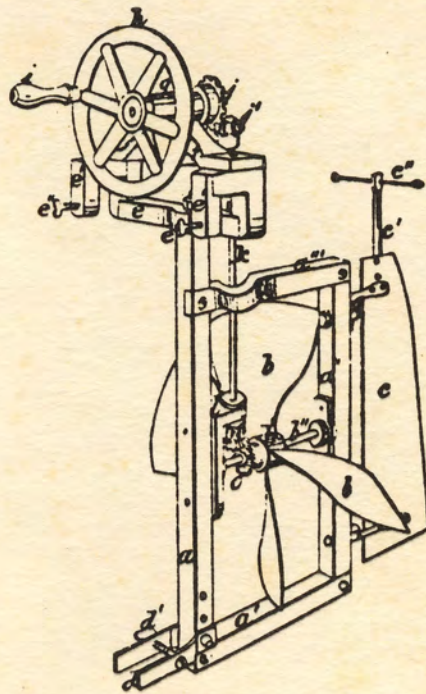


The ANTIQUE OUTBOARD



T. Reece.
Screw Propeller.
N^o 59,074. Patented Oct. 23, 1866.



Witnesses;
Thos. H. Daley
E. R. Galgen

Inventor;
Thomas Reece

AND SO, THE OUTBOARD MOTOR DATES BACK TO 1866.

VOLUME 1

NUMBER 2

APRIL 1966

The Antique Outboard Motor Club

The Antique Outboard Motor Club

1107 Pueblo Drive
Richardson, Texas

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D. R. Reinhartsen	President and Editor
C. R. Owen	Vice-President and Test Editor
J. C. Harrison	Treasurer and Technical Advisor
C. R. Reinhartsen	Secretary
R. A. Hawie	Curator
W. J. Webb	Historian
J. F. Johnston	Restoration Advisor



Looking Backward 50 Years - More or Less

W. J. Webb

Let's see what Outboards had in the way of fundamentals by the year 1916. While the motor of today bears little exterior resemblance to the noisy heavyweights of that time, they did have a good base upon which to build.

The electric outboard was on the scene, in several different shapes. The first one was put on the Seine in Paris back in 1881 by a Frenchman, Trouve. An American, Harthan, had patented a steam outboard. But I could never find that he had built one. This was in 1887.

A Philadelphian of French descent, a Mr. LaRoche built an electric kicker which used aluminum parts for the first time. Brother, how they must have corroded in salt water. Aluminum was a poor salt water metal until the 20's.

The world's first gasoline outboard, the American, showed up in Long Island City in New York in 1896. This was a single with horizontal cylinder, vertical crank and drive shafts, horizontal propeller shaft and bevel gears, the same as we have today. No one can be sure how many they made, 25 would be a good guess figure. At the same time drawings indicate that the American folks designed but never built an opposed twin outboard.

In 1904 Gabriel Trouche built a single cylinder outboard in which the propeller shaft was simply an extension of the crankshaft and extended straight back over the transom. No gears were used. Late in the teens the Caille Company of Detroit brought this straight drive to America and called it the Liberty drive. Its only and defeating disadvantage was that this straight drive made the whole assembly too long and cumbersome. In 1907 this same Frenchman, Trouche, came up with the first alternate firing Twin: This was called the Motogodille, which translates to "Motor Scull" (oar).

The first magneto ignition appeared in 1911, and was, I believe, developed by Bosch, a German. This was a gear driven job with the U magnets.

Cameron Waterman was a law student at Yale when he rebuilt his motorcycle engine in his dormitory room, mounted it on the back of a chair to test it, and from that conceived the idea of mounting that same engine on a rowboat. Communications being what they were in those days, it is certain that Waterman did not know of either the American or the French Motogodille. Think how little he had to go on.

Archimedes of Sweden were the first to produce an opposed firing twin. This was in 1912 and was developed by the Hult Brothers, of whom, more later. I doubt that the Hults knew anything about the American Motors design, or that there had been such a company. They called it the BALANS Twin.

A French motor, the Lutetia, was the first to show an underwater exhaust in production, although, the Motogodille had an exhaust that could have been called underwater in 1907. The Lutetia underwater exhaust, which did not differ too greatly from what we see on some engines today, came in 1913.

Under Ole Evinrude's direction, "Jump Spark" Miller invented the flywheel magneto for outboards which appeared on Evinrudes in 1914.

Federal, of Washington, D. C. gets credit for the first outboard tilting device in 1915, although everyone had it by that time. Ole Evinrude's first motors could tilt, but he tied them down with set screws in the stern bracket.

The first device for rewinding the starting rope was shown by Caille in 1915. I haven't been able to find out who first thought of using a rope instead of a knuckle busting handle or crank to start outboards, but I suspect that Trouve had it on his Motogodille before anyone else.

The Hult Brothers who were the Archimedes engineers, brought the full pivot reverse to light in 1916. Finn Irgens, now Vice President for Engineering and Research for Outboard Marine bought the Hult patents for Johnson in 1922.

Okay already, so a lot of improvements have been made since 1916, but in my opinion those boys jumped more and bigger hurdles in the first 50 years than since 1916. All right, so you think differently. And I in no way deprecate today's fine engineering.

Incidentally, this fellow Reece, who patented his hand powered outboard device in 1866 must have been pretty good. His powerplant (hand and crank) was right on top of a vertical driveshaft connected to a horizontal propeller shaft through bevel gears. And what a propeller he swang or was it swung.

So maybe you think the Inboard-Outboard or the Outdrive or whatever you call it is a recent arrival on the scene? Okay, you are no smarter than I was (or am) because until I did some lucky research and happened to stumble on it, I always thought that Johnson showed the way with their Stern drive back in 1930.

Actually the first thing that looked like the I-O drive of today was put out by Societe Propulseur Amovible at Neuilly-sur-Seine in France in 1899. This was the Lautonautile. Today's Murray and Tregurtha Harbormaster bears a resemblance to the Lautonautile.

The above sketches only a few of the early milestones in outboard development. But I haven't room to tell the whole early story here. Some day I will make a list of what I think were the 50 most significant improvements in Outboard motors in order of their appearance.

So much for the engineering developments. Lets look at production developments. And this is where, in my opinion, greater progress has been made since 1916 than before. Fifty years ago the lathe, milling machine, drill press and grinding wheel about told the machine shop story. There were fine hand tools aplenty along with workmen who knew how to use them. We don't have very many of that type of thoroughly trained artisans today. But we have automatic machines of every sort which, with some one to push the starting button, can turn out fine work to limits closer than those which even the best tool maker could produce with the tools of 1916.

