

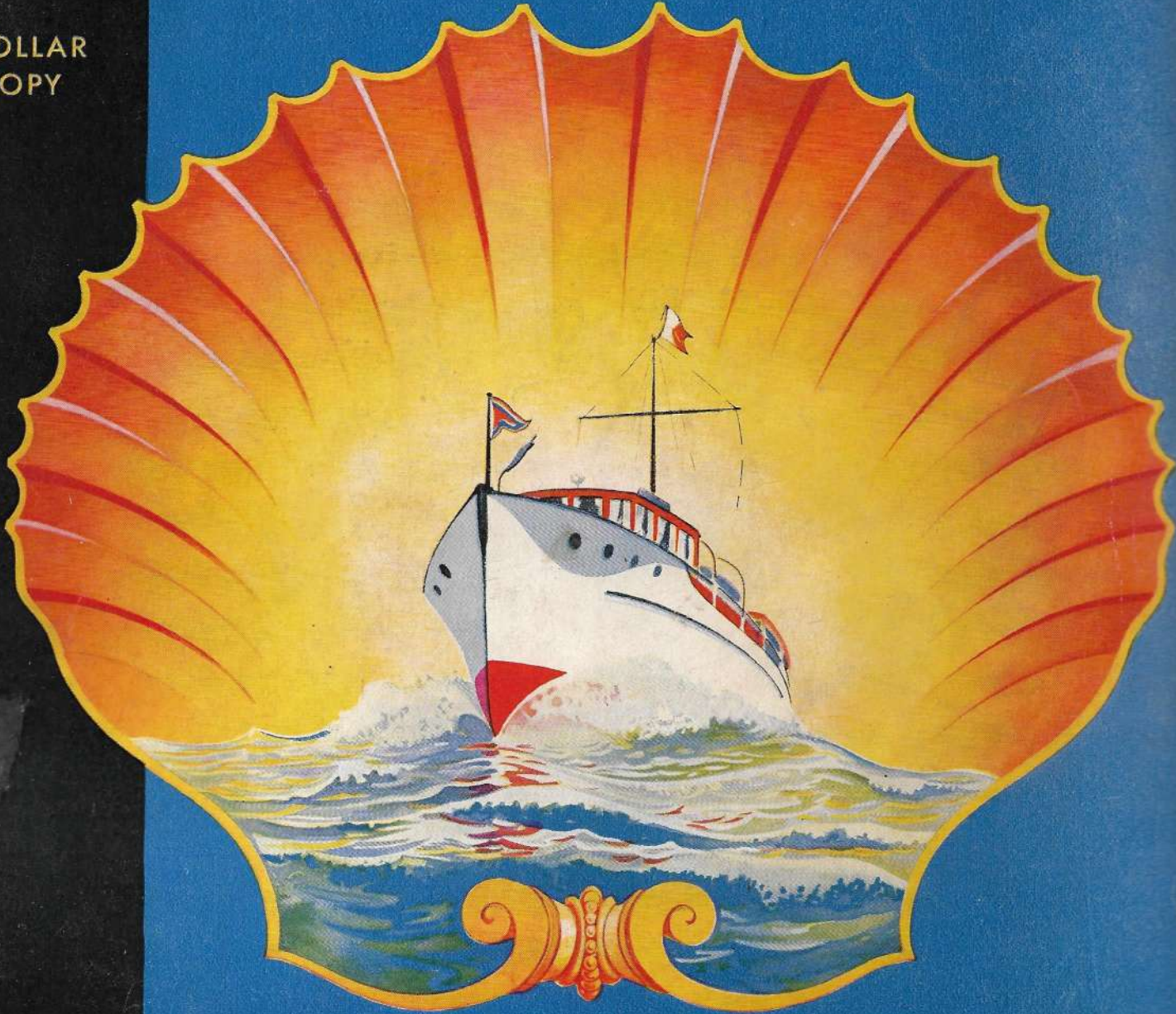
February
1931



ONE DOLLAR
THE COPY

MOTOR BOATING

The Yachtsmen's Magazine



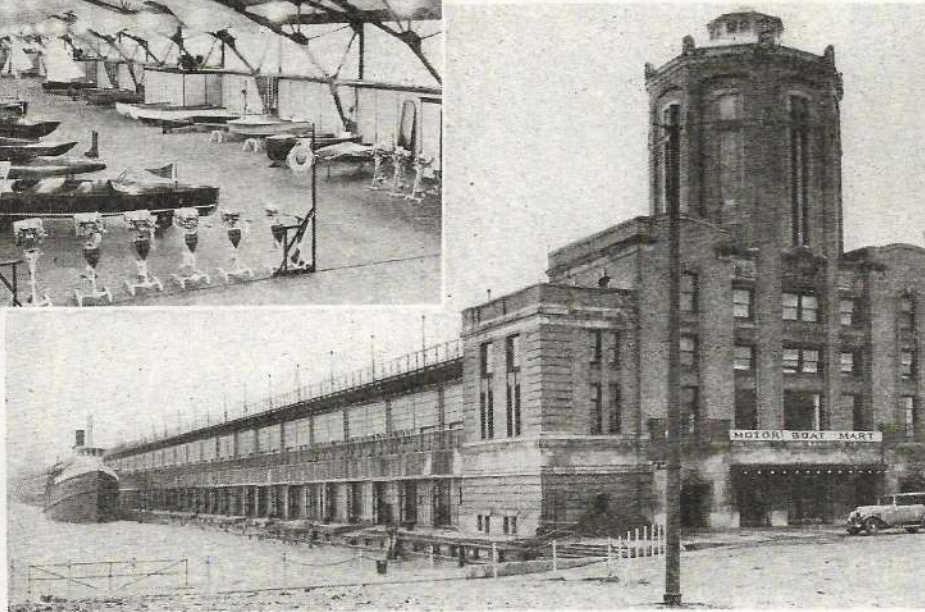
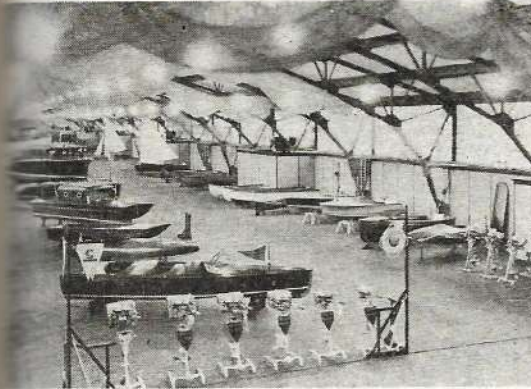
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SLOW NUMBER

MOTOR BOAT MART

CHICAGO, ILLINOIS

World's Largest Permanent Marine Exhibit



Open All Year

140,000 Square Feet for Displays

THROUGHOUT the year thousands of people come monthly from all parts of the country to inspect the latest in cruisers, runabouts, commutars, outboard boats, sail boats, marine engines, outboard motors and accessories exhibited at the Motor Boat Mart, the world's

largest permanent marine exposition. Under the glass roof of this mammoth 2,200 foot pier there are 140,000 square feet for displays. The Motor Boat Mart is a national marine institution sponsored by Chicago's civic authorities and leading yachtsmen.

1931 CHICAGO NATIONAL BOAT SHOW

The 1931 Chicago National Show will open at the Motor Boat Mart, April 24th and continue for ten days. During the period of the National Show manufacturers enlarge their exhibits with special displays on newest models to meet the demand of the greatly augmented show audience. To manufacturers desiring exhibit space for the year of 1931 we offer the three options given below. Mail coupon today for full particulars.

MOTOR BOAT MART
Navy Pier, Chicago, Ill.

Please send us full particulars on exhibit space. We are interested in option number 1 2 3

Name

Address

City State

THREE OPTIONS FOR EXHIBITORS

Use the Coupon

NUMBER 1

Chicago National Boat Show period, including one week prior to and one week after end of show. \$1.50 per sq. ft.

NUMBER 2

January 1 to June 1 of year, including exhibition in Chicago National Boat Show. \$2.00 per sq. ft.

NUMBER 3

January 1 to December 31 of year, including exhibition in Chicago National Boat Show. \$2.50 per sq. ft.

