Ammunition Management in Battery Operations

by Majors Michael Forsyth and Troy Daugherty

Over the past few years the combat training centers (CTC) have identified ammunition management at battery level as a continuing training shortfall. There are several reasons for this trend ranging from understanding leader responsibilities, unrealistic home station training and the overwhelming variety of powder lots issued as a part of a single Unit Basic Load (UBL). Poor management of ammunition leads to slower fire mission response time, poor gunnery procedures, and in extreme cases, increased safety risk. Although the problem seems insurmountable, managing artillery ammunition is a task that any unit can tackle. This article will offer solutions for battery leaders to improve the management of ammunition before deployment to a CTC or combat.

The Challenge

Battery level leaders rarely have to deal with the sheer number of rounds that compose a UBL. During home station training units routinely draw ammunition adequate only for a field training exercise. These numbers are usually small and do not stress the battery's haul capacity or the importance of load planning of turrets or ready racks. Additionally, there is not a wide variety of munitions. Typically a battery will draw high explosive (HE), white phosphorus (WP), hexachloroethane (HC), and illumination (Illum). Only on the rarest of occasions will a unit draw any type of improved conventional munitions (ICM) or copperhead (CPH), but at the CTCs batteries receive the entire spectrum of artillery ammunition. The complacency fostered at home station leads to headaches in juggling turret/ready rack load plans at the CTCs.

Compounding the problem is the challenge of powder lot management. At home station units rarely have to sort through more than two to three lots of powder for a field exercise. As a

result, batteries do not have to segregate lots and ensure the validity of the ammunition information as a part of the gunnery solution. At a training center it is not unusual for a battery to have in excess of ten different lots of powder.

Improper load configuration not only places inordinate strain on battery operations, it can also throw maneuver unit execution out of synchronization. For example, a 155mm battery often receives the task to emplace a FASCAM (Family of Scatterable Mines) at the various training centers. Poor distribution of the ADAM (Area Denial Artillery Munition) rounds can increase emplacement time. If the task for the battery is to fire sixteen ADAMs but the unit has all the rounds consolidated on one gun, it will take an additional thirteen minutes to deliver the minefield at the sustained rate of fire. If emplacement timing is critical to the synchronization of the maneuver plan, a slower delivery of the rounds can lead to a minefield emplaced too late to achieve its purpose. This actually happened at a training center recently exposing the battery to a heightened counterfire threat and it also desynchronized the entire maneuver brigade. Battery commanders can prevent this from happening in their units and it starts with an understanding of leader responsibilities.

Pinning the Rose or Responsibility

The battery commander has overall responsibility for ammunition management within the battery. He focuses the unit on future operations and provides guidance for ammunition load planning. Upon receipt of a new mission he should issue a warning order to his unit that allows the executive officer (XO)/Platoon Leader (PL) to begin uploading, downloading, or trans-loading ammunition on the battery vehicles. Configuring loads early in the planning process means the unit gets a head start on preparation and less wasted time. This also enables the battery to make quick adjustments to the loads as the mission is fleshed out.

The XO/PL takes the battery commander's guidance and executes the physical load configuration using direct supervision. He should disseminate that guidance to the chief of firing battery (CFB)/platoon sergeant (PSG) and section chiefs so they can begin shifting ammunition. The XO/PL then supervises to ensure the loads are correctly configured and he ensures a correct distribution across the vehicles. He must also have a thorough understanding of the tactical situation and fire plan in order to make valid decisions concerning ammunition management.

The fire direction officer (FDO) is the "honest broker" in ammunition management. In many instances, at home station, FDOs hold direct supervisory responsibility for ammunition distribution and tracking, but this should not be the case. It is the XOs responsibility to exercise direct supervision of ammunition management. The FDO should provide a secondary independent check by keeping the XO informed of ammunition required to support the fire plan, gunnery validity, and suggest changes to load configuration. He then tracks the ammunition count as a double check for the XO and informs the XO of any discrepancies requiring correction.

The CFB/PSG is the "butt-kicker" on the line of metal and is assisted by the gunnery sergeant (GSG). Using the battery commander's guidance, disseminated through the XO, he implements the load plan. He ensures the section chiefs understand the proposed configuration and starts the loading process. He identifies potential problems - to the XO and battery commander - with the plan and suggests alternatives that will solve the problems yet satisfy the mission. Upon completion of loading, the CFB and XO conduct inspections to check for correctness.[1]

How to Configure

Based on the tactical mission (offense or defense) and the essential field artillery tasks (EFAT) - the scheme of fires - from the field artillery support plan (FASP), the battery commander identifies the required munitions for the operation. For example, in a deliberate defense a battery could receive the task - through an EFAT - to emplace a FASCAM minefield. This requirement forces the battery commander to decide how to configure the ammunition. He must answer the following questions to help him develop the plan.

