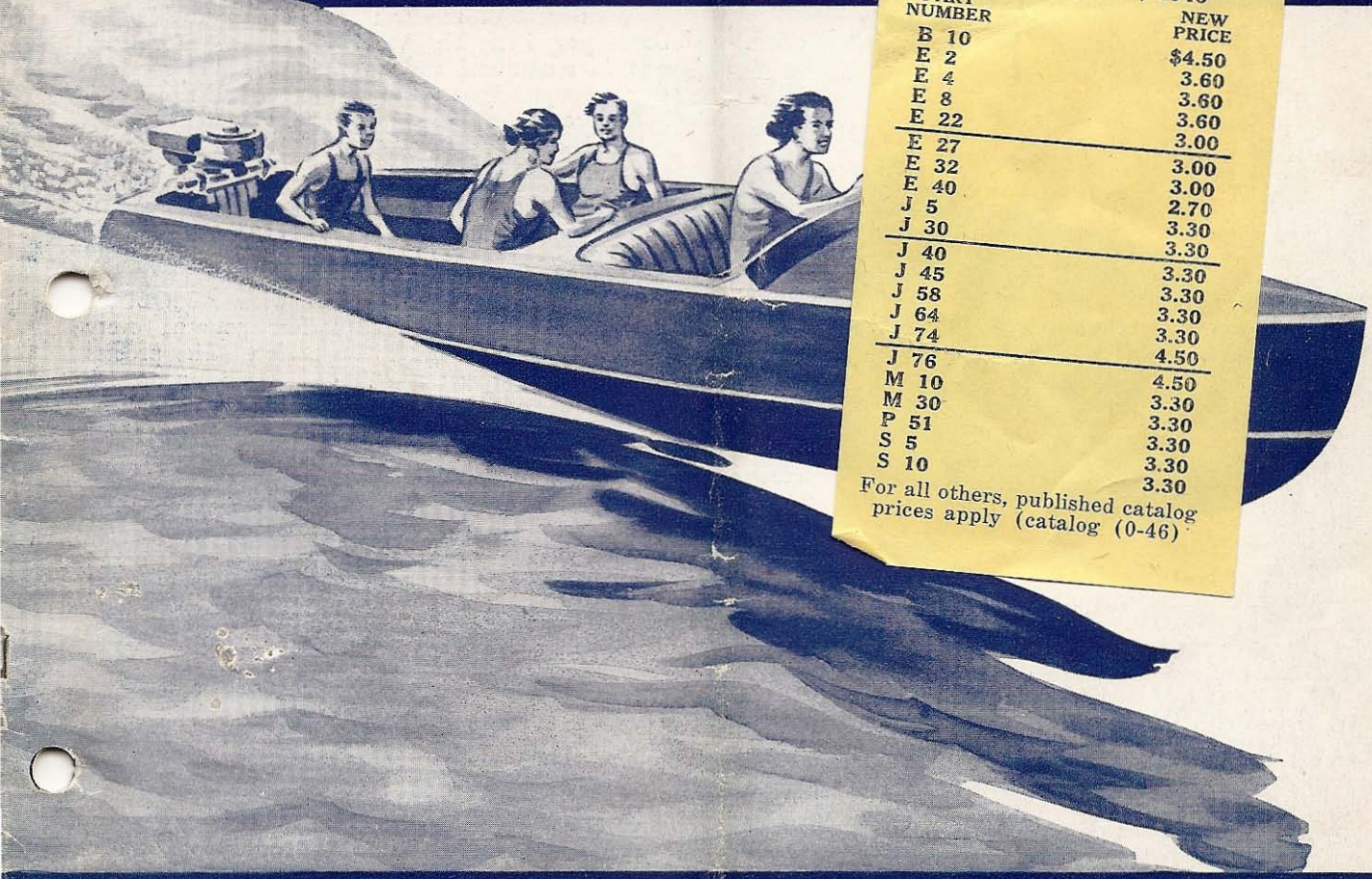
MICHIGAN PROPELLERS

MACHINED DITCH

# The Key to Greater Boating



## OUTBOARD PROPELLER PRICE CHANGES

Effective April 16, 1946

| PART NUMBER | NEW PRICE |
|---|---|
| B 10 | $4.50 |
| E 2 | 3.60 |
| E 4 | 3.60 |
| E 8 | 3.60 |
| E 22 | 3.00 |
| E 27 | 3.00 |
| E 32 | 3.00 |
| E 40 | 2.70 |
| J 5 | 3.30 |
| J 30 | 3.30 |
| J 40 | 3.30 |
| J 45 | 3.30 |
| J 58 | 3.30 |
| J 64 | 3.30 |
| J 74 | 4.50 |
| J 76 | 4.50 |
| M 10 | 3.30 |
| M 30 | 3.30 |
| P 51 | 3.30 |
| S 5 | 3.30 |
| S 10 | 3.30 |

For all others, published catalog prices apply (catalog (0-46)

**OUTBOARD CATALOG No. 0-46 MICHIGAN WHEEL CO. Grand Rapids, Mich.**

# *The* KEY TO GREATER BOATING SATISFACTION

The contents of this booklet constitute an almost infallible key wherewith nearly every owner of an outboard motor has quick and easy access to achieving far more enjoyment from his outboard motor and boat — smoother and better performance, more speed, greater carrying capacity, economy of fuel and upkeep, and even additional safety.

To say that all this may be accomplished by simply substituting a MICHIGAN MACHINED-PITCH propeller for the one which came with your motor, or the one you are now using, may seem like a far cry at this point. Yet it is a sound, indisputable fact proven beyond the shadow of doubt, times without number, that these results are almost invariably accomplished when a MICHIGAN propeller, scientifically selected to coordinate the motor, boat and conditions of service, is used.

The reasons for the vast superiority of MICHIGAN MACHINED-PITCH propellers over any other the market affords will be apparent from the description which follows. The means of quickly and easily ascertaining the specific model and size to give best results with your motor and boat, under the conditions in which you will use it, is to be found in the Propeller Selector Chart on pages 8 to 13. The recommendations it contains are soundly based on engineering facts and over 40 years of experience. They have been proven time and again by thousands of motor owners.

With these facts at hand, and a reasonable accurate analysis of your boat and conditions of service, you have the key to a whale of a lot more pleasure from your outboard motor; particularly if you are the owner of one of the medium or larger motors.

Note: While the accuracy of the data in our Propeller Selector Chart in our opinion, is incontestable, variations in hull design, load conditions, fuels and owners' own analysis of his individual unit make it impossible for us to assume responsibility for results obtained. These will be in direct relation to the care and accuracy of the individual's analysis of his boat and service conditions.

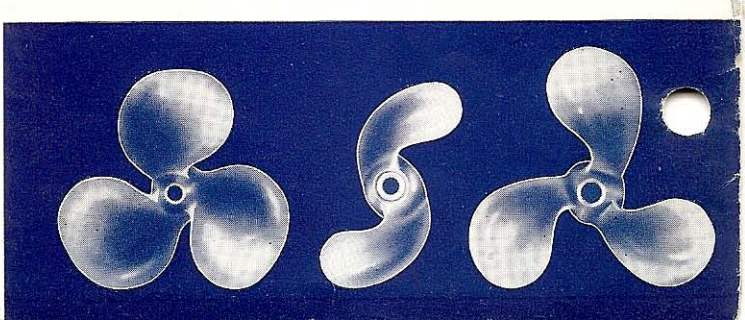
## WHY MICHIGAN MACHINED-PITCH PROPELLERS ARE OUTSTANDING PERFORMERS

In any propeller there are four prime factors essential to perfect functioning. These are, Accuracy, Design, Size and the material of which it is made. Imperfection of any one of these factors makes for a poorly performing propeller. Through its patented and exclusive MACHINED-PITCH process of manufacture, which excludes the human variable element, and the development of special alloys these factors are unerringly controlled in the production of MICHIGAN propellers.

## *The* FACTOR of ACCURACY

In 1930 Michigan astounded the marine field in its announcement of the first MACHINED-PITCH inboard propeller. The improvement in performance was so sensational and so enthusiastically received that subsequently we adapted this method to all outboard propellers of our manufacture, as well.

The basis of the MACHINED-PITCH method of propeller manufacture was the development of the Helical Planing Machine (see illustration). These machines, patented and exclusively a Michigan development, as we have previously stated, eliminate the human element of error or inaccuracy. It carves the original propeller patterns with ABSOLUTE ACCURACY. From these perfect patterns every casting made is bound to be perfect. The process that guarantees perfect accuracy in Michigan Propellers goes much further, however, by applying the precise and undeviating accuracy of the helical planer to every step of the production. This is done through the medium of PITCH BLOCKS having true screw surfaces precisely machined by the helical planer, upon which Michigan propellers are checked through every step of manufacture. For example: Castings are bored on Pitch Blocks, and thus chucked to the pitch of the blade, perfect assurance is had that the shaft hole

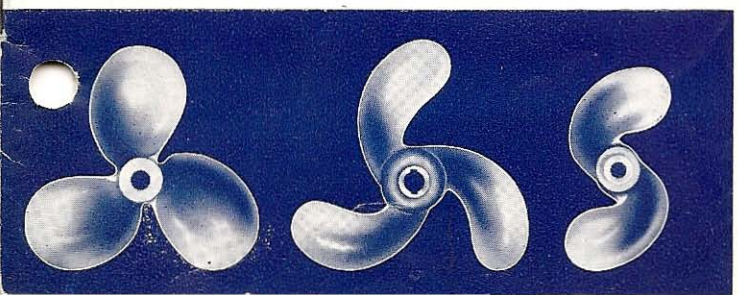


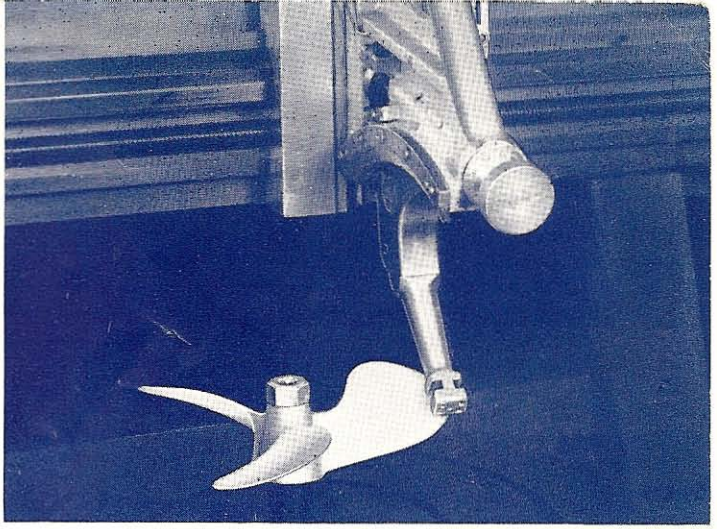
will be perfectly aligned to the pitch. A perfect casting otherwise bored can be out of center and the blades badly out of "track" which results in turbulence of slip stream, loss of power and speed together with excessive vibration. There simply is no possibility of a Michigan Propeller being bored out of true.

After being machined for the shaft, the casting is carefully checked throughout for balance, the blade extremities are brought to a fine feather-edge and it is buffed and polished to mirror-like surfaces. During these operations it is checked again and again on Pitch Blocks — similar to the Pitch Blocks on which it was bored to insure retention accuracy of pitch, blade spacing and layout; for even the slightest variation of these factors can result in excessive vibration and poor performance. Thus it will be seen that absolute accuracy of all manufacturing factors are insured in Michigan as in no other propellers. (For a complete description of the MACHINED-PITCH process write for our inboard propeller catalog.)

