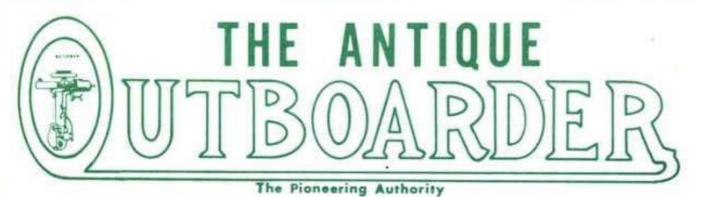
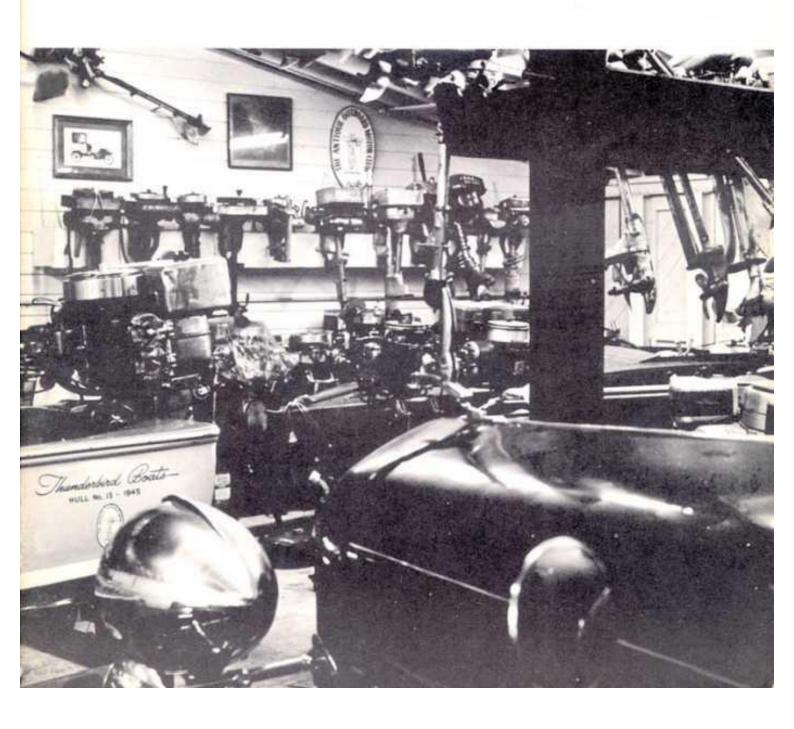
VOLUME 5 NUMBER 3

JULY 1970





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., 20505 NW 3rd Av., Miami, Florida 33169.

	ldresses and duties:					
President David R. Reinhartsen	8819 Enfield, Northridge, Calif Coordinator of A.O.M.C.I. activities.					
Vice President & Editor Robert W. Brautigam	2316 W. 110th St., Bloomington, Minn. 55431 Edits and mails The Antique Outboarder					
	1000 N.W. 54th Street, Miami, Florida 33127 In charge of financial affairs.					
Secretary Carol R. Reinhartsen	AND THE RESERVE AND ADDRESS OF THE PROPERTY OF					
Membership Chairman Richard M. Jones	20505 N.W. 3rd Ave., Miami, Florida 33169 Keeps A.O.M.C.I. membership records.					
Classified Editor & Newsletter Editor Robert H. Zipps	24A St. Regis St., E. Hartford, Conn. 06108 Management of the classified section of The Antique Outboarder and preparation of the monthly Newsletter.					
W. Jim Webb	2560 N. 97th St., Wauwatosa, Wisc. 53213 Worlds foremost authority on outboard motor history. Author of a column, "Of Histo- rical Interest", for The Antique Outboarder.					
Curator Richard A. Hawie	The second control of					
	330 O'Connor Dr., Toronto 6, Ontario, Can. Author and Editor of a Special Features column for The Antique Outboarder.					
Racing Editor B.W. "Bud" Cowdery	A column on the early days of outboard racing for The Antique Outboarder.					
Test Editor Christopher R. Owen						
Motor Registration Robert B. Hampton	54 Clinton Avenue, Eatontown, N.J. 07724					
Membership Coordinator Raymond Machen	Keeps registrations of antique outboards. 624 Gardner Rd., Westchester, Illinois 60153 Distribution of A.O.M.C.I. literature.					

Regional Activity Centers

YANKEE CHAPTER Southern New England South New England Peter Hunn 124 Old Farms Road Simsbury, Conn 06070

KNUCKLE BUSTERS CHAPTER New Jersey H. Tom Luce 39 Constantine Place Summit, New Jersey 07901 MIDWEST CHAPTER Great Lakes William Rose 714 Bluff Street Waukegan, Illinois 60085

TWIN CITIES CHAPTER Minnesota, West Wisc. Ronald Johnson 3946 Cedar Avenue Minnespolis, Minn 55407 FLORIDA John Harrison 1000 NW 54th Street Miami, Florida 33127



CALIFORNIA William Salibury 1105 Hunterston Place Cupertino, Calif 95014



CONTENTS



July, 1970

Club Briefs	Page 2	
Letters To The Editor	4	Cover:
Twin Cities Chapter News	5	D - 1 - 2 T- 1
New Member Contest	6	Part of John
Of Historical Interest	7	Harrison's collection
1970 Connecticut Regatta	13	Mbs 4s - 1022
The Antique Small Inboard Engine	18	The car is a 1933
Knuckle Busters News	22	V 12 Cadillac
The Collector's Gallery (Elto)	24	
The Elto 4-60 - in racing cars	27	Correction, last
4th New Jersey Annual Meet	29	month's cover:
Midwest Chapter News	31	Should mond
AOMCI Special Feature, VR-50 Johnson	32	Should read,
Balancing Antique Outboard Powerheads	34	Elto Super C
Trader's Cove	35	powered light runabout, 1932
How To Make An Ignition Coil Tester	37	
Your Fellow AOMCI Member	38	
HEART COSTS AND HORSE SOME AND COSTS AND STREET SPECIAL CONTROL OF THE PROPERTY OF THE PROPERT	- Application Company	

Planned for next issue: The Champion Story; Outboards of The Future; Fuel Mixes; regular features and other stories.

AOMCI EXECUTIVE COUNCIL

Dick Anderson	Ron Johnson	Bill Salisbury
Bob Brautigam	Bill Kelly	Jim Smith
John Harrison	Tom Luce	Sam Vance
Dick A. Hawie	Don Peterson	W. Jim Webb
Peter Hunn	Dave Reinhartsen	Mark Wright
Dick Jones	Bill Rose	Bob Zipps

The Antique Outboarder

Volume 5 * No. 3

July, 1970

Published quarterly by the Antique Outboard Motor Club, Inc. Publication Offices — 2316 W. 110th St., Bloomington, Minnesota 55431

Single copies: \$1.00 except as included with Club membership. Subscriptions: Nonmembers — \$4.00 per year Change of address should be forwarded two weeks in advance and Zip code numbers should be included.

© A.O.M.C., Inc., 1970 All rights reserved.

The Antique Outboard Motor Club Inc

CLUB BRIEFS



IMPORTANT IMPORTANT IMPORTANT IMPORTANT IMPORTANT IMPORTANT

Hembers are urged to check your membership cards and renew your annual dues before you get a notice. As you know, our book work, like all Club activities, is done on a volunteer basis. Your remittance early will save Dick Jones a lot of time and the Club the price of the stationery and a stamp. One of Dick's problems concerns members who delay sending in their dues until more than three months after the due date and just after the member's name has been removed from the permanent mailing list. This offagain, on-again book work makes a bigger ulcer for Dick. Although he'd never say anything personally, we can all make his (and his wife's too) job a whole lot easier by keeping on top of our own membership.

ALL RIGHT, YOU GUYS! THIS IS YOUR MAGAZINE AND IT NEEDS INFORMATION YOU HAVE IN ORDER to be successful. The Antique Outboarder doesn't have a paid writing staff like "Playboy" or "National Geographic". Although we have several fine, regular contributors, we depend on other members to send in a story once in a while too. SO DO IT! Here's a list of subjects to pick from - and don't hesitate to get at one right now:

Show and display arrangements, in public or at home Meet organization and planning Racks and stands for display or storage Motor signs and decals Water Pollution from outboards Outboard cruises Outboard dynamometer testing RPM indicator and other instruments Motor angle and transom height Member news Antique boating Small inboard engines Special interest group data Stories of finding engines Photographing Motors Old brochures etc.

Heliarc weld, preparation for Cast iron weld, preparation for Piston ring fit, where to locate Measuring bores and pistons Plunger waterpump rework and ballcheck replacement Seal replacement and preservation on centrifugal pumps Replacement of driveshaft tube on Johnson or other engines. Frost plug replacement Unusual engine model year variations Technical notes - engines, plugs etc. Lake tests Letters to Editor Gripes Old advertisements

Or pick any subject, I'll work it in somehow. Don't worry about spelling and all that, I'll straighten up any wrong words I catch. Send your input to Editor, The Antique Outboarder, 2316 W 110th St., Bloomington, Minnesota, 55431.

MEMBERSHIP DRIVE.....YOUR ANTIQUE OUTBOARD MOTOR CLUB NEEDS MORE MEMBERS. OUR GROWTH is necessary if we're to realize a healthy future. The explanation is easy:

- We need a fresh supply of ideas, talent and interest to retain the members we do have.
- More members will strengthen the local chapter and special interest organizations.
- More members in <u>your</u> area will significantly increase <u>your</u> pleasure from the fellowship and association <u>you</u> will have.
- More memberships automatically boost the Club treasury, helping to keep overall membership rates as low as possible.

To help get the new member roster started, The Antique Outboarder is offering a contest with prizes, see page 6. You can help too by sending in your ideas for recruiting new members to the magazine. Let's all pitch in and see if we can double our membership this summer. Start by sending a card or making a phone call to anyone you know who might be interested in joining. Don't forget the possibility of giving a relative or friend a gift membership at Christmas time or for a birthday, etc.

AOMCI PRESIDENT DAVID R. REINHARTSEN HAS MOVED TO CALIFORNIA...DAVE'S NEW ADDRESS IS 8819 Enfield, Northridge, California. Telephone number, A.C. 213 349-1172.

NO DALLAS TEXAS MEET THIS YEAR! WITH DAVE MOVING TO CALIFORNIA, LOOK FOR MORE MEETS THERE. Dave and Dick Anderson are planning a Meet at Big Bear Lake. Contact Dick for details.

REGARDING THE ARTICLE IN THE LAST ISSUE OF THE ANTIQUE OUTBOARDER ON THE 1000 ISLANDS boat show, by Phil Kranz - John Harrison, Dick Jones, Dick Gentile and Harold Culp met at the Fort Lauderdale Marina in early April, with Robert O. Cox who owns and operates the Marina. Bob Cox was very instrumental in starting The Thousand Islands Boat Show, and the Miami Chapter enjoyed very much looking at Bob's pictures of the show and the boats he had in the show, all the while having a pleasant time in his pleasant office. Bob is a member of AOMCI and deserves a great deal of credit for his part in the 1000 islands show.

MORE PARTS SOURCES! SINCE RELEASE OF THE ORIGINAL AOMCI PARTS SOURCES LISTING, A SURPRISing number of new sources have developed. Therefore; this Fall (closing date Sept 1) a supplement will be published and sent to the members of record. All members are urged to notify Mark Wright (address inside from cover) of any parts they would like to have listed in the supplement.

MORE CLUB ANNOUNCEMENTS! SAM VANCE IS NOW ON THE EXECUTIVE COUNCIL. SO IS DON PETERSON, who is also leading the Johnson T owner's special interest group. DICK MICHEL is our Club Cartoonist - let Dick know of any punch lines or ideas for a cartoon you may have. Dick's address is: Richard C. Michel, 494 Windsor Road, River Edge, N.J. 07761.

PLEASE SEND ALL ADVERTISEMENTS AND REQUESTS FOR SAME TO BOB ZIPPS (ADDRESS INSIDE FRONT cover) Classified Editor, instead of mailing direct to the Outboarder Office. Bob will see to it that your ad is properly processed and sent along to the magazine.

AOMCI SPECIAL INTEREST GROUPS

Here's a list of the different Interest Groups intended to help focus your needs for literature, information, parts and fellowship regarding your favorite motor or subject matter. Notice that not all of the Groups have leaders - volunteers will be appreciated. Write to the Antique Outboarder publishing office.

