A Critical Analysis of the Aviation Support Battalion's Efficacy in the Operational Environment:

Lessons Learned From 1st Armored Division's National Training Center Rotation 24-03

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Since 2017, the U.S. Army has been undergoing a transformation of the Total Army's focus from counterinsurgency (COIN) to large-scale combat (LSC). The combat aviation brigade's (CABs) role has been forced to adapt to the rigorous challenges of this unfamiliar environment to meet the demands for the Army of 2030. The ever-growing capabilities of our adversaries will put added stress on our fighting force and place a premium on sustainment operations.

The aviation support battalion (ASB) is the sustainment force of the CAB. Just like the CAB, the ASB will be forced to rapidly adapt to maintain flexibility in this new environment if it wishes to provide uninterrupted logistical support and ensure the CAB maintains its lethality.

In February 2024, the 127th ASB deployed with the 1st Armored Division CAB (1AD CAB) to National Training Center (NTC) 24-03 in support of the 1AD's rotation. The ASB was able to test its mission-essential task list in this large-scale NTC rotation and walk away with critical lessons learned. This article discusses these lessons learned and provides a critical analysis of the ASB's unique capabilities and what it takes for an ASB to be successful in the LSC environment.

The NTC 24-03 Rotation From the ASB Perspective

As our Army transitions from COIN operations to LSC, it is division elements—enabled and supported by the corps—that defeat enemy forces, control land areas, and consolidate gains for the joint force (Department of the Army [DA], 2022b). This requires a paradigm shift, especially in aviation, away from the battalion (BN) task force mentality

engrained after decades of COIN. For the second time in recent history, the NTC provided the Army the opportunity for division-level training during 24-03. The difference between 1AD's rotation at NTC 24-03 and 1ID's rotation at NTC 20-10 was scale. The scale of the 24-03 rotation exceeded all past rotations in terms of participants and physical breadth of the operational environment. In NTC 24-03, the aviation unit executed missions across the entire training area, plus 200 miles outside the Fort Irwin, California (FICA), Training Center at the Nevada Training and Test Range (NTTR).

To facilitate this training, the 1AD CAB deployed the brigade (BDE) headquarters (HQs), 127th ASB, 3-6 Air Cavalry Squadron (ACS), and 1-501 Attack Battalion (AB). This consisted of 29 AH-64 Apaches—five UH-60 Black Hawks; four HH-60 Medical Evacuation Black Hawks; four CH-47 Chinooks; 60,000 gallons worth of CLIII (petroleum, oil, and lubricants) sustainment capabilities; and all the logistical, life support, and HQs equipment and personnel to support such a force. The CAB executed multiple deep attacks, supported by forward arming and refueling points (FARPs) from the forward support companies (FSCs) and the ASB. The most demanding of which, led by the ASB, consisted of a 200-mile convoy from FICA to the NTTR. The FARP at the NTTR was comprised of eight arming and refuel points from the ASB and four points provided by two CH-47s.

The ASB is responsible for a variety of unique tasks to support the CAB's missions. The 127th ASB conducted six very

notable tasks at NTC 24-03: base defense for the ASB and BDE HQs, logistical distribution of all classes of supply to the CAB, FARP operations, Role 1 medical support to the CAB, ground-fleet field maintenance, and signal support.

As the ASB is unique to aviation, it lacks consistent doctrine that indicates how and when an ASB is most effectively utilized. National Training Center rotations, such as 24-03, are therefore essential to validating tactics, techniques, and procedures that may not otherwise be tested and codified. We wanted to share the following lessons learned at NTC 24-03.

Lesson 1: The ASB is not a Brigade Support Battalion (BSB)

The lack of doctrine on the ASB lends to a common misconception that the ASB is the aviation equivalent to the BSB. Even the limited information in Army Doctrine Publication (ADP) 4-0, "Sustainment," would indicate that this is the case (DA, 2019). Understandably, strategic planners with limited aviation experience overestimate the internal capabilities of an ASB if compared with the traditional BSB supporting an armored brigade combat team (ABCT). Though both units serve as the sustainment unit for their BDEs, the differences in their primary customer are reflected in their modified table of organization and equipment (MTOE) and dictates their composition. The ASB consists of a headquarters support company (HSC), a distribution company, an aviation support company (ASC), and a signal support company.

