

BETTER FUEL HOSE CLAMPS

Revision 2



Graeme Dennes

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What attributes should a good hose clamp possess to ensure proper sealing and security of the rubber fuel hoses in your vehicle, including the clamps fitted to the carburettor, fuel pump, fuel filter, fuel tank, etc? In my experience, (1) the metal band should *not* be of the commonly available perforated (i.e., slotted) type, otherwise the multiple razor sharp edges of the slots act like scalpel blades, cutting into the hose rubber during tightening; (2) the metal edges of the clamp should be rolled (i.e., smoothly rounded) so as to prevent the otherwise sharp edges from cutting into the hose during tightening; (3) the clamp should tighten in a fully circular manner so as to ensure an even, uniform pressure is applied all the way around the circumference of the hose, to ensure its proper sealing on the fuel fittings without excessive deformation force being applied, further damaging the hose rubber, and (4) the clamp must be able to be used with small diameter hoses, including the 5.5mm inside diameter hoses used in the 2CV fuel supply line.

In the writer's experience, most commonly available hose clamps fail one or more of the above requirements, usually in the cause of lowering the manufacturing costs! Have you had a good look recently at the surface of rubber fuel hoses after the common, poorly designed clamps have been removed? You will usually find multiple cuts in the rubber hose surface resulting from the sharp edges of the worm drive slots, as well as damage from the sharp band edges cutting into the rubber. This damage to the rubber fuel hose is permanent. It occurs the *very first time* the commonly used clamps are tightened onto a new hose! Well, that's now been relegated to the past. A supplier of a hose clamp which meets the above requirements has been found. It is sold under the ABA brand. Details follow.

Two photos which illustrate two of the key attributes noted above are shown. The ABA clamp and a commonly available clamp are shown, and the clamp sizes chosen would be typical of the size used to secure a 12mm (when fitted) outside diameter fuel hose, as in the 2CV fuel line fittings.



Photo 1

Photo 1 shows the ABA hose clamp at the left, and a common (not so good!) hose clamp at the right. Both clamps have been appropriately sized for the task, and tightened to fit around a 12mm diameter hose. It's clear that the ABA clamp has remained nominally circular, ensuring it will tighten evenly around the circumference of the fuel hose, properly sealing the hose onto the fitting, and with the least compressive force on the rubber. Meanwhile, the common clamp at right has tightened into an obvious oval shape and has in fact started to deform (i.e., permanently bend) at the left side of the band, and the right side is on the verge of deforming. This clamp will definitely *not* tighten evenly around the circumference of the hose, and so will not guarantee proper sealing of the fuel fitting, even though the clamp may feel securely tightened. By the way, if you *do* manage to stop the fitting from leaking fuel when using the common clamp, the hose rubber will be compressed so brutally in places that its premature failure is essentially guaranteed!



Photo 2

Photo 2 shows the bands of the two clamps. The clamp on the left is the ABA clamp with the non-perforated band, while the clamp on the right is the commonly available clamp with the perforated band. If you look carefully, you can see the multiple sharp edges of the worm drive slots in the common clamp, waiting to slice into your fuel hose on its very first fitting, and those steel edges are indeed sharp.

Where do you obtain the stainless steel ABA clamps? They are sold by Auto Parts Wholesalers in South Australia, phone 08 8523 5888, as Small Bore Hose Clips in packs of 10. They are sold under the ABA brand, are made in Sweden, and may be ordered online. (They may be available from other sources as well.) Refer to the following web link for the details:

<https://www.autopartswholesalers.com.au/products/hose-clamps/aba-clamps/aba-small-bore-hose-clips/small-bore-hose-clips-packs-of-10->

The default listing is for Mild Steel clamps, so click the *W4-304 S/S* tab for the preferred Stainless Steel types.

These are ideal for automotive and marine use on small diameter fuel, emissions and EFI hose applications, both high and low pressure. The present range fits fuel hoses of outside diameters 7.5mm to 17mm.

The part number of the ABA clamp used for the writer's 2CVs is **Mini 12/9W4**, a stainless steel hose clamp which fits over hoses with outside diameters in the range of 11.5 to 13mm, which fits the standard 2CV rubber fuel hose. Problem solved. No more fuel leaks and no more hose damage, so the rubber fuel hose should last a long time.

The writer fitted two clamps at *each* end of the rubber fuel hose at the tank – just to be sure.

Q. When did you last check the rubber fuel hose and clamp integrity at your fuel tank?

LIST OF ARTICLES BY THE WRITER

The articles written by the writer, listed below, may be freely downloaded from either of the following club websites by clicking on the adjacent links and locating the articles. Both websites maintain the latest revisions of the articles. Before using the articles, please ensure the latest revisions are being used, as the articles are updated on an as-required basis by the writer and given new revision numbers.

Citroen Classic Owners' Club of Australia: [Technical Articles](#)

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1. 2CV 40-Litre Fuel Tank
2. 2CV API GL-4 Gearbox Oil
3. 2CV Battery Charging Circuit
4. 2CV Battery Problems Solved
5. 2CV Brake Saga
6. 2CV Buyer's Questions
7. 2CV Carburettor Cover Screws
8. 2CV Carburettor Jets and Adjustments
9. 2CV Engine Problems
10. 2CV Fuel Filter
11. 2CV Fuel Gauge and Battery Meter
12. 2CV Gearbox Output Hubs
13. 2CV Gearbox Unwinding Debacle
14. 2CV Hard Luck Stories
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16. 2CV Ignition Coil
17. 2CV Knife Edges Replacement
18. 2CV Low Oil Pressure Beeper and Lights On Beeper
19. 2CV Maintenance - Part 1 of 2
20. 2CV Maintenance - Part 2 of 2
21. 2CV Oil Breather
22. 2CV Oils and Maintenance Advice From Burton
23. 2CV Points Ignition Reinstallation
24. 2CV Roof Rack
25. 2CV Secondary Choke Butterfly Adjustment
26. 2CV Spare Parts to Carry
27. 2CV Valve Clearance Adjustment
28. 2CV Workshop
29. Better Fuel Hose Clamps – **applies to all vehicles**
30. Better UHF CB Car Radio Performance – **applies to all vehicles**
31. Ignition Coil Ballast Resistors – **applies to all vehicles**

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