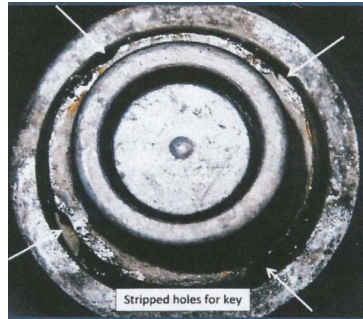
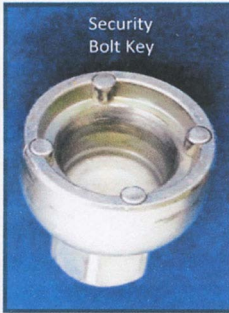


CITROËN C 5 SECURITY BOLT/NUT

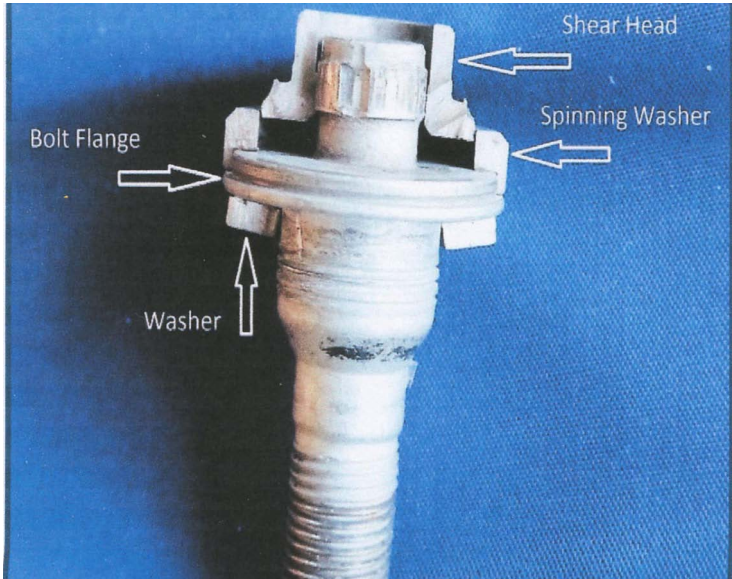
In 2016 on a trip to Queensland we managed to have a front tyre blow out in the mountains between Bathurst & Mudgee due to my lack of attention to tyre maintenance despite the continual urging of my wife to get them checked before leaving. All tyres were subsequently replaced at Mudgee. When we arrived home the car was booked in for the 100,000 Km service. I was a bit perturbed to be told on picking up the car that they could not get the left rear wheel off because the security bolt had been over torqued and had been stripped by the security key. It would be a difficult job to get it out and could take hours. See photos:



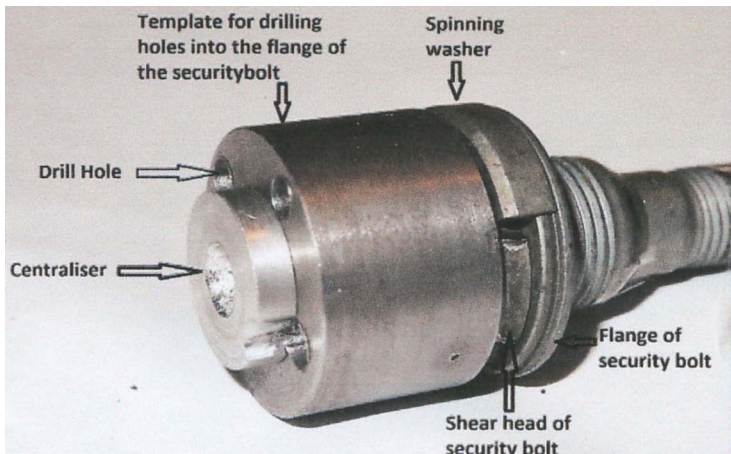
Just two weeks earlier while at Bruce and Shiona McMaster's residence at Coolah, Bruce had informed me that every time he got a new Citroën he removed the security wheel bolts and replaced them with normal ones. Little did I know that I was soon to become a victim. I hit Google to find out all about this disaster. I found that security bolts have spawned an industry in Great Britain for their removal. People lose their keys, buy a used car only to find at the crucial time the key is missing, the bolt is over torqued, the key can go missing or be forgotten to be replaced after servicing and many car owners are not aware of them. There are apparently three types of security bolts and various ways of removing them, and yes you guessed it Citroën and Peugeot are the most difficult to remove. In my subsequent chats to tyre people and auto mechanics it apparently occurs relatively frequently. Here is a link if one wishes to read some detailed information on security bolts and their removal. http://www.jamesandtracy.co.uk/howto/locking_wheel_nut_removal.htm There is also a tool developed by Dynomec used by garages, the RAC & the AA in Great Britain <http://www.dynomec.co.uk/locking-wheelnut-remover.html> See Photo:



I could not find anyone who specifically advertised removing these bolts here in Australia. If you want to replace a lost key, one has to prove car ownership, identification and have a deep pocket as each key is individual to each car. The question also is who would want to steal a Citroën car wheel anyway? One doesn't hear of car wheels being stolen these days, they just take the car. Luckily, I managed to get three of the bolts out, replacing them with normal bolts and all showed signs of stripping. I got the angle grinder to one to see what I was up against. The Citroën security bolt has a shear head and spinning washer. See Photo:



David Gries offered to help by making a template to drill holes into the flange of the security bolt to fit a key he would make similar in principal to the original. Photos:

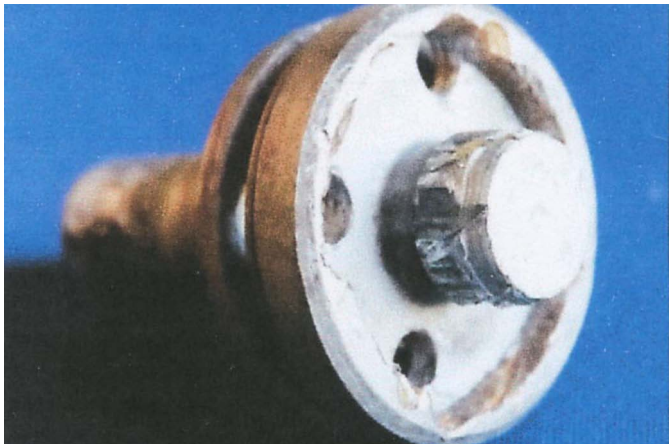


Drilling the holes proved more difficult than it looked as it was difficult to keep the template from moving due to the drill tip hitting the edge of the rotating washer and wandering. Eventually, the new key was held in place firmly by a jack and then turned by a large spanner.

Unfortunately, there was too much lateral give in the tyre wall, allowing the key to slip out and bending the pins. Alas, no success. The last resort was going to be to weld a nut on the bolt, but I thought if I could get the shear head off that would make life much easier. I had a Dremel and by using a long thin grinding wheel I figured I could grind the shear head through on one side and remove it.



This proved surprisingly easy and only took about 15 to 20 minutes. I then went to my local garage where the boys in their spare time restore all types of military vehicles. Out came the easy out bolt extractor kit and the bolt was out in a few minutes! Photos: The offending bolt showing the holes from the first unsuccessful removal attempt.



The moral of this story. Check you have your security bolt key especially if you are planning a trip to the middle of nowhere or better still replace the security bolts with normal ones.

Bruce Stringer.