

## Johnson QD Coils

### Article & Photo's By Peter McDowell

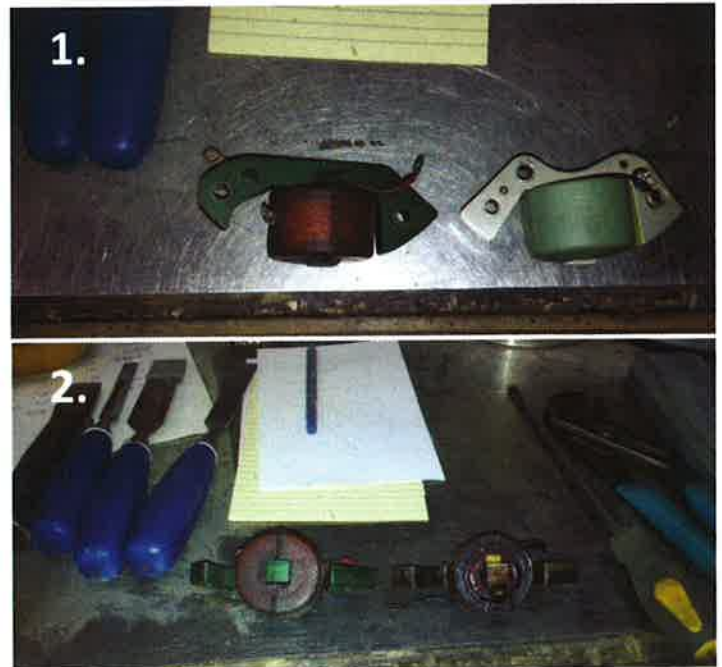
I originally wrote this same story about 19 or 20 years ago. I can't believe it has been that long. The subject has come up several times recently and so I thought I should write it again (I no longer have the original story) for those not around at the time.

A new type of coil was introduced in 1949, part number 580040. (see **picture #1** on the left) It was used in 1949 and 1950 on the QD10 & 11 and also on a few other motors.

Again in 1951 a new coil was introduced, part number 580118, (see **picture #1** on the right) which was used on all 1 and 2 cylinder motors up to and including 1972. The newer coil is still available today as part number 584477.

The 1949-1950 coil is NLA and very difficult to come by used or NOS, firstly because of its age, it was only used on a few motors for two years, and secondly because the material used to encapsulate the coil degrades with age. It becomes semi-liquid at room temperature.

**Picture #2** shows two of the old coils side by side. The one on the left is in very good condition. The one on the right is how most of them look. You will find the majority of these motors with sticky brown goo dripped down the cowl, front, back or sides depending on which position it was left in. I believe it is a combination of age and heat because I have seen a very few NOS coils where the material had not degraded, so it can't be just age.



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The 1951 – 1972 coil is still available today, even though it has not been used for 44 years, because it ended up being used on millions of motors and there is still enough demand to justify the cost of production. If you have one of the 1949-50 motors that uses the 580040 coil there is a solution for replacing the coils. It is possible to install the 1951-1972 coils on the laminations for the old 1949-1950 coils. The coils are close to the same size but the laminations have different mounting hole positions. You will need to make minor modification to the new coil, the old laminations and the mag-plate.

For the laminations: The old laminations had two brass strips riveted to the section the coil is installed on, one on the top and one on the bottom. After the coil is installed the end of the strip is bent up locking the coil in place. These brass strips make the lamination too thick for the new coil to fit over. They need to be cut off. If you look at **picture #3** you can see where I bent back and cut off the brass strips.

For the coils: The new coils are slightly thicker in the direction perpendicular to the crank-shaft, than the old coils. The lamination must extend beyond the coil, or the coil will come in contact with the magnets. It doesn't have to clear by much. When the laminations are properly installed the gap between them and the magnets on the flywheel is .010" (ten thousandths of an inch). The newer coils have a molded cup as the outer layer, you need to trim a small amount of it to allow the coil to go on the lamination. If you look again at **picture #3**, you can see where I have removed a small amount of the cup and material filling it. Once you have removed enough material for the coil to clear the lamination you can epoxy it in place.

For the Mag-plate: The new coils have the spark plug wire connection terminal on the opposite side of the coil from the old coils. I used my handy-man's secret weapon #2 (the dremel tool) to remove some material from the mag-plate to allow the coil to be installed. (**see picture #4**) I have done this on my own QD10 and also for several customers.

