

By

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Observation: In a situation as described on the preceding page, a definitive phase out time should be established at earlier coordination meetings. This would prevent unnecessary problems in control changes.

3.(v)Source: Debriefing, Operation 32-67, in support of 3d Bde, 25th Inf Div, 16 September 1967.

Item: Misuse of C & C.

Discussion: Four Viet Cong were spotted by the ground commander from the C & C aircraft while conducting an airmobile operation. The ground commander, when he saw that gunships were unable to engage the target, sought to engage the target with the C & C aircraft.

Observation: The ground commander was advised by the Air Mission Commander that engaging an enemy target by the C & C aircraft could well result in the loss of all commanders on board, an Army helicopter, and if lost at a critical time, the success of the airmobile assault. A decision to engage an enemy target by a C & C aircraft during the conduct of an airmobile assault is, at best, highly imprudent.

4.(v)Source: Debriefing, Operation 33-67, in support of 1st Bde, 25th Inf Div, 17 September 1967.

Item: C & C back-up.

Discussion: The present policy in command and control is to have the C & C ship backed up by an alternate C & C aircraft. The infantry commanders, however, are in the primary C & C. The possibility of an engine failure or combat loss is always present. If the alternate C & C were to carry a back-up infantry command crew on board to insure continuity of effort in the airmobile assault, the loss of the primary C & C would not

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hinder the conduct of the operation. Presently, subordinate commanders are carried on board 25th Infantry Division organic aircraft. However, in operations conducted by this Battalion, the placing of subordinate infantry Battalion Commanders in another aviation battalion's aircraft further divorces alternate commanders from the tactical situation.

Observation: To insure maximum depth of control in airmobile operations, both the primary and alternate Command and Control aircraft should carry infantry commanders or their designated representatives. It is further of paramount importance that the alternate infantry commander be on board the aircraft carrying the alternate Air Mission Commander. To preclude added confusion, both the C & C aircraft and the alternate should come from the same Aviation Battalion Headquarters. To separate command otherwise in airmobile operations is nothing less than folly and certainly potentially deprives ground forces of their right to full and competent command at all times in a tactical combat situation.

5.(v)Source: Debriefing, Operation 33-67, in support of 1st Bde, 25th Inf Div, 17 September 1967.

Item: Fuel on board C & C aircraft.

Discussion: The fuel limitation of two hours on the C & C ship, coupled with the expected duration of the airmobile operation, resulted in a refueling during an important airstrike. This necessary return for fuel prevented the AMTF Commander from observing this airstrike, thereby denying him first hand assessment of the results.

Observation: The need for a larger on-station capability for C & C aircraft exists. One possible solution is the installation of auxiliary fuel tanks which would substantially increase flight time.

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6.(v)Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th
Inf Div, 22 September 1967.

Item: Excessive aircraft in AO.

Discussion: In recent operations, especially large scale airmobile operations, numerous aircraft have been entering the AO to observe the conduct of assaults, airstrikes, artillery, etc. In most cases such aircraft identify themselves as entering the AO and request an orbit altitude at which to fly. A number of aircraft occupying the same airspace, with all pilots intent on observing goings on on the ground, pose the singular aviation hazard of a mid-air collision. In conjunction, as assigned altitudes invariably change, the C & C aircraft, the only ship with a responsibility in the area, often must alter its course, putting itself out of position at crucial times, to avoid a near miss with an observing party.

Observation: In large airmobile operations this problem could be alleviated by informing the AMTF Commander, usually a Brigade Commander, of the inherent problems created when Division personnel arrive in the AO to observe. Courtesy dictates such aircraft not be turned away if a ground commander is on board, but with the assistance of the Infantry Brigade Commander, the number of such ships could be significantly reduced even prior to the beginning of an operation.

7.(v)Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th
Inf Div, 22 September 1967.

Item: C & C aircraft within range of hostile fire.

Discussion: The C & C aircraft of a Battalion Commander subordinate to the AMTF Commander in today's operation was struck by enemy fire while

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flying at an altitude known to be within range of Viet Cong automatic weapons.

Observation: Pilots of C & C aircraft should use discretion in the area and altitude in which they choose to fly their aircraft. The loss of a Battalion or Brigade Commander as a result of negligence on the part of an aviator is an offense most grave in nature. Not only is the loss of life involved, but also the success of the operation. Aviators, knowing fire to have been taken from a specific area, must make the ground commander aware of the impending hazard of flying within effective range of the weapon.

8(u)Source: Lessons learned, 116th Assault Helicopter Company.

Item: Coordinating USAF airstrikes during combat operations.

Discussion: During a recent operation the ground unit was engaged in heavy contact and had been pinned down by heavy automatic weapons, M-79, and small arms fire. The unit had requested an airstrike and an Air Force aircraft was dispatched almost immediately. However, the AMTF Commander was unable to communicate with the FAC due to incompatible radio frequencies. This left the responsibility with the Air Mission Commander who coordinated and instructed the Air Force FAC where the airstrike would go. The Air Mission Commander had been listening and was deeply involved in the ground tactical plan, giving advice when requested. Being alert he was able to grasp the situation, effect coordination, and employ the resources effectively.

Observation: Air Mission Commanders must keep up with the AMTF Commander and his ground plan and be able to step in effectively when requested to do so.

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9.(v)Source: Lessons learned, 116th Assault Helicopter Company.

Item: Monitoring artillery nets for combat assaults.

Discussion: Artillery preparations of landing zones sometimes become ineffective because of the time lag between the time of the last round and the time the lift aircraft touch down in the landing zones. Normally time limits are set for the preparations but numerous items can cause delays. Monitoring the artillery net is very helpful to the Air Mission Commander since he can hear first hand the progress of the artillery preparation and so maneuver the lift ships and gunships to have them on station and on target at the desired time without delay.

Observation: UHF is normally designated for the Air Mission Command and Control, unit FM nets for internal control, and VHF for gunship control. An aircraft's FM set in the Air Mission Commander's ship may be used effectively for monitoring the artillery net.

10.(v)Source: Lessons learned, 188th Assault Helicopter Company.

Item: "Y" cords for C & C ship.

Discussion: The "Y" cords on the C & C ship have only one "push to talk" button per cord. A hazardous condition was found to exist in that the crew chief or gunner could not get access to the mike button in time to initiate warning of other aircraft in the area of operations.

Observation: Push to talk buttons will be spliced into the "Y" cords for each headset.

11.(v)Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: C & C procedures.

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Discussion: During a recent company size operation a C & C party briefed supporting aviation elements of operations to be conducted in a specific AO. The briefing consisted of information pertaining to pick-up zones and landing zones to be used upon the completion of more immediate insertions and extractions. Rules of suppression for an extraction were understood as rules of suppression for what in fact was the next insertion. Confusion ensued with action taken, the effects of which could have been most undesirable.

Observation: When conducting airborne briefings for aircraft supporting an operation, instructions should be limited whenever possible to the insertion or extraction next to be executed. Rules of suppression, directions for landing, and other pertinent data transmitted in reference to later assaults may be construed as pertinent to the next immediate portion of the operation. When discussing rules of suppression especially, a wrong inference with its subsequent results could be quite tragic.

12(v) Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: Target identification.

Discussion: A recent incident involving ground commanders aboard a C & C aircraft disclosed that emphasis should be placed on target identification. In the case in point a ground commander was not able to identify a target to a gun team specifically because he could not find an obvious reference point identifiable to both himself and the gunship pilot. It should be remembered that a ready reference point is always on board Army helicopters. The colored smoke grenade is the easiest item to use in identifying a point on the ground, and is generally stored in

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the crew chief's and gunner's station. The smoke grenade need not be dropped directly on the target. If one's control is such as to enable him to drop smoke on targets with consistent accuracy, he should consider himself gifted. In most cases the marking smoke grenade is at best only near the target. In order to identify target locations to gunships:

- (1) Drop smoke.
- (2) Give the distance from the smoke to target.
- (3) Give:
 - (a) Either an azimuth heading from the smoke to the target, e.g., 090 degrees from smoke;
 - (b) Or an approximate directional reference, e.g., EAST of the smoke, SOUTHWEST of the smoke, etc.
- (4) A typical transmission identifying a target follows:
 - (a) "STINGER 96, this BLACK BARON 3. Target is a concrete bunker 500 meters SOUTH of RED smoke."
 - (b) "STINGER 96, this BLACK BARON 3. Target is a gun emplacement 800 meters on a 120 degree heading from smoke."

Observation: While on board the C & C aircraft, ground commanders can get compass headings from the "directional gyro," a heading indicator instrument readily visible to passengers once shown its location. There are two directional gyros on the instrument panel of a UH-1 helicopter, one in front of each pilot. One procedure which should be completely shunned is the use of the clock system. Identifying a target as being "3 o'clock, my position," means nothing to the gunship pilot. This is especially true if you are not the only ship in the area and the gunship has not positively identified your aircraft. Likewise, the use of "lefts" and "rights" is terribly inaccurate. The only positive system is a heading

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in degrees from a reference point and an estimated distance to the target.

