

Racegun have invented this little modification to increase the power of the sear release called the FreeKICK.

This modification is now standard on the new grips leaving Racegun

Fortunately for everybody with "older" grips this modification is backwards compatible which means that everybody who has a Racegun grip can install it if they want to!

In simple terms this modification allows the solenoid a little head start before it comes in contact with the sear actuator (The U piece with the roller on top). This is done by installing a little spacer on the solenoid that leaves a small gap between the solenoid pin and the sear actuator. This increases the "kick" that releases the sear (well lug I guess is more correct), giving positive sear release with up to 50% higher load on the sear.

Disclaimer: Don't hold me responsible if you mess up doing this modification!

If you are satisfied with the performance of your grip don't mess with it (Why fix it if it ain't broken).

This modification requires partial disassembly of the grip and the use of some tools (NO not a sledgehammer) - if you are comfortable with this lets get on with the actual thing.

Here is a picture of the spacer (some of the Racegun guys likes to call it a shim) - the screw next to it is a standard 10-32 for size reference.



Here you can see the gap between the solenoid pin and the sear actuator after the modification.



This is how it's done:

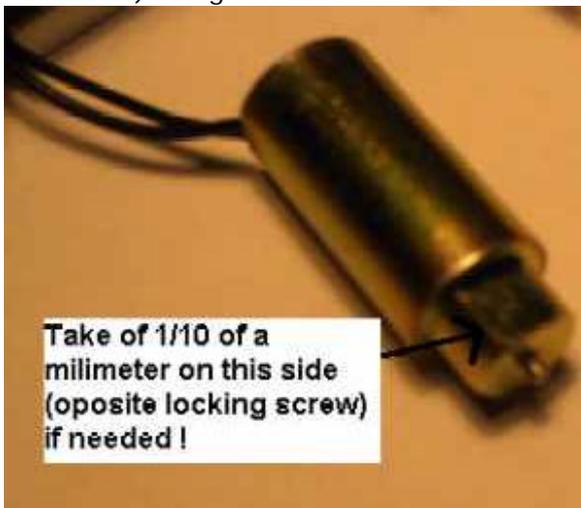
Take the grip of the gun and loosen the solenoid from the grip (by loosening the solenoid lock screw on the left side of the frame with a 3/32 hex key) - remove any spacers (small squares of plastic) that might be behind the solenoid pin, glued to the frame.



Check if there is room for the spacer on the right side of the solenoid by trying to slide it in.



If there is not enough room for the spacer you have to shave a little material of the solenoid itself - do this very carefully (we are talking about 1/10 (0,1 millimeter) of a millimeter) using a small file or a Dremel with the appropriate tool.



Make sure that you get all the metal dust of the solenoid before reinstalling it in the grip.

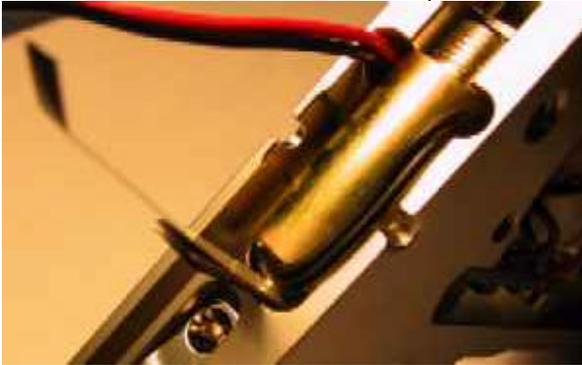
Put everything into the grip but DO NOT tighten the screw that holds the solenoid in place. Make sure you set the solenoid correctly (all the way in) and take care that the wires are not damaged or in the way of the operation of the solenoid. Now comes the tricky part of adjusting this thing - to do this we need a "tool/gauge" that is 6/10 (0,6 millimeter) of a millimeter thick. We have found that if you cut out a piece of the Tippmann advert on the backside of APG (Action Pursuit Games) measuring roughly 10 millimeters by 100 millimeters and fold it 4 times (look at picture) you will have a spacer that is 0,6 millimeter thick.



Some of you might have a more "normal" tool that can be used.

Note - Do not use Paintball Sports International or PGI their quality is much to low (paper quality that is)!

Put the tool behind the solenoid pin.



Adjust the FreeKICK spacer in front of the solenoid so that the sear actuator is just touching the solenoid pin (you might want to use some smaller pliers than me).



Then tighten the solenoid lock screw (don't overdo it - just snug it up and then a slight nudge) making sure nothing moves around.

Remove the tool from behind the solenoid pin and notice that you now have a small

gap between the solenoid pin and the sear actuator (tilt the frame a bit forward to let the solenoid pin drop back).

You might be able to tweak this a bit by increasing the gap to more than the 0,6 millimeters (getting more kick) but at some point the solenoid stops working - this is a good indication that you have made the gap to big 🤖
Seriously 0,6 millimeters seems to be working pretty good for now.

Reassemble you gun and go play some ball!!

Oh yeah I almost forgot!

If you send an e-mail to support@racegun.dk they will mail you a FreeKICK spacer free of charge - remember to include your full snail mail address and the serial number of your Racegun grip - please put FreeKICK in the subject line of the e-mail.

If you can't wait to get one shipped to you from Denmark you can make it yourself out of some thin sheet metal (0,1 millimeters).

You need a piece roughly 10 millimeters by 10 millimeters - fold it in a L shape with one side 7,5 millimeters and the other 2,5 millimeters (math is great) - You need to find some source for the actual material it needs to be fairly stiff (actually a 0,004" feeler gauge might do the job) - do not use a Coke can it's much too soft !

P.S. if you are not into millimeters you can convert the numbers yourself - 1 inch is 25,4 millimeters.

STAY HIP PLAY SAFE

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