EXHIBITORS

- AMERICAN CAR & FOUNDRY CO.
- AMERICAN CANOE ASSOCIATION
- ANCHOR SAWMILLS CO.
- ATLAS BOAT CORPORATION
- BOATING PUBLISHING CO.
- BOYD-MARTIN BOAT CO.
- BURGER BOAT CO.
- E. S. BURMAN CO.
- CAILLE MOTOR CO.
- CAPE COD SHIP BUILDING CORP.
- GEO. B. CARPENTER & CO.
- CENTURY BOAT CO.
- A. B. CHASE-EMERSON CORP.
- CHRIS CRAFT CORP.
- CO-TWO FIRE EQUIPMENT CO.
- COLUMBIAN ROPE CO.
- COLUMBIA YACHT CLUB
- CORSAIR BOAT COMPANY
- CRANDALL BOAT CO.
- CUMMINS ENGINE CO.
- DACHEL-CARTER BOAT CO.
- DART BOATS, INC.
- HORACE E. DODGE BOAT & PLANS CORP.
- DUNPHY BOAT MFG. COMPANY
- DWIGHT LUMBER CO.
- EAU CLAIRE PAD CO.
- ELTO MOTOR CO.
- ENTERPRISE OIL CO.
- EVINRUDE MOTOR CO.
- B. F. GOODRICH RUBBER CO.
- HENRY C. GREBE CO.
- GREAT LAKES BOAT BLDG. CORP.
- HACKER BOAT CO.
- HALL-SCOTT MOTOR CAR CO.
- INDIAN MOTORCYCLE CO.
- JOHNSON MOTOR COMPANY
- KAINER & CO.
- KERMATH MANUFACTURING CO.
- DAN KIDNEY & SONS, INC.
- KRAMER BOAT CO.
- U. G. LEE & CO.
- LOCKWOOD MOTOR CO.
- MARKUS LIFE VESTS
- MODEL YACHT BUILDERS ASSOCIATION
- MoToR BOATING
- MULLINS MANUFACTURING CORP.
- NATIONAL OUTBOARD ASSOCIATION
- NIAGARA MOTORS CORP.
- PENN YAN BOAT CO.
- POWER BOATING
- PYRENE MANUFACTURING CO.
- ROBINSON MARINE CONSTR. CO.
- RUDDER PUBLISHING CO.
- SCRIPPS MOTOR CO.
- STAUGAARD MARINE & SUPPLY CO.
- STERLING ENGINE CO.
- STONE METALLIC LENS CO.
- THOMPSON BROS. BOAT MFG. CO.
- UNITED STATES MOTORS CORP.
- UNIVERSAL MOTOR COMPANY
- VAN BLERCK MOTORS, INC.
- WHEELER SHIPYARDS
- JOHN H. WELLS, INC.
- WINTON ENGINE CO.
- GAR WOOD, INC.
- YACHTING

THE AC SPARK PLUG HEAT RANGE SYSTEM

ONE OF THE GREATEST CONTRIBUTIONS TO THE INDUSTRY

The AC Heat Range system takes the "guess" out of spark plugs—makes it possible to select the correct type of spark plug to give maximum engine efficiency.

It is based on the well-established principle that spark plug operating temperatures have much to do with spark plug performance. Each spark plug is identified by a number on the insulator. The lower this number, the cooler the plug—the higher the number, the hotter are its relative operating characteristics.

Application of the AC Heat Range System

Consult the chart at the right and find the type of AC spark plug recommended for average service.

To correct habitual fouling, change to the hotter plug type listed in column I below.

To correct habitual pre-ignition, change to the cooler plug type listed in column III below.

For racing service, use the colder plug type listed in column IV below.

For example, if G-6 is the AC spark plug recommended for average service in your engine, as shown on the specification chart—use G-7 to correct fouling, G-4½ to overcome pre-ignition, and G-1½ for racing service.

I Hotter Than Average	II AC Spark Plug for Average Service	III Cooler Than Average	IV For Racing Service
A-CP	A	Y	A-2½
Y	AM	A-2½	A-2½
B-CP	B		
C-CP	C		
D-9	D-8	D-7	D-6
E-CP	E	E-9	E-9
F-CP	F	F-10½	
G-3½	G-2½	G-1½	G-1½
G-4½	G-3½	G-2½	G-1½
G-6	G-4½	G-3½	G-1½
G-7	G-6	G-4½	G-1½
G-8	G-7	G-6	G-4½
G-9	G-8	G-7	G-6
G-10	G-9	G-8	G-6
G-11	G-10	G-9	G-1½
G-12	G-11	G-10	G-6
G-14	G-12	G-9	G-6
G-14	G-13	G-12	G-6
G-CP	G-14	G-12	G-6
I-CP	I		
L-12	L-10	L-9	L-6
G-8	N	NN-1	G-4½
E-8	NN	E-6	E-4½
N	NN-1	G-4½	G-3½
G-10	N-1	G-8	G-6
Q-CP	Q	F-10½	
G-CP	W	G-14	G-6
A	Y	AM	A-2½
Z-CP	Z	Z-1	
	AC 575		
	AC 1075	F-10½	

