

Amal Update Kit

Shortly after the introduction of the Concentric, Amal realized that their design did not give optimal fuel atomization on 4-stroke motorcycles. Shortly afterwards they introduced a Concentric "jet update kit" to solve the problem. Unfortunately, few motorcycles were retrofitted at that time and many of those motorcycles and carburetors are still in service today awaiting their update kit. To further complicate matters, the early design was retained for all 2-stroke engines, so both part designs are still available from Amal distributors.

If your Concentric carburetor has the older screw-in type pilot jet in the float bowl and you need new carb needles or needle jets, there's a good chance the best repair for you is the complete Concentric update kit. The Amal part number for the kit is 622/235 and consists of 3 parts: a new jet block, a new needle jet and a new needle.



The Amal Update Kit

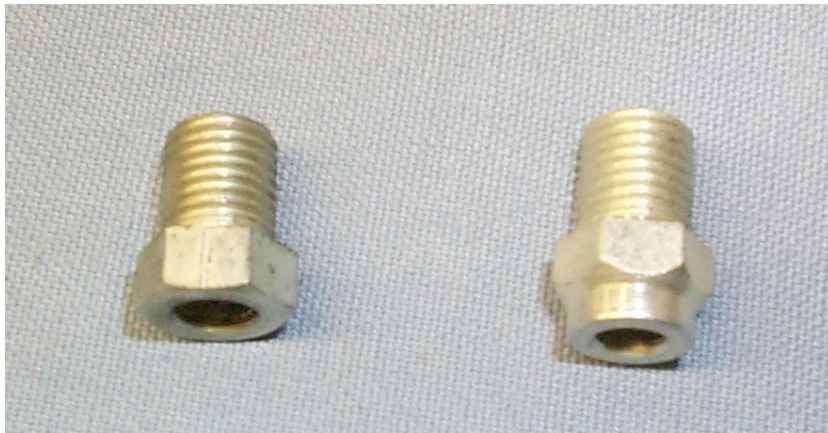
Additionally, if your bike is running strangely, and it was last repaired using used carburetor parts off any English motorcycle made around 1968 or 1969, there's an excellent chance that carbs parts have been intermixed between the two "early 2-stroke" and "late 4-stroke" designs. Spotting the difference between the 2 designs is difficult, even for experienced Brit bike mechanics.

As with any piece of highly technical equipment, proper carburetor settings are critical towards the correct running and operation of the motorcycle. Furthermore, in tuning multi-carburetor motorcycles it is essential that the component parts of all the carbs be identical. In the case of the Amal Concentric, with 2 generations of internal parts in circulation, the intermixing of parts becomes a very real issue.

The Jet Block

The easiest way to differentiate the 2 designs is by the “jet block”, or “jet holder” as it’s sometimes called. This part is in plain view as soon as the Concentric float bowl is removed.

As you look at the underside of the carburetor with the float bowl removed, the old style jet block has the hex portion, then it's completely flat on the bottom, just as if they hollowed out a bolt to make the jet block. The new style jet block has a small conical section added below the hex, which lowers the main jet position about 1/8 inch.



Concentric 2-stroke and 4-stroke jet blocks

The Needle Jet

The older and newer style needle jets are very easily confused... until you lay them side-by-side. The older style needle jets are shorter, seem to have a smaller top opening and are not cross-drilled. The later style needle jets are longer, seem to have a larger opening at the top and contain a cross-drilled hole through the entire body, positioned right on the hex.



Concentric 2-stroke and 4-stroke needle jets

The Needles

The hardest of all the changes to spot is the needles. The updated parts kit includes a longer carburetor needle than the early model. Other than length, there does not seem to be any identifying marks to differentiate the 2 needle designs.

Details

The following chart gives the over all length of the parts to make identification easier.

	2-stroke (Early Style)	4-stroke (Late Style)
Jet Block	0.750 in	0.875 in
Needle Jet	0.720 in	0.800 in
Needle	Not available	2.675 in

Hope this helps! 🤝

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