Johnson OK Series – Part 1

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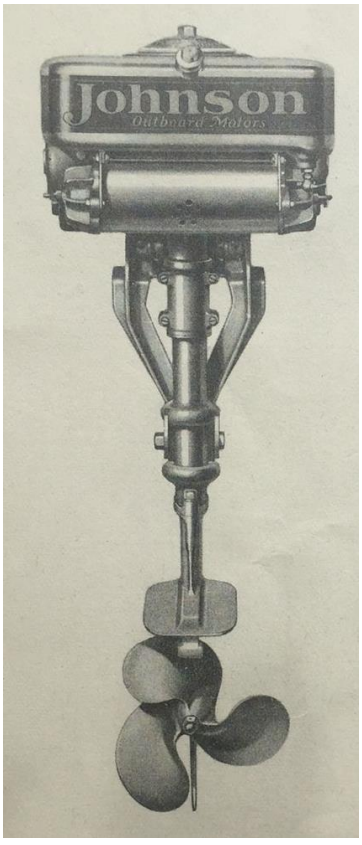

Fig. #1. 1927 Johnson K-35 the first of the K Series

Fig. #2. 1928 Johnson K-40

The OK series of Johnson outboards receive less attention than some of the many other models produced by the company. These motors are not exotic or rare, but do represent an important part of Johnson history. The OK series was produced in both the US and Canadian plants prior to WWII. Some confusion is created by the continuation of the OK series in the Canadian market after WWII. To fully understand the OK series and its role in the Johnson line, we must start by looking at the K series motors.

The Johnson K Series - The Predecessor of the OK

The K series was introduced by Johnson in 1927 as the K-35 Standard Twin **(Fig. #1).** This motor filled the gap between the A series Light Twin and the P series Big Twin. The motor featured a 2-5/16" bore and 2-1/16" stroke, resulting in a displacement of approximately 17.3 cubic inches. The motor was an opposed twin with simple barrel type carburetor. During these early years, the horsepower was given as a range based on RPM. The 1927 catalog showed up to 4.8hp at 3000 RPM in stock form. Removing the hot air tube and opening the exhaust cut-out was said to yield 500 more RPM and a peak output of 6.45 HP.

Johnson introduced their 40 series motors for 1928 including the K-40 Standard Twin **(Fig. #2)** and the KR-40 Special Racing Standard Twin. As the popularity of outboard racing increased, Johnson re-worked the K series motors to meet the upper limits of B class specifications. The 1928 motors saw the bore increased to 2-3/8" and the stroke to 2-1/4", giving a displacement of 19.93 cu.in., just under the 20 cubic inch limit for a B engine. The K and KR shared the same displacement, however the KR had higher compression, different port timing and came standard with a 2 blade propeller. The outputs were given as 7.15HP @ 3500 RPM for the K-40 and as high as 11.00HP @ 3800 RPM for the KR-40 with exhaust open and hot air tube removed.

In 1929 Johnson began referring to their motors as Sea Horses, a tradition that would stay with the company for the remainder of its operation. Under the new Sea Horse banner, the 1929 K-45s were named "Sea Horse 10" **(Fig. #3).**

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Fig. #3. 1929 Jonson K-45 the First use of the name "Sea Horse"

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The number 10 seems arbitrary; it is not the displacement or horsepower of the motor. All of the Sea Horse motors were assigned a number, perhaps only to better clarify their position in the line for the public who might not know that a P series was a larger motor than a K series. Still at 19.93 cubic inch and 7.15 HP in stock form, the K 45 was fitted with a underwater exhaust and release charger to ease starting. The model KF-45 has a round canister muffler like the K-35, to allow for full pivot reverse. There was no KR motor offered for 1929.