13(v) Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th Inf Div, 22 September 1967.

Item: Photo reconnaissance of landing zones.

Discussion: In multi-company airmobile assaults which have landing zones in close proximity to one another, it is difficult for flight leaders to pinpoint their touch down areas. This problem is compounded in the rice paddy areas of III CTZ where it is extremely difficult to differentiate a specific rice paddy from another specific rice paddy when both are situated in a huge expanse of nothing but rice paddies. The problem of identification exists not only for lift aircraft flight leaders, but also for gunship pilots marking the landing zones. The use of 1:25,000 photo coverage is of great assistance, and is of primary importance in preventing landing zone identification from being a major problem in such terrain. Photo coverage of the area containing the multiple landing zones has proven to be of significantly greater value to key personnel, however, and when available, has greatly assisted pilots in their study of the terrain.

Observation: To date copies of landing zone photos have been difficult to get. The capability of having sufficient copies to distribute to all flight leaders and gunship pilots involved in an operation is very desirable, though presently a near impossibility. To have the print on board the lead ship of each flight would preclude any misidentification of landing zones and obviously be a step forward in airmobile operations. It is recommended that a study be made to provide such copy equipment as is necessary to reproduce photo coverage at Aviation Battalion level.

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The most recent operation consisted of six assault helicopter companies, six fire teams, two alternate C & C aircraft, and one smoke ship, creating a requirement for 15 photos covering six landing zones. This Battalion had one photo available which truly is insufficient quantity to satisfy the Battalion's needs.

14(v) Source: Lessons learned, 116th Assault Helicopter Company.

Item: Eagle flight combat assaults.

Discussion: Excessive reconnaissance of landing zones prior to an assault often produces an operation with negative results. A highly effective operation recently conducted employed the scheme of two flight leads identifying their separate landing zones from about 4000 meters out. The two flights of five (5) landed at two separate landing zones 1000 meters apart with the gunships capping the open end. This operation caught the Viet Cong completely by surprise and little ground fire was encountered. The heavy fire team kept a tight orbit around the two landing zones at low altitude and closed all escape routes. Results of the operation were 16 enemy body count for the fire team and six enemy body count for the Infantry.

Observation: Operations of this nature, without prior reconnaissance or preparation should only be conducted when the Air Mission Commander and the ground commander are in complete accord as to its advisability.

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C. (U) Reconnaissance.

Source: Lessons learned, 21st Reconnaissance Airplane Company.

Item: Visual reconnaissance.

Discussion:

a. Many hours have been flown at altitudes below 1500 feet absolute in an attempt to locate enemy elements. At times, observers have requested the aviator to contour at tree top level or lower in open areas. Below 500 feet absolute the aircraft is needlessly exposed to ground fire unless it is flown below 50 feet. Below 50 feet any target observed is passed too quickly for the observer to get any more than a fleeting glance at it, requiring additional passes over the target.

b. Aircraft flying between 500 and 1500 feet are still vulnerable to ground fire and have little luck spotting targets due to the relatively high relative motion between the ground and observer. In addition the aircraft engine noise serves as an early warning to enable enemy elements to take cover.

Observation:

When flying at or above 4000 feet, the aircraft is not audible to personnel on the ground. If the observer has binoculars, he can scan the ground below him in great detail at his leisure. Trenches, foxholes, personnel, etc, are easily spotted using binoculars because of the relatively stable air at this altitude. Recently, 15 Viet Cong were spotted holding a conference in a small clearing. The aircraft orbited directly over them at 4500 feet for approximately 45 minutes awaiting clearance to fire. The Viet Cong were apparently unaware that the aircraft was in the area. The observer had time to accurately plot the coordinates, resulting in fire for effect on the second round. Recommend consideration of flying visual

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reconnaissance missions at 3000 feet or higher unless the mission or weather requires a lower altitude.

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D. (U) Artillery.

1.(v)Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th
Inf Div, 30 August 1967.

Item: Artillery coordination.

Discussion: The salient problem this Battalion is recurrently faced with in airmobile operations is insuring a cut off of artillery support at the proper time, i.e., in accordance with the operation's Sequence of Events. The importance of an artillery fire direction center's computing the projectile's time of flight to preclude impact after the scheduled RP time cannot be over-stressed. During coordination briefings the following points should be impressed on the AMTF Commander and the supporting unit's ALO:

a. Unless a drastic change occurs in the tactical situation, once an airmobile force passes the RP inbound, it is committed to the landing zone. Artillery must be planned to terminate no later than the scheduled RP time since entering the final approach course to the landing zone at this moment is the marking gunship and the smoke dispensing aircraft. All rounds must be on the ground at this point in the operation.

b. A change or delay in artillery timing at the scheduled RP time results in the unnecessary delay of a 4 minute flight orbit, the time normally required to turn a formation of lift aircraft 360 degrees.

c. Artillery units must keep the Artillery LNO abreast of the conduct of missions at all times. Of utmost importance is the ability of the LNO to relay to the Air Mission Commander the time at which the final rounds were fired, the time of flight of projectiles, and the confirmation from FDC that all rounds are on the ground.

Observation: Close scrutiny of the planned artillery support of an

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airmobile operation is required at coordination briefings. The crucial importance of timing in the conduct of airmobile assaults must be continually emphasized to all supported and supporting elements.

2.(v)Source: Debriefing, Operation 27-67, in support of 3d Bde, 25th Inf Div, 1 September 1967.

Item: Terminating artillery preparations of landing zones.

Discussion: A scheduled landing zone time of 1230 could not be met because the supporting artillery, after a delayed start in its planned preparation, did not terminate its firing on schedule. The artillery, continuing to impact in the landing zone after the scheduled RP time, resulted in the lift aircraft executing two full orbits and inserting the ground troops at 1238, eight minutes late.

Observation: A continuous requirement exists to stress at coordination briefings, with artillery LNO present, the importance of precision in timing artillery preparations in accordance with the planned Sequence of Events of the airmobile force.

3.(v)Source: Debriefing, Operation 33-67, in support of 1st Bde, 25th Inf Div, 17 September 1967.

Item: White phosphorous and final artillery preparations.

Discussion: During the final artillery preparation of a landing zone in support of this operation, the supporting artillery unit fired two rounds of white phosphorous into the impact area. Since the WP fell into the landing zone just three minutes before the scheduled landing time for the lift ships, sufficient time did not pass for the smoke to dissipate. Mixed with the gray haze created by the detonation of the previous rounds

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of the preparation, the composite smoke and haze partially obscured the landing zone for the inbound aircraft.

Observation: In airmobile operations white phosphorous should be included in the final preparations of a landing zone under the following conditions:

- a. At the specific request of the AMTF Commander.
- b. At the specific request of the Air Mission Commander to identify the last round fired into the landing zone.
- c. In no quantity greater than one round.

4(v)Source: Debriefing, Operation 33-67, in support of 1st Bde, 25th Inf Div, 17 September 1967.

Item: Artillery control.

Discussion: When artillery is massed in a large operation, control of individual batteries becomes more difficult. In this operation, an individual FO requested that fire be placed on a specific target. The target was never cleared through the C & C aircraft, and when fired, was completely unexpected by the AMTF Commander. Fortunately, all aircraft were airborne at this time and clear of the flight path of the projectiles.

Observation: During an airmobile assault it is imperative that all artillery FDC understand that no missions will be fired unless the missions have been cleared through the C & C aircraft.

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5.(v) Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th Inf Div, 22 September 1967.

Item: Unplanned artillery support.

Discussion: Artillery support for this operation was planned to be fired from two of three possible Fire Support Bases within artillery range of the landing zone. No mention of artillery support from the third base was ever made by the Artillery LNO. During the conduct of the mission, however, artillery was called in to prepare the landing zone, and was found to be fired from the unplanned FSB. This had negligible effect on the flight, however, since flight routes were not interfered with.

Observation: Though no effect was realized on the airmobile mission by the use of the third FSB, it is quite clear that all FSB with artillery capable of reaching the target area should be considered in flight planning. Should the third FSB have fired concentrations having trajectories crossing the planned flight routes, adjustments to flight paths would have caused delays in time, and possibly unnecessary confusion within our aviation elements. All artillery FSB should be noted on operation overlays and considered active in flight planning.

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E.(v) Gunships.

1.(v) Source: Debriefing, Operation 25-67, in support of 2d Bde, 25th Inf Div, 30 August 1967.

Item: Loss of gunship lead.

