

LETTERS

Dismounted Scouts in Mechanized Cavalry Operations

Dear Sir:

Divisional cavalry organizations are "combined arms" units with the capability and flexibility to operate within a variety of operational concepts, today and in the future.

The versatility of divisional cavalry makes it the unit of tomorrow's Army, capable of sustaining operations as far as 100 kilometers forward of a division in a massive strike concept, such as DESERT STORM, or providing mechanized and air support of security operations in a lower intensity, small force concept which faces the Army and U.N. forces today. Another theater of operation for today's cavalry is its involvement in the support of counternarcotics operations. The divisional cavalry serves as the eyes, ears, and support element for joint task force operations on our nation's borders.

A divisional cavalry squadron's TO&E is ideally suited for these various missions, consisting of 28 M3 Bradleys, 18 M1 Abrams, and four mortars for ground operations, and eight AH1 Cobras, 12 OH58C Kiowa, and a UH1 Iroquois for aerial reconnaissance and group support.

The concept of security in speed (offensive) and security in depth (defensive) justifies the need for an additional element in the cavalry squadron, a dismounted scout platoon.

The dismounted team concept is not new to the cavalry. The "Blues Platoon" of the Vietnam era was very successful, and today's OPFOR ground scouts at the National Training Center (NTC) are highly successful in utilizing small dismounted "dirt teams" to gain intelligence and call indirect fires on unsuspecting rotational forces.

The mission of the dismounted scout platoon must be tailored to the conduct of operations forward of the cavalry squadron. This platoon would provide intelligence and security prior to the commitment of ground and air forces and would conduct battle damage assessment for aerial and indirect fires. It would also provide security, allowing ground and air elements freedom and speed of movement, security of downed aircraft sites, and extraction of downed aircraft crewmembers. The addition of these missions greatly enhances the squadron's survivability on the battlefield, buys more realtime, hard intelligence, and provides added security and support for ground and air forces moving into an area of operation.

Including this dismounted platoon as an element of the squadron alleviates the coordination needed with other ground forces not organic to the squadron, and allows the division to use those assets that would otherwise be attached to the squadron. Making the dismount scouts organic also allows

continuous dynamic training of the dismounted platoon within the squadron and allows cross-training with ground and air elements of the squadron to enhance mission success.

The assets needed to allow the platoon to accomplish its mission are currently organic to the squadron or easily attached from the aviation brigade. The modes of transportation for insertion and extraction would vary. Aerial support can be accomplished by the UH1 that is within the squadron, or by an attached UH60 provided by the brigade. Ground transportation can be accomplished by using ground force M3 Bradleys or HMMWVs. Another option is to simply move dismounted into the area of operation. Resupply is handled similarly, or by other creative options such as poncho parachute drops from OH58s.

The issue of sustaining communications with dismounted teams can also be handled internally. One option is to establish a series of observation posts with additional teams from within the platoon, each of these observation posts having an additional mission of acting as relay stations. Another option is to use helicopters or forward-deployed ground scouts to act as relay stations. Using these methods of communication must be rehearsed and perfected, which further justifies the need of this platoon to be an organic, not attached, element of the squadron.

The absolute need for the dismounted platoon's soldiers to understand cavalry operations, coordinate direct and indirect fires, conduct reconnaissance to support the squadron's operations and execute small team dismounted operations indicates the need for the team's members to be 19D scouts.

The need for such an element would best be demonstrated by employing them on a theoretical mission. I refer to LTC Douglas A. Macgregor's example in "Cavalry Operations in Limited Warfare" (printed in *Army Trainer*, Spring 93 issue) to display the possible use of the dismounted platoon.

In this scenario, an Army aviation brigade (-) has been deployed as the vanguard of the U.S. contingent. Sent as part of the U.N. forces, the brigade is to quell ethnic fighting between rival factions and push the Krasnovian forces back over the approved demarcation line in the region of Lydia, a province of Samaria. Upon deployment, U.S.-U.N. coalition forces establish an air-ground screen without interference from the hostile Krasnovian forces.

