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## FITTING INSTRUCTIONS

# Fork Cap Kits

TPER-0068: Honda RVF400 NC35

TPER-0071: Aprilia RS250 Mk2, Showa Forks

TPER-0099: Suzuki RGV250 VJ23

TPER-0072: Honda RVF750R RC45.





# Fitting Instructions

Fork Cap Kit, Honda RVF400 NC35, Honda RVF750 RC45, Suzuki RGV250 VJ23 and Aprilia RS250 Mk2, Showa Forks

**TPER-0068/0071/0072-0099**

Please note that the pictures shown in the instructions are for the RVF400 NC35 forks. The Aprilia RS250 Mk2 has almost identical internals and if there are any differences to note, then additional instructions are given.

Before removing the forks from the bike, it's advisable to loosen the fork cap. It may be difficult to loosen once off the bike. Slacken off the top clamp pinch bolts and also the handle bar clamp bolts before loosening the fork cap or they could squeeze the for outer and lock the cap into the fork making it difficult to remove and maybe even cause damage upon removal.

On a loose fork, a handlebar could be used to help stop the fork from rotating while loosening the top cap, but be sure to tighten it to the loose fork below where the threads of the fork cap are.

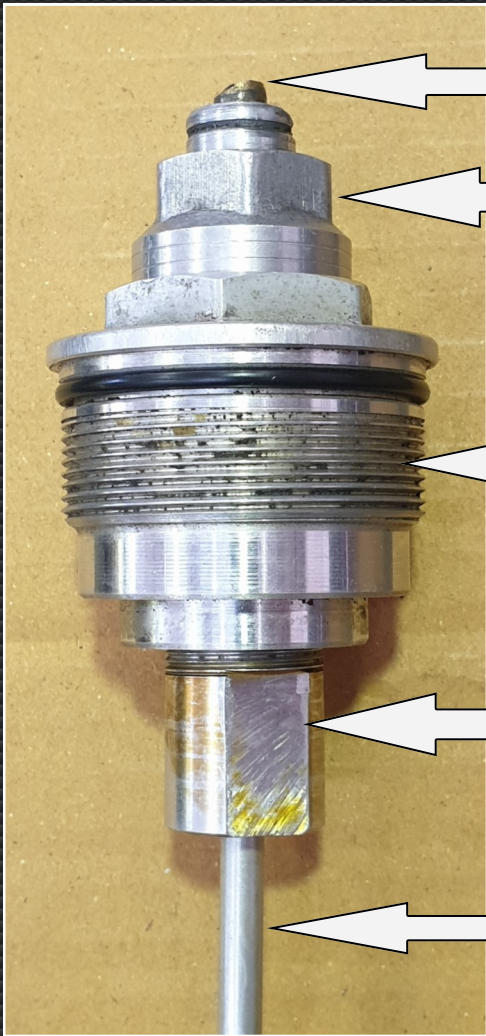
No instructions are given here for changing the fork fluid, but as the forks will be open during this procedure, it may be a convenient time. It's also a good idea to make a note of your current settings (preload and rebound) so that you can reset them when you're all done.

The NC35 standard rebound adjuster has "clicks" whereas the Aprilia RS250 Mk2 does not. In the case of the Honda, 6 clicks = 1 full turn. So when the forks are finally reassembled you can reset the Honda to the same number of clicks, but will need to convert the Aprilia turns into clicks.



Before starting, please first familiarize yourself with the names of the components as shown, and then follow the procedure below





