

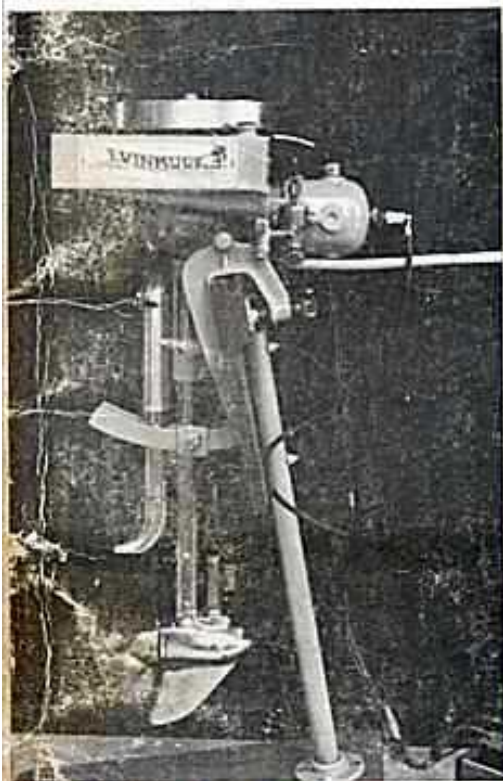
VOLUME 4

NUMBER 3

JULY 1969



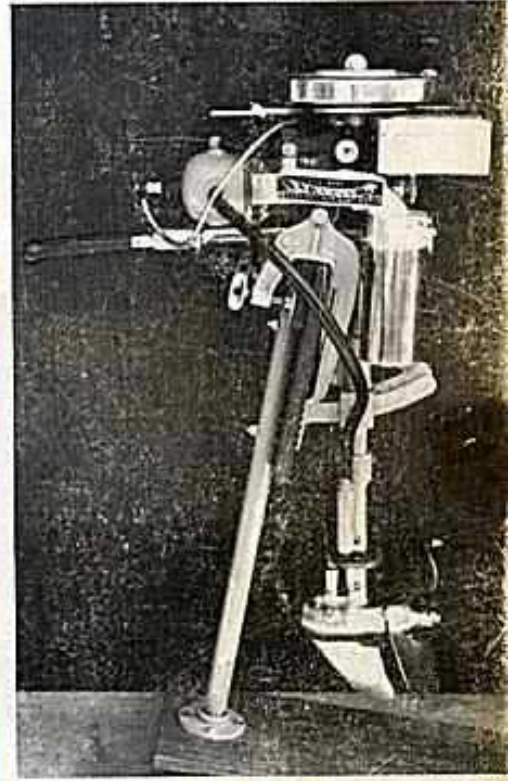
THE ANTIQUE OUTBOARDER



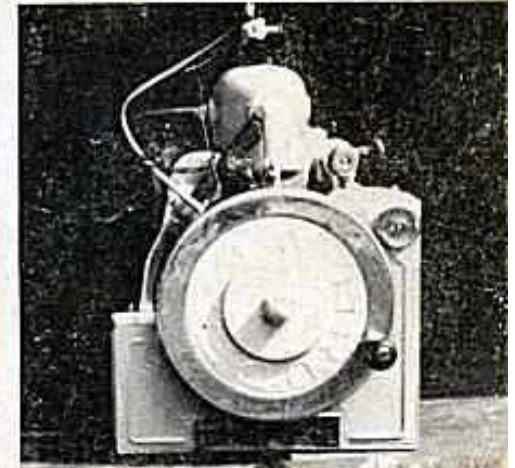
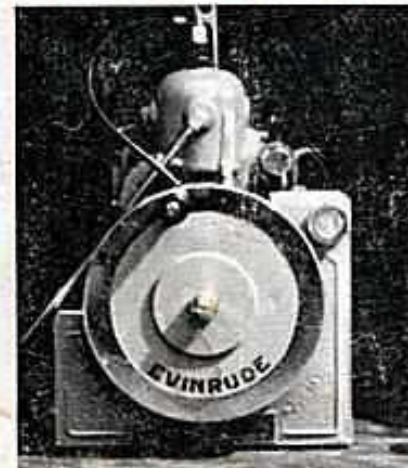
1913



1914



1915



The Antique Outboard Motor Club Inc. is incorporated in the State of Texas as an Educational Institution. The Club is devoted to people all over the world who are interested in the search for, restoration and preservation of old time outboard motors. Regular membership dues are \$7.00 per year. Other membership information available on request. Address membership requests to A.O.M.C., Inc., 1107 Pueblo, Richardson, Texas 75080.

Club officers, addresses and duties:

David R. Reinhartsen, President: 1107 Pueblo Drive, Richardson, Texas,
Coordinator of club activities.

Christopher R. Owen, Vice-President and Test Editor: Route 3, Eau Claire,
Wisconsin. Runs lake tests of antique motors.

Robert Brautigam, Editor, The Antique Outboarder: 2316 West 110th Street,
Bloomington, Minnesota 55431.

Marcus Wright, Parts Acquisition: 30 Crest Drive, Little Silver, New Jersey.
Helps members find parts needed in their restoration projects.

John C. Harrison, Treasurer and Technical Advisor: 1000 N. W. 54th Street,
Miami, Florida. Reviews financial reports and gives advice on motor restoration.

Carole R. Reinhartsen, Secretary: 1107 Pueblo Drive, Richardson, Texas.
Keeps records, etc.

Richard A. Hawie, Curator: 31 Hillside Drive, Easton, Connecticut. Helps in
identification of rare motors and prepares a column, Notes From The Curator.

W. J. Webb, Historian: 2560 North 97th Street, Wawatosa, Wisconsin. World's
foremost authority on outboard history. Author of a column, Of Historical Interest.

James L. Smith, Special Features Editor: 330 O'Connor Drive, Toronto, Canada.
Preparation of special articles on unusual motors.

Ray Machen, Membership Coordinator: 624 Gardner Road, Westchester, Illinois.
Distribution of Club literature.

Robert Zipps, Classified Editor and Editor of The Newsletter: 24A St. Regis
Street, East Hartford, Connecticut. Management of the classified section, and
preparation of a monthly newsletter.

Bud Cowdery, Racing Editor: 15 Crestdale Road, Danbury, Connecticut. Preparation
of a column on the early days of outboard racing.

Richard M. Jones, Membership Secretary: 20505 N. W. 3rd Avenue, Miami,
Florida, 33169. Keeps membership records.

Bob Hampton, Motor Registration: 54 Clinton Avenue, Eatontown, New Jersey,
07724. Registration of Antique Outboards.

Lowell Simmons and Paul Aruda, Special Assistants: 1107 Pueblo, Richardson,
Texas 75080.



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Cover: Three early Evinrudes from the Editor's collection.

The Antique Outboarder

Volume 4 • No. 3

July, 1969

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

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CLUB BRIEFS

Contributors of articles, pictures and other data for publication in the magazine should send their material to R.W. Brautigam, 2316 W. 110th Street, Minneapolis, Minnesota 55431. Please indicate if photos are to be returned and include captions for each. All members are urged to submit any items for publication that you think might be of interest to other readers.

The regular mailing dates for the quarterly Outboarder are the first of January, April, July and October. All input from contributors should be received at least three weeks prior to mailing dates in order to be included.

The club is interested in more members and a wider circulation of The Antique Outboarder. Don't overlook the possibility of giving a relative or friend a gift subscription to the magazine at Christmas time or for a birthday, etc. The rate is \$4.00 per year. Let the Editor know too of any ideas you have for selling advertising space in the magazine. A better Outboarder will result from having more dollars available.

The club would appreciate each member checking his own membership expiration date and voluntarily sending in his next year's dues. This will save a lot of President Reinhartsen's time and postage money.

To clear up the mystery of the Elto Quad carburetor pictures mentioned on page 4 of the April, 1969 Antique Outboarder, Mr. Ralph Evinrude has kindly offered the true facts:

The 1929 Quad originally was introduced in the early part of that year with a single float feed carburetor to which a manifold was attached, feeding both the upper and lower crankcases thru dual poppet valves for each crankcase. The early advertising and original literature for this model covered this configuration.

However, this particular manifolding in the field caused severe leanness in the upper left cylinder, with the result that in April of that year the float feed carburetor was removed and each crankcase was fed separately thru jets in the poppet valves, the same as in the 1928 Quads. Subsequent photographs and advertising showed this later configuration.

The formation of local chapters is well underway with new units being formed in New England and California. Peter Hunn of Simsbury, Connecticut is organizing "The Yankee Chapter" and both Bill Salisbury and Rick Anderson are talking up one or maybe two chapters for the West Coast area. That's great news and should be good encouragement for other member areas that want to organize and enjoy the fun that chapter association brings. Let's keep the ball rolling and by all means, let "The Outboarder" know of your chapter activities. So far, other chapters exist in the Twin Cities (Ron Johnson) and Florida (John Harrison).

Christopher R. Owen of Eau Claire, Wisconsin who is Vice President of the Club and Test Editor of the Antique Outboarder plans to leave for service with the U.S. Navy. Our best wishes to Chris on his tour of duty. I guess Chris' plans to go down the Mississippi River with his Elto Service Twin will have to go on the

shelf for a while. No doubt Chris can look over the international outboarding situation and who knows, if the stories about Government procurement are true, Chris may find some antique outboards packed in mothballs, in some warehouse.

The Antique Outboarder stands corrected!

Mr. Joe Swift, Public Relations Director of Kiekhaefer Mercury has called our attention to an error appearing in the April issue, within an article titled "Outboard Racing Since 1945". On page 12, below the photograph of the Evinrude engine is a caption stating "World Class X Speed Record Holder". According to Mr. Swift:

The above statement is an error probably resulting from confusion over the definition of Class X. Class X was established by U.I.M. (Union of International Motorboating), and this category limits the cubic inch piston displacement of the powerplant to one litre, or 61.02-cubic-inches. The record in Class X was established May 4, 1960, at Seattle, Washington by Burt Ross, Jr. with a Jones Hydroplane powered by a 60-cubic-inch Mercury engine running over the kilo at 115.547 miles per hour. Only records approved by U.I.M. become world records. Thus, Mercury established, and still holds, the Class X world record.

In 1966 Evinrude established a U.I.M. Class I record of 131.051 miles per hour using an engine of 89-cubic-inch piston displacement. This record was never recognized by the American Power Boat Association because in A.P.B.A. there is no such class. As a matter of further information, the American Power Boat Association Class F hydroplane record was established in November of 1964 by Hugh Entrop with an Entrop Hydroplane powered by a 60-cubic-inch Mercury engine. This record of 110.485 miles per hour still stands.

Naturally, the Antique Outboarder is anxious to keep the record straight on these hard won speed records.

Be sure to attend a meet this summer. If none appears close enough to your area, get together with a few close-by members and have a meet of your own. Take a few pictures and send them in to the magazine along with a few details and highlights. The known 1969 meet schedule appears on the next page. Continued on page 39

ACMCI ANNUAL POINT SYSTEM

By C.R. Owen & Dave Reinhartsen

A numerical system of rating ACMCI member achievements during the year. First published in 1968 the system has been refined for 1969 to reward outstanding service.

- | | |
|---|--|
| 5 Stopped by Game Warden for courtesy check | 3 Public hard starting |
| 2 Noisy overwater exhaust | 5 Getting towed in yourself |
| 2 A lot of smoke trailing boat | 5 Exhaust muffler burns |
| 2 Provide tools or a tow to someone whose new motor has conked out. | 10 Lose motor in lake |
| 4 In a race, pass up a boat with a newer motor | 6 Rained out at meet after arrival |
| 2 Backfire your motor (10 additional points if a fire starts) | 1 Old motor purchased over objection of wife |
| 3 Lose an impromptu race | 2 Test barrel tips over |

1969 MEETS

CHECK YOUR NEWSLETTER FOR DETAILS OR CONTACT MEMBER IN CHARGE. BE A HIGH POINTER!



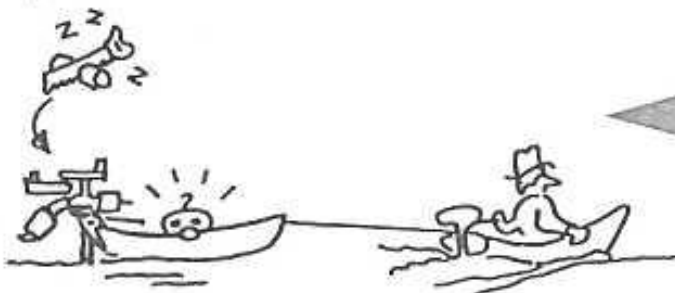
July 12
TWIN CITIES
B Peterson

Calero Dam
CALIFORNIA
B Salisbury
AUG 10

Lake
HOPATCONG
Sept 13
T Luce



AUG 23
DALLAS
D Reinhartsen



THE SHAME OF 5 POINTS



OF HISTORICAL INTEREST

..... *W J Webb*

ABOUT THE AUTHOR

The July 1969 Antique Outboarder wishes to salute Mr. W. Jim Webb for his many achievements in the field of outboarding and his most willing and capable support of the Antique Outboard Motor Club and the club magazine. Mr. Webb is the author of a book entitled "The Pictorial History of Outboard Motors", the result of years of experience and research.

Mr Webb was born January 30, 1901 in Shullsburg, Wisconsin and graduated from high school there in 1919. Raised on a farm, Mr Webb also worked on a variety of odd jobs from janitor to mineworker during high school and later as a mathematics tutor, waiter and pinsetter while in college. Three years after graduating from the University of Wisconsin, Mr Webb joined the Elto Outboard Motor Company in 1926. After holding several managerial sales positions, Mr Webb became Vice President and General Manager of Evinrude Motors in 1952 and held that job until his retirement in 1963.

Mr. Webb has been a director of the Milwaukee Association of Commerce, Wisconsin State Chamber of Commerce, Wisconsin Manufacturer's Association, Better Business Bureau, and Employers' Association of Milwaukee. He was president of the Employers' Association for two years.