1. What ammunition do I need now? (Meaning stored in the gun turret for a heavy unit, or in the ready rack for light units.)

2. What ammunition do need readily available? (This means what ammunition should be stored in the Field Artillery Ammunition Supply Vehicle (FAASV) for heavy units, in the section ammunition truck for light units.)

3. What ammunition do I need for immediate resupply? (This is the ammunition stored on the Palletized Loading System (PLS) truck for heavy units, or the 5-ton ammunition trucks for light units.)

4. What is the unit resupply triggers? (When ammunition, by complete round, is brought from the FAASV to PLS and FAASV to the howitzer. Also, when should the PLS return to the combat trains for resupply.)

Once the battery commander answers these questions, he then allocates the ammunition across the gunline and support vehicles.

Next the commander - with the XO and FDO - identify powder lots in order to ensure validity of the gunnery solution. The battery should use the most numerous powder lot as its base lot for accuracy and as the fire for effect (FFE) fire mission powder lot. Inevitably, the

[1] FM 6-50, Tactics, Techniques, and Procedures for the Field Artillery Cannon Battery, 1996, pp. 1-4, 1-5. All the

battery will receive several other powder lots in small numbers. The commander should ensure these lots are used for adjust fire (AF) fire missions and non-precision munitions such as smoke or illumination. The battery must have a powder lot marking system to mark powder canisters in its standing operating procedures (SOP). This will prevent using the wrong powder canisters in a FFE mission requiring precise fires. A simple system is to use chalk to mark a lot number - given by the FDO - on the canister and segregate the powders by the lot chalked on the container.

Some missions require pre-positioning of ammunition to support the operation. The battery commander will identify those locations and the munitions - if they were not specified in the FASP - required at those positions. He will decide what munitions to preposition based on the mission, EFATs, and battle phasing.

Reconnaissance, either map or ground, will verify much of the ammunition planning guidance. Positioning has a great effect on load configuration. While conducting recon, the commander should check to ensure the battery loads are compatible with the expected range to target for fires and that there is not site to crest problem. Also, some positions will not support pre-positioning or ammunition vehicular traffic which could require modification to the movement plan or load configurations.

The battery commander will then finalize the tactical plan and brief the ammunition distribution load plan to his subordinates as a part of the battery operation order. (See Chart 2 Ammunition Load Matrix) The plan should not only cover the gun and vehicle breakdown, but it should also specify the resupply triggers by ammunition type.

---

responsibilities for battery personnel are derived from the duty descriptions in this manual.

Since the battery already configured its loads based on the guidance in the commander's warning order, the battery should only have to make adjustments and refinements to the load plans. The XO and CFB compare the ammunition matrix from the operation order to the actual count on the gunline. They identify the changes and then give the adjustments to the section chiefs for final configuration.

Upon all section chiefs reporting their uploads complete, the XO, CFB, and GSG conduct final inspections to verify distribution and ammunition counts. The FDO provides a double check by having the section chiefs report section counts to the fire direction center. The XO and FDO identify any discrepancies and then the XO and CFB reconcile the differences. As a final check the battery commander conducts spot inspections to validate distribution. The battery can now get on with the business of delivering fires.

Execution

During execution of the operation the battery leadership must maintain situational awareness in order to ensure that the unit conducts resupply at the appropriate time. Digital communications makes it difficult to monitor ammunition expenditure, especially in Paladin units, and the battery leaders can lose touch with the situation. To alleviate this possibility the leaders should work out a system to monitor control of ammunition usage. A technique that battery leaders can use is to have the FDO always announce "fire mission" over the battery internal voice net. Using a standard fire order the BC, XO, and CFB can track the expenditure of ammunition in order to anticipate when the unit will require resupply. If the fire mission deviates from the standard ammunition in the fire order, the FDO simply announces the changes.

Conclusion

Any unit can effectively tackle the challenge of ammunition management. The key is to develop a systematic approach to handling ammunition and commit it to black and white in a written battery SOP. It is too late to start considering ammunition management when the UBL is issued at a CTC or in combat. Preparation to solve the problem begins a home station. The effort placed into developing an SOP and validating that SOP, will pay great dividends when a battery receives the call to deploy. The end result of sound ammunition management is timely and accurate fires - the standard for all field artillerymen.