## *The* FACTOR *of* DESIGN

Michigan's entire engineering staff, backed by over 40 years of experience, is devoted exclusively to making the finest propellers money will buy. And since we are propeller specialists with no distracting sidelines, it is only natural that Michigan should be recognized as the outstanding leaders in the propeller field. This is duly attested to by the fact that we are not only consulted by nearly every manufacturer of outboard motors in relation to propellers for new motors as brought out, but also by the fact that we provide pilot or test propellers. What this all adds up to is that Michigan design is tops — that it provides a generous margin of extra speed, power, durability and smoothness of operation beyond compare. Its designing skill is further attested to by the phenominal success of our "AQUA-MASTER" propellers, of which more will be said later, and the fact that in the highly competitive outboard racing field, Michigan wheels have consistently driven in the majority of winners, and in fact, in some classes such as "A", "B" and "M" have held *every* record and important win for many years.

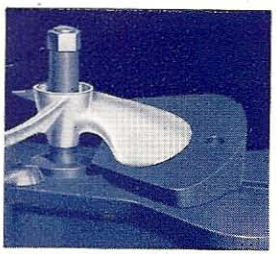




*The Helical Planer Machining a Michigan Propeller Pattern*

*Boring a propeller by the Pitch Block Method*

*Checking a propeller on a Pitch Block*



**NO OTHER PROPELLERS ARE MADE THIS WAY**

## *The* FACTOR *of* SIZE

When the outboard motor you buy comes from the dealer's shelf, it is fitted with a propeller that can be only an average satisfactory size and design for the many types of boats on which it can be used. If it is a real small motor the chances are that little can be done in a propeller change to improve results. This is especially true if it is operated on rowboats or other displacement boats where speeds are limited regardless of propeller or power applied. For the medium and large sized motors, however, frequently undreamed of improvements are possible by intelligently coordinating the proper Michigan propeller with the type of boat and service desired. Many times actual boat speed improvements of 4, 6 or even 8 miles per hour have thus been attained.

The Propeller Selector pages following will be found of real aid to every owner in determining whether he can obtain improvements with his outfit. Where a size has been suggested other than that which is now being used, he can be pretty certain that a change of propellers will be productive of decidedly worthwhile results. All recommendations are based on turning the motor at or very close to the engine manufacturer's r.p.m. rating, at full throttle. We do not obtain the results that we do from our propellers through permitting excessive motor speed!

Where requested, individual recommendations will be provided by our engineering department, and analysis forms are available for you to fill out. Simply write for "Outboard Analysis Form."

## *The* FACTOR *of* MATERIAL

Due to the weight factor we recommend only aluminum alloy for propellers for the very small outboard motors. Here Michigan's cast pure aluminum stands head and shoulders in quality above the die cast aluminum used in most conventional propellers. More costly to manufacture, these propellers necessarily sometimes sell at a higher price, but considering the important function of the propeller and the great affect it has on your boating pleasure, the Michigan aluminum propeller is well worth the small difference in cost.

For heavier motors Michigan propellers are all cast of "MICHALLOY," a special propeller bronze, an exclusive Michigan development which is far higher in tensile strength than ordinary bronze, is readily repairable, and is far more resistant to fresh and salt water corrosion. This is the same outstanding alloy used in our famous inboard propellers.



# HELPFUL HINTS ON HOW TO GET THE MOST FROM YOUR OUTBOARD MOTOR AND BOAT

### FIRST FACTOR TO CONSIDER

An outboard owner should decide first of all just what he desires from his boat — the extreme speed possible, to the exclusion of other features, or a shade less speed with acceleration, load carrying with minimum loss of speed and handling qualities that make it seem an entirely different outfit. When the last bit of speed, such as is desired for racing, is not required, the latter features are highly desirable and can usually be secured with a propeller that is only a shade less than the fastest.

### BOATS AND ENGINE R. P. M.

All dimensions, features and characteristics of a boat greatly influence engine R.P.M. and this is best illustrated by experience in our recent test work. In the test of one popular model engine using the equipment propeller, engine R.P.M. upon two boats (each of different makes), was 4900. However, upon all other of many boats used the R.P.M. ranged from 4000 to 4300. The many factors making up the "character" of a boat makes classification impossible but this example will illustrate our contention that "with most outboard engines one propeller size cannot possibly meet the varying conditions encountered in actual use."

### TRANSOM HEIGHTS

Generally speaking, upon boats of proper size, design and good turn of speed for the size engine involved (and reference here is not to racing jobs), the greatest acceleration and speed from any design propeller can be obtained with the wheel running up close to the surface of the water. This is particularly true of many of Michigan's specially designed wheels which can be run nearer the surface of the water without slippage.

There are numerous reasons for running a motor as high on the boat as possible.

FIRST, you can navigate very shallow water with more safety.

SECOND, it is almost impossible to turn over a boat with the propeller operating close to the bottom of the boat. When you throw a boat into a quick sharp turn, it goes into a bank (except flat and near flat bottom boats) and long before this bank becomes dangerous, the propeller is lifted out to

# SELECT YOUR PROPELLER

the slipping point and the boat will right itself even if you hold the throttle wide open (which, of course, is not the correct thing to do). On some of the new extremely wide-beam boats, 58" or more, the motor will have to be run some deeper in the water than we would recommend for boats 56" and under. This is due to the wide boat lifting the propeller out too quick and thus really hindering turning ability.

THIRD, your motor can turn the same propeller 100 to 200 R.P.M. more by only raising the motor one inch, if it happens to be running one inch too deep (and most are). This is caused by having to pull one inch more lower unit through the water plus forcing the propeller to run down in solid heavy water instead of up in loose water.

FOURTH, and most important, is Back Pressure. Since the advent of the underwater exhaust, back pressure has been a big problem and the running of the cavitation plate, from which the exhaust is released, as near the surface as possible has given the best answer in all tests that have been made. And with the new design, low pitch, large area Michigan Propellers you are able to run the cavitation plate anywhere from ½" below the keel to right up level with the bottom of the keel, and on some jobs higher, *giving you a positive easy carburetor adjustment on an easier starting motor — a cooler running motor — a smoother running motor — a safe outfit — and a positive increase in speed of 2 M.P.H. and up, and in many cases a lot up.*

The best actual height of transom depends upon the motor involved. The safest guide is to carry the cavitation plate ¼" below the keel or where some of the keel is cut off the motor can still be brought up to ¼" of keel after cutting. For example, on the Johnson PO and P65 series we have consistently used 17½" transom (in some cases as high as 18½" without slippage). With the Evinrude Speeditwin and Speedifour, a 16½" transom. At these heights you will not get slippage until you pass a 58" beam. On these wide beams somewhat lower transoms will be necessary. In our opinion most standard outboard boats have transoms too low for any motor above 5 H.P.

## BACK PRESSURE

This is supplemental to back pressure discussion above. Another way of relieving back pressure and getting better performance at both high and low speeds, especially in small trolling motors, together with better starting and much easier carburetor adjustments in both large and small motors, is to drill a row of relief holes in the exhaust, beginning just below where top of boat transom is level with the exhaust pipe. Drill holes one half to one inch apart from just below top of transom down to the cavitation plate, starting with ⅛" holes at the top and increasing size as you go down to 3/16" or ¼", or drill ⅛" holes all the way down. This will improve the motor in every way and if the relief holes are kept below the top of the transom any difference in exhaust noises will be extremely small. Even in the most particular locality, this exhaust relief will not be noticeable enough to be even questioned, *unless you drill too large holes.*

## YOUR BOAT

Now comes the question of your boat in general. In event of a deep keel, you can cut the keel down to about ½" at the transom and taper it up to original height about two feet forward of transom without changing the performance in any manner. This will allow you to raise the motor another inch or so giving additional speed and performance.

Most of the later design Michigan Propellers are intended to give maximum results on a ***straight lined boat bottom.*** Many boats today have or develop a hook in the bottom or an inverted curve upward just forward of the transom. This hook is intended to give the boat easy planing and a level ride with a small motor, let us say, under 16 H. P. This curve is not necessary for a level ride and is very detrimental with larger motors, except where there is a very narrow beam. The faster you drive it the more and more the nose of the boat is pulled down in the water causing it to push water and dive through waves and an extreme hook will cause a boat to gallop at high speed.

Also, this hook will develop in a new or old boat that was originally straight. It is caused by warpage, swelling of transom, placing on trailer or hoisting with load being taken one or more feet forward of the transom and from the natural pull of the motor which pulls out at the top of transom causing the knee attached to transom to lift upward on bottom of boat. This strain, naturally, is much greater with the larger and more powerful motors and many boats on which the larger motors are used are not sufficiently rigid to resist this "pull" and the hook described above is constantly present under operation. In some instances, a flexible bottom boat will check straight but when running the bottom is hooked or lifted.

If you have a boat with which a series of propellers will not show a reasonable improvement in speed or if you want top performance and riding qualities, turn your boat upside-down, new or old and check the keel line and bottom lines with a straightedge. If you find it out of line, put in one-by-six pieces across boat under front and back of rear seat anchored to sides of boat seat rail and put permanent wedges under these one-by-sixes until you have forced the bottom in line and it will stay that way. If bottom happens to be out of line the opposite way, pull the bottom up until in line and anchor to the one-by-sixes, then put her on the water and nine times out of ten, you will be repaid more than you even dream of for your simple job. Then and then only will you be able to get the benefit of a propeller designed to run on a straight lined boat bottom.

## INFLUENCE OF WEIGHT DISTRIBUTION

Most outboard boats are sensitive to weight distribution. Again, an example is the best explanation: in the test of an Evinrude Speeditwin on a 1940 model 14 ft. by 54 in. boat with a 240 pound man driving and a 160 pound man in the front seat, the speed was one full M.P.H. faster than with the 160 pound man driving and the 240 pound man in front. This is typical of the result of "putting down" the nose of the boat.

**from the Propeller Chart on Pages 8 to 13**

***What's a vacation or fishing trip without the use of your motor — carry a spare propeller.***

## TWO BLADE vs. THREE BLADE PROPELLERS

Generally speaking, with engines of sufficient power to plane a good boat, an owner can in many cases expect to obtain highest possible speed with a two blade wheel, if his outfit is in shape for peak performance. However, in most of these cases, the extra speed from the two blade wheel (excepting on a hydroplane) is very small and for the average owner does not offset the inherent greater smoothness of the three blade wheel and greater load carrying capacity, etc. Also, it is true in so many cases that it is easier to obtain a proper propeller "fit" with a three blade wheel.

Some two blade wheels do offer some difficulties with certain engines, such as proper cooling with some Johnson outboard motors. For example on all Johnson 24 and 22½ H.P. motors from P50 up to and including all PO models, the 10 x 14 two blade Michigan wheel (J1197) is the fastest wheel available. However, this wheel cannot be used for displacement boats or for slow speed operation, due to the limited diameter and area retarding water circulation. Hundreds of these 10 x 14 two blades have been used with splendid results but close to full engine speed must be maintained for proper water circulation.

In contrast to this, however, some two blades, such as the Michigan JW28 for the Johnson KA, not only give maximum and improved efficiencies but also offer no problem in relation to cooling either at high or low speeds. The blade design plus its operation closer to the water pick up maintains a pressure that is ample compared to any three blade wheel.

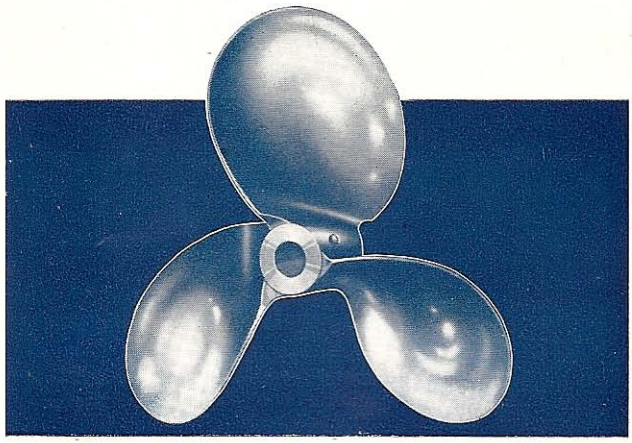
## SPARK AND THROTTLE SETTING

If you, like many owners, are trying to bring your outfit to peak performance, do not forget that in installing a new propeller or working on your boat, the correct spark lev r setting and carburetor setting must be found. For example if a change is made resulting in 200 or 300 more R.P.M. this will allow you to run more spark advance which, if not set correctly, will not show you the results you should get.

