

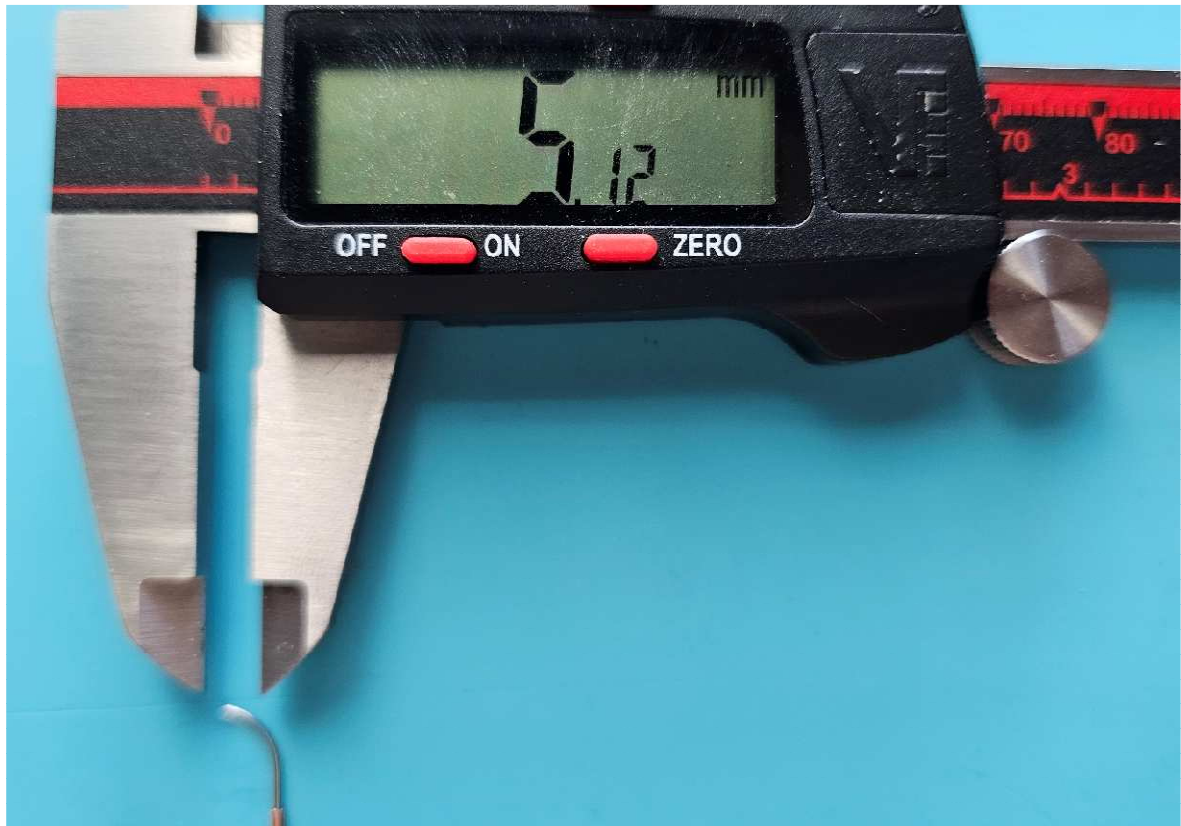
22G Industrial Liquid Dispenser Needle – 2"



What is copper tape for? – see below



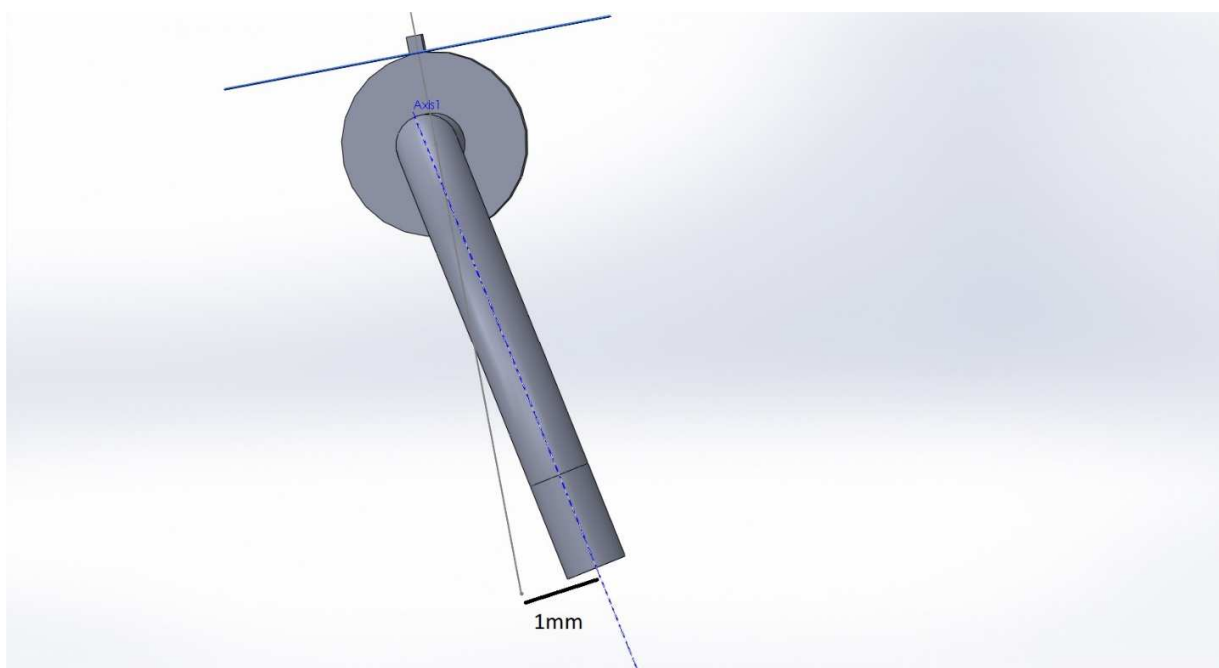
9.44mm from edge of tape to end of needle