Note: CP indicates Carbon Proof Type

AC Spark Plugs are sold by more dealers than all others combined

AC SPARK PLUG COMPANY
FLINT, MICHIGAN

AC SPARK PLUG SPECIFICATION CHART

MARINE ENGINES—INBOARD

Anderson—All Models	F	Falcon—All Models	A	All Others	F
Automatic—All Models	Q or F	Fay & Bowen—Challenger, Conqueror, Defender, T-2	Y	Packard—Models 1M-268 1M-357	I
Bridgeport—All Models	F	All Others	E	Model 1M-621	E
Brennan Std.—Models N-4, E-4, D-6	B	Faybow—Continental—Challenger, Conqueror, Defender	Y	Models 1M-1242 2M-1551	G-2½ or G-7
All Others	G-11	All Others	E	Palmer—Model NK-4	A or Y
Brill—All Models	NN-1	Ford—Model T	AC-1075	All Others	C
Buchanan Bull Dog—Models using Continental engines	H-8, L-29, 16C, 20L	Models A, AA	AC-575	Peerless—All 4 cyl. Models	F
H-8, L-29, 16C, 20L	A	Frazer-Adams—All Models	F	All 6 cyl. Models	C
Models using Continental engines 12K	G-12	Frisbie—All Models	F	Pontiac—1930 Models	G-14
Buda—All Models to 1927 incl.	E	Gray—Model 8-H. S.	G-6	All Models to 1929 incl.	B
Models HM-260, HM-298	G-10	Model H-8	G-9	Red Wing—Model's D, K, W-6	
Models BMA-6, BM-386	G-6	Model 6-50	G-14	Arrow Jr.	E
BM-411	G-6	Models 4-50, 6-40, 4-75	G-14	All Others	C
All Others	A or Y	Models 4-25, 4-30, 17-27, 37, 4-41	Z	Regal—Models GF, KF	C
Buffalo—Model BA-4	I	Models 444, 660, 670	Y	Models HA, GP, GC	I
Models CE-4, DE-4	Z	Eight Cruiser	N-1	All Others	Z
Models R-4, RA-4	C	All Others	A	Roberts—Model HS	G-14
Model BKK	F	Half-Scott—Models L, LN-6A	G-6	Model OX	C
Cady—All Models	F	Other Models of 1928-29	G-8	All Others	F
Capitol—Wright H-3; Liberty 12 H. C.	N	30	G-8	St. Lawrence—All Models	F
Liberty 12 L. C.; Hispano-Suiza-220; Curtiss OX-5	N-1	All Others prior to 1927	L-10	Sanderson Cyclone—Models A, AR	Y
All Others	Y	Hartford—All Models	G-6	Scripps—Models D-2, F-4, F-6, E-2	L-10
Chris Craft—All Models	G-8	Kermath—Models K-85, K-125, 9-150, R-200	N	Models 84, 120	G-8
Chrysler Imperial—Models AMR	Y	Model L	NN-1	Model 124	G-11
Crown and Majestic C	G-8	All Others	Z	All Others	G-6
All Others	NN	Lathrop "Mystic"	E	Speedway—All Models	A
Curtiss OX-5—All Models	G-9	All Others	B	Standard—All Models	E
Detroit-Marine—All Models	G-8	Lockwood—All Models	N-1	Stearns—All Models	B
Dodge Water Car—Models using Universal engines 85 H.P.	G-10	Long Island—Model B	G-11	Sterling—Model Neptune	F or Q
Models using Lycoming engines 115 H.P., 40 H.P.	G-9	Model M and MS	E	Model Viking II	NN
Models using Chrysler engines 105 H.P., 120 H.P.	NN	All Others	F	Model Dolphin Special 6	E
Models using Scripps engines 150 H.P., 200 H.P.	G-6	Lycoming—All Models	G-9	All Others	A
Cyclone—All Models	Y	Lyon and Tuttle—Model 60	N	Universal (Blue Jacket)—Models GL, N, W	E-9
Doman—Models K-1, K-2	F	Mack 6 cyl.	G-8 or D-8	Models AB, 6-77, 6-88, 8-115	G-10
All Others	A	Mayback Zeppelin—All Models	G-6	All Others	NN
Elco—Models F-6, F-42, F-62	Y	Miller—Model E-6	E	Van Blerck—Model Van Blerck, Jr.	G-8
Model A-4	A	All Others	F	All Others	A
Evansville—All Models	F	M and T—Models J-6, K-6	G-13	Winton—Model 124	E
		Model K	G-8	All Others	Z
		All Others	C	Wisconsin—All Models	A
		Niagara—1930 Models	G-6	Wright—All Models	N
		1928-29 Spec.	A		

