

2CV CARBURETTOR COVER SCREWS

Revision 3



By Graeme Dennes

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This article applies to the dual-choke carburettor fitted to the 2CV from 1978 onwards.

1. Two Types of Carburettor Top Cover Screws Were Used by Citroen/Solex:

- a. Paris-manufactured left-hand drive ("European") 2CVs generally used 5mm diameter, 0.8mm pitch screws, which is a DIN and (later) ISO thread standard. These have 15 thread *spacings* over 12mm ($12\text{mm} / 0.8\text{mm} = 15$) and are commonly available from automotive parts stores, hardware stores, etc.
- b. Paris-manufactured right-hand drive ("English") 2CVs often used 5mm diameter, 0.75mm pitch screws, which is a superseded JIS (Japanese Industrial Standard) thread standard. These have 16 thread *spacings* over 12mm ($12\text{mm} / 0.75\text{mm} = 16$) and are quite difficult to find. I have seen ISO and JIS screw types used in carburettors in RHD cars, but the extent that each type was fitted is not known to the writer. Carburettors may also have been changed previously, and so the type of screws originally fitted to the cars when new may be difficult to ascertain.

The two thread standards appear very similar to the eye, but the screws are *not* interchangeable, and *permanent* damage to the threads in the carburettor body *will* result from fitting the incorrect screw.

Further, the writer has seen a small number of carburettors with *both* types of cover screws fitted! (This would have been done in error.) The rule? Always return the *same screw to the same position*. You'll only have one chance, at best, to fit an incorrect screw to a socket. If you then attempt to fit the original screw to that position, you will usually find the carburettor body thread has been damaged and stripped, and the screw cannot be tightened! A helicoil repair will be needed. You may get away with changing the thread type once, but *very unlikely* twice!

Should such thread damage occur, it may prevent proper tightening of the cover screws, resulting in poor sealing of the top cover to the gasket and body. This could allow fuel to escape and the possibility of fire! *Treat this as a very serious issue*. Another possible consequence of damaged threads is interference with the carburettor's normal operation through loss of vacuum inside the body chambers, leading to vehicle starting and running problems.

The simple rule? *Always* refit the *same* screw back to the *same* position it came from and hope for the best when retightening!

Wilson Carburettor Service, located in Campbellfield, Victoria, phone (03) 9330 3216, has a long history in repairing and overhauling Solex carburettors. They can also supply or manufacture replacement screws of 0.75mm and 0.8mm pitch to suit your requirements and can perform helicoil repairs.

2. Choke cable mounting bracket screw - Standard Screw Is Too Short:

The standard carburettor top cover screws are typically 15mm in length. However, the screw which does double duty to hold the choke cable mounting bracket should be around 22mm in length (but no longer) to maximise thread contact with the carburettor body. The effect of this 7mm shortfall is the eventual stripping of the threads in the body socket during normal carburettor maintenance activities because only about *one third* of the carburettor body threads engage with the screw. A helicoil repair will be needed if the threads are stripped. The problem may be easily resolved by fitting a 22mm length screw of the *same* thread type as the original. It seems this issue was never corrected by Citroen. Again, Wilson Carburettor Service can provide the 22mm screw.

3. The Perfect Solution:

For my green "English" 2CV, which was fitted with 0.8mm threads (yes, ISO threads!), I made up a set of six custom-length M5 x 0.8 "screws" from hex-headed bolts with a screwdriver slot neatly cut in the heads. Each screw was cut to the maximum length allowable for each position, which provided for the correct sealing between the top cover and the body, and the longest maintenance life of the carburettor body threads. Don't forget to add a split washer under each screw head, and always return each screw to the same position.

4. Photos:

At bottom of Photo 1 is a standard Solex M5 x 0.8 x 15 screw with its fitted split washer, alongside an M5 x 0.8 x 20 replacement screw (hex headed bolt).

Photo 2 shows the new M5 x 0.8 x 22 screw fitted to the choke cable mounting bracket position. Note the slot cut in the head for a screwdriver.

Photo 3 shows a side view of the choke cable mounting bracket, with the new M5 x 0.8 x 22 screw in position. Note the end of the screw just projecting outside of the lower opening of the carburettor body socket (centre of photo), ensuring the maximum number of engaged threads is being utilised. Ensure all new screws are not *too* long to cause binding against the carburettor body, else more stripped threads will result.



PHOTO 1

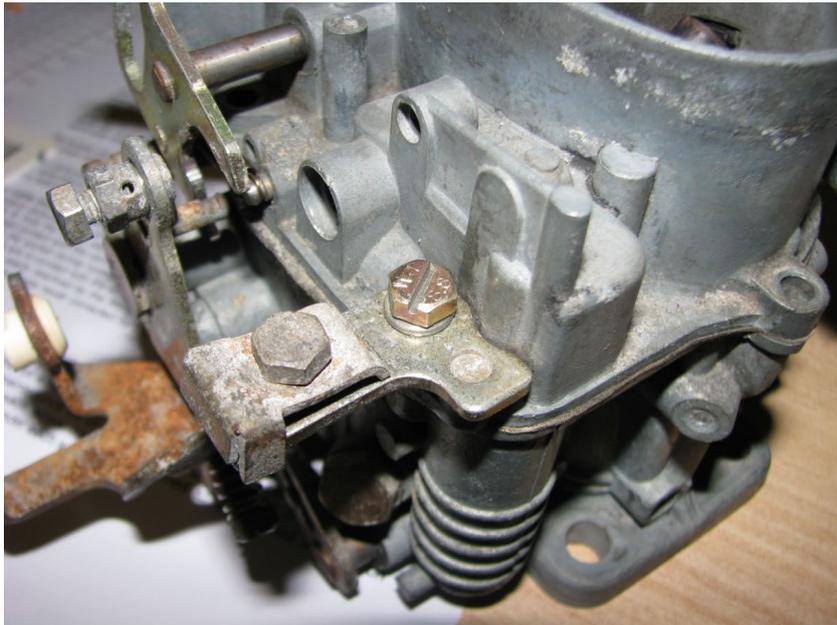


PHOTO 2



PHOTO 3

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