Discussion: The loss of an organic assault helicopter company's gun platoon leader, wounded on an assault, resulted in the disorganization of gunship elements. The C & C aircraft resultantly was forced to place the mark for the inbound assault force. A loss of the C & C aircraft in the landing zone would have depleted the airmobile force by an Air Mission Commander, and an Infantry Battalion Commander and staff.

Observation: Briefing of all gunship Aircraft Commanders should necessarily be more thorough to insure that all subordinate gun Aircraft Commanders are aware of details of operations. The risk of having to use the C & C aircraft to mark a landing zone is unacceptable.

2.(v) Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th Inf Div, 30 August 1967.

Item: Gunship SOP.

Discussion: The marking gunship in this Battalion size operation followed its company's SOP in that, leading the lift aircraft inbound to the landing zone, it attempted to maintain ten rotor discs separation ahead of the lead lift ship. The thought behind this method is the belief that more protection can be afforded the lift aircraft if a gunship is very close to the formation and directly ahead of it. Spacing is maintained between the marking gunship and the slicks through communication with the lift ship leader. Problems arise, however, in that this procedure completely denies the ground commander any latitude or flexibility in the positioning of his ground forces.

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Observation: By having the gunship lead the flight by 30 seconds or more, when the mark is dropped, should it be long or short, the ground commander still has an opportunity to alter his plan. By spacing the lead lift ship away from the marking gunship by 30 seconds or more, the Command and Control ship can still vary the actual touch down point of the air, mobile force.

3(u)Source: Debriefing, Operation 28-67, in support of 3d Bde, 25th Inf Div, 9 September 1967.

Item: White phosphorous signal.

Discussion: A five minute gunship preparation of the landing zone was planned to follow an artillery preparation of 20 minutes duration. The artillery mixed white phosphorous with the final rounds fired. The white phosphorous was not called for by the C & C elements, nor was it planned to identify the final rounds fired. The gunships supporting the operation, however, turned inbound to begin their own preparation, thinking that the white phosphorous rounds were the last rounds fired.

Observation: To gunship pilots, white phosphorous projectiles, when fired into a landing zone, should signify merely that the artillery preparation is still being conducted. When confirmed by the C & C aircraft that the white phosphorous rounds are in fact the last rounds to impact in the landing zone, and only when confirmed by the C & C, may gunships turn inbound for their preparation runs. Gun platoon personnel should be briefed on this procedure and the policy instated throughout the Battalion.

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4.(v) Source: Debriefing, Operation 30-67, in support of 2d Bde, 25th Inf Div, 12 September 1967.

Item: Location of gunships.

Discussion: Gunships of one of the assault helicopter companies participating in this assault, when asked today if they were "in position," answered in affirmation. When told to proceed inbound to prep, however, they were, in fact, 2 flight minutes away from where the C & C ship expected them to be.

Observation: Battalion operation orders will henceforth include detailed instructions indicating specific orbit areas for gunships, areas to be capped by fire teams, and targets to be attacked on preparation runs. This will insure that all aviation elements are fully aware of exact responsibilities with reference to gunship location and targets.

5.(v) Source: Debriefing, Operation 32-67, in support of 3d Bde, 25th Inf Div, 16 September 1967.

Item: Gunship preparation.

Discussion: While waiting for the arrival of lift aircraft during this assault, the gun platoon leader designated to mark the landing zone maneuvered out of position for a proper preparation run. As the flight reported the RP inbound, the gun platoon leader, out of position, made his gun run in the wrong area, accomplishing nothing toward effective support of the inbound assault force.

Observation: An orbit point must be exactly located for the lead gunship to orbit to insure his timing and orientation are perfectly geared to the landing zone and the location of the inbound assault force.

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6.(v) Source: Debriefing, Operation 32-67, in support of 3d Bde, 25th Inf Div, 16 September 1967.

Item: Use of rockets on point targets.

Discussion: During the conduct of this operation the ground commander requested gunship destruction of a chimney/smokestack by rockets. The target was engaged repeatedly with little success, and since gunship ordnance was nearly expended, the target was not destroyed at all.

Observation: Ground commanders should be advised of the capabilities of rockets. These are extremely accurate weapons, nor are they, in fact, effective against structures such as the chimney described or concrete bunkers. They are primarily area weapons systems.

7.(v) Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th Inf Div, 22 September 1967.

Item: Gunship reconnaissance.

Discussion: By flying at a lower level gunships have a considerable visual reconnaissance capability. Once a target is spotted, however, discretion should be used to determine the weapons system required to attack it. During this operation, a hard target, a reinforced concrete bunker, was discovered. Knowing little could be done with standard armament systems available on helicopters against a fortification of this type, a FAC, on station, was relayed data and directed to take the target under attack.

Observation: Air Force ordnance proved effective against a target which would have been unscathed by Army weapons systems. Serious consideration should be given to the employment of all ordnance available to insure the weapon which is committed is suitable to destroy the target.

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8.(v)Source: Debriefing, Operation 35-67, in support of 2d Bde, 25th
Inf Div, 27 September 1967.

Item: Gunship instructions.

Discussion: All instructions received by gunships upon which action can be taken to engage enemy targets must be received from the C & C aircraft. Often, however, other aircraft in the area mark targets and give specific instructions to gunships indicating not only a location, but also, at least, an implication to engage the target. This confuses gunship pilots and requires immediate remedial action by the C & C personnel to insure that only proper targets are engaged and in a priority established by the ground commander.

Observation: At coordination briefings all personnel to be involved in airmobile operations should be continually reminded of the procedure required to insure proper target identification and engagement. Targets should be marked and spotted, but reported only to the C & C party. The AMTF Commander, and only he, may approve the engagement of ground targets. Once airborne, personnel identifying targets directly for target engagement should be advised by gunship Aircraft Commanders to contact the C & C elements with this information.

9.(v)Source: Debriefing, Operation 37-67, in support of 3d Bde, 25th
Inf Div, 9 October 1967.

Item: Gunships armed with white phosphorous rockets.

Discussion: A gunship making a preparation run on the landing zone fired white phosphorous rockets into a tree line directly adjacent to the touch down point of the inbound lift aircraft. Prevailing winds

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moved the smoke over the landing zone obscuring the mark. The expected results partially occurred. The flight leader had extreme difficulty in identifying his touch down point, a degree of confusion followed, and immediate rectifying vector control had to be initiated by the C & C aircraft. A particular hazard developed as the white phosphorous expanded and began to engulf the second flight of ten ships, at that time only five rotor discs behind the first flight of ten.

Observation: Battalion operation orders will indicate the type ordnance to be carried by gunships armed with rocket launching systems.

10/6 Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: Gunship weapons employment.

Discussion: In planning Battalion size operations, little emphasis is placed on the designating of targets for specific weapons systems. This results in an almost arbitrary engagement of enemy targets by aircraft having weapons which are not always suited for the destruction of such targets. Often rockets rake a tree line while an M-3 system remains in a gunship orbit area awaiting further instructions. Though both systems are efficient, one is certainly better suited for a tree line or a point target than is the other.

Observation: In the planning phase of Battalion operations, particular emphasis should be placed on designating specific targets for weapons systems. The planning for and utilization of gunships as weapons systems capable of delivering varied ordnance, rather than merely as gunships, stride forward in the conduct of the airmobile assault.

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The commander who insures that specific mission assignments are given to weapons systems is the commander who will soon realize a substantial decrease in enemy fire received and aircraft lost from combat damage.

11.(v) Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: M-5 weapons system.

Discussion: In 38 consecutive Battalion operations, the weapons systems proven to be most effective in the terrain and operational environment of III CTZ is the M-5.

Observation: In planning for weapons systems to be mounted on aircraft deploying to the III Corps area, RVN, it is advisable to program an increase of the 40mm guns per gun platoon. The present allowance is 2 systems per 8 aircraft. An increase to 3 would be more satisfactory. Systems used in conjunction may be whatever are desired. However, coming to III Corps, M-5 systems are a must.

12.(v) Source: Lessons learned, 116th Assault Helicopter Company.

Item: Selection of Gun Platoon aviators and crews.

Discussion: Gun platoon aviators and crews in this unit are selected from in-country experienced personnel assigned to a slick platoon. As a matter of policy, no aviator or crew member is assigned directly to the gun platoon without first being assigned to a slick platoon and proving himself worthy of this additional responsibility.

Observation: This method of selection has proven to be highly successful as evidenced by the gun discipline of the 116th Assault Helicopter Company gun platoon. This not only adds prestige to a gun platoon

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assignment but also insures that quality personnel are assigned to the gun platoon.

13.(v) Source: Lessons learned, 188th Assault Helicopter Company.

Item: Gunship night operations.