Rebound Adjuster

Preload Adjuster

Fork Cap Outer

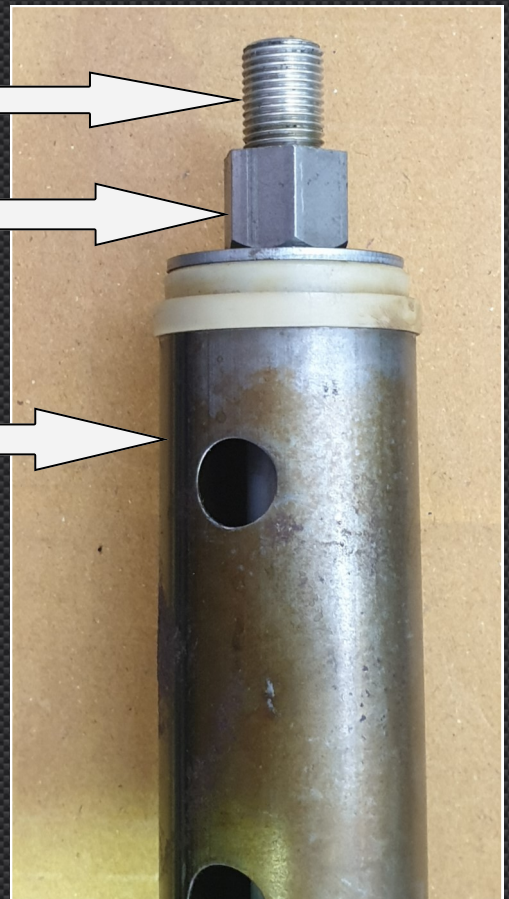
Rebound Adjuster Holder

Rebound Adjuster Rod

Damper Rod

Damper Rod Lock Nut

Preload Spacer





**1)** Wind down the preload adjuster a few turns and remove the circlip, if it's still there. It wasn't on my sample fork



**2)** With the circlip removed, now wind the preload adjuster completely off.

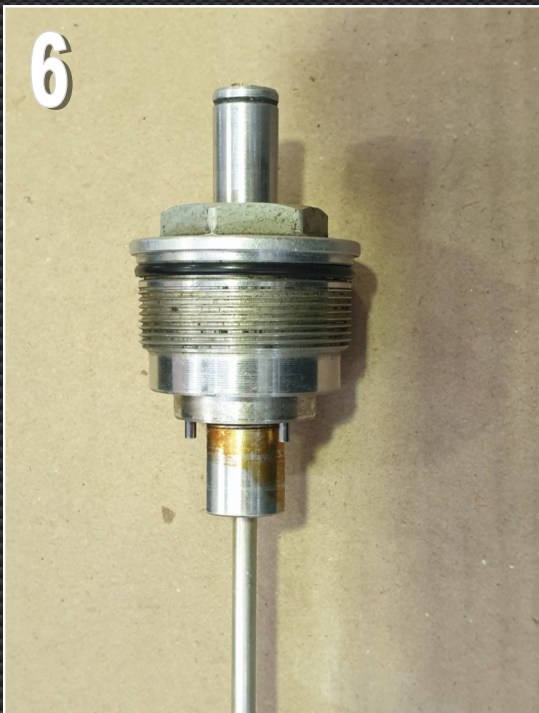
**3)** Now remove the cap. It will be under preload, so expect it to pop out a bit.



**4)** Pull down the preload spacer with a bar in one of the holes in the preload spacer, and you can now jam a 14mm wrench onto the rebound damper locknut. This will hold the preload spacer down.