## CARBURETOR ADJUSTMENT

This subject, although only indirectly related to propellers, is so important it deserves emphasis. The tendency of many outboard owners is to adjust the carburetor to the leanest point — a very definite fallacy, for the leaner the adjustment, the less lubrication there is, and it is safe to say that many motors have been burned out for this very reason. Often, an owner tries to lean up a carburetor to eliminate smoking when excessive oil is used, or an oil that smokes easily (there is much difference in oils in this respect).

Always adjust your carburetor to the rich point. It is not advisable to attempt a final adjustment until the motor has run 100 yards or more wide open (in fact, it is impossible until then). The reason is that a two cycle engine will overfill the crankcase every time you slow it down or start it off and it takes 100 yards or more to clean the crankcase to where correct adjustment can be obtained.



# *The* MICHIGAN "AQUA-MASTER" *The Propeller of Propellers for Larger Outboard Motors*

A few years ago Michigan introduced the Outboard version of our highly popular inboard "AQUA-MASTER." It immediately became recognized as the most sensationally performing propeller ever offered for service motors. In the following pages many new "AQUA-MASTERS" will now be found listed, and the range has been expanded to include motors down to the 6 h.p. jobs of some makes. Any owner of a motor of this size using a well designed runabout or utility certainly owes it to himself to own one of these propellers.

The prime reasons for this statement are: Better boat speeds, smoother performance and more flexible operation under varying load conditions. Every "AQUA-MASTER" carries Michigan's guarantee of complete satisfaction. If on trial it does not thoroughly come up to your expectations, if it doesn't give you far better boating performance, you are entitled to return it to the dealer from whom you purchased it for full refund or credit on a standard style propeller. No other outboard propeller in the world carries such a guarantee!

In addition to the above there are several other reasons for preferring the "AQUA-MASTER." They are more sturdy in design and construction. Their design is practically full weedless and it tends to deflect or ward off drift and debris with less damage to the blades than would be suffered by the conventional propeller. Furthermore, their usual shorter diameter and greater blade width enables their use closer to the surface (see preceeding paragraphs regarding Transom Heights and Back Pressure on page 5.

***No propeller will perform smoothly, efficiently if bent or thrown out of balance. Own a spare to use while damaged wheel is reconditioned.***

# Typical of What Others Say About The "AQUA-MASTER"

### ALL TESTS SHOW MORE SPEED, SMOOTHER PERFORMANCE

We are pleased to advise you that we found your Michigan Aqua-Master to be a prime factor in stepping up outboard motor boat performance. In every case a noticeable increase of speed and carrying capacity was gained by installation of the Aqua-Master propeller . . . a higher degree of smooth motor performance. We believe that your Aqua-Master is generally accepted in the outboard field as the peak of perfection.

Schuler Marine Sales — Russels Point, Ohio

### WITHOUT EXCEPTION USERS INCREASED BOAT SPEEDS 2 TO 5 MILES PER HOUR

Time after time this past season we sold these AQUA-MASTERS with a clear understanding that they might be returned if there was not a definite improvement in boat speed. Without exception these propellers remained sold and we received reports from users that they were receiving increased boat speed ranging from two to five miles per hour, depending on the outfit.

Oluf Mikkelsen — New York City

### LESS LOSS IN SPEED PER PASSENGER ADDED

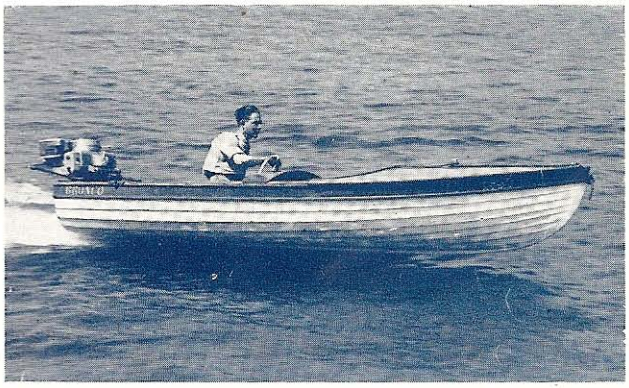
We learned that our losses per passenger added was two and one-half to three and one-half miles per hour with 22 H.P. and 33 H.P. motors with two blade propellers properly matched to the job; and then came the surprise — we found our losses with the three blade Aqua-Masters properly matched to the job to be one mile per hour and less. Furthermore, we had much better boat control with the three blade Aqua-Master . . . If you have checked the number of propellers we sold this year you will have already gotten the answer.

Everett Motor Company — Tulsa, Oklahoma

### SPEED INCREASE AND PERFORMANCE BEYOND EXPECTATIONS

Regarding the new Aqua-Master outboard propellers we wish to advise that our customers that purchased the Aqua-Master propellers have told us they received an increase in speed and performance beyond their expectations . . . all of our best performing outboards are equipped with the Aqua-Master.

Jenkins Marine Motor Sales — Baltimore, Md.



*Above: Thompson Sea Skiff and Evinrude Speedi-four equipped with AQUA-MASTER propeller. Photo courtesy of Oluf Mikkelsen.*

*Other AQUA-MASTER equipped boats below.*

# MICHIGAN PROPELLER SELECTOR — FOR ELTO MOTORS

| MOTOR | MODEL NO. | YEAR | Michigan Equiv. Original Propeller | Row Boat | Kayak and Car-Top | RUNABOUT 11'-14' | | RUNABOUT 14'-17' | | Racing Hydro. | Outboard Cruiser, Work Boat, Etc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 150 to 350 lbs.* | 350 to 600 lbs.* | 150 to 350 lbs.* | 350 to 600 lbs.* | | |
| Ace | 4145, 4205 | 1936-37 | E22 | E22 | E22 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4256, 4301, 4329, 4351, 4352 | 1938-39-40-41 | E27 | E27 | E27 | ..... | ..... | ..... | ..... | ..... | ..... |
| Big Quad | 800, 820 | 1931-32 | E281 | ..... | ..... | AM61 | AM61 | AM61 | AM60 | E283 | E277 |
| Cub | 4264 | 1939-40-41 | E2 | E2 | E2 | ..... | ..... | ..... | ..... | ..... | ..... |
| Fisherman | 413, 4018, 4095 | 1932-33-34-35 | E296 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... |
| Fleetwin | 4038 | 1934 | E291 | ..... | ..... | AM80 | AM80 | AM80 | AM81 | E294 | E293 |
| | 4335, 4336 | 1939-40-41 | EW40 | ..... | ..... | AM80 | AM80 | AM80 | AM81 | E294 | E293 |
| Foldlight | 162, 404 | 1930-31 | B10 | B10 | B10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Handifour | 4219 | 1937 | E522 | ..... | ..... | E522 | E522 | E522 | ..... | ..... | ..... |
| Handitwin | 4158, 4212, 4261 | 1936-37-38 | E32 | E32 | E32 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4307, 4332, 4357, 4358 | 1939-40-41 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Junior Quad | 900 | 1931 | E251 | ..... | ..... | AM10 | AM10 | AM11 | E248 | E258 | E248 |
| | 914, 924 | 1932-33 | E304 | ..... | ..... | AM42 | AM41 | AM45 | AM45 | E309 | E365 |
| Lightweight | 90000, 309 | 1929-30 | E232 | E232 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | 401, 411 | 1931-32 | E242 | E242 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | 444 | 1933 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lightweight Special | 360 | 1931 | E242 | E242 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lightwin | 4020 | 1934 | E512 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4099 | 1935 | E322 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4313, 4314 | 1939-40-41 | E196 | E196 | E198 | AM121 | AM120 | AM120 | E199 | E198 | ..... |
| Lightwin Imperial | 4032 | 1934 | E512 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4106 | 1935 | E322 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lightfour Imperial | 4044 | 1934 | E512 | ..... | ..... | E512 | E512 | E512 | E512 | ..... | ..... |
| Pal | 4203, 4253, 4266 | 1937-38-39-1940-41 | E40 | E40 | E40 | ..... | ..... | ..... | ..... | ..... | ..... |
| Quad | 70000-75000 | 1928 | E211 | ..... | ..... | E211 | E211 | E214 | E214 | E216 | E214 |
| Service A | 424 | 1932-33 | E291 | ..... | ..... | AM80 | AM80 | AM80 | AM81 | E294 | E293 |
| Service Speedster | 60000-69999 | 1928 | E201 | ..... | ..... | E201 | E201 | E201 | E204 | E206 | ..... |
| | 80000H-89999H, 300, 348 | 1929 | | | | | | | | | |
| Service Speedster Hi Speed | 302 | 1930 | E201 | ..... | ..... | E201 | E201 | E201 | E204 | E206 | ..... |
| Special Speedster | 340, 905 | 1929-31-32-33 | E246 | ..... | ..... | E246 | E246 | E246 | E246 | E249 | ..... |
| Senior Speedster | 310 | 1930-31-32 | E251 | ..... | ..... | AM10 | AM10 | AM11 | E248 | E258 | E248 |
| Service Twin | 4161, 4163, 4151 | 1936 | E296 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4216, 4229 | 1937 | E296 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... |
| Speeditwin | 6004, 6015, 6018 | 1934-35-36 | E261 | ..... | ..... | AM50 | AM50 | AM50 | AM51 | E267 | E263 |
| | 6034 | 1938 | EW2 | ..... | ..... | AM50 | AM50 | AM50 | AM51 | E267 | E263 |
| Speediquad | 7004, 7013 | 1934-35 | E271 | ..... | ..... | AM62 | AM62 | AM61 | AM60 | E283 | E277 |
| Senior Quad | 314, 700, 721, 732 | 1930-33 | E272 | ..... | ..... | AM62 | AM62 | AM61 | AM60 | E283 | E277 |
| Sportfour | 9004, 9013 | 1934-35 | E360 | ..... | ..... | AM42 | AM41 | AM45 | AM45 | E309 | E365 |
| Super Single | 436, 4008, 4010 | 1933-34 | E237 | E237 | E237 | ..... | ..... | ..... | ..... | ..... | ..... |
| Super "A" | 422, 456 | 1932-33 | E291 | ..... | ..... | AM80 | AM80 | AM80 | AM81 | E294 | E293 |
| Super "C" | 605, 624, 638 | 1931-32-33 | E261 | ..... | ..... | AM50 | AM50 | AM50 | AM51 | E267 | E263 |

*Weights indicated are passenger and equipment loads exclusive of motor.