Discussion: Two gunships with complete crews were lost as a result of losing visual contact with each other at night. The "wing" gunship of the team had habitually flown lower than the team leader to silhouette the lead ship against the sky. This procedure also afforded the wing man an unrestricted fire area in the event the leader was taken under enemy fire. The hazard involved was that the wing ship was the first to recognize a loss of contact, and once recognizing it, until visual contact was again established, the wing ship could not readily change altitude. This problem of loss of visual contact was further amplified by the combat requirements to mask all navigation lights.

Observation: A procedure was established directing that the wing man maintain a flight level at least 150 feet higher than the team leader until a target is actually engaged. This policy improves night visual contact with the references available on board the aircraft, i.e., navigation lights or beacon. This also allows the wing man to immediately initiate a climb should contact be lost, precluding the hazard of a mid-air collision.

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F. (U) Suppression.

1.(v)Source: Debriefing, Operation 30-67, in support of 2d Bde, 25th Inf Div, 12 September 1967.

Item: FCL suppression and formations.

Discussion: One landing zone was apportioned into two sections, a landing zone EAST and a landing zone WEST. The approach course was EAST to WEST with the first insertion into landing zone EAST. Full suppression was authorized on both insertions, with a FCL separating landing zone EAST from landing zone WEST. The second insertion into landing zone WEST was made by necessity in a trail formation of 20 ships. The resultant length of the flight precluded full effective suppression simultaneously expended from all ships due to the long passage time of the aircraft over the FCL.

Observation: When a FCL separates adjacent landing zones, it is important to either bring the flights into a landing zone in smaller groups, i.e., 5 or 10 at a time, and deny the enemy targets restricted from firing by the FCL, or, if possible, change the formation from a lengthy trail to a more compact column of heavy rights, lefts, echelons, or even V's.

2.(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: Door gunner suppression.

Discussion: After arriving in Vietnam, this company adhered to the principle of firing only the outside guns of ships in formation. It was realized, however, that the fire power available for the protection of the troop carriers was thus cut in half. In view of this fact, and as a result of the heavy volume of enemy fire received, full suppression using

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all guns on the troop carriers was tested, refined, and adopted by this company.

Observation: Full door gunner suppression involves the following factors in order to achieve maximum benefit with safety:

- a. The formation discipline must be strictly observed. An absolute minimum of two rotor discs separation must be maintained and three discs separation is preferred.
- b. Full door gunner suppression can be granted by the Mission Commander only when in fact the formation is being strictly maintained.
- c. The aircraft commander must aggressively control the fire of his inside door gunner in regard to other ships in the formation. As a portion of this control, the gunners must be thoroughly briefed and explicitly directed when and where to fire.
- d. The fire of the inside door gunners must be directed down to pass under the flight paths of the other troop carriers.
- e. A high degree of gunner skill and training is required.
- f. Inside door gunner suppression must be cut off prior to the final landing flare.

3(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: Door gunner suppression.

Discussion: During Eagle Flight operations it is desired that maximum suppression be utilized in pick-up zones where ground troops have received fire from one side. In this situation, when the Airmobile Force Commander desires that his troops be picked up in trail, the ships land between the friendly troops and the source of the enemy fire. This allows

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approach, throughout touch down and loading, and on take off and climb out. The ground troops load the aircraft from one side only and the gunner on that side, of course, does not fire.

Observation: The additional time required to load from one door only has proven almost negligible while the benefits derived from the continuous suppression have been noteworthy. In the instances where this tactic has been used, no enemy fire has been received by the ships, although fire had been received by the ground troops just prior to extraction. This tactic can be logically extended to the use of staggered trail formations by landing the columns on each side of the troops, and having them load from the inside of the columns only while continuous suppressive fire is maintained by the outside guns.

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G. (U) Communications and Signal

1(v) Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th Inf Div, 30 August 1967.

Item: Excessive communications traffic.

Discussion: Too much company traffic is generally transmitted on Battalion UHF during an airmobile operation. At a crucial time such as an RP or landing zone time, the jamming of frequencies with unnecessary traffic is an operational hazard.

Observation: Commanders should insure that inter-platoon transmissions are given on Company FM frequencies.

2(v) Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th Inf Div, 30 August 1967.

Item: Alternate frequencies.

Discussion: During this operation a requirement existed to switch all aviation elements to an alternate frequency. Though this was entered in the OPORD, no set method was instated to have all units transfer channels.

Observation: Effective immediately a code word transmitted on guard to all Battalion elements will indicate that a transfer to alternate frequencies must be made immediately.

3(v) Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th Inf Div, 30 August 1967.

Item: Radio technique.

Discussion: A general observation in the conduct of aviation support in RVN is that aviation personnel tend to be apologetic without due cause. Transmissions of "I'm sorry, but....," instill doubt in the ground commander's mind. In addition, transmissions should be as brief as

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intelligible.

Observation: Never apologize. Think before you transmit.

4(v)Source: Debriefing, Operation 29-67, in support of 3d Bde, 25th
Inf Div, 11 September 1967.

Item: Chinook operating frequency.

Discussion: Chinooks, after the completion of Huey insertions in combined operations, were instructed by the departing C & C aircraft to contact the infantry command elements for instructions on an infantry Brigade Command frequency.

Observation: The Brigade Command frequency was so cluttered with transmissions that supporting elements were unable to make effective contact, much less function under infantry control. An alternate frequency for ground to air contact and control should be allocated to aircraft by the infantry during the conduct of Chinook resupply missions.

5(v)Source: Debriefing, Operation 35-67, in support of 2d Bde, 25th
Inf Div, 27 September 1967.

Item: Incomplete reports by Aircraft Commander.

Discussion: Incomplete reports are being rendered by lift aircraft commanders when they are in receipt of hostile fire or have spotted an enemy. A most recent example consisted of a report by an aircraft commander that he had spotted a Viet Cong running. Nothing more was initially reported. A number of transmissions later, transmissions from the flight leader to the C & C ship, to the gun leader, and back through the chain, disclosed that the VC spotted was running, did in fact have a weapon and pack, and was moving in a specific direction when referenced

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from the flight path of the lift ships. The transmission time required to obtain the complete data to effectively engage the target consumed about 50 seconds. During these 50 seconds, the enemy disappeared.

Observation: Complete data transmitted initially by the aircraft commander to his flight leader would have precluded several unnecessary radio transmissions and probably would have resulted in an enemy body count. It is recommended that aircraft commanders be thoroughly briefed before each mission as to what is required in a transmission identifying a target to be engaged. The correct reporting of such data is an aviator training matter to be monitored continually by unit commanders. Brevity and accuracy in radio transmissions is one of the operational refinements distinguishing a well-disciplined assault helicopter company.

6(v) Source: Lessons learned, 187th Assault Helicopter Company.

Item: Broadcast of receipt of enemy fire.

Discussion: On final to the landing zone, the aircraft commanders in this company place the radio selector in the UHF position during company operations. When enemy fire is received, the chalk number and the direction to the fire is immediately broadcast.

Observation: This procedure results in extremely fast reaction by the escorting gunships. This method is faster than the use of smoke alone and results in accurate and effective suppressive fires against the source of enemy fire.

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7(u) Source: Lessons learned, 11th Assault Helicopter Company.

Item: AN/ASC-11 Commander's Console.

Discussion: The AN/ASC-11 Commander's Console, as issued, is unsatisfactory for command and control. There are three major limitations.

a. Only one position is provide for the Mission Commander to monitor the console FM radios. It is mandatory that both the Mission Commander and the pilot have the capability to monitor and transmit over these radios.

b. Only two intercom/transmit positions are available to the ground commander. "Y" cords can be utilized to give additional positions, but this is unsatisfactory because all microphones on the "Y" cord are hot during transmissions. A minimum of three independent positions are required by the ground commander.

c. The Commander's Console does not provide a second UHF capability for the C & C aircraft. This can be overcome by installation of a float UHF radio. To be satisfactory the console should be issued with a UHF radio installed.

Observation: Correction of these major deficiencies is considerably beyond the capabilities of organic Signal detachments. Only by correction of the above limitations, however, will the AN/ASC-11 provide satisfactory service.

8(u) Source: Lessons learned, 242d Assault Support Helicopter Company.

Item: Radio frequencies for control in landing zones and pick-up zones during tactical artillery moves.

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Discussion: Many artillery batteries desire to control the CH-47 on the Artillery Command Net. This has resulted in excess traffic on a net which was being utilized to control aircraft traffic into a landing zone. Many delays have occurred when commanders have used the radio net at the critical time when an aircraft was nearing the landing zone and needed guidance from the ground. Secondly, by using the same frequency at the pick-up zone and the landing zone, especially on short distance moves, too much traffic is on one net and confusion will exist.

Observation: Control of aircraft at the pick-up zone should be on the aviation unit frequency. Control at the landing zone should be on the pathfinder frequency.

9(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: AN/ARC-54.

Discussion: A great deal of difficulty has been experienced with binding gears on certain modules of the receiver-transmitter unit, resulting in low or zero power output and frequency drifts.