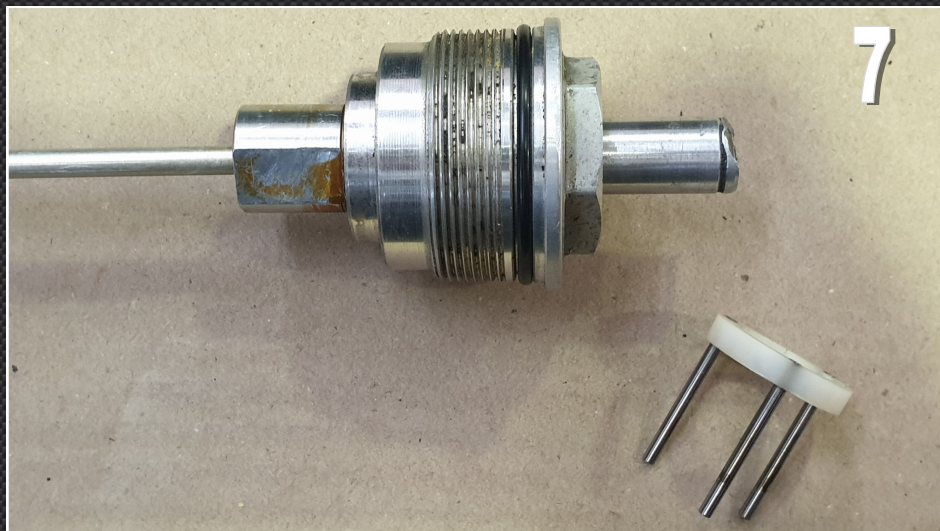


**5)** Use a 17mm wrench on the rebound adjuster holder and loosen off the rebound damper locknut



**6)** Use the 14mm wrench to help keep the spring compressed and wind off the fork cap assembly from the damper rod. Now pull the fork cap off completely. The rebound adjuster rod will come out together with the fork cap assembly.

**7)** Tip out the 3 legged piece. We'll be using this on the TYGA fork caps.

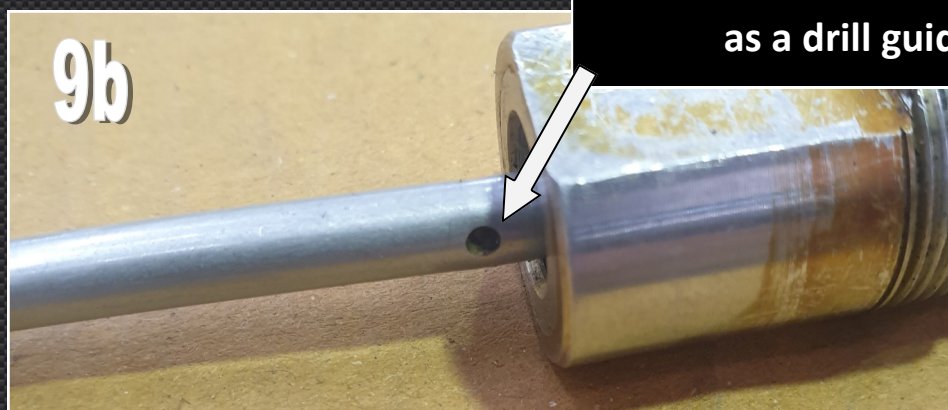




**8)** Separate the fork cap main outer body from the rebound adjuster holder using a 32mm socket/wrench and 17mm wrench.



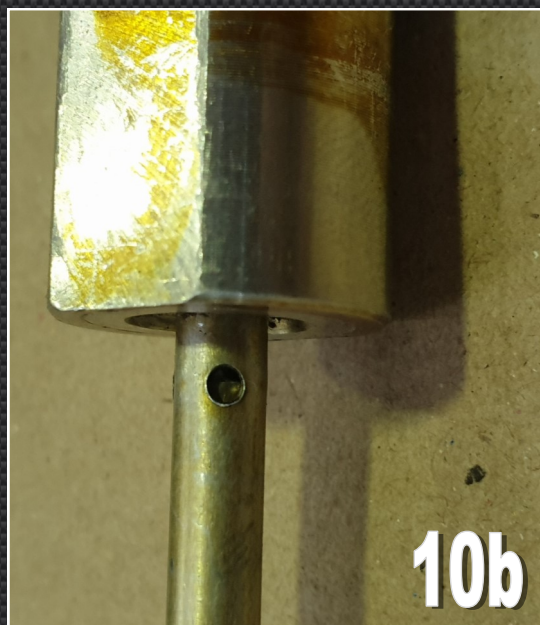
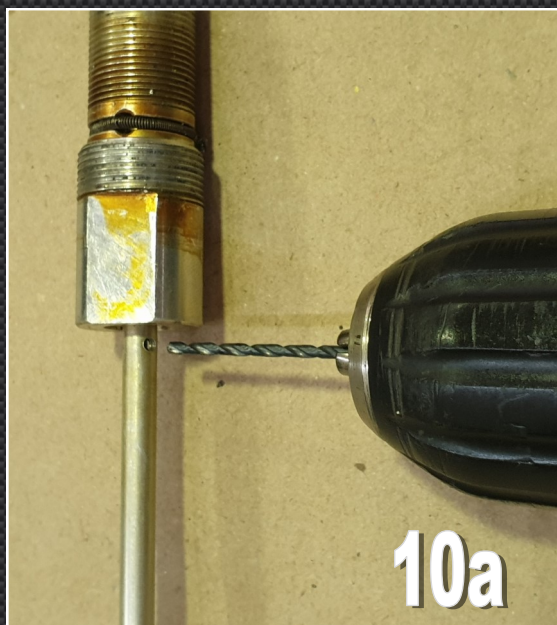
**9)** Screw the rebound adjuster clockwise until you just see the brass piece (Aluminium in the case of the Aprilia RS250). And notice the three punch marks in the aluminium rebound adjuster rod that holds the damper needle