According to ADP 4-0; there are six primary differences between the BSB and the ASB.

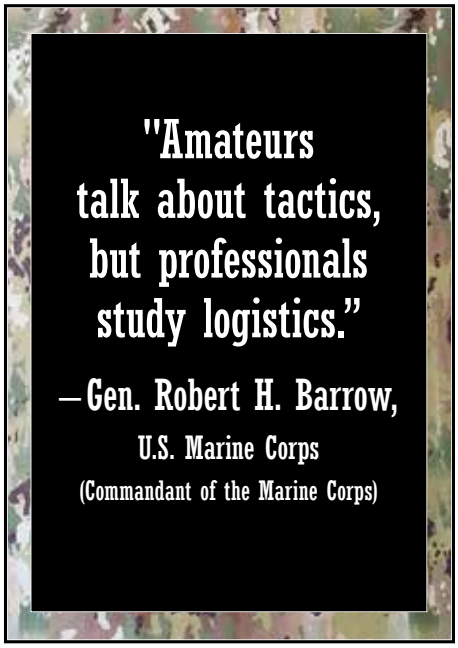
1. "The ASB does not have a brigade support medical company" (DA, 2019a, p. 2-16). Instead, it has a medical platoon within the HSC capable of providing Role 1 level medical support.

2. While the ASB does have a distribution company, it has a significantly smaller CL III distribution capability than a BSB (6 M978s vs. 18 M978s) (127th ASB, 2024). The ASB makes up for the lack of highly mobile CL III systems with its less mobile M969 (5,000 gallons each) tanker trailers and the static fuel system supply point (FSSP) (six 20,000-gallon blivets) (DA, 2022a, p. A-21; 127th ASB, 2024).

3. The aviation BDE's FSCs are not organic to the ASB. Instead, they are distributed and remain organic to each of the four flight BNs within the BDE. The ASB does not innately have tasking authority over any of the FSCs (DA, 2019a, pp. 2-56; Garner, 2013).

4. The ASB does not have a dedicated ground maintenance company. Instead, it has a maintenance platoon that is responsible for maintenance support to the ASB and CAB HQs only (DA, 2022a, pp. 2-32 to 2-33; Garner, 2013).

5. The ASB has an ASC, which the BSB does not (DA, 2022a, p. 2-33). The ASC provides scheduled and unscheduled field-level aviation maintenance support to the flight BNs (Polk & Case, 2020). This is often seen as the ASB's major function and consumes the largest share of its personnel and resources.



6. Similar to a maneuver enhancement BDE, the ASB has a signal company, which the BSB does not. The signal company provides communications support directly to the CAB HQs (Garner, 2013; DA, 2019b, pp. 2-55 to 2-56).

Upon further analysis, more parallels can be drawn between the ASB and the division sustainment support battalion (DSSB) than the BSB. The ASB is just equipped to execute at a smaller scale. The BSB is structured and equipped to be highly mobile in support of the maneuver BDE. The entirety of its asset is designed to be "carried on its back" for distribution. The ASB, on the other hand, is better equipped to serve a static support role, as most of its assets are designed for storage or low-mobility distribution. In comparing the ASB to the DSSB:

1. Both the ASB and the DSSB are equipped with less mobile M969 trailers and static FSSPs to make up for the lack of highly mobile M978 systems (DA, 2022a; DA, 2019a). The BSB has neither M969s nor FSSPs.

2. Both the ASB and DSSB are equipped with Tactical Water Purification Systems and the M105 water tank racks (HIPPOs) to distribute water. The BSB does not have this equipment (Garner, 2013).

The purpose of highlighting these differences and similarities is to critically analyze where the ASB fits into the logistical common operating picture of the division. The NTC 24-03 rotation highlighted that the most common sustainment friction points within the CAB centered around logistical capacity (specifically, CL III) and command and control (C2) of logistical distribution. During offensive operations, both the CAB and the ABCT require large quantities of fuel to operate. The Table (p. 21) shows a CL III capabilities breakdown across 1AD CAB directly compared to an armored BSB and the DSSB.