# MICHIGAN PROPELLER SELECTOR — FOR EVINRUDE MOTORS

| MOTOR | MODEL NO. | YEAR | Michigan Equiv. Original Propeller | Row Boat | Kayak and Car-Top | RUNABOUT 11'-14' 150 to 350 lbs.* | RUNABOUT 11'-14' 350 to 600 lbs.* | RUNABOUT 14'-17' 150 to 350 lbs.* | RUNABOUT 14'-17' 350 to 600 lbs.* | Racing Hydro. | Outboard Cruiser, Work Boat, Etc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Big Four | 802,814 | 1931-32 | E281 | ..... | ..... | AM61 | AM61 | AM60 | AM60 | E283 | E277 |
| Fastwin | R-RS | 1927 | V836 | V836 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | H-1H-13H | 1928-29 | V821 | ..... | ..... | V821 | V821 | V823 | V823 | V825 | ..... |
| Fisherman | 4016, 4093 | 1934-35 | E296 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4227, 4267 | 1937-38 | | | | | | | | | |
| | 4309 | 1939 | E196 | E196 | F198 | AM121 | AM120 | AM120 | E199 | E198 | ..... |
| Fleetwin | F, 1F, 4F | 1928-29 | V818 | V818 | ..... | V818 | V818 | V818 | V818 | ..... | ..... |
| | 418, 450, 4034 | 1932, 33, 34 | E291 | ..... | ..... | AM80 | AM80 | AM80 | AM81 | E294 | E293 |
| Foldlight | 162, 403 | 1930-31 | B10 | B10 | B10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Lightfour | 4231, 4271, 4315, 4316, 4317, 4322, 4323, 4324, 4375-7 | 1937-38-39-1940-41 | E342 | ..... | ..... | AM70 | AM71 | AM71 | E446 | E346 | E446 |
| Lightfour Imperial | 4042 | 1934 | E512 | ..... | ..... | E512 | E512 | E512 | E513 | ..... | E513 |
| | 4111-4178 | 1935-36 | E342 | ..... | ..... | AM70 | AM71 | AM71 | E446 | E346 | E446 |
| Lightwin | 402,407 | 1931-32 | E242 | E242 | E242 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 442, 4020 | 1933-34 | E296 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4097, 4153 | 1935-36 | E322 | E322 | E322 | E322 | ..... | ..... | ..... | ..... | ..... |
| | 4221, 4289 | 1937-38 | E422 | E422 | E422 | E422 | ..... | ..... | ..... | ..... | ..... |
| Lightwin Imperial | 4102, 4165 | 1935-36 | E332 | E332 | E332 | E332 | ..... | ..... | ..... | ..... | ..... |
| Mate | 4263 | 1939-40-41 | E2 | E2 | E2 | ..... | ..... | ..... | ..... | ..... | ..... |
| Ranger | 4252, 4265, 4334, 4406, 4407 | 1938-39-40-41 1946 | E40 | E40 | E40 | ..... | ..... | ..... | ..... | ..... | ..... |
| Scout | 4201 | 1937 | E40 | E40 | E40 | ..... | ..... | ..... | ..... | ..... | ..... |
| Speedifour | 704, 715 | 1931-32 | V861 | ..... | ..... | AM150 | AM150 | AM150 | V851 | V862 | V853 |
| | 728, 7022 | 1932-37 | E271 | ..... | ..... | AM62 | AM62 | AM61 | AM60 | E283 | E277 |
| | 7026, 7031, 7032 | 1939-40-41 | EW6 | ..... | ..... | AM62 | AM62 | AM61 | AM60 | E283 | E277 |
| | | 1946 | EW20 | ..... | ..... | AM172 | AM172 | AM171 | AM170 | ..... | ..... |
| Speeditwin | U1-U5 | 1928 | V831 | ..... | ..... | V831 | V831 | V831 | V833 | ..... | V833 |
| | 1U,15U, 143, 156, 167 | 1929-30-31 | V841 | ..... | ..... | AM130 | AM131 | AM130 | V844 | V849 | V844 |
| | 601, 618 | 1931-32 | V851 | ..... | ..... | AM140 | AM141 | AM140 | V853 | V857 | V853 |
| | 634, 6008, 6011, 6041 | 1933-34-35 | E261 | ..... | ..... | AM50 | AM50 | AM50 | AM51 | E267 | E263 |
| | 6039 | 1939-40-41 | EW2 | ..... | ..... | AM50 | AM50 | AM50 | AM51 | E267 | E263 |
| | | 1946 | EW10 | ..... | ..... | AM160 | AM160 | AM160 | AM161 | ..... | ..... |
| Sportfour | 902 | 1931 | E251 | ..... | ..... | AM10 | AM10 | AM11 | E248 | E258 | E248 |
| | 912, 9200, 9000 | 1932-33-34 | E304 | ..... | ..... | AM42 | AM41 | AM45 | AM45 | E309 | E365 |
| | 9008, 9015, 9022 | 1935-36-37 | E360 | ..... | ..... | AM42 | AM41 | AM45 | AM45 | E363 | E365 |
| | 9026, 9031, 9035 | 1938-39-40-41 | EW7 | ..... | ..... | AM42 | AM41 | AM45 | AM45 | E363 | E365 |
| Sport Single | 432, 4000, 4002 | 1933-34 | E237 | E237 | E237 | ..... | ..... | ..... | ..... | ..... | ..... |
| Sportsman | 4091 | 1935 | E22 | E22 | E22 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4146, 4207 | 1936-37 | E27 | E27 | E27 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4285, 4296, 4346, 4364, 4365 | 1938-39-40 | | | | | | | | | |
| | 4366, 4367 | 1941-46 | E4 | E4 | E4 | ..... | ..... | ..... | ..... | ..... | ..... |
| Sportwin N-NS | 1500-10,000 | 1923-25 | | | | | | | | | |
| | 10500-14750 | 1926-27 | V128 | V128 | V128 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 183 | 1931 | | | | | | | | | |
| | 409, 476 | 1932-33 | E296 | E296 | E296 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4156, 4209 | 1936-37 | E32 | E32 | E32 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4287, 4303, 4353 | 1938-39-40 | E8 | E10 | E8 | ..... | ..... | ..... | ..... | ..... | ..... |
| | 4368, 4369, 4371, 4372 | 1941-1946 | | | | | | | | | |
| Sturditwin | 420 | 1932-33 | E291 | ..... | ..... | AM80 | AM80 | AM80 | AM81 | E294 | E293 |
| Weedless Fisherman | 4092, 4152, 4269, 4312 | 1935-36-38-39 | E313 | E313 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Zephyr | 4359, 4361, 4362, 4363, 4378, 4379, 4381, 4382, 4402, 4403, 4404, 4405 | 1940-41-46 | E196 | E196 | E196 | AM121 | AM121 | AM120 | E199 | E198 | ..... |

*Weights indicated are passenger and equipment loads exclusive of motor.

***Carry a spare propeller to slip on when a damaged propeller would otherwise spoil your boating pleasure.***

# MICHIGAN PROPELLER SELECTOR — FOR JOHNSON MOTORS

| MODEL NO. OF MOTOR | Johnson Propeller Part No. | Michigan Equivalent Original Propeller | Row Boat | Kayak and Car-Top | RUNABOUT 11'-14' 150 to 350 lbs.* | RUNABOUT 11'-14' 350 to 600 lbs.* | RUNABOUT 14'-17' 150 to 350 lbs.* | RUNABOUT 14'-17' 350 to 600 lbs.* | Racing Hydro. | Outboard Cruiser, Work Boat, Etc. |
|---|---|---|---|---|---|---|---|---|---|---|
| A Lightwin | 13-67 | J110 | J110 | M26 | J110 | J110 | M27 | | | |
| A 25 | 13-569 | J112 | J112 | J110 | J112 | J112 | | | | |
| A 35, 45 | 13-378 | J114 | J114 | J114 | J114 | J114 | | | | |
| A 50, 65, 70, 75, 80, AA 37 | 25-73 | J140 | J141 | J141 | J141 | J141 | J140 | J140 | | |
| AB 25 | 13-623 | J113 | J112 | J110 | J112 | J112 | | | | |
| AT 39, 10 | 41-279 | J14 | J17 | J18 | J18 | J17 | J17 | | | |
| BN Lightwin | 13-67 | J110 | J110 | M26 | J110 | J110 | M27 | | | |
| DS 37, 38 | 41-277 | J10 | J10 | J10 | | | | | | |
| DT 37, 38, 39, 10 | 41-279 | J14 | J17 | J18 | J18 | J17 | J17 | | | |
| F 70 | 38-64 | J80 | J80 | J80 | | | | | | |
| F 75 | 37-159 | J84 | J84 | J84 | | | | | | |
| HA 39, 10 | 43-260 | J30 | J30 | J30 | | | | | | |
| HA 15 | 300-034 | J40 | J40 | J40 | | | | | | |
| HA 20 | 300-558 | J52 | J52 | J52 | | | | | | |
| HD 39, 10 | 43-260 | J30 | J30 | J30 | | | | | | |
| HD 15 | 300-034 | J40 | J40 | J40 | | | | | | |
| HD 20 | 300-558 | J52 | J52 | J52 | | | | | | |
| HS 39, 10 | 43-260 | J30 | J30 | J30 | | | | | | |
| HS 15 | 300-034 | J40 | J40 | J40 | | | | | | |
| HS 20 | 300-558 | J52 | J52 | J52 | | | | | | |
| J 5, 65 | 11-22 | J90 | J90 | J90 | | | | | | |
| J 70 | 12-78 | J94 | J94 | J94 | | | | | | |
| J 75 | 11-123 | J96 | J96 | J96 | | | | | | |
| J 80 | 39-91 | J86 | J86 | J86 | | | | | | |
| K 35 | 15-103 | J118 | J118 | | J118 | J118 | J121 | J121 | J120 | |
| K 40, 45 | 15-153 | J122 | J122 | | J122 | J122 | J125 | J125 | J1222 | J125 |
| K 50, 65, 70, 75, 80 | 27-57<br>27-73<br>27-207 | J144<br>J145<br>J182 | | | AM100 | AM101 | AM100 | AM101 | J149 | J144 |
| KA 37, 38, 39, 10 | 27-275<br>27-297 | J23<br>J22 | | | AM21 | AM20 | AM21 | AM20 | J24 | J21 |
| KD 15 | 300-431 | JW 27 | | | AM21 | AM20 | AM21 | AM20 | J24 | J21 |
| KS 15 | 300-431 | JW 27 | | | AM21 | AM20 | AM21 | AM20 | J24 | J21 |
| LS 37, 38 | 41-277 | J10 | J10 | J10 | | | | | | |
| LT 37, 38, 39, 10 | 41-279 | J14 | J17 | J18 | J18 | J17 | J17 | | | |
| MD 15 | 300-247 | J58 | J58 | J58 | | | | | | |
| MD 15, 20 Shock Absor. | 300-275 | J45 | J45 | J45 | | | | | | |
| MD 38, 39 | 43-2 | J5 | J5 | J5 | | | | | | |
| MS 15 | 300-247 | J58 | J58 | J58 | | | | | | |
| MS 15, 20 Shock Absor. | 300-275 | J45 | J45 | J45 | | | | | | |
| MS 38, 39 | 43-2 | J5 | J5 | J5 | | | | | | |
| OA 55, 60 | 32-11 | JA 1 | JA 1 | JA 1 | | | | | | |
| OA 65 | 31-149 | JA 6 | JA 6 | JA 6 | | | | | | |
| OK 55, 60 | 34-11 | JK1 | | | JK1 | JK1 | JK1 | JK4 | | JK4 |
| P 30, 35, 40, 45 | 17-92<br>17-94<br>7-109 | J165<br>J162<br>J126 | | | J128 | J164 | J128 | J162 | J131 | J162 |
| P 50, 65, 70, 75, 80, PO 37, 38, 39, 10, 15 | 23-39<br>23-28<br>23-38<br>23-126<br>29-175 | J175<br>J1202<br>12x13 2-Blade<br>J176<br>J174 | | | J1197<br>AM32 | AM32 | AM31 | AM30 | J1198 | J176 |
| S 45, 65, 70, SA, SE | 21-288<br>21-292<br>21-452 | J151<br>J153<br>J154 | | | AM110 | AM111 | AM110 | J155 | J156 | J160 |
| SD 10 | | J277 | | | J277 | J277 | J277 | J273 | | |
| TD 15 | 300-559 | J1 | J1 | J1 | AM91 | AM90 | AM91 | AM90 | | J4 |
| TS 15 | 300-559 | J1 | J1 | J1 | AM91 | AM90 | AM91 | AM90 | | J4 |
| V 45, 65, 70, VA, VE50 | 23-39<br>23-32<br>23-28<br>23-38<br>23-126 | J175<br>J1203<br>J1202<br>J174<br>J176 | | | AM32 | AM32 | AM32 | AM30 | J1708 | J176 |
| 100, 110 | 11-176 | J64 | J64 | J64 | | | | | | |
| 200, 210 | 37-170 | J74 | J76 | J76 | | | | | | |
| 300 | 39-91 | J86 | J86 | J86 | | | | | | |

*Weights indicated are passenger and equipment loads exclusive of motor.