Observation: It has been found that the application of a drop of light weight oil to the RF power amplifier slug rack gears and guides has greatly reduced the gear binding and wear. Undesirable effects have not been noticed to date.

10(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: AN/ARC-54.

Discussion: Continuous cycling resulting in a constant tone in the headphones is often caused by binding stresses in the mechanical drive.

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Observation: This condition was eliminated by a thorough cleaning with alcohol and straightening the pins on the seeking switches S-701 and S-702.

11(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: AN/ARC-54.

Discussion: Experience continues to disclose misalignment to be the major cause of failure, resulting directly from vibration while in flight. The misalignment occurs when the slugs in the tuning coils change positions.

Observation: To assist in overcoming this deficiency a drop of candle wax is placed on the screw seats of L602, L603, L609, L612, and L615 of the RF amplifier. This procedure has significantly reduced the maintenance work load.

12(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: Floor microphone switches.

Discussion: "Hot microphones" are often caused when the contacts are shorted due to moisture collecting on the bottom of the floor microphone switch.

Observation: It has been found that by coating the contacts with grease or an oily substance this condition is suppressed.

13(v)Source: Lessons learned, 187th Assault Helicopter Company.

Item: Avionics float.

Discussion: In many instances Avionics detachments arrive in country with only a small percentage of their authorized float. Efforts

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were made to obtain the necessary float by requisitions. Requisitions were returned, however, indicating that an avionics float was not authorized for specific items.

Observation: Float equipment on several new communication systems has not arrived in country, thereby seriously affecting the support provided to the supported unit. It is highly recommended that at least part, if not all, float equipment be issued prior to a unit's departing CONUS.

14(v) Source: Lessons learned, 187th Assault Helicopter Company.

Item: Initial parts stockage of supply shelter AN/ASM-147A.

Discussion: The repair parts received with the AN/ASM-147A contained many parts needed for general support repair. Many items known to have a high turnover rate, such as modules for radios, control head knobs and lights, and helmet repair parts were not included.

Observation: The prepack concept should continue, but it is recommended that part inclusion be based on direct support usage factors.

15(v) Source: Lessons learned, 187th Assault Helicopter Company.

Item: Requirement for UH-1D modification.

Discussion: Any UH-1D assigned to an assault helicopter company is subject to be used as a C & C aircraft. The aircraft must have the capability of providing the ground commander and his staff entry into the aircraft communications system. Two methods have been employed to provide this service:

a. A "Y" cord is placed in the aircraft for each passenger

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not to exceed two. This method has proven to be undesirable in that the capability of two-way communications between the pilot and crew is eliminated. The crew's push to talk button is utilized by the passengers.

b. The preferred method is to locally fabricate and install an additional cord on each of the C-1611's used by the crew. This method allows the pilots and crews to maintain constant two-way communications.

Observation: It is recommended that the second method be adopted as a modification and installed in all aircraft. This would eliminate the excessive time expended in obtaining and installing these cords at detachment level.

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H. (U) Formations

1(u)Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th Inf Div, 30 August 1967.

Item: Flight formations.

Discussion: One company in the Battalion was not familiar with 180 degree pedal turns, nor was it familiar with the meaning of "5 rotor discs separation."

Observation: All companies should be familiar with Battalion SOP, and in the event the company is newly arrived in country, priority should be given to becoming intimately familiar with Battalion SOP.

2(u)Source: Debriefing, Operation 29-67, in support of 3d Bde, 25th Inf Div, 11 September 1967.

Item: Chinook formations.

Discussion: Chinook pilots making multiple lifts with two aircraft from the same landing zone invariably resupply in individual sorties. Into a field location where gunship cover is required for the inbound Chinooks, it is difficult to break off a cap of one Chinook to escort another in.

Observation: The problems of gunship escort to Chinooks can be remedied by having a close formation of Chinooks inbound to a landing zone. If this be done, fire teams need not split, but rather can afford maximum protection to a CH-47 flight of two by covering both at once.

3(u)Source: Debriefing, Operation 37-67, in support of 3d Bde, 25th Inf Div, 9 October 1967.

Item: Formations into landing zones.

Discussion: Some landing zones are quite naturally covered to

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a degree by isolated trees, shrubs, or, in some cases, crater holes. Frequently the flight leader cautions the flight on final of the hazards spotted in the landing zone. This transmission is normally followed by instructions to pilots to "pick their spots." It appears that too often pilots feel this is sufficient latitude to warrant breaking formation. In today's operation one aircraft touched down a full one hundred meters from the flank of the flight.

Observation: Commanders should insure that all aviators understand that the instructions to "pick a spot" are not synonymous with "disband." Flight integrity through the maintenance of a formation must be maintained. "Pick your spot" merely indicates that caution and discretion should be used in the point of touch down.

4.(v)Source: Lessons learned, 188th Assault Helicopter Company.

Item: Formations.

Discussion: Recently this unit has supported ARVN units which have been exposed to very few airmobile operations. As a result they encountered considerable difficulty in preparing for pick-up in the pick-up zone. During and after the operations the Air Mission Commander discussed items which would have been of great benefit had they been covered during the planning and preparation phase of the airmobile operations.

Observation: It would be extremely helpful to all ground commanders if a packet could be assembled showing the different formations used for pick-up and landing. This packet should also contain information on how to form for pick-up considering winds and flight routes. This packet could be taken on coordination missions and given to the supported unit as an aid in preparation of their airmobile mission.

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I. (U) Pick-up Zones

1.(v)Source: Debriefing, Operation 27-67, in support of 3d Bde, 25th
Inf Div, 1 September 1967.

Item: Troops not in pick-up zone.

Discussion: At pick-up time on this operation, infantry elements were not located in the correct area, causing considerable confusion and hazarding the success of the airmobile assault.

Observation: To preclude a similar occurrence:

a. A sketch of the landing zone and pick-up zone will be inserted into operations orders, a copy of which will be forwarded to the ground commander.

b. An officer or senior NCO will be attached to the supported infantry unit the day before the operation to insure proper organization within the pick-up zone.

c. The infantry Battalion Commander will be informed by the aviation representative of any obviously imminent delays in the positioning of ground troops.

d. On all coordination briefings the S3 or Assistant S3 will physically show his infantry counterparts the exact geographical areas designated as the operation's pick-up zones.

2.(v)Source: Debriefing, Operation 28-67, in support of 3d Bde, 25th
Inf Div, 9 September 1967.

Item: Priority of aircraft in airfields with towers.

Discussion: On a number of operations originating at airfields with towers, problems arose on tower clearances given to aircraft not involved in the operation at hand. In these instances these clearances adversely affected the take off or landing times of airmobile companies

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involved in time-critical airmobile assaults.

Observation: The agency controlling the tower should be advised of operations upcoming at its airfield. A priority should be established for lift aircraft involved in the operation over other transient ships.

3(u)Source: Debriefing, Operation 28-67, in support of 3d Bde, 25th Inf Div, 9 September 1967.

Item: Weather decisions.

Discussion: On several occasions with Battalion operations staging out of smaller areas such as DAU TIENG airstrip, the Battalion was forced to accept a considerable weather delay. With this delay 50 aircraft were located in the vicinity of one short runway. A large group of aircraft such as this, shut down in a small area, presents a lucrative target for Viet Cong mortars.

Observation: Whenever possible weather decisions should be made early enough to preclude having so high a concentration of aircraft shut down in one area as a result of IFR weather. A mortar attack at such a time could be devastating.

4(u)Source: Debriefing, Operation 29-67, in support of 3d Bde, 25th Inf Div, 11 September 1967.

Item: Flights returning to pick-zones.

Discussion: On occasions of successive lifts of multi-companies from the same pick-up zone, flight leaders are not returning to the same location. The problem of loading infantry troops is greatly magnified if lift companies fail to return to the exact location of pick-up on subsequent lifts. The infantry anticipates specific lift companies at

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specific locations in a pick-up zone. If, in fact, the required company is on the left side, instead of the right side of a runway, as expected, confusion ensues.

Observation: Flight leaders should insure that lift aircraft return to the exact touch down point of the first pick-up on all subsequent lifts.

5(u) Source: Debriefing, Operation 29-67, in support of 3d Bde, 25th Inf Div, 11 September 1967.

Item: Perpendicular parking of lead ships.

Discussion: The lead aircraft of a lift company occasionally turns perpendicular to the flight path of his ships on touch down to a pick-up zone. The intent here, of course, is to allow the platoon leader the opportunity to observe the loading of troops and the status of aircraft. This has caused confusion, however, ground troops boarding the flight, since ground troops have difficulty identifying the cocked lead aircraft as part of the flight and an aircraft to be loaded. With the lead ship turned 90 degrees, the tendency exists for the first two loads to converge on the second aircraft with a ripple effect down the line.