Intelligence then reports that the Krasnovian forces refuse to evacuate the area around the town of Krasnoye-selo due to its tactical and logistical importance. The townspeople, being primarily of Samarian descent, have voted themselves free of Krasnovian rule. The town lies within the Samarian boundaries, as set forth by the agreed upon demarcation line. Intelligence

also reports that several air defense batteries of S60 radar-directed guns, ZSU-23 cannons, and ZPU multi-barreled machine guns have been positioned in the valley around the town.

At this point, tactical planning by the coalition forces begins. This is also the time for dismounted scouts to become active, moving to positions overlooking the enemy's location to provide hard intelligence for the S2 and reports of enemy main logistical routes resupplying their forward units. This intelligence will greatly benefit the commander in his tactical planning.

The dismounted scouts will also pinpoint enemy built-up areas and preplot them for indirect fire. Resupply of cache sites by OH58 scout helicopters and other outgoing teams allows continuous operations by the dismounted teams.

At H-3 of mission execution, an MLRS battery fires on known locations of enemy ADA Batteries. Dismounted teams are used to assess battle damage and ensure there is no longer a threat from these units prior to committing aerial assets to the area. In addition, an Apache company is placed in reserve to help locate and destroy a missing ADA battery. With dismounted teams in the area days prior to mission execution, the missing enemy battery may previously have been located and marked for indirect fire, alleviating the need to tie up assets such as the Apache company. In the event the missing battery is discovered after the operation begins, a dismounted team can direct indirect fire and conduct battle damage assessment to eliminate the possible loss of friendly aircraft by direct fire. Later in the mission, the dismounts' battle damage assessment becomes vital because two friendly helicopters are lost to enemy air defense artillery fire. Lack of proper battle damage assessment of the MLRS fire on the enemy ADA positions can be directly attributed to these losses.

Upon committing of the ground forces (H-Hour), small dismounted teams located along the friendly main axis of attack would better be able to direct indirect fires, in turn, providing an increased level of security along the axis. The ground and air elements conducting the attack (using security in speed) have a greater level of success, while minimizing losses.

Dismounted teams are also used as search and rescue teams in the event of downed, friendly aircraft. Teams already located in the area of operations speed to the scene and provide security at the crash site. This will also help reduce the risk of capture, and allow quick evaluation of wounded air crews.

Upon completion of the operation, the squadron begins security and surveillance operations in which the dismounted teams,

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establishing observation posts and conducting patrols, play a key role.

The dismounted teams used in depth as observation posts, during and after the operation, would also be able to maintain contact with the retreating Krasnovian forces to ensure there is no reconsolidation of forces and threat of counterattack.

A dismounted platoon organic to a cavalry squadron would enhance the commander's capabilities before, during, and after any operation. The assets needed to create such a unit are virtually organic to the squadron, making it a cost-effective concept, while the increased mission success and minimized loss of life and equipment make it invaluable.

The configuration of the platoon, when deployed, will vary by mission and METT-T. There should be at least 20 soldiers in the platoon, allowing enough manpower to conduct multiple missions and necessary coordination and resupply for the teams in operation.

The platoon should be controlled by the S3, while working closely with the S2. Command would fall directly under the squadron commander, treated as another unit under his command.

Training of such a unit must receive the highest priority and training distractors must be kept to an absolute minimum to ensure readiness of the platoon and its survivability when deployed. Only the best scouts should be selected for the platoon, and the highest standards must be sustained and periodically evaluated.

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Scout Vehicles: Still No Good Answer

Dear Sir:

The purpose of this letter is to add my views to the ongoing, rapidly expanding dialogue regarding suitability of the HMMWV for the battalion task force scout platoons. I have attempted to reduce complexity of the subject by focusing on survivability, mobility, and deployability. The HMMWV is regarded as a proven high-mobility, multi-purpose, wheeled vehicle. But is it really suitable for combat operations in a battalion task force scout platoon?

Survivability: Survivability is of paramount importance to the scout. Can HMMWV-mounted scouts survive on a modern battlefield while actually conducting reconnaissance, surveillance, and security operations? Truthfully, even the uparmored

HMMWV cannot adequately protect scouts from either direct or indirect fire.

Most reconnaissance units around the world are using armored vehicles with large caliber weapon systems. Scouts will frequently have to preclude enemy reconnaissance personnel from doing the same thing that they are trying to do. HMMWV-mounted scouts are disadvantaged from the start.