Take cylinders. Fifty years ago they were sand cast with plenty of stock to be removed from the bore by rough boring, grinding, honing and lapping. After that the cylinders were lapped with their matching piston for two hours with a mixture of jewelers rough and oil at about 1000 RPM. After washing out the lapping compound, motors were assembled run for an hour without a propeller, then another hour or two with propeller, and a final test for fifteen minutes. After all that the cylinder was usually not as smooth or as round as we get today with a few passes with diamond boring and honing equipment. Besides todays cylinders are fine cast iron sleeves die cast into aluminum cylinder blocks.

Or take crankshafts. We used to start with a forging which also had plenty of stock left for the many turning, grinding and honing operations to remove. As we later came to know, the biggest element of cost was in the pile of chips that we cut off. Now we shell cast crankshafts close to size and finish them into finer "unburned" shafts than was believed possible even 15 years ago. We now finish crankshafts to three to five "micro" - which means three to five millionths of an inch - and think little of it.

A crankshaft of today's quality could not have been made at any cost 50 years ago. The metal and the tools had not been invented yet. Were we to use 1916 methods on a shaft of today, the unit cost would be at least twenty times what it is today and the product would be inferior.

Sixty years ago the Ferro company of Cleveland who were to enter the out-board game briefly in the teen years, put out a really fine publicity story in which they made much of the fact that with their new machinery they could hold limits as fine as one thousandth of an inch if necessary. Today we hold "half a tenth", which is to say -- one half of one ten thousandth of an inch.

Fifty years ago, connecting rods were sandcast bronze or bronze with babbitt liners. And there was a very definite limit on the speed at which they could be run. Today rods on all larger engines are steel with roller or needle bearings, pioneered by Evinrude and Johnson in 1927. Today most of the smaller engines use die cast aluminum with a bronze liner or in some cases bronze. Stresses developed in todays high power per cubic inch of displacement

are well understood and design calculated to meet the stresses are employed.

The bronze and iron motors of the teens had plenty of salt water troubles. Water jackets in cast iron cylinders used to clog with salt scale. Electrolitic action used to set up promptly between the different metals placed in close proximity. Today most outboards are engineered for salt water, and while we still have a long way to go to make a perfect salt water engine, todays motors are anyway 500% better in salt water than they used to be.

Why all the rassel about salt water? Well you fresh water sailors don't know what you are missing until you have seen what a day in salt water will do to a piece of marine equipment designed with no thought given to salt water operation.

And so it goes with absolutely every part. Todays motors are far lighter, more powerful, durable, and reliable under every condition because they are made of better, more accurately machined materials. And of course todays engineering and research show the effects of all those years of trial and error.

Here is a list of most of the names of outboards of various kinds that came to bat during the first fifty years:

Admiral, Aerothrust, Amphion, American, Anderson, Arrow, Blakely, Burtray, Caille, Campbell, Columbian, Cullen, Federal, Ferro, Hi-Speed, Jewel Electric, Joy, Koban, Lockwood, Miller, Motorrow, No-Ro, Nymph, Racine, Spinaway, Strelinger, Submerged, Sweet, Northwestern, Walnut, Waterman, Wilcox, Wisconsin, and Wright. Evinrude was in there too, and is the only one around today.

Some of the foreign makes in business 50 years ago were Archimedes (still active), Ailsa-Craig, Alligator, Cudell, Danette, Lutetia, Effezet, Hasse, Mac, Motogodille, Spartan, Spencer, Tip-Top, Uhticke.

Notes from the Club Curator

R. A. Hawie

The Club seems to be moving along well. I've had several letters and calls from members whose interest was aroused by our first newsletter.

Identification of our motors is one of the primary problems we face. Some old motors have no company name at all. Often it was on a nameplate which has been lost through the years. Later motors in the 1930-40 era are not much of a problem for most of us since the few manufacturers then produced quite different motors.

The real problems occur in the era before 1920 as some of the motors look like they were made by the same "little old winemaker." The flywheels on several of the motors of that era look like they were cast from the same pattern.

When a motor can be identified, then trying to date its year of manufacture becomes the secondary problem.

From time to time I am called on to help either identify a motor or date its year of manufacture. Good pictures -- at least one shot of the starboard and port sides as the motor would hang on the transom -- are a great help. The best way to photograph a motor is to lay it down on the floor or on an old sheet to provide a clear background for the picture. Don't take the picture on a stand as the parts of the stand have a horrible way of blending into the motor. Too many of the old motors differ in such slight things as the shape of the exhaust manifold that motor stands can hide wanted details.

Magazine ads and articles are the best source for identifying motors. In the early days there was not the great yearly model change; and, of course, few manufacturers made more than two different HorsePower motors. For members who have access to well stocked public libraries, I've found that the following issues in particular are very helpful:

The Rudder May 1915 has a fine article entitled "Detachable Motors, Development of a useful type of auxiliary power plant." In that day outboards were only considered auxiliary power! What a difference 50 years make. There are pictures of 18 different motors with the article.

Motor Boating May 1916 has an article with pictures and also descriptions of the motors.

Motor Boating June 1921 has an article on outboard boats and motors which also includes pictures.

Motor Boating June 1922 has an article which includes a sectional view of an Evinrude motor.

There are, of course, many other helpful articles and ads and yearly lists of motor specifications; but these four magazines, especially with the pictures -- one picture still being worth a thousand words -- are exceptionally helpful.

We are, of course, just scratching the surface of outboard history. A great deal of confusion exists because the manufacturers didn't foresee that there would be a small group of dedicated historians who would try to date and identify their motors. Unfortunately, not too many were successful, for most of them have fallen by the wayside. In the early 1920's Evinrude still advertised a single cylinder motor which was a duplicate of their early 1911 motors; at least it looked the same. Serial numbers and model numbers become important in these cases.

Johnson began producing outboard motors in 1922, so you can look with jaundiced eye at anyone offering to sell you a 1920 Johnson outboard! I qualify that by saying outboard because they made motorcycle engines before they made outboard motors; you might be lucky enough to find a Johnson motorcycle engine. Johnson motors are fairly easy to identify because they used letters to identify the model and numbers to identify the year. For example, an S-45 was a 20 cubic inch service motor made in 1929. Johnson started numbering in 1925 with models -25. For each year they added 5 so that a 1926 was -30, a 1927 -35, 1928 -40, 1929 -45 and 1930 -50. Then the depression goofed things until 1933 -65, 1934 -70, 1935 -75 and 1936 -80. During the years 1930-1932 there were not many model changes except in racing motors, so that the V-45 four cylinder motor was sold through 1932 still called a V-45. I suspect that most of these motors were already built in 1929 and were leftovers which had to be sold. Inciden-

tally, imagine the confusion some of us will have twenty years from now for the latest Johnson V type engines are model V4S! Unless it's carefully written, V4S and V45 will look alike. I foresee some wild correspondence trying to determine whether a potential find is a 57 year old V-45 or a 20 year old V-4S.