As shown in the Table, the majority of the CAB's distributable fuel is with the BDE's FSCs. This design, well suited for COIN operations, allows the FSC to provide nearly independent CL III support directly to the end user. The reality of aviation operations requires rapid "truck to aircraft" support from FSC to flight company due to the extreme usage rate and mobility of aviation platforms. The distribution of FSCs down to the BN level facilitates this, while enhancing integration and anticipation of BN

CLIII Capacity in Gallons		
CAB **Distro 263K / Store 120K**	**ABCT** **Distro 201K / Store 0**	**DSB** **Distro 285K / Store 6660M**
Distro Co (ASB) (4)M969 Tanker (5K) (1)120KFSSP (6) HEMTT Tanker (2.5K) (6) Tank Rack Module (2.5K) Distro 50K / Store 120K **Petroleum Analysis TM (ASB)** (1) PQAS-E **Aviation SPT Co (ASB)** (2) HEMTT Tanker (2.5K) Defuel 5K. **FSC (GSAB)** (22) HEMTT Tanker (2.5K) (6) Tank Rack Module (2.5K) Distro 70K / Store 0 **FSC (AHB)** (11) HEMTT Tanker (2.5K) (6) Tank Rack Module (2.5K) Distro 42K / Store 0 **FSC (AB)** (8) HEMTT Tanker (2.5K) (3) Tank Rack Module (2.5K) Distro 27K / Store 0 **FSC (ACS)** (8) HEMTT Tanker (2.5K) (3) Tank Rack Module (2.5K) Distro 27K / Store 0	**Distro Co (BSB)** (18) HEMTT Tanker (2.5K) (18) Tank Rack Module (2.5K) Distro 90K / Store 0 **FSC (BEB)** (3) HEMTT Tanker (2.5K) (3) Tank Rack Module (2.5K) Distro 15K / Store 0 **FSC (CAV)** (6) HEMTT Tanker (2.5K) (6) Tank Rack Module (2.5K) Distro 30K / Store 0 **FSC (AR)** (6) HEMTT Tanker (2.5K) (6) Tank Rack Module (2.5K) Distro 30K / Store 0 **FSC (AR)** (6) HEMTT Tanker (2.5K) (6) Tank Rack Module (2.5K) Distro 30K / Store 0 **FSC (MECH)** (6) HEMTT Tanker (2.5K) (4) Tank Rack Module (2.5K) Distro 25K / Store 0 **FSC (FA)** (3) HEMTT Tanker (2.5K) (3) Tank Rack Module (2.5K) Distro 15K / Store 0	**Composite SPT Co (DSSB)** (12)M969 Tanker (5K) (2)120KFSSP (1)300K FSSP (6) HEMTT Tanker (2.5K) (20) Tank Rack Module (2.5K) (1) PQAS-E Distro 125K / Store 540K **Petroleum Analysis TM (DSSB)** (1) PQAS-E **Pipeline OPN Co (DSSB)** (2)M969 Tanker (5K) (1)800K FSSP Distro 10K / Store 800K **Petroleum SPT Co (DSSB)** (15)M969 Tanker (5K) (3)120KFSSP (6)300K FSSP Distro 75K / Store 2160M **Petroleum SPT Co (DSSB)** (15)M969 Tanker (5K) (3)120KFSSP (4)300K FSSP (2)800K FSSP Distro 75K / Store 3160M

Table. Class III capacity in gallons (127th ASB, 2024).

sustainment needs. However, it generates a potential shortfall in economy for the BDE. Battalion assets are not easily redirected when operations are planned and prioritized independently. For example, under the current construct, if the BDE's primary mission is to conduct attack operations, the abundant assets in the general support aviation battalion (GSAB) may be left idle and impact the ability of the BDE to sustain operations as a whole.

Lesson 2: Sustainment at Scale

The 24-03 rotation tested the ASB's ability to support the BDE and division on a previously untested scale. "Scale" refers to three inter-related factors of the operations supported at the NTC: size of the supported operations, the operational tempo, and the distances required. As we analyze each factor, it is critical to understand that they must be considered together to fully capture the stress that will be placed on the CAB's sustainment operations in LSC. It is important to note the absence of the attack helicopter BN and the GSAB at NTC 24-03, which would have doubled the CAB's sustainment requirements.

