

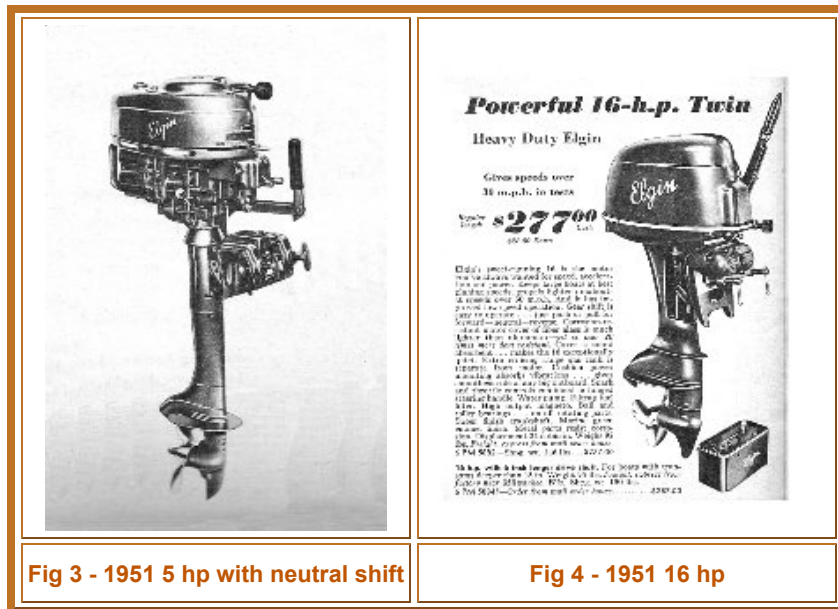
These classic pea-green motors, manufactured by West Bend, are some of the best running antiques available. They start easily, develop good smooth power, and will idle down well. Figure 1 shows the Sears catalog drawings of the 1948 1.25 and 2.5 hp models and Figure 2 shows a 1948 6 hp model with semi-automatic rewind and a full reversing leg.

The Elgins were completely new designs and were developed through comprehensive, year-round testing in Sears Marine Laboratories at Pike Lake, Wisconsin and Fort Meyers, Florida. They featured synchronized throttle controls, high quality Wico magnetos and Tillotson carburetors. Other quality features of these motors include a Hyatt top main roller bearing on all models, including the 1.25 hp air-cooled single. Some later models featured rubber motor mountings and a neutral shift.

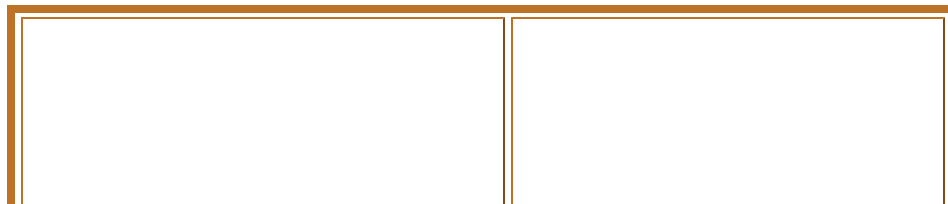
Evolution of the Elgins

The Elgin motors in the 1946 - 1954 time period show continual development and improvement. Every year improvements were made to the existing designs. Table 1 below shows how many distinct models were produced in this limited time period. Most of the changes were done so that new parts could be put in the older motors. The newer magnetos, carbs, rewinds and water pumps could all be retrofitted into any earlier similar model. This presents a very favorable picture about how Sears and West Bend valued their customers.

By 1951, the early 3.5 and 5.5 hp twin cylinder motors had evolved to 5 and 7.5 hp models that included roller rod bearings, and a smooth operating neutral shift that made starting and operating them even easier. Figure 3 illustrates a 1951 5 hp with neutral shift.



Sometime around late 1950 or early 1951, Sears added the 16 hp Elgin to the lineup and Figure 4 shows a 1951 catalog illustration of this model. It featured a full gearshift, twist-grip throttle, fiberglass hood, Fairbanks-Morse magneto and roller & needle bearings throughout. In 1952 Sears added a 2 hp air-cooled motor. At the same time the original 1.25 hp air-cooled motor was phased out. The 1953 version of the 2 hp air-cooled motor is shown in Figure 5. In **1955** a completely redesigned motor lineup was introduced and production of the classic pea green motors ended.