Use 3x standard punchmarks as a drill guide



**10)** Use a 2mm drill and using the indents as a guide, drill through the aluminium until you just touch the brass. The aluminium is much softer than the brass, and you should feel the increased resistance when you are through the aluminium. You may make a little mark on the brass (I did), but this won't hurt things. A bit of added care is required with the Aprilia RS250 components, as the rebound adjuster is aluminium, so is quite easy to drill into. Drill in stages and inspect the hole to see when you break through the rod.



**11)** The rebound adjuster rod can now be removed from the brass piece. Just give it a bit of a tug if it's hanging up on the burr from drilling. Make sure you clean out any drill chips



**12)** You're now done with the standard parts (except the 3 legged piece).



**13)** The TYGA fork caps are delivered lightly assembled. Please disassemble into three sub assemblies as shown. Do not twiddle the rebound adjuster as it is preassembled in a specific position for fitting and punching of the rebound adjuster rod.

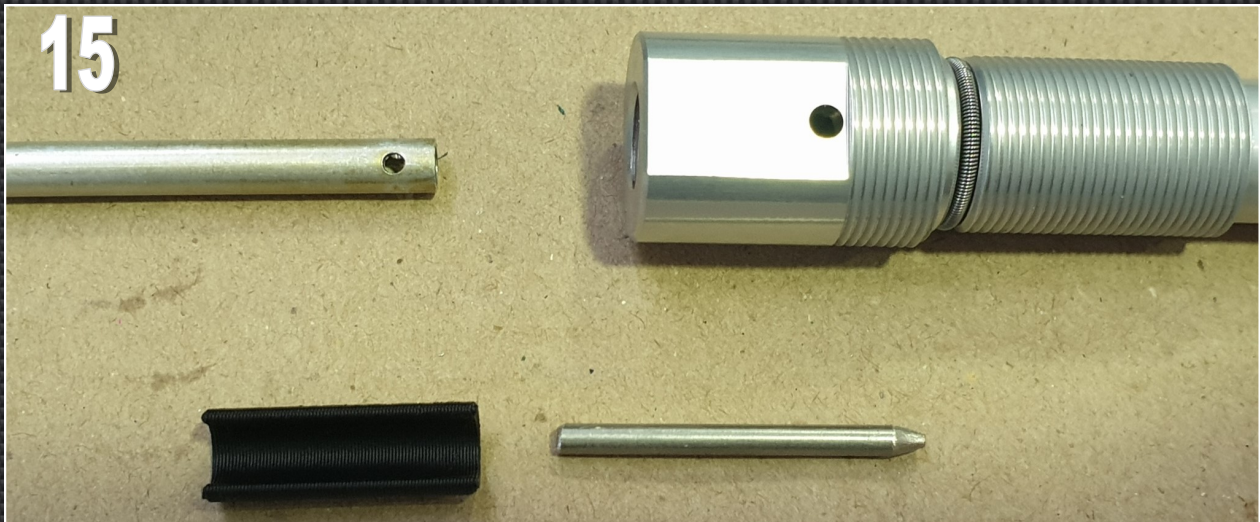


**14)** You now need to mark the rebound adjuster rod so that during assembly of the aluminium rod to the brass adjuster, the lines you make will need to be inline with the 3.3mm hole in the rebound adjuster holder. Note that the marks are in between the drilled holes you made earlier. This will be punched with a tool to retain the rebound adjuster rod (aluminium piece) to the rebound adjuster (brass piece). The mark at around 23mm down the rod is just a simple visual aid to line up with the hole.