He is a member of the Milwaukee Yacht Club, Lake Beulah Yacht Club, University Club, Blue Mound Golf and Country Club, and the Antique Outboard Motor Club. How Mr. Webb became so much a part of outboarding is best expressed in his own words.

"Back in 1912 when I was 11, my uncle, a most kind, understanding and patient man, packed my aunt, two cousins, himself and me into a model T and drove us from his Darlington, Wisconsin home to Lake Mason at Briggsville, Wisconsin--a total of 98 miles. That day marked the first time I ever saw a body of water that I couldn't wade across--but more importantly, it also gave me my first view of one of the flat bottom fishing skiffs, propelled by an Evinrude motor.

Toward the close of what was, up to that time, one of the high point days of my life, a lone fisherman with his Evinrude put-putted past the Griffith establishment, where we were staying, down toward Briggsville. I stood and watched him and waded out in the water to catch the last glimpse as he anchored down near the dam.

It would make good theatrical reading to say that from that day on I set my sights on having something to do with making that marvelous Evinrude contraption. But, in

the high and dry country around my home town of Shullsburg, Wisconsin, there just wasn't any boating and darn little swimming. So the Evinrude incident remained no more than a memory until one day late in 1925, when I received an invitation to discuss employment with B. Evinrude of the Elto Motor Company. B. Evinrude turned out to be Mrs. Ole Evinrude, Vice President and Secretary of the Elto Outboard Motor Company, of which Mr. Ole Evinrude was President.

I badly needed a job and so on January 4, 1926, I started to work at Elto. That evening I told my wife-- 'I think this is it. The people are tremendous, and these outboard motors are something I know I will enjoy like nothing I have ever done before'. And so it went for the next 37 years and 10 months, until my retirement on November 1, 1963.

For the first 26½ of those years I worked in the sales department--the last 11 plus I was in Management--but I was always more a salesman than anything else. I found every aspect of the marine industry to be a most thrilling and interesting activity. The industry people--the dealers--the owners--the publishers--the happenings--the boat shows--the marine products--and, of course, the outboard motors themselves, contributed to the richest personal experience imaginable."

MYSTERY MOTOR

Calling all club detectives...

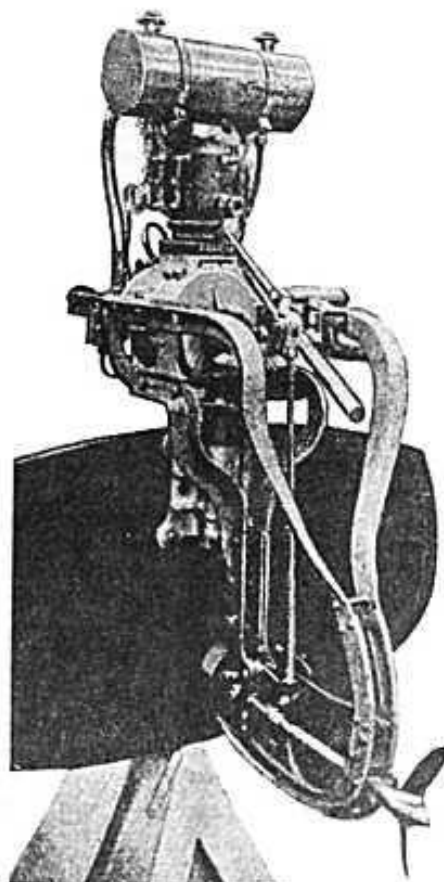
The Foreign Section of the April 25th, 1907 issue of MOTOR BOAT (US) Magazine carried this picture and write-up under the title "A Novel Propeller Outfit":

"An interesting combined propeller and rudder device has recently been brought out abroad, and is shown in the accompanying illustration. As will be noted the motor, which has a single vertical cylinder, is mounted upon an angular frame which is extended downward in the shape of a rudder and also forms a good bearing for the propeller shaft. The fuel tank is located above the motor, and the ignition outfit is attached to one side of the frame. The entire device turns in a socket in a plate attached to the stern of the boat, thus acting as a rudder. It can also be removed by lifting it out of the socket and leaving the plate attached to the boat."

This Expert is stumped - Help! Help!

(continued next page)

WHAT IS IT?



The mention of fuel tank and ignition outfit indicates that this is an internal combustion motor. It probably came from France, since the French were doing a lot in this direction at that time. But the trail ends before it goes that far.

I have examined every available issue of American Boating and Scientific and Mechanics magazines from 1903 through 1909 and if any contained any mention of this outfit, I missed it. I have also checked through all of the French, British and German boating magazines that I could find here and during two trips abroad and drew blanks everywhere. Copies of the photo and write up sent to French, British and German libraries and authorities met with no success. No one that I have been able to contact in the Scandinavian countries "goes back" that far. Then, too, the ravages of two wars haven't helped accuracy of records.

But you can't fool me - - somewhere, someone knows all about this strange motor, and I certainly would like to have the true word from that person. Who knows, maybe, if we give 'em the chance, the Russians may claim it.

Sunflower Boat Works . . . Designers and Builders of The Sunflower-Craft
F. A. Woodzicka . . . Lake Tomahawk, Wisconsin

The Antique Outboard Motor Club,
Minneapolis, Minn.

Dear Sirs:

Find enclosed a photo of a Submerged Electric Outboard Motor built in Menomonie, Wisconsin about 1906. We have one of these motors in our museum and another one on a 16' row boat. Voltage used is from 8 to 12 volts.

We also have about fifty other motors in our museum from 1912 to 1950. Also two old Koban motors.

Sincerely,
(F. A. Woodzicka)

*Ed. Note -
Sounds like
an interesting place
to visit. The
Sunflower Museum
also has antique
cars on
display*





RICHARD A. HAWIE

NOTES FROM THE CURATOR

To paraphrase the old rhyme about the wise old owl who sat in the oak:

The poor old curator is in a stew,
The more I learn, the less I know;
I have trouble telling
A Lockwood from a Motorgo!

The foregoing was prompted by an unsuccessful attempt to identify a motor for Jim Smith. It also signals that in a moment of lunacy I will sidestep into the catacomb of private brands where all motor identification experts eventually become entombed in "who built which for whom when"!

But first, Jim Webb has kindly cleared up the Elto art mystery of 1929. The first picture is an Elto ad of early 1929. (1) The ad is an artist's drawing of the motor, not a photograph. You can see that there is only one carburetor, and it looks like a Tillotson not the usual Elto poppet valve carb. Now the only way you can have one carburetor for four cylinders is to use a rotary valve or check valves at the crankcase opening. Elto did not introduce the crankshaft rotary valve until 1930, and Johnson held the patents on externally geared rotary valves. Did Elto plan the Quad with rotary valve a year earlier than it was produced?

Here is what happened according to Jim Webb's best recollection:

" The first models of the 1929 Quad did in fact employ a float feed auto carburetor with a Y manifold ahead of check valves. And it ran beautifully. The only trouble was that it was hard to start for all but experts who knew just how to rock the charges into the cylinders how to prevent over or under choking and finally how to give the flywheel just the right flip. Ralph, Charley Koller, Rob Cary and I had no trouble at all, but others had so much that it was decided to go to the twin carbs like the 1928.

But, meanwhile, the ad agency had made its drawings from the first models and it was too late to change. The catalog was correct, as we had time to change that. You have good eyes."

I am afraid that if my attempts at photography don't improve, I'll be the only member with good eyes as I have the advantages of looking at the original pictures. Some day A.O.M.C. members may be identified by their thick glasses gotten from trying to look at my photos closely.



Photo ① Single Carburetor 1929
Hi-Speed Elto Quad



Photo ② 1929 Elto Quad Hi-Speed model
with twin poppet valve carbs

② The second photo is of my 1929 Elto Hi Speed Quad, as they were produced; you can see the typical poppet valve carburetors. The 1929 Quads were 50 cubic inch displacement; the 1928 Quads were 40 cubic inch displacement, and the 1930 and later Quads had internal rotary valves. So if you are lucky enough to find 1928, 1929 and 1930 Quads, they are different. Pick them up if you can. Now the interesting question arises - did any of those single carburetor Quads get out of the engineering department and are any around today?

While looking at the Quad listings in the Evinrude service manual, I was reminded of the fact that sometimes typographical errors creep into motor listings. Both the manufacturers and the annual listings in the boating magazines are guilty. Often when there is a long list of motors of the same model, one of the specifications is repeated on the next line for a different model. The 1929 Quad is listed after the Service Twin on page 9-14 of the Evinrude service manual and until the revision of 1958 the bore and stroke of the Service Twin $2\frac{1}{2}'' \times 2''$ was repeated as the bore and stroke of the 1929 Quad. The correct bore and stroke of the 1929 Quad is $2\frac{3}{4}'' \times 2\frac{3}{32}''$, which you will find listed in the revised manual. You can find errors and omissions in Evinrude's listing and in all other listings I have seen. This is not an indictment of Evinrude but a suggestion that any motor listing be used with a little judicious caution.

Since Lockwood became part of Outboard Motors Corp. and Lockwood was also a supplier for some of the private brands, I guess we can logically look at Lockwood again. Some of this has been covered before, but since I can now picture the models it may be of more help.

Private brands are usually hard to identify, because they did not usually advertise in boating magazines if at all and no pictures exist of many of the models. Motorgo marketed by Sears is one exception; they advertised some years so pictures of some models exist. Their models were sometimes listed in the annual outboard motor list-

I have an operating instruction sheet and repair parts catalog of the Motorgo Outboard Motor, Model OB 3, made by the Muncie Gear Co., Muncie, Indiana. This is probably a 1932 model. You can see that it all depends on what model and which year you are talking about as to who built what.

A problem arises on these unmarked motors if they are magneto models, because the magnetos usually do have manufacturer's names on them. I sometimes get letters requesting me to identify an Eisemann or Bosch outboard motor! Eisemann and Bosch were two magneto manufacturers; they did not make whole outboard motors. It becomes more confusing because Eisemann magnetos which were used on Lockwood motors used magneto model numbers which were similar to the Lockwood motor model numbers!

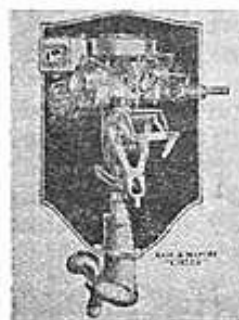
The Lockwood Twin Model T was made from 1925 through 1927. (7) This is the 1927 model 72T. The earlier model "T" was similar.



Photo (6) 1923 Lockwood Single



Photo (7) 1927 Model 72T Lockwood



Below: Photo (8) 1928 Lockwood Models Ace and Chief

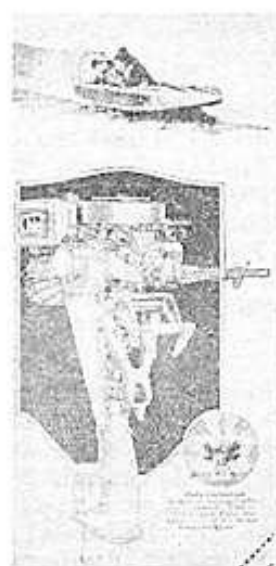


Photo (9) Lockwood Silent Chief 1929

The Ace and Chief were introduced in 1928. (8) The Ace was similar to the earlier model "T"s except for the lower unit. Notice that both Ace and Chief came "factory equipped" without skegs. The 1928 Chief had above water exhaust and a distinctive carburetor which was mounted in the manifold. Even though service motors, these motors were designed for high speed as the large exhaust manifold cast on the cylinder indicates - the Ace, being a Class A motor, was model 82A; and the Chief, being a Class B motor, was model 82B.

In 1929 the Chief was changed slightly - having underwater exhaust. This was the model 92B "Silent Chief." The Ace retained its 1928 look though it was model 92A. I can't find a picture of the 1929 Ace, but I believe that it retained overwater exhaust. (9)

The 1929 racing Chief model 92BR is rare, so rare that I have only one not-too-clear picture of it. New member Dick Michel had a picture of a motor he wanted identified at our last indoor meet, and it was a Lockwood Racing Chief! It was in a welding shop, and he got it without knowing he had one of the rarest of motors since he had never seen a picture of a Racing Chief. (10) In hopes that more Racing Chiefs are waiting to be recognized, I include this poor picture of one. Look for a cylindrical gas tank, dual carburetors, and two large glass oil cups on a Lockwood Chief. Kirk Ames was the winner of Class "B", in the Around Manhattan Marathon. The tube from the motor along the deck is a tachometer drive cable. He is wearing a life jacket and a tam or beret, depending on which side of the channel you come from. As with auto racing, hard helmets didn't come into use until the mid and late 1930's. Tams and linen or leather aviator helmets were popular though.

In March of 1929 before the OMC merger, Lockwood mentioned a new motor, the "Flying Four", details to be announced in April. The 1929 motors listed in the racing rules in March included the "Flying Four", bore 2 3/8", stroke 2 1/4", Class D motor. By the time of the OMC merger in April, the "Flying Four" was not mentioned in the ad which listed the products of the Outboard Motors Corp. It was supposed to be a 4 cycle engine and never got out of the experimental stage, but several engineering models were produced.

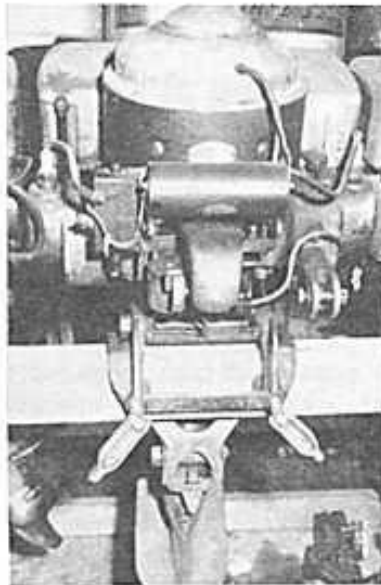
If you enjoy chasing "elusive butterflies", you will find that both Rudder and Motorboating in 1931 list a Lockwood "4-60". This motor had the same specs as the Elto and Evinrude 4-60 and was not listed in 1932. I can't find a Lockwood ad in the few 1931 magazines I do have and can't find it listed in the Evinrude motor list which even includes some Sea King models. There is one gap in the model numbers of the 1931-33 big Quads and Big Fours. The model numbers run from 800 to 829 except that there is no model 805! I wonder why?