HMMWV-mounted scouts have neither the lethality nor armor protection required for survival. There is little to protect the crew from fragmentation. On the other hand, the M3 Bradley Fighting Vehicle, although a noisy vehicle with a large silhouette, can also compromise its location because of exhaust plumes. The Bradley does have good armor protection against direct fire up to 30mm (BMP-2), and good protection from effects of high-density artillery fragmentation. It provides excellent protection from small arms, 12.7mm and below (BRDM-2).

The basic HMMWV is not comparable. It can be uparmored, but the results are only slightly better than nothing. Uparmoring also carries penalties — increasing gross vehicle weight and decreasing space inside the vehicle, thus reducing the payload. Payload is very important. Scouts must carry all their equipment all the time.

NBC protection is another aspect of survivability. The HMMWV offers nothing in this area, except what the scout carries for personal protection. Most armored combat vehicles in the U.S. Army have an NBC particulate system which greatly enhances the crew's ability to perform while mounted. I cannot say enough about survivability on the battlefield. Scouts cannot be effective if they cannot survive, and you cannot rely on stealth alone for mission accomplishment. Scouting is very dangerous under the best battlefield conditions.

HMMWV lethality doesn't really measure up to requirements of a modern battlefield. Weapon systems currently organic to a task force scout platoon are well proven. The M2HB .50-cal. machine gun is an excellent weapon, but it does not pack the power to defeat the threat a scout may meet. The Mk 19 MOD 3 is also a great weapon. It has a good range and explosive rounds capable of defeating most thin-skinned vehicles. It can wreak havoc on dismounted troops. But there is a definite shortfall in the antitank area.

The TOW system carried by platoons of light cavalry squadrons is a combat multiplier. "Scouts are not supposed to fight," but it has been proven in combat over and over that there are those situations in which a scout must fight. HMMWV-mounted scouts do not have a weapon capable of at least taking out enemy armored reconnaissance elements, whereas Bradley scout platoons have all the firepower

needed to defeat almost any threat on the battlefield.

Scouts, unfortunately, by the nature of their business, will frequently get into trouble in combat. They must be provided the capability to defend themselves and survive on potential battlefields.

Target acquisition is an extremely important aspect of a good scout platoon. Scouts must be able to detect the enemy before the enemy detects them. The HMMWV offers poor target acquisition capabilities, basically nothing better than World War I technology, i.e., binoculars which are not even close to state-of-the-art.

At the NTC, my platoon was issued AN/TAS6 night sights along with UAS-11 TOW sights. There were only two vehicle mounts available. We were being creative, attempting to find ways to put the sight up with the gunner, but whatever we tried was field expedient at best. These sights enhanced our night operations ability, their capabilities cannot be compared to what an M3 BFV platoon can do.

Thermal sights are a must for a scout platoon. Scouts are supposed to own the night. How can scouts own the night if they cannot see? Night vision goggles are good on patrols and OPs for close-in observation, but a thermal sight is a must for long-range night vision. We will always have problems with this in the dismounted mode until someone designs a reliable, lightweight, thermal sight for the dismounted elements of a scout platoon.

Mobility: Mobility is an essential requirement for scout platoon operations. Coupled with mobility is stealth. Being quiet is very important. If the enemy cannot hear you, the enemy probably cannot locate you. The M3 BFV does have a large silhouette, a loud engine and powertrain, an exhaust plume, and a thermal signature which can be seen for two miles. But it can be reasonably stealthy if operated in a stealthy manner.

In reality, the Bradley can be maneuvered fairly quietly, but not as quietly as a HMMWV or LAV-25. When attempting stealth with the Bradley, the time it takes to maneuver/move is greatly increased. The HMMWV, on the other hand, has excellent stealth attributes. It is quiet and has a low silhouette. There is a problem with having external speakers for the communication systems that can compromise its position.

Amphibious capabilities of the Bradley, which can be rigged to swim, given the time, are lacking in the HMMWV. The HMMWV requires engineer support, or must find a bridge or ferry to cross more than a ford.

Deployability: Both vehicles can be deployed by many means. While a HMMWV can be loaded in just about any cargo aircraft, the M3 BFV cannot. But, since the U.S. Army will not deploy solely by air,

there really is no problem in strategic deployment given early warning.