Observation: Lead ships of lift companies, after terminating an approach to a pick-up zone, should touch down in the same direction as all other chinks in the flight. This will preclude any confusion in the crucial minute habitually allowed for loading troops.

6(u) Source: Debriefing, Operation 29-67, in support of 3d Bde, 25th Inf Div, 11 September 1967.

Item: Change of pick-up zone.

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Discussion: During this operation one Battalion Commander, in changing the location of his designated pick-up zone, failed to inform the aviation elements in support. Pathfinders exerted a maximum effort to rectify the situation as best they could, but with limited time available considerable confusion ensued, even until five minutes prior to take off time.

Observation: All Infantry Brigade and Battalion Commanders must be made aware of the problems created if pick-up zone locations are arbitrarily changed without notifying the supporting aviation unit. Certainly, if a pick-up zone must be changed due to a tactical situation, aviation units will adjust. However, at least we must stress with the infantry the critical importance of making us aware of changes. A delay in the pick-up zone invariably results in a late landing zone arrival, which subsequently reflects directly on our professional competence.

7(v) Source: Debriefing, Operation 31-67, in support of 199th Light Infantry Brigade, 12 September 1967.

Item: Traffic pattern.

Discussion: When staging out of forward airfields such as GO DAU HA, where sod or dirt runways exist, but no towers, aircraft invariably take off and land in any direction determined by aircraft commanders to be appropriate. This constitutes a definite aviation hazard.

Observation: The operations order should have enclosed as an annex a sketch of the airfield/pick-up zone, to insure one landing direction in the traffic pattern used.

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8(v)Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th Inf Div, 22 September 1967.

Item: Early arrivals.

Discussion: When operations orders are published, the Sequence of Events indicates at what time assault helicopter companies are to arrive at their designated pick-up zones. Since departure times from base camps to the pick-up zones are left to the discretion of the individual assault helicopter company commanders, they frequently depart so as to insure an early arrival at the pick-up zone. The intent of stipulating arrival times in the pick-up zones is to limit the exposure time of so lucrative a target as one or more assault helicopter companies shut down in a small area. The early arrival of lift aircraft denies us the luxury of minimizing the exposure time of our flights in the pick-up zones.

Observation: If assault helicopter company commanders desire to depart their base camps early, and they arrive at the pick-up zone early, it would be prudent to orbit at a known distance from the pick-up zone, breaking the orbit and turning inbound so as to touch down at the time designated in the Sequence of Events. The establishing of such an orbit policy will additionally serve as a training vehicle to instill a greater degree of discipline in compliance by subordinate units to Battalion directives.

9(v)Source: Debriefing, Operation 35-67, in support of 2d Bde, 25th Inf Div, 27 September 1967.

Item: Pathfinder reports.

Discussion: In large multi-company airmobile operations consisting of two, three, or more lift companies staging from one pick-up zone, it

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has been found that not always are full flights of aircraft required for the lift. Often the ground units have insufficient loads to fill all the aircraft in a flight. Rather than have the extra ships touch down with the flight in the pick-up zone, it is on occasion more expeditious to have aircraft orbit, or perhaps send them forward to the next secure pick-up zone, to await the inbound main body. This relieves congestion in the pick-up zone and precludes the hazard of having aircraft unnecessarily down in an area vulnerable to enemy mortar or recoilless rifle attack.

Observation: To effectively control the number of aircraft sent to a pick-up zone location, constant monitoring of the number of loads to be transported is required by Pathfinder elements at the pick-up zone. Reports of the number of loads to be lifted by each assault helicopter company on subsequent lifts must be relayed to the Command and Control aircraft as soon as the information is available.

10(u) Source: Debriefing, Operation 37-67, in support of 3d Bde, 25th Inf Div, 9 October 1967.

Item: Spare aircraft in pick-up zone.

Discussion: Operations orders continually require that each assault helicopter company involved in a Battalion operation have an additional aircraft available to serve as a maintenance spare. A requirement arose to use the maintenance spare as the lift aircraft were departing for their initial insertion. The spare aircraft could not be immediately notified since its location on the airfield was not known. Since a few minutes passed before the aircraft could be found, started, loaded, and airborne, one flight of lift ships consisted of nine instead of the

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scheduled ten aircraft. The problem ensuing is not only one of getting the desired number of personnel into the landing zone on the first lift, but also, should the ship which fails to depart have an Infantry Company Commander or other key personnel on board, unnecessary and critical problems might result once the ground troops are inserted.

Observation: To preclude such occurrences:

- a. All spare aircraft will start engines and remain at flight idle at the same scheduled time as the lift aircraft start.
- b. All Aircraft Commanders will monitor appropriate frequencies immediately upon starting aircraft.
- c. The gunner from each spare aircraft will post himself with Pathfinder detachment personnel controlling loads. When instructed, the gunner may return to his ship, informing the Aircraft Commander of the location of the aircraft and load which he is to replace.
- d. Operations orders will specify the location of the spare aircraft in the pick-up zone to insure their parking in close proximity to the Pathfinder elements.
- e. In the event lift aircraft enter a pick-up zone for an initial troop pick-up from an airborne orbit point, spare aircraft will remain in orbit, monitoring the Pathfinder FM frequency, as well as the Battalion UHF Command net, to insure that, if and when needed, they need only descend to the landing zone and replace the grounded aircraft.

11. (v) Source: Debriefing, Operation 38-67, in support of 3d Bde, 25th Inf Div, 12 October 1967.

Item: Marking permanent pick-up zone.

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Discussion: The second lift during this operation was delayed an extra minute as a result of unequal spacing of infantry personnel chalks in the pick-up zone. The aircraft, attempting to maintain a required minimum spacing between ships, could not reach the load designated for the last three ships in the flight. A slight confusion ensued with infantry personnel running toward the last three ships, loading at random, and losing any planned load integrity.

Observation: The problem of controlling chalk spacing in the pick-up zone habitually used by infantry elements for airmobile operations can best be resolved by placing marking stakes with chalk sequences correctly spaced along the permanent pick-up zone area. By so doing the problem of exact location of loads and the spacing between them can be eliminated.

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J. (U) Landing Zones

1.(v)Source: Debriefing, Operation 26-67, in support of 2d Bde, 25th
Inf Div, 30 August 1967.

Item: Landing zone identification.

Discussion: The use of yellow smoke in an early morning insertion to the EAST serves of little benefit. The glare of the sun, plexiglas scratches, etc, preclude identification of yellow smoke on an approach to the EAST.

Observation: SOP should reflect this recognized deficiency in the use of yellow smoke.

2.(v)Source: Debriefing, Operation 27-67, in support of 3d Bde, 25th
Inf Div, 1 September 1967.

Item: Landing zone mark.

Discussion: On the marking run into the landing zone on the initial insertion of this operation, only one mark was dropped by the lead gunship. It did not ignite and created a potentially serious error in the positioning of the incoming flight.

Observation: The use of 2 marks from the lead gunship is mandatory. In addition the backup of a wingman familiar with the proper location of the mark is added insurance. Should either mark by the lead ship not ignite, the wingman would be in position to drop a 3d and 4th round.

3(v)Source: Debriefing, Operation 36-67, in support of 2d Bde, 25th
Inf Div, 28 September 1967.

Item: Marking wet landing zones.

Discussion: Problems have been encountered by gunships marking wet landing zones. The smoke grenades in use, when wet, take considerably

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longer to have the color come up than when ignited over dry ground. A portion, in fact, never ignite, an occurrence which causes serious problems in airmobile operations. It has also been found that yellow and red smoke is easier to spot when dropped in a wet area than is green and violet.

Observation: When marking a wet landing zone, it is advisable to mark with yellow or red smoke, as these colors continually seem easier to recognize visually in a marshy or wet area. If the landing zone is completely submerged, as are some landing zones in the III CTZ during the rainy season, and point accuracy in the touch down spot is not a dire necessity, consideration can be given to the use of a white phosphorous rocket round in the landing zone as a mark. Of course, if white phosphorous is used, care must be taken to insure placing the round in position only after an analysis has been made of the full effect of wind on the smoke itself.

4.(v) Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: Air controlled approach.

Discussion: The problem of a flight leader having difficulty in identifying a landing zone is a recurrent one. Though prior planning, reconnaissance, and the use of smoke grenades are standard procedures within this Battalion, it has been found that maximum benefit can be derived from gunships by having a gunship lead the flight into a landing zone. For example, a report from the flight leader that he is one minute from the RP is sufficient notice to have the marking gunship turn toward the RP to meet the flight. Radio contact is established between the flight leader

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and the marking gunship when the marking gunship transmits his position relative to the lift aircraft. A typical contact when the lift ship reports the RP consists of, "HORNET LEAD, this is STINGER 96, (marking gunship), in a tight left turn, your 2 o'clock level." At this time the flight leader can make visual contact with the gunship. A further transmission from the gunship to the flight gives the lift leader the final heading from his present position to the landing zone. On final to the landing zone, the marking gunship reports the following:

- a. "400 meters from the mark."
- b. "100 meters from the mark."
- c. "Mark is out." (The mark is dropped on the touch down point).
- d. "LZ is hot/cold." (A report of any fire received).