1930 was an interesting year for the Johnson Motor company. In 1929, a large quantities of motors were produced and the rotary valve induction system was debuted on some models. The 1930 line was a mix of 45 series motors carried over from 1929 and the new 50 series for 1930. Johnson continued selling the K-45 "Sea Horse 10" and introduced a completely new design; the K-50 "Sea Horse 12" **(Fig. #4).** The K-50 was an alternate firing twin with a 2-1/8" bore and 1-31/32" stroke, resulting in a displacement of 13.96 cubic inches. This motor fit the 15 cubic inch limit for A class racing. The K-50 had a crankshaft rotary valve for induction. The output was advertised as 8 HP at the recommended speed of 3500 RPM. They claimed that it would produce 12 HP at peak capacity. The alternate firing K went on to enjoy much success in A class racing. The KR and Alky modified KRs were some of the best A class motors of the pre-war era. We won't discuss the alternate K any further and will get back to the opposed models that we began with.

Fig. # 4. 1930 Johnson K-50.
The first alternate firing K series motor.

The OK Series is Introduced

1931 Johnson Motors were called the 55 series. Most models were the same as the 1930 offerings. The opposed twin K-45 was dropped for 1931. The A series had become alternate firing motors in 1930. Tucked away at the back of the 1931 catalog, were two "new" 55 series motors, the OA-55 Light Twin and the OK-55 Standard twin. By 1931 the effects of the 1929 Stock Market crash were permeating all facets of daily life. Johnson must have seen a demand for some basic, low cost motors that did not have all of the features that were being added to the rest of the line.

A low priced outboard seemed like a wise idea. The O in OA and OK referenced the opposed-firing design of these engines. These two models were the first time that Johnson strayed form the Sea Horse moniker introduced in 1929. These motors were once again referred to as the Light Twin and Standard Twin as they were in the late 1920's. The powerhead of the OK-55 had the same 19.93 cu.in. displacement as the K-40 and K-45. The output was given as 8 HP at 2800 RPM. The carburetor was the same simple barrel type used in years past. The release charger that was added to the K-45 was eliminated on the new OK models.

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The most obvious visual change on the OK-55 (and OA) was the use of a cylindrical, steel fuel tank finished in bright red **(Fig. #5).** The tank wore a decal identifying the motor as the Johnson Standard Twin. These fuel tanks were only used in 1931 and make the motor attractive to collectors due to their unique appearance. The lower unit was a new design that was more streamlined than earlier K series. A new round muffler was designed with a tapered down-pipe, and it would stay with the OK series throughout its production. The OK-55 came equipped with a 2 blade weedless propeller. The 1931 catalog advertised these motors as being suitable for small boats or commercial use.