# MICHIGAN PROPELLER SELECTOR — FOR CHAMPION OUTBOARD MOTORS

| MODEL OR SERIAL | MOTOR | YEAR | Champion's Part No. | Michigan's Part No. | Rowboat — Round or Flat Bottom | Kayak and Cartop to 75 Lbs. | RUNABOUT 11'-14' | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 150 to 350 lbs.* | 350 to 600 lbs.* |
| Standard Single | A | 1935 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| Standard Single | 1B | 1936 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| Lite Twin | 2B | 1936 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| Senior Twin | 3B | 1936 | 3B126 | P60 | P60 | P62 | P60 | P60 |
| Standard Single | S1C | 1937 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| DeLuxe Single | D1C | 1937 | D1C126 | P47 | P47 | P47 | ..... | ..... |
| Standard Lite Twin | S2C | 1937 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| DeLuxe Lite Twin | D2C | 1937 | D2C126 | P48 | P48 | P48 | ..... | ..... |
| DeLuxe Senior Twin | D3C | 1937 | 3C126 | P60 | P60 | P62 | P60 | P60 |
| Red Flash | R1C | 1937 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| Standard Single | S1D | 1938 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| DeLuxe Single | D1D | 1938 | D1C126 | P47 | P47 | P47 | ..... | ..... |
| Standard Lite Twin | S2D | 1938 | 1A126 | P44 | P44 | P44 | ..... | ..... |
| DeLuxe Lite Twin up to Model No. D2D3000 | D2D | 1938 | D1C126 | P50 | P50 | P50 | ..... | ..... |
| From D2D3000 up | ..... | ..... | D1F126 | P91 | P91 | P91 | ..... | ..... |
| DeLuxe Senior Twin | D3D | 1938 | 3C126 | P60 | P60 | P62 | P60 | P60 |
| Standard Single | S1E | 1939 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| DeLuxe Single | D1E | 1939 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| DeLuxe Lite Twin | D2D | 1939 | D1F126 | P91 | P91 | P91 | ..... | ..... |
| DeLuxe Senior Twin | D3D | 1939 | 3C126 | P60 | P60 | P62 | P60 | P60 |
| Standard Single Kingfisher | S1F | 1940 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| DeLuxe Challenger Single | D1F | 1940 | D1F126 | P91 | P91 | P91 | ..... | ..... |
| Standard Lite Twin Fish Hawk | S2F | 1940 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| DeLuxe Lite Twin-Playboy | D2F | 1940 | D2F126 | P70 | P70 | P73 | P73 | ..... |
| DeLuxe Single Blue Streak | B1F | 1940 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| Standard Single Kingfisher | S1G | 1941 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| DeLuxe Single Challenger | D1G | 1941 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| Standard Single — Model 400 | S4G | 1941 | 4G126 | ..... | ..... | ..... | ..... | ..... |
| DeLuxe Single — Model 400 | D4G | 1941 | 4G126 | ..... | ..... | ..... | ..... | ..... |
| Standard Lite Twin — Viking | S2G | 1941 | D2F126 | P70 | P70 | P73 | P73 | ..... |
| DeLuxe Senior Twin — Electra (Alternate Firing) | 3G | 1941 | 3G126 | P80 | P80 | P80 | P80 | P80 |
| Single — Ensign | M1G | 1941 | 1E126 | P51 | P51 | P51 | ..... | ..... |
| Single — Commodore | M4G | 1941 | 4G126 | ..... | ..... | ..... | ..... | ..... |
| Lite Twin — Admiral | M2G | 1941 | D2F126 | P70 | P70 | P73 | P73 | ..... |
| Super Single | 1H | 1942 | 1H126 | ..... | ..... | ..... | ..... | ..... |
| Alternate Firing Twin (Electra) | 3H | 1942 | 3G126 | P80 | P80 | P80 | P80 | P80 |

*Weights indicated are passenger and equipment loads exclusive of motor.

***Propeller damage won't lay up your boat if you own a spare propeller.***

# Michigan Propeller Selector for MUNCIE, NEPTUNE, SEAGULL GAMBLE

| MODEL OR SERIAL | Muncie's Part No. | Michigan's Equivalent | Rowboat Round or Flat Bottom | Kayak and Cartop to 75 lbs. | RUNABOUT 11'-14' | | RUNABOUT 14'-17' | | Racing Hydro. | Outboard Cruiser, Work Boats, Etc. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 150 to 350 lbs.* | 350 to 600 lbs.* | 150 to 350 lbs.* | 350 to 600 lbs.* | | |
| Jr. Single 1938-41 1A38, 1A39, 10A1, 11A1 (1.2 and 1.5 h.p.) | OB100-99 | E40 | E40 | E40 | ..... | ..... | ..... | ..... | ..... | ..... |
| Singles 1933-41 OB1, OB11, OB12, 2A38, 2A39, 10A2, 11A2, 11AA2 (2 and 2.5 h.p.) | OB1-99 | M10 | M10 | M10 | M12 | ..... | ..... | ..... | ..... | ..... |
| OB2 1930-31 (2.5 h.p.) | OB2-99 | M30 | M30 | M30 | ..... | ..... | ..... | ..... | ..... | ..... |
| OB3, OB4, OB5 (1931-32) (3-4-5 h.p.) | OB4-99 | M34 | M34 | M34 | ..... | ..... | ..... | ..... | ..... | ..... |
| Junior Twin 1933-41 OB31, OB32, OB34, OB35, OB38, OB39, 10A4, 11B4 | OB31-99 | M20 | M20 | M26 | M27 | ..... | ..... | ..... | ..... | ..... |
| Twin OB51, OB61, OB63, OB64, OB51 | ..... | M37 | M37 | M37 | ..... | ..... | ..... | ..... | ..... | ..... |
| Alternate 1939-41 11A3, 11AA3, 5A39, 10A6, 11A6, 11AA6 | OB31-99 | M20 | M20 | M26 | M27 | ..... | ..... | ..... | ..... | ..... |
| Imp. Twin 1938-39 6A38, 6A39 | OB31-99 | M20 | M20 | M26 | M27 | ..... | ..... | ..... | ..... | ..... |
| Alternate 1938-41 9A38, 9A39, 10A10, 11A9, 11AA9 | OB9-99 | M60 | ..... | ..... | M65 | M65 | M65 | M65 | M62 | M63 |
| Master Twin 1931-41-46 OB15, OB16, OB17, 16A-38, 16A39, 10A16, 11B16 | OB16-99 | J154 | ..... | ..... | J151 | J150 | J154 | J160 | J156 | J160 |

*Weights indicated are passenger and equipment loads exclusive of motor.

# Michigan Propeller Selector for MERCURY AND OTHER MOTORS

| MOTOR AND MODEL NO. | Standard Michigan Duplicate | Rowboat Round or Flat Bottom | Kayak and Cartop to 75 lbs. | RUNABOUT 11'-14' | | RUNABOUT 14'-17' | | Racing Hydro. | Outboard Cruiser, Work Boat, Etc. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 150 to 350 lbs.* | 350 to 600 lbs.* | 150 to 350 lbs.* | 350 to 600 lbs.* | | |
| **BENDIX** | | | | | | | | | |
| All Singles, 1940, 2¼ h. p. | X5 | X7 | X5 | ..... | ..... | ..... | ..... | ..... | ..... |
| All Twins, 1940, 4½ h. p. | X20 | X24 | X20 | ..... | ..... | ..... | ..... | ..... | ..... |
| **LAUSON** | | | | | | | | | |
| Single 1940-41-42 and 1946, 2½ h. p. | L30 | L30 | L30 | ..... | ..... | ..... | ..... | ..... | ..... |
| **LEJAY** | | | | | | | | | |
| Electric | H50 | H50 | H50 | ..... | ..... | ..... | ..... | ..... | ..... |
| **LOCKWOOD** | | | | | | | | | |
| Foldlight 1930 | B10 | B10 | B10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Ace 1929-30 | L411 | ..... | ..... | L411 | L411 | L411 | L411 | L410 | ..... |
| Chief 1928-29, 82B-92B | L420 | ..... | ..... | L420 | L420 | L423 | L423 | L421 | L423 |
| "72-T" 1927 | L606 | L606 | ..... | L606 | L606 | ..... | ..... | ..... | ..... |
| **MARTIN** | | | | | | | | | |
| Twin, 1946 | Q10 | Q10 | ..... | Q10 | ..... | ..... | ..... | ..... | ..... |
| **MERCURY** | | | | | | | | | |
| Singles, 1940, K-1, 2, 3, KB1, KB1A | K8 | K8 | K8 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twins, 1940, K-4, K-5 | K10 | K10 | K10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Singles, 1941, KB2, KB3 | K15 | K15 | K15 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twins, 1941, KB4, KB5 and Wizzard WB6 | K15 | K15 | K15 | ..... | ..... | ..... | ..... | ..... | ..... |
| **SEA KING (Montgomery-Ward)** | | | | | | | | | |
| Single 2.8 h. p. (by Kiekhaefer) | K8 | K8 | K8 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single 2 h. p. (by Thor) | T26 | T26 | T26 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single 1 h. p., No. 377, 381, 469 | E40 | E40 | E40 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single 1.8 h. p., No. 477 | E27 | E27 | E27 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single 1.8 h. p., No. 367 | E4 | E4 | E4 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single, 2.2 h. p., No. 489, 490 | E237 | E237 | E237 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 2.5 h. p., No. 498 | W8 | W8 | W8 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 2.8 h. p., No. 449 | E32 | E32 | E32 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 3.3 h. p., No. 378 | E32 | E32 | E32 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 3 h. p., No. 369, 378, 379 | E8 | E10 | E8 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 4 h. p., No. 400, 416, 491, 494, 499 | E242 | E242 | E242 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 5 h. p., No. 371 | E196 | E199 | E196 | AM121 | AM120 | AM120 | AM120 | E198 | ..... |
| Twin, 8.5 h. p., No. 471, 492, 473 | E291 | ..... | ..... | AM80 | AM81 | AM81 | AM81 | E294 | ..... |
| Twin, 15.2 h. p., No. 375, 376 | E222 | ..... | ..... | AM42 | AM41 | AM45 | AM45 | E309 | E365 |
| Twin, 21.0 h. p., No. 615 | V841 | ..... | ..... | AM130 | AM131 | AM130 | V844 | V849 | V844 |
| **THOR** | | | | | | | | | |
| Single, 1935-36 | T20 | T20 | T20 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single, 1937-38-39 | T26 | T26 | T26 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 1936 | T24 | T24 | T24 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 1937-38 | T28 | T28 | T28 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 1939 | T26 | T26 | T26 | ..... | ..... | ..... | ..... | ..... | ..... |
| **WATERWITCH (Sears-Roebuck)** | | | | | | | | | |
| Single, ¾ 1938-39-40 and 1941 1 h. p. | S5 | S5 | S5 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single 2.5 h. p. 1936-40 and 1941 2¾ h. p. | S10 | S10 | S10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Single, 3.5 h. p. 1940-41 | S15 | S15 | S15 | ..... | ..... | ..... | ..... | ..... | ..... |
| Twin, 4.0 h. p. 1936-37-38 and 1939 4¾ h. p. | S20 | S20 | S25 | S23 | ..... | ..... | ..... | ..... | ..... |
| Twin, 5¾ h. p., 1940-41 | S15 | S15 | ..... | S15 | ..... | ..... | ..... | ..... | ..... |
| Twin, 10 h. p. 1941 | S50 | ..... | ..... | S50 | S50 | S50 | S50 | ..... | ..... |
| Twin, 8.5 h. p. | JK-1 | ..... | ..... | JK-1 | JK-1 | JK-1 | JK-4 | ..... | JK-4 |

*Weights indicated are passenger and equipment loads exclusive of motor.