Lockwood also put electric starting on the Chief in 1930. (11) It is model 163 and it is only listed in 1930 in Evinrude's master list, but Motorboating lists model 163 in 1931 and 1932. It has battery ignition as all the early electric starting motors, but also has a different manifold and a Tillotson carburetor, instead of the usual Chief carburetor of earlier models.

I have several mystery motors, ones I can't identify positively as to make and year. One of them was obviously a Lockwood Silent Chief, but the flywheel had no identification where Lockwood usually cast their name. The serial number 5000424 was unusual for the other Chiefs I have or have been asked to identify had 5 digit serial numbers. I found the answer in a Bendix ad for their Eclipse inertia starters. (12) This is a Sea King motor, but a Lockwood Chief none the less; no way to hide the characteristics. A search through Evinrude's model-year guide turned up a Sea King #9188, Evinrude model 500, 1931-33, 15.0 HP so my mystery is solved -- unusual



Photo 10 Racing Chief by Lockwood



Left: Photo 11 Chief Electric
Above: Photo 12 Sea King

serial number and all, it's a Sea King by Lockwood. The serial number on a Lockwood can be found on the crankcase just under the carburetor if it is missing on the top of the flywheel. There is no model 500 listed in the specification section of Evinrude's service manual; you need the model-year guide 1909-1959 item 4138. It is a wonderful help, and someone did a lot of work on it. You can date a Speeditwin 6039 by actual year according to serial number blocks instead of saying 1939-1950 which is the span of the 6039 model designation.

Evinrude motors are easy to identify as long as you can find a serial number, but impossible to identify by model name. There are, for instance, over 95 model numbers using the name Lightfour!

Mark Wright who has several Amphion motors reminds me that Amphion used detachable cylinder heads, along with Koban and Johnson.

Summer will be upon us before the next issue. I am partway through some research on Cross and Waterman. If someone has a pressing desire to find out about one or the other, let me know.

Photo Credits

- (1) March 1929, MOTOR BOATING, Page 6
- (2) my own 1929 H1 Speed Quad
- (3) Jan. 1916, MOTOR BOATING, Page 53 - Lockwood
- (4) Jan. 1916 MOTOR BOATING, Page 86 - Motorgo
- (5) Jan. 1925, MOTOR BOATING, Page 136B - Motorgo
- (6) June 1923, MOTOR BOATING, Page 129 - Lockwood
- (7) Oct. 1927, MOTOR BOATING, Page 99 - "T"
- (8) Sept. 1928, MOTOR BOATING, Page 172 - Ace & Chief
- (9) Sept. 1929, MOTOR BOATING, Page 177 - Silent Chief
- (10) Aug. 1929, RUDDER, Page 123 - Racing Chief
- (11) my model 163 Lockwood
- (12) July 1931, RUDDER, Page 116 - Sea King

A MASTERS



BOATMETER

on your bulkhead insure accurate dead-reckoning. You can read your boat's speed any time with less effort than looking at your watch.

Model B indicates to 10	m.p.h.\$19
Model C indicates to 20	m.p.h.\$29
Model D indicates speed	to 20 m.p.h.\$17

Sold by Marine Stores
Standard equipment of leading builders. Send for Catalog.
Muncie, Indiana



Assuming your antique outboard is in good condition complete with a clean carburetor, tank, fuel screen and an ignition system in good operating order you also need the correct spark plug to permit the engine to start easily and run hour after hour with no problems. 100% running success is attainable with the proper plug.

The combustion temperature of modern gasolines is very much different from the fuels available when your engine was built. For this reason, antique spark plug lists advising the use of a particular number spark plug are more often wrong than right. Modern plugs lists showing the old engines usually are incorrect too, as the recommendations are based on the older listings.

Spark plugs that are too cold will foul out quickly. Plugs of too hot a heat range will cause misfiring, loss of top RPM and can be directly responsible for burning a hole in the crown of aluminium pistons.

The life of the antique outboarder is much easier today due to wide heat range availability of spark plugs which fit all the old engines. Forty or more years ago the exactly correct heat range plug to suit a particular engine wasn't available. If the plug fit the threads of the cylinder it was used. Often, the plug would foul or burn out in an hour or two of running. Spares were mandatory. A lot of the outboard's reputation for being unreliable was undeservedly earned from frequent spark plug failure.

Using the correct heat range spark plug with outboard oil in carefully measured proportion will result in a sweet-running engine for an amazing amount of hours with no spark plug problems at all. In my collection of twenty-odd running antiques of vintage 1907 to 1940 with RPM ratings from 750 to 4800 RPM there have been no troubles with, or attributable to, spark plugs after once determining by experiment the correct plug the engine should wear. My 1928 Elto Speedster has been used as a family service engine for two seasons. The same plugs are still good enough to use for the third season. Part of the answer is to use outboard oils which contain none of the plug-fouling ingredients present in auto, or 4 cycle, engine oils. Too much modern oil fouls plugs, too.

Just how do you arrive at the correct plug to use? Simple! Run the engine wide open with the recommended plugs on a boat (as opposed to a test tank) for 5 to 10 minutes. Stretch this to 20 to 30 minutes for grandfather engines that run under 2000 RPM at full speed. Shut down and remove the plug(s), examining the color of the insulator. If it is black, the plug is too cold. An insulator color that is white to almost red means the plug is too hot. Accordingly, try a plug one step hotter or colder. When the insulator comes out of the freshly shut down engine from tan to almost chocolate brown in color, you have the correct plug. Rarely, a change of two heat ranges is needed to get the correct heat range.

Plug selection is just a matter of common sense. Visualize what is going on inside the combustion chamber for a moment and you will soon learn to recognize a proper or improper plug upon examination. The plug insulator must run just warm enough to burn off the oil in the fuel so it won't foul, therefore the tan to nearly chocolate brown color of the properly suited plug.

Should any of your antiques be rated to turn about 4000 RPM or beyond it is possible to be bedeviled with a rare spark plug condition which causes the engine to pre-ignite and stop in a fraction of a second from full throttle! The plug insulator color can be OK, too. The chances are the ground electrode of the plug was glowing red hot, causing preignition. The remedy for this is to run with a very slight enrichment of the high speed needle and shorten the ground electrode with a hacksaw, bending it inward after shortening so you can achieve the correct spark gap.

Many two and four cylinder engines built in the twenties and early thirties have different actual compression ratios from cylinder to cylinder due to dimensional variances from the machine shop. Don't be surprised if you find the same engine needs different range (heat) in spark plugs for each cylinder.

The first time you run any newly acquired antique outboard, take some different heat range spark plugs along. Make up your mind you are going to experiment to determine the correct plugs for your engine. You will be rewarded with an easy starting, reliable and sweet running antique motor- ample reward for coaxing an old engine back to life.

Most used 18mm Champion plugs		
Range	Old numbers	New
Hot	<i>10 20MM</i>	<i>D23</i>
	C-15, C-7, 9	D-21
	8 Comm, 15-A, 7	D-16
	6 Comm, 6M, 6MJ	<i>K-15-J-014</i>
	5 Comm, H-17A, 5M, 5MJ	D-9-J
	4 Comm, H-16A	D-6
	R-7, R-16	K-61R
Cold	R-1, R-17	K-58R
	R-11, R-18	K-55R


Most used 7/8" Champion plugs		
Range	Old numbers	New
Hot	20	W-20
	3 Comm	W-18
	2 Comm	W-18
	C-4	C-16C
Cold	1 Comm	W-14
	0 Comm	W-10

Most used 1/2" pipe thread Champion plugs


Current numbers	Range
32, 34	Hot
33	
30	
A-25	
	Cold

Champion plugs for some popular antiques


	Old	New
Johnson A-35	5MJ	D-9-J
Johnson LT series	-	J-8-J
Elto Speedster	5MJ	D-9-J
Elto 1921-25	C-7	D-21
Elto 4 HP, 1926-31	5MJ	D-9-J
Evinrude single (1909-28)	1 Comm	W-14
Waterwitch (late 30's)	7	D-16




The HOOD




A/C/T
10c




R/A/C
10c




C/T
9c




T/W
8c




H/T
8c



R/2
5c



S/S
12c



A/S/S
15c

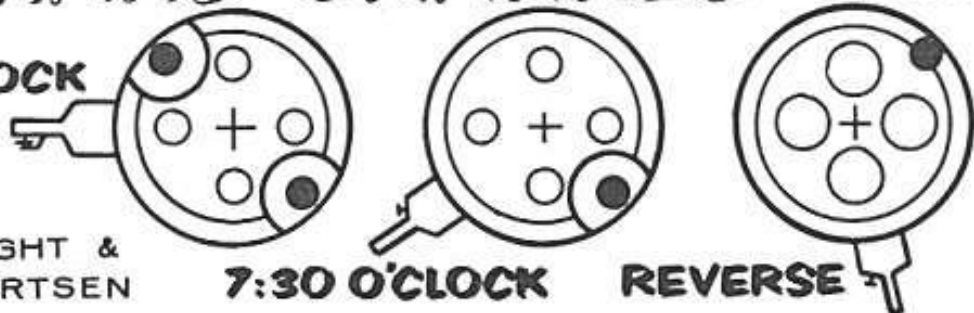
THE RAJAH COMPANY • BLOOMFIELD, NEW JERSEY, U. S. A.

RUNNING HAND CRANKED ELTOS

9:00 O'CLOCK

by

MARCUS WRIGHT &
DAVE REINHARTSEN



7:30 O'CLOCK

REVERSE

Elto outboards are the easiest starting hand cranked outboards ever built. In their day they were advertised to "Start with a Quarter Turn" and this they indeed will do. As they start so differently from any other outboard many a good man has given up entirely or was frustrated because he could always start the engine - - - but only in reverse!

This article is intended to get those unstarted Eltos running again with the boat going forward! These engines are so reliable, one deserves to be in every collector's stable. Most Eltos found turning freely on discovery will run well as is with a little servicing.

Two cylinder battery ignition Eltos from 1921 to the early 30's have a cranking knob on the flywheel. Either 6 or 7-1/2 volt Hot Shot batteries work well and last a season. Elto ignition systems draw 0.5 amp per coil at 3500 RPM. This means a Hot Shot battery will last about 70 hours under continuous usage, and about 200 hours under intermittent usage. A "lantern battery" will last about 10 and 25 hours under the same conditions.

LUBRICATING INSTRUCTIONS

Model	Motor/Model No.	Pints of oil per gallon of gasoline
1921-1925 Service Twin	1000-29999	1/4
1926-1930 Service Twin	30000-59999, 358 & 359	1/3
1928-1929 Service Speedster	60000-69999	3/4
	80000-89999	3/4
1929 Hi Speed Speedster	Stamped "H"	1 1/2
1928 Quad	70000-74999	1
1929 Quad	75000-79999	1
1930 Speedster	300-340-348	3/4
1931 Special Speedster	905	1
1930-1933 Senior Speedster	310 to 313, 360 & 361	3/4

All fuel should be thoroughly mixed in a clean, separate can. Fill the gearcase with LUBRIPLATE #105 or equivalent grease often. Timer points are set at 0.009" to 0.010".

Eltos with a 2-1/4" bore, 3 HP, 1921-25, serials 1000 up, models A, B, C, D, use Champion C-7 or D-16 spark plugs best. The 2-1/2" bore, 4 HP, 1926-31, G, H, J, K, 358 and 359 models run best with Champion 5MJ or D-9-J plugs. The various 7, 9 and

11 HP 1928 and later Speedster series with 2-1/2" bore, 2" stroke perform best with Champion 5MJ or D-9J plugs. Larger and later Senior Speedsters models 310 thru 313 use Champion 6MJ or K-15-J plugs as do the little Foldlight engines. Most Eltos require 0.032" plug gaps. Perfectionists will note often one cylinder can sometimes use a plug one step hotter or colder due to that cylinder having slightly more or less compression from machining differences.

If your Elto is to start promptly, fuel and ignition systems must be clean. The coil and battery are normal if a 3/8" to 1/2" spark is obtained. Clean the fuel tank, strainer screen, fuel line and blow out all carburetor orifices with compressed air. Nine out of ten hard starting Eltos have a filthy carburetor or fuel strainer.

Start your Elto the first time out of the water on a stand so you get the feel. Run it only about 10 seconds so you don't overheat those precious cylinders! The heat and vibration of running will loosen up almost all rust and scale; therefore it is a good idea to disconnect the water lines and fittings and blow the water jackets out with compressed air after initial running. When you later run the engine on your boat, correct cooling should be assured. Look into those water jackets with a flashlight. If you can't get all scale out, the water jacket expansion plugs can be removed. These are standard, and new ones can be obtained at an auto parts store.

Connect the battery, fuel up and open gas tank vents and fuel shut-offs. Set Service Twin mixing-valve type carburetors at about 1-1/2 turn. Speedsters should be set 2 - 2 1/2 turns open. Some models have a carburetor needle valve adjusting handle. Turn toward the starboard cylinder when starting. Turn toward port cylinder when warmed up to best running position. Keep this in mind: moving the needle valve lever to the extreme right and rocking the flywheel gives motor gas, while with the lever to the left, rocking the flywheel gives motor air. If motor apparently is flooded, rock air into it. If starved, rock gas into it. Other carburetors with floats are set 1-1/2 to 2 turns for cold starting.

Forward starting position for timer handles is 7 o'clock for 3 and 4 HP slow speed models and 8:30 o'clock for faster revving models such as the Speedsters or Quads.

STARTING ELTO TWINS--Wear a glove, or tape the knuckles of your starting hand. To prime, rock the flywheel back and forth several times using choke if equipped or holding up a carburetor crankcase valve with your finger if not choke equipped. An alternate method of priming is to rock the flywheel back and forth while pressing the stop button on the timer. For engines with an exhaust cut-out under the Starboard cylinder, open for starting. Using the flywheel knob, rapidly bump the flywheel left (counter-clockwise) against compression, letting go of the knob simultaneously.