CATEGORIES

Golden Anniversary Motors 50 years or older
Odd Fellows - Unusual motors
Racing engines Antique boats and equipment Small inboards Extremely rare engines History - W.J. Webb
Souping
Modern classics - Hurricanes
etc.

ACTIVITIES

Motor hunting Old literature

ACTIVITIES, cont.

Rebuilding for running restoration for display Research - Dick Hawie

MOTORS

Lockwood Chief - D. Reinhartsen Johnson PO - Bill Salisbury Johnson V-series - John Harrison Eltos - Mark Wright Air Drive Watermans - Dick A. Hawie Cross Johnson A-series - Bob Zipps Lockwood - Dick Anderson Cailles - Walter Weidman Martins - Glen Ollila



RESTORING



OPERATING

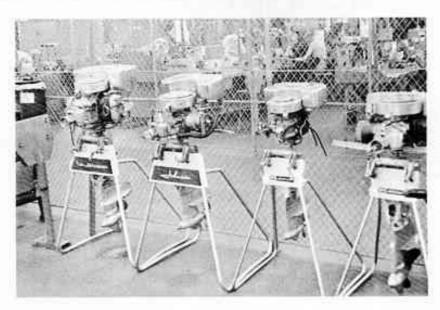
LETTERS TO THE EDITOR

Regarding the Club emblem..... "I think it should be a 'conversation piece', easily enough recognized as an old outboard motor to cause a stranger to ask about it or perhaps recall that he had one just like it once. It's a good way to get new members or old motors. This I think would rule out both the Reece and the 1913 Waterman, a 57 year old motor. A former owner or operator of a 1913 Waterman would probably be 70 or more. I would like to see a motor of more recent vintage used as our emblem such as a 1929 Elto Quad, a 1929 Lockwood Chief, a 1930 Johnson P50 or an Elto rudder-twin. One of these would be more easily recognized by the strangers we are likely to meet around the water, and would be of some advertising value to the Club. I would vote for a good view of a Lockwood Chief where the name shows on the gas tank. Probably we will get 350 different ideas as to what should be on the emblem, but the Chief gets my vote. It has the same advantage as the Waterman in that the name Lockwood is dead as far as present advertising value goes, and we would not be advertising a present brand name to the detriment of other name brands being sold. Since all four outboard companies have helped us get started and keep operating, it would be good manners to keep remaining neutral in the choice of a motor brand name as a Club emblem.".... Richard A. Hawie

Gentlemen:...."I believe I have been a member since the Early days of the Club and must say I find the various publications of great interest. My own collection is limited to racing models built by Johnson or Evinrude. Completely restored (and completely operative) are one each Johnson KR55, Johnson SR55, Johnson PR65, Johnson PO39 and a Johnson KR55. These motors are in mint condition and are displayed, with the exception of the SR55 at the Johnson Motors Service School in Waukegan, Illinois. The SR55, which was raced by the great Fred Jacoby Jr. to several world records and national championships is in my den at home.

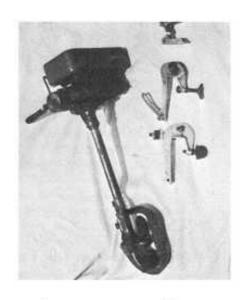
Incidentally, the KR and SR were on display at the Outboard Marine exhibit at the N.Y. World's Fair, having been loaned for that purpose at the request of Ralph Evinrude whose continuing interest in high performance outboards is well known. From time to time, we at Johnson Motors receive inquiries from owners of antique or obsolete model motors for parts, instructions, etc. We have replied to these owners that we do not stock parts for these models; however, we recommend they contact The AOMCI and place a classified advertisement for the parts. I am sure many folks have been helped in this manner, and hopefully they have become members. I am enclosing two photos of part of my collection. Before too long I hope to have an Evinrude Midget and an Evinrude 4-60 to round out my racing group. This will give me representative motors in A.P.B.A. classes M, A, B, C, CS, E and F. Best wishes for the continued success and growth of the AOMCI." Most cordially, Johnson Motors, Lou Eppel, Service Manager.





LETTERS TO THE EDITOR (Continued)

"The enclosed photo is of a motor that Dick Hawle has been unable to identify. Fred Lucas a motor quite similar to it, also unidentified. As a suggestion for a new department in the Antique Outboarder, maybe you could have a Mystery Motor section where members could display photographs of unidentified motors for the entire membership to see. Surely someone in the Club would recognize these motors! Both Fred Lucas! and my motors have Evinrude magnetos with the youngest patent date of 1916 stamped into the top of the flywheel. My fuel tank is cast aluminum with rivet stubs at the rear as though a name plate had been attached. The carburetor is a Zenith CV20; the lower unit is brass. The broken mounting bracket that came with this motor has the number S13604, and a defaced number S12420 stamped on the side of the bracket. Any body know what it is?" Milt Moos



The Antique Outboarder publishing office is interested in your views or answers to "Letters To The Editor". Don't hesitate to write in, today!



MINNESOTA



Mr. Peterson, what do you do if your OB16A doesn't start? Bob's Big Twin Evinrude ran perfectly



Lunch time at the Island Lake Meet held June 13th. At left is R. Johnson's race rig- 24 MPH with 7 HP. Ron brought his small Sea King and excellent Sportfour.



Why are you paddling, Mr Koonce? John ran this K-35, his Elto Twin and his Gopher.



The editor and G. Ollila say a few words about Gophers. Glenn's Martin 60 ran beautifully.





AOMCI NEEDS MEMBERS



ANTIQUE THORS

OUTBOARD MOTORS

Good enough to make one from, freight paid

Furnished by DAVID R. REINHARTSEN, AOMCI President:

"FIRST PRIZE

To the person soliciting more new members than anyone else before midnight, September 15, 1970.

also: SPECIAL AWARD

Each person obtaining 4 or more new members will receive his next year's membership

A WORLD-WIDE, NON-PROFIT ORGANIZATION DEVOTED TO PEOPLE WHO ARE INTERESTED IN ANTIQUE OUTBOARDS, THEIR PRESERVATION, AND THEIR RESTORATION CONTEST RULES: Simple! Use any technique you wish to encourage prospective members to join the Club

An official registration form not needed. Use an application blank like the one below to forward the necessary data to Dick Jones. Be sure the candidate writes "recommended by (your name)" on his application. Gift memberships count too!

NEW MEMBERS MEAN MORE MOTORS, MORE PARTS AND MORE FUN Let's All Get New Members

JOIN NOW

MEMBERSHIP INFORMATION

Name			Date		
Address				Telephone	
City		State	Zip		
Number of pre-19	42 motors collected				
Check the way (s)	that you most enjoy Antique	Outboarding		Mail this application and \$7.00 to:	
	Collecting motors		Running maters	THE ANTIQUE OUTBOARD MOTOR CLUB	
	Restoring motors		Collecting Information	20505 N.W. 3rd Ave. Miami, Florida 33169	



OF HISTORICAL INTEREST

.....W J Webb

THE USE OF OUTBOARD ENGINE UNITS AS POWER FOR WATER PUMPS

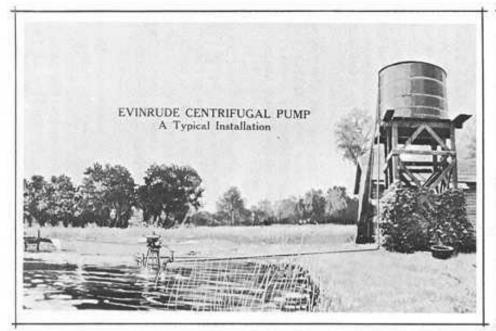
To the best of my knowledge, The Evinrude Motor Company was the first to combine an outboard motor powerhead with a water pump. In 1914, Evinrude attached a small centrifugal pump to the propeller shaft of an Evinrude single, Model A. This was called the "Waterboy" and was supposed to be great for watering lawns, filling the upstairs water tanks at summer homes, etc. When everything was right, this outfit put just about as much water through a garden hose as the average city hose bib. While this was a really good idea, it never caught on in a big way. Evinrude supplied Waterboys off and on until the late '40's. I have one that does a nice job, powered by a 3 HP Sportwin.

From here it was a short step in 1915 to mount either a 2-1/2 or 3-1/2 HP single outboard motor powerhead on a high volume, low pressure centrifugal pump as shown in Figure 1. Known as a contractor's pump, this was supplied as an industrial tool to anyone who had a drainage problem, an irrigation project or anything which required good water volume with little pressure. The single cylinder pump really did quite a job - as good as the best of the field in its day. Against a head of two to five feet, it delivered up to 90 gallons per minute. As a pressure pump, it wasn't much good, but it could push water to a height of 30 feet. As such, it was a good water supply source for lake cottages. See Figure 2.

Evinrude had a good start in the pump business. In fact, the Company was at the top of the market for a couple of years. The outboard motor powerheads were considerably more compact and lighter than any of the applicable industrial engines of similar power. This made them much easier to handle and let them fit into places where other pumps couldn't be used.

But World War I came along and Evinrude turned most of its energies to making war products; among them, grenades and shells. After the War ended, Evinrude returned to the pump business to find that the competition was well ahead in the high volume portable pump development. No one shed any tears because there was more outboard motor business than the factory could handle until Elto and Johnson entered the field in 1921. This combination of circumstances put Evinrude back in the pack, never to come close to the top in the pump field again. Pumps remained a sideline until they were dropped just before World War II.

However, Evinrude did not retire from the field without giving it a try, even though not a strong one. As the years advanced, some of the more light and powerful outboard engine units were applied to the drainage pump. Successively, it was put out with 4, 6 and 8.5 HP twin cylinder engines. With the 8.5 HP Fleetwin powerhead, better than 185 gallons per minute could be delivered against a five foot head. Meanwhile, in the early twenties, State and Federal Forestry Departments had been trying to find a real-



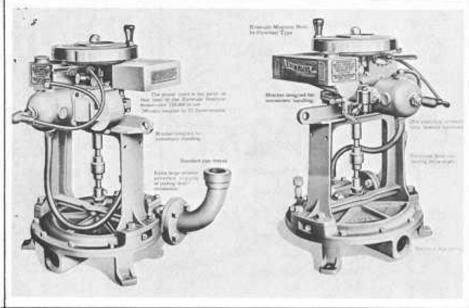


Figure 1. Evinrude Contractor's Pump. Note special exhaust manifold and cooling water lines to the engine.

Figure 2. Note absence of outboard motors on boats.

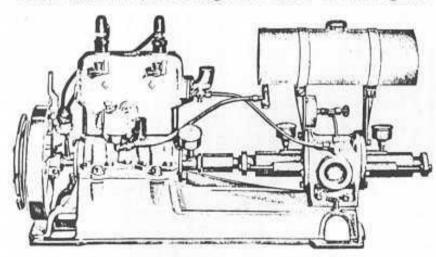


Figure 3. The Evinrude DDV Pump

High Pressure Pumper

A special word of thanks must go to Walter Lembke and Gordon Rice. former employees of Pacific Marine Supply, Seattle, and to Clay Conover, Division Manager of Johnson Motors and Lou Eppel, Service Manager of Johnson Motors for their valuable assistance in suppling material upon which parts of this article were based. Mr. Rice authored a manual on forest fire fighting techniques that has been used by State and Federal Forest Services for years.

EVINRUDE



PUMPER

ly portable, gas-engine powered, high pressure water pump for forest fire fighting. The pumps were there, heavy engines were there; but no one had come up with portable fire fighting units that could do the required job.

In 1922, in response to this demand, Evinrude began to experiment with its two cylinder 4.5 HP alternate firing, in-line cylinder inboard engine combined with a high pressure gear pump made by Viking of Minneapolis. This filled the bill as far as high pressure and water delivery performance went, but its weight of 104 pounds strained the portable adjective considerably. This pumper, known as the DDV, might have made it big had it not been for two competitors - Elto of Milwaukee and Pacific Marine Supply Company of Seattle (who happened to be distributor for Johnson Outboard Motors in the Pacific Northwest).

In 1923, at the request of the California Forestry Department, Ole Evinrude put a 3 HP Elto Light Twin powerhead on a Viking pump. This weighed 50 pounds plus an 8 pound dry battery for ignition. This Elto could not equal the DDV in pressure or water volume delivery, but its lighter weight and more compact dimensions made it more easily useable, especially in rough country. Elto never got far in the pump business for two reasons. First, the Elto factory was taxed to the limit to provide enough outboards, and second, Ralston Cunningham of Pacific Marine Supply Company made a successful combination of a Pacific gear pump and a Johnson 2-1/2 HP Lightwin outboard powerhead. This remarkable outfit weighed only 38 pounds and measured only 16" x 12½" x 13½". This became known as the Pacific Type A (see Figure 4) and for many years was regarded as the standard for light, portable fire fighting pumps. It rapidly outdistanced the field. It was not quite up to the Elto or the DDV in pressure or volume, but its small size and fine performance made it the leader. The Johnson Lightwin powerhead required almost no changes outside of a goosenecked carburetor manifold.

