

Timing a DIAS, LL or M16:

The DIAS must be timed with each change of upper or lower. To check the timing is easy, to adjust the timing is hard. With a M16 or AR15 with M16 parts and the DIAS in place...

1. Remove any magazine and ammo from the gun.
2. Set the selector on the full auto position.
3. Drop the hammer with the trigger (you did check to see the chamber was empty right?)
4. Now you need your timing gauges (The cheapest is drill shanks at the required dimensions. I use three, one early timing gauge .12 dia, one correctly timed gauge .10 dia, and one late timed gauge .08 dia.) (#46 Drill = 0.0810"; #39 = 0.0995"; #31 = 0.1200")
5. Secure the trigger in the fired condition (rearward) with wire. Using the charging handle pull the bolt carrier all the way to the rear but do not let it go, slowly lower the carrier towards the front until you have a 1/2" gap left between the carrier and barrel extension.
6. Insert the early timed gauge in between the bolt carrier and the barrel extension (not the bolt head) and slowly lower the bolt carrier with the charging handle. If the auto sear releases then your gun is out of time (early) and will most likely give you light primer hits. If not go to step 7.
7. Slightly retract the charging handle and remove the early gauge and insert the late gauge. Slowly lower the carrier until the carrier rest on the gauge that is between the bolt carrier and the barrel extension. The hammer should have dropped, if it did not the gun is out of time (late) and will most likely either not release the hammer or act sluggish and have a slow cyclic rate. If it dropped go to step 8.
8. Pull back on the charging handle and recock the gun while removing the late gauge. Slowly lower the bolt carrier with the "go" or correctly timed gauge until the bolt carrier rest on the gauge that is against the barrel extension. The hammer might release or might not.

This same system could be used to check the timing of an M-16 or RR AR-15 using a traditional auto sear as well. The key is to set the timing so the hammer falls with the 0.10 diameter gauge but not the early gauge. Assuming that the hammer was released on this gauge but not the early gauge the gun is timed.

Now that you have determined the timing of the gun you must adjust it. The DIAS should NOT be loose in the gun since it can shift and affect your timing. The easiest way to secure it in the gun is to A) drill a hole and tap it in the auto sear body so you can clamp it to the upper lug and adjust the timing with shims on the front side or 2) You can glue plastic shims to the upperlug with JB weld so the DIAS is timed to each upper by the shims on that lug. Moving the sear forward in the gun makes the timing later (therefore correcting an early timed sear) and rearward makes the timing earlier (correcting a late timed sear).