INFANTRY NEWS

THE PUBLICATIONS Division of the Infantry School's Directorate of Training and Doctrine offers the following update on infantry publications:

FM 23-90, Mortars. This manual is scheduled for publication by 1 October 1990. It will supersede FMs 23-90, 23-92, 23-85, and 23-36 (Test) and TC 23-90. It will also rescind DA Forms 2187-R, 3214-R, and 3609-R; a new form designed to replace them is included in the manual for local reproduction.

This manual discusses the characteristics, operations, and functions of the 60mm, the 81mm (M29A1 and M252), 107mm (4.2-inch), and 120mm mortars. It also includes the organization of squads and sections, personnel duties, and sighting and fire control equipment (including characteristics and tabulated data). The gunner's examination is in Chapter 9.

FM 23-91, Mortar Gunnery. The coordinating draft should be in the field by now, and the estimated date of publication is December 1991.

TC 21-xxx, Rappelling. The coordinating draft should be in the field by now, and the estimated date of publication is September 1991.

THE ARMY'S 75th RANGER Regiment and its three battalions are now being equipped with a lighter and more lethal recoilless rifle.

The portable 84mm weapon, called the RAAWS (Ranger Antiarmor, Antipersonnel Weapon System), replaces the current M67 rifle, which fires a 90mm projectile. The RAAWS is based on a Swedish-designed weapon.

An improved weapon was needed for several reasons: The M67 (now out of production) is too heavy at 35 pounds and too long (53 inches) to jump with. (It has to be dropped separately, and valuable time is lost on the ground while the Rangers find it, unpack it, and set it up.) In addition, it does not fire illuminating or smoke rounds and cannot be employed at night.

The RAAWS, labeled the M3, is shorter (41.85 inches) and lighter (20 pounds), fires both illuminating and smoke rounds, and uses a night vision device.

Taking aim with the RAAWS in the kneeling position.

A modified version of the M67 is available that is only slightly longer than the M3 at 43 inches, but it still weighs 32 pounds and fires rounds that weigh nine to 13 pounds each. By contrast, the RAAWS fires seven-pound projectiles, and this significantly increases the number of rounds that Rangers can carry into battle.

Lethality also played an important role in the selection. Preliminary tests of the M3's high-explosive antitank (HEAT) round against targets at 600 meters have revealed that it is about twice as effective as the M67 in hit probability—33 percent as compared to 17 percent. The maximum effective range of the M3's high explosive round, used against personnel and lightly armored targets, is two-and-one-half times that of the modified M67's HE round.

The Ranger antiarmor teams will use the RAAWS during special operations missions, infiltrations, exfiltrations, raids, ambushes, and defensive operations. Its primary mission will be to defeat vehicles, exposed or protected personnel, and field fortifications. Its secondary mission will be to identify targets by marking or illuminating them and to obscure the enemy's vision.

THE ALLIED KINETIC Energy Recovery Rope (AKERR), which enables a tracked armored vehicle to recover a like vehicle, has been adopted by the Army.

One size is available to support mid-sized tracked vehicles including the Bradley fighting vehicles. The 64mm rope is available as part of a kit, NSN 4020-01-

211-8382, which also contains hookup hardware (shackles), a storage bag, and an operator's manual.

The recovery method is as follows:

- The towing vehicle reverses as close as possible to the bogged vehicle. The rope is connected and snaked to allow tangle-free deployment. (For situations where it is not possible to get close to the bogged vehicle, extension cables may be used, but the AKERR must be connected directly to either the recovery or the towing vehicle.)
- The towing vehicle accelerates to the maximum speed possible and snatches the rope with its total energy at that speed. When the towing vehicle is slowed or halted, its kinetic energy is converted into the potential energy of a stretched rope and transferred by the rope into the bogged vehicle. (If the bogged vehicle has power to assist this transfer of energy, recovery can be faster.)
- After a slight pause, the bogged vehicle rises free. If it does not do so on the first attempt, the process should be repeated. Once the vehicle is free, the AKERR can continue to be used in towing it.