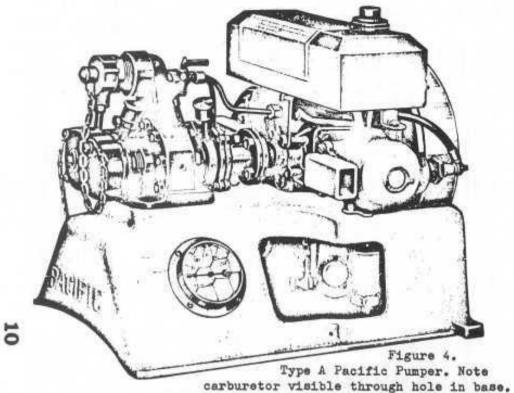
As the men on the fire-fighting lines became more familiar with these new tools, new techniques were developed and soon the need for more water pressure and volume was felt. So, about 1925, Pacific Marine answered by bolting together two Johnson 2-1/2 HP Lightwin powerheads and attaching this four cylinder unit to a larger Pacific gear pump. This became the famous Pacific Type N Pumper, Figure 5. It weighed only 70 pounds and measured 24" x 12-3/4" x 11½". Pacific Marine developed other gas engine powered pumpers but the two cylinder Type A and the four cylinder Type N were the only two which employed outboard motor engine units until World War II.

Pacific Marine dominated the fire pump business for a number of years, particularly in the portable sizes. Fire pumps were an important part of their business and they treated them as such, while Evinrude and Elto treated fire pumps as a neglected side line. In the late twenties, Johnson Motors began to supply a drainage pump consisting of the 2-1/2 or 5 HP powerhead mounted on a vertical, cylindrical casing about 6 feet long - driving a propeller type impellor through a long shaft supported by properly placed bearings. This pumper moved a large volume of water but was discontinued after a few years because of a lack of sales.

In the early thirties, Evinrude brought out a 12 HP, high pressure fire pump using a Viking gear pump in combination with the 20 cubic inch Fastwin powerhead. This pump was a good one, but sales never amounted to much as those were tough years and Evinrude lacked the money to finance the development. See Figures 6 and 6A showing a really fine high pressure, centrifugal pump Evinrude brought out in 1935. This pump used the four cylinder, 9.2 HP Lightfour outboard powerhead. The complete unit weighed only 40 pounds and its water volume and pressure performance was excellent. Where the gear pump, as used by most fire fighters, were out rapidly in any but clean water - the centrifugal pump was virtually wear free. Its only drawback was that it had to be manually primed whereas the gear pump did not.

By this time, however, Evinrude's outboard business was booming again after the Depression years and was absorbing all available engineering and production effort. So, fire pumps again became a sideline and a really fine product - capable of holding its own with any - fell by the wayside before the onset of World War II.

Early in WW II, our Navy recognized the need for auxilliary pumpers that could be placed in operation in an emergency, when the ship's main power plant was out of action. In



MANUFACTURED BY
PACIFIC MARINE SUPPLY CO
SEATTLE U.S.A.

Figure 5. Type N
Pacific Pumper, 1925. Ed. Wonder if
Johnson considered the four cylinders?

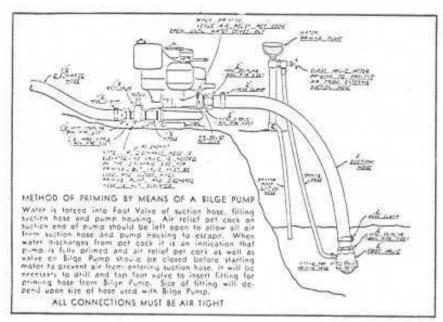
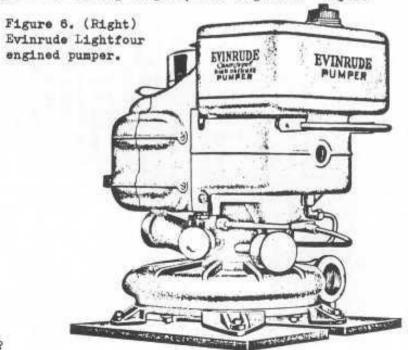


Figure 6A. Priming diagram, 1935 Lightfour Pumper.



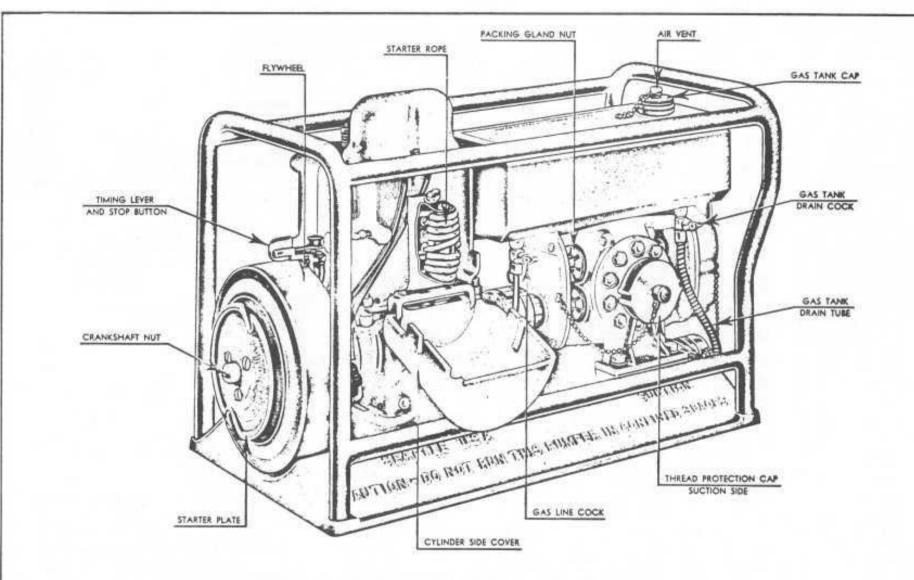


Figure 7. The "Handy Billy" showing protective aluminum rails.

Powerhead is a 9.8 HP Model K Johnson outboard.

SUCTION SIDE OF PUMPER

Fire Fighting Equipment Division PACIFIC MARINE SUPPLY COMPANY.

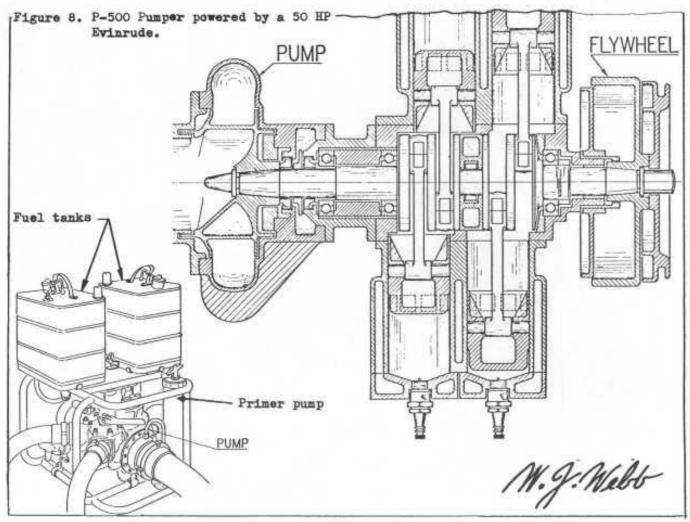
response to this requirement, Engineers of The Johnson and Evinrude Divisions of Cutboard Marine, and Pacific Marine Supply, developed the famous "Handy Billy", see Figure 7. This high pressure gear pump was powered by the Johnson Model K, 9.8 HP outboard powerhead. Another development, the P-500 (see Figure 8) high pressure, centrifugal pump was powered by a four cylinder, 50 HP Evinrude powerhead very similar to that used in the Evinrude Storm Boat Motor. The P-500 could deliver 675 gallons per minute against a six-foot lift and 40 pounds pressure. At 140 pounds pressure with a 22 foot suction lift, it delivered an amazing 250 gallons per minute.

At 3500 RPM, The Handy Billy (also known as the Pacific NY) delivered 64 gallons per minute at 40 pounds pressure.

These pumpers were used for firefighting in all types and sizes of warships as well as for emergency bailing in cases where enemy fire had caused hull damage. The pumps were also used to spread fire foam as well as water in all types of Military installations. Both pumpers were equipped with aluminum pipe rails which permitted a solid hand lifting hold from any position. The rails also protected the wartime pumpers against damage from dropping, rolling, etc.

Outboard Marine and Pacific Marine Supply received numerous citations for the excellent service rendered by these pumps. In one case, three P-500 pumpers ran continuously for 157 hours and kept a badly mauled destroyer afloat until it reached a safe harbor. In another case, a dangerous fire aboard a carrier was quickly controlled by the "quick starting foam pumps...". They happened to be Handy Billies.

Johnson Motors ceased supplying engine parts for volume pump production after World War II. However, Johnson still supplies outboard parts of later models in small quantities for pump service. If any other outboard manufacturer is currently supplying outboard parts for volume pump production, I plead ignorance and would be glad to be corrected.



1970 CONNECTICUT REGATTA

By Bob Zipps

The weatherman really came through for us that Saturday, May 16th, 1970. For days before, the weather had been threatening - seeming to be building up to a terrific storm for the weekend. Well, the day of the Meet came but someone up there must have been watching over us, for although it was overcast the majority of the day, not a drop of rain fell.

The 1970 Regatta all started the first weekend in January when I contacted Mrs. George Bokis, owner and operator of Sandy Beach Park, to see if we could hold a Meet there. She agreed and from there on in, it was all down hill. Sandy Beach Park is on the shore of a beautiful 200 acre lake in North Central Connecticut. Markers made to plans in Hank Bowman's book made a nice race course.

The first event of the day was the Predicted Log Race, which was run in two heats. In the first heat, Tony Caglione ran his ultra-nice Racine, Phil Kranz was at the tiller of his Johnson K-50, Dick Hawie Jr. had a Caille Model 30 Racer, Tom Luce ran a restored Indian Silver Arrow and Vin Loss ran his favorite, a 1929 Elto. In the second heat Jean Luce ran a Johnson Waterbug Model AB-25, Dick Michel had his fabled Lockwood Racing Chief, John Jensen operated his Johnson Model K-45, Frank Shimer ran a Johnson Lightwin Model A-35 and last, but not least, Mark Wright ran a restored Elto Speedster. The competition was very keen and Mark Wright won the trophy with a time difference of only four seconds. John Jensen missed by only seven seconds, and Dick Michel missed by 10. Now that's what I call close.

The next event was the Bang And Go Back Race. This was run with two elimination heats and a final run-off heat. In the first heat, which was limited to planning boats only, Buddy Streat ran a Johnson Model P-50 with a tractor lower unit on his beautifully restored Pidgeon boat; Tom Luce ran his Indian; Mark Wright ran his Elto Speedster; Dick Michel had his Lockwood and John Jensen ran his K-45 Johnson.

The first three finishers of each heat went into the finals. Those three in the first heat were: lst, John Jensen; 2nd, Mark Wright; and 3rd, Tom Luce.

The second heat was limited to non-planning boats and here the competition was very keen as the race was extremely close, right down to the wire. Tony Caglione ran a 1941 Mercury, Phil Kranz ran his Lockwood Chief, Jean Luce ran her Johnson AB-25, Dick Hawie Jr. ran his Caille Racer, Vin Loss ran his Elto Lightweight and Buddy Streat ran a Caille Liberty Single. The results of the Second heat were: 1st, Phil Kranz; 2nd, Buddy Streat; and 3rd, Vin Loss.

With emotions high and competition keen, the final run-off heat was started with the gun blast. The six contestants were really at their best and when it was over, The Kiekhaefer Trophy for The Bang And Go Back Race was won by John Jensen with his Model K-45 Johnson. Coming in second was Tom Luce; Phil Kranz was third.



Buddy Streat running Caille, Phil Kranz looking on.



A portion of the display area early in the Meet.



Getting ready for the big race are Dick Hawie and his son Dick Hawie Jr. snown here with their Caille model 50 racer.



Tony Caglione couldn't wait to hang a motor on the transon as soon as he arrived and is shown with his 1941 Mercury.



Phil Kranz is setting up his 1930 Johnson K-50 in the foreground and his 1929 Lockwood Chief.



