

Johnson CD Series - Part 1

Report & Photos: Adam Gibb

In 1954 Johnson introduced the new 5-1/2 hp CD series motor to replace the successful T series 5hp that had sold well since 1941. Johnson based their 1954 marketing campaign around their new QUIET motors.

The 5-1/2hp CD was a new design from top to bottom, with engineering advancements to make the new motor as quiet as possible (Fig.1). The noise reduction was accomplished through several innovations, including a rubber mounted transom bracket to reduce vibration in the boat and an air intake silencer on the carburetor to reduce reed noise. The biggest change was the new “up and off” clamshell hood that featured rubber mounts at the back, allowing easier access to the spark plugs and more sound dampening than previous models (Fig.2).

The new CD also featured FNR gear shift. This was now the lowest hp Johnson to offer full gear shift. In the previous model year, the 10hp QD and 25hp RD were the only gear shift models, while the 5hp TN had only a neutral clutch and required turning the motor 180 degrees for reverse. The 3hp JW remained a direct drive.

Other engineering improvements on the CD included helical cut gears in the lower unit that ran quieter than the straight-cut bevel gears in the TN. A modern float type carburetor replaced the old dual carburetor setup that had been found on the small Johnson motors since 1937. Throttle control and spark advance were moved to the grip on the tiller handle as had been done on the 1953 10hp and the 25 hp motors since 1951. The CD was rated at 5-½hp, a ½hp increase over the TD and TN. The displacement remained the same at 8.84 cu.in with a 1-15/16 bore and 1-½” stroke. The increase in power likely came from improved induction and more precise mixture control. The internal rotor valve of the T series was replaced with reed valves. The CD weighed 47 lbs as a short shaft model, 3 lbs more than the TN. The gravity feed integral fuel tank of the TN was eliminated in favour of an external pressurized fuel tank with a 4-gallon capacity, this gave the buyer a great increase in range over the 7-pint fuel capacity of the TN. This was attractive to fishermen and eliminated the need to carry a separate fuel can (Fig.2) New Up and Off clamshell hood.



(Fig.1) Page from 1954 Johnson brochure highlighting NEW features of the CD model.



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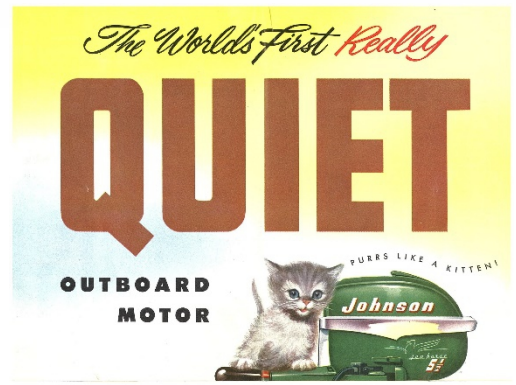
Johnson marketing material for 1954 detailed the new mechanical features and emphasized that the motors were quiet. The word QUIET appeared in bold text along with images with a purring kitten. (Fig.3) Their claim was that regular conversation was possible while the motor was running. Additional marketing materials included cards to hang on the motors in dealer showrooms with the word QUIET in bold text (Fig.4), buttons and ashtrays showing the new motor along with a kitten reinforced the quiet theme. Johnson published a 28-page booklet, "Quite Facts", explaining all of the new features of the 1954 line. The front and rear covers are dedicated to promoting the low noise level of the motors. (Fig. 5)

The QUIET claims made by Johnson were not just marketing hype. The new 5-½hp CD was recognized by the National Noise Abatement Council. (Fig. 6) Shows Willis L. Manning (right) and W.C. Conover, Chief Engineer for Johnson Motor Company at the presentation of a "Certificate of Merit" for innovations in noise reduction achieved on the new CD.

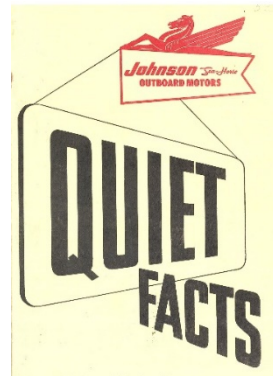
The CD series was introduced as the CD-10 for the 1954 model year. Similar to the introduction of the all-new RD series in 1951, Johnson made running changes to the motor in early production. The model number was changed to CD-11 and finally CD-12 before the end of the 1954 model year. The changes in model number represented a significant engineering change that warranted clear designation on the motor ID tag.

The CD-10 was the shortest iteration of the CD series. As first introduced, the new 5-1/2hp motor was not compatible with Johnson's new Ship Master Remote Controls, introduced in 1953. In early 1954, only the 10hp and 25hp motors were compatible with remote controls. Perhaps Johnson did not expect the demand for remote control capability on the 5-1/2 hp motor, but they very quickly made changes to the motor that allowed remote hook ups and began calling it a CD-11. In Canada, this change came after only 900 CD-10s were produced. Kits were issued for adapting the motors with remote control. Service bulletin #433 lists the parts contained in the kits for the CD-10 and CD-11. The installation on the CD-10 was a significantly larger task because the motor was not built to receive remote controls from the factory. The following modifications had to be made;

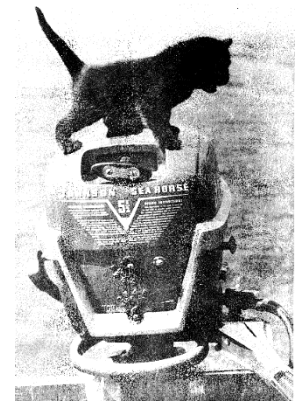
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(Fig. 3) The purring kitten was used throughout all 1954 Johnson Advertising material.