The authorization for the device is Common Tables and Allowance (CTA) 50-970. The item manager is Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-FHCS (Sam Hazime), Warren, MI 48397-5000; AUTOVON 786-5940.

A GAS STATION ON WHEELS has been developed for use with the Army's 5,000-gallon fuel tankers such as the M969, M970, and M131 series trailers.

These tankers, towed by 5-ton trucks, are now equipped to handle only two vehicles at a time. The new kit will enable troops to set up temporary stations that are capable of refueling up to eight of these vehicles at a time.

The kit consists of eight 50-foot sections of hose connected to form a 400-foot-long pipeline, which attaches at its midpoint to a tanker fuel valve, and eight 25-foot fueling hoses with nozzles.

In operation, the pipeline is extended along the ground 200 feet in front of and behind the tanker. The fueling hoses are then connected to the pipeline through T-joints. The joints are spaced 50 feet apart to allow enough room for vehicles to park while refueling.

When not in use, the hoses and associated fittings are disassembled, capped, and stored in a special reusable container that has removable sides and top for easy stowage and unpacking.

THE NATIONAL INFANTRY Museum has received several noteworthy donations recently. One, a life-size bust of General J. Lawton Collins, was presented by the sculptor, Colonel (Retired) Ludlow King.

General Collins had 39 years of active service, many of which he served in the infantry. He graduated from the U.S. Military Academy in 1917 and from the Infantry School in 1925, after which he served as an instructor in weapons and tactics at the School.

During World War II he commanded the 25th Infantry Division, leading it successfully against the Japanese forces on Guadalcanal and the New Georgia Islands. He later transferred to the European Theater of Operations, where he commanded the VII Corps in the D-Day assault on Utah Beach on 6 June 1944. He continued to lead the corps across Europe until the end of the war in 1945. He served as Chief of Staff of the Army from 1949 until 1953.

Colonel King was a great admirer of General Collins and had long wanted to do something to honor this great leader. He served with General Collins in the VII Corps as chemical officer. He was wounded a few days after D-Day and was awarded the Bronze Star and the Purple Heart medals. He retired in 1945 because of the wounds he sustained at that time.

Another bronze sculpture, this one depicting the 173d Airborne Brigade "Sky Soldier," was donated and is now on display in the Vietnam section of the exhibits. A Viet Cong flag captured by elements of the 25th Infantry Division in the Tay Ninh Province of South Vietnam during the Tet offensive of 1968 is another interesting addition to the collection.

The Regimental Quartermaster Sales Store continues to operate at a good pace. A van has been purchased, and a selected array of merchandise is offered at Infantry Training Center graduations and at veteran or unit reunion sites on post. More than 300 items are now offered for sale. A catalog is available on request, and the store is ready to accept mail orders.

Many of the museum's visitors will be happy to know that the elevator, which had been out of service for about a year, has been replaced and a new air conditioning system is in place and working.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is $2.00 for a one-year membership or $10.00 for a lifetime membership.

Additional information about the museum and the society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273; telephone AUTOVON 835-2958, or commercial (404) 545-2958.

A ONE-PIECE DRIVE SHAFT of graphite and epoxy has been proposed as a replacement for the two-piece steel front drive shaft on the HMMWV (high mobility, multipurpose wheeled vehicle).

The four-wheel drive HMMWV now uses two drive shafts—a 27.1-inch shaft for the rear wheels and a 57.8-inch shaft for the front wheels. Because of its length, the front shaft had to be designed

as a two-piece unit.

Although the composite shaft costs about $30 more than the steel shaft, it would eliminate problems with corrosion, increase the speed at which the vehicle could safely travel, and require less maintenance. In addition, it weighs only 12.5 pounds while the steel shaft weighs 26 pounds.

If the composite shaft is approved, it may also be used on other trucks in the future.

THE NEW DESERT MOBILITY Vehicle System (DMVS) will fill an important Special Forces requirement for a ground vehicle system to use on long missions. A Special Forces operational detachment must now rely solely on air transport for rapid mobility.

In support of the program, 63 HMMWVs (high-mobility multipurpose wheeled vehicles) will be modified to meet this need, and modification kits will be provided for 12 others.