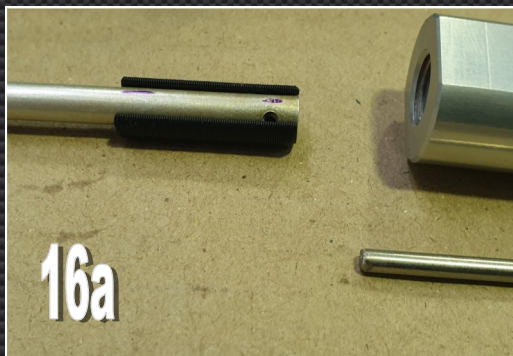




**15)** Prepare the necessary tools provided. 1x plastic damper Support. 1x punch.

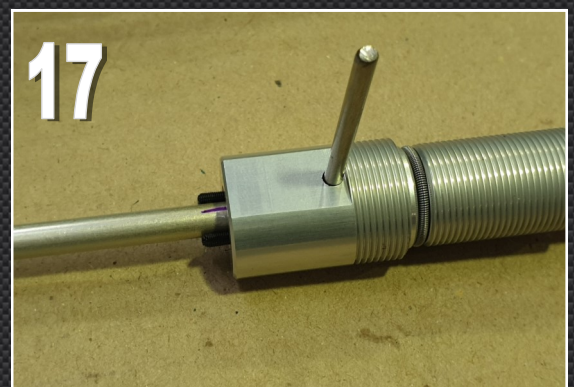


**16)** Fit the plastic damper support temporarily to the rod as shown, and slide it into the rebound adjuster holder. The rebound adjuster rod will locate on the spigot of the rebound adjuster. Make sure that this slides fully in until it stops, and check that your previous mark is visible through the 3.3mm hole



**17)** Now take the punch and use the 3.3mm hole as a guide. Make double sure that the rebound damper rod is fully inserted, and give the punch a tap with a hammer. Supporting the assembly on a block of wood is a good idea to limit and chance of damage to the components. The TYGA aluminium parts are all A7075 T6 so very strong, but always best to take precautions.

**18)** The first indent punched should be enough to stop the rebound adjuster rod from slipping off the rebound adjuster. Now remove the plastic damper support, turn the rebound adjuster rod 120 degrees, slip the plastic support fully in again and using the tool through the hole as before, make a second punch in between the next two previously drilled holes. Repeat this for the third and final punch mark.



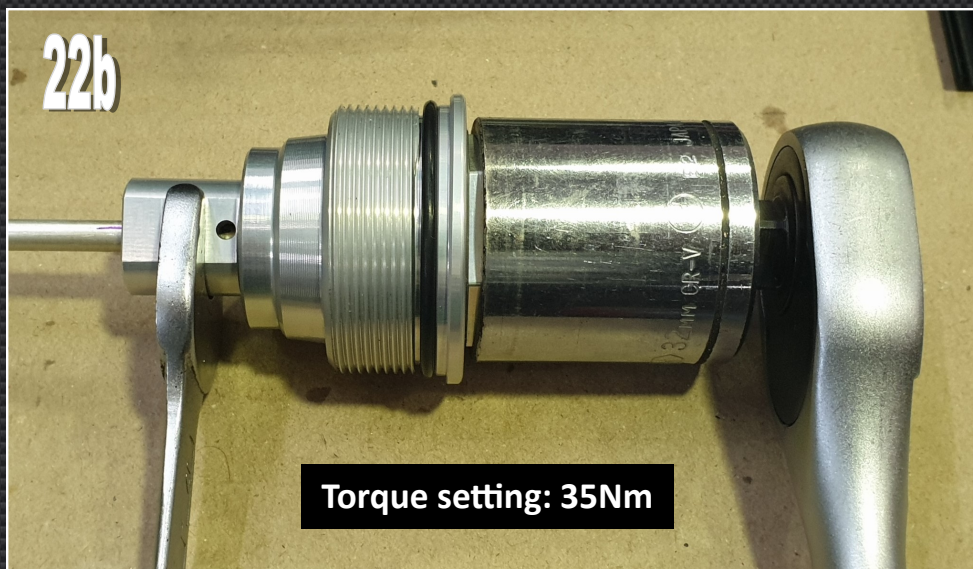
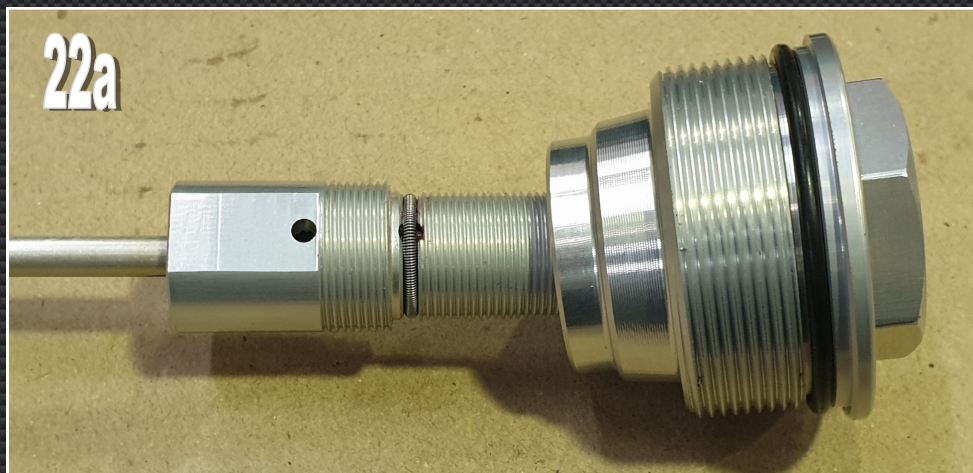