The problem is in tactical deployment. My platoon has practiced sling-loading the HMMWV in a tactical environment. It takes, at a minimum, two UH-60 helicopters per vehicle. As it stands, an empty M1025 or M1026 HMMWV is just short of the maximum weight for the cargo hook of a UH-60. This equates to one aircraft for the vehicle and a second for the crew and equipment. Which in turn means either 20 aircraft for the ten HMMWV scout platoon or two aircraft flying ten sorties. Not impossible, but is it feasible?

Bottom Line: Is there an existing vehicle which would be better than the HMMWV of the task force scout platoon? There are approximately 107 vehicles worldwide that could be used as a reconnaissance platform. Some would need to be modified to fit the scout's needs, others would not.

Should the U.S. Army develop a unique reconnaissance vehicle from the ground up? Unless we are prepared for extremely high casualties among reconnaissance, surveillance, and security personnel, the answer is a resounding YES!

We urgently need to capture modern and maturing technology to adequately prepare scouts for the modern battlefield, as well as for the 21st century battle. It is essential that the scouts/soldiers who will use it provide the input into the design, development, and testing process. This is an absolute requirement to ensure that we field the right design.

In closing, I want to emphasize that scouts across the total force need to engage in the dialogue to ensure the future user is properly mounted/equipped. *ARMOR*, over the years, has provided us a great forum. My thanks for that.

SGT WILLIAM BIGHOUSE
HHT, 2-1 Cavalry
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Recoil Vibration of the .50 Cal MG

Dear Sir:

Two things in the September-October 1994 *ARMOR* really caught my attention: One is Don Loughlin's article, "Reducing Gun Recoil: Differential Recoil Systems," the other the back cover HMMWV Scout Update regarding the new dual-purpose, dual-weapon gun mount for the Mk 19 GLMG and cal .50 BMG M2-HB.

Although Loughlin's article is primarily about weapons firing "out of battery," both it and the back page gun mount story address the problem of the recoil "vibration" of the cal .50 machine gun.

This problem has existed as long as the powerful cal .50 MG has. I first fired a .50 over 50 years ago. It was one of the M2

water-cooled antiaircraft mounts, which incorporated recoil-absorbing springs. However, in World War II, relatively few cal .50s were fitted with recoil-absorbing devices.

In World War II, recoil-absorbing devices were primarily used on those M2 water-cooled and M2-HB .50s in antiaircraft mounts. They were also used in many of the flexible hand-held mounts for the cal .50 M2 aircraft guns and in some .50 M2 aircraft guns mounted in power aircraft turrets. The introduction of the new MK 93 dual-purpose mount with recoil absorbing provisions seems to me to make it worth discussing the systems used in World War II and long after.

These original recoil absorbers, developed in the World War II era, fell into two classes: "recoil adapters," integral with the gun assembly, and "gun mount adapters," interposed between the gun and mount. In addition to either of these, there has always been the "barrel buffer assembly" of the gun's action and the "buffer assembly" portion of the gun's back plate assembly, both integral to the gun itself.

Neither of the .50's integral "buffer" assemblies do much to limit the "vibration" of the gun, but they both make an important contribution to its basic Browning design being one of the most reliable and smoothest of any machine gun ever conceived, and that is what has made it as long-lived a weapon as it is. Its basic design dates from about 1920!

The integral "recoil adapter" for the .50 M2-HB was listed as late as in TM 9-500, *Data Sheets For Ordnance Materiel*, September 1962, but it is largely forgotten today. This is in part due to the fact that it cannot be used with the M2 tripod ground mount or any of the .50 gun mount assemblies in use today.

The recoil-absorbing "gun mount adapters" of World War II were only usable with the .50 M2 aircraft gun, and they have been used with it in things like helicopter and gunship hand-held flexible mounts fairly recently. This system has never been adapted to the .50 M2-HB gun although recoil absorbers were part of some older antiaircraft mounts for it.

The problem of stability of mounts for machine guns was addressed in TM 9-2205, *Fundamentals of Small Arms*, 1952 edition. Figure 47 on page 57 in this TM shows a series of graphs of recoil effect which happen to have been for the cal .50 machine gun. From these it can be seen that the "recoil adapters," like any recoil absorber, made a considerable reduction in the peaks of the gun's recoil force, which made a gun fitted with them much more stable.