If the engine fires, the flywheel knob will jerk out of your hand turning clockwise, and be carried past the next compression stroke. If it doesn't fire, it will merely get additional priming. As soon as the engine starts, immediately advance the timer handle to 5:30 o'clock (6:30 in higher speed models) to prevent stalling. Set carburetor needle leaner as engine warms. If the engine started backwards, you had the timer advanced too far. Try again at 5 to 10 degrees less advance. Sometimes it is easier to start early 3 HP models setting timer at 5 o'clock and pulling flywheel very quickly through compression, or clockwise.

On the boat, Eltos take up to 5 minutes for full warm up and final carburetor cruise setting. For trolling find the best needle setting to give even running but keep enough RPMs so cooling water runs in a steady stream. At high speed, set the needle by turning in until the RPM just barely begins to drop, then open $1/8$ to $1/4$ turn. Restart warm engines without priming or choking.

Eltos are reversible. Higher speed (3500 plus RPM) models reverse when running forward by moving timer to 6 o'clock, pressing stop button until engine nearly stops running - then release the button. Speed control in reverse is by moving timer handle opposite from forward running: fast becomes slow, slow becomes fast. To achieve forward running again, set timer at 8:30 o'clock and use the rest of the procedure above. Practice this and it will come very easily to you later for close-quarter maneuvering! For slow speed engines (1350-1700 RPM) the timer positions are 5 o'clock to reverse and 7 o'clock for forward, same procedure. Tilt bolts should be adjusted tight for reversing.

While familiarizing yourself with your Elto, you may find a position of timer advance beyond which no more RPM will be gained. This is particularly true of Eltos rated at 3500 or more RPM. Never run beyond this point - the engine is telling you it cannot handle any more advance in spark timing. Perhaps you are driving a heavy or heavily loaded boat. Try the engine on an aluminum boat sometime. You will be surprised how much faster it will turn.

STARTING ELTO QUADS -- Basically the Quad is two Speedsters, one on top of the other with a bearing between crankcases and a crankshaft with four throws. By the way, most Speedster and Quad parts are interchangeable. When you restore your Quad, make sure the center main bearing is in good shape; otherwise the engine will be extremely difficult to start. The Quad is alternate firing; that is, the upper and lower banks of cylinders fire alternately. You may also have a lot of trouble when you rebuild your Quad because you have connected the wrong coil leads to the wrong set of points. Set it up in the following manner: With the timer set in the 8 o'clock position, the point leads should be connected such that the wrong bank of cylinders fires at approximately TDC when the engine is turned over very slowly. It is set up this way because of an extremely long time lag in the timer assembly. This is discussed further in the July, 1966 issue of The Antique Outboarder.

Starting is accomplished in much the same manner as Speedsters or Service Twins. However, two flywheel knobs are used and two sets of knuckles should be taped to prevent the inevitable and painful removal of epidermis. Priming is accomplished in the same manner described previously; however, you will find that it is easier to start your Quad if you prime both sets of cylinders before attempting to start operation. This is done by priming one set first, then rotating the flywheel 180° and priming the other set. Ignition should be cut off during priming. Open the carburetor needle valves an extra $1/2$ turn for starting, then rock the flywheel against compression, letting go of the knobs as previously described.

Once the engine is running, it will take a good 5 minutes to warm up during which time the carburetors should be adjusted. Adjust the carburetors alternately for best running. The usual setting is $1-1/2$ to $1-3/4$ turns open or in the case of needle levers; just to the right of center. Reversing is accomplished as in Elto twins except in the case of the Quad, it is extremely tricky and takes quite a bit more practice.

Notice that the Quad fuel tank outlet is placed in such a position that unless the engine is level, the top carburetor can be higher than the fuel level in the tank. Thus, when the tank is low on fuel, the top cylinders will likely be starved for gas. This and the astounding fuel consumption of the Quad makes for a few more pit stops than you plan. Performance-wise, the Quad is a dream. It will power a 12 foot aluminum boat to about 28 miles an hour. It will, with some difficulty, pull a water skier. Quads are relatively rare and are one of the most classic and reliable antique engines which you can own.

YOUR FELLOW AOMCI MEMBER.....

CLARENCE SITTON

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

First, let me introduce myself. My name is Clarence Sitton. I'm 46 years old, the son of a blacksmith, and have been a carpenter for many years. In the years past, I have spent much of my time on the water, cruising, skiing, etc. This is a year round hobby with me as I build and maintain my own boats and motors. My latest, now several years old, is a 19' cruiser - bunks, sink, head, stove - the works. My own design. The machinery which propels this craft is a single Evinrude 75 HP 1960 model. It now has nearly 2000 hours on it and has never been back to the dealer. I suspect it has more hours on it than all the oldies I have put together.

I am in the process of building a test tank. Cut a 275 gallon oil tank in two. Should have it reinforced and a mounting board on it soon. Another gadget I'm working on is an electric starter for old motors. If this works like it should, I'll get out some drawings for other people whom have starting rope blisters. It works OK on my 16 HP Caille but won't wind the 22 HP. I'm in the process of changing the pulley.

As to the motors I'm working on, I've finished restoring the two Cailles and the Evinrude Storm Motor. The Cailles are real show pieces and I hope they run as well as they look. The Storm Motor is now in nice shape although it has really been a challenge. AOMC member Grossmor tipped me off to its whereabouts - standing against a tree in his harbor. As it turned out, it didn't belong where it was standing. After a lot of telephone calls and a couple of weekends running around, I finally located its owner. We made a deal. It had sunk on a boat last fall. It must have been under for a couple of weeks when they finally pulled it out. All they did was to remove the spark plugs and stand it against the tree. You can imagine the condition it was in. My wife suggested I keep track of the hours put into it; about 115 hours to date.

The 4-60 that I have, I've seen in operation many times. It was the personal motor of my local Evinrude dealer. He is now deceased but he really thought a lot of this motor. It was the fastest rig on the river for about ten years or so. In 1958, while he was on a buying trip East, his wife sold it for \$250. When he returned he was very unhappy, raised a lot of Cain around the store, then went looking for his motor. He found it alright, but he had to give the fellow \$300 to get it back!

Having purchased about eight new Evinrudes and a couple of used motors from him over the last 20 years, I know the family quite well. His two sons run the store and his wife remarried and moved away from here. I was in their place looking for some parts for my Storm Motor when one of the sons asked if I would like to have the 4-60 - just name a price! I stammered around for a while and finally suggested \$10. He said "sold". It had been hanging in their shop since '57 or '58 but looks as if it just came out of a box.

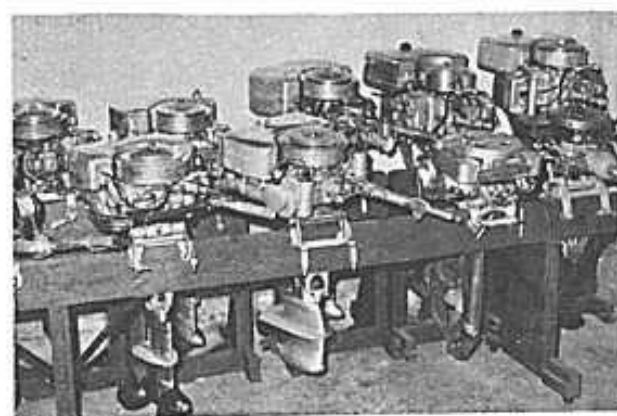
Behind every motor, there is a tale. The Japanese motor came quite by accident also. A fellow with whom I was working ran across it, loaded it on his truck in the rain and mud and hauled it to me for free! I gave him a case of Falstaff for it. It is a 2 cylinder, 4 cycle with overhead valves, push rods, oil pump and all kinds

of things Americans don't have on theirs. I've had it over a year and just recently had a magneto built up for it. When I get a little time, I'll take some pictures of it as it is being restored.

I called a meeting of all the AOMC members in this area on April 4, 1968 at member Grossman's Boat Store. Three of us were there: Wayburn Niemeyer, Joe Grossman and myself. We spent the evening looking at Joe's collection of old motors. He is the oldest marine dealer in the midwest. He showed us such things as sales records of Cailles, Evinrudes and Lockwoods in years 1912-1916. He also has a lot of old advertising brochures of these oldies. Joe is known as Mr. Houseboat now, but I can remember when he set up and ran some of the fastest rigs around.



Here are some photos of my collection. That's me above with the XXII $\frac{1}{2}$ HP Caille. In the upper rt. corner is my wife with the 16 and 22 HP Cailles and the Japanese military motor. At the right (center) are the S-45, P-65 and V-50 Johnson motors and a couple of Big Four Evinrudes. On the lower right photo (front row) are a modified early P-series Johnson, a modified Lockwood Chief, An Elto Model G and an early Evinrude single.



Aerotherm

Outboard Motor

The only motor for shallow water
Air drive, 3 & 5 H.P. for light pleasure and
freight boats. Write for catalog and prices.
Aerotherm Engine Co. LA POETE, IND.



1918

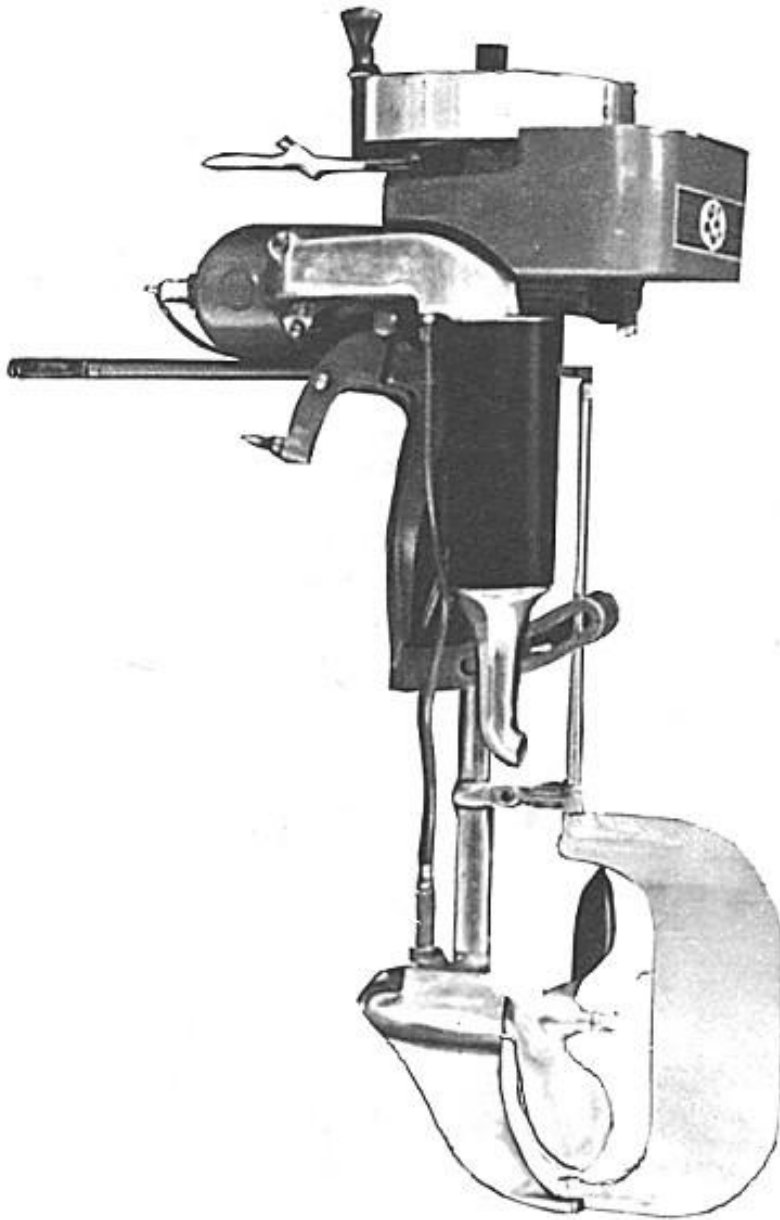
THE ANTIQUE OUTBOARDER
Presents

THE
Collector's
GALLERY

FEATURING

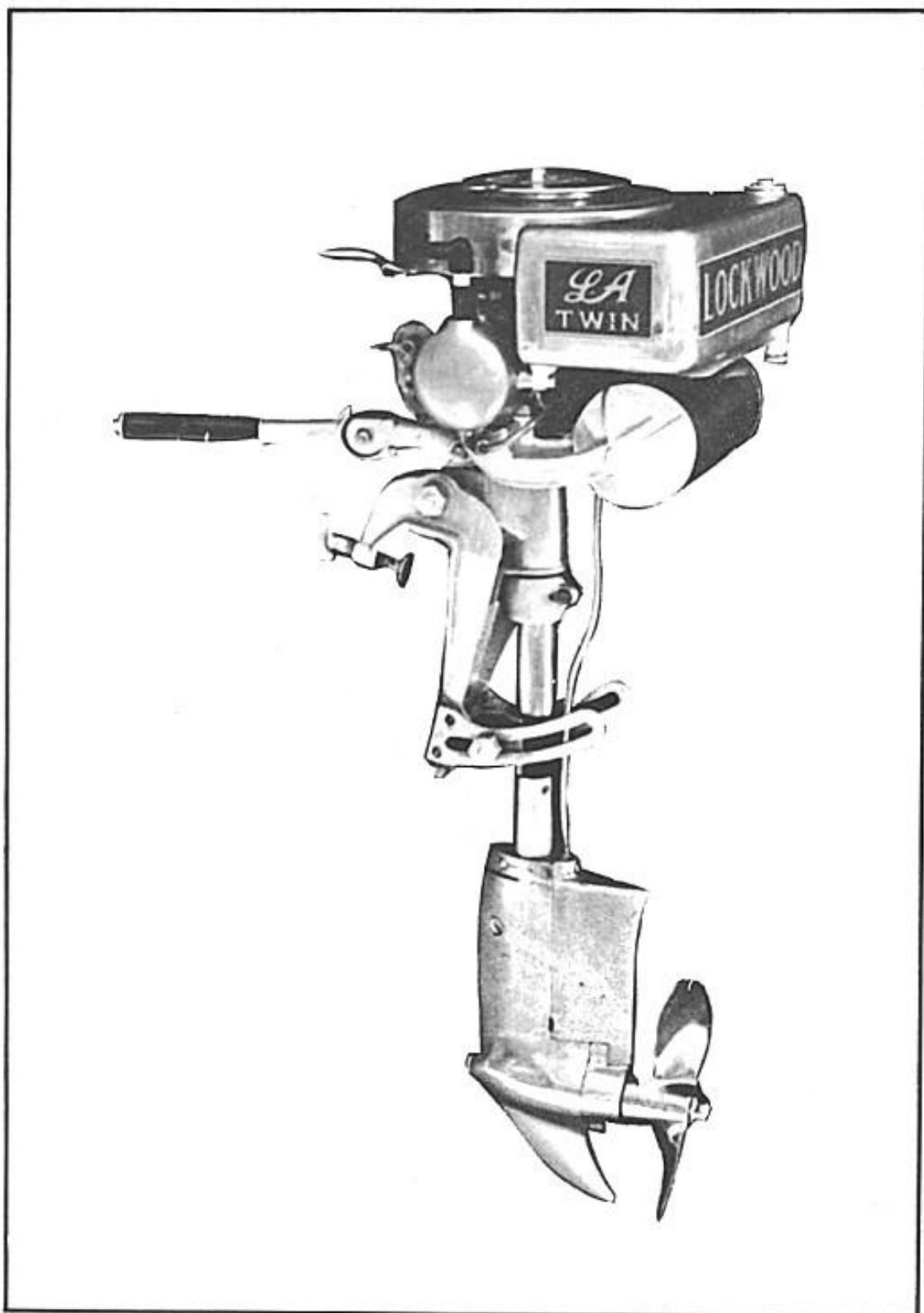
MARINE  ENGINES
Outboard

Lockwood-Ash Motor Co.
1802 Horton Ave. Jackson, Mich.