**19)** Be sure to check that the plastic damper support is on the underside and fully fitted before punching. The rebound adjuster rod should now be firmly retained with no movement.

**20)** Remove the plastic damper support, and separate this and the punch from the fork components. They are no longer required and we don't want those falling inside the fork!

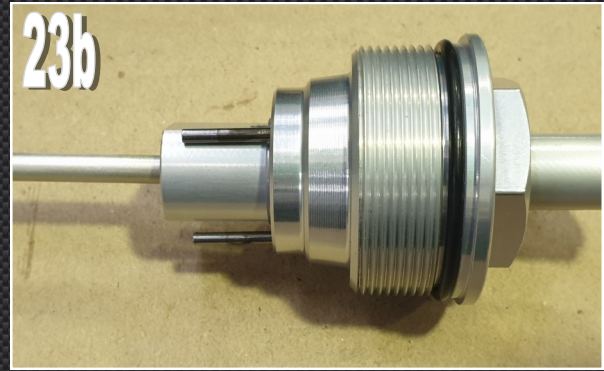
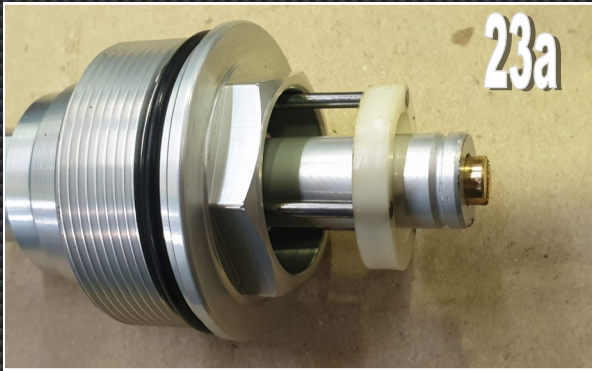
**21)** Reassembling the fork cap components is simply a reverse of disassembly. Lubricating each component (threads and O-rings) with fork fluid will aid assembly

**22)** Fit the main outer cap to the rebound adjuster holder, and using the 17mm wrench and 32mm socket, tighten to 35Nm





### 23) Fit 3 legged piece



**24)** Using a good fitting flat bladed screw driver, wind the rebound adjuster fully out (anticlockwise) until it stops, and then wind back in just a little until you feel the first click. This is the maximum open setting. Now wind it in 18 clicks (3 complete turns). This will be the maximum closed setting. I recommend never actually using the maximum closed setting as you will need some clearance between the needle and orifice for the oil to actually flow. The rebound adjuster at this (18 clicks) position will be just proud of the rebound adjuster holder surface.