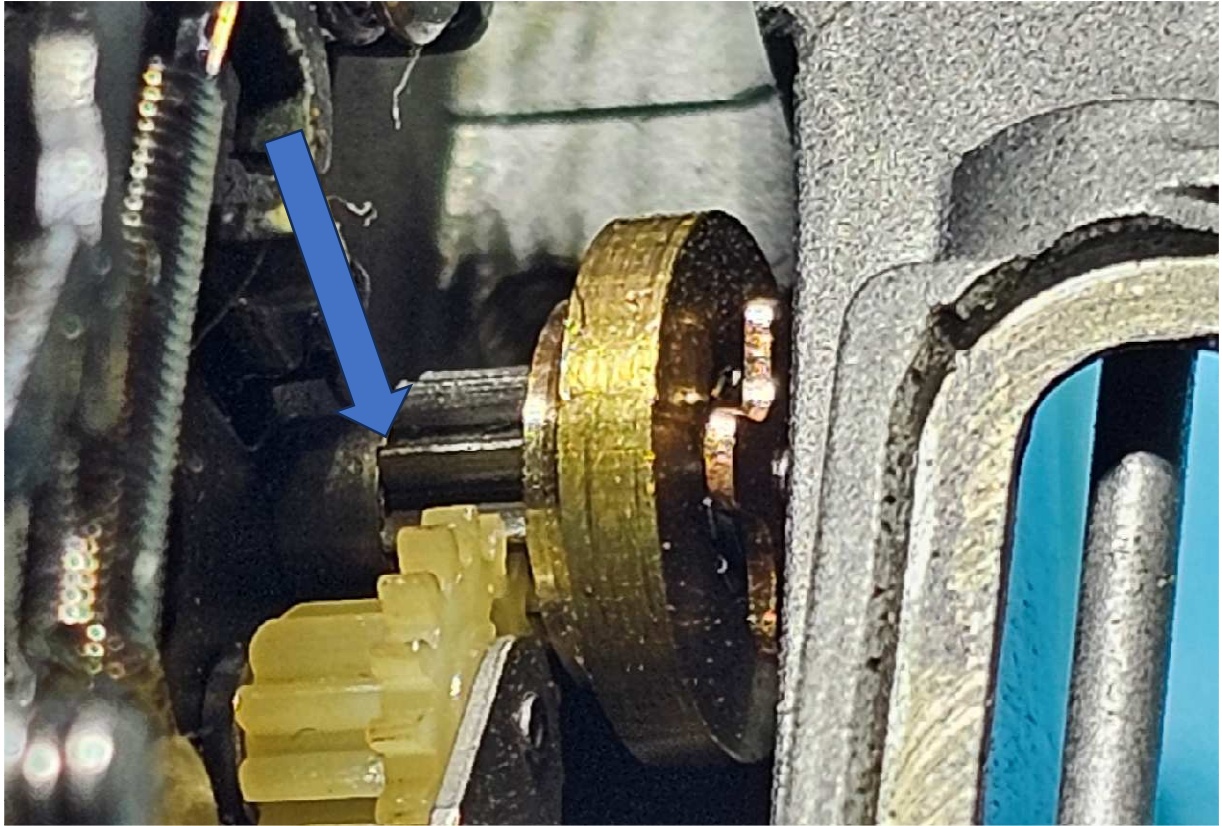
5.12mm – size of bended end



I have marked line so when I set it straight up, then tip of needle is turned about 1mm left (when you look from syringe side)



Where oil goes?