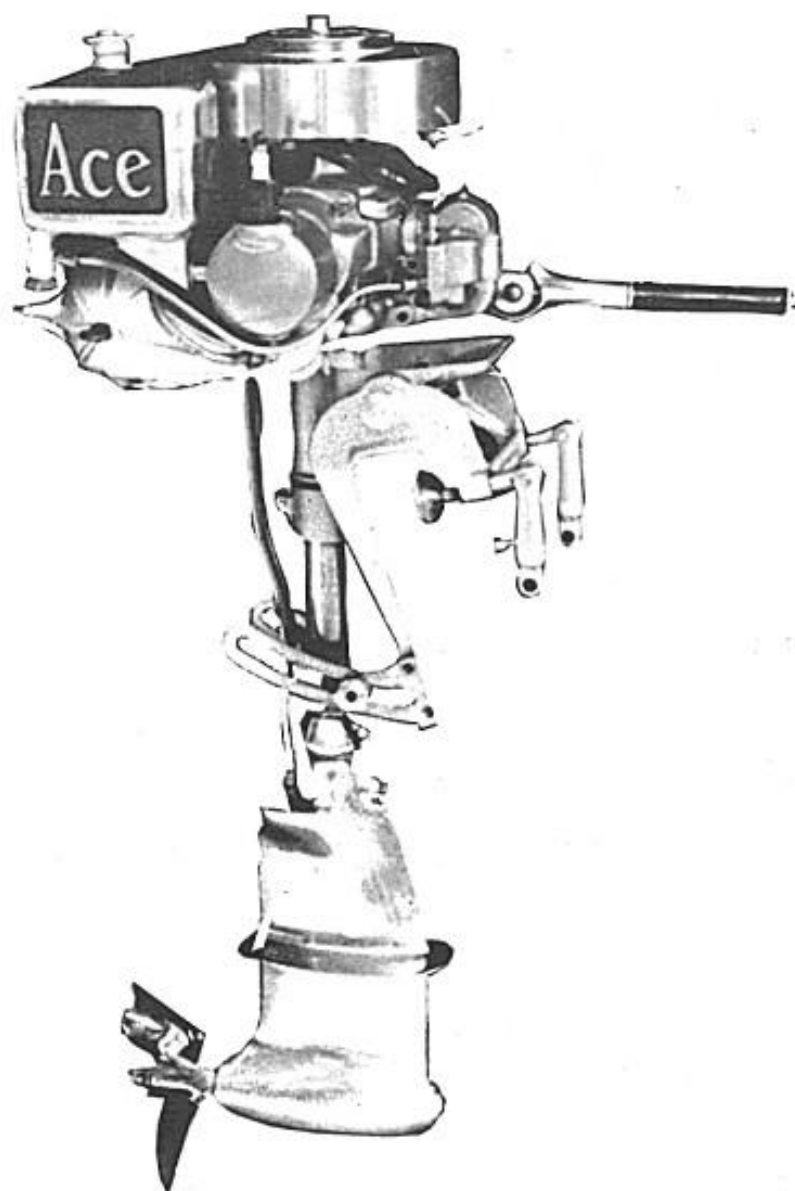


1921 LOCKWOOD-ASH ROWBOAT MOTOR

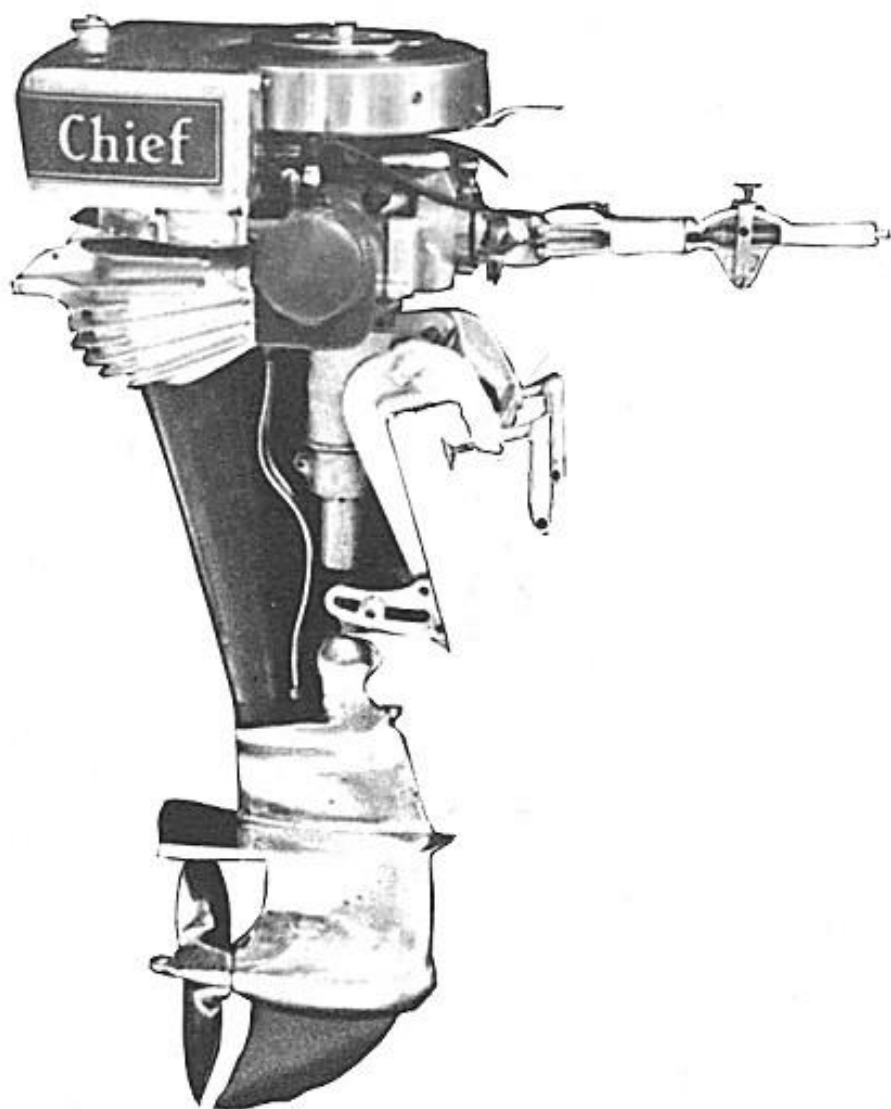




1926 MODEL 62T LOCKWOOD-ASH TWIN



1928 MODEL 28A LOCKWOOD ACE



1930 MODEL B LOCKWOOD CHIEF
(with accessory skeg)

LOCKWOOD SERIAL NUMBER, MODEL NUMBER AND YEAR REFERENCE CHART

1914 through 1930

Year	OMC Model	Type	Cu. In.	Description	H.P.	RPM	Weight	Price
1914-1926	-	-	-	L-A Row Boat Motor	2	800-900	65	\$60.00
		NOTE: Lockwood Row Boat Motors were essentially the same through 1926, having a single cylinder and rudder steering. Minor changes in the shape of the rudder and gas tank configuration occurred in 1916 and 1921. In 1921, the gas tank was cast integral with the crankcase.						
1924-1925	-	T	-	L-A Twin	3	1350	53	-
1926	-	62 T	-	L-A Twin	3.85	2300	55	150.00
1927**	174*	72 T	-	Lockwood	5.5	3300	70	145.00
		72 TS	-	Lockwood	5.5	3300	81	150.00
1928	175	82 B	19.92	Chief	10.85	4000	70	185.00
		82 BS	19.92	Chief (starter)	10.85	4000	80	195.00
		82 A	13.85	Ace	7.0	4000	50	155.00
		82 AS	13.85	Ace (starter)	7.0	4000	60	160.00
1929	169	92 A	13.85	Ace	7.0	4500	55	170.00
	171	92 B	-	Chief	14.0	3500	75	190.00
	173	92 BR	-	Racing Chief	14 +	4500	75	235.00
1930	160	-	19.92	Chief	11.0	4500	75	190.00
	161	-	13.85	Ace	7.0	4500	55	170.00
	163	-	19.92	Chief (starter)	11.0	4500	85	200.00

* OMC Model Reference

** In 1927 Model 72 T was Standard, 72 TS was Standard salt water, 72 TL & 72 TLS were longshaft standard and longshaft salt water.

This Table has been compiled from the best information available but should be considered as an unofficial guide.



TWIN CITIES

MINNESOTA

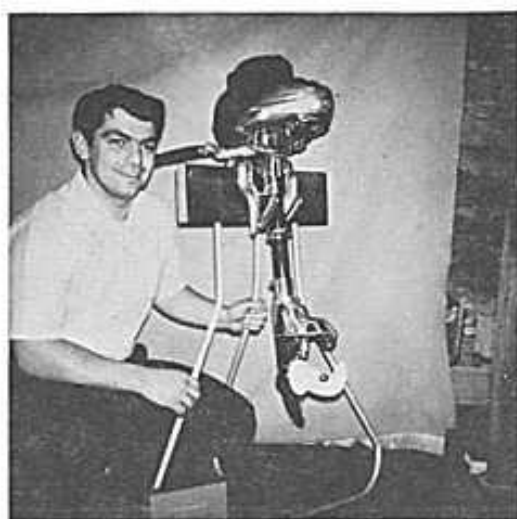
CHAPTER NEWS

BOB BRAUTIGAM

In January, the chapter met at the home of John Koonce. Initial plans were made for coming local events to include one major display for mid-March and two outings for later in the summer. During the meeting we were pleased to welcome Robert Peterson to our chapter membership. Bob has a history of outboarding spiced by some racing.

Highlight of our chapter meetings is the visit to the workshop. John is fairly new at the motor collecting business but already has a good number of engines to work with. Two of the nicer units are 1928 Eltos - a Service Quad and a Service Twin. John's a little turned around though: his Quad ran when he got it, but doesn't any more. In spite of that, he's a good motor polisher and had a DS 38 Johnson ready for the March show. Other motors on John's basement rack include Seabees, Neptunes and Waterwitches.

A printer by trade, John has produced a good deal of printed identification material for chapter members and is readying name cards for display motors. He's a real creative guy and an aggressive member of the club. His enthusiasm has been an important asset to the success of our local organization. John's interest has been caught up by his wife Nancy who helps scrub up dirty motors and tells John which parts to paint and which parts to polish. Nancy's even looking for a motor of her own to restore. She even tells John to go down in the shop and get busy, I think she's the Bess Evinrude type!



Here's John with his DS 38 Johnson.



Don Carlson (vest) and Dave Johnson (back) give a Quad lesson.



John has just turned down an offer of \$75 from Don.



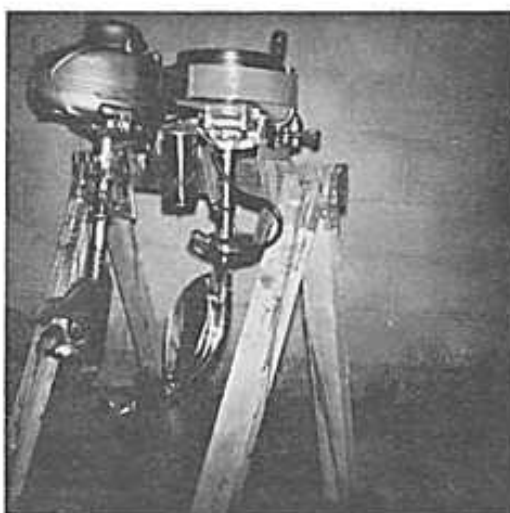
Some of John's printing work admired by (l. to r.) John, Bob Peterson, Don Carlson and Ron Johnson.

In February, the group got together at the home of Bob Peterson. Outside the weather was cold, the streets were slippery and snow was falling but inside Bob's spacious home we forgot all that in favor of boat and motor talk. During the meeting we enrolled new member Bill Slice and did more planning for the March exhibit. We even split up the work getting ready for the show with one fellow making the big sign, one making motor name cards, one making motor stands, others making the railing, etc. Things go easier it seems when every one pitches in.