Johnson used the letter R to identify a racing motor or rather a motor built by them as a racing motor; some of the service motors were raced. As near as I can determine, the racing models were KR, SR, PR, VR, TR and XR. Racing motors were not produced in great quantities by any of the manufacturers and are generally a good find and very rare. I believe that Johnson numbered their motors consecutively not reserving blocks of numbers for certain models. The model and serial number of Johnson motors can be found on the flywheel cover plate. This plate was the rope sheave on some motors and was just a cover over the access hole to the ignition points on others. "Herein lies the rub" as they say, for these cover plates were interchangeable on many of the larger motors such as the S, V, P, T and the racing motors. So there was always a chance of the plates being switched in a repair shop or by the home mechanic. I've done it myself when I was in a hurry to try a motor. It's the last thing to go on after you've checked the ignition; and if you aren't looking, chances are 3 out of 4 that you'll grab the wrong plate if you have more than one. Johnson did usually stamp the serial number on the crankcase near the starboard cylinder, and you can verify the cover plate serial number with the crankcase number. There are casting numbers on the cylinders and crankcase which sometimes help in a difficult case

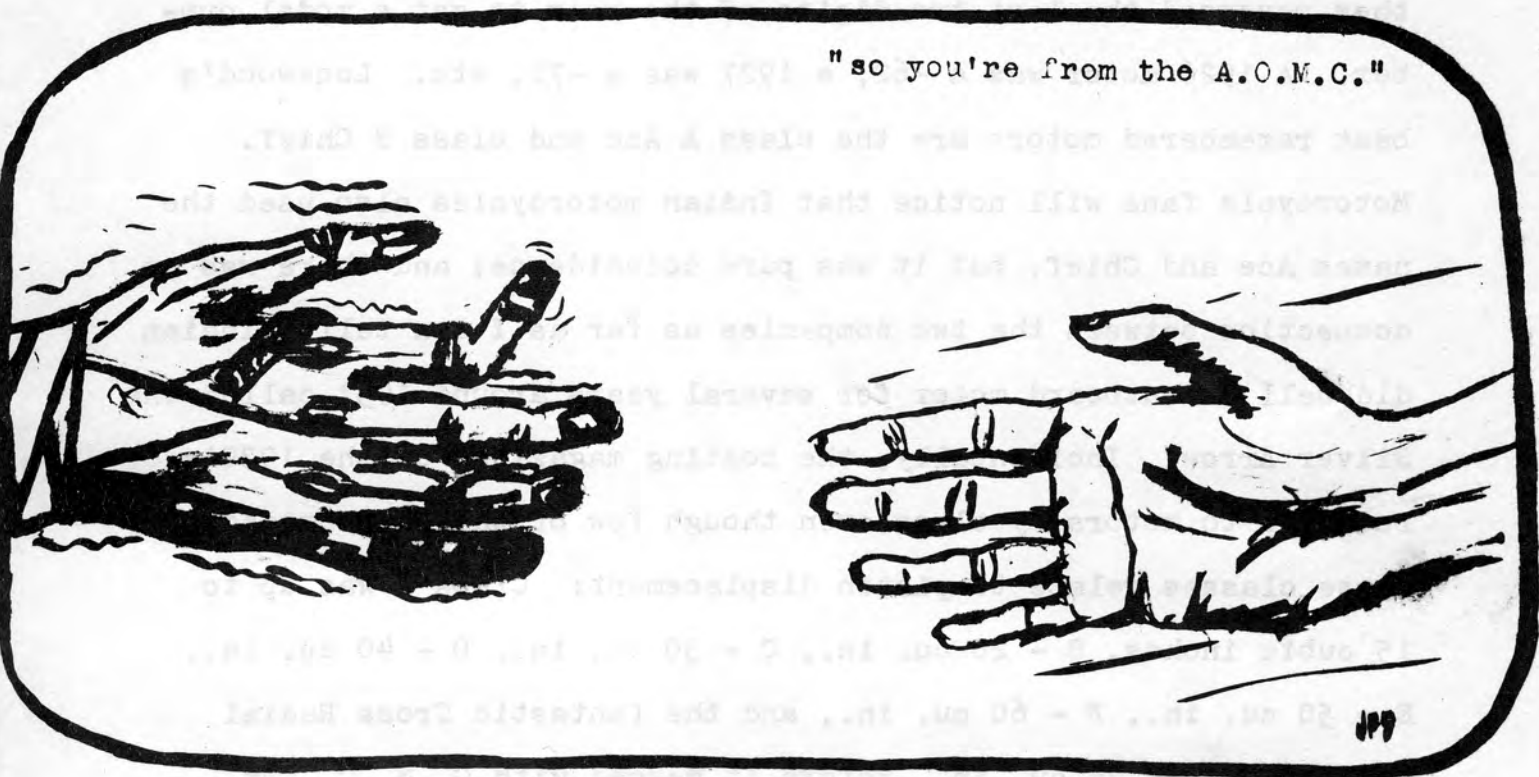
of identification, but you have to have the code lists for the motor. I have some of the lists but even they don't always help.

Several miles back I stopped the model lists at 1936 -80; 1937 was the first year Johnson produced motors as a part of O. M. C., and the numbering changed to the last two digits of the year: 1937-37, 1938 -38, 1939 -39, 1940 -10 --- and from then on mass confusion. There seems to be no yearly sense to the model numbers after 1940. If there was no change in the model it kept its number.

Lockwood was a much older firm than Johnson but they did not produce as many different models as Johnson when they finally stopped making motors. Of course, they were merged into O. M. C. in 1929 and continued as a subsidiary for several years; but that's Mr. Webb's department. Lockwood did a nice thing for us in that they reversed the last two digits of the year to get a model number. A 1926 motor was a -62, a 1927 was a -72, etc. Lockwood's best remembered motors are the class A Ace and class B Chief. Motorcycle fans will notice that Indian motorcycles also used the names Ace and Chief, but it was pure coincidence; and there was no connection between the two companies as far as I can tell. Indian did sell an outboard motor for several years around 1931 called the Silver Arrow. Incidentally, the boating magazines of the 1930's referred to motors by class even though few of them were raced. These classes relate to piston displacement; Class A was up to 15 cubic inches, B - 20 cu. in., C - 30 cu. in., D - 40 cu. in., E - 50 cu. in., F - 60 cu. in., and the fantastic Cross Radial was Class G at 74 cu. in. Before it merged with O. M. C. the Lockwood motors were made by the Lockwood-Ash Motor Co., Jackson, Michigan, and this was usually cast on the flywheel.

I'd like to close with a tribute to Pop Jacoby, builder of the famous Jacoby Flyaway hydroplanes and father of Fred and Emile; to Hank Bowman, author of "The Encyclopedia of Outboard Motorboating" the best outboard history to date; and to Donald Graham, Jr., long time racing driver who set the world's record for class C outboard hydro 5 miles in competition at 44.776 MPH during the National Championships in Middletown, Conn., in 1930. All three have passed on in the last few months. Each left his own mark on outboard history and it is richer for their having passed this way.

"so you're from the A.O.M.C."