The modifications include the following:

- Removing the run-flat tire devices from the wheels to permit the crew to perform tire repairs, and providing a 12-volt air compressor for inflating tires. The run-flat tire system was never intended for long-distance, cross-country operation while deflated.
- Replacing the driver's and right-front passenger seats (with bucket seats from the ¾-ton commercial utility cargo vehicle) for improved comfort during cross country operation.
- Lengthening the seat belts with a commercially available restraining system that provides better support and keeps crewmen in their seats while traveling at high speed over rough terrain.
- Installing storage racks in the area normally occupied by the rear seats to carry 12 "jerrycans" (capacity of five gallons each of water or fuel).
- Installing a lighted magnetic compass for use in off-road navigation.
- Installing an interior rear-view mirror.
- Providing additional ready ammunition capacity by installing two ammunition boxes atop the vehicle.
- Installing wire mesh protection for the lower radiator hoses to protect them against cross-country wear and tear.
- Installing handholds for the crewmen to grasp during rough travel.
- Installing additional tie-downs to keep cargo from bouncing around.
- Installing duplicate vehicle instruments for the navigator.

In addition, the HMMWVs are being painted a sand color instead of the traditional three-color camouflage pattern. The acquisition of a DMVS trailer and motorcycle as non-developmental items is also being pursued.

The DMVS program is a joint effort involving the Tank Automotive Command and the John F. Kennedy Special Warfare Center.

A BATTALION MAINTENANCE pamphlet has been developed by the 705th Support Battalion (Maintenance) at Fort Polk, Louisiana, for use at the operator and organizational levels.

The pamphlet summarizes the battalion's approach to maintenance and is intended to reinforce but not to duplicate a maintenance standing operating procedure. Since the document is generic, it can be applied to most battalion-sized units.

The pamphlet outlines the battalion commander's maintenance philosophy and includes segments on such items as inspections; external maintenance assistance; safety; motor officer selection; preventive maintenance checks and services; prescribed load list (PLL); and the Army maintenance system (TAMMS) clerk operations.

More information or a copy of the pamphlet is available from Major Larry Harman at AUTOVON 863-7915/6101, or commercial (318) 535-7915/6101.

THE HELMET IN THE PASGT (Personnel Armor System Ground Troops) must be carefully fitted to each soldier. Proper sizing of the PASGT helmet is based on the three-dimensional shape of the human head—length, width, and circumference—with a half-inch of standoff between helmet and head to protect the head properly. It has been estimated, however, that only about two percent of our soldiers are being properly measured.

The Natick Research, Development and Engineering Center is encouraging Central Issue Facilities (CIFs), which do the fitting, to take these measurements before issuing a helmet. First, calipers should be used to measure the length and width of the head, then a tape to measure the circumference. For instance, a soldier's head may measure small in width, medium in length, and large in circumference. The largest of the three is his proper helmet size.

Any questions concerning the fitting of the helmet may be directed to the Natick *Hotline*, AUTOVON 256-5341; commercial (508) 651-5341.

THE NEW FLAME AND INCENDIARY Technology (FIT) Program is now in exploratory development at the U.S. Army Chemical Research, Development and Engineering Center (CRDEC) at the Edgewood area of Aberdeen Proving Ground, Maryland.

Currently, the Army has only one flame weapon system in its inventory—the M202A1 launcher with the M74 66mm incendiary rocket clip. The portable M202A1 "flash" is a 28-pound weapon consisting of four launch tubes grouped together. It is designed to be used against bunkers, and is being held in war reserve stocks because there are so few of them.

The new program is using the M74 warhead to conduct baseline testing that will establish a starting point from which a much-improved flame system can be developed. Another requirement of the program is to use an existing delivery system instead of developing a new one.

The Army is also looking at ways to have the improved FIT round fired from the standard M72A2 light antitank weapon (LAW). Incorporating the improved payload into the LAW will be the role of the U.S. Army Missile Command.

Even though the program is in the hands of CRDEC and the Chemical Corps, flame and incendiary items will probably be used by the infantry, field artillery, special operation forces, and the Marine Corps.