MARINE ENGINES—OUTBOARD

Caille—Models 10, 12, Liberty Twin	E	Cross—1930 Radial 5	G-8	Johnson—Racing Models 10KR, 14PR-40, 16SR, 32VR, 25TR, 24PR	G-2½
Models 20, 22, 30, Liberty Single	C	Elto—J, K, 23K, 28K, Lightweight, Service Speedster, Foldlight, Senior Speedster	G-8	Models 10, 14, 16, 32, 25, 12, 24	G-6
Models 32, 42, 24, 14, Motor-go Jr., Motor-go Sr., Motor-go Big Boy	G-10	Elto—All Others	G-6	All Others U-11, U-15, U-18	G-11
Models 27, 28, 34, 35, 36, 40, 44, 45, 46, 47, 48, 49, 50	G-7	Evinrude—1928	AM	Lockwood—Racing Chief	G-2½
Models 25, 26	G-4½	1929-30	G-6	Lockwood—All Others	G-7
Cross—1929 Radial 5	W	F-60	G-3½	Neptune Twin—All Models	W
		Hartford—All Models	G-6	Spinaway—All Models	F
		Indian—All Models	G-14		



A CHANGE FOR THE BETTER

SPECIFICATIONS OF AMERICAN OUTBOARD ENGINES

MODEL	Class A, B, C, D	Horse- power	Piston Displace- ment	Bore and Stroke	No. of Cylin- ders	R.P.M.	Weight	Piston Rings Number—Size	Propeller Diam. & Pitch	Fuel Tank Capacity Quarts	*Make Starting Device	*Make Ignition System	*Make Carburetor
CAILLE RED HEAD													
Caille Motor Co., 6242 Second Blvd., Detroit, Mich.													
16.....	A	7	13.916	2 1/4 x 1 3/4	2	4500	55	2	8 1/2 x 8	2 1/2	Rope	Bo M	Til
Racer 35.....	A	12	13.916	2 1/4 x 1 3/4	2	6000	52	2	8 x 12 1/2	4	Rope	Bo M	2 Til
15.....	A	7	13.916	2 1/4 x 1 3/4	2	4500	55	2	8 1/2 x 9	2 1/2	Rope	Bo M	Til
27.....	B	15	19.63	2 1/2 x 2	2	5000	85	2	10 1/2 x 9	8	Rope	Bo M	Til
28.....	B	15	19.63	2 1/2 x 2	2	4500	105	2	9 x 11	8	Ow Dy El	Ow Dy	Til
Racer 40.....	B	16	19.63	2 1/2 x 2	2	6000	80	2	8 x 13	8	Rope	Bo M	2 Til
48.....	C	21	29.6	2 3/4 x 2 1/2	2	4500	110	2	10 3/4 x 11	10	Rope	Bo M	Til
49.....	C	21	29.6	2 3/4 x 2 1/2	2	4000	130	2	10 1/2 x 10 1/2	10	Ow Dy El	Ow Dy	Til
Racer 50.....	C	24	29.6	2 3/4 x 2 1/2	2	6000	95	2	9 x 15	10	Rope	Bo M	Til
CROSS													
Cross Gear & Engine Co., 3260 Bellevue Ave., Detroit, Mich.													
†Radial.....	G	50	74	2 1/2 x 3	5	4200	160	3-1/8	11 x 14	12	Rope & El	Bo	Vacturi
†Sea Gull 582.....	C		29	2 3/4 x 2 1/2	2	5000	95	3-1/8		8	Rope & El	Bo	Vacturi
†Sea Gull 582R.....	C		29	2 3/4 x 2 1/2	2	7000	75	3-1/8		8	Rope & El	Dual Bat	Sch