Bob's collection already includes a Model B Evinrude and a Gray Gearless as well as an A-25 Johnson and others. Bob just has to be rated as our local champion negotiator - he bought the Gray for 10% of the original asking price.



Bob Peterson as he explains details of the unusual Gray lower unit.



Here's the Gray again, showing how nicely Bob's restoration job turned out.

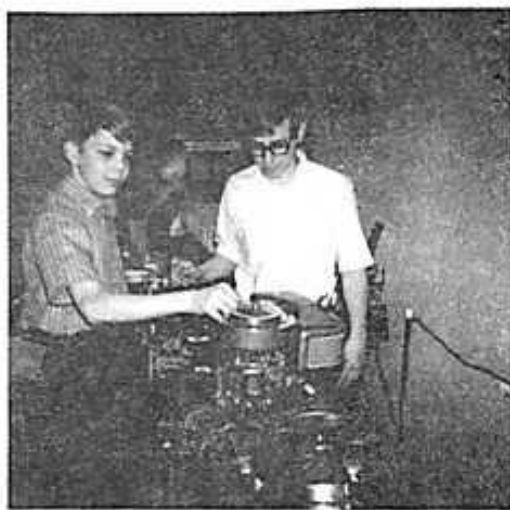
The March meeting was sponsored jointly by Dave Johnson and Bill Slice. No new members this month and after we all listened to another one of Sec'y-Treasurer Koonce's fund raising speeches, we adjourned to the workshop. I recall one time recently when Bill and Dave each had a motor in the living room! This is something I've never been able to sell at my house. The evening display though, was in the basement and an interesting exhibit it was.

Both Dave and Bill are still in high school. Some boys can't wait to get a car so they can chase girls. Dave, I know, is anxious for a car so he can chase after motors. Both these guys do nice restoration work. Bill has an LT-38 Johnson and an alternate firing Neptune. Dave has about 10 machines including a Service Twin Elto, A-50 Johnsons, and a couple of Champions.

Bill is taking a printing course in school and Dave works part time in printing shop. As a spare time project, they restored an old printing machine donated by John Koonce.



Ron Johnson and Bob Peterson admire a pair of Johnsons while Dave looks on.



Dave and Bill wipe off the fingerprints of the visitors.

Now they can duplicate technical dope, etc. for all of us. Dave's one wish is to locate a really big motor. With his enthusiasm, he'll have one before long.

Beginning March 15th and ending April 12th, the chapter held its spring display at the Elmer N. Olson store in Minneapolis. The Olson Company is the world's largest Johnson Outboard dealer. The Antique Outboard exhibit was part of the store's annual boat and motor show.

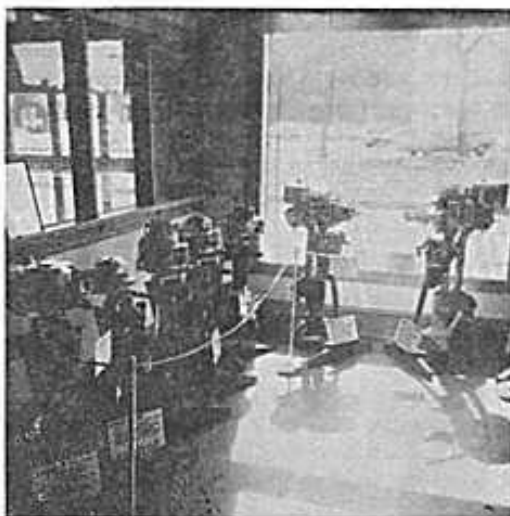
Several officials of the Johnson Division of OMC visited the old motor exhibit and some pictures were taken. We were advised that if possible, the pictures would be published in the Johnson Jotter, a company dealer type newsletter.

Needless to say, the antiques shown were all Johnsons. Each member of the chapter had at least one motor on exhibit. Dave Johnson and Bill Slice visited the store every day during the exhibit to make sure everything was presentable. The rest of us stopped in on busy evenings and weekends.

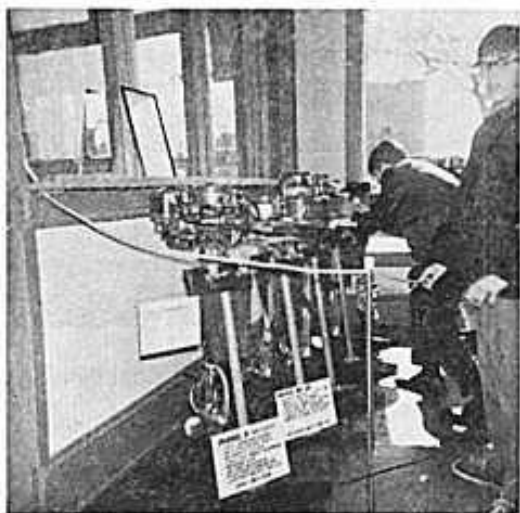
John Koonce provided his usual color to the show - he changed the color of his DS-38 two or three times. Some of the sales people in the store were sure John had brought in at least three different motors. We in the club knew it was the same one though, because when you pull out the starter rope, a sign comes up in back saying put-put.



Your Editor who's just big enough to hide a VR-45 and make a VR-50 look small.



A view of the display room. Notice the hand rail which was made by fitting $\frac{1}{2}$ " conduit into a polished flywheel and stringing nylon rope between. Motor stands were all alike. A sign for each motor gave details.



Looks like a knob twirler at work while his accomplice stands guard.

John Koonce showed me some of his club correspondence the other day. I didn't know he was such an all-around authority. I think we should all share his commentary:

Dear John; I know I spend too much time in my shop working on my motors -- four or five hours a day-- but the other night when I came in early, I found my wife in the arms of another man. I was so upset, I dropped the crankshaft I was carrying. What should I do? Signed: Broken hearted

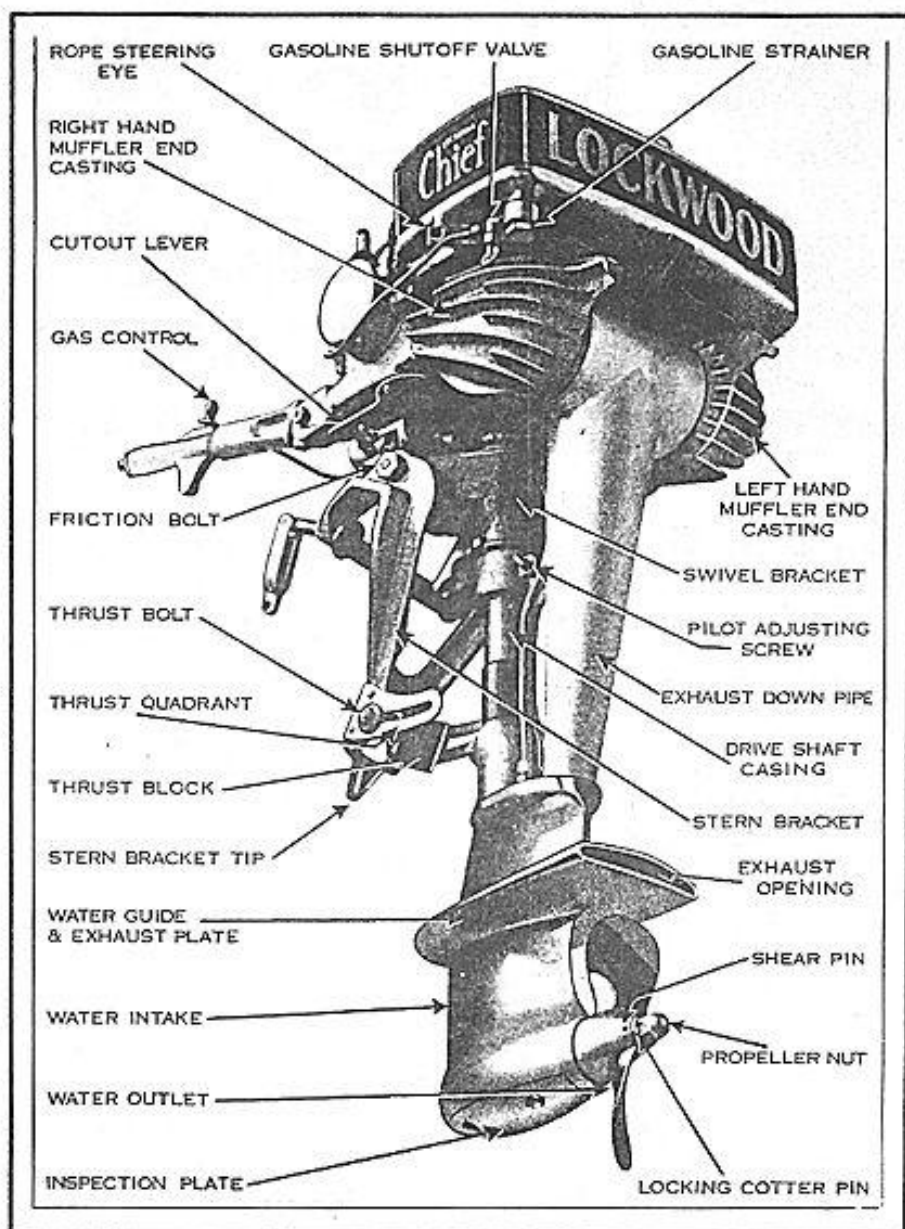
Dear Broken hearted; Don't despair. Give the crankshaft a visual check for knicks or scratches. If you don't see any, it's probably OK.

Dear John-

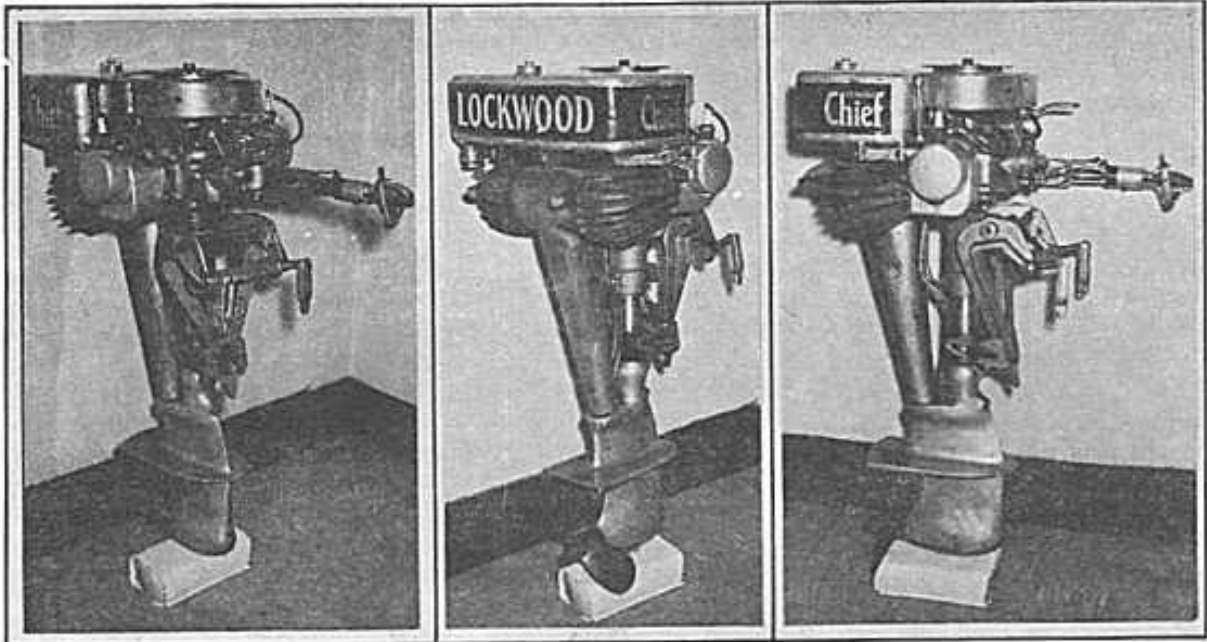
My 1919 Onelung Twin has fallen off the transom several times - into the lake - due to vibration. How can I keep that from happening again? Signed: Shook

Dear Shook- Next time, leave it.

AOMCI SPECIAL *Feature*



1930 LOCKWOOD Chief by J.L. Smith



SPECIFICATIONS:

Model B Serial 21,290
Bore: Two and Three-eighths inch
Stroke: Two and one-quarter inch
Cubic Inches: 19.92

Weight: 75 pounds
Original cost: \$190.00
H.P.: 11.0 at 3500 RPM
14.+ at 4500 RPM
(Racing)

HISTORICAL: Our Historian, W. J. Webb, provides the following information: "The Lockwood predecessor company, Lockwood-Ash Motor Company, was founded in 1904 to build 2 cycle marine engines. These engines were marketed under the Lockwood-Ash brand to dealers and boat builders, and under 'Motorgo' brand to Sears-Roebuck. In 1914 Lockwood-Ash brought out an outboard motor which continued with medium success until 1925 when a brilliant young engineer, F. T. Irgens, was hired. The effects of advanced engineering became immediately noticeable in 1926 as the L-A Model T began to make a name for itself in racing.

In 1927 Mr. A. L. Lockwood purchased the Ash interests and changed the name to the Lockwood Motor Company. In 1928 Lockwood brought out the Ace and Chief which won most of the Class A and Class B races that year. Sales rose and Lockwood now became a figure in the field.

This brought Lockwood to the attention of Steve Briggs, then President of Evinrude Motors and the Briggs and Stratton companies of Milwaukee. As Art Lockwood wanted to sell, Mr. Briggs had no difficulty in getting Lockwood to combine with Evinrude and Elto to form Outboard Motors Corporation in March of 1929. The depression hit in 1930 and as a result the Lockwood brand was discontinued for good."

IGNITION: Magneto parts including the single coil, condenser and breaker point assembly were manufactured by Eisemann. The heavy flywheel is $9\frac{1}{2}$ inches in diameter and has a rope plate attached with three bolts. This plate has the model and serial

number stamped on and bears the script LA together with the lettering "Lockwood Motor Co., Marine Engines, Made in USA, Jackson, Mich." There is a handle for advance and retard positions of the magneto plate, these positions being firmly held by a ratchet. There is no stop button on this handle as provision is made for this on the steering handle. Spark plugs recommended are 18mm. Champion M-6.

