

# ABNSOTD Tests, Evaluates Airborne Equipment

William Slaven

While walking through the halls at the Airborne and Special Operations Test Directorate (ABNSOTD), you will observe several tributes honoring inductees in the Operational Test Command's (OTC) Testers Hall of Fame. Roger Pickett, Tom Hammonds, and Dean Horton are just a few of the many names that serve as a reminder to current and future testers of what an operational tester should be. These Department of the Army Civilians — dedicated individuals who have contributed a lifetime of service to testing and ensured that new airdrop equipment such as personnel parachutes, aircraft, and cargo airdrop equipment are safe to use by Soldiers in the field — are considered legends by those currently serving as airdrop testers and those serving in the airborne community. Users across the Department of Defense (DoD) depend on the ABNSOTD to test paradrop equipment to ensure it is reliable and safe. Therefore, we strive to test equipment the right way, the first time, all of the time.

ABNSOTD is located at Fort Bragg, N.C., and is the sole test directorate within the DoD that performs test and evaluation of airborne equipment. The directorate formally began as a service board activated in December 1944 at Camp Mackall, N.C. Its history can be traced back through the Testing and Developing Section of the Airborne Command, organized in 1942 at Camp Mackall, to the original Parachute Test Platoon, activated at Fort Benning, Ga., in August 1940. LT William T. Ryder, commander of the Army's Parachute Test Platoon, made history as the first American Soldier to make a military parachute jump. Ryder's jump, and those that followed by the rest of the platoon's members, validated the airborne concept and ultimately led to the creation of the Army airborne units that distinguished themselves during World War II. Following the end of World War II, the Airborne Board was incorporated into the Army Ground Forces Board on 1 October 1945 at Fort Bragg. As a direct descendant of the original parachute test platoon in 1940, ABNSOTD is not only responsible for the testing of new parachutes and airborne equipment, but it is also chartered to operationally test every item of Army equipment to be airdropped, airlifted, sling-loaded, or in any way transported or delivered by Army or Air Force aircraft.

Operational test requests are typically submitted by program managers or customer units to the Army Test and Evaluation Command located at Aberdeen, Md., where they are reviewed to ensure that they meet the requirement for operational testing. Once evaluated, the Army Test and Evaluation Command then sends the test request to the OTC located at Fort Hood, Texas, where an operational test directorate is assigned to design the scope of testing based off the requirements needed to properly test the listed equipment. The request is then assigned to a test officer within the test directorate where a test plan is developed. This is all followed by a well-coordinated and executed test by hand-selected test teams.

ABNSOTD is responsible for designing, analyzing, and executing all assigned tests. The test manager via the deputy test manager assigns tests to a test officer based on the type of testing required and work load required for the test. The Test Division is composed of several civilian test officers and research, development, test, and evaluation NCOs who are responsible for planning, executing, and reporting the test results. Each test officer and NCO assigned to the Airborne and Special Operations Test Directorate has years of military or civilian experience within the Airborne community, and all have completed a rigorous certification process to become OTC testers. The combined airborne experience level is in excess of 150 years and includes heavy airdrop rigging, static line, and military free-fall operations. Civilian test officers are offered the opportunity to perform duties as a test jumper. These testers and their test teams understand the value of robust testing in a world where Soldiers must rely on their

equipment to accomplish their mission. The two types of testing that an ABNSOTD test officer will typically be assigned to execute are personnel airdrop testing and heavy equipment airdrop testing. Personnel tests are usually challenging and in some cases difficult to thoroughly test because of their complexities. Personnel airdrop testing usually consists of anything that a jumper would wear during a combat insertion by parachute but may also include the testing of jump procedures for newly procured aircraft or jump-testing optics, scopes, radios, and other equipment that a Soldier may carry in a ruck sack or on the parachute harness. Personnel testing is usually followed by an operational ground exercise or a range exercise to validate the survivability and functionality of the equipment that has just been tested.

Heavy airdrop testing requires a test officer to have a complete understanding of how the military delivers light and heavy equipment safely to a user while in combat. This knowledge comes from years of working on and around heavy airdrop rigging. Test officers work in conjunction with aerospace engineers from the U.S. Air Force Air Mobility Command and Natick Research, Development and Engineering Command because when testing new equipment for airdrop, the rigging procedures for the test items must be developed as well. These procedures have to be designed to function with the airdrop rollers and rail systems that are used by all DoD aircraft used in airdrop operations. The challenges of airdrop testing include designing restraint provisions and energy dissipation kits that can survive the rigors of airdrop for equipment that weighs up to approximately 42,000 pounds. After final rigging of the heavy equipment is complete, testers must coordinate with manual writers from the U.S. Army Quartermaster School located at Fort Lee, Va., to document the rigging designs into the appropriate format for publications in field and technical manuals. In addition to heavy airdrop testing, ABNSOTD is often tasked to conduct testing of external air transport (EAT) procedures of various types of equipment. This type of testing involves the flight testing of equipment that is to be moved by helicopter sling load. The ABNSOTD conducts aerial flight testing of light combat vehicles, howitzer guns, and many other forms of cargo by suspension from a helicopter while in flight. This type of test involves aviation resources that are typically organic to the U.S. Army but may also include Marine, Air Force, and Navy aircraft. Weights of test loads, flight patterns, number of hook-up points, type of lifting slings, and lift provisions are all considerations when planning to conduct EAT testing. Once the plan is in place, helicopters, flight crews, and accompanying equipment are assembled with a test team that is prepared to document the results of a series of flight maneuvers over a predetermined flight route. If proven successful, the results are documented and sent to certifying agencies for use in the field.

ABNSOTD has developed a trusted relationship throughout the airborne community. Experienced testers plan well-thought-out, well-executed, and safe tests — the accuracy of which has been proven in the field. Program managers, local commanders, and airborne entities across DoD depend on ABNSOTD for advice and validation of questions or procedures that pertain to anything airborne. “If the Airborne and Special Operations Test Directorate didn’t test it, we aren’t going to drop it,” has become a common quote from within the Airborne community and speaks volumes to the respect and reputation earned by the directorate. In addition to providing advice and confidence to the Airborne community, ABNSOTD is constantly challenged with complex tests such as C-27 and C-17 aircraft personnel airdrop and heavy airdrop certification tests. Other examples include testing of rigging procedures for new emerging vehicles like the Joint Light Tactical Vehicle, Joint Precision Aerial Delivery Systems, unique equipment to be tested for use with Special Operations Forces, foreign interoperability airdrop equipment to be deployed with the Global Response Force, and newly designed personnel parachutes such as the T-11 static line parachute and the RA-1 military free-fall system. When equipment comes to the Airborne and Special Operations Test Directorate, it is generally there for final testing before certification for use in the field. This testing provides users across the entire DoD with an airborne capability that they did not have before the testing and certification process.

According to Pete Morakon, ABNSOTD's most recent Hall of Fame inductee, "...the duty at the Airborne and Special Operations Test Directorate is both vital and personally satisfying. Everything we do is for Airborne and Special Operations Soldiers. It's an honor to have been a member of this organization." Many current and retired test officers have expressed the same sentiments when asked to describe their experiences as a ABNSOTD test officer.

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Original Test Platoon Displayed with Modern Day Operational Test Jumpers (Photo illustration by James Finney)



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