“squeak” is coming from bearing inside that flywheel with connected toothed wheel

1! – literally **ONE** drop of oil needs to be applied between toothed wheel and bushing/distance

Use only light oil (sewing machine oil for example), 3in1 oil may cause problems in future

Don't even think to use WD-40!!! – it is **NOT** lubricant!

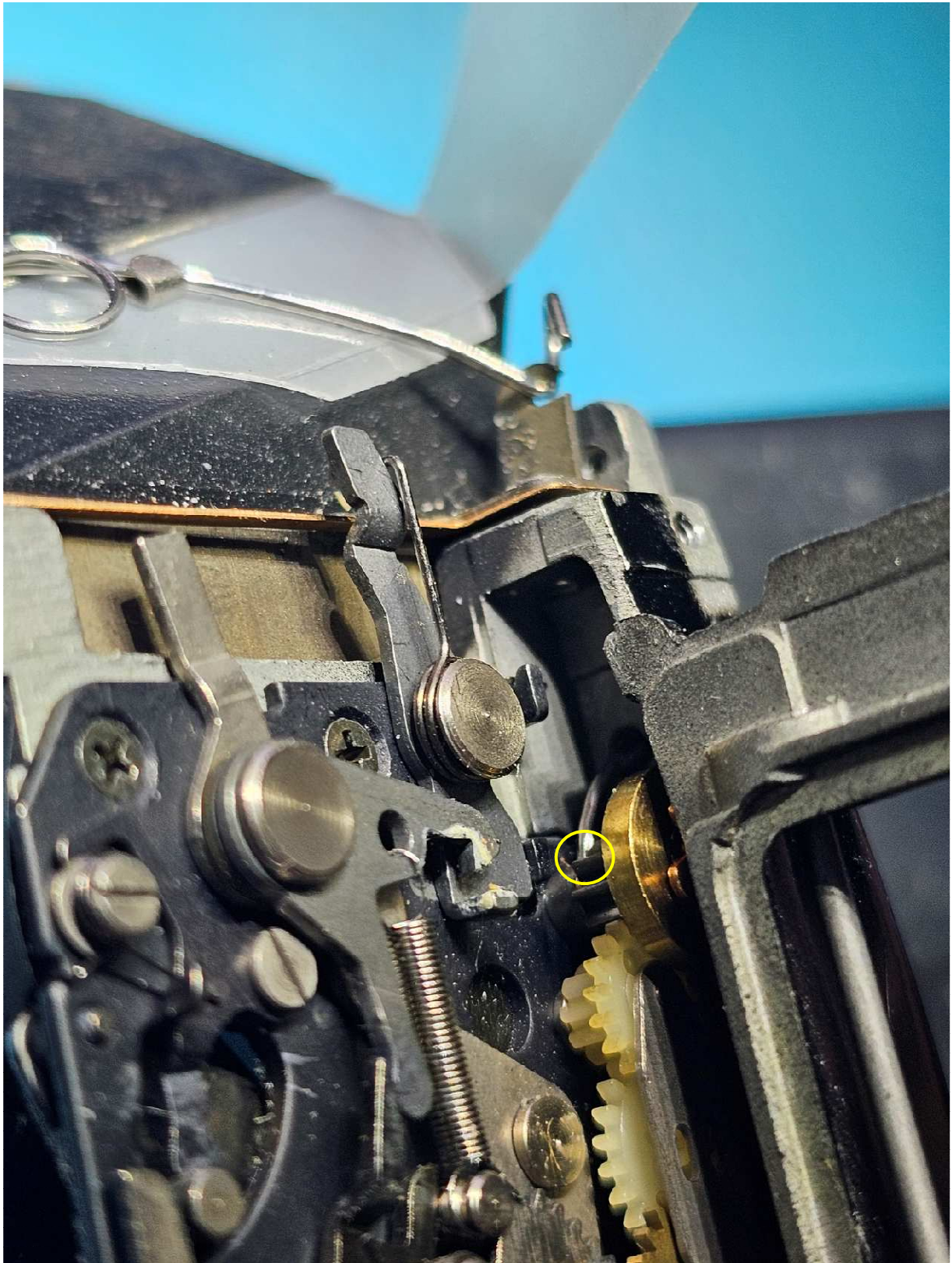
Insert needle through hole in lens mount (lot of videos available about how to get there)