Setting up their motors are L to R John Gustarison and the racing team from Long Island, Frank Shimer and Vin Loss.



Dick Michel right is shown here with Tony Caglione admiring Tony's perfectly restored Evinrude model A row Boat Motor.



Buddy Streat is getting his Caille Liberty Single ready for the 2nd heat of the Bang and go back Race. The Caille never missed a beat.



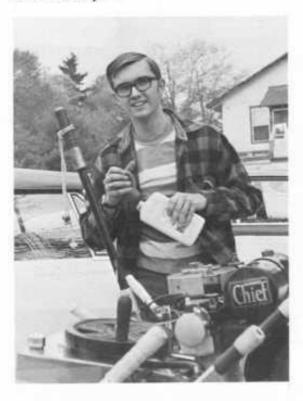
Phil Kranz is getting his Caille Liberty Single back to the display area after using it on his 1932 Antique Sea Sled Boat.



I finally got a chance to run my 5-70 Johnson after all the events were over. It started easily but I blew both head gaskets. There is no substitute for the copper ones.



Tom Luce with the Evinrude Trophy after winning the Oldest Running Motor Contest with his 1914 Evinrude, ----



Dick Michel is shown getting his Lockwood Racing Chief ready for action. Dick is putting oil in the Lunkenheimer Oilers.



----while his proud wife Jean snaps his picture for the family album.



John Jensen is holding the Kiekhaefer Mercury Trophy after winning the Bang and Go Back Race with his Johnson model K-45.

The classic event of the day was the Oldest Running Motor contest in which there were six entries. The cldest entry to successfully complete the course was a 1914 Evinrude belonging to Tom Luce. Phil Kranz came in second with a Caille Liberty Single. Tom won the Evinrude Trophy.

The most painstaking event of the day was The Mint Condition Motor contest. To compete one has to start months ahead of time restoring his motor. The judges really had a tough time coming to a decision on this one because there were many exquisitely restored motors on display. The winner was Tony Caglione with an ultra-nice 1913 Evinrude. This motor was truly the finest restoration I have ever seen. No detail was too small to be overlooked.

The Most Unusual Motor of the day was the award winning Lockwood Racing Chief belonging to Dick Michel. With its cylindrical, bright red gas tank and gleaming brass oilers, the Racing Chief is truly a sight to see.

One of the intangible benefits of the Club is meeting many darn fine people, some of who contribute to an event with sportsmanship to the degree that with helping other people, they themselves do not win a competition trophy. In recognition of such spirit a Special Trophy was awarded. This trophy is not won, for there is no way to compete for it. This trophy is awarded because the Club as a whole, is better off for the recipient having passed this way. The Sportsmanship Trophy was awarded to Vin Loss.

I want to personally thank Rod Clarke who assisted me the entire day of the Meet, by manning the patrol boat and judging all the dynamic events. There is no question that things would not have run so smoothly except for Rod's help.

Park
Thanks also go to Mrs George Bokis who donated the use of her/facilities including her rental boat fleet; and to F.J. Prichard Jr., First Selectman of the town of Ellington and Trooper Thomas Watson of The Connecticut State Police for giving approval to hold the Meet.

Fred Hopkins of 28 Tumblebrook Drive, Vernon Connecticut, joined the Club at the Meet. Fred came with a Model KS-15 Johnson. Welcome aboard, Fred.



1970 Connecticut Regatta winners, from left to right:

Mark Wright

- Fredicted Log

Dick Michel

- Most Unusual Motor

Tom Luce Tony Caglione - Oldest Running Motor

Vin Loss

- Mint Condition Motor - Sportsmanship Trophy

John Jensen

- Bang And Go Back

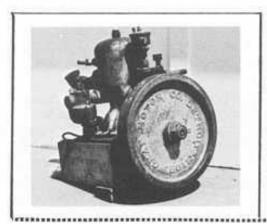
Those who attended the Meet are as follows:

John Gustaffsen, Seaford, New York Marcus Wright III, Little Silver, N.J. Tom Luce, Westfield, New Jersey Jean Luce, Westfield, New Jersey Buddy Streat, Richmond, Virginia Dick Hawie, Easton, Connecticut Dick Hawie Jr., Easton, Connecticut Dick Michel, River Edge, New Jersey John Jensen, Fords, New Jersey Ed Fredericks, Naugatuck, Connecticut Phil Kranz, Slingerlands, New York Vin Loss, Levittown, New York Frank Shimer, Bellmore, New York Tony Caglione, Dover, New Jersey Steve Mizgala, Newburgh, New York Fred Hopkins, Vernon, Connecticut Rod Clarke, East Hartford, Connecticut Bob Zipps, East Hartford, Connecticut Bud Ridings, Pittsford, New York



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

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



The Antique small INBOARD

By The Antique Outboarder Editorial Staff

Photos and information by AOMCI members as shown

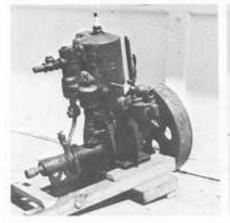
The antique small inboard engine has a great deal of appeal for many AOMCI members who have a prime interest in outboard motors but enjoy also the entire subject of boats and engines. This article is introductory, necessarily short and doesn't even scratch the surface of the inboard story; but if these brief data and pictures serve to stimulate enough interest, perhaps periodic articles on specific inboards can become a feature.

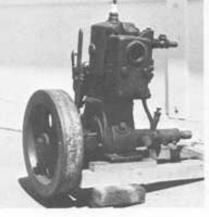
Small inboards were a part of early outboard manufacturers' history also - many built both. Caille, Amphion, Evinrude, Johnson, Waterman, Koban, Ferro and Lockwood-Ash to name a few. Some parts such as pistons, rings and ignition pieces were interchangeable. In general, most small inboards of the early days were heavy and good-sized. However, those units built by manufacturers of outboards tended towards smaller size and lighter weight construction, making them more manageable - and appealing. To the collector and restorer, these engines offer extensive use of brass, sight-feed oilers, grease cups & a variety of unique fittings, valves and plumbing.

To those interested in performance, these little engines with their steady, sharp exhaust beat were capable of moving a large boat with a good turn of speed. For example:

HP	SIZE OF BOAT	PROPELLER	SPEED, MPH	AV. PRICE	AV. WEIGHT
2-1/2	12 to 16 ft	12" X 18	6 to 8	\$40.00	100 lbs
4	14 to 18 ft	13" X 16	8 to 10	\$55.00	140 lbs
6	18 to 20 ft	16" X 18	10 to 13	\$85.00	200 lbs

While the average complete inboard installation of 2 HP weighed about 140 pounds, up to 250 pounds for 6 HP, the lightweights such as Caille and Waterman, got the weight down towards 45 pounds for 2-3 HP. In 1916 Montgomery Wards Stores sold a small lightweight installation, made by Caille, having specifications typical of many similar engines: 2 HP, 40 pounds, made for cances and rowboats with speeds 7 to 9 MPH and furnished with gas tank, propeller shaft, stuffing box and propeller - all for \$33.50, catalog order.



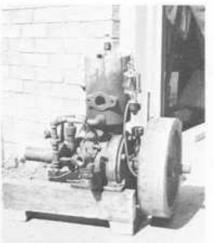




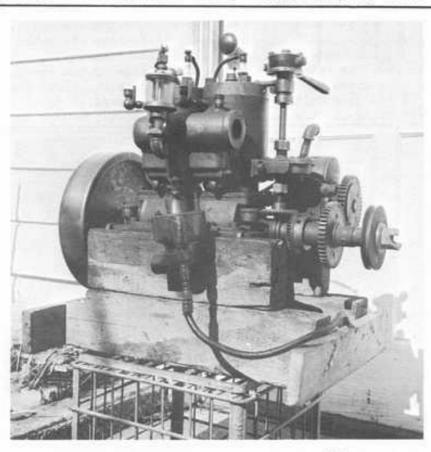
Two views of a 2-1/2 HP Caille Perfection engine, vintage 1908. Note water pump.

A Gray Motor Co. engine about 3 HP, 1925 or so.





Enclosed photographs are of two inboard marine engines that I own. The one on the left is about 1904 or '05. I have seen their 1906 catalogs which show and announce a new type of timer mechanism. Made by Erd Machinery Co. Saginaw, Mich., the unit has 2 HP, is 2 cycle and is water cooled, is I cylinder, has make and break ignition and a mixing valve carburetor. The engine, which weighs about 90 lbs., seems complete and good except the connecting rod needs to be fitted to the crankshaft. I also have the boat it goes in - in restorable condition. It's a 16' double-ender. The motor on the right has been restored but not yet run. It is a W.J. McDuff, made in Lakeport, New Hampshire. This about the same size and weight as the Erd, is water cooled, 2 cycle, 1 cylinder, float carburetor and make and break ignition. The HP and year are unknown....Phil Kranz, Slingerlands, New York.



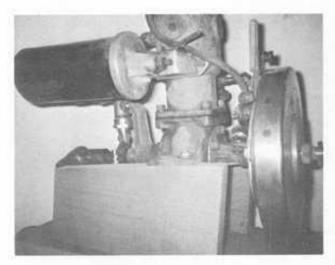


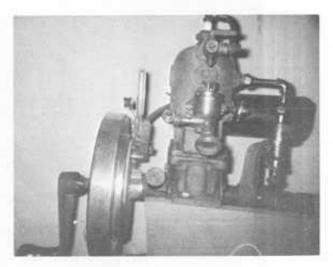


Above are two photos of my Caille Perfection 2 HP inboard engine. Except for a broken timer lever and a missing carburetor, it appears to be in excellent condition. I'll include a picture of the carb (below) which is a Schebler model D, with a 3/4" diameter pipe-threaded gas outlet. If anybody has one of these, or a timer lever, casting number AE 151, please contact me.
...Milt Moos, 369 Ottawa Av. Westerville, Ohio, 43081.



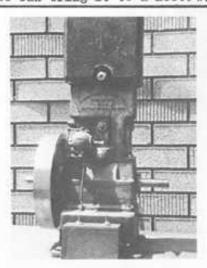
Photo at left: A Brownie Marine Engine made by the Brown Engine Co., Schenectady, N.Y. Twin cylinder, 2-cycle, 2 HP. Dual ignition, both magneto and battery. Owned by Walter Weidmann, Voorheesville, N.Y.

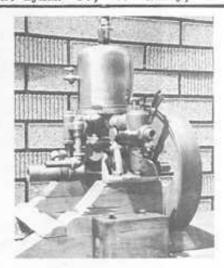




I have, in my collection, a small, 1916 Evinrude inboard cance engine. I found the complete cance and engine in Stow, Mass. from an ad in our Club magazine. I tried to buy the engine alone, but to settle an estate, the complete outfit had to go. I already have three cances and didn't need another. So now I have four. The previous owner had bought the cance in 1916 and had an Evinrude dealer install the engine for him. It is a pretty neat set-up. The cance is seventeen feet long and has sponsons built into the sides so it wouldn't sink or tip. He was in a sailing boat accident and almost lost his life. Still yearning to go boating, he bought the cance and believe it or not, it has never been in the water. His wife said he started the motor up now and then, just to hear it run. We would like very much to try it out ourselves but the cance needs new skin; so someday it will be done at its home base, Old Town, Maine. I started the motor up while it was still in the cance just to see how it would sound; its a good thing that the cance ribs are flexible because that little engine just tries to shake it-It has a crank instead of a knob for starting, but the carburetor is self to death. the same as for the outboard; in fact if you take off the lower part of the crankcase, you could make an outboard out of it. The inlet side of the cylinder where the water pipe connects comes directly from the pump which runs off a cam on the crankshaft. It has a 2-5/8" bore and a 2-1/2" stroke. The exhaust is piped to the side of the cance. the water intake is at the bottom. The speed of the cance feeds water to the pump, but the pump works even if the cance is standing still. We're looking forward to getting this rig in working order so we can bring it to a meet. W.H. Lyman Sr., So. Hadley, Mass.



