, 9.3 HP, runs, complete,
LaMont Anderson, 2003 Linekelm
Pike, Dresher, Pennsylvania

JOHNSON- Mod LT-38, Ser 294614, 1938, --
alternate twin, runs, complete, good
cond, Nathan Updegraff, Box 829,
Newton, Iowa

JOHNSON- Mod MS-39, Ser 318927, 1939
single cyl, 1.1 HP, runs, complete,
Jap Reece, Star Rt C, Box 77,
Camdentown, Missouri

JOHNSON- Mod PO-39, Ser 315122, 1939
opposed twin, 22.0 HP, runs, complete
Jack Robinson, 245 South Main St.
Nephi, Utah

JOHNSON- Mod LT-10, Ser 367663, 1940
alternate twin, 5 HP, runs, complete
William Belke, 1950 West Landis Ave
Vineland, New Jersey

JOHNSON- Mod ?, Ser 402126, 1941, -- --
alternate twin, 9.9 HP, runs,
complete, Gordon Hurst, Box 2266,
Corpus Christi, Texas

JOHNSON- Mod AT-10, Ser ?, alternate
twin, 1940, runs, complete, F.J.
Crawford, 11 Penzance Drive,
Scarboro 1, Ontario, Canada

JOHNSON- PO-15, 2 Motors, Ser
444839, 466676, both run, both
complete, F.S. Keith, 503 Rice,
Gregory, South Dakota

JOHNSON- PO-15, Ser 460731, 1941-
50, 22.0 HP, runs, complete, fair
cond, James Novak, Shoreline Resort
Mc Millan, Michigan

JOHNSON- Mod ?, Ser 503012, 1946, --
9.9 HP, alternate twin, runs, Compl.
Gordon Hurst, Box 2266, Corpus
Christi, Texas

JOHNSON- Mod PO-15, Ser 658790, 1941
-50, opposed twin, 22 HP, complete,
runs, Joel Knott, 1203 South 50th,
Milwaukee, Wisconsin

JOHNSON- Mod PO-15, Ser 827738, 1941
-50, opposed twin, 22 HP, no prop,
runs, I. Spink, 6677 Clear Springs
Rd. Santa Susana, California

NEPTUNE- Mod OB34A, Ser E61542, 1936
opposed twin, 4 HP, complete, runs,
Dave Akosi, 1614 New Mexico Ave.
Lorain, Ohio

NEPTUNE- Mod OB65A, Ser D73292, 1936
opposed twin, 6 HP, runs, good cond,
John Adamek, 121 Merryhill Drive,
Rochester, New York

Neptune- Mod OB35A, Ser E73563, 1937
opposed twin, 4 HP, runs, good cond,
William Butzke, 8816 West 84th Place
Justice, Illinois

NEPTUNE- Mod LA38, Ser C1403, 1938
single cyl, 1.2 HP, runs, gas cap
missing, James Marron, 183 Leroy St.
Rochester, New York

NEPTUNE- Mod 4A38, Ser B602, 1938 --
opposed twin, 4 HP, runs, exhaust
pipe missing, Roy Raymond, 1116 Rowan
Spokane, Washington

NEPTUNE- Mod 6A38, Ser 438C, 1938 --
opposed twin, 6 HP, runs, complete,
L.H. Edmondson III, 3659 Brookcrest
Decatur, Georgia

NEPTUNE- Mod 4A38, Ser D2125, 1938,
opposed twin, 4 HP, runs, complete,
W.J. Mc Cready, 742 Jefferson
Kansas City, Missouri

NEPTUNE- Mod 2A39, Ser 609862, 1939
single cyl, 2 HP, runs, complete,
Jon Boudreau, 817 Troy-Schby Road,
Lathams, New York ⁷⁸⁵⁻⁷⁰⁴⁷

NEPTUNE- Mod ?, Ser J4212, 1947, --
single cyl, runs, complete, good
cond, L.A. Wobbe, 41 Waverton Drive
St. Louis, Missouri

MOTORS FOR SALE

NEPTUNE- Mod ?, Ser 158156, 1939
single cyl, needs piston ring,
good cond, Earl Dilliner, Box
44 Rt 1, Belpre, Ohio

Sea King- Mod ?, Ser ?, 1924 ???
opposed twin, does not run, compl
Glenn Culbertson, 2 willow Street
Antwerp, New York

WATERWITCH- MB452-6, Ser 4542774,
single cyl, runs, good cond,
Gordon Motley, 5 Linden Street,
Ipswich, Massachusetts

WATERWITCH- Mod OB1C5, Ser 3899,
1937??, runs, complete, good cond,
Grant Bowman, 3108 Morson Street,
Charlotte, North Carolina

WATERWITCH, Mod MB, Ser 571-20,
opposed twin, runs, complete, good
cond, Forest Meredith, Rt 1, Box
253, Austin, Texas

WATERWITCH- Mod 571.11, single cyl,
runs, complete, fair condition,
James T. Sluder, 1519 West
Mistletoe, San Antonio, Texas

WATERWITCH- Mod 571.12, Mod 588146
Single cyl, does not run, rewind
starter missing, Francis Sheehy,
4 Dodge Court, Danvers, Mass.

PARTS WANTED

ELTO- 1928 Super Elto Service Twin
needs, flywheel in good condition,
Nicholas Wyeth, 528 East 87th
Street, New York, New York

MOTORS WANTED

EVINRUDE- Big Four; Evinrude- 2
cylinder 4 cycle; CROSS- Radial
Duke Hartley, 3401 Amherst Road
Rocky Mount, North Carolina

GENERAL REQUIREMENTS FOR

CLASSIFIED ADVERTISING

1. a) Members- Complete AOMC Form 101 or include: Make, Year, Model, Serial number of cyl, runs, or, not; condition, of compression and spark, list parts missing, give overall condition, features, price, state if member.

b) Non-members must complete AOMC Form 101. Forms can be easily obtained by contacting this writer.

2. Advertising Rates: Members-Free; Non-members \$1.00 per motor.

For paragraphs 3 to 5, see a previous issue.

WATERWITCH- Mod 571.10, single cyl,
runs, complete, broken skeg,
Clell Ritenour, Route 3
Dover, Ohio

OMC- Ser-Mod 40161134, opposed twin,
runs, complete, very good condition,
Walter Schmidt, 6838 Lake Shore Road,
Derby, New York

OMC- Ser-Mod 40420813, opposed twin,
runs, complete, good condition,
H.A. Eldridge, 2650 Watson Street,
Sacramento, California

OMC- Ser-Mod 4093327, opposed twin,
runs, exhaust baffle, missing, very
good cond, Frank Kane, 300 Westlind Rd.
Syracuse, New York

OMC- Ser-Mod 41530220, opposed twin,
runs, complete, good cond, E.F.
Bunting, 4523 Young Street,
Pasadena, Texas

OMC- Ser-Mod 439800212, 4 cyl opposed,
it will run, complete, Monroe Jones
Drummonds Post Office,
Tenn.

LITERATURE FOR SALE

JOHNSON- 3 page model specification
list, includes: model number, year,
price, bore, stroke, HP, RPM, Gas tank
capacity, spark plug #, & weight.
Page 1: 1922-1935 price \$.75, Page 2:
1936-1947 price \$.75, Page 3: 1947-
1956 price \$.75. All three pages \$1.75
Marvin Howell, 906 Winthrop
Joliet, Illinois

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Buddy Streat with his Evinrude 4-60. This picture was taken around 1958.