INDIAN													
Indian Motorcycle Co., Springfield, Mass.													
Silver Arrow.....	B	10	19.63	2 1/2 x 2	2	4500	68	2-3/8	10 x 10	7	Rope	Bo	Til
JOHNSON SEA HORSE													
Johnson Motor Co., 3020 Pershing Rd., Waukegan, Ill.													
Single.....	A	11 1/2	4.71	2 x 1 1/2	1	2700	27	3-1/8	7 3/8 x 5 1/8	2	Rope	Own Mag	Own
4.....	A	4	8.28	1 7/8 x 1 1/2	2	3500	45	2-1/8	9 3/8 x 6	3 1/2	Rope	Own Mag	Own
12.....	A	8	13.96	2 3/8 x 1 3/4	2	3500	60	2-1/8	9 1/2 x 7 3/4	6 1/2	Rope	Own Mag	Own
16.....	B	16	19.93	2 3/8 x 2 1/4	2	3500	95	3-1/8	10 x 10	10	Rope	Own Mag	Vacturi
16 (Elec. starting).....	B	13	19.93	2 3/8 x 2 1/4	2	4000	140	3-1/8	10 x 10	10	Ow Dy El	Ow Bat	Vacturi
24.....	C	24	29.92	2 3/4 x 2 5/20	2	5500	102	3-1/8	12 x 12	10	Rope	Own Mag	Vacturi
24 (Electric starting).....	C	20	29.92	2 3/4 x 2 5/20	2	4000	150	3-1/8	12 x 12	10	Ow Dy El	Ow Bat	Vacturi
32.....	D	36	39.86	2 3/8 x 2 3/4	4	5500	110	3-1/8	12 x 12	17	Rope	Own Mag	Vacturi
32 (Electric starting).....	D	26	39.86	2 3/8 x 2 3/4	4	4000	176	3-1/8	12 x 12	17	Ow Dy El	Ow Bat	Vacturi
NEPTUNE													
Muncie Gear Co., North Vine St., Muncie, Indiana.													
OB2.....	A	2.6	9.42	2 x 1 1/2	2	2600	45	3-1/8	9 x 9	3	Rope	Bo	Til
OB4.....	A	4 1/8	9.42	2 x 1 1/2	2	3200	56	3-1/8	9 x 9	3	Rope	El	Til
OB15.....	B	16	19.63	2 1/2 x 2	2	4000	95	2-1/8	10 x 14	7	Rope	El	Til
OUTBOARD MOTORS CORP.													
5130 N. 27th St., Milwaukee, Wis.													
Elto Division													
Lightweight.....	A	4	10	2 x 1 5/8	2	2700	38	2-1/8	8 3/4 x 9	2	Rope	Own	Own
Fold Light.....	A	2 3/4	8	1 3/4 x 1 5/8	2	3200	29	3-1/8	8 1/2 x 8	2	Rope	Own	Til
Speedster.....	B	7	20	2 1/8 x 2	2	3500	64	3-1/8	10 x 10	5 1/2	Hand	Own	Own
Special Speedster.....	B	12	24	2 3/4 x 2	2	4000	75	3-1/8	10 x 10	5 1/2	Hand	Own	Own
Senior Speedster.....	B	14	25	2 1/2 x 2 1/2	2	4000	84	2-1/8	10 x 10	10	Hand	Own	Own
Senior Speedster.....	B	14	25	2 1/2 x 2 1/2	2	4000	113	2-1/8	10 x 10	10	Ow Dy El	Own	Own
Junior Quad.....	C	18	25	2 x 2	4	4200	85	2-1/8	10 x 10	9	Rope	Own	Til
Super C.....	C	25	30	2 3/4 x 2 1/2	2	4500	95	2-1/8	10 x 13	10	Rope	Own	Own
Super C.....	C	25	30	2 3/4 x 2 1/2	2	4500	120	2-1/8	10 x 13	10	Ow Dy El	Own	Own