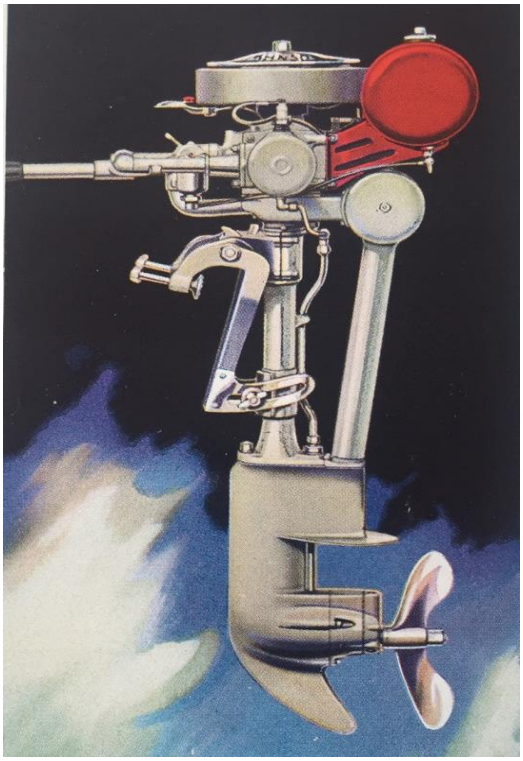
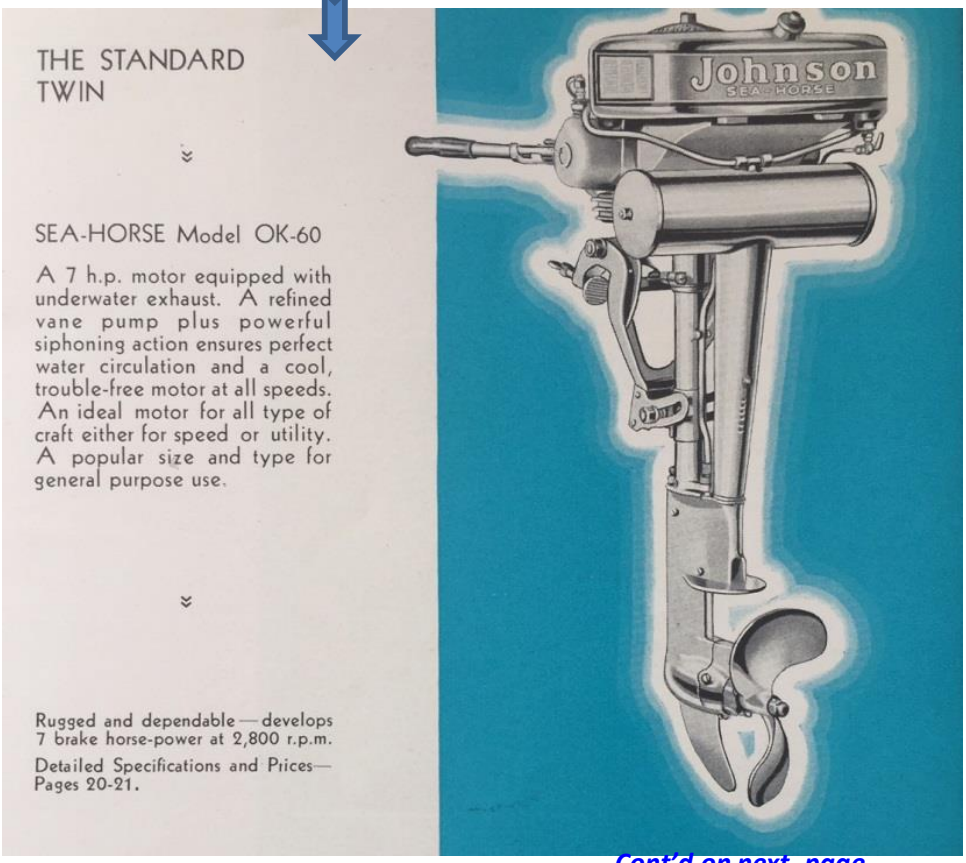


Fig. # 5. 1931 Jonson OK-55. The first of the OK series with unique cylindrical fuel tank.

The 1932 OK-60 saw a decrease in output rating to 7 HP. There was no shock absorber clutch on the OK-60. This change was reversed and the clutch was added back to subsequent models. The specifications were otherwise unchanged. The horsepower change may have been to create some differentiation between the OK-60 Standard Twin and the K-50 "Sea Horse 12" which had a rating of 8 HP. The most significant change on the OK-60 was the elimination of the red cylindrical fuel tank found on the OK-55 and a return to the typical "wrap around" aluminium tank as found on most Johnson motors **(Fig. #6).**

Fig. # 6. Johnson OK- 60. Production started in 1932. This image is from the 1934 Canadian Johnson brochure. Note the addition of the name "Sea Horse"



1932 was the second, and last year that the Johnson OK series appeared in the American full line Johnson catalog. Similar to other models, it is likely that there was some leftover OK-55 and OK-60 models that were sold off in 1933 and later.

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The Johnson model list for 1935 includes the model OK-75 with a rating of 8.1 HP **(Fig. # 7)** however, the OK-75 does not appear in the US version of the 1935 catalog. The horsepower rating of the OK-75 was returned to the 8 HP mark because the rating of the alternate firing K series had been boosted to 9.3 HP by 1935. The OK-75 is the last OK model that appears on US built model charts and marks the end of the OK series production at the Waukegan, IL plant. It is unclear why the OK-75 was not included in sales literature in the US. The OKs were omitted from the full line catalogs and price lists after 1932. From here on, the story of the OK series moves North.