**Fig 5 - 1953 2hp 571.58202 owned by Ron A.
(see additional photos below)**



Similar 1958 2hp

Model Identification

Please find below a link to the West Bend made Elgin model numbers along with some of their specifications and tune up information. This table was compiled with information from Elgin service manuals, owners manuals and parts lists. Also below is a link to a page outlining where to find and how to read your model #.

Elgin 1946-1954 Model Identification and Specifications

A note on the model numbers - There is no definitive listing of Elgin model and serial numbers, below represents the best effort to date to catalog them. Some outboards may have a different last digit from the ones noted below. If you can not find your exact number and only the final number is different from a model listed, that will be the closest match. Click on the links below for the following:

[LINK: Reading Elgin model identification numbers](#) *<--Read this first!*

[LINK: Sequential List of Model Numbers](#)

[LINK: Model Numbers by Horsepower](#)

Magnetos and Spark Plugs

The 1946 - 1954 Wico magnetos used three types of coils. The early coils are brown and have a 5/8" center lamination. These coils are usually still in good condition today and this type of magneto usually requires only a point cleaning and gapping to 0.020", and perhaps new spark plug wires. The second version magneto has the 5/8" laminations but the coils are covered with black plastic. These coils may be cracked but can be repaired with epoxy or other insulating material or they can be replaced with the earlier brown coils. The final magneto design uses black plastic covered coils with 7/16" center laminations. These coils are quite often cracked and may require replacement. If this type coil does need replacement, a 1950s style OMC coil can be substituted. On most models, the Wico points have a

bakelite slider that slides in a groove in the magneto plate. This slider should be cleaned and lightly lubricated. Old oil or dirt in the groove can make the points sticky which results in a poorly running motor.

Over the years Sears recommended various Allstate, AC and Champion plugs for their motors. All of the 1946 - 1954 motors run well with modern Champion J11C plugs available at auto supply stores. The J11Cs come pre-gapped at 0.035"; this works fine for all the motors. The J11C is a little longer than the older spark plugs, and if your motor has a spark plug cover, care must be taken to make sure the spark does not jump to the cover.

Fuel System and Oil Mix

The Tillotson carburetors used in the Elgins are almost identical to those used in Martins and Scott-Atwaters of the same time period. They very seldom need new parts other than gaskets which can be made from gasket material. The carbs use a metal float and have adjustable high and low speed needles. The entire carburetor usually requires a complete cleaning. It is very important to clean the idle tube thoroughly. This tube can be removed from the top of the carb with a screwdriver. A good soak in lacquer thinner followed by a cleaning with either compressed air or a wire is essential to make sure that the motor will idle well.

The synchronized throttle butterfly can be adjusted by placing the mag handle in the fastest running position and then observing the groove in the left end of the throttle butterfly shaft. It should be exactly horizontal, corresponding to the butterfly inside the carb being fully open.

When you are ready to run the motor, both needles should be preset to 1/2 turn, then adjusted as necessary for smooth running. The high speed needle should be opened an additional 1/4 turn when starting cold. After the motor has warmed up, the high speed needle should be adjusted to its final position. When the motor is running well at high speeds, the low speed can be adjusted. The low speed adjustment is very sensitive and when it is readjusted the motor should be given 5 seconds or more to fully respond to the new setting.

Prior to 1951 Sears recommended 3/4 pints of SAE 30 or 40 weight motor oil per gallon of gasoline for all motors. Starting in 1951, the specified mix was changed to 1/2 pint per gallon in all motors. Today, modern 2-stroke oil with the TCW-3 designation should be used on all water cooled motors. Air cooled outboards should use 2-stroke oils with the TC designation such as used by weed whackers and chain saws. **Modern automotive oils should be avoided at all costs.** All of the 1946 - 1954 motors should run fine on 1/2 pint per gallon.

Lower Unit and Water Pump

The water cooled motors used two types of water pumps. The early motors used a bakelite sliding vane type pump. This type pump can be identified by the water inlet holes located on the lower left side of the tower casting. The sliding vane pumps usually still work well enough to run and use the motor. If the pump does not work well, servicing it may either be easy or somewhat difficult. On some models with this style pump, removing the lower unit requires pulling the power head from the tower and then removing a groove pin and a slotted nut at the bottom of the main swivel tube. This is a lot of work but is the only way to remove some early design lower units. Once the lower unit is removed, the sliding vane and the lower water pump cover can be examined. The Elgin spec on the vane length is 0.852" - 0.854" with a wear limit of 0.842." Replacements are not readily available but a new one can be easily made from some similar material. If the lower pump cover is worn from the drive shaft rotation, it can be renewed by reinstalling it upside down. To do this only requires countersinking the two small screw holes in it.