Racing Super C.....	C	27	30	2 3/4 x 2 1/2	2	5500	103	2-1/8	Opt	10	Rope	Own	Opt
Senior Quad.....	E	35	50	2 1/2 x 2 1/2	4	4500	120	2-1/8	11 x 13	16	Rope	Own	Til
Senior Quad.....	E	35	50	2 1/2 x 2 1/2	4	4500	149	2-1/8	11 x 13	16	Ow Dy El	Own	Til
Big Quad.....	F	40	60	2 3/4 x 2 1/2	4	4500	130	2-1/8	11 x 17	16	Rope	Own	Til
Big Quad.....	F	40	60	2 3/4 x 2 1/2	4	4500	156	2-1/8	11 x 17	16	Ow Dy El	Own	Opt
Four Sixty.....	F	45	60	2 3/4 x 2 1/2	4	4750	127	2-1/8	Opt	16	Rope	Own	Opt
Evinrude Division													
Lightwin.....	A	4	10	2 x 1 5/8	2	2700	38	2-1/8	8 3/4 x 9	2	Rope	Own Mag	Own
Foldlight.....	A	2 3/4	8	1 3/4 x 1 5/8	2	3200	29	3-1/8	8 1/2 x 8	2	Rope	Own Mag	Til
Fleetwin.....	A	7	14	2 1 x 2	2	4100	58	3-1/8	9 x 9	4 1/2	Rope	Own Mag	Til
Fastwin.....	B	14	20	2 3/8 x 2 1/4	2	4200	82	3-1/8	9 x 12	8	Rope	Own Mag	Til
Speeditwin.....	C	25	30	2 3/4 x 2 1/2	2	4500	95	2-1/8	10 x 13	10	Rope	Own Mag	Own
Speeditwin.....	C	25	30	2 3/4 x 2 1/2	2	4500	120	2-1/8	10 x 13	10	Ow Dy El	Own	Own
Racing Speeditwin.....	C	27	30	2 3/4 x 2 1/2	2	5500	103	2-1/8	Opt	10	Opt	Own Mag	Opt
Speeditwin.....	C	22	30	2 3/4 x 2 1/2	2	4200	124	3-1/8	10 1/2 x 11	10	Ow Dy El	Own	Til
Speeditwin.....	C	20	30	2 3/4 x 2 1/2	2	4200	98	3-1/8	10 x 13	10	Rope	Own Mag	Til
Snort Four.....	C	18	25	2 x 2	4	4200	85	2-1/8	10 x 10	9	Rope	Own Mag	Til
Speedifour.....	E	35	50	2 1/2 x 2 1/2	4	4500	120	2-1/8	11 x 13	16	Rope	Own Mag	Til
Speedifour.....	E	35	50	2 1/2 x 2 1/2	4	4500	149	2-1/8	11 x 13	16	Ow Dy El	Own	Til
Big Four.....	F	40	60	2 3/4 x 2 1/2	4	4500	130	2-1/8	11 x 17	16	Rope	Own Mag	Til
Big Four.....	F	40	60	2 3/4 x 2 1/2	4	4500	156	2-1/8	11 x 17	16	Ow Dy El	Own	Til
Four-Sixty.....	F	45	60	2 3/4 x 2 1/2	4	4750	127	2-1/8	Opt	16	Rope	Own	Opt
Lockwood Division													
Foldlight.....	A	2 3/4	8	1 3/4 x 1 5/8	2	3200	29	3-1/8	8 1/2 x 8	2	Rope	Own Mag	Til
Ace.....	A	7	14	2 1 x 2	2	4500	55	3-1/8	9 1/4 x 8 1/2	4 1/2	Rope	Ei Mag	Own
Chief.....	B	14	20	2 3/8 x 2 1/4	2	4500	75	3-1/8	9 x 14	8	Rope	Ei Mag	Own
Four-Sixty.....	F	45	60	2 3/4 x 2 1/2	4	4750	127	2-1/8	Opt	16	Rope	Own	Opt
Chief.....	B	14	20	2 3/8 x 2 1/4	2	4500	100	3-1/8	9 x 14	8	Ow Dy	Own	Til