(Fig.4) A Dealer Showroom "Hang Tag" for the CD.



(Fig. 5) A photo of a real cat standing on a running CD was published in the "Quite Facts" booklet.



(Fig. 6) L-R: W.C. Conover, Chief Engineer for Johnson & Willis Manning at "Certificate of Merit Award" presentation.

- Replacement of the steering (carrying) handle with one that had provisions to receive the steering adapter.
- Replacement of the gear at the base of the throttle tower with one that had an arm for the throttle cable.
- Cut away the cowling for clearance around the throttle gear.
- Replace the shift handle with the new design to receive the shift cable. This required removal of the powerhead -Mount the anchoring boss on the Starboard side of the cowl. Replace the retaining ring on the magneto plate with a new one that eliminates the wave washer, allowing the plate to rotate with less resistance.

The CD-11 was built with most of these modifications from the factory, making the installation process of the remote controls much more straightforward. I find it interesting that although the steering handle design was updated to include the mounting tabs for the accessory remote steering bracket, the factory did not include a steering cable mount in the handle until the CD-13 that came out in 1956. (Figs. 7 & 8) show a CD-10 with the early shift handle and the throttle gear, both unable to accept remote controls.

The changes from CD-10 to 11 were mostly related to the remote-control compatibility above. The gearcase was also modified to include a larger thrust face on the forward gear.

The CD-12 was introduced late in the 1954 model year. The crankcase changed part number. I believe this was to improve the efficiency of oil scavenging from the top main bearing back to the intake manifold. The CD-12 is confusing because it spanned the 1954 & 1955 model years. The CD-12 was the highest production of the early CD series.

All 1954 motors CD-10, 11 & 12 were painted Seahorse Green with Dull aluminium trim on the wings of the hood. The 1954 motors had thumb screws that held the front half of the hood in place to a bracket extending from the intake manifold. After the CD-11 model, the low-speed adjustment knob was changed from a round knob to the lever type used on the high-speed jet. In the 1955 model year Johnson changed the color of the wings on the hood to Cream in place of the Dull Aluminium. The decal on the front of the hood that previously included starting and oiling instructions was replaced with the stylized Sea Horse logo and the instructions were moved to the top of the hood. (Fig. 9)



(Fig. 7) The starboard side of a CD-10 showing the early design shift handle, not compatible with remote control.



(Fig.8) The port side of a CD-10. Note the lack of arm on the throttle gear & the cowl is not cut away for clearance.

I don't know when production of the CD-12 changed from the 1954 color scheme to the 1955 scheme. The records are unclear. The motor in figure 10 is a US built, late 1954 model CD-12. It has the 1954 graphics and thumb screws. This is evidence that some CD-12's were sold as 1954 models. The thumb screws on the hood were eliminated early in the 1955 model year. In Canada, the thumb screws used to secure the hood were eliminated at serial number 183964, after a total of 2550 CD-12s were produced. In the US, the change happened at serial number 1221830. These are commonly referred to as early and late style CD-12s. The CD-12 actually had 3 major iterations. The first was the CD-12 with 1954 graphics, followed by the CD-12 with 1955 graphics and thumb screws and finally the 1955 style without thumb screws.



(Fig. 9) Starting & Oiling instruction on CD-11.



(Fig. 10) 1955 Sales brochure showing the CD-12 with cream wings & new decal on the front of the cowl . Note the absence of thumb screws on the side of the cowl.

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Canadian production of the CD series was as follows;

| | | |
|------------------------|--------|------|
| 1954 | CD-10 | 900 |
| 1954 | CDL-10 | 100 |
| 1954 | CD-11 | 5130 |
| 1954 | CDL-11 | 370 |
| 1954 and 1955 combined | CD-12 | 6775 |
| 1954 and 1955 combined | CDL-12 | 625 |

The number of CD-12s produced in the 1954 vs 1955 color scheme is unclear from the production records.

The 1955 Johnson brochure claimed that in 1954 more people purchased the 5-½hp CD than any other outboard model ever produced. They also claimed that the 1955 model was even quieter. This claim likely stemmed from the replacement of the thumb screws on the cowl with two more rubber mountings, making the cowl fully dampened by rubber. **(Fig. 10)**

The CD series are excellent running motors that idle very well and are easy to run. The series continued to see upgrades and carried on into the late 1960s. I hope to get around to writing about the later ones in the future. Meanwhile, anyone who enjoys classic era motors should consider one of the early CD series for their collection. They are Quiet, inexpensive, easy to work on and very reliable.