FUEL AND CARBURETOR: The oiling suggested in the Evinrude manual is one pint to the gallon of gas while the Champion Spark Plug booklet recommends one-half pint. One could make a logical compromise at three-quarters pint to the gallon. The aluminum tank has a capacity of two gallons and is equipped with a vertical glass tube on the left side for sight viewing of contents.

The two intake manifolds are cast in one piece the central portion of which serves as a housing for a cylindrical insert. This insert at a certain point of rotation cuts off the air intake and acts as a choke and can be set in this position by manual operation of a choke lever at the front of the carburetor. Once the motor has started the lever is moved to the off choke position and a cable from the throttle lever on the steering handle continues to rotate this same insert. By varying the size of an opening into the manifolds the insert acts as a valve, regulating the volume of fuel intake for fast or slow operation. This valve together with its support, control levers, float basin, and high speed needle adjustment is bolted as a unit to the intake manifold. This special arrangement seems to be of Lockwood design. The throttle on the steering handle is not a twist grip control but acts similarly to a modern remote control lever in miniature.

Fuel vapour is carried by the two intake manifolds to intake ports at a portion of the cylinders nearest the crankcase. During the intake stroke these ports are uncovered allowing the fuel vapour to enter the crankcase and cylinder bypass. Then, as the power stroke occurs it becomes compressed and is forced to enter the firing chamber through a second set of ports via the bypass located at the top of the cylinder.

CONSTRUCTION: The heavy cast iron cylinders are only partially offset and the bronze connecting rods are straight but partially offset at their ends. Other manufacturers of this period used straight rods with completely offset cylinders. In this way Lockwood softened the staggered arrangement and achieved a somewhat more symmetrical appearance of the powerhead. As mentioned earlier intake ports to the crankcase are at the front of the cylinders close to the crankcase. Intake ports to the cylinders are at the top while exhaust ports are at the bottom. Aluminum pistons have three rings each, kept from rotating by pins. Two rings at the top end maintain compression during the power stroke and one ring at the piston skirt helps crankcase compression. The crankshaft rotates in solid bushings as ball and roller bearings were not in common use for the purpose at that time. At the bottom of the starboard cylinder is a manually operated valve. As it is rotated, perforations line up with holes in the cylinder casting so that exhaust from the cylinder can be released above water. Presumably this improved the starting characteristics.

There is a large cylindrical sheet iron muffler to which is welded an exhaust pipe of generous size. This in turn secures to the lower unit and exhaust is discharged under water. The lower unit is cast in one piece of aluminum alloy and differs from the usual in having no skeg. Instead, a curved section attaches with four bolts at the base and this can be removed for inspection of gears and bearings. Access for greasing is also accomplished by removing any of these four screws and

using a grease gun through the hole. The propeller, made by Michigan is marked 10" x 12 $\frac{1}{2}$ " and has two blades of bronze. The shear pin is described as being Tobin bronze .1817" diameter x 1 $\frac{3}{16}$ inches in length.

COOLING: A pair of cast aluminum exhaust manifolds bolt to the cylinders and conduct the exhaust gases directly to the round shell muffler. These manifolds are well equipped with cooling vanes and do a reasonable job of cooling, but nevertheless even a short contact with any part of the muffler system during the running of the motor will teach the operator to keep good clearance in the future.

The water cooling for the cylinders is provided for in a unique manner. A vertical series of holes in the forward edge of the lower unit allows for positive pressure of water as the boat moves forward. Water is conducted up a pipe just to the rear of the driveshaft housing and thence to the base of each cylinder. The water exits at the top of the cylinders and is conducted downwards by an adjacent pipe, through the lower unit to the forward end of the propeller shaft which has been drilled hollow. The propeller shaft has a pair of holes towards its rear portion which is covered by the hub of the propeller. However the hub of the propeller likewise is hollow. A hole in the rearward aspect of each blade connects through to the hollow part of the hub so that water is constantly being thrown out by centrifugal force.

PERFORMANCE: Although the standard 'Chief' described herein has not been in use for several years the writer had ample opportunity to assess it during the course of a summer when it was operated on several occasions. The boat on which it was used was a 15 ft. round bottomed displacement type skiff and speeds of from 14 to 16 miles per hour were regularly obtained depending on the load. Starting, while seldom accomplished on the first crank, was never disappointing and the overall performance of the engine was dependable. The noise factor was consistent with an engine of this size and type. It was also noticed that the motor kept a clean condition, better than some engines of this vintage. While direct tiller steering was usual in the period a steering wheel hookup would certainly facilitate use and give much more positive control of boat and power plant.

CONCLUSION: Undoubtedly the Lockwood could be considered a casualty of the depression. It was sturdy, well engineered and dependable and for its time displayed as many or more of the desirable features we would expect on any outboard. Despite this, the Outboard Motors Corporation, being hard hit in the early years of the depression when outboard sales fell off rapidly, had to trim costs and reduce the variety of the models produced in order to survive. If this had not happened we could easily imagine the name Lockwood being in the fore among outboards today.



THE EVINRUDE TROPHY

An interesting remembrance of times past is this Evinrude trophy awarded to race winners of the late 'teens and early twenties. About ten inches tall, the trophy was decorated with a bronze relief of an old Evinrude single on the other side. It was up to the dealer or distributor to secure the trophy from the factory and present it to the winner with as much fanfare as was possible. At first, Evinrude gave the trophies free to the dealers but soon hundreds had been awarded, sometimes not for the purpose intended. Few of the graceful, silver trophies still exist today.

W. J. Webb and R. Brautigam

by
R H ZIPPS

TRADER'S COVE

One of the most important considerations members should give when buying motors whether they are located in the Trader's Cove Column or in the nock of some old outboard shop, and that is whether or not the motor is a salt water motor. Salt water can be a killer to cast iron cylinders. The vast majority of the boating public is not conscientious about taking adequate precautions when boating in salt water. If a motor was used years ago in salt water and then stored without being flushed, it is a sure bet the water jacket of the cylinder will be completely corroded.

This corrosion is constantly taking place and will do so until the outer water jacket bursts. And if you don't think that will happen, take a gamble on a salt water motor and don't do any preventive maintenance, and believe me you will regret the day you were born. What happens is that the salt water forms a coating over the interior of the water jacket. Corrosion starts and causes large flakes of metal to fall to the bottom of the water jacket. This process takes place until the entire bottom of the water jacket cavity is full of these flakes. The corrosion causes these flakes to bond and after a while since the flakes cannot expand because the bottom of the cavity is full, a tremendous pressure builds and causes the outer water jacket to crack. If allowed to continue large scale damage will occur. I have seen a case where the entire end of a cylinder water jacket was pushed completely off.

If for any particular reason, you decide to buy a salt water motor, take all the freeze plugs out as soon as you can (if the motor has removable heads, the heads should be removed). If the jacket is full of scale, drill carefully at every possible angle through the freeze plug holes. Hitting the cylinder firmly with a rubber mallet helps to loosen the scale. I will not attempt to go any further with the cleaning operation as that is a separate article in itself. The prime thing to remember is not to attempt to run the motor until the jackets are clear, or serious damage will result. Blowing through the water line proves nothing as 99% of the jacket could be plugged. The only sure way is to remove the freeze plugs and probe around.

GENERAL REQUIREMENTS APPLICABLE TO 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. Obtain forms from writer.
2. Advertising rates: Members-Free; Non-members- \$1.00 per motor.
3. Closing dates: all ads must be received not later than the 1st of the month preceding the date of issue.
4. Transactions based on good faith: Deliberate misrepresentation, or violation of the code of business ethics and good sportsmanship, will constitute grounds for refusal of advertising, and may result in disbarment from this club.
5. Warning to purchasers: The AOMC will accept no responsibility for any unsatisfactory transaction involving articles which either have or have not been described in accordance with the provisions of paragraph one.

MOTORS FOR SALE

CAILLE- Large opposed twin; running condition; complete; sounds like a 20 cubic inch red head from the very late twenties or early thirties. Warren Husted Sr., 12 Burkhardt Ave. Bethpage, New York 11714

CLARKE- Troller, Mod T-39, Ser 2244; 1.2 HP; cylinder in lower unit; runs; complete; never used; Walter Hooper; 1003 Peninsula Drive; Traverse City; Missouri 49684

ELTO- Lightwin; Mod A; Ser 8205; 3 HP; 1923; opposed twin; has rudder; runs, good overall condition; Ellis Wroughton; 3000 Stewart; Boise, Idaho 83702

EVINRUDE; Row Boat Motor; Mod B; Ser ?; 2 HP; single forward pointing cyl; runs; complete; also has spare parts; good overall cond; Warren Husted Sr.; 12 Burkhardt Ave.; Bethpage, New York

EVINRUDE- Row Boat Motor, Mod A; Ser 100760; 2 HP; 1918; single forward pointing cyl; does not run; muffler & exhaust manifold missing; George Huebner; 314 Cleveland Ave; Tulsa, Oklahoma 74432

EVINRUDE- Sportwin; Mod N; Ser 11540; 1926; 2.5 HP; opposed twin; runs ; complete; good overall cond; Gene Jacco; 6290 Hemlock Way; Rocklin, California 95677

EVINRUDE- Sportwin; Mod N; Ser 14271; 1927; 2.5 HP; opposed twin; does not run; mounting flange on carb body broken; not frozen; complete; Warren Husted Sr.; 12 Burkhardt Ave.; Bethpage, New York 11714

ELTO- Lightwin; Mod ?; Ser ?; opposed twin; 3 HP; has rudder; does not run; not frozen; complete; George Huebner; 314 Cleveland Avenue; Tulsa, Oklahoma 74432

EVINRUDE- Sportsman; Mod 4091; Ser 0872; 1.5 HP; 1935; single cyl; runs; hard starting when cold; complete; comes with owners manual; Russel Dutton; Union Street; Richfield Springs, New York 13439

EVINRUDE- Sportwin; Mod 409; Ser 3572; 4 HP; 1932; opposed twin; runs; complete; comes with owner's manual and parts book; good overall cond; Frank Ceustara; Box 162; Trumbull, Connecticut 06611

EVINRUDE- Sportsman; Mod 4254; Ser 00178; single cyl; runs; broken prop; has three dents in tank; Warren Hustis; 17 Essex Road; Fishkill; New York 12524

JOHNSON- Water Bug; Mod A; Ser 16418; 2 HP; 1923; opposed twin; running condition; complete; Ernest Lazette; 126 Central Street; Ashburnham, Massachusetts 01430

JOHNSON- Water Bug; Mod AC-25; Ser 32032; 1925; 2 HP; opposed twin; prop missing; not frozen; good overall cond; George Huebner; 314 Cleveland Avenue; Tulsa, Oklahoma 74432

JOHNSON- Mod ?; Ser 229890; twin cyl; running cond; not frozen; complete; Robert Sample; Hammer Creek Road; Canisteo, New York 14823

JOHNSON- Mod PR-40; Ser 92079; Big Twin; 1928; 13.15 HP; opposed twin; running cond; gas cap missing; small weld on one cyl; This model is the special racing Big Twin; Clinton Oak; 2825 Elgin; Muskogee, Oklahoma

JOHNSON- Mod A-75; Ser 224634; 4.5 HP; 1935; Alternate twin; does not run; not frozen; linkage rod and plate for exhaust bypass missing; Gas tank & exhaust manifold are welded; Edward Rasel; 8106 Stratman Rd; Baltimore, Maryland 21222

LAUSON- Mod Y4938; Ser 7084161; 1935? single cylinder; 4 cycle; runs; complete; fair overall cond; Warren Husted Sr.; 12 Burkhardt Ave.; Bethpage, New York 11714

EVINRUDE- Cup; Mod 4264; Ser 04968; 1/2 HP; 1939-41; near mint cond; runs perfectly; decals still legible; A.L. Dale; P.O. BOX 146; Ketchum, Oklahoma 74349

PARTS FOR SALE

AMPHION- Rods, piston, crankcase, crankshaft, lower unit transom clamp; ELTO- 1928, Quad, Misc. parts; NEPTUNE- 2 inch bore blocks, pistons, powerhead with lower unit; WATERWITCH 1938 or 1939, 2 cyl powerhead, lower unit; Mark Wright, 30 Crest Drive; Little Silver, New Jersey 07739

JOHNSON- Mod KR racer; chrome plated rotary valve type crankshaft; 2 chromed dome pistons with wrist pins (very high dome); one block(new or newly noneed) with stainless steel exhaust & two chromed water pipe outlets; one padded head & head bolts; one head gasket; N. Lefty Krusinski; 57915 Maple Hill; Mt. Clemens, Michigan

PARTS WANTED

MERCURY- 1940, Mod K-5, Ser 326; needs gas tank; Von's Outboards, 3256 Midway Drive, San Diego, California 92110

PARTS FOR SALE

JOHNSON- Mod A-50 thru A-80; Mod K-50 thru KD-15; Bill Salisbury; 1105 Hunterston; Cupertino, California

MOTORS FOR SALE

JOHNSON- Mod AT-10; NEPTUNE- Mod 10A6; Small JOHNSON made in South Bend; JOHNSON- Mod KA-39 in excellent cond; JOHNSON- Pacific pumper # 43327 NY; EVINRUDE- 3 HP, # 624830; all at reasonable prices; Chuck Stoker; 63 Wilson Ave.; San Jose, California

PARTS WANTED

MERCURY- Mod KF-5, needs lower unit; Marcus Wright; 30 Crest Drive; Little Silver; New Jersey 07739

KOBAN- needs:magneto, flywheel and steering handle; Gene Powell, 496 Oakwood Road; Huntington, Long Island 11743

JOHNSON - Model MS-38. Needs carburetor; Sam Anderson 1661 Emerald Drive, New Brighton, Minnesota.