***Own a spare propeller to use while the original is reconditioned.***

# MICHIGAN PROPELLER PRICE LIST

*(All prices are subject to change without notice)*

## EVINRUDE — ELTO

| Michigan Part No. | Price | Dia. and Pitch | Metal | No. Blades | PROPELLER TO BE USED ON MOTOR MODEL NO. |
|---|---|---|---|---|---|
| E 2 | $ 1.65 | 5½ x 4¾ | AL | 2 | Evin Mate 4263-Elto Cub 4264-SeaKing Single 1.8 H.P. 367 |
| E 4 | 2.20 | 7 x 6 | AL | 2 | Evin Sportsman 4285, 4296, 4346, 4364, 4365, 4366, 4367 and 1946 Models |
| E 8 | 2.75 | 7½ x 6 | AL | 2 | Evin Sportwin 4287, 4303, 4353, 4368, 4369, 4371, 4372 and 1946 Models, and Seaking |
| E 10 | 4.40 | 7½ x 5½ | AL | 3 | Twin 3 H.P. 369, 3.3 H.P. 378, 379 |
| E 22 | 1.90 | 7 x 6 | AL | 2 | Evin Sportsman 4091-Elto Ace 4145, 4205 |
| E 27 | 1.90 | 7 x 6 | AL | 2 | Evin Sportsman 4146, 4207-Elto Ace 4256, 4301, 4329, 4351, 4352, Sea King Single 1.8 H.P. 477 |
| E 32 | 2.20 | 7½ x 6 | AL | 2 | Evin Sportwin 4156, 4209-Elto Handitwin 4158, 4212, 4261, 4307, 4332, 4357, 4358-Sea-King Twin 2.8 & 3 H.P. 449, 3.3 H.P. 378 |
| E 40 | 1.65 | 6 x 5 | AL | 2 | Evin Ranger 4252, 4265, 4334, 4406, 4407, Scout 4201-Elto Pal 4203, 4253, 4266-SeaKing Single 1 H.P. 377, 381, 469-Muncie Jr. Single 1A38, 1A39, 10A1, 11A1 |
| E 196 | 4.74 | 7½ x 8 | AL | 2 | Evin Fisherman 4309, Zephyr 4359, 4361, 4362, 4363, 4378, 4379, 4381, 4382, 4402, 4403, |
| E 198 | 6.00 | 7¼ x 9 | BR | 2 | 4404, 4405-Elto Lightwin 4313, 4314-SeaKing Twin 5 H.P. 371 |
| E 199 | 5.50 | 8¼ x 6 | AL | 2 | |
| E 201 | 7.00 | 10 x 10 | BR | 2 | |
| E 204 | 8.80 | 10 x 8 | BR | 3 | Elto Service Speedster 60000-69999, 80000H-89999H, 300, 348, HiSpeed Service Speed- |
| E 204 | 9.90 | 8½ x 11½ | BR | 2R | ster 302 |
| E 211 | 8.25 | 11 x 14 | BR | 2 | |
| E 214 | 9.90 | 11 x 10 | BR | 3 | Elto Quad 70000-75000 |
| E 216 | 9.90 | 9½ x 14 | BR | 2R | |
| E 222 | 7.00 | 10 x 10 | BR | 2 | Elto Special Speedster 340-SeaKing Twin 15.2 H.P. 375 |
| E 232 | 3.80 | 9 x 9 | AL | 2 | Elto Lightweight 90000,309 |
| E 237 | 3.80 | 7½ x 6 | AL | 2 | Evin Sport Single 432,4000, 4002-Elto Super Single 436, 4008, 4010 SeaKing Single 2.2 H.P. 489, 490 |
| E 242 | 3.80 | 8¾ x 8 | AL | 2 | Evin Lightwin 402 407-Elto Lightweight 401, 411, 360-SeaKing Twin 4 H.P. 400, 416, 491, 494, 499 |
| E 246 | 7.00 | 10 x 10 | BR | 2 | Elto Special Speedster 340, 905 |
| E 251 | 8.80 | 10 x 10 | BR | 3 | Evin Sportfour 902-Elto Sr. Speedster 310, Jr. Quad 900 |
| E 258 | 9.90 | 9½ x 11½ | BR | 2R | |
| E 260 | 11.00 | 10 x 12 | BR | 2R | |
| E 261 | 9.90 | 11 x 11 | BR | 3 | Evin Speeditwin 634, 6000, 6011, 6039, 6041-Elto Super "C" 605, 624, 638, Speeditwin |
| E 263 | 9.90 | 11 x 9 | BR | 3 | 6004, 6034, 6015, 6018 |
| E 267 | 11.00 | 9¼ x 14 | BR | 2R | |
| E 271 | 9.90 | 11 x 13 | BR | 3 | Evin Speedifour 728, 7022-Elto Speediquad 7004, 7013 |
| E 272 | 9.90 | 10½ x 13 | BR | 3 | Elto Sr. Quad 314, 700, 721, 732 |
| E 277 | 13.00 | 11¾ x 10 | BR | 3 | |
| E 279 | 11.00 | 10½ x 15 | BR | 2 | Evin Big Four 802, 814, Speedifour 728, 7022, 7026, 7031, 7032-Elto Sr. Quad 314, 700, |
| E 281 | 11.00 | 11 x 14½ | BR | 3 | 721, 732, SpeediQuad 7004, 7013, Big Quad 800, 820 |
| E 283 | 11.00 | 10½ x 17 | BR | 2R | |
| E 291 | 7.00 | 9 x 8 | BR | 2 | Evin Sturditwin 420, Fleetwin 418, 450, 4034-Elto Service "A" 424, Super "A" 422, |
| E 293 | 7.00 | 9 x 6 | BR | 3 | Fleetwin 4038, 4335, 4336-SeaKing Twin 8.5 H.P. 471, 473, 492 |
| E 294 | 8.80 | 8½ x 9½ | BR | 2R | |
| E 296 | 4.75 | 7½ x 8 | AL | 2 | Evin Fisherman 4016, 4093, 4227, 4267, Sportwin 409, 476, Lightwin 422, 4020-Elto Lightweight 444, Fisherman 413, 4018, 4095, Service Twin 4161, 4163, 4151, 5216, 4229 |
| E 304 | 8.80 | 10 x 10 | BR | 3 | Evin Sportfour 912, 90000, 9200-Elto Jr. Quad 914, 924-SeaKing Twin 15.2 H.P. 375, 376 |
| E 306 | 8.80 | 10 x 8 | BR | 3 | |
| E 309 | 9.90 | 9½ x 11½ | BR | 2R | |
| E 313 | 4.75 | 7½ x 8 | AL | 2 | Evin Weedless Fisherman 4092, 4152, 4269, 4312 |
| E 322 | 4.40 | 7½ x 8 | AL | 2 | Evin Lightwin 4097, 4153-Elto Lightwin 4099 |
| E 332 | 5.50 | 8¼ x 8 | AL | 2 | Evin Lightwin Imperial 4102, 4165-Elto Lightwin Imperial 4106 |
| E 342 | 6.00 | 8¾ x 9 | AL | 2 | Evin Lightfour 4231, 4271, 4315, 4316, 4317, 4322, 4324, 4375, 4376, 4377, Lightfour Imperial 4111, 4178-Elto Lightfour Imperial 4115 |
| E 360 | 8.80 | 9¾ x 10 | BR | 3 | Evin Sportfour 9008, 9015, 9022, 9026, 9031, 9035-Elto Sportfour 9004, 9013, Jr. Quad |
| E 363 | 8.80 | 8¾ x 12 | BR | 2R | 912, 9200, 9000, 900, 914, 924, SeaKing Twin 15.2 H.P. 375, 376 |
| E 365 | 9.90 | 10¼ x 8 | BR | 3 | |
| E 422 | 5.50 | 7½ x 8 | AL | 2 | Evin Lightwin 4221, 4289 |
| E 446 | 7.70 | 9 x 6½ | AL | 2 | Evin Lightfour 4231, 4271, 4314, 4316, 4317, 4322, 4323, 4324, 4375, 4376, 4377, Lightfour Imperial 4111, 4178 |
| E 512 | 6.50 | 8¾ x 8 | AL | 2 | Evin Lightfour Imperial 4042-Elto Lightfour Imperial 4044, Lightwin 4020, 4032 |
| E 513 | 6.50 | 9 x 6 | AL | 2 | |
| E 522 | 6.00 | 8¾ x 9 | AL | 2 | Elto Handifour 4219 |
| EW 2 | 9.90 | 10½ x 10½ | BR | 3 | Evin Speeditwin 6039, 6041-Elto Speeditwin 6034 |
| EW 6 | 11.00 | 10½ x 13 | BR | 3 | Evin Speedifour 7026, 7031, 7032 |
| EW 7 | 8.80 | 9¾ x 10 | BR | 3 | Evin Sportfour 9026, 9031, 9035 |
| EW 10 | 9.90 | 10½ x 10½ | BR | 3 | Evin Speeditwin 1946 Models |
| EW 20 | 11.00 | 10½ x 13 | BR | 3 | Evin Speedifour 1946 Models |
| EW 40 | 7.00 | 9 x 8 | BR | 2 | Elto Fleetwin 4335, 4336 |

R Indicates Racing Type Propeller
W Indicates Weedless Type Propeller

# MICHIGAN PROPELLER PRICE LIST

*(All prices are subject to change without notice)*

## EVINRUDE — ELTO

| Michigan Part No. | Price | Dia. and Pitch | Metal | No. Blades | PROPELLER TO BE USED ON MOTOR MODEL NO. |
|---|---|---|---|---|---|
| B 10 | $ 3.80 | 8½ x 8 | AL | 2 | Evin Foldlight 162, 403-Elto Foldlight 162, 403-Sea King 162,403 |
| V 128 | 4.00 | 8½ x 6 | AL | 2 | Evin Sportwin 1500-10000, 183, 10500-14750 |
| V 818 | 8.25 | 9 x 9 | AL | 2 | Evin Fleetwin F, 1F, 4F |
| V 821 | 7.00 | 10 x 12 | AL | 2 | Evin Fastwin H1001-H2500, 1H001-13H250 |
| V 823 | 9.90 | 10 x 10 | BR | 3 | |
| V 825 | 8.80 | 9 x 13½ | BR | 2R | |
| V 831 | 9.25 | 10 x 13 | AL | 3 | Evin Speeditwin U1-U5 |
| V 832 | 9.25 | 10 x 13 | BR | 3 | |
| V 833 | 9.25 | 10 x 11 | BR | 3 | |
| V 836 | 6.60 | 8 x 9 | AL | 2 | Evin Fastwin 1-4429 Model R |
| V 841 | 8.80 | 10 x 13 | AL | 3 | |
| V 842 | 9.90 | 10 x 13 | BR | 3 | Evin Speeditwin 1U-15U, 143, 156, 167-Sea King 21H.P. 615 |
| V 844 | 9.90 | 10½ x 10 | BR | 3 | |
| V 849 | 11.00 | 9½ x 14 | BR | 2R | |
| V 851 | 9.90 | 11 x 11 | BR | 3 | Evin Speeditwin 601, 618, Speedifour 704, 715 |
| V 853 | 9.90 | 11 x 9 | BR | 3 | |
| V 857 | 11.00 | 9¾ x 16 | BR | 2R | |
| V 861 | 9.90 | 11 x 13 | BR | 3 | Evin Speedifour 704, 715 |
| V 862 | 11.00 | 10½ x 15 | BR | 2R | |
| AM 10 | 10.45 | 8¾ x 10 | BR | 3 | Evin Sportfour 902-Elto Jr. Quad 900, Sr. Speedster 310 |
| AM 11 | 11.00 | 9½ x 10 | BR | 3 | |
| AM 41 | 10.45 | 8¾ x 10 | BR | 3 | Evin Sportfour 912, 9000, 9008, 9015, 9022, 9026, 9031, 9035-Elto Sportfour 9004, 9013, |
| AM 42 | 10.45 | 8¾ x 10½ | BR | 3 | Jr. Quad 914, 924-Sea King 15.2 H.P. 375, 376 |
| AM 45 | 11.00 | 9½ x 10 | BR | 3 | |
| AM 50 | 12.65 | 10 x 10 | BR | 3 | Evin Speeditwin 634, 6000, 6011, 6039, 6041-Elto Speeditwin 6004 6015, 6018, 6034, |
| AM 51 | 13.20 | 10½ x 9½ | BR | 3 | Super "C" 605, 624, 638 |
| AM 60 | 13.20 | 10½ x 12½ | BR | 3 | Evin Big Four 802, 814, Speedifour 728, 7022, 7026, 7031, 7032-Elto Sr. Quad 314, 700, |
| AM 61 | 13.20 | 10½ x 13½ | BR | 3 | 721, 732, Speediquad 7004, 7013, Big Quad 800, 820 |
| AM 62 | 12.65 | 10 x 13 | BR | 3 | |
| AM 70 | 8.80 | 8 x 8 | BR | 3 | Evin Lightfour 4231, 4271, 4315, 4316, 4317, 4322, 4323, 4324, 4375, 4376, 4377, Lightfour |
| AM 71 | 9.35 | 8 x 7½ | BR | 3 | Imperial 4111, 4178 |
| AM 80 | 8.80 | 8 x 9 | BR | 3 | Evin Fleetwin 418, 450, 4034, Sturditwin 420-Elto Service "A" 424, Super "A" 422, |
| AM 81 | 9.35 | 8¼ x 9 | BR | 3 | 456, Fleetwin 4038, 4335, 4336-Sea King Twin 8.5 H.P. 471, 473, 492 |
| AM 120 | 8.00 | 7½ x 6½ | BR | 3 | Evin Fisherman 4309, Zephyr 4359, 4361, 4362, 4363, 4378, 4379, 4381, 4382, 4402, 4403, |
| AM 121 | 8.00 | 7½ x 7½ | BR | 3 | 4404, 4405-Elto Lightwin 4313, 4314-Sea King Twin 5 H.P. 371 |
| AM 130 | 12.65 | 10 x 11 | BR | 3 | Evin Speeditwin 156, 143, 167, 1U-15U-Sea King Twin 21 H.P. 615 |
| AM 131 | 12.65 | 10 x 10½ | BR | 3 | |
| AM 140 | 12.65 | 10 x 10 | BR | 3 | Evin Speeditwin 601, 618 |
| AM 141 | 12.65 | 10 x 10½ | BR | 3 | |
| AM 150 | 12.65 | 10 x 13 | BR | 3 | Evin Speedifour 704, 715 |
| AM 160 | 13.20 | 10 x 10 | BR | 3 | Evin Speeditwin 1946 Models |
| AM 161 | 13.20 | 10½ x 9½ | BR | 3 | |
| AM 170 | 14.00 | 10½ x 12½ | BR | 3 | |
| AM 171 | 14.00 | 10½ x 13½ | BR | 3 | Evin Speedifour 1946 Models |
| AM 172 | 14.00 | 10 x 13 | BR | 3 | |