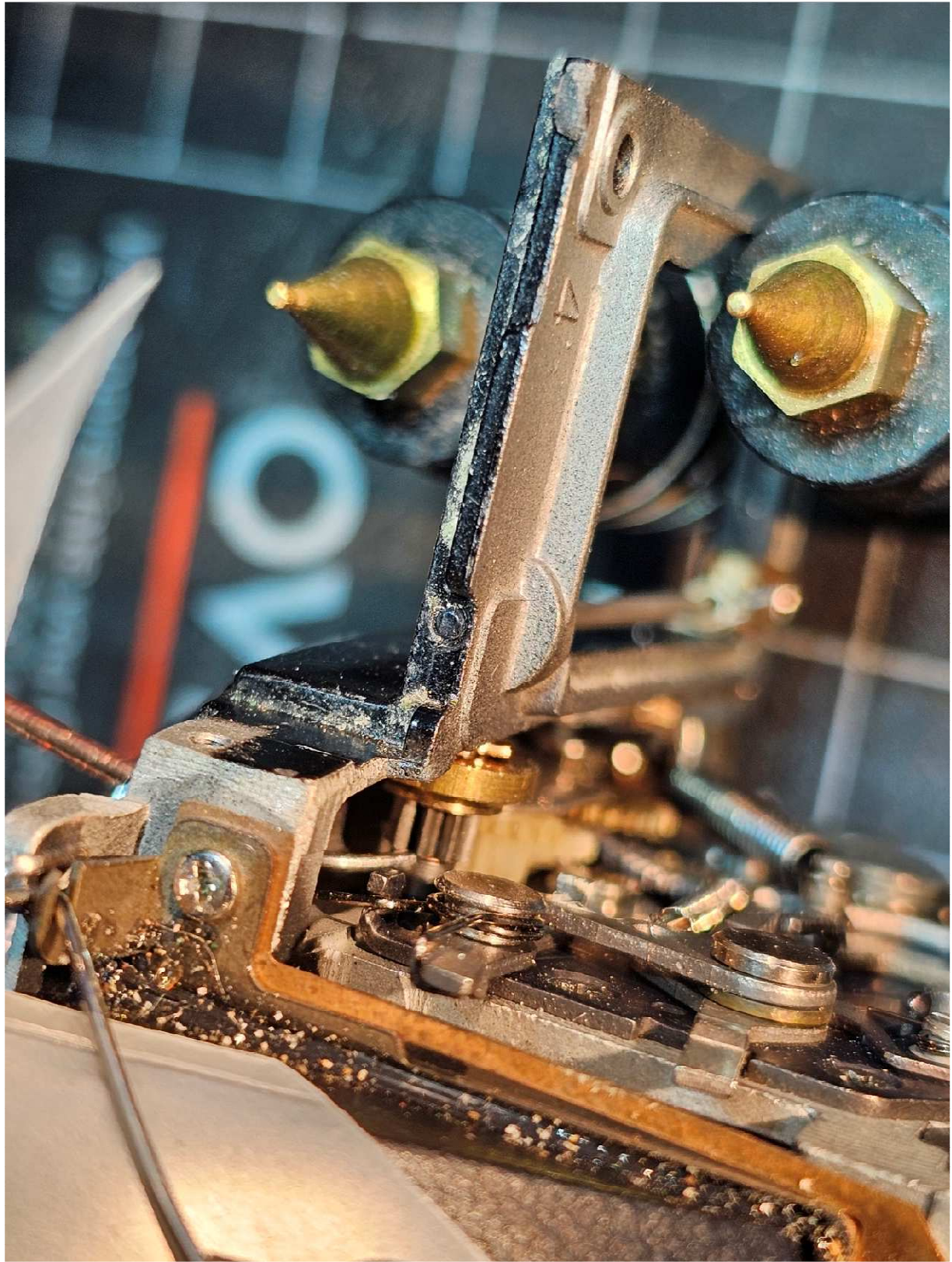
Make sure that:

- (1) needle is perpendicular to body
- (2) distance mark (my copper tape) is on edge of hole
- (3) needle is turned so mark is going straight up



and you can be sure that end of needle is very close to place, where it should be





- I usually turn needle clockwise little bit to make sure its end is over toothed wheel, move it back and forward so it's between teeth and turn counterclockwise so it stops on edge of bushing – exactly where it needs.
- Practice this before you actually use oil.
- Prepare drop of oil and suck it in by slowly pulling piston – you want some oil to stay inside needle; rest will go to syringe.
- When I have needle placed, I smoothly press piston. You want to push all oil that was in needle but not spray it all over mechanism. You can repeat it but do not add oil – use whatever was initially pulled into syringe.
- Now give it some time – no rush. You can turn camera little left and wait 30 min, next turn it little right and wait another 30 min. This will allow any oil that was on bushing or toothed wheel move into gap between them.
- Do not try to make shoot right after you applied oil. It will be blown away instead flow down into bearing.
- If you are lucky – you will hear difference during first shot. Usually you will need 20-30, possibly more than 50. It may happen that you will hear squeak once every few shots. In that case leave camera and wait another 30 min.