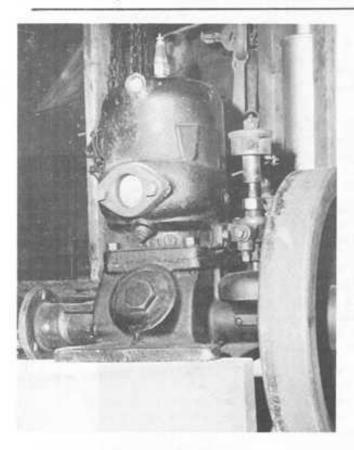




Above three engines are owned by George A. Winter, Spooner, Wisc. Left is a Red Wing 2 HP, 2 cycle, 200 lbs, wiper type vibrator coil/battery ignition. Center is a 2 cycle Sieverkropp patented in 1910. This engine was in a old 17 foot fan tail wood hull that I bought in Ashland, Wisc. to make my steam boat out of. The engine is odd in that it is

20

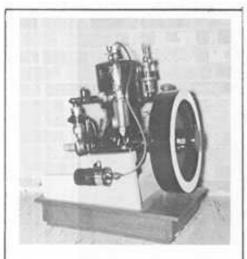
a 2 cylinder, but only one fires, the other being a pump for induction of the gas charge. It is self contained with the cylinders cooled from a top mounted water reservoir. The engine on the right is a small inboard with a spun-on copper water jacket and crankshaft eccentric driven water pump. There's a mixing valve carburetor and wiper type ignition. The crankcase is a heavy sand cast aluminum structure; there's no name plate. Ed. note: George, you'll be happy to know that this latter unit is a 2-1/2 HP Waterman. Probably a model K-1, but the year is pretty hard to determine.



1912 Single cylinder Gray marine motor Model O, 2 HP, 2 cycle; Mfg. by Gray Motor Co., Detroit. Owned by W. Weidmann



1927 Palmer Model YT-1, single cylinder 2 HP 3" bore X 3-1/2" stroke; 800 RPM. 4-cycle, jump spark. Owned by W. Weidmann



Vintage 1905, make unknown. Crankshaft is made from bar of steel. Wood peg starter.

Well, there's your brief exposure to inboards. Many thanks to the contributors of pictures and data. You know, historically, small inboards had their beginning in the 1890's and ever since, a multitude of builders have come and gone. Many engines today can hardly be identified (see unit at left). Today, the smaller inboard is used as auxiliary power for sailboats and to drive smaller workboats.

True, the outboard motor has the advantage of "easy-on, easy-off" the boat; and as such, can be more easily handled and stored. Even so, the little inboard has enough appeal of its own to warrant a place, or two, or three in anyone's collection.



KNUCKLE BUSTERS NEWS

By Sam Vance

The morning was bright and sunny and the waters of Lake Hopatcong were inviting on April 25, 1970. This was the day The Knuckle Busters had planned to meet for a day of running. The Vances arrived with a 1936 Neptune Master Twin OB16A, 1930 Caille tractor Racer and a 1929 Elto Quad at the Woodport Boat Basin around 10:00 AM. Tom Luce's prearrangements were great. We were directed to a spot on the waterfront, just about the same time Tony "Smilie" Caglione showed up with the best looking 1913 Evinrude I have ever seen. His second motor was a KAB 1940 Mercury. Mark Wright pulled in with his old dependable 1928 Elto Speedster which ran great. Tom and Jean Luce made it nicely with three motors.

One was a 1930 Indian Silver Arrow; another was a 1925 Caille Pennant 5-Speed and finally, a 1930 Lockwood Foldlight. Phil Kranz arrived with two motors - a Clarke Troller and Evinrude Zepher. Nick Wyeth and Lester Flaskamp came in about noon and added an element of professionalism to the get together. Those of us who had boats and those who had rented boats proceeded to get them into the water.

"Smilie" put his KAB on his boat and after a few pulls, took off while Tom hooked up his Caille 5-Speed. What a great job of restoring! After a dozen pulls of the rope, the Caille began to talk. Sam had his whole family in their new 16' Starcraft and began a 1/2 hour of moving about the harbor under rope power on the OB16A Master Twin. After a change of spark plugs, action began to take place - and take place it did! The motor started but almost immediately began to shake, proceeding to shake the port spark plug wire off. it stopped with a thud. A feel of the flywheel proved it was loose. When the flywheel was removed, the crankshaft was a mess around the keyway area. The Neptune was retired for the day. Editor's note: I know another OB16A owner who belongs to the same "special interest" group that Sam does.

The Caille would give a "pop" now and then but wouldn't light off. The day was beginning to get discouraging for the Vances. The Elto Quad was set in position on the transom and made ready for running. Lester Flaskamp had many words of good advice as he was an Elto dealer for 50 years. The "ole" Quad must have known we were having a bad day and wanted to make up for it. After priming both sets of cylinders, I bumped the flywheel on the back-stroke and the Quad broke into action so fast, I was almost thrown out of the boat. The rest of the day was great.



The Vance family arriving at Lake Hopatcong. OB16A Neptune on the boat transom - all set!



Tony "Smilie Caglione's 1913 Evinrude looks and runs beautifully.



Sam Vance and his newly acquired 28 get into his car. We Evinrude Speeditwin. Needs some work had a misspent youth.



Tom Luce's '25 Caille Pennant, 4 HP ran great. Caille Tractor on dock



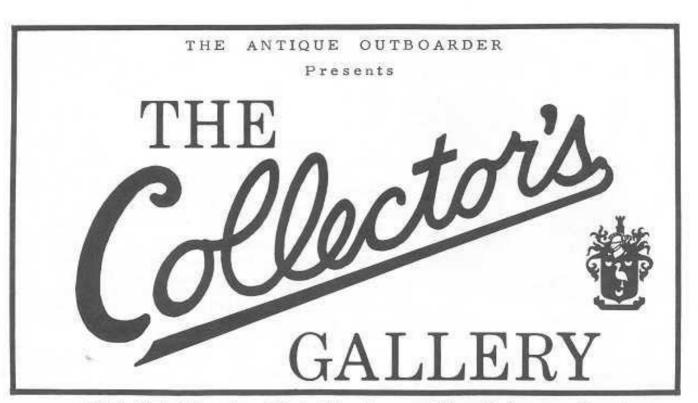
Sam Vance and his 1929 Elto Quad.

Mark Wright's 1928 Speedster performed beautifully even to the point of backing into place at the dock; what an engine! Smilie changed engines, putting the 1913 Evinrude in place. Three turns of the flywheel and he was underway. Tom Luce next tried the Indian Silver Arrow. It started quite nicely this day. It seems Tom and Tony had taken the Silver Arrow to the Lake the Saturday before. Tom had pulled for 2-1/2 hours and got a put-put for his effort. Finally Tony noticed a few beads of water in the gas tank. Tom would have given \$10 for a can of Dri-Gas that day. A change of fuel and they were off with a roar.

The largest mechanical challenge of the day came when Nick Wyeth locked the keys in his car. Everyone had a chance in trying to get the door open, but it wasn't until Tom stepped up and hooked a wire over the lock button when Nick was able to get into his car. We all thought Tom must have had a misspent youth.

All in all, a great day of running and fellowship was had by everyone. We certainly want to extend our thanks to Peter and Paul Sundheim of Woodport Basin for helping make the afternoon a great one. We are all looking forward to the Long Branch Meet where our efforts of April 25th can become competitive.





ELTO Serial Number, Model Number and Year Reference Chart
1921 Through 1930

Year.	From	To	Model*	Туре	Description	н. Р.	R. P. M.	Weight (lbs.)
1921	1,000	1,920	-	-	Service Twin	3.0	1350	48
1922	1,921	A 6,519	-	-	Service Twin	3.0	1350	48
1923	A 6,520	C 12,000		A-B	Service Twin	3.0	1350	48
1924	C 12,001	C 20,000	353	C-D	Service Twin	3.0	1700	50
1925	C 20,001	G 29,999	343	C-D	Service Twin	3.0	1700	50
1926	G 30,000	G 39,999	337-354	G&H	Service Twin	4.0	1700	50
1927	J 45,000	J 54,799	304-321	J & K	Service Twin	4.0	1700	50
1928	J 54,800	J 56,859	304-321	J & K	Service Twin	4.0	1700	50
1928	J 56,860	J 59,999	304-321	J&K	Service Twin	4.0	1700	50
1928	60,000	69,999	348-355		Service Speedster	7.0	3500	62
1928	70,000	74,999	307		Service Quad	18.0	3800	92
1929	70,000 H	74,999 H	308		Hi-Speed Quad	18.0	4800	92
1929	80,000	89,999	300 318 319	-	Service Speedster	7.0	3500	64
1929	80,000 H	89,999 H	302-333	-	Hi-Speed Speedster	11.0	4500	64
1929	80,000	89,999	340	-	Special Speedster	9.0	3800	68
1929	75,000	79,999	305	<u>=</u>	Service Quad	25.0	4000	115
1929	75,000 H	79,999 H	306	-	Hi-Speed Quad	25.0	5000	115
1929	75,000	79,999 (S)	322-323	-	Service Quad	25.0	4000	92
1929	75,000 H	79,999 H	329	2	Hi-Speed Quad	25.0	4000	92
1929	90,000	99,999	309	-	Lightweight	3.5	3000	38
1930	3,090,001	UP	309		Lightweight	3.5	3000	38
1930	3,600,001	UP	360	Special	Lightweight	3.5	2300	38
1930	3,100,001	UP	310	= 1	Senior Speedster	14.0	3500	84
1930	3,140,001	UP	314	-	Quad	30.0	3800	120
1930	3,410,001	UP	341	Special	Speedster	9.0	3800	68
1930	3,350,001	UP	335	50 Cu. In.	Hi-Speed Quad	35.0	4000	120
1930	3,360,001	UP	336	60 Cu. In.	Hi-Speed Quad	40.0	4750	120
1930	3,440,001	UP	344	50 Cu. In.	Hi-Speed Quad	40.0	5500	120

^{*}OMC Model Reference





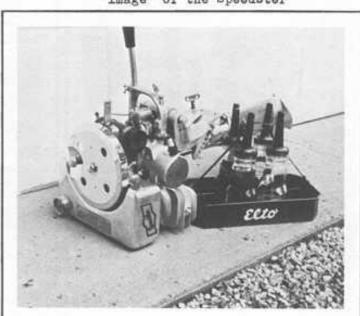
Above Left: Elto Service Twin - "Rudder Twin"

Above Right: 7 HP Elto Speedster Below Left: Fueling up a 1929 Quad

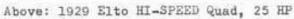
The ELTO

Below Right: a fueling accessory helps the "image" of the Speedster







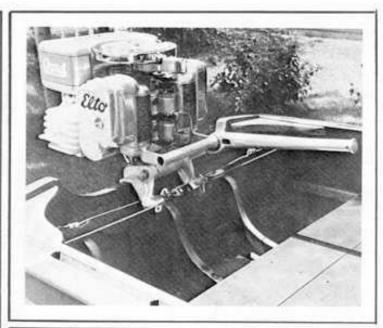


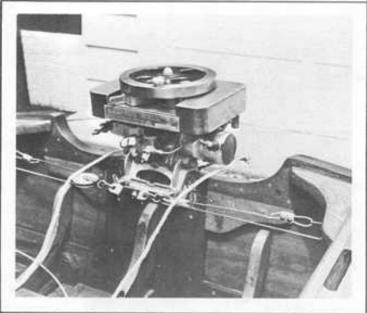
Top Right: Driver's side of the Quad showing the two carburetors and coil/cylinder covers

Center: Driver's view, 1924 Elto 3 HP Service Twin

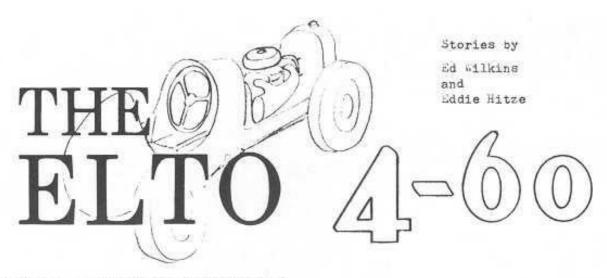
Below, Left and Right: 1938 Elto 22.5 HP Speeditwin











Ed Wilkins I REMEMBER THE OUTBOARDS

With great respect to the late Doctor Conaway and his series of articles on board track racing in <u>Speed Age Magazine</u>, I would like to give a view of a truly great competition machine - the outboard powered midget racer. In the era of 1935-36 when the country was in the last stages of the depression and sprint car racing wasn't drawing much of a crowd, I saw my first motor competition before the half-mile bull rings died from spectator starvation.

This type of racing was replaced by the midgets which at that time could be built at a very nominal cost. A \$500.00 machine was on the expensive side. Cost was low, mainly because of the ingenuity of the builder. Parts were salvaged from many sources. Model "T" parts were standard in the art. Cut a 12" section out of the front axle, work a few hours on the frame, cut and reweld the rear end, shorten the springs and you were in business. That is, if you could locate a Franklin steering mechanism.