The reports of distances from the position where the mark is to be placed and the marking gunship afford the flight leader the luxury of being able to positively identify his landing zone a few seconds sooner than had he had to wait until the mark was dropped. Immediately upon receipt of the "400 meters" report, he, the flight leader, can scan for his touch down point and appraise the entire landing zone.

Observation: Though difficulty in identifying a landing zone is only occasionally experienced by flight leaders, every effort must be made to insure that the one rarely occurring error be precluded. The above system can best be described as an air controlled approach, similar to a GCA, in that the marking gunship in fact funnels the lift aircraft into a landing zone. The systematic reports by the gunship serve to accomplish the following:

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a. Insure positive landing zone identification even before the mark is thrown.

b. Preclude a confusion normally associated with a failure of the mark to ignite, since through radio communication the flight leader identifies where the mark should have been dropped.

c. Should the ground commander desire greater surprise for his assault by not positively identifying the landing zone with a smoke grenade, the flight leader can, when in receipt of the report that the "mark is out," identify the point over which the gunship is at that instant, and shoot his approach to that point. Not dropping a smoke grenade as a mark affords the ground commander maximum surprise by denying the enemy knowledge of the exact location of the landing zone. A dropped smoke grenade is proof positive of an inbound flight, while a gunship at low level is nothing more than a gunship overflight.

5(v) Source: Lessons learned, 188th Assault Helicopter Company.

Item: Marking of landing zones.

Discussion: It has been brought out during discussion of combat assaults that the time taken to describe and locate the desired landing zone in several instances was excessive and possibly compromised the impending assault.

Observation: The possibility of arming the Command and Control aircraft with two small rocket pods would enable the C & C ship to mark the landing zone with one round of white phosphorous and the gunships could immediately bring the area under fire, thereby reducing the possibility of a compromise of the landing zone. It is understood that this technique could only be used when suppression by gunships is authorized.

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6(v)Source: Lessons learned, 116th Assault Helicopter Company.

Discussion: Marking of wet landing zones, targets, or other areas with smoke is often a difficult task since the grenade submerges, causing extensive delays in the smoke billowing. On a recent mission in the delta such was the problem. To eliminate this a beverage can opener was used to perforate the smoke grenade canister. Results were instant smoke in a great volume, but of shorter duration. However, it did serve the purpose and assisted in accomplishment of the mission.

Observation: Should such difficulties be experienced this method of perforating the smoke canister can be used effectively.

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K. (U) Miscellaneous

1. (U) Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: Infusion.

Discussion: Present infusion programs in Vietnam are on occasion quite inadequate and seriously detrimental to the operating efficiency of the units involved. Specific reference is made to instances wherein aviators are infused from newly arrived companies with less than a year in country. An infusion program is established basically for two reasons. Primarily, it is desirable to attain an immediate combat experience level within the new unit. The assignment of a number of experienced aviators accomplishes this to a degree. Secondly, it is necessary to vary the rotation dates of the assigned personnel of a new unit to CONUS. This is also accomplished, but to an even lesser degree. The critical problem resulting from taking aviators from a unit with less than a year in country is that it leaves that unit short of experienced personnel, personnel who are just barely reaching the proficiency level wherein they themselves can even be considered "experienced." What in fact is accomplished is that a unit striving for operational stability in its early months in Vietnam has its few experienced resources depleted by the infusion process, with the only return being an input of no experience whatsoever. The other unit, newly arrived, is in turn acquiring aviators with a level of experience not nearly sufficiently high to be of significant benefit.

Observation: A much better solution would be realized if an infusion policy were established assigning aviators to new units from

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companies established in country for well over a year. In this way maximum benefit can be derived from the exchange by both units involved. A unit which has been in RVN for over a year has achieved operational stability and has the quantity and developed quality of personnel from which it can select individuals who would be of benefit to the new unit and yet retain sufficient talent to readily absorb the loss.

2(v) Source: Lessons learned, 21st Reconnaissance Airplane Company.

Item: Employment of observation aircraft in teams of two aircraft.

Discussion: BLACK ACE pilots supporting 25th Division (ARVN)

operations in the DUC HOA area have enjoyed considerable success by employing a team of two Bird Dogs to locate enemy troops and emplacements for engagement by artillery and/or armed helicopter fire teams. Enemy emplacements in this area are well-concealed and camouflaged and are very difficult to see from the usual reconnaissance altitude of 1500 feet or above. These targets can be detected from low level flight altitudes but accurate plotting of their location is difficult due to lack of prominent terrain features visible from altitude. By employing two aircraft, one flying at low levels (approximately 50 feet above the terrain) and the other at 1500-2000 feet, excellent results have been obtained. The observer in the low level aircraft locates and describes the target to the observer in the higher aircraft who then accurately plots the target's location. The pilot of the higher aircraft maintains radio communication with the supported ground unit and appropriate flight following agency. This technique has been especially successful when used in conjunction with an armed helicopter fire team. During the last

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30 days a Viet Cong body count of 30 confirmed KIA has been obtained by armed helicopters working with BLACK ACE aircraft in the DUC HOA area. BLACK ACE aircraft have not been hit by enemy fire while using this technique.

Observation: Employment of Bird Dog aircraft in teams of two is recommended where targets are difficult to detect from normal altitude and low level flight is required.

3(u) Source: Debriefing, Operation 27-67, in support of 3d Bde, 25th Inf Div, 1 September 1967.

Item: Entry into Fire Support Base.

Discussion: An aircraft resupplying a FSB established in support of this operation made an approach to the center of the FSB, throwing dust and dirt on troops eating a noon meal in a location directly adjacent to his touch down point.

Observation: Discretion in landing supplies into a troop location should be constantly stressed by subordinate unit commanders. This not only prevents unnecessary harrassment of ground elements, but also insures a reasonable degree of safety.

4(u) Source: Debriefing, Operation 27-67, in support of 3d Bde, 25th Inf Div, 1 September 1967.

Item: Aborts.

Discussion: The question arose during the debriefing of this operation concerning aviation elements' aborting a landing zone insertion once committed from the RP.

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Observation: The dictates of the ground commander remain the guidance. If he chooses to insert, air elements are committed; if he chooses to abort, we abort.

5.(v)Source: Debriefing, Operation 34-67, in support of 3d Bde, 25th Inf Div, 22 September 1967.

Item: Aircraft destruction.

Discussion: A gunship from an organic assault helicopter company received sufficient .50 caliber weapons fire to cause it to crash. Having extracted the crew and the salvagable radio equipment, nothing remained but a ruined hulk of a helicopter. The decision was made by the Air Mission Commander to destroy the aircraft for reasons based on the tactical ground plan, the security of the recovery ship, the condition of the aircraft, and the length of time the recovery operation would have required. The infantry ground commander sought to remain in the AO not more than 3 hours, after which he wanted his troops extracted. The crash site was not secure, nor was it expected to be secured to allow recovery operations to begin. The estimate from the recovery team indicated that at least 4-5 hours would be required to get the aircraft extracted. Finally, the weighing of one CH-47, subject to the same ground fire which downed the UH-1, against the value of the scrap metal on the ground, dictated that the Air Commander destroy the crashed ship immediately.

Observation: Four points which must be considered by each Air Mission Commander prior to directing the destruction of an aircraft are:

- a. Ground tactical plan.
- b. Time required to extract.

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c. Security of CH-47.

d. Condition of the crashed aircraft.

6(v) Source: Lessons learned, 116th Assault Helicopter Company.

Item: Employment of smoke by helicopter during extractions from a hot pick-up zone.

Discussion: During an extraction of 2 companies from the IRON TRIANGLE, smoke was employed to deprive the enemy of a view of the loading aircraft. Due to the loading time required the smoke dissipated and was almost ineffective. During the final extraction the Air Mission Commander had the smoke ship dispense a small amount of smoke to give protection to the slicks in the pick-up zone. Then the smoke ship re-positioned itself to lay the final smoke screen for the ships departing the pick-up zone. The pick-up zone was hot, but no hits were received by the lift aircraft.

Observation: Smoke is a valuable asset to the Air Mission Commander when used effectively. When using smoke during extractions, insure that there is sufficient smoke employed for the landing and loading in the pick-up zone. Loading time permits the smoke aircraft to re-position itself, then employ the smoke along the initial smoke line, and continue on for the departure route.

7(v) Source: Lessons learned, 242d Assault Support Helicopter Company.