Lake Test:
Small Motor Sampler
1928 Johnson A-35 2.5 Hp.

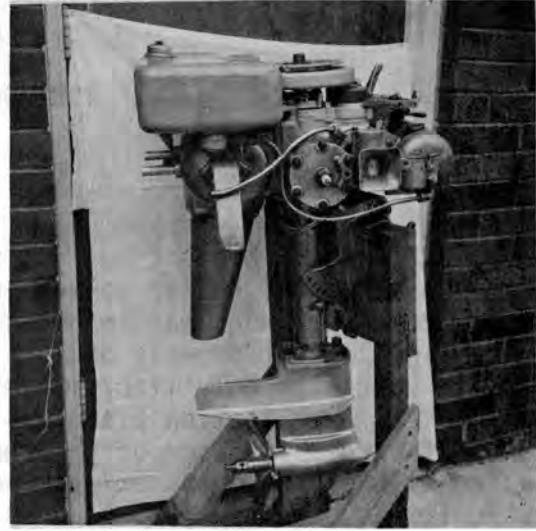
C. R. Owen

In 1922 Johnson brought out its first outboard motor. It was a two cylinder motor of conventional design converted from a former bicycle engine, and developed 2 Hp. at 2250 RPM. What was important about the motor was its dependability and its very light weight of only 35 lb. As the years progressed, the motor was built year after year with only minor improvements. The name was changed from Waterbug to Sea Horse. A cavitation plate was adopted in 1923 and the piston water pump was soon discarded in favor of the more dependable scoop and outlet which were force fed by the prop. In 1927 the power and RPM were increased to 2.5 at 2600. In 1929, it was boosted again to 3 Hp. at 2700 RPM. The same block in fact was used for many years until it reached its final form in 1937. Here at its peak of development, it turned out 3.3 Hp. at 3300 RPM.

The motor to be tested is the 1928 model A-35. At this time, the motor was at its mid-point of development and delivered 2.5 Hp. at 2600 RPM. The engine is a conventional two cylinder opposed motor with a three port cylinder charging system. The bearings are conventional bronze and the pistons are of cast iron. The ports are comparatively smaller than those on most motors its size. This motor was built to last an age and many owners will no doubt testify from the condition of theirs that these motors do indeed last a long time. The lower unit is well built and streamlined, but it is obviously a lugging unit. The prop has three blades and seems huge for a motor of only 2 1/2 Hp. but it is needed because of the low speed gearing and RPM.

The clamp is narrow enough to fit on a narrow transom but still has enough grip to take the strain of a 90 degree corner (the motor pivots 360 degrees). The motor starts easily enough although the starting torque from the motor tends to jerk the motor in the counter-clockwise direction. The acceleration is very strong because of the motor's generous displacement and the narrow RPM range through which it must accelerate. Top speed was 8 mph with one person on my 11 ft. starcraft. This is good for a 2 1/2. But more amazing was how little the speed decreased when the load was increased. With three people in the boat the speed was still about 6 MPH. The engine idles well but because of the large prop this slow engine speed still makes the boat go faster than the trolling speed of newer motors. The motor boasts excellent fuel economy. It uses only 1/2 Pt. of oil to the gallon of gasoline and the 3/4 gallon of fuel in the tank lasts for over an hour. The noise level is surprisingly low, especially for above water exhaust. The one major complaint I had was the habit of this particular motor, perhaps all A-35's, of shaking loose bolts, nuts, screws and anything not welded to the clamp. The motor must be checked after every few hours of running. (Even the cylinders will come loose.) As far as convenience, performance, economy, and long life go, this motor scores highly, but it needs periodic tightening - from flywheel to skeg.

Model A-35 Johnson basic specs: Year: 1928
BHP: 2.5
Bore: 2"
Stroke: 1 1/2"
Displ: 9.42 In.³
Cylinders: two, opposed
Original price: \$140.00



THE OMC SPEEDY-BEE Model 176.0006 (Racer)

J. L. Smith

The Speedy-Bee was built in 1930 by Outboard Motors Corporation of Milwaukee, Wisconsin, and designated model 176. It is a high speed motor of 19.9 cu. in. piston displacement, bore 2 3/8" and stroke 2 1/4". It develops 20 H.P. at 6000 R.P.M.

Some of its interesting features include: Double rotary valves, straight steel connecting rods (no cap), roller and ball bearing construction, solid steel flywheel, closed circuit battery ignition system, positive gear oil pump, sight feed oilers, chrome nickel steel case hardened crankshaft, 2 1/2 gallon attached gas tank, 3 quart oil tank and dual float feed carburetors. Each motor was given individual attention in machining, assembling and testing. As this motor was a limited production item, price tag was \$400.00 - a lot of money in the depression.

CRANKSHAFT

The crankshaft is permanently assembled with connecting rods and roller bearings in place. It is drilled for oiling of the crank pin bearings, the oil being forced in by a double gear pump to each journal bearing, and from the journal bearing to the crank pin bearing.

ROTARY VALVES

Two rotary valves are driven in opposite directions by bevel gears from a vertical timer shaft. The timer shaft is driven at crankshaft speed by a steel spur gear on the crankshaft. The timer shaft drives a closed circuit timer mechanism on top of the crankcase.

OILING AND OIL PUMP

Oil is mixed with the gasoline in the gas tank as a safety measure only, in case the oil pump should cease to function and this is not immediately noticed by the driver. Oil is put in the air tight oil tank at the front of motor. One pipe leads from the crank case through a ball check valve in an elbow at the crankcase to the top of the oil tank, putting crank case pressure on the oil. Oil is led from the oil tank through a shut-off valve to left hand sight feed glass, and from there to upper part of the crank case which contains the crankshaft ball bearing and the spur gear. Oil drains through the ball bearing to the top of the spur gear on the crankshaft, then to the spur gear on the timer shaft, then to the ball bearing on timer shaft and then to the bevel gears driving the rotary valves, lubricating the bottom bearing on timer shaft. The oil is finally caught by the double gear oil pump, and forced by one set of gears through the bottom journal bearing to the lower crankshaft pin bearing and by other set of gears to the right hand sight feed glass. From there, the oil passes through the top journal sealing bearing to the top crankshaft pin. Finally the oil is thrown into the crankcase, and passes out of motor in the regular way, after lubricating rotary valves and pistons.

When the motor is running, there is a solid flow of oil through the left hand sight feed glass and a spray of oil through the right hand sight feed glass.

FLYWHEEL AND IGNITION


Due to the high speed of the motor, a solid steel flywheel is used on the crankshaft and instead of a high tension magneto, and closed circuit battery ignition is employed to assure a hot spark at all times.

CARBURETORS

Two float feed Tillotson carburetors are used, one on each side of the motor, in line with rotary valves. Mixture is regulated by the needle valve adjustment and the mixture flow is controlled by barrel valves in the carburetor bodies where they are attached to ends of the rotary valve chambers. These barrel valves are interconnected by means of central throttle and choke levers. The throttle is operated by Bowden wire control.