Around 1950 a new style pump with a flexible vane impeller was introduced. Motors with this style pump can be identified by the water pick-up holes in the front of the lower unit. These motors have lower units that can be easily removed. The life span of the flexible vane impellers was relatively short and many motors found today have failed impellers. Fortunately AOMCI member Bob Long in WA makes replacements, you can reach him at flyingscott91@yahoo.com or through his [website](#). Replacing the impeller on these style lower units is not difficult.

All Elgin motors from this period use grease in the lower unit. Lubriplate 105 is a good choice today, it is available at most good auto parts stores like NAPA and others. Some motors have fill and vent screws above & below the gearcase bulge on the lower unit - a small amount of air pressure may be used to force out the old grease (Watch out, this can be messy if too much air is used!) If no fill/drain screws are present then remove the propeller and then the carrier bearing to clean & refill.

Repainting 1946-54 Elgins

Our resident guru has had good luck repainting the 1946-52 Elgins with Rustoleum Satin Spruce Green. Its available at many retailers such as WalMart and others. With an overcoat of Duplicolor Clear Ceramic engine paint from NAPA it produces an almost dead match for the 46-52 motors.

Paint for 1954 Elgins

These motors were painted in a light green and dark green color scheme.

For the dark green the best match we have found is Rustoleum Dark Hunter Green (no. 7733). This color is a dead on match for several motors we have compared it to.

For the light green the best match we have found is Rustoleum "Painters Touch" Seaside Green (no. 240266). This is a close but not exact match. Comparing it before you paint with it is recommended.

Neither of these colors is advertized as gasoline proof so we recommend a clear overcoat of Duplicolor 500 degree Ceramic Engine Paint.

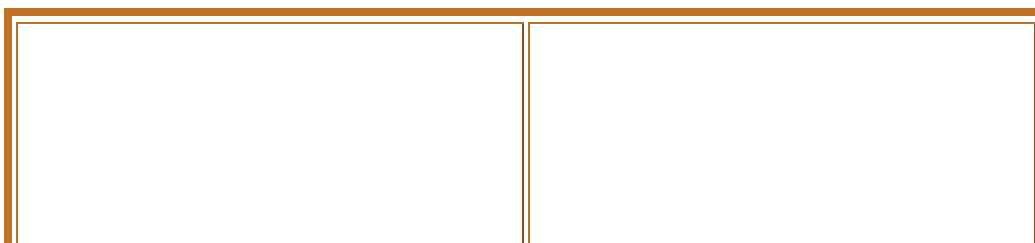
The colors are available at stores like Wal Mart or Home Depot. The clear is available at most auto stores.

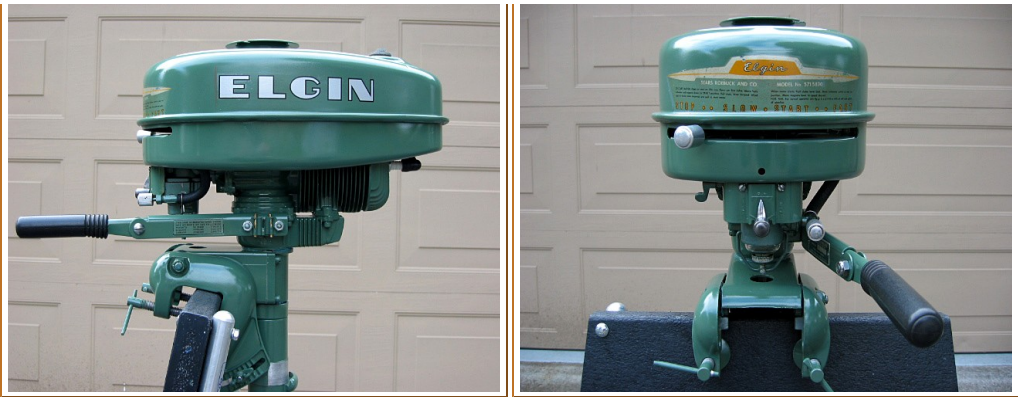


Restored 1947 1.25 hp model 301, 1947 2.5 hp model 401, and 1947 5.5 hp model 601



Boating fun in the 1950's (Circa 1950 Elgin promotional photo)





Two more shots of Ron A's beautiful 1953 2 hp model 571.58202

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