Next problem for the builder was to locate a power plant. I heard rumors at the time that some firm named Offenhauser out on the Coast was builing a "spittin' image" of a Miller "255" for midgets, but it was 1939 before Chuck Andres brought one to Texas. Due to the Offenhauser's cost and the fact that the sport was still in its infancy, most builders looked either into a dark, dusty corner of the garage - or a wrecking yard - for an engine. It's amazing what they engineered, begged, borrowed or stole for a power plant, as this item alone made the early midgets very interesting for the racing fan.

Bill Betteridge on the West Coast was probably the first to put an outboard on wheels. His record out there speaks for itself during those early years - including a dusty road race victory. There were many drivers who chose the 4-60 for their mounts during the late thirties. Johnny Ritter, Doc Shanebrook and others too numerous to mention. Although I never had the pleasure of seeing these East Coast drivers run, the Southwest had its champion for 1938, Chuck Andres (Emil's brother) using an outboard which he brought down from the Chicago Armory. Later, Doc Cossey was the man to beat in Houston driving the Watson Oil Company Special, a red and white Dreyer, Elto powered, of course.

A picture of Ernie Gesell appeared in a National pictorial magazine of his turning the Nutley N.J. boards at about 100 MPH on the straightaways. I imagine the New Jersey fans really got a thrill being so close to so much speed and noise. All of these cars are to be remembered by their unusually noisy, 6" diameter exhaust which could make more racket than the entire field. Usually, the only thing louder was to have two or three more outboards in the feature.

The outboard was a real oddity due to the engine set up - using a vertical crankshaft with the pistons moving fore and aft in line with the center of the car. This being the only car to my knowledge with this arrangement. If there is another, you name it. At the top was the rope pull flywheel; on the bottom or opposite end of the crankshaft was a bevel gear drive which converted into a horizontal drive through a dog clutch and universal joint; thus, through the driveshaft to the rear-end in conventional ways.

One of the most beautiful midgets I have ever seen was the Mitchell Elto from Houston, Mel Wainswright driving. This car had a polished aluminum body like an airliner - the only paint being a black number "6" on the tail. Some fast pit work was accomplished with this engine, as I saw them change engines in this car one night prior to a race main event, in about 45 minutes. I don't believe there were Rudge nuts on the motor mounts.

I'm not gray headed or bald enough to remember the boards but when I think of my first races (40t including tax) I remember the deep whine of the Elto 4-60 outboards - the engine that with the aid of a patient mechanic, could put drivers like Jimmy Snyder, Wally Zale and Babe Bower into the lead many times for a feature victory. Yes, those outboards were the real midgets. There is an old saying that "it takes an Offy to beat an Offy"....but it took an Offy to beat an Elto.

Eddie Hitze....I'M RESTORING AN ELTO MIDGET RACER

Elto 4-60's were first used in midget auto racing in the middle thirties, being converted from boat motors. At that time, some of the other popular engines were the 61 cu. in. Harley-Davidson, four cylinder Henderson, English JAPS, Ford V-8 60's, 4 cylinder Chevrolets and many others. The Elto was a sensation at once so most of the smart boys went for the outboard. The factory recognized a market and produced a special motor for the midgets that had no fuel tank, no lower unit, detachable aluminum heads, larger water headers, etc. These engines cost in the near neighborhood of \$350.00.

Most of the owners had at least three engines - one in the car, a fresh one as a spare and one being overhauled. Some had as many as five because there were often seven or eight races each week. The race fans were all just crazy about the "screaming Eltos" as they were called. The famous Offy engine appeared in 1935 and became really strong in '37, '38 and '39; but the Elto hung on for dear life while winning its share of races. They slowly faded when scarcity of parts made them not practical to compete with the higher horsepower, 91 cu. in. Office.

The Elto was an ornery thing that demanded constant attention and perfect tuning. The last active Elto that I saw ran about 1950 - except for the one I have which ran up to 1951. In 1951 it was put away until 1958 when it was taken out by its owner and driver, Ray Courtney of Alliance Ohio, for one race. He hit a spinning car, bent the front axle, busted the nose and put the car away in his basement to keep. Ray bought the car in 1939 when it was two years old from its builder, owner and driver of recognition, Johnny Wohlfiel, of Pontiac, Michigan. After his owning the car for 30 years, it was difficult for me to talk Ray into selling it. Only after promising him that I would restore the car and not "butcher"it, would he relent.

Down through the years, the tail has been changed, the nose changed and the front suspension changed from a two, to a single spring. The car has a chromed model T rear end and an Ernie Young gearbox sitting beneath the engine. The complete car weighs about 500 pounds compared to the cars of today that weigh from 850 to 1100 pounds. It has a Crosley front spindle set-up and the brakes are Harley. We've put on polished magnesium wheels and wide tires of soft compound in order to run with today's breed of super cars.

My Dad and Sons have been working on it since I brought it home on June 6th, 1969. By the way, I have 10, that's right, 10, sons so I have plenty of pit crew. The oldest is 15 and the youngest is two. We know we are underpowered with the Elto, but we want to show the new race fans the thrill of seeing and hearing the Screamer run, and for the older fans, another chance to see the most popular engine of the thirties race once again. You know, all we have to do is beat just one or two cars and the fans will go wild. That will make all we've done well worth it.





4th N.J. ANNUAL MEET.,

Mark Wright

Winners All....
(L to R) Tom Luce, Sam Vance,
Bill Salisbury, Tony Caglione,
Bob Zipps and Phil Kranz

Our Meet this year was the first one run with rain. This understandably cut our attendance by quite a few of our regular participants who come from long distances. Nevertheless, we did have fun. After lunch, the Bang And Go Back events were run. The heat winners, Tony Caglione with a 4.4 HP 1937 Evinrude; Tom (Colonel) Luce, with a 7 HP '28 Elto Speedster and Bob Zipps with his 5 HP, 1940 LT-10 Johnson ran a very close final event until the last few seconds when Bob's magneto went out on one cylinder, thereby spoiling this normally keen competitor's chances - this time. Tom won and Tony was a very close second, all of which shows the sharp timing and fair competition considering the fact that the course for this event was a shade over one mile long.

The rains then came and stopped proceedings for about 20 minutes. Back to the boats and engines went Tony Caglione with a incredibly well restored and perfect running 1913 Evin-rude; Tom Luce running Tony's 1915 Racine (same condition as his Evinrude) and Sam Vance running his 1928 Johnson K-40 that looked and ran as if time had been set back 40 years. All engines ran the 3/4 mile course flawlessly. Tony won first prize and Tom took 2nd place with that famous Racine of Tonys - that has been too many times a bridesmaid, but never a bride, in the Oldest Running Motor competition.

Harry Bickel, who did a fine job of taking the pictures in this article and Lou Evans, who ran his speedy and sharp running 2 cylinder Bendix (had some tough luck with fuel system problems while running in front during the second Bang And Go event), teamed up with Stan Dubois and acted as our judges. Stan, incidently, put on quite a show for us with his 65 MPH Mercury KG9 equipped hydro. The judges awarded the first Mint Condition award to Phil Kranz for his 1930 Johnson K-50. Phil apologized for having to pull the rope twice to start this real gem. Second place went to Bob Zipps for a really clean and rare 1929 Elto Hi-Speed Speedster.

The Most Unusual first prize went to Sam Vance for his 1939 Evinrude Midget Racer which has a bark as mean as its excellent appearance. The second prize went to Colonel Luce for his Clarke Troller which gleams so brightly, Tom will have to pass out welding glasses at the next meet that has sunshine.

The Sportsmanship Award went to Bob Zipps due to the sour magneto in the Bang And Go event final. Second prize was awarded to Bill Salisbury because the judges felt they shouldn't send a fellow back to California without something to show for his having been in New Jersey. This is the second time Bill has joined us for a Meet here and we hope he will come back often.

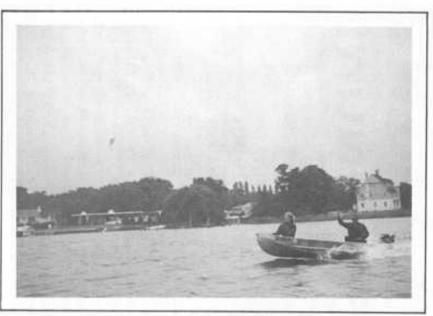
One of our members pointed out that each year we have better looking and better running engines. A good deal of help comes from Lester Flaskamp who can always be counted upon to appear and offer the benefit of his experience to those with technical questions. All of us were pleasantly surprised to have Doc Craver drop by for a visit - Doc had just recently gotten out of the hospital. Tom Luce ran the best looking '28 Elto Speedster we've ever seen. Sam Vance, that master mechanic from Unadilla, N.Y., broke out his'28 Quad for all to see running. A real treat despite the fact Sam was muttering something about sparkplugs. Music to the rest of us though!



Master mechanic Sam Vance fueling the '28 Quad (he sure puts a lot of gas thru it). Get your Quad going!



Bob Zipps keeping the sun off Tony Caglione and helping Tony win the Oldest Running Motor event.



Colonel and Mrs Luce on the way to winning the Bang And Go Back event with the 1928 Elto Speedster.



Our Flight Engineer Bill Salisbury on a day off. "Where are the wheels up, flaps down controls"?

Heather Wright kept her 1938 Neptune 1-1/4 HP beached for the day - we sensed that rain entered into her decision. Steve Mizgala brought a 1913 Evinrude with an <u>original</u> decal! Beached also was Ken Hampton's fine '27 Elto Rudder Twin, permitting us to have Ken's help again this year as the starter.

We had a good Meet and a lot of fun. The kidding was great and the help to each other showed the sportsmanship we can always count on.

MIDWEST CHAPTER NEWS

by Lynn Sallee

MIDWEST CHAPTER PLANS SUMMER OUTING

The Midwest Chapter met for the second time on May 2nd at the Waukegan, Illinois Public Library. We welcomed Harry Stern of Antioch, Illinois into membership, increasing our Club to 14 active members.

We have decided to undertake the enormous project of compiling a Blue Book of Motor Prices and could use the help of all the members of the national organization. Would you take a few minutes to note the price and condition, when purchased, of all the motors in your collection? Send the list to William Rose, 714 Bluff Street, Waukegan, Illinois, 60085. When completed, the book should be a valuable guide to reasonable prices to pay.

The Chapter has voted to hold quarterly meetings, perhaps alternating between Illinois and Wisconsin since our membership is quite evenly divided between the two states. The Summer meeting will be an informal picnic and motor show at Ed Kant's cottage on Lake Winneconne, Wisconsin, on Saturday, August 8th. Members are requested to bring a running motor since boats will be available. Anyone interested in our Chapter who would like to come to the picnic can write to Lynn Sallee, Hiawatha Drive, Winneconne, Wisconsin, 54986, for directions and more details.

A Fall meeting is already planned for November 7th to be held in the Waukegan Public Library, featuring a demonstration on rebuilding the check-valve carburetor, by Mr. Harry Stern.





SPECIAL Fleature

VR-50 JOHNSON

By Jim Smith

The Johnson Outboard Motor Company had set the pace for speed beginning in 1926 with the model P-30 Big Twin which set a mark of over 23 MPH. Over the next four years, engine size and power climbed by leaps and bounds, culminating in 1930 with the four cylinder Model VR-50, Sea Horse 32. Designed for D Class competition, this monster weighed 139 pounds and developed 32 HP, at 5200 RPM. In 1929 Johnson had built a service version called the V-45, the equivalent of two S-45 twins, then modified it for racing as the VR-45. This engine of 39.86 cubic inches and equipped with a one-half speed rotary valve became the Model VR-50 of 1930.

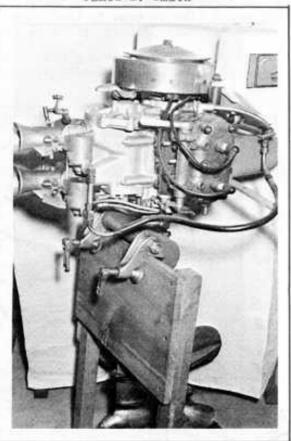
However, the most remarkable change was the provision of two Johnson barrel valve carburetors. They had a common throttle linkage but separate chokes and needle valves. Placed one above the other, the carburetors were connected to a housing containing the rotary valve and serving as the intake manifold being bolted directly to the engine crankcase. In this way, timing and metering of fuel was accomplished, but the two carburetors of course necessitated different rotary valve phasing for each. With each bank of cylinders firing at each revolution of the flywheel, the engine had inherent smoothness and tremendous ability to pull out of corners during races.