† Four cycle—pressure lubrication.

*Key to Symbols.

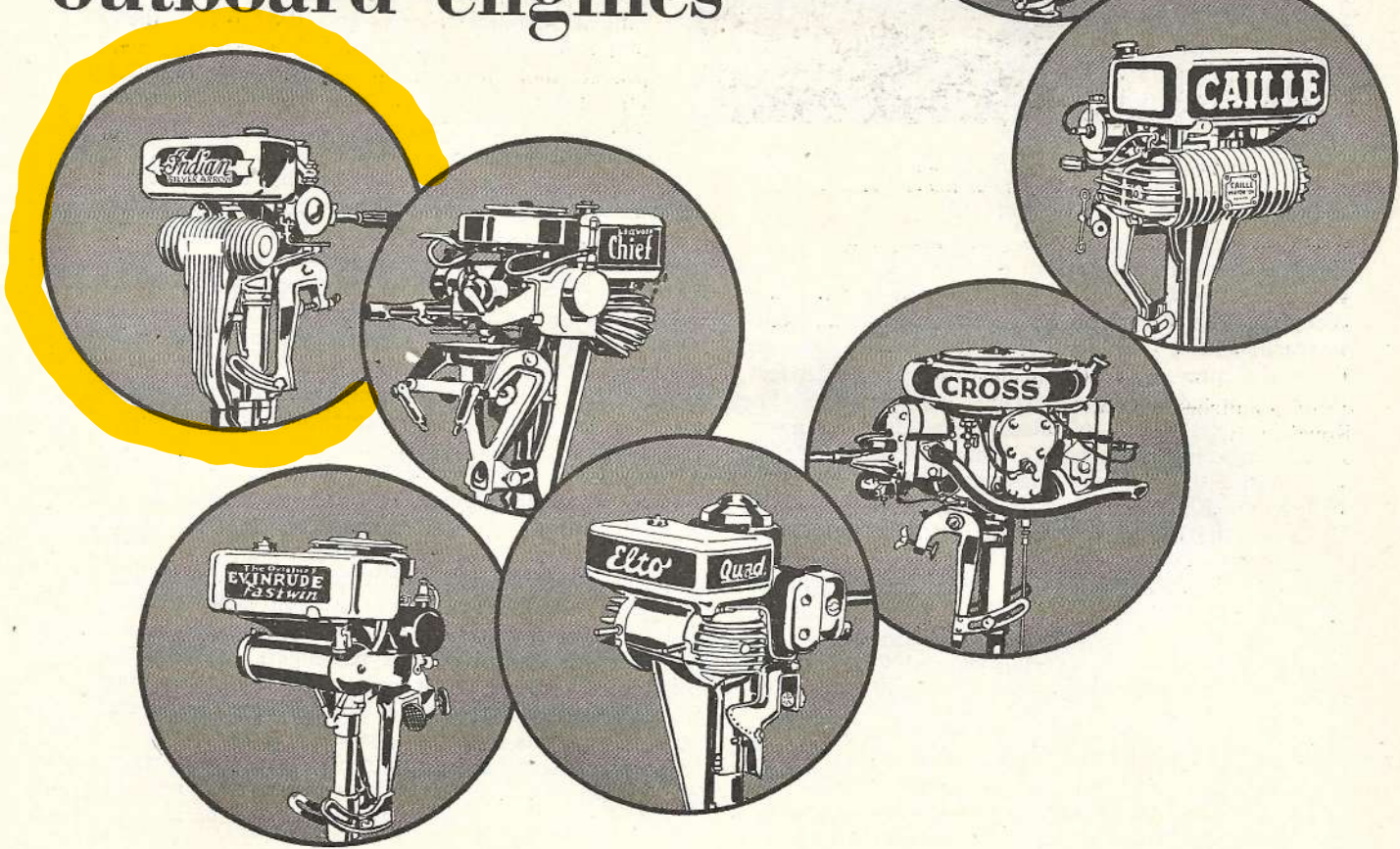
Bo—Bosch
Ch—Champion
Dy—Dyneto
El—Electric

Ei—Eisemann
Fl—Flywheel
Ow—Owen
Pr—Pressure

Se—Scintilla
Til—Tillotson
Zen—Zenith
AK—Atwater Kent

FEBRUARY, 1931

Mobiloil recommended on 92% of all outboard engines



92% of all outboard engines leave the factories with Mobiloil recommendations! Caille, Cross, Elto, Evinrude, Indian, Johnson, Lockwood — all the leading builders.

Who knows better than the builders what kind of oil is best for your engine? They want you to get all the service that's built

into it. Correct lubrication is the one big factor in efficient engine performance. That's why they tell you the proper grade to use.

Mobiloil is specially refined to resist the extreme heat and velocity stresses of high-speed operation. It stands up better, minimizes wear, and prevents

excess carbon and gumming. Over the last several years the great majority of official American and foreign outboard records were made with Mobiloil. You will find Mobiloil on sale everywhere.

VACUUM OIL COMPANY
Makers of high-quality lubricants for all types of Marine Engines



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Mobiloil



Modern business demands speed . . . accuracy . . . efficiency. To any kind of business C. J. O'Brien brings the most modern and thorough methods in the printing of catalogs, booklets and color work of the highest degree. Your inquiry will be welcomed and estimates gladly given.

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392-400 LAFAYETTE ST.
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