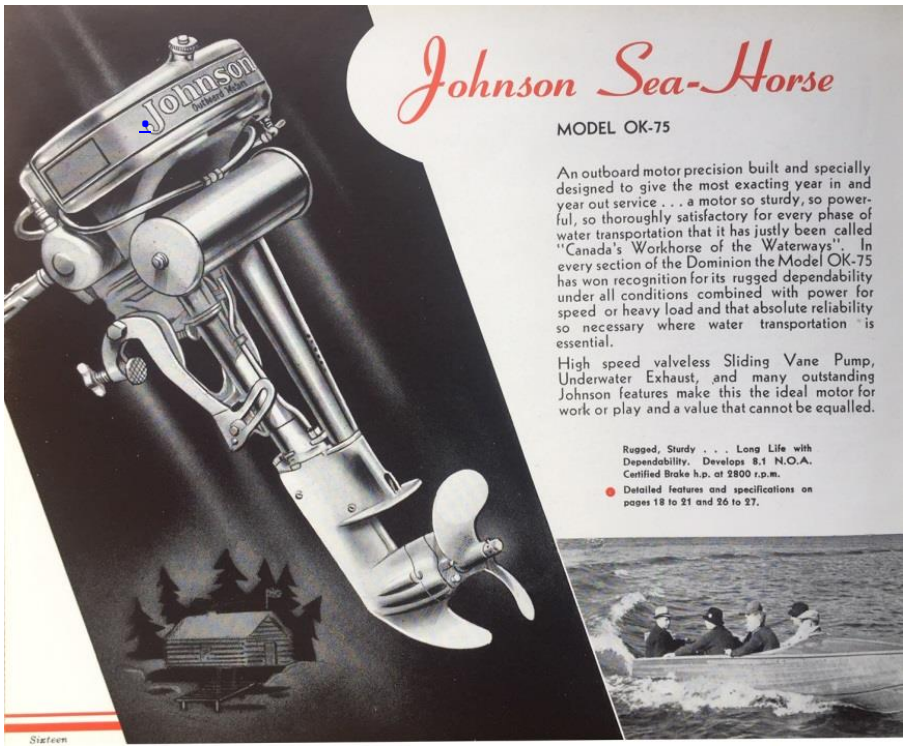

Fig. # 7. 1935 Johnson OK-75. The first new OK model since 1932. Note there is no "Sea Horse" name on the decal.

The Canadian OK series

After the discontinuation of the OK-75 in the US, production of the OK-75 continued at the Canadian Johnson plant in Peterborough, Ontario until 1940 and continued as other variations until 1950. The OK-75 appears in the 1935 through 1939 Canadian Brochures. The decal on the tank reads "Johnson Sea Horse" from 1935 to 1937. This was the first time that a OK series motor was referred to as a Sea Horse. In later years, the decal reads "Johnson Outboard Motor". The Sea Horse name did not re-appear on the OK series until sometime in 1946.

Year	Series	Year	Series
1925	25	1933	65
1926	30	1934	70
1927	35	1935	75
1928	40	1936	80
1929	45	1937	37
1930	50	1938	38
1931	55	1939	39
1932	60	1940	10

Fig. #8. Johnson Series by year.

In 1940 Johnson used the number 10 to designate the series of motors. This creates some confusion among those who are unfamiliar with Johnson models. Traditionally Johnson increased the series number by 5 ever year. In the late 30's they deviated to some extent**. (See Fig. # 8).** The 1940 OK-10 was the same motor as the 1935-39 OK-75 simply with an updated model number to match the new series naming. The OK-10 is listed as a 1940-45 model. In reality, most OK-10s were built in 1940. By late 1941 most of the capacity of the plant had been switch to wartime production and very few outboards were being produced. The records from Peterborough show a handful of OK-10s in 1945, before the introduction of the OK-15 in 1946. The only cosmetic change to the OK-10 was the replacement of the smooth muffler end caps found on previous OKs with ribbed castings. These stayed with the OK series until the end of production.

PART 2, of the Johnson OK story will continue in the June 2019 Newsletter.