In addition to reducing the gun's recoil force peaks, these recoil adapters, particularly the "stiff" type, had no effect on the guns reliability and/or rate of fire, and speaking from personal experience, they made the gun easier to aim and control and enhanced its accuracy when it was

fired "free" handheld. They also improved its accuracy when it was locked in its mount for long-range fire.

It has long bothered me to see that mounts for powerful weapons such as the .50 M2-HB have not incorporated recoil absorbing "recoil adapters" or "gun mount adapters." These devices can make the .50 a more stable and, therefore, more accurate and effective weapon in not only mounts for vehicles like the HMMWV, but on any light motor vehicle, aircraft, or boat. They can also do the same thing for a .50 mounted on more stable platforms such as tank turrets. Perhaps the time has come that they will?

Now that I have got the burr out from under my saddle, let me say you continue the long tradition of turning out *ARMOR* as an excellent and highly professional publication. Thank You.

KONRAD F. SCHREIER JR.
Los Angeles, Calif.

The Dichotomy of Non-Digitized and Digitized Forces

Dear Sir:

By the turn of the century, a force dichotomy will exist between non-digital and digital forces. There are four very likely scenarios in which this will occur: within units conducting digitized new equipment training (DNET), when an Army brigade is assigned to support a Marine Corps-led Joint Task Force (JTF), when a yet-to-be-digitized Army National Guard fights with a digital active duty force, and in conducting coalition warfare. We must, therefore, not simply determine how to fight homogeneous digital forces. We must also ascertain how they will fight with non-digital forces.

In Sun Tzu's *The Art of War*, he defines the concepts of ordinary and extraordinary forces. The ordinary force is described as a "...normal, direct... orthodox... (or) fixing force... or... as the force(s) of distraction..." The extraordinary force is recounted as the "...indirect... unorthodox, unique... (or) flanking (force)... or the force(s) of decision..." (Sun Tzu stresses that both forces are complementary, and that an ordinary force can become the extraordinary force if they meet with success, while the reverse is true of the extraordinary force.)

A recent example of this notion was the use of the Marine Corps in Operation DESERT STORM. To the consternation of the Corps, CENTCOM planners envisioned them as the ordinary force whose attack would "...hold the Iraqis by the nose..." One day later, an Army extraordinary force (the VII and XVIII Corps) was to "...blind-side them from the rear..."

A non-digital force can similarly complement digital warfighters. The digitized,

M1A2 force is no more lethal than a non-digitized, M1A1 force in terms of firepower. (Both main guns still have a 12-rounds-per-minute rate of fire.) The digital force, however, has inherently superior command and control (C²) features, allowing for the faster decision cycle necessary in pursuit operations. This suggests that non-digital units are suited to the ordinary force role while digital units are tailored to extraordinary force missions.

There are two possible reasons that a partially-digitized unit could be sent into combat. Most obvious is the incredible, shrinking Army, followed closely by possible budget cuts that stall or slow digitization.

In the first (and worse) case, two simultaneous regional conflicts could erupt. Were that to occur, every available armored unit would be needed. That just may include a brigade, division, or corps with elements that concurrently are, and are not, digitized. In the second example, if funding dried up to complete digitization of the force, the Army would have to determine where DNET breaks off. Doing so could leave the same situation.

Keying on a digital force's faster decision cycle capability, I would argue that there is a twofold method for employing this force. First, we designate non-digitized forces as our ordinary force to conduct fixing attacks or attacks to achieve a penetration of enemy defenses. Digitized units are then assigned extraordinary force missions. And secondly, we provide every Army headquarters down to battalion level digital C² capability, even if their fighting vehicles do not have combat vehicle command and control (CVC²) systems. This is primarily because of a need to communicate with higher and sister units. It also provides non-digital units the means to persevere when they meet with success and are used to press the attack. With digital intelligence collection assets, their C² method would be to receive data and vector units using a FRAGO with GPS waypoints.