**25)** Now you are ready to fit the fork cap back to the fork, but you need to prepare the preload spacer and damper rod lock nut prior to actually fitting the new cap.

**26)** Wind the locknut on the damper rod down fully until it stops. You will lock this up against the rebound adjuster holder later in the procedure.

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**27)** Compress the spring and the preload spacer down below the locknut. This is a little tricky as the spring is quite strong. I have used a 10mm wrench to lock the compressed spring in this position by jamming it between the preload spacer and the underside of the 14mm lock nut. Special tools can be purchased from 3rd party suppliers, but I want to keep it simple and use what you have in the toolbox.

**27**



**28**



**28)** Insert the rebound adjuster rod into the damper rod and screw the assembly onto the damper rod. You will feel it go tight when the rebound damper needle makes contact deep inside the fork. You only need to be finger tight here



**29)** Now wind up the damper rod lock nut against the rebound adjuster holder. Again, just nip it up finger tight. Do not use any tools to tighten at this stage or you could cause damage to the rebound damper needle.

**30)** At this point, we need to give some clearance between the rebound damper needle and the orifice, so wind out the rebound damper (anticlockwise) two complete turns. This will give adequate clearance



**31)** Using the 14mm and 17mm wrenches, tighten the locknut fully against the rebound adjuster holder.

Basically, the reverse of the earlier procedure to disassemble these two components

**32)** Remove the 10mm wrench and allow the preload spacer to butt up against the underside of the main outer cap.



**33)** Fit the cap back into the top of the fork. I use a piece of plastic bag (or similar) here to help to protect the components. You don't want to put a ding in your brand new parts!



**34)** The fork cap should be tightened to 35Nm.

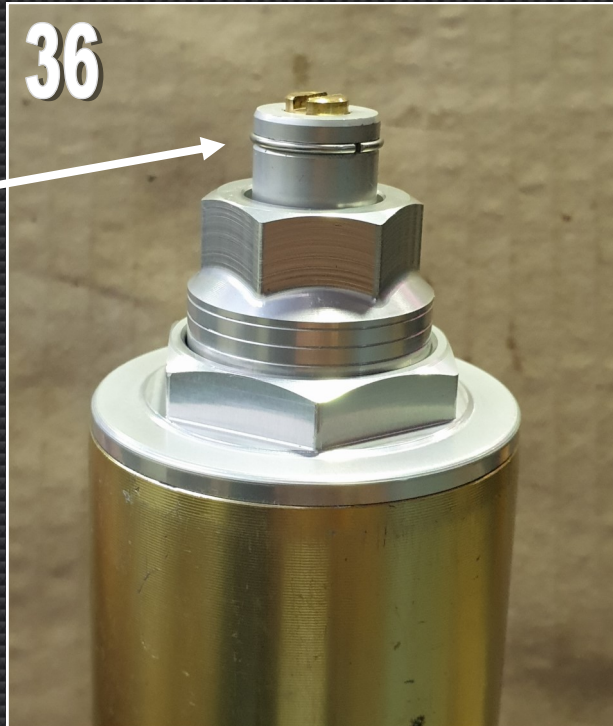
This can be done in the vice with the correct holding tools, or once the fork is reinstalled in the triples clamps. **DON'T FORGET!**

**35)** Fit the preload adjuster and screw down to expose the retaining circlip groove





**36)** Fit the circlip.



**37)** Screw the rebound adjuster all the way in until it stops, using just light pressure, and then reset to your original setting.

**38)** Reset the preload adjuster to your original setting.

**39)** All done on this fork. Repeat on the other one.

Please note that you should always assemble the caps onto the fork with the fork at full extension. So this means either with the forks removed from the bike, or if the forks are still in the bike then the front end should be off the ground so that the forks are fully extended.

Make double sure that all nuts and bolts are tightened before standing back and admiring your handywork.

This guide is provided as simple assistance to perform the job of fitting the TYGA fork caps. It can be done with limited knowledge of suspension, but basic mechanical skills and hand tools skills are required. If you don't feel confident then please seek professional assistance.

We are happy to provide you with assistance by email if you should need it.

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