The rotary valve operated by means of a steel gear mated to a crankshaft gear; but having twice the number of teeth as the crankshaft gear, the rotary valve gear ran at only half crankshaft RPM. It is very important that this gear be timed correctly so that the teeth on the rotary valve gear mesh at the right place on the crankshaft gear. Otherwise, correct metering of the fuel to the crankcase will not take place and the motor will either run poorly or not at all. Service manuals detail the proper timing procedure.

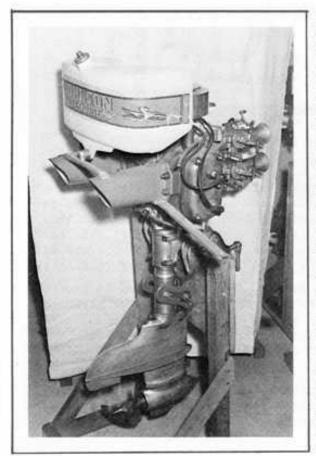
Drivers experienced great difficulty in trying to have both needle valves adjusted properly at the



AOMCI Special Features Editor James L. Smith



"Screaming Iron", note large rotary valve housing/manifold.

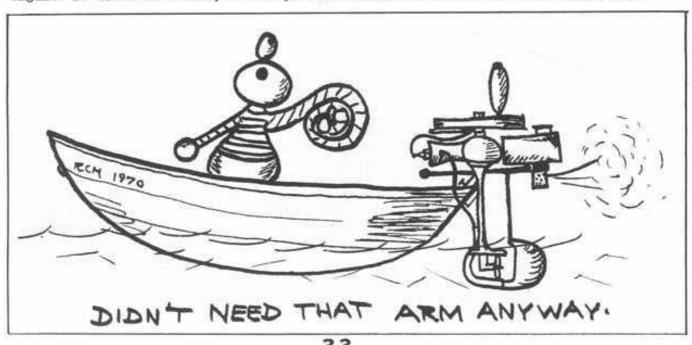


Good shot of the racing lower unit & exhaust exits. Notice needle valves.

same time. Operating these two-carb VR-50's could be a dangerous and nerve wracking business designed to separate the men from the boys. As the needle valves went out of adjustment, the engine would run in tremendous surges. With 140 odd pounds of screaming iron at his back and possibly rough water conditions to contend with, the driver had to reach back with one hand and through trial and error, detect which needle valve needed resetting. Races could easily be lost and for this reason, the Johnson engineers recast the rotary valve housing to accept only one carburetor. Much of the difficulty was then overcome. Many owners converted their two-carb engines to one carburetor versions. As a result, the two-carb models became very scarce indeed.

Magneto, gas tank, cylinder castings, release charger lever/mounting bracket were similar to the service model. Pistons however, were different and had two rings instead of three. The water cooled muffler was similar, but there was a short, above water exhaust pipe. The sample motor pictured is equipped with cast iron exhaust deflectors, but they were probably a special installation. The driveshaft housing was short and the special, streamlined lower unit provided for pressure-vacuum cooling. There was no water pump and no provision for underwater exhaust piping. Several propeller options were available and they were all two blade bronze.

A popular propeller for light racing boats was 10-3/8" diameter, 19" pitch, with a shaft hole diameter of 3/4". Prior to 1931 bronze bearings were fitted, but the VR-55 of 1931 had ball and roller bearings giving appreciable better performance. This model developed 36 HP at 5500 RPM. These racing engines were much more costly to produce and held a limited market. It was therefore not surprising that Johnson began to discontinue their production by the mid-thirties as sales of the service models began to improve. Many lessons had been learned from them and the years of experience with racing engines resulted in better, more dependable outboard motors for the everyday user.





BALANCING ANTIQUE OUTBOARD POWERHEADS

By Marcus S. Wright III

Older 2 and 4 cylinder service engines were built when balancing and machining techniques were less refined than today. Machining differences caused port timing and reciprocating part weights of the same model to be better balanced on some engines than others, partially explaining why some antiques of the same model run better than others. Luck entered into the consistency, or lack of it, on connecting rod, wrist pin and piston weights. Those machining differences often show up as inconsistent port timing too.

No suggestion is made to soup up service engines. Rather, this information is brought to the reader's attention so he may bring his engine's performance up to the standards designed into it. Careful balancing of weights and exhaust port timing on one 2 cylinder, opposed engine owned by the writer increased the RPM from 3500 to 4400 with no other changes. This engine, however, was an extreme case.

You will be surprised at how many of the older, opposed engines do not simultaneously exhaust on both cylinders. Remove your exhaust system at the ports. When turning the flywheel dead-slow, by hand: do both upper piston edges clear these ports at the same time, or is one open and the other piston still covering its port? The slightest difference means unbalanced cylinders. The upper edge of the pistons must clear their exhaust port top edges at precisely the same time. This simultaneously releases combustion pressures in both cylinders; thereby improving engine smoothness and causing new sir/fuel mix to enter both cylinders more nearly at the same instant - and in nearly the same quantities. Fuel by-pass ports are sometimes "out" also, but synchronizing the exhaust timing will normally and automatically do the same for fuel breathing too. Exhaust timing balance is achieved by adding sufficient gaskets between the crankcase and the base of the cylinder with the late exhaust.

Connecting rod, wrist pin and piston assemblies of precisely equal weights in an opposed engine cancel out the imbalance of the other assembly. Should one of these assemblies weigh a few more grams than the other, the imbalance effect will be magnified to as high as 30 to 40 pounds, with higher RPM. The engine does not run mechanically smooth; therefore, HP and RPM is wasted because some is expended overcoming this imbalance, rather than being available at the propeller shaft.

Borrow a scale you can read to at least one gram. So far as is known, members Randolph Hubbell, Bob Thornton and Mark Wright have the scales to balance rod/wrist pin/piston assemblies to very close limits. Weigh each part, recording weights of same. Each part weighing more than the lightest one of its kind will require a small amount of metal to be removed, to make the part the same weight as the lightest piece. Connecting rods can be filed or drilled where strength will not be reduced. Wrist pins can be ground off on one end to lighten. Cleaned pistons (no carbon) with rings can have small amounts of material taken off inside the piston, in areas where strength won't be lessened. By way of information, the average U.S. penny weighs about 3.1 grams. It would not be unusual to find many thirty or forty year old engines out of balance by as many as 30 grams (10 pennies). The symptoms are excessive vibration and lower top RPM. I find it quite easy, with patience, to get piston/connecting rod assemblies balanced to within 1/10 gram. Makes the motor smoother and faster.

Remember, the closer you balance, the better engine performance you'll have. Simultaneous exhaust release will give you a better starting and higher revving antique, as one cylinder will not be working harder than the other. Better idling will be possible too because of the closer matching combustion conditions in opposite cylinders, which in turn makes possible finer carburetor needle valve adjustment. (end)

TRADER'S COVE

by R. H. ZIPPS

GENERAL REQUIREMENTS APPLICABLE TO CLASSIFIED ADVERTISING

- a) Members Complete AOMCI Form 101 or include: Make, Year, Model, Serial Number, Number of cylinders, runs or not, condition of compression and spark, list parts missing, overall condition, features, prices, state if member.
 - b) Non-members must complete AOMCI Form 101. Obtain forms from writer.
- Advertising rates: Members free except parts and literature for sale type ads. Should be neatly typewritten. Non-members \$1.00 per 3 line, 1 column ad. Other non-member advertising space is available at \$5.00 per quarter page, \$10.00 per half page, \$20.00 per full page of camera-ready repro ad copy.
- Closing Dates: All ads must be received not later than the 1st of the month preceding the date of issue,
- 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.
- Warning to purchasers: The AOMCI 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.

No doubt that there has been a time when you have been working along restoring your motor, when you are forced to come to a screaching halt because of a lack of a spare part. This is a little bit aggravating since you cannot just wash your hands and drive down to the auto parts store to find a replacement as if you were working on your car. What's the procedure?

Your first step is to refer to your personnal copy of the Club Special Publication, "The AOMCI Parts Sources Manual", and write the suppliers. If this does not get you the part you need, then write to the Club Parts Acquisition Officer, Marcus Wright who may be able to give you more up to date leads. If you are again not able to locate the part, write to me for an ad in Trader's Cove, to see if there is a member who has a spare part; and if that doesn't do the trick then the last resort is to scan all the back issues of the Antique Outboarder and the Club Newsletter to see if you can find the duplicate to your motor. For this reason it should be extremely important for you to save all of the back issues of all the Club Publications. I print every single letter that comes across my desk either in the Motors Seen or in the Motors For Sale section of Trader's Cove.

Lots of the motors are sold to members through this section; however, I am sure that many are still gathering dust in their owners basement because no one answered the ad. And without question the cheapest way to get a spare part is to get a second motor, then you have a whole supply of spare parts, some of which you may wish to sell and get your money back.

Keep a file of the Antique Outboarder and Newsletter and when you come across a motor of the same make and model that you have, jot the issue and page number on a list so months or years later, you can find the motor you are looking for quickly. Above all treasure your back issues of the Antique Outboarder and Newsletter. They are the largest current source of information on antique outboards to be found anywhere on this earth.

MOTORS SEEN CLARKE: Troller; J.J. Bradley, 604 Highland, Ithaca, New York 14850 ELTO: Mod C; S.A.Norris Jr.; Box 548; Coraopolis John Bohan; 51 Koger Rd; Pennsylvania 15108 ELTO: Ser 2965; M.L. Parks; 975 Prairie; Elgin, Illinois 60120 ELTO: Three motors; Gottfried Riring; 117 River; Menosha, Wisc. Bay; Virginia Beach, ELTO: Mod C; Ruddertwin; ELTO: Ruddertwin; R. R. Woodara; 1401 W 2nd; McDonald; 15695 SE Oat-Rusellville, Ark. 72801 field; Milwaukie, Oregon EVINRUDE: Mod A; James EVINRUDE: 1940 Big Twin Lau; 738 N. Sth Ave; Sturgeon Bay, Wisc. EVINRUDE: Mod 4209; P. Schweitzer; 5555 West Alpine; Stockton, Calir. Dunn; Alexandria, South Lakota 57311 EVINKUDE: Mod 4153; J. Horimann; 3378 S 69th; Milwaukee, Wisconsin EVINHUDA: Mod 4265; L. Hotonkiss; 77 Jefferson; Adams; 692 Clinton Sk; Lakeport, New Hampshire EVINRUDE: Single; R. Dennis; 313 Portage la Prairie; Manitoba, Canada EVINRUDE: Mod 4378; G. Warren; 1410 E 29th; Bryan, Texas JOHNSON: Mod K-30; J. Richardson; 2824 Broad Bay; Virginia Beach, Va. Greenville, New Hampshire Charlotte, North Carolina JOHNSON: Mod OKL-75; H. JOHNSON: Mod A-80; G. JOHNSON: Mod A-35; Ray Cox; Box 2700; Whitehorse, Yukon JOHNSON: No other inro; L. Lenth; Rogers Rte.; International Falls, Minn Terrell, Texas 75160 JOHNSON: Mod A; Duane JOHNSON: Mod A-25; Cecil JOHNSON: Mod A; Duane Barker; Route 4; Merrill, Wisconsin Blue Island, Illinois JOHNSON: Mod LT-38 7; E. JOHNSON: Mod A; E. Van Quekelberg; 2705 Hi- Smiltzer; 1315 Boone; way #2 K; Grand Rapius, Minn. Ft. Wayne, Ind. BENDIA: Mod SMD; Fred SEA KING: No other info; Nordmann; 2055 Zula Lane D. Schnorrenberg; Bx 478; Mobile, Alabama 36605

MOTORS SEKN ELTO: Mod 4351; Ace: Henry Court M; Sierra Negra 420; Mexico 10 DF ELTO: Mod J; Ruddertwin; Trumbull, Connectiout A.TO: Mod J; Ruddertwin; J. Kmetz; 1614 W 2nd; Ashland, Wisconsin ELTO: 1925 Ruddertwin; J. michardson; 2824Broad Bowers; 118 Elm Street; Bay; Virginia Beach, Va. EVINRUDE: 1940 Big Twin; Terry Heidtman; 939-F Cherry: E. Lansing, Mich EVINHUDE: Mod 7031; R. Gates; 94 Harwich ot.; Pittsrield, Mass. 01201 EVINRUDE: Mod H; Paul Szczepanski; 5219 N. Osceola; Chicago, Ill. EVINRUDE: 1935, 3 HP; B. Lannia; Apt L; 502 N Oak; Bloomington, Illinois EVINRUDE: 1939; 5 hP; L. Doylestown, Ohio EVINRUDE: Ser 3F484; H. Newcomer; 501 Mimosa Dr.; Denton. Texas 76201 EVINRUDA: Speeditwin; M. Hammargren; 1104 Foulk; Waterloo. Iowa JOHNSON: Mod J-80; W. Taylor; RFD #1, Mason Hills Lepscier; Rt. 6, Box 576; Struble; 71 Englewood; Trenton, New Jersey JOHNSON: Mod J-25; Sam Warren; 204 East Brin; Trainer; 13023 Maple ave; Cassville, Wisconsin