To understand the first factor of supporting at scale is the size of the operations that will be supported in LSC vs. COIN. Operations in COIN focused heavily on platoon- and team-level operations (two to four aircraft formations) flying out of static and consolidated footprints. Prior experience and NTC rotation 24-03 taught us that in LSC, aviation units will be conducting BN and squadron-level attacks (up to 24 aircraft) and BN-level air assaults (up to 30 aircraft), while operating out of constantly moving footprints. This significantly alters the dynamic for sustainment planning, and it can no longer be an afterthought that follows mission planning. Sustainment will inevitably limit mission planning if not employed correctly in LSC.

Supporting BN-level operations at a rapid operating tempo (OPTEMPO) during NTC 24-03 highlighted the limitations of the BN FSC, especially when the FSCs were required to displace forward to support greater operational distances. The OPTEMPO inherent to LSC operations, combined with the high usage rates of aviation platforms, can quickly overwhelm resupply operations. By doctrine, the ASB is required to provide its supported units with 72 hours of supply during high-intensity combat before requiring replenishment from a higher unit like the DSSB (DA, 2019a, p. 5-20). The NTC 24-03 rotation simulated high-intensity operations through alternating nightly BN deep attacks between the ACS and the AB. This requirement was impossible to achieve with the fuel systems operated by each FSC when operated independently. The fuel amounts the CAB will require to maintain around-the-clock operation overwhelms the FSC's internal storage capabilities and capacity to provide constant resupply. The elevated fuel consumption rates (upward of 15,000 gallons in less than 24 hours), combined with the lack of organic bulk fuel distribution capabilities at the ASB's distribution company level, also presented shortfalls in the ability to maintain around-the-clock operations.

The solution utilized at NTC was to combine the resources of both FSCs to support both the ACS and the AB as a larger team. This allowed one FSC to refuel aircraft at the aviation tactical assembly area (TAA) and the other to conduct forward operations in the close area. The ASB utilized stationary storage tanks from the 916th Sustainment BDE to replenish bulk stores, allowing the ASB to focus its distribution assets on pushing fuel to FSCs rather than pulling fuel from division support brigades to minimize the duration of refuel cycles.

Lastly, the distances required of aviation units during LSC present a major hurdle for sustainment operations. Aviation operations in the deep area will require aircraft to refuel and rearm hundreds of miles beyond the aviation TAA. Forward arming and refueling points play a critical part in the success or failure of aviation operations in the deep area. These FARPS are inherently complex due to the risk associated with multiple aircraft landing simultaneously in a congested area, while receiving fuel and ammunition from teams of personnel on the ground. Large-Scale Combat adds a significant level of risk due to enemy forces possessing the capabilities to hunt for and destroy the CAB's FARPs. Beyond survivability, FARP operations are resource intensive. Once a FARP is deployed for an operation, the assets can no longer support the larger BDE mission. In fact, FARPs can further degrade the BDE's sustainment situation when they themselves require resupply.

In the case of NTC 24-03, the requirement to provide CL III refuel at the NTTR in the form of the 12-point FARP decimated the ASB's ability to resupply fuel to the rest of the BDE. The conducted deep attack lasted less than 8 hours, but the assets needed to fuel those aircraft were taken out of the BDE logistical network for about 5 days. The time required for travel, site selection, setup and verification, tear down, and the return movement must all be considered as additional costs associated with the deep fight FARP.

A U.S. Army Reserve Private operates an electric raw water pump during combat support training at Fort McCoy, Wisconsin. U.S. Army photo by SPC John Russell.

A FARP's impact grows exponentially larger if it requires resupply due to the extended distances in which they are displaced from the aviation TAA. In the case of NTC 24-03, the CAB executed a 12-point FARP 200 miles from the aviation TAA in support of a BN deep attack at the NTTR. The logistical requirements for the mission required the support of the ASB, which was assigned C2 of the FARP operation. In this case, the sheer distance made resupply for the FARP impractical. All assets had to be brought forward prior to the deep attack. Ground assets and personnel from the ASB and AB, along with CH-47 Fat Cows (rapidly employed FARP) from the GSAB, were utilized to meet the demanding requirements. The resulting impact left a single FSC to accomplish the BDE's CL III mission in the BDE support area.

