

Repairing internal thread – Chin Spoiler Alfa Romeo 90

The internal thread cut into the inner side of the chin spoiler on my Alfa 90 was ripped out on one side after an encounter at speed with a large feral cat.

As the thread appears to have been originally cut into a resin boss built into the fibreglass spoiler, I puzzled over a possible fix for it. Originally, I thought of cutting a larger hole in the boss and then setting a 14mm nut into it with resin or j-weld or similar. Had to discard that idea as it would have meant having to weaken the walls of the boss in order to make space for the nut.

My local plastic welder came up with a better concept – to drill out the boss and create a new internal thread using a 2 pack resin filler. I decided to give it a try and here's my little "how to".

First, use a hole saw (minus the guiding centre bit as you do not want to drill right through the spoiler) to drill out the centre of the boss. If you work with gradually increasing sizes of saw and work with care, the hole saw will follow the contours of the existing hole and gradually increase the size. The next picture shows a partially drilled section of the boss:



You will also note that the boss has 2 additional holes drilled through its sides almost opposite each other. These are to create a "key" in the 2 pack which will give it additional strength and lock it into the existing boss. A 5 or 6mm drill bit will give you a large enough hole without destroying the integral strength of the boss.

Complete drilling out the boss the with hole saw until it is deep and wide enough for the 2 pack fill – I used PlastiBond Bog for this job. The next pic shows the larger size hole but you can see it needs to go a little deeper yet. This view also shows the 6mm keying holes better



As the thread you want is 14mm (I measured the captive bolt that fastens into this thread) get a 14mm bolt around 50mm long and coat the lower half of the thread with Vaseline:



Then wipe off until you leave a very thin film of Vaseline on the bolt



Next, mix enough of the Plastibond to fill the cavity you've created in the boss and quickly put a thick coat of the Plastibond on the end of the bolt and put the remainder of the bog the into the hole in the boss, making sure that it goes into the 6mm "key holes". Then insert the bolt into the hole in the boss:



This looks messy but don't worry, you can clean up excess later. The main thing now is to hold the bolt in place and as square as possible for about 4 minutes to allow the plastibond it's initial set. Viewing the bolt from the top down will help you set it square to the boss.

When the resin has initially set, leave the bolt in place and it will look a bit like this:



Leave it until the plastibond has completely cured and hardened.

Now for the magic bit! Hopefully your thin coating of Vaseline will now allow you to carefully unscrew the bolt, leaving in place a 14mm thread....



All that's left is to clean up the excess plastibond. I used a rasp to take off the excess from the face of the boss until it was back to the original height. This is quite easy to judge as the original boss is almost black and the plastibond much lighter in colour so you know when you're getting close:



Finally, you can clean up the remaining excess plastibond around the outside of the boss if you want a really neat finish. I just rasped back to the boss face and left the rest (once the spoiler is refitted it can't be seen).



To clean up the thread before refitting, you can just screw in the 14mm bolt and then remove it.