MOTORS SEAN ELTO: Mod G; Ruddertwin; E. Pienta; 103 Wood Lane; Absecon, New Jersey 08201 ELTO: Mod C; Ruddertwin; J.B. Hastings; ASR Box 575; Azle, Texas 75020 ELTO: Lightweight; John Morrow; 10926 Randall St. Sun Valley, Calif. 91352 ELTO: Mod 4205; Mrs. North Syracuse, N.Y. EVINHUDE: Mod 4296; W. Griese 352 Tillbury Apt. 6; Ottawa 13, Ontario, Canada EVINKUDE: 1937, 0.9 HP; K. Paul; 3316 S. Pennsylvania; Milwaukee, Wisc. EVINKUDE: Mod 6039; K.J. Killeen; Route #1; Slinger, Wisconsin EVINRUDE: Mod A; M. Leir; 4102 South Oregon St.; Seattle, Washington LVINRUDE: Mod NS; Cecil Woodgate; 710 5 Jeffers; North Platte, Nebraska EVINRUDE: Mod 6039; T. Migdal; 2319 E. Malvern; Milwaukee, Wisc. EVINRUDE: Mod N; Alden Wurtsbaugh; 936 Castle Hill; Redwood City, Calif. 94061 JOHNSON: Mod PO-15; R. Gates; 94 Harwich St.; Pittsfield, Mass. JOHNSON: No other info; F. Gerber; Route 9W; Stony Point, New York JOHNSON: Mod A; Floyd Deffinger: 884 Sycamore; Cincinnati, Ohio 45245 JOHNSON: Mod A-25; Henry Scholtens; 1986 Huizenga; Muskegon, Michigan JOHNSON: Mod A; R. Mc -Murry; 540 Redbud E. Hurst, Texas THOK: No other inro; V. Wessels; 9638 1/2 Oak Summit Baltimore, Maryland

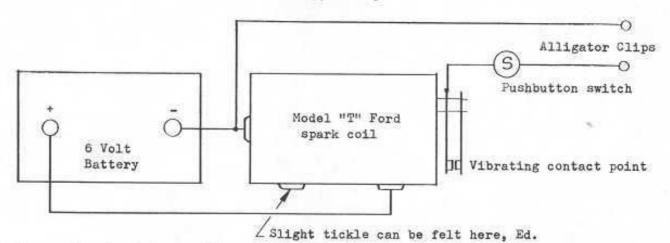
TRADER'S COVE (continued)

Many inquiries are sent to me asking the difference between "Motors For Sale" and "Motors Seen". The answer involves Club Policy. Loads of letters are sent to Club Headquarters by people wanting to sell their motor. Dave puts all these letters in one envelope and sends them to me. I answer these letters and include an advertising form asking if they would like to have a paid ad. If they do, I print it immediately in the next issue of the newsletter. If they do not want to spend a buck for an ad, I file the letter and when space permits I print it under the neading of "Motors Seen". It is as simple as that. That is why the paid ads are more complete, and motors seen ads are printed three across. The paid advertiser definitely has the advantage as his ad has first priority, and the motors seen is on standby when space is available which usually takes months.

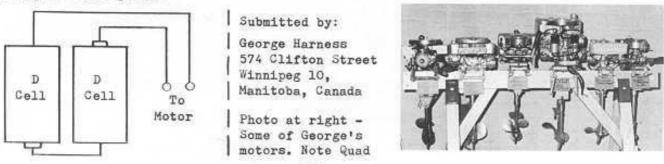
PARTS WANTED..... Bill Talbot has just picked up a 1931 Cross Radial that needs all the parts between the powerhead base and the cavitation plate. If you can help, write Willis L. Talbot, 2300 Ottawa, Leavenworth, Kansas 66048.

HOW TO MAKE AN IGNITION COIL TESTER

I made this tester many years ago, using the vibrating points on a Ford "T" coil to produce the make and break spark which is fed into the primary leads of the outboard coil to be tested. Mount the Ford coil and battery in a plywood box for easy carrying and mount the pushbutton on one end of the box. With the leads coming out of the box, make a connection to the primary terminals of the coil to be tested. Attach the high tension lead of the coil in such a fashion that any high tension current passing thru will have to jump a gap to ground. A good coil will cause a 1/4" spark to jump the gap. The pushbutton allows current to flow from the battery through the vibrating Ford coil points and then, still vibrating, through the outboard coil on test.



Another quick check to see if a coil works at all can be made by wiring 2 flashlight cells in series as shown below, left. With the outboard motor points open, "flick" one lead from batteries across the insulated point while grounding the other lead on the magneto base plate.



YOUR FELLOW AOMCI MEMBER

JOHN C. HARRISON

1000 N.W. 54th Street Miami, Florida 33127



Few persons indeed have pursued the enjoyment of boating and engines to the depths and richness as has our Club Treasurer, Mr. John Harrison. One needs only a glance at John's garage where some of his motors and boats are stored to realize that here is an exceptional focus of the same atmosphere that has attracted us all.

John's engines number about 100 and range from the historical Waterman to the classic 4-60 Racers. The unique motors are here too, an Electric Oar, The Clarke Troller, the Cross Radial and even foreign racing engines.

John does a great deal of work on these motors too. Don't get the idea that they just hang on the rack! John has actively participated in racing, rebuilding and displays for years. Anyone who has attended the boat shows in the Miami area - or has seen pictures of the displays - knows what a fine job of restoration and presentation John does.

Once a Navy Officer, John is now an executive with a construction company in Miami. He received his college education at Purdue University graduating as an Aeronautical Engineer. Re-reading some of his writing in earlier issues of The Antique Outboarder will demonstrate his technical expertise to you.

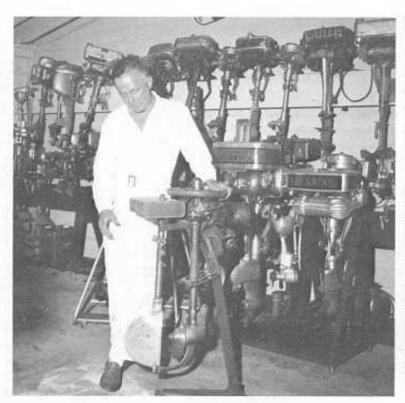
His concentrated interest in the V-Series Johnson motors (he heads up the V-series Special Interest Group) stems from John's 20 years (cont.)

TOP PHOTO: Here's John framed by Flambeaus and Cailles and partly hidden by a tractor "X" Evinrude, a Waterman and a Cross Radial.

LOWER PHOTO: Note the Electric Oar behind John who's holding a Clarke Troller. Below, left, is a highly polished Sea Horse "32".







Yes, John owns a Waterman too. Me? I'm wishing!

of boat racing. 4-60's, Big Four's, Sea Horse "32"s and TR-40's are no strangers to John - he knows them all, from the inside, out.

A back injury in 1957 forced him to give up racing, and has nagged John somewhat ever since. On January 30, this year, back surgery put him out of commission for a time. Reportedly, he's OK now.

Even with the demands on his time these days, John still finds a few hours for the hobby and of late, is attempting to find a 1940 "C" hydro, "X" hydro and "X" Evinrude engine. Knowing John, he'll find them all.

We of the Antique Outboard Motor Club can well be proud of the professional manner John represents the Club to the public. We all have benefited from his helpfulness and thoughtfulness in conducting our AOMCI affairs.

Editor

the MARINER

Published for employees of JOHNSON MOTORS

On December 30th General Foreman, Art Coulombe, 66, and still as chipper as the day he started work at Johnson Motors 44 years ago, said so long to his life-work and headed for his home, and retirement. Dressed in a smart suit and a smile he had a final meeting with another man who has put his life into Johnson Motors, Division Manager W. C. Conover.

"He did a heck of a job and I mean it," Mr. Conover said it to his face, "Art never doubted that a job could be done. He just did it. I mean that as the highest compliment."

Forty-five years ago Art was a newly-married, young apprentice toolmaker in Kankakee, Illinois, He got a letter from his brother, who had gone to work for this new outfit in South Bend, Indiana. "Come and work for Johnson," the letter said.

"I wanted something different," Art said, "For my apprenticeship I needed to work a year in some other place, I went, I ran a turret lathe for about four months then I was night foreman at a new plant that we opened up there, I lived in South Bend two years and I still can't tell up from down,"

About that time Art and four other men were picked to go to a place up on the North coast called Waukegan and make things ready for the 50-car freight train transporting the South Bend company to its new plant on the water. The train came ("In the middle of a blizzard, I remember") and Art spent 20-hour days installing the machinery in its new location, "I know how long we spent each day," he chuckled, "because the first thing we did was install a big time clock on the back wall. We had about 100-square-feet of cement poured and the rest was sand and wire mesh. As the new floor was drying we were putting new machinery down,"

Excerpted from the February, 1970 "Johnson Mariner" as furnished by Bill AuCoin, Public Relations, Johnson Motors.

AOMCI salutes two men who helped build some of the fine engines now sought after by Club members...



Art Coulombe (right) is congratulated for his 44 years service with Johnson Motors by W.C. Conover, OMC Vice President and Division Manager

AOMCI NEW MEMBERS

James L. Bowen 12 Robinhood Road Albany, New York, 12203

A.S. Weygandt 198 Marlin Road East Quogue, N.Y. 11942

Frederick W. Hopkins 28 Tumblebrook Drive Vernon, Conn. 06086

Maxwell L. Boales 511 S. Atlantic Ave. Daytona Beach, Fla. 32018 J.H. Moessner Box 62 Irvington, Va., 22480

P.S. Brooke Jr. 830 E. 35th Spokane, Washington, 99203

Raymond Davis 1702 Lake Washington Blvd Seattle, Washington, 98122 Bud Hey Route 5 Box 5024 Bainbridge Island Washington, 98110

George A. Winter 1121 Summit Street Spooner, Wisc 58401

Leonard H. Specht 111 Saddletree Road San Antonio, Texas 78231

Let's all extend a cordial welcome to the newcomers by writing or visiting. Show them what the Club is!

SPECIAL GIANT TWIN OWNERS ASSOCIATION NEWS DON Poterson

John Harrison has made a breakthrough and has original blueprint decals that read "SEA HORSE '25'". They're colorful and add the finishing touch for your restoration. John is asking \$20 for the decal. Notice the TR-40 driveshaft housing is notoriously weak. John is having a new, stronger housing cast for his motor. "The danger in breaking the driveshaft housing while underway, is that you'll lose the lower unit. The housing on my engine is not broken - however, I think I'll get a new one before I put my motor on a boat in the water. This spot is so weak, and lower units are just not to be found." Editor's note: Congratulations should go to Don and "The Fearsome Eight" as he calls his Group, for being an outstandingly active crew.

The Antique Outboard

Motor Club

EMBROIDERED SHOULDER PATCHES are available from Mr. John Harrison, 1000 NW 54th Street Miami, Florida Price: \$1.00

Colorful- 5% inches high FOR SEWING ON SHIRT or JACKET



REMEMBER

Richard M. Jones is handling all new & re-newed AOMCI Memberships and records. All applications, dues and address corrections should be dent to him at 20505 N.W. 3rd Avenue, Miami, Florida 33169

PLEASE CHECK YOUR OWN MEMBERSHIP DUE DATE AND RENEW EARLY. SAVE THE CLUB \$\$

DECALS for JOHNSON

John C. Harrison

1000 N.W. 54th Street

Miami, Florida 33127

Price: \$8.00

Models

Made from factory Blueprints

V-45,65,70; VR-45,50 & VE-50

DECALS

SELF STICK CLUB INSIGNIA
Approx. 3" X 5" Price \$.25 each
Order from Dick Jones 20505 NW 3rd Ave.
Miami, Fla. 33169

DECALS

1911-1928 MODELS A & B EVINRUDE Four piece tank Decal Set \$4.50 Order from R. Brautigam 2316 W 110th St Bloomington, Minn 55431

The Antique Outboard Motor Club Inc.



Published, 2316 W. 110th St Minneapolis, Minn 55431

Home Office, 8819 Enfield, Northridge, California

PRINTED MATTER-NO COMMERCIAL VALUE



AOMCI 5TH YEAR