MOTORS WANTED

EVINRUDE- 4-60; or Big Quad; any ELTC; VAN BLERCK ensign; KOBAN; CLARKE; CROSS Sae Gull Twin; NEPTUNE Master Twin; OMC Speedi-bee; EVINRUDE- Speeditwin racer; Lockwood Ace or Chief; Bill Kelly; 10201 114th Place NE; Kirkland, Wash.

MOTORS SEEN

This month I have opened my files to the miscellaneous motors section.

CHAMPION- Mod D201568;R. Allison; 2315 25th Ave. San Francisco, Cal.

CHAMPION- Mod A; Ser 3029; J. Argyle; Box 32; St. Johns, Utah

CHAMPION- 1941?, 5 HP; N. Dietrich; 1569 Sunnyvale; Walnut Creek, Cal.

CHAMPION- no other info; Harry Greer; Plymouth, Washington 99346

BENDIX- Ser 7B8000; James Shandera; 7407 Alvarado; La Mesa, Calif.

BENDIX- Ser 7B7834; Bud Noble; 244 Roswell; Marietta Georgia

FIRESTONE; Ser 487-403376; George Rogers; Martins Beach; Willingboro, New Jersey

FIRESTONE- no other info; Harry Dean; Box Y; Clearlake Highlands, Cal.

Indian- Silver Arrow; L.R. Parkinson; 171 Lincoln Ave. Amherst, Mass.

LOCKWOOD- Mod 72T; Martin Johnson; Rt. 1, Box 331; Cook, Minn. 55723

LOCKWOOD- Ace; H.A. Nork; 820 Broadway; Marysville, Kansas

LOCKWOOD- Mod 82A; Robert Freerksen; RFD Lakeview Ave Mansfield, Mass. 02048

LOCKWOOD- "Foldlight"; Ross Parker; 2451 21st Ave. Rock Island, Ill.

MARVIN- Mod 200; Tom Graham; 826 S 10th; Lafayette, Ind.

OMC- Ser 4132123; Jerry Williams; Hodgdon; Maine

JOHNSON- Mod A; Ser 563111; Ross Parker; 2451 21st Ave Rock Island, Ill.

OMC- Ser 4240520; Manyel Consalves; Rt. 1, Box 371B; Half Moon Bay, Cal.

OMC- no other info; W.R. Martin; Rt 4, Box 82; Excelsior, Minn.

LOCKWOOD- Ace; Arnold Kruzell; 753 N. Jones Rd. Essexville, Mich.

OMC- Ser 4012217; D.J. Little; 11 Stirrup; Albany, New York

SCOTT-ATWATER; Ser 16929; H. Dunning; Rt. 2; Gouverneur, New York

MOTORS SEEN

SCOTT-ATWATER; no other info; J. Larremore; 719 Shell; Midland, Texas
SEA KING- no other info; D. Sommers; 1105 Charlton West St. Paul, Minn.
Misc. Motors: John Snyder 1222 Latta Lane; Orlando, Florida
???????; no other info; Scheila Vachon; 2148 Cromwell; Houston, Texas
???????; no other info; A. Laurent; 217 S Johnson New Orleans, Louisiana
WATERWITCH- no other info; M. Reid; 11 Centre St. Chatham, New Brunswick
WATERWITCH- no other info J. Shannon; 10504 Ruthelen Los Angeles, California
WATERWITCH- no other info R. Zimmerman; 110 E. George Arcanum, Ohio
WATERWITCH- Mod MB-571-10 H. Tremblay; 223 W. 110th Chicago, Ill.
CHAMPION- Ser 1E30; Leo Megary; 101 Palmerest, Apt 2; Dale City, Calif.
MERCURY- Mod KG-7; H.G. Shirray; 10301 108th St. Edmonton, Alberta Canada
SCOTT-ATWATER- #1-20; T. Nash; Box 267; Daroy, Montana
THOR- Ser 7251; H. Geoutke Box 246; Peewaukee, Wisconsin
WISCONSIN- Row Boat Motor H. Karrer; 4925 N. 30th; Omaha, Nebr. 68111
OMC- Mod 4156; B. Weesner; 119 West 7th St. Mishawaka, Ind.
INDIAN- Silver Arrow; F. Page; 570 Dennett; Portsmouth, New Hampshire
LOCKWOOD- Ace; Karl Cerny 1545 S. 34th St. Milwaukee, Wisconsin
MARTIN- "75"; Kenneth Powers; 33 Pioneer Ave. Caribou, Maine
SEA-KING; no other info; R. Beau; 6119 Raincloud; San Antonio, Texas
SEA KING- Mod 14KI8821; C. Wallsteadt; Shingleton, Mi. 49884.
SEA KING- no other info; M. Pearson; 501 13th Ave Fulton, Illinois
25 Motors; Robert Smith 1501 Holmes; Springfield Illinois
???????; no other info; R. Perry; 233 Bakerdale; Rochester, New York
WATERWITCH- no other inf T. Watson; 1162 Eastgate Cincinnati, Ohio 45231
WATERWITCH- Mod M-B; P. Mc Dermott; 840 N. Main Randolph, Mass.
WATERWITCH- no other inf R. Hall; Rt. 1; Gladstone, Virginia
MOTORGO- Has Rudder- J.C. Reichenbach; Rt 4; Black River Falls; Wisc.
WATERWITCH- no other info; M. Jones; 409 Utah; Pittsburg, Kansas
CHAMPION- no other info H. Klopf; 3529 McConnell Sharpville, Pa.
MERCURY- Mod K3; Alan Nogle; 729 College; Winthrop Harbor, Illinois
SEA KING- Ser W7487; L. Bliesner; 8605 N. Granville; Milwaukee, Wisconsin
WATERWITCH- no other inf B. Boreaux, 187 Anchor; Oceanside, New York
CHAMPION- Ser 1B6871; J. Gish; 4210 Dupont Ave N.; Minneapolis, Minn.
CHAMPION- no other info J. Warer; 394 N. State; Concord, New Hampshire
CHRIS-CRAFT; no other inf A. Arnold; 29 Hopper; Pompton Plains, N.J.
WATERWITCH- Ser C53633; W. Way; 215 E. Cheryl; San Antonio, Texas
SEA KING- no other info; O.M. Goldman; Gen. Del. Martinez Lake, Yuma, Ariz
SEA-KING; no other info M. Ricker; 908 Redwood Richardson, Texas
SEA KING- no other info; A. Ruston; 49 Guelph; Stratford, Ontario
???????; no other info; D. Davis 2851 Washtenaw Ave. Ann Arbor; Mich.
???????; no other info; L. Bidwell; Constantia, New York
JOHNSON- alt twin; K series H. Scane; 32445 Hees; Levonia, Michigan
WATERWITCH; no other info; J. Gearing; Gearing Aircraft Brule, Nebraska
WATERWITCH- no other info; K. Craig; 7811 Enola St. Apt; 211; McLean, Virginia
WATERWITCH- Mod MB-571-10; J. Story; 898 Kenneth St. Campbell, California
WATERWITCH- Mod 571-22; A. Geist; 623 Allegheny; Oakmont, Pa.
BANDIX- no other info; Carl Nelson; 6020 Chrisholm; Duluth, Minn.
LAUSON- no other info; W. Broderick; 1122 S 5th; Clinton, Iowa
6 Motors; Norman Alsen 628 Sycamore; South Milwaukee, Wisconsin
SEA KING- no other info; W. Farm; Carnation, Wash. 98014
WATERWITCH- Ser 331879; B. Nash; 1069 Main St. Tewksbury, Mass.
FIRESTONE- no other info; Wayne Buckland; Hooks, Texas
CHAMPION- no other info; A. Pearson; 2620 E. 22nd; Minneapolis, Minn.
EGLIN- Ser 601-93826; K. Townsend; 729 Green Ave; Mt. Bohrain, New Jersey
3 Motors; E.M. Zirbes; Castlewood; South Dakota 57224
SEA KING- no other info; R. Kennedy, 14453 Pearl; Southgate, Michigan
WALKER TROLLER??; Jack Minar; 18348 Mac Arthur; Detroit, Mich.

PARTS WANTED

1 Set of coils (2) and flywheel for 1928 Elto Quad S/N 7163. Write John Koonce, Twin Cities Chapter, 1049 24th Av S.E. Minneapolis, Minn. 55414

PARTS FOR SALE

Mr Charles C. Boyd who has been in the outboard motor business since 1910 offers these parts for sale in response to an unknown written request:

QTY	ITEM	PRICE
1	Elto Senior Quad	\$10
3	Timers with points & cam for 3 1/2 HP Super Elto twin	8 (each)
1	Super Elto twin dbl poppet valve carb and choke with lever	8
1	Same carb as above but missing poppet valves	6
1	Super Elto twin coil	5
1	Coil used on electric start Quad	5

Others-make request

Continued from page 3

For the Minnesota meet, member John Koonce plans to donate the trophy but won't tell us what the contest will be. Hope it's not one of those Le Mans start races. Those attending the Calero Dam, California meet, watch out for Bill Salisbury's terrorizing PO-38 that belches smoke and flame - and raises eyebrows.

The Antique Outboard Motor Club



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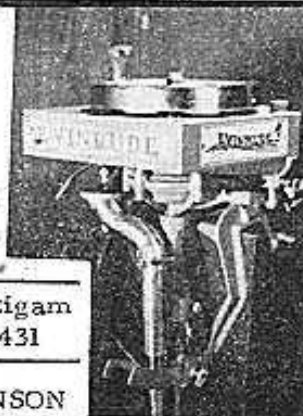
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COMING: DECALS FOR ELTO, EVINRUDE AND JOHNSON



1969 Membership List

For your convenience, the roster is arranged by state or country. At a spare moment in your travels, contact the nearest member and make a new friend.

ALABAMA

Morris Marine Inc.
1546 Florence Blvd.
Florence, Ala. 35630

Clyde W. Stanfield
Birmingham Tin Shop
3710 5th Ave. N.
Birmingham, Ala. 35222

Robert Thurstone
1401 Toney Dr. S.E.
Huntsville, Ala. 35802

ALASKA

Mike Molchan
Box 146
Ft. Wainwright, Alaska 99703

ARIZONA

Lloyd Helmley
6720 E. Main St.
Mesa, Ariz. 85201

CALIFORNIA

David Anderson
2942 Sea View Ave.
Ventura, Calif. 93003

Richard L. Anderson
657 24th Pl.
Hermosa Beach, Calif.

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

Carl L. Castle
4655 Elmhurst Dr.
San Jose, Calif. 95129

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

Burke D. Hardy
526 W. 58th St.
Los Angeles, Calif. 90037

O. E. Bill Hayes
P.O. Box 97
Clearlake Park, Calif. 95424

Odie L. Hockenberry
12336 Burl Ave.
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Harry G. Ingersoll
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Dob Leonard
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Big Bear Lake, Calif. 92315

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USS Daniel Boone
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San Francisco, Calif. 96601

Frank Nunes
P.O. Box 537
Newman, Calif. 95360

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Leonard W. Seeley
706B Nimitz
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Mel Spencer, Jr.
5258 Vikie Dr.
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David L. Stanfield
Rt. 1, Box 109
Brawley, Calif. 92227

Chuck Stoker, Sr.
63 Wilson Ave.
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2618 Landis
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San Pedro, Calif. 90731

Richard Von Heitman
3256 Midway Dr.
San Diego, Calif. 92110

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42 Garvin St.
East Hartford, Conn. 06108

Cortland E. Colver
Bella Vista Harrisons Land.
Quaker Hill, Conn. 06375

Bud Cowdery
15 Crestdale Rd.
Danbury, Conn. 06810

Norman W. Harris
Borglum Rd.
Wilton, Conn. 06897

Richard C. Hawie
31 Hillside Dr.
Easton, Conn. 06612

Richard A. Hawie
35 Hillside Dr.
Easton, Conn. 06612

Harry L. Holden, Jr.
273 Burningtrees Dr.
Groton, Conn. 06340

Peter Hunn
124 Old Farms Road
Simsbury, Conn. 06070

David J. Macha
121 Main St.
Willimantic, Conn. 06226

Perry A. Stanley
104 High Street
Wallingford, Conn. 06492

Robert H. Zipp
24 A St. Regis Street
East Hartford, Conn. 06108

DELAWARE

E. Morton Daller
7801 Bov. Printz Blvd.
Claymont, Dela. 19703

Hilton A. Wright
1900 Kirkwood Hwy.
Elsmere, Dela. 19805

Richard E. Riegel
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Lakeland, Fla. 33801

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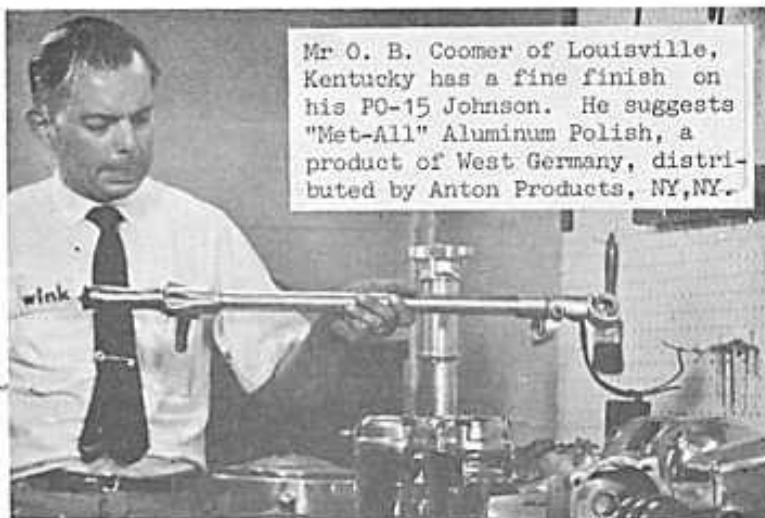
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Mail this application and \$7.00 to:

THE ANTIQUE OUTBOARD MOTOR CLUB
1167 Pueblo Drive
Richardson, Texas 75080

The Antique Outboard

Motor Club Inc.

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Florida

John Harrison, Harold Culp and Dick Jones
and the attractive Antique Outboard Club
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