Item: Preparation of loads.

Discussion: Missions in support of an engineer unit were never ready when the aircraft arrived. The ground units would have only the

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first load out of many loads ready when the aircraft arrived. Aircraft were waiting as much as an hour for loads to be prepared. A visit by the Operations Officer with the S3 and Executive Officer of the Engineer Battalion revealed the fact that the Battalion mission requests were erroneously made. As an example, a request was sent to Division for 12 sorties between 0800 and 1200 hours. The Battalion meant they wanted the sorties spread over the four hour period. Division interpreted the request as meaning they would have 12 sorties ready for pick-up at any time between the hours of 0800 and 1200, and assigned two aircraft from 0800-0930 to complete the mission. Only the first sortie was ready at 0800 hours.

Observation: All units utilizing Chinook support should be instructed to be very specific in their requests, to include how many sorties at what specific times. Units should have all sorties ready before the time requested to facilitate scheduling of aircraft.

8(v)Source: Lessons learned, 242d Assault Support Helicopter Company.

Item: Tactical missions, such as artillery moves, sandwiched between general support missions.

Discussion: Recently an artillery battery move was scheduled for four CH-47 aircraft to commence 15 minutes after the same aircraft were scheduled for resupply missions to another location. Last minute changes to the artillery mission had to be briefed over the radio and resulted in confusion and delay in the artillery move.

Observation: For scheduling purposes, the CH-47 should have a

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minimum of thirty minutes ground time to refuel and coordinate last minute changes with the Flight Leader and Aircraft Commanders, prior to conducting a mission of a different type from the last.

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L. (U) Safety

1(u) Source: Debriefing, Operation 31-67, in support of 199th Light Infantry Brigade, 12 September 1967.

Item: Operations in vicinity of TAN SON NHUT.

Discussion: The flight path of lift aircraft followed a routing close to the ILS and GCA approach course to TAN SON NHUT's Runway 25.

Observation:

a. Care should be given to insure flight routes and altitudes sufficiently restrictive to guarantee clearance of IFR high performance aircraft traffic inbound to TAN SON NHUT.

b. The SAIGON traffic pattern should be published and printed with reference to control zones, as is the BIEN HOA traffic pattern.

2(u) Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: Loss of transmission oil pressure.

Discussion: On two different occasions during the month of September, aircraft of this Battalion received fire from enemy positions, resulting in a loss of transmission oil pressure. Within a short time after the loss of transmission oil, the transmission "froze." In one of the two cases this resulted in the severing of the mast and fuselage from the main rotor.

Observation: Immediately upon noting the loss of transmission oil pressure, all aviators should attempt to land the aircraft in the nearest safe area.

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3.(v) Source: Lessons learned, 269th Combat Aviation Battalion Headquarters.

Item: Helmet visors.

Discussion: The policy of wearing the helmet visors down on all combat assaults was adopted by this Battalion. On final to landing zones, the Flight Leader reminds the flight that visors should be down and harnesses locked.

Observation: Since this policy was adopted, five members of this unit have had eye injuries prevented by the visor's deflection of fragments of metal and plexiglass shards.

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M. (U) S2

Source: Lessons learned, S2.

Item: Photographs of landing zones.

Discussion: Photo coverage of selected landing zones is procured for all Battalion combat assaults. The photographs are obtained from G2 Air, 25th Infantry Division, III Corps MI in SAIGON, II Field Force Vietnam, and the 73d Aviation Company at VUNG TAU. The photos are used during the Battalion briefings and provide the commanders with a true depiction of the area. The point of touch down of the lead aircraft and direction of approach are marked on the photographs. Upon completion of the Battalion briefing the photographs are lent to the companies' gun platoons which mark the landing point for the lead ship during a combat assault.

Observation: Photo coverage has proven to be most desirable and beneficial to the commanders, operations officers, and particularly to the gunship pilot providing the mark. This has resulted in extreme accuracy in delivering the ground units to their exact desired location.

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N. (U) S3, Training

Source: Lessons learned, 116th Assault Helicopter Company.

Item: Orientation and training of newly assigned aviators.

Discussion: Directives from higher headquarters outline requirements for standardization, orientation, and training of newly assigned pilots, but mission requirements preclude raw training as such in the required amounts. III Corps normal missions and other general support missions, are the prime type missions available to the unit for the accomplishment of necessary training. Combat assault operations tend to produce "follow the leader" type pilots and do not require the aviators to think for themselves. General support missions do require pilots to exercise their own judgement, for they necessarily are required to clear artillery and accomplish the pre-flight and in-flight planning for each sortie. Pilots who are proficient in general support missions are normally outstanding on combat assaults. Extended periods of combat assault operations deny the unit valuable training of Aircraft Commanders, potential Aircraft Commanders, and newly assigned pilots.

Observation: Companies should be scheduled for general support type missions 2 or 3 times a week. This would afford the unit an opportunity to establish a continuous training cycle to attain and maintain a satisfactory pilot proficiency level.

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0. (U) S4

1(v) Source: Debriefing, Operation 38-67, in support of 3d Bde, 25th Inf Div, 12 October 1967.

Item: Dry season operations.

Discussion: An approach to DAU TIENG Airfield at 0445 hours on this operation indicated to the C & C ship personnel that the dust problems peculiar to the start of the dry season are an extreme hazard to aircraft operations. In the final stages of a night approach, at termination, dust was blown in such quantity that it caused the aircraft's crew to lose visual ground reference.

Observation: The change of seasons from wet to dry in III CTZ seems quite long in duration. The effects of the change, i.e., the drying of ground in higher places, occurs quite rapidly, however, creating problems which all too suddenly are realized. To insure that airfields from which rotary wing aircraft continually operate do not suddenly become hazardous to aircraft ground operations, plans should be made sufficiently early to surface the airfield with a dust controlling agent. "Pema-prime," a crude petroleum-asphalt product, is presently a solution. The importance of early programming of engineer support for this mission cannot be over-stressed.

2(v) Source: Lessons learned, S4.

Item: Receipt of equipment by newly arrived units.

Discussion: The receipt of unit equipment by newly arrived units requires strict compliance with procedures developed as a result of past experiences in order to prevent loss or excess damage to equipment. These procedures should be initiated by the sponsoring unit and should follow

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the sequence listed below.

a. Notify unit prior to deployment from CONUS to make necessary arrangements for unit personnel to accompany all shipments of unit equipment to include WABTOG packet.

b. Upon arrival of the advanced party assign a project officer from within the Battalion who has either been involved in receipt and off-loading of an incoming unit or has received a briefing on the procedures. If no experienced personnel are available, the project officer should be sent to the receiving port area transportation office for a thorough briefing on port procedures and method of obtaining in-country transportation for trans-shipment of equipment.

c. The arriving unit must be thoroughly briefed on the necessity for providing unit guards for their equipment at all times until the equipment arrives at the final destination. This includes having personnel accompany all in-country shipments.

d. If the unit main body does not arrive until after its equipment, the sponsoring unit must provide sufficient personnel to act as drivers and guards.

e. Any loss or suspected pilferage of equipment during shipment must be reported to the sponsoring Battalion headquarters as soon as it is discovered.

f. Unit personnel to include a responsible officer should be present during off-loading and should make the personnel performing the off-loading aware of his presence.

Observation: These procedures were followed by the 21st Recon-

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naissance Airplane Company and the 242d Assault Support Helicopter Company. Neither unit sustained any loss or major damage to equipment during shipment and receipt.

3.(v)Source: Lessons learned, S4.

Item: Resupply of fuel to tactical refueling sites.

Discussion: During several recent exercises a problem arose with the resupply of JP-4 to tactical refueling sites. These sites are set up to support a particular operation, and based on the tentative plan, coordination is made with the supported unit to provide a given amount of fuel on site. The supported unit normally makes coordination several days in advance to have the fuel delivered. Last minute changes to an operation plan or unanticipated requirements for gunship support can cause the supply to be depleted prior to completion of an operation. Storage and transportation requirements prevent overstocking of the refueling point to meet any contingency. Resupply of JP-4 is the responsibility of the supported unit. However, due to the rapidity with which the requirement can change, and the lead time required for surface transportation of fuel, they have not been able to react with sufficient speed to meet the requirement.

Observation: The 269th has placed the requirement on the 242d Assault Support Helicopter Company to have 2 each 500 gallon collapsible drums rigged for sling load and prepared for use on call. These full drums would be delivered to the refueling site and exchanged for 2 empty drums to start a refueling shuttle by CH-47. In addition, closer coordination will be maintained with the supported unit S4 to insure that

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he is aware of any anticipated increase in requirements.

4(u) Source: Lessons learned, S4.

Item: Construction requirements for programmed units.

Discussion: The present system for requesting construction projects for incoming aviation units is inadequate for the following reