From the Boresight Line: Armor Accuracy Checks?

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Based off a recent poll from master-gunner candidates, 85 percent stated they have never done armor accuracy checks (AACs). Out of the 15 percent who have conducted AACs, more than half realized they had conducted them incorrectly.

An excessive amount of the Abrams fleet currently requires discreet computer correction factors (CCF) during screening. The fleet CCF is designed to encapsulate 90 percent of the tanks in the force. The discrepancy between the two numbers can usually be related to the fact that AACs are not being conducted to standard.

Despite the fact that the M1A2 platform can conduct 52 ballistic solution checks on its own, this only accounts for one of the six AAC steps listed in the training manual (TM). The main-gun-mount check is the first step in conducting AACs. This step ensures that the main-gun recoil system parts are assembled correctly and that each time the gun is returned to battery, it is in the same position. Failing to successfully complete this step could lead to round-to-round dispersion, causing master gunners to give discreet CCFs based on a correctable maintenance checks. This causes units to fire additional rounds and could potentially lower the crew's confidence in the platform's ability.

You may be wondering why tanks that have not had AACs performed on them can still fire accurately. Think about it like this. If your car's manual requires an oil change every 5,000 miles, you may be good at 6,000 miles, but eventually if the car is left unserviced, this will lead to catastrophic failure. AACs are a monthly check.

As a leader, how do we ensure units are conducting AACs to standard? Check your motorpools for an AAC solution board; ask to see a crew's AAC worksheet; ask the crew what version of software their tank is currently running; and ensure that the AAC steps are correct for the version of software the tank is currently running. These steps will help a leader identify if a crew is properly maintaining their equipment in accordance with the TM.

Currently there are two versions of software you should expect to encounter in the fleet: 4.4.2 and 4.5. Crews still using Appendix Alpha of the heavy brigade combat team's TM – which is for software versions 4.0, 4.2 and 4.3 – will incur false ballistic solution failures. Crews must ensure they are using the appropriate ballistic solution chart for the version of software the tank is running. If you do not have the proper publication for the version of software you are running, notify your Abrams field-service representative.

With the increasing capabilities of threat tanks, it is more important than ever that we are achieving first-round kills. This is accomplished by conducting maintenance to standard and ensuring we are conducting AACs properly. Bottom line: the live-fire accuracy screening test is not a maintenance check, but monthly AACs are!

Acronym Quick-Scan
AAC – armor accuracy check
CCF – computer correction factor
TM – training manual