WATER COOLING

Water cooling is accomplished by a forward directed scoop on the gear housing. The muffler is water cooled, water leaving the muffler at rear.



Don't Row on hot days!


Here is a detachable motor that you can clamp to the stern of any rowboat in an instant and go skimming over the water 8 miles an hour with all the enjoyment and comfort of a high price motor boat. Fits any shape bottom or stern without alteration to boat. Don't think of going on a vacation, hunting trip or auto tour without an

**EVINRUDE
ROWBOAT MOTOR**

Instantly Attached or Detached

Can be carried from place to place. Is simple, smooth running, quiet, light and compact. A woman or boy can attach and run it. Write at once and get catalog with illustrations descriptions and low price. Special proposition to live agents

Evinrude Motor Co., 223 Reed St., Milwaukee, Wis.



Fits any boat

Make a Motor Boat of Any Boat in Five Minutes



You can do it with the Waterman Out Board Motor, which you can quickly attach (and detach) to the stern of any skiff, rowboat, dinghy, punt, sail boat, and have a good motor boat. It is not a toy, but a reliable 2 H. P. Marine Motor that will drive an 18-ft. rowboat 7 miles an hour, 4 hours on one gallon of gasoline. Simplest motor made. Weight 40 lbs. Six years successful results behind it. Canoe and larger motors—light weight models K and B

—LIFE GUARANTEE.

WATERMAN MARINE MOTOR CO.
1507 Fort St., West, DETROIT, MICH., U. S. A.

MOTOR OPERATION AND REPAIR

J. C. Harrison

Q: What should be done to a 33 Evinrude to restore it, and at the same time give it a little more zip?

These motors had notoriously rough cylinder castings in the port area. Occasionally the outermost of the four port exhaust would be almost closed. Other than that, this engine is very well designed and built and is a very beautiful and reliable unit. My suggestions are really only two- check your main bearings closely for clearances and in particular the center main. If the center main has too much clearance hard starting will result and this clearance is important both on the center main journal and the crank cheeks. If the clearance is excessive on the center main, I suggest that you have the bore copper plated to build it back to whatever clearance is recommended and I would say that should be 3 - 1/2/1000. The same goes for upper and lower mains.

The second item is to clean up the port system both intake and exhaust. Tools required for this are 1/4" drill and several rotary files, plus a coarse square file tapering from 1/4" square to approximately 1/2" square. With the file and the rotary files in the drill, struts can be narrowed to 1/8" and the square file can be used to square up the ports neatly. Great caution must be exercised not to disturb the upper and lower margin of the ports as this is critical for timing the engine. The exhaust ports should be done first. Then, using a 1/4" diameter rotary file which has had a 4" or 5" shaft extension welded on to the standard 2" rotary file shaft, start on the intake ports, working through the exhaust ports. A bright light is necessary to see what you are doing. A real good neat job can be done this way and all four cylinders can be cleaned out with 4 to 6 hours labor. Considerable care must be taken all the way through because broken port struts are extremely difficult to repair.

Of course it goes without saying that a set of straight cylinders is also a must and, if a rebore job is necessary, this too should be done if pistons are available. If new pistons are not available, straighten the cylinders with a hone as best you can, put in new rings and you will be surprised at what fine results you will get. Of course good spark and carburation are a must, but I certainly wouldn't advise any alteration to these units for a stock engine. The longer I am in this hobby, the more convinced I am that the people who designed and built these machines pretty well knew what they were doing.

Oh yes, I would suggest some diligent work at cleaning out the water jackets. You will remember that this is done by removing all freeze plugs. In the case of the 33 there are some screwed in plugs in the back of each cylinder, then by using a soft wire such as a coat hanger, an ice pick, compressed air and any other suitable instrument, remove all scale rust. Incidentally, a 1/4" drill with a 3/16" bit is good for breaking up scale rust. Considerable care must be taken, of course, not to drill any cast iron but you can tell there is quite a difference in the feel of scale rust and cast iron. There is little danger of doing any damage with the drill.

THE EDITORS CORNER

Dave Reinhartsen

The Editors Corner of volume 1 number 2 begins with one word from your editor and president - HELP! We need members to help answer the mail which the Club now received - about 10-20 letters per day.

We need someone to answer letters that read "Is my motor considered an antique, and if so, how much is it worth?"

We need someone to mail our literature to those who write in, asking for information on the Club.

We need someone to write a column in which a little information about each member is written, so that members can get acquainted.

We need someone to answer the letters that read "Are parts still available, and if so, where can I get them?"

If you would like to volunteer for one of these tasks, please be assured that I'll work with you 'till you get acquainted. Just help the Club along.

A line or two about the broad plans of the Club seems in order after that plea for help. We want all Club members to participate in its management so as to insure its success. If one person runs the Club, it will fail, for an individual is doomed to run out of ideas. Come on, Antique Outboarders, pitch in, and help.

Do we have a printer in the Club? - or someone who has a friend? We've got to get magazine costs down, and an inexpensive printer is the first step. The first issue costs about \$2.00 per issue to print, and as a direct result, the format and the content of this issue is decidedly less elaborate. Can't someone help us lower our printing costs?

The Headquarters of the Antique Outboard Motor Club is now 1107 Pueblo Drive, Richardson, Texas. Richardson, a suburb of Dallas, may seem like a strange place for an Antique Outboard Motor Club, but it's a fine place for its Electrical Engineer-President to be employed. Y'all come n' see us. There are 5 lakes within an hour's drive of Headquarters, and we can go Antique Outboarding at almost any time of the year. By the way, my employer, Texas Instruments, will be sending me to some of the major universities within the next year. Don't be surprised if I phone you to tell you that I'm in your town.

The Antique Outboarder needs pictures. How about sending in one of your favorite motor?

We're being a little unfair to some outboard manufacturers by having the Waterman on our emblem. The reason this is on there is that we had hoped to continue the work of the Antique Outboard Motor Club of America;

however, the changeover is not progressing very well. Until everything is worked out, we are in no way connected with the Antique Outboard Motor Club of America.

Jim Webb and I had lunch with the Evinrude Public Relations group in December. They've been awfully helpful to the Club whenever we have called upon them.

John W. Hunt a member in Sanford, Maine, and Edmund Diederick, a member in Elyria, Ohio would like to contact other owners of vertical cylinder Waterman outboards. These are rare engines and they would like to gather as much information on theirs as is possible.

John Hunt is one of our most active members, and enjoys writing letters to others who share this unique hobby. John is 52 years old and I'll bet he has been a boating enthusiast for 53 of them. He's a dentist, musician, composer, skier, and a collector of antique outboard motors (about 50). This summer, John will open the Lake Winnepesaukee-Wolfboro Outboard Motor Museum in New Hampshire. It will be open from late June to after Labor Day. Somehow, I'm going to get up there to see it. I wonder what John's patients say about his knucklebusted knuckles.

