What would be wrong, then, with including something like the following in the briefing of the operations order?

Commanders' recon will leave from this location at ---- hours. Each company commander and the AT platoon leader is authorized to bring one vehicle and up to four people. The objective rallying point/release point for the commanders' recon will be coordinates ----. You will have one hour to complete your special recon and return to the ORP. Turn in a sketch of your intended recon to the S2 before we leave. Alpha Company will provide one platoon for security.

And because the U.S. units at the NTC must also find ways to deal with the OPFOR scouts, counterreconnaissance must be a part of every defensive plan.

Thus, the first thing the U.S. forces should do is to establish OPs covering the OPFOR's likely approach into their sectors. They have to do this anyway to provide early warning, but after the sun goes down the OPs should change their mission and become ambushes, lying in wait for OPFOR patrols.

They should also place additional ambushes on the likely routes through or around their positions and establish moving patrols to cover both the likely OPFOR patrol routes and any gaps in the ambush plan.

Any obstacles that are emplaced should have ambush parties either lying in front of them or actually wired-in as strong points. (In the latter case, the forces in the strong points should send out ambushes.)

Several important lessons about reconnaissance can be learned from the experiences of the battalions that have trained at the NTC:

- S2s must learn to regard their job as a search for a flesh-and-blood opponent and not as a classroom exercise. In map and command post exercises, they must constantly remind themselves that they don't know where the enemy is and consider how they will go about finding him.
- All reconnaissance and counter-reconnaissance efforts must be coordinated into a single plan, and this plan should be an annex to the operations order. The U.S. units should adopt some of the highly effective techniques the OPFOR uses.
- The S2 must be actively involved in the training of the scout platoon and in the patrolling effort itself.
- Commanders' reconnaissances must be planned and coordinated.
- Land navigation training, particularly at night, is critical. A fear of losing patrols can only inhibit aggressive patrolling.
- At both company and task force levels, there must be a plan for dealing with the OPFOR's motorized reconnaissance elements in case they get through. Using ambushes and tank-killer teams from the unit trains is one way to do this. And company commanders must be alert for those OPFOR motorcycle scouts and must find them and get rid of them.

If the U.S. forces will adopt some of these techniques, their reconnaissance efforts can be as effective as those of the OPFOR in future battles at the NTC and elsewhere.

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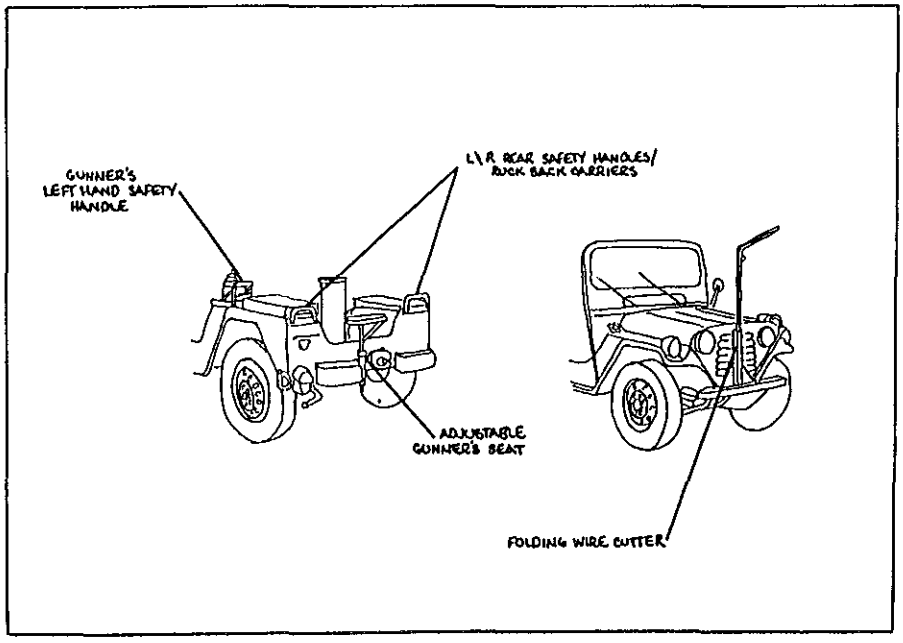
TOW Jeep Modification