Adding to this already complicated picture is that FARP operations are not a core mission-essential task for the ASB. Regular FARP setup, practice, and cross-training of personnel are essential to ensure the safety of operators and aircrew executing FARP operations. Soldiers, regardless of military occupational specialty, need to be cross-trained with a 92F (petroleum supply specialist) and a 15Y (AH-64 Armament/Electrical/Avionic System Repairer) to ensure operational readiness and execution. Additionally, conducting FARP operations in a contested environment stresses the defensive capabilities of sustainment units by requiring a security posture exceeding the organic capabilities of the ASB. Depending on the terrain and threat levels, support from external combat arms units is required to secure the FARP area and maintain security while resupply operations are executed.

Lesson 3: The ASB Must be Integrated in the CAB's Sustainment Operations

The ASB's leadership will face additional planning and synchronization challenges during LSC. The CAB will be expected to conduct larger and more complex missions than those traditionally conducted during COIN. To achieve success, the BDE and BN planners need to be synchronized at all levels. As the senior logisticians in the CAB, the ASB commander, ASB executive officer, and support operations officer should lead the logistical efforts to prioritize and synchronize all classes of supply in time and space across the operational environment. To synchronize the economy of the BDE's logistical assets, we also recommend task organizing the FSCs under the ASB, similar to how the BSB operates. This will allow the ASB to serve as the logistical heart of the CAB and provide accurate and timely recommendations to the BDE commander.

Lessons learned from NTC 24-03 show that independently run sustainment operations at the BN level and synchronized by the BDE operations cell create numerous friction points for the BDE.

Conclusion

The future LSC fight has created new challenges that the ASB should quickly address to ensure continuity of support. Tactics that have been utilized for the last 20 years will no longer be able to carry the battle and achieve victory. Commanders and leaders at all echelons should conduct serious assessments of their formations and current strengths and weaknesses. The ASB, with its current MTOE, may not be able to support four flight BNs with a moderate OPTEMPO. The keys to success will be exhaustive maintenance, prioritized fuel distribution, and a synchronized military decision-making process (MDMP), including subject matter experts from all levels, for an organization whose capabilities and responsibilities fall somewhere between a BSB and a DSSB. Divisions and CABs must continue to stress the sustainment system through rigorous training and evaluations similar to NTC 24-03 to develop sound doctrine for the ASB.

The scale of aviation operations in LSC and the increased burden on sustainment will require higher level commanders to make critical decisions that ensure synchronicity between sustainment and maneuver at the BDE level. At current scale and implementation, the ASB will fail in a LSC fight if used as a BSB. Commanders must either deliberately focus the use of ASB assets or increase the size and breadth of its capabilities to ensure mission success. Using aviation maneuver assets to support the BDE's sustain-

ment goals may be one of these decisions. Additionally, the commander should balance the use of the ASB to conduct FARP operations against the long-term sustainability of the BDE's mission. It is critical for BDE planners to integrate the ASB into the BDE's planning process during the entire MDMP to enhance the commander's decision-making ability. The ASB brings an incredible capability to the table and, if harnessed correctly, can ensure the CAB's success in LSC.

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LTC Linus Wilson is the 127th ASB Commander, 1AD CAB, at Fort Bliss, Texas. He was commissioned and went on active duty as an Aviation Officer in October 2004, after graduating from Troy University in Troy, Alabama. His previous assignments include Deputy Commander Joint Special Task Force–Somalia, as well as assigned Organization Personnel & Force Development, Fort Novosel, Alabama, and BDE Executive Officer, 1st Aviation BDE, Fort Novosel, Alabama.

CPT Ellen Schultz is the Company D, 2-501 GSAB Commander at Fort Bliss, Texas. She graduated from Tennessee Technological University with a degree in Mechanical Engineering and received her commission from its ROTC program in 2017. CPT Schultz graduated from flight school in November 2018. Her previous assignments include the 1st BN-52 GSAB, Fort Wainwright, Alaska, where she was a Flight Company Platoon Leader, Plans Officer-in-Charge, and Liaison to Red Flag, Alaska. She attended the Captains Career Course and Aviation Maintenance Officers Course upon leaving Alaska. CPT Schultz was then assigned to the 127th ASB at Fort Bliss, Texas, and was selected to strengthen its plans section (NTC rotation 24-01).

82D Combat Aviation Brigade Paratroopers conduct FARP operations. U.S. Army photo by SGT Vincent Levelev.

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