The Club received a letter from Frank Scalpone of Kickhaefer Corporation, telling of the many places he has seen the Club mentioned. I'd like to print a list of them all, but frankly, the advertising end of the Club has gotten away from me. Every where I look we're getting publicity.

We have about 120 members now, all of whom have joined the Club since October of 1965. That's a rather remarkable growth isn't it? This growth is in part responsible for our need of more help in the administration end of things.

A partial membership list appears at the end of this issue. It is not a complete list, for the Club is growing at such a rate that newer members may have been left off. Check the address and spelling of your name to see that they are right. This list is for the use of members only - no copies will be distributed to non-members.

Johnson Motors is really represented on our membership list with 4 members. I wonder if they know that their old outboards are just as good as their new ones. Well - we think so anyway.

Member Larry Comstock has loaned us some magazines which contain articles on him business, Comstock Marine in Los Angeles. Larry has been in the outboard business for many years, and has an extensive collection, with many spare parts, especially for the Johnson outboards.

As you have no doubt noticed, the Editors Corner has been moved to a corner, and made a little less formal so as to pass on more Club news with fewer words. The magazine itself now has page numbers, reflecting increased sophistication in the art of magazine publishing. We intend to make changes like this from time to time in order to improve the quality and content of our magazine.

MOTORS FOR SALE

1. Johnson motor no. A707 said to be the 17th oldest Johnson on record. Needs carburetor. Willing to sell or trade for gun or Indian artifacts. B. Rayeske
816 Columbia Ave.
South Milwaukee, Wisconsin
2. Liberty Drive Caille for sale by: W. G. Jordan
32 South Main Street
Hartford, Wisconsin
3. Old Elto - No specs. For sale by: Harvey Gritzner
1411 Main Street
Watertown, Wisconsin 53094
4. Well kept 5 hp Evinrude 1930; Evinrude with folding shaft; 8 hp Johnson pre-1930. For sale by: R. Dale Frank
Sail Place
Cedar Springs, Michigan
5. Old Evinrude (probably 1914) For sale by: Don Thela
25 Gordon Street
Yonkers 2, New York
6. Pre-war Johnson can be seen evenings, Saturdays or Sundays. Gaylor Fill
138 Spring Street
Waukesha, Wisconsin
7. Johnson P-30 in running shape for sale by: Wm. F. Yanz
Second Street
Fox Lake, Wisconsin
8. Johnson A-35 in good shape except that left cylinder is cracked. New coil comes with motor. \$25 plus \$5 shipping. Harold W. Westervelt
79 Francisco Ave.
Rutheford, New Jersey 07070
9. Elto #J 54122 for sale by: Edwin Nusslock
4614 W. Green Tree Road
Milwaukee, Wisconsin 53223
10. 1926 or 27 Elto Lightwin - excellent condition- reasonably cheap. H. S. Hamlin, Jr.
201 Island Drive
Madison 5, Wisconsin
11. 1948 Evinrude Speedifour 33.2 hp. May sell: Clinton D. McKin
c/o Alicia Whitmore
R.R. #2
Mason City, Iowa
12. 1941 5.4 Evinrude, good condition: Albert B. Spencer
Hubbard Road
Higganum, Connecticut

Motors for sale: (Con't)

- | | | |
|-------|---|---|
| 13. | 1930 Evinrude Twin: | James W. Lavin
156 Madison Street
Burlington, Wisconsin |
| 14. | 1937 4 hp Seagull (British) | Charles Pereny
11215 Wilbur Dr.
Utica, Michigan |
| 15. | Good Elto (huh) to high bidder:
(Barrels of information?) | H. Oleson
411 N. Wisconsin Street
Elkhorn, Wisconsin |
| 16. | Model A Evinrude: | Mr. Earl Hoffman
246 North Polk Street
Lancaster, Wisconsin |
| 17. | 7.8 hp Lockwood-Ash, excellent running
condition: | Jack E. Martin
4824 33 Ave.
Kenosha, Wisconsin |
| 18. | 3-1/2 hp Champion (Old!) for sale by: | Harvey Badtke
Kewaunee Bowl
Kewaunee, Wisconsin |
| 19. | Elto Motor: 64582 for sale: | Philip Herman
1542 S. 38th Street
Manitowoc, Wisconsin |
| 20. | 1929 Johnson 10 hp running condition: | Frank Skee
23378 Eureka
Warren, Michigan 48091 |
| 21. q | Indian Silver Arrow, all original parts.
For sale by: | William J. Ehlers
26 Ronkonkoma Ave.
Lake Ronkonkoma, N. Y. 11779 |
| 22. | Alternate firing 12 hp Johnson, perfect
condition, built in thirties, for sale by: | George Rhoder
105 Devon Road
Albertson L. I. N. Y. 11507 |
| 23. | 1920 Evinrude 2 hp Model A for sale by: | J. W. Grissom
1303 E. Lake Dr.
Walled Lake, Michigan |
| 24. | 1930 2.75 hp Evinrude Foldlight for sale by: | Erwin H. Dibbern
c/o Johnson Motors
Waukeegan, Illinois |

Motors for sale: (Con't)

- | | |
|---|--|
| 25. Johnson OA-55 1930-32 3 hp; 1938 Johnson MS-38 1.1 hp; 1937 Sea King 1.0 hp; 1937 Sea King 1.0 hp minus cylinder; 1938 Champion 4 hp; Johnson A-25 2 hp disassembled. | E. M. Rosenes
727 Claude Street
Ottawa 7, Ontario
Canada |
| 26. Evinrude Detachable Rowboat Motor for sale | Ben Zolin
B. Z. Sales and Dist.
Erskine, Minnesota |
| 27. Evinrude Detachable Rowboat Motor for sale | F. Chapman
6100 Dupres
Fergusin, Mo. |
| 28. 1914 Evinrude single 2 hp for sale | Mrs. Floyd Littell
214 Bellefontaine
Champaign, Illinois |
| 29. 1938 Evinrude Speedifour 33.4 hp - good condition-for sale by: | John Tuttle
Tuttle Insurance Agency
Box 332
Vermillion, Ohio |
| 30. Old Evinrude single knuckle-buster for sale | Bill Lehmann
405 W. 4th Street
Pittsburg, Kansas 66762 |
| 31. 1911 Model B Evinrude for sale by:
(Don't let this one get-away) | Major Darwin M. Booker
Vincennes Police Dept.
Vincennes, Indiana |
| 32. Champion Model or serial SID-10813 for sale by: | J. F. Jahns
109 W. Seward Street
Ripon, Wisconsin |
| 33. Evinrude Model B 21684 - 1911-1920's single for sale by: | Mrs. H. B. Tibbetts
3573 LaPorte Road
Waterloo, Iowa |
| 34. Evinrude Mate 4263-03740 1/2 hp running condition | R. R. Palmer
1250 Sacramento St.
San Francisco, Calif. 94108 |

MOTORS WANTED

Wanted by:

John Hunt
239 Main Street
Sanford, Maine 04073

Don Booth
Booth's Electric
21 Otter Creek Place
Cortland, New York

John Harrison
1000 NW 54th Street
Miami, Florida

Kit Owen
Route #3
Eau Claire, Wis.