## WATERWITCH

| | | | | | |
|---|---|---|---|---|---|
| S 5 | $1.65 | 6½ x 4 | AL | 2 | Single 1938, 39, 40 ¾ H.P., 1941 1 H.P. Motor Nos.: 571.30, 571.31, 571.33, 571.34, 571.35, 571.36. (Replaces Sears Part Nos.: MB2265, MB2265-1, MB2265-2, MB2265-11) |
| S 10 | 2.75 | 7½ x 7 | AL | 2 | Single 1936-40, 2½ H.P., 1941 2¾ H.P. Motor Nos.: MB10, 571.10, 571.11, 571.40, 571.41, 571.42, 571.43, 571.44. (Replaces Sears Part Nos.: MB265, MB7265). |
| S 15 | 3.30 | 8½ x 7 | AL | 2 | Single 1940, 41 3.5 H.P. and 5¾ H.P. Motor Nos.: 571.12, 571.13, 571.14, 571.15, 571.20, 571.24, 571.26. (Replaces Sears Part Nos.: MB265-5, MB765-11). |
| S 20 | 3.80 | 8 x 8 | AL | 2 | |
| S 23 | 5.50 | 8¼ x 7 | AL | 3 | Twin 1936, 37, 38 4 H.P., 39 4¾ H.P. Motor Nos.: 5807, 571.21, 571.22, 571.23. (Re- |
| S 25 | 5.50 | 7½ x 9 | AL | 2 | places Sears Part Nos.: MB765 (2-Blade), 765-2 (3-Blade). |
| S 50 | 6.50 | 9 x 10½ | AL | 2 | Twin 1941 10 H.P. Motor No.: 571.45. (Replaces Sears Part No.: MB9265-1) |

R Indicates Racing Type Propeller
W Indicates Weedless Type Propeller
AM In part number indicates AQUAMASTER design.

***What's a vacation or fishing trip without the use of your motor — carry a spare propeller.***

# MICHIGAN PROPELLER PRICE LIST

*(All prices are subject to change without notice)*

## THOR

| Michigan Part No. | Price | Dia. and Pitch | Metal | No. Blades | PROPELLER TO BE USED ON MOTOR MODEL NO. |
|---|---|---|---|---|---|
| T 20 | $3.30 | 6½ x 4½ | AL | 2 | Single 1935, 36 |
| T 24 | 3.30 | 7⅝ x 5⅛ | AL | 2 | Twin 1936 |
| T 26 | 3.30 | 7 x 6 | AL | 2 | Single 1937, 38, 39, Twin 1939-Sea King Single 2 H.P. |
| T 28 | 4.30 | 9 x 7 | AL | 2 | Twin 1939 |

## JOHNSON

| | | | | | |
|---|---|---|---|---|---|
| J 1 | $ 5.00 | 8 x 7½ | AL | 2 | TD 15, TS 15 |
| J 4 | 5.00 | 8 x 6 | AL | 2 | TD 15, TS 15 |
| J 5 | 1.65 | 6½ x 3½ | AL | 2 | MD 38, 39-MS 38, 39 |
| J 10 | 4.40 | 8 x 4¾ | AL | 2 | DS 37, 38-LS 37, 38 |
| J 14 | 4.40 | 8 x 7½ | AL | 2 | AT 39, 10-DT, 37, 38, 39, 10-LT 37, 38, 39, 10 |
| J 17 | 6.50 | 8 x 6 | AL | 3W | |
| J 18 | 5.50 | 8 x 7½ | AL | 2W | |
| J 21 | 8.80 | 9¾ x 7¼ | AL | 3 | KA 37, 38, 39, 10-KD 15-KS 15 |
| J 22 | 11.00 | 9¾ x 7¼ | BR | 3 | |
| J 23 | 8.80 | 9½ x 9 | BR | 3 | |
| J 24 | 9.90 | 9 x 11 | BR | 2R | |
| J 25 | 8.80 | 9½ x 9 | AL | 3 | |
| J 26 | 9.90 | 9 x 10 | BR | 2R | |
| J 30 | 2.20 | 6⅝ x 5¼ | AL | 2 | HA-HD-HS 39, 10 |
| J 40 | 2.75 | 6⅝ x 5¼ | AL | 2 | HA-HD-HS 15 |
| J 45 | 2.75 | 6⅝ x 4¼ | AL | 2 | MD 15, 20-MS 15, 20 |
| J 52 | 3.30 | 6⅝ x 5¼ | AL | 2 | HD 20-HS 20 |
| J 58 | 1.65 | 6½ x 4¼ | AL | 2 | MD 15-MS 15 |
| J 64 | 2.75 | 7¼ x 4½ | AL | 2 | 100-110 |
| J 74 | 3.00 | 7⅝ x 5½ | AL | 3 | 200-210 |
| J 76 | 3.80 | 7⅝ x 5½ | AL | 3W | |
| J 80 | 4.75 | 8¼ x 6 | AL | 2 | F 70 |
| J 84 | 4.75 | 8 x 9 | AL | 2 | F 75 |
| J 86 | 4.75 | 8 x 6¼ | AL | 2 | J 80, 300 |
| J 90 | 4.40 | 7⅝ x 5⅛ | AL | 2 | J 25, 65 |
| J 94 | 4.75 | 7⅝ x 5⅛ | AL | 2 | J 70 |
| J 96 | 4.40 | 8 x 8 | AL | 2 | J 75 |
| J 110 | 4.40 | 8 x 7 | AL | 2 | A Lightwin-A 25-BN Lightwin-AB 25 |
| J 112 | 5.50 | 8⅝ x 6½ | AL | 2 | A 25-AB 25 |
| J 114 | 6.00 | 9⅛ x 7.7 | AL | 3 | A 35, A 45 |
| J 118 | 9.90 | 10 x 10 | AL | 3 | K 35 |
| J 119 | 11.00 | 10 x 10 | BR | 3 | |
| J 120 | 9.90 | 9 x 12 | BR | 2R | |
| J 121 | 11.00 | 10 x 8 | BR | 3 | |
| J 122 | 8.80 | 10¼ x 13.02 | AL | 3 | K 40, 45 |
| J 123 | 9.90 | 10¼ x 13.02 | BR | 3 | |
| J 125 | 9.90 | 10¼ x 11 | BR | 3 | |
| J 126 | 9.90 | 10⅛ x 12½ | AL | 3 | |
| J 127 | 11.00 | 10⅛ x 12½ | BR | 3 | |
| J 128 | 9.90 | 10 x 12½ | BR | 2R | P 35, 40, 45-PB 35 |
| J 131 | 9.90 | 9½ x 14 | BR | 2R | |
| J 140 | 6.00 | 9⅛ x 6 | AL | 3 | A 50, 65, 70, 75, 80-AA 37 |
| J 141 | 7.70 | 9⅛ x 7 | AL | 2W | |
| J 144 | 7.70 | 9½ x 7¾ | AL | 3 | K 50, 65, 70, 75, 80 |
| J 145 | 7.70 | 9½ x 9½ | AL | 3 | |
| J 146 | 8.80 | 9½ x 9½ | BR | 3 | |
| J 148 | 8.80 | 9½ x 7¾ | BR | 3 | |
| J 149 | 9.90 | 9 x 11 | BR | 2R | |
| J 150 | 8.80 | 10 x 10 | BR | 2 | Johnson S 45, 65, 70-SA-SE; Muncie OB15, OB16, OB17, 16A-38, 16A-39, 10A-16, 11B-16 |
| J 151 | 8.80 | 10 x 11 | BR | 2 | |
| J 153 | 8.80 | 10 x 14 | BR | 2 | |
| J 154 | 9.90 | 10 x 10 | BR | 3 | |
| J 155 | 9.90 | 10 x 8 | BR | 3 | |
| J 156 | 9.90 | 9 x 12½ | BR | 2R | |
| J 157 | 9.90 | 9 x 14½ | BR | 2R | |
| J 160 | 11.00 | 10½ x 9 | BR | 3 | |
| J 162 | 11.00 | 10¼ x 10½ | BR | 3 | P 30, 35, 40, 45 |
| J 164 | 9.90 | 10¼ x 12¼ | AL | 3 | |
| J 165 | 11.00 | 10¼ x 12¼ | BR | 3 | |