In Major R.W. Lamont's November-December 1994 article, he speaks of the Army and Marine Corps memorandum of understanding to provide a brigade-sized armored force in support of Operational Maneuver From the Sea (OMFTS). It is conceivable, given the Marine Corps' budget constraints, that our supporting force could be digitized while theirs is not.

For this effort to be successful, we should be prepared for two possible courses of action (COAs), either colocate our brigade's headquarters with the MEF's, or, provide a digital liaison staff to the JTF commander.

The first option limits our brigade headquarters' flexibility by possibly placing it out of communications range with forward elements. However, it provides the MEF commander with easy access to the intelligence our digital sensor package collects.

The second option provides flexibility to our brigade's headquarters and JTF access

to our assets. However, we may need to configure our digital systems to operate on board ship if that is the site of the JTF HQ. I would argue for this course of action because it allows us to retain our flexibility.

Engaging in even one major regional conflict will see reserve component combat units fighting alongside active duty units. A heavy force equivalent to that deployed for DESERT STORM would require significant combat unit support from the National Guard. Since the National Guard will not see digitization until well into the next century, we will have the same situation as with our partially digitized active duty force above.

I believe the answer is the same: designate National Guard units as the ordinary force and provide them with digital C² systems down to battalion headquarters level. The National Guard can then orient on offensive missions in unit training (based on late deployment into the region).

Current Army doctrine states that the U.S. will often pursue its objectives through coalitions and alliances. Indeed, it is difficult to imagine fighting in the Middle East, Korea, or Bosnia unilaterally. Wherever we have digitized forces fighting alongside non-digital allies, we have the same situation as when our digital brigade supports OMFTS.

To fight a synchronized battle, we must be prepared to share intelligence gathered by digital sensors with our allies. To do so, we are probably better served having digital liaison staffs working in conjunction with our allies, as mentioned above with the Marines.

However, there are a few twists. The liaison staff must speak our allies' native language, suggesting Army Special Operations Forces need training in digital C² systems. We must also be prepared to place some form of mobile CVC² system — say the kind we will employ in HMMWV scout elements — with any allied unit that flanks, or is within, our battlespace. If we command the coalition, we also need to consider ramifications of designating our non-digital allies as the ordinary force and use our digital forces as the extraordinary force.

We must consider how we will employ a force dichotomy of non-digital and digital elements. In all cases, it is key that every Army battalion-level staff has digital C² systems so that it can communicate with any headquarters across the command and has the means to persevere if it meets with success. It is equally important that our sister branches in a JTF, and our allies, have some form of liaison team equipped to provide them with digital links to our force. In so doing, we can lessen the potential C² nightmare we might face whenever this dichotomy arises.

CPT MICHAEL L. PRYOR
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LAARNG

The Crewing and Configuration of the Future MBT

Dear Sir:

I have a few comments, which are not necessarily intended as being contradictory to Robin Fletcher's article, which appeared in the May-June 1995 issue.

The Swedish "S-Tank" is an innovative, creative approach to combat vehicle design, but it is not a tank. Any vehicle not capable of being fired on the move can hardly now be called a 'tank.' It is really an armored, self-propelled, antitank gun; at which, it should be excellent. It is compact (a small target), lightweight, has highly sloped armor to the front, and saves all the height, weight, and cost associated with a turret, associated armor, and the turret drives and 'stabe' — a not inconsiderable saving. I wish I knew more about it and why it didn't become more widely used. Can anyone with personal knowledge enlighten me? Perhaps calling it a 'tank' just confused people about what its role is, or should be?

More has been written about the future of front engine designs for tanks than is necessary. Yes, rear access is desirable for several reasons, but so is adequate frontal armor which makes it difficult to be able to raise engine access doors and get adequate cooling air. Meeting the requirement for maximum gun depression angle is also important. It is all a matter of which approach best meets the system's specifications, which should reflect the user's priorities. When the system designers are satisfied that a front engine design best meets the user's requirements, it will be chosen — which is what the Israelis did with the Merkava.

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Requests Information

Dear Sir:

I am doing a study and research on the massacres by Hitler's armies during the Battle of the Bulge. I would appreciate any information your readers could provide me.

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Correction

On the back cover of the May-June 1995 issue, we listed incorrectly the future designation of the 3d ID in Vilseck and Schweinfurt. The correct designation is 1st ID (Mech).