Johnson single, Johnson K-50, Caille Liberty drive, Evinrude all electric, Lockwood Chief or Ace, Elto or Evinrude 1/2 hp, Evinrude or Elto Fastwin, Bendix single, Lauson four cycle, 1920's Evinrude single, Motorgo (Sears).

Evinrudes, Caille with adjustable prop, Evinrude Foldlight, Evinrude Electric, Evinrude Midget Racer, Evinrude Streamflow Bicycle.

Johnson KR-55

Any Caille over 3 hp.

PARTS WANTED

E. B. Causey
319 West 12th Street
Bowling Green, Kentucky

L. M. Cooksey
Bachman-Anderson Inc.
Pioneer Building
St. Paul, Minn.

Russ Curcurio
1821 N. 31 St.
Milwaukee, Wisc.

John C. Renfroe
P. O. Box 716
Dothan, Alabama

John C. Harrison
1000 N. W. 54th Street
Miami, Florida

Recoil starting device for Evinrude Zephyr 5.4 hp. 1946.

Piston ring for Elto Pal. 4264-01673

Miscellaneous parts for 1920 Lockwood

Coil for 1941 Evinrude Sportsman

Carb for Evinrude Foldlight, complete Johnson KR-55 or lower unit

Parts Wanted (Con't)**Wanted by:**

Robert G. Mills
4047 N. Pinedell Dr.
Lansing, Michigan 48910

Miscellaneous parts for 1920 Lockwood-ash

Alois J. Mokolke
4454 S. Lenox St.
Milwaukee, Wisconsin

Connecting rod for 2 1/2 hp waterwitch
single model 571.10

John W. Teele
24 Monument Street
Concord, Massachusetts

Gearcase and water pump impellers
for Evinrude Pal model 4203-02866 1939

Fred Bennett
4044 "I" Street
Philadelphia, Pa. 19124

Cylinder and stud assembly for 1939 5.4 hp
Evinrude #4309-02324

Clifford J. Lockrow
4896 Duerr Road
Orchard Park, N. Y.

Coil for Evinrude-Elto Ace

Gilbert Schlechta
W. 157-N. 8996 Carolina Avenue
Menominee Falls, Wisconsin

Carb for Johnson Model 200 serial 251-317

Kit Owen
Route 3
Eau Claire, Wisconsin

1 prop, 1 prop nut for 1916 Model B Evinrude

David R. Reinhartsen
Write the Club

For 1929 Elto lightweight: Starboard cylinder, flywheel
For 1927 Johnson P-35: Stren bracket Quadrant, Carb intake tube, Port-cylinder
For 1931 Caille Model 27: Underwater exhaust attachment, exhaust cut-out cover plate
For Johnson Model OK-55: Propeller, Piston
For 1927 Lockwood Model 72-t: Quadrant for stren bracket
For 1929 Johnson S-45: Crankshaft, Linkage from handle to throttle on Vacturi Carb,
Starboard cylinder, roller bearings.
For 1930 Speeditwin Racer: Steering handle, Clamp screws, Carburetor intake
screens 1 for each carb
For 1937 Neptune OB-35A: Gas Cap

MEMBERSHIP LIST

Richard L. Anderson
708 Paseo Lunada
Palos Verdes Estates
California 90275

Mrs. "Gene" Atwood
1417 Oak Hill Dr.
Lakeland, Florida

John R. Burke
1360 Amherst St.
Buffalo, New York 14216

J. W. Carroll
8620 Elmira
Detroit 4, Michigan

Joseph L. Carver
P. O. Box 2157
Costa Mesa, California 92626

L. T. Comstock
10923 Santa Monica Blvd.
Los Angeles 25, California 90025

Robert Osborne Cox
1900 SE. 15th St.
Ft. Lauderdale, Florida

Dudley Davidson
4117 NE 107th
Seattle, Washington 98125

Joseph Desloge
Rt. 2, Box 555
Forissant, Missouri 63031

Thomas B. Ebbets
2323 Washington Ave.
Seaford, New York 11783

Ralph Evinrude
Jensen Beach, Florida 33457

Ed Hanson
Evinrude Motors
4143 27th St
Milwaukee, Wisconsin 53216

Isadore Ackerman
c/o Port Monmouth Marine
116 Highway 36
Port Monmouth, New Jersey

Paul E. Breeding
1473 West 25th St.
Anchorage, Alaska 99501

Donn Booth
21 Otter Creek Place
Courtland, New York 13045

David B. Carse
Sales Promotion Manager
Johnson Motors
Lake Front
Waukegan, Illinois 60086

"Doc" Chauvin Inc.
63 Lake Avenue
Worcester, Massachusetts

Jerry Crowther
30 Woodland St.
Huntington, L. I., New York 11743

Charles L. Damon
Caneadea, New York 14717

Paul H. Daykin
331 Washington St.
Geneva, New York 14456

Edmund Diederick
R. D. #3 Box 136
Elyria, Ohio 44038

Louis W. Eppel
345 E. Crescent Knoll
Libertyville, Illinois 60048

Allan Feinberg
10 Vinton St.
Long Beach, New York 11561

George Harness
461 Notre Dame Ave.
Winnipeg 2, Manitoba
Canada

Membership List (Continued)

John C. Harrison
1000 NW 54th Street
Miami, Florida 33127

Richard A. Hawie
35 Hillside Dr.
Easton, Conn. 06425

Donald J. Heermans
13925 S.W. River Lane
Tigard 23, Oregon 97223

Kenneth E. Jackson
658 Leicester Ave.
Duluth Minnesota 55803

W. A. Johnson
6863 Crystal Drive
Beulah, Michigan 49617

Rolf Jorstad
93 Greenlawn Crescent
St. Vital 8, Manitoba
Canada

Dr. V. M. Manchester
39 Pine St.
Auburn, Maine 04210

Lt. Col. G. L. Mobley (Ret)
305 E. Dakin Ave., Apt. 2
Kissimer, Florida 32741

Willard Olson
P.O. Box 2520
Sarasota, Florida 33578

Charles F. Orr
P.O. Box 54
Winter Haven, Florida 33881

Niles H. Hammink
Scott & Fetzer Co.
1920 W. 114th St.
Cleveland, Ohio

Norman W. Harris
Borglum Road
Wilton, Conn. 06897

John W. Hunt DMD
239 Main St.
Sanford, Maine

John G. Jeffrey
Box 262 NPO
23 Kithope
Kitimat, British Columbia
Canada

J. F. Johnston
P.O. Box 154
Gainesville, Florida
32601

James H. Jost, Pres.
American Power Boat Association
2577 Spruce St.
River Grove, Illinois 60171