R Indicates Racing Type Propeller
W Indicates Weedless Type Propeller

# MICHIGAN PROPELLER PRICE LIST

*(All prices are subject to change without notice)*

## JOHNSON AND MUNCIE "16"

| Michigan Part No. | Price | Dia. and Pitch | Metal | No. Blades | PROPELLER TO BE USED ON MOTOR MODEL NO. |
|---|---|---|---|---|---|
| J 174 | $13.00 | 12 x 13 | BR | 3 | P 50, 65, 70, 75, 80-PO 10, 15, 37, 38, 39-V45, 65, 70-VA-VE50 |
| J 175 | 13.00 | 12 x 12 | BR | 3 | |
| J 176 | 13.00 | 12 x 10 | BR | 3 | |
| J 182 | 7.70 | 9½ x 9 | AL | 3 | K 50, 65, 70, 75, 80 |
| J 273 | 9.90 | 10 x 12 | BR | 3 | SD 10 |
| J 277 | 9.90 | 10 x 13 | BR | 3 | |
| J 1197 | 11.00 | 10 x 14 | BR | 2R | P 50, 65, 70, 75, 80-PO 10, 15, 37, 38, 39-V45, 65, 70-VA-VE50 |
| J 1198 | 11.00 | 9¾ x 16 | BR | 2R | |
| J 1202 | 9.90 | 12 x 15 | BR | 2 | V 45, 65, 70-VA-VE 50 |
| J 1203 | 9.90 | 12 x 17 | BR | 2 | |
| J 1222 | 9.90 | 9 x 15 | BR | 2 | K 40, 45 |
| J 1499 | 9.90 | 9¼ x 10½ | BR | 2R | K 50, 65, 70, 75, 80 |
| J 1708 | 11.00 | 10½ x 16 | BR | 2R | P 50, 65, 70, 75, 80, PO 10, 15, 37, 38, 39, V45, 65, 70, VA-VE50 |
| J 1709 | 11.00 | 10½ x 17½ | BR | 2R | |
| JA 1 | 5.50 | 9⅛ x 8 | AL | 2 | OA 55, 60 |
| JA 6 | 6.50 | 8⅝ x 7½ | AL | 3 | OA 65 |
| JK 1 | 6.60 | 10¼ x 13 | AL | 2 | OK 55, 60-Waterwitch Twin 8½ H.P. |
| JK 4 | 7.70 | 10¼ x 10 | BR | 2 | |
| JW 27 | 9.90 | 9½ x 10 | BR | 2W | KA 37, 38, 39, 10 KD 15 KS 15 |
| M 26 | 4.75 | 8 x 8 | AL | 2 | A-BN Lightwin |
| M 27 | 6.50 | 8¼ x 6 | BR | 3 | A-BN Lightwin |
| AM 20 | 11.00 | 9½ x 8½ | BR | 3 | KA 37, 38, 39, 10-KD 15 KS 15 |
| AM 21 | 11.00 | 9½ x 9 | BR | 3 | |
| AM 30 | 13.20 | 10½ x 12½ | BR | 3 | |
| AM 31 | 12.65 | 10 x 13 | BR | 3 | P 50, 65, 70, 75, 80-PO 10, 15, 37, 38, 39-V45, 65, 70-VA-VE50 |
| AM 32 | 12.65 | 10 x 13½ | BR | 3 | |
| AM 90 | 8.00 | 7¾ x 6½ | BR | 3 | TD 15, TS 15 |
| AM 91 | 8.00 | 7¾ x 7 | BR | 3 | |
| AM 100 | 11.00 | 9½ x 8½ | BR | 3 | K 50, 65, 70, 75, 80 |
| AM 101 | 11.00 | 9½ x 8 | BR | 3 | |
| AM 110 | 11.00 | 9½ x 9½ | BR | 3 | S 45, 65, 70-SA-SE |
| AM 111 | 11.00 | 9½ x 9 | BR | 3 | |

## CHAMPION

| | | | | | |
|---|---|---|---|---|---|
| P 44 | $3.30 | 7½ x 6½ | AL | 2 | A, 1B, 2B, S1C, S2C, R1C, S1D, S2D |
| P 47 | 3.80 | 7½ x 5½ | AL | 3 | D1D, D1C |
| P 48 | 3.80 | 7⅜ x 6 | AL | 3 | D2C |
| P 50 | 4.40 | 8¼ x 6 | AL | 3 | D2D, Up to Model D2D3000 |
| P 51 | 2.75 | 7½ x 6½ | AL | 2 | S1E, D1E, S1F, S2F, B1F, S1G, D1G, M1G |
| P 60 | 4.40 | 9 x 6 | AL | 3 | D3C, D3D, 3B |
| P 62 | 6.00 | 8 x 9 | AL | 2 | D3C, 3B, D3D |
| P 70 | 5.50 | 8¼ x 7 | AL | 3 | D2F, S2G, M2G |
| P 73 | 6.60 | 8 x 8½ | AL | 2R | D2F, S2G, M2G |
| P 80 | 6.00 | 8½ x 7 | AL | 2 | 3G, 3H |
| P 91 | 4.40 | 7½ x 6½ | AL | 3 | D2D, from 3000 up, D1F |

## MUNCIE (Also see Johnson for partial listing)

| | | | | | |
|---|---|---|---|---|---|
| M 10 | $2.75 | 7⅝ x 5⅛ | AL | 2 | OB1, OB11, OB12, 2A38, 2A39, 10A2, 11A2, 11AA2 |
| M 12 | 3.80 | 8¼ x 4 | AL | 2 | |
| M 20 | 3.80 | 8 x 7 | AL | 2 | |
| M 26 | 4.75 | 8 x 8 | AL | 2 | OB31, OB32, OB34, OB35, OB38, OB39, 10A4, 11B4, 11A3, 11AA3, 5A39, 10A6, 11A6, |
| M 27 | 6.50 | 8¼ x 6 | BR | 3 | 11AA6, 6A38, 6A39 |
| M 30 | 2.75 | 9 x 9 | AL | 2 | OB2 |
| M 34 | 3.50 | 9 x 9 | AL | 2 | OB3, OB4, OB5 |
| M 37 | 3.50 | 9 x 8½ | AL | 2 | OB51, OB61, OB63, OB64, OB51 |
| M 60 | 7.00 | 9 x 9 | AL | 3 | |
| M 62 | 8.25 | 8½ x 10½ | BR | 2R | |
| M 63 | 8.80 | 9½ x 7¾ | AL | 3 | 9A38, 9A39, 10A10, 11A9, 11AA9 |
| M 65 | 8.25 | 9 x 9 | BR | 2R | |

R Indicates Racing Type Propeller
W Indicates Weedless Type Propeller

***Carry a spare propeller to slip on when a damaged propeller would otherwise spoil your boating pleasure.***

# MICHIGAN PROPELLER PRICE LIST

*(All prices are subject to change without notice)*

## BENDIX

| Michigan Part No. | Price | Dia. and Pitch | Metal | No. Blades | PROPELLER TO BE USED ON MOTOR MODEL NO. |
|---|---|---|---|---|---|
| X 5 | $4.40 | 7½ x 5 | AL | 2 | All Singles 1940 2¼ H.P. |
| X 7 | 5.50 | 8¼ x 4½ | AL | 2W | |
| X 20 | 4.75 | 8¼ x 6 | AL | 2 | All Twins 1940 4½ H.P. |
| X 24 | 6.00 | 8½ x 5 | AL | 3W | |

## LAUSON

| | | | | | |
|---|---|---|---|---|---|
| L 30 | $3.30 | 7½ x 6 | AL | 2 | Single 1940, 41 2½ H.P. |

## LE JAY

| | | | | | |
|---|---|---|---|---|---|
| H 50 | $2.50 | 6 x 5 | AL | 2 | Electric Troller |

## LOCKWOOD

| | | | | | |
|---|---|---|---|---|---|
| L 410 | $8.80 | 8 x 11½ | BR | 2R | Ace 1929, 30 |
| L 411 | 8.80 | 9¼ x 8½ | AL | 2 | |
| L 412 | 8.80 | 9¼ x 8½ | BR | 2 | |
| L 420 | 9.25 | 9 x 14 | BR | 2 | |
| L 421 | 9.25 | 9 x 15 | BR | 2 | Chief 1928, 29-82B-92B-Sea King 11 and 15 H.P. No. 500 |
| L 473 | 9.25 | 10 x 12½ | BR | 2 | |
| L 606 | 8.80 | 9 x 7 | BR | 2 | 1927 "72-T" |

## MARTIN

| | | | | | |
|---|---|---|---|---|---|
| Q 10 | $5.00 | 8 x 8½ | AL | 2 | 1946 Models |

## MERCURY

| | | | | | |
|---|---|---|---|---|---|
| K 8 | $3.30 | 7⅝ x 6 | AL | 2 | Singles K 1, 2, 3-KB1-KB1A-Sea King Single 2.8 H.P. |
| K 10 | 3.30 | 7⅝ x 7 | AL | 2 | Twins K4, K5 |
| K 15 | 3.30 | 7⅝ x 7 | AL | 2 | Singles KB2, KB3, KB4, KB5-Wizard WB6 |

## SEA KING (Also see E, K, & T Part Nos.)

| | | | | | |
|---|---|---|---|---|---|
| W 8 | $2.20 | 7½ x 6 | AL | 2 | Twin 2.5 H.P. No. 498 |

R Indicates Racing Type Propeller
W Indicates Weedless Type Propeller

***Propeller damage won't lay up your boat if you own a spare propeller.***

# A NATION-WIDE PROPELLER RECONDITIONING SERVICE

Accidents are bound to happen it seems in the life of a propeller. You hit a rock, a log or some other object and perhaps bend, twist, or tear one or more blades, or at least throw your propeller out of balance. But there's no need of discarding that propeller. Just attach a mailing tag to it (or have your dealer do so) and send it to the nearest of our many strategically located Service Stations. No matter how badly damaged it may be, chances are that they can fully restore it and make it as serviceable as ever. All authorized MICHIGAN Service Stations are fully equipped with our patented PITCH-BLOCKS which assure restoration of perfect pitch, and other factory equipment and are manned by factory trained workmen. Absolute accuracy of the finished job is guaranteed. And, incidentally, this is the only method of reconditioning in which accuracy can be guaranteed. It is significant that the Army and Navy have relied almost exclusively on MICHIGAN EQUIPMENT for their vast propeller reconditioning requirements in all parts of the world.

## OWN A SPARE PROPELLER

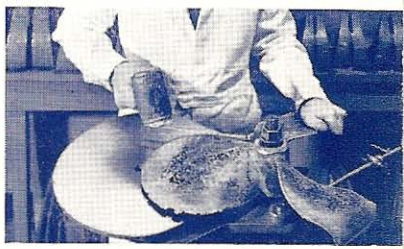
No propeller can give you smooth, vibrationless performance that is even slightly out of balance. Hence, a constantly increasing number of boat owners are finding it an excellent investment to own a spare wheel. This permits them, without laying up the boat, to have their wheels checked at the nearest MICHIGAN SERVICE STATION whenever damage to the propeller may be suspected.

*Below: A typical authorized, factory-equipped Michigan Service Station.*

## A GRAPHIC EXAMPLE OF PROPELLER RECONDITIONING by the Michigan Machined-Pitch Method

***Accuracy is Guaranteed***

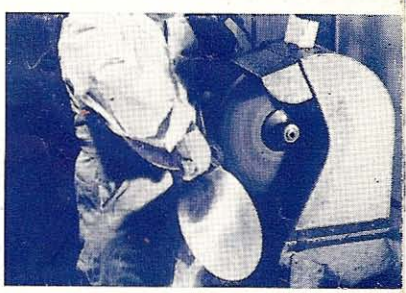
**STEP BY STEP EVERY PROPELLER IS HANDLED AS AN INDIVIDUAL JOB**



**1.** Each is carefully inspected on receipt and proper sized machined-pitch block is selected.

**2.** Blades are individually straightened and aligned to conform with pitch block. There is no guesswork — accuracy is guaranteed.

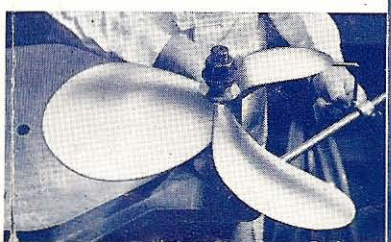
**3.** Each propeller is welded as required and edges are built up in thickness and out to full diameter. No undersize trimming.

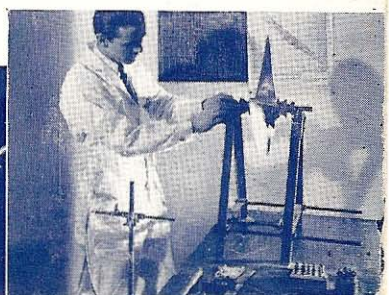


**4.** Next each wheel is ground, polished and buffed to the appearance of a new propeller. Very carefully checked for flaws.

**5.** Then comes Balancing and Checking for proper spacing and equalizing of blades.

**6.** Back on the patented pitch block for an inspection. It leaves this block only when it can be okayed as 100% accurate.





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