LIEUTENANT STEVEN R. PELLEY

The jeep-mounted TOW system is the heart of the 82d Airborne Division's potent airborne antiarmor defense and has been for almost 10 years. Although the lightweight, modular components and "first round kill" ability of the TOW make it perfectly suited to the highly fluid mission of airborne units, its primary carrier, the M151A2 one-quarter ton truck, has presented some problems in crew safety and performance. The solutions the Division found for these problems may prove helpful to other units as well.

Captain V.J. Bero, while commanding Company E, 505th Infantry (Airborne), identified the principal safety problems and proposed some solutions. These solutions, as shown on the accompanying sketch, were modified to streamline production and improve effectiveness and became the basis for upgrading the Division's entire TOW jeep fleet.

One of the problems with safety was the expected proliferation of wire



on the battlefield from the wire-guided munitions used by virtually every modern army. This wire — strong and nearly invisible — would pose an obvious threat to the safety of men and equipment in open vehicles.

Accordingly, members of the service section, 782d Maintenance Battalion, devised an inexpensive, bolt-on wire cutter made of one-inch angle iron and two-inch channel iron. This wire cutter is unique in that it can be folded down out of the gunner's line of sight while he fires the TOW missile and then raised to protect the crew and equipment while on the move. Either of these adjustments can be made in only a few seconds without any special tools.

HAND-HOLDS

The other safety problem was the lack of secure hand-holds for the crew to grasp while the vehicle was moving. (Several troopers in the 82d had been injured, for example, when they were thrown against equipment or the vehicle itself.) Three bolt-on handles, therefore, were added for the gunner and assistant gunner to grasp. The first of these handles was mounted to the base of the radio antenna's mounting bracket. It provides a firm hand-hold for the gunner's left hand and keeps him from being slammed into the weapon's optical sight and night sight. The other two handles were mounted onto the crew's seat in the rear of the truck. Besides giving the crew something to hang onto, they also double as racks on which to secure ALICE packs, which creates more room in the vehicle for the crew.

Besides these safety problems, there was also a performance problem: the gunner could track 180 degrees over the front of the vehicle only by alternately sitting and standing. All of this movement sometimes caused the gunner to make erratic movements while tracking, which naturally increased his chances of missing his target.

To make matters worse, the AN/TAS4 TOW night sight, which was added to the weapon system, forced the gunner to track his target through an eyepiece about eight inches above the original optical sight. The resulting half-squatting position the gunner had to use was not only uncomfortable but unstable as well, and it influenced the gunner's ability to track smoothly.

The solution to this problem did not come as easily as the others. Several solutions were proposed and rejected because the additions weighed too much, were too expensive, or permanently altered the vehicle. The solution had to be lightweight, inexpensive, and easily removed.

The solution finally adopted was a padded seat, readily available through the Army Supply System, mounted on a one-inch diameter length of bar stock. The bar stock was fitted into a 10-inch piece of one-inch inside diameter pipe mounted to the left rear bumperette of the jeep. The seat was offset and a one-inch slip ring placed between the seat and the pipe so that the gunner could adjust the seat to any desired height and lock it without a wrench. This seat gave the gunner a stable platform from which he could easily track a target with either the optical sight or the night sight.

Once these modifications had been engineered, it was simply a matter of procuring the materials needed and fabricating a set of wire cutters, handles, and seats for each of the Division's 162 TOW carriers. The materials selected were common, easily assembled, and relatively inexpensive. (The cost per vehicle was only about $35.) Once the sets were completed, they were installed at a rate of 30 per day. (In less than 10 minutes per vehicle, all of them could be restored to their original configuration by an operator armed only with a few wrenches.)

Here was a case in which the ideas of a concerned commander, translated into action by his direct support maintenance people, contributed to a safer, more effective force.

Anyone who would like more detailed information on these modifications may write to the Commander, 782d Maintenance Battalion, Fort Bragg, North Carolina 28307.

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