Ralph K. Merrill, Jr.
Box 71
Fremont, Michigan 49412

Jerry Mobley
299 Rolling Terrace
Leola, Penn. 17540

Oristano-Pearsall Associates, Inc.
100 E. 42nd St.
New York, N.Y. 10017

Christopher Owen
C/O Wayland Academy
Beaver Dam, Wisconsin

Ralph W. Owen
28 Newton St.
Eau Claire, Wisconsin

F. J. Puchalski
118 S. Figueroa
Santa Ana, California 92703

Thomas M. Reichert
Public Relations
Chrysler Outboard Co.
Hartford, Wisconsin 53027

John C. Renfroe
P. O. Box 716
Dothan Alabama

Robert C. Rheinfels
1039 Hannah Avenue
Forest Park, Illinois 60130

Robert L. Ridings
20 Shire Oaks Dr.
Pittsford, New York 14534

Henry W. Seibel
3207 Harley Avenue West
Seattle, Washington 98199

James L. Smith
330 O'Connor Drive
Toronto 6, Ontario

Eloise Snyder
Lakeland Boating Magazine
416 Longshore Drive
Ann Arbor, Michigan 48107

Lawrence B. Ward
2460 Riverside Dr.
Beloit, Wisconsin 53511

Monty Watson
109 N. Farr Avenue
Andrews, S. C. 29510

Norman Pearson
22537 Law Avenue
Dearborn, Michigan

Robert D. Purdy
1820 Rhonda St.
Portage, Indiana

David R. Reinhartsen
1107 Pueblo
Richardson, Texas

Lyle F. Renouf
9714 S. Millard
Evergreen Park, Illinois

Charles L. Ridall, Jr.
14 Crockett St.
Rowayton, Connecticut 06853

Frank Scalpone
Kiekhaefer Corp.
660 Hickory t.
Fon du Lac, Wisconsin 54935

M. P. Shaw
405 S. Bragaw
Anchorage, Alaska

William J. Smith
Point Defiance Outboard
Sales & Service
Point Defiance,
Tacoma, Washington 98407

Charles D. Strang
939 Grove St.
Oshkosh, Wisconsin 54901

Mrs. Cameron B. Waterman
330 Lincoln Road
Grosse Point 30, Michigan
48230

W. J. Webb
2560 N. 97th St.
Wawatosa, Wisconsin

Membership List (Continued)

Danville S. Webber
100 Linden St.
Bangor, Maine 04401

William A. Wescott
Cove Hill
North Chatham, Mass. 02650

Harry H. Bickel
Rt. #1, Box 388
Pottstown, Pa. 19464

Robert W. Brautigam
2316 W. 110th St.
Minneapolis, Minn. 55431

James B. Briggs
Outboard Marine Corp.
100 Pershing Road
Waukegan, Illinois 60086

Hugh A. Brown
444 Fairlawn Avenue
Toronto 12, Ontario
Canada

Rodney E. Clarke
42 Garvan St.
East Hartford, Conn. 06108

William A. Coda
Kingsville, Ontario
Canada

Glenn Davis
2140 Weron La.
Cincinnati, Ohio 45225

Walter L. Weidmann
c/o Weidmann's Outboard Service
Route 2
Voorheesville, New York 12186

G. Dixon
5674 Chester St.
Vancouver 15, B.C.
Canada

Lorne Douglas
73 Deer Lodge Place
Winnipeg 12, Manitoba
Canada

Robert M. DuBois
9 Far View Hill
Rochester, New York 14620

Paul E. Foster
P.O. Box 93
Trumansburg, New York 14886

Harvey L. Frey
Rt. 2, Box 252
Middlefield, Ohio 44062

H. A. Garland
23 Lake St.
Sherborn, Mass.

Edward J. Gordon
132 Winslow Ave.
Norwood, Mass. 02062

Membership List (continued)

27

Dean Higginbotham
Box 283
Rome City, Indiana

Darwin E. Meyers, Jr.
4614 Main St.
Buffalo, New York 14226

Richard M. Jones
2505 NW 3rd Ave.
Miami, Florida 33169

Franklin A. Morgan
500 Warburton Avenue
Yonkers, New York 10701

William S. Jones
Ely Lake
Eveleth, Minnesota

G. Bill Mould
RR 2
Hawkestone, Ontario
Canada

Jack G. Kinn
650 E. Wisconsin Avenue
Oconomowoc, Wis. 53066

Kieth Musselman
8919 Chapke
Chicago, Illinois

Phillip Kranz
Rt. 2, Box 116
Altamont, New York

W. F. Niemeyer
RR 1, Box 126
Marthasville, Mo.

Dr. John W. Lemmon
527 S. Iowa
Washington, Iowa

Robert W. Pollard
52 Wilson Dr.
Brampton, Ontario
Canada

Fred Lucas
RR 1
Winchester, Indiana 47394

Marlen F. Rosene
430 Shaw St.
Rockford, Illinois

William H. Lyman
393 Hadley St.
South Hadley, Mass.

Jere M. Sairs
4817 N. Woodruff
Milwaukee, Wisconsin 53217

Harold Frank Marsh
c/o University Marine Ltd.
Silverdale Road
Hayes, Middlesex
England

Don Saunders
P.O. Box 313
Marysville, Washington 98270

Kenneth J. Mesker
3648 S. Maple Avenue
Berwyn, Illinois

Herbert Schuelke
Herbert Schuelke Co.
144 E. Second St.
Kaukauna, Wisconsin

Membership List (continued)

Scott D. Shumaker
37704 Jordan Dr.
Willoughby, Ohio 44094

Harold L. Simpson
4504 Parkview Place
St. Louis, Missouri 63110

Clarence Sitton
2101 N. 4th St.
St. Charles, Mo. 63301

Kenneth Smith
1876 Haslett Road
Haslett, Michigan

Mel Spencer, Jr.
5258 Vickie Dr.
San Diego, California 92109

David A. Wallner
4736 Yates Ave., North
Minneapolis, Minnesota 55429

E. Walton-Ball
Longoowd Equipment Co. Ltd.
132 Railside Road
Don Mills, Ontario
Canada

TO APPLY THE CLUB DECAL

1. Apply only to a clean, smooth, wax-free surface.
2. Apply only at moderate temperatures.
3. Wash surface with water and detergent soap solution (Vel, Dash, Dreft, etc.) and leave surfact wet.
4. Remove paper backing from film. Be sure exposed back surface does not touch itself.
5. Apply sign to wet surface and slide into position.
6. Squeegee out all air bubbles, working from the center out. Be sure edges are tight. Use rubber squeegee or stiff cardboard.
7. Let dry 6-8 hours and resqueegee. Recheck edges.

