This article was originally posted by 'CharlieCeng' on blogspot.com. Copyright is his, but I thought the article might be useful to those who own these little grease guns. I was unable to find a way to contact the author to check he was happy with me to share it.

So CharlieCeng, I hope you're okay with this copy of your article, as it was originally posted. The original is at https://ariel-square-four.blogspot.com/2018/02/tecalemit-grease-quns.html

Monday, 26 February 2018

Tecalemit Grease Guns

I've seen a few posts recently on Tecalemit grease guns which were often supplied in the toolkits of our bikes. People have problems with them, complaining that they don't work and consequently changing all the grease nipples to more modern types to work with modern snap on grease guns. There's no need for this - these guns work perfectly well if you know what you are doing...

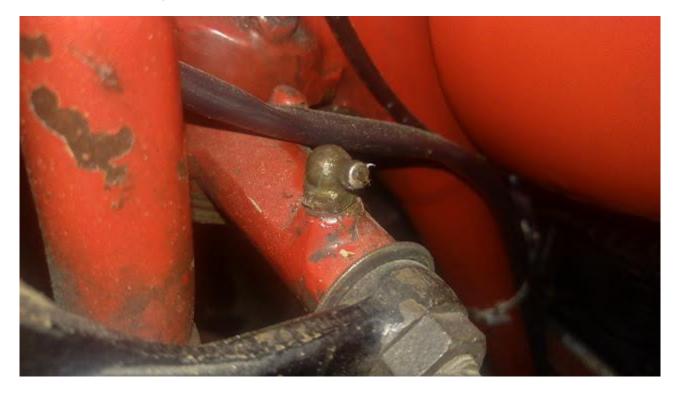


Tecalemit type 7MC toolkit grease gun

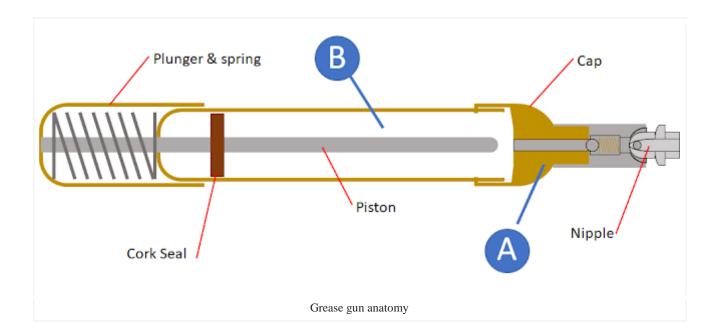
There are several different types of grease nipple in the pages of history, but here's the type these guns are used for - The Tecalemit 'Tecazerk' nipple.



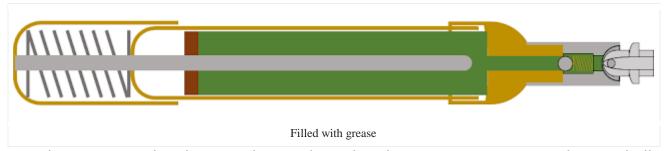
Here's one on the girder forks of my Ariel W/NG. Note the cylindrical shape with the rounded end & the tiny ball valve:



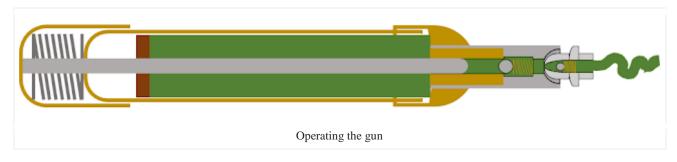
These guns are simple to use, but there are a couple of tricks you need to pay attention to, to make them work - and keep working. The gun consists of a brass cylinder with spring loaded plunger - the end of the plunger is spun over into a machined recess in the cylinder, so it won't come off; the plunger is attached to the piston which pushes greases into a bore (A) in the cap. Grease is contained in the cylinder (B) above a cork seal. The nose of the gun is is retained into the cap using a fine thread and a hemi-spherical shape is formed in one end to accept the nipple.



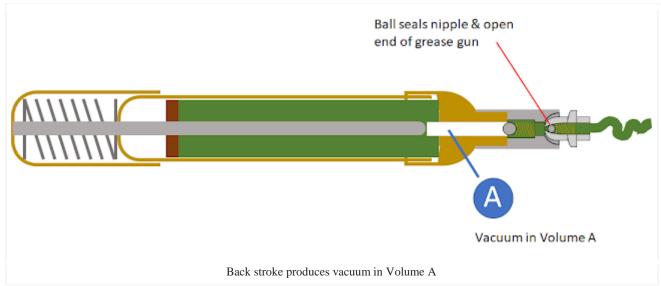
To fill the gun, the end cap is removed and the volume B is packed with grease, pushing the cork seal down to the bottom of the cylinder. The trick here is to avoid leaving any air bubbles in the body of the gun. Do this with a straw inserted right to the bottom (before filling) and withdraw it carefully, filling as you go and by warming the grease before you start. You can pack the cap with grease before you put it on to prevent air bubbles forming in there too.



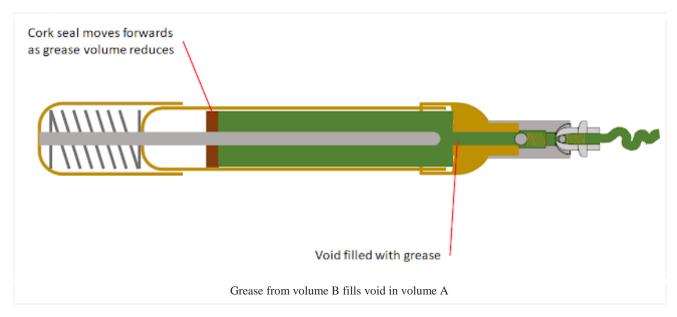
To use the gun, start by cleaning the nipple and making sure you can see the tiny ball valve. You might have noticed there is a check valve in the grease gun and another one in the nipple - they are critical to the operation of the gun. If the ball is stuck and you operate the gun with no nipple on the end, you will get air in the gun and it will only work once. Place the gun over the nipple squarely - it helps to put a cotton rag between the nipple and the gun (old tee-shirts are good for this). This improves the seal between the gun and the nipple and the grease will happily go through the fabric. You can then push the plunger as many times as you want, keeping the gun aligned with the nipple.



Here's how the gun refills itself. When you release the plunger, the springs close the ball valves and the piston, as it moves back, generates a small vacuum in volume A shown by the white space in the drawing.



As the piston emerges from volume A, grease moves forward to fill the void, pulled forward by the vacuum. At the same time, the cork washer moves forward, effectively reducing the volume B until all the grease is used up.



This demonstrates the criticality of the ball valves and the use of the cotton rag - the absence of either prevents formation of the vacuum in the cylinder, which prevents recharging of the gun. Without the vacuum, an air pocket will be left in the cylinder and volume A will not refill and the next stroke will not pump any grease out of the gun.

So the moral of the tale is, carefully fill your gun and take a rag with you in your toolbox!



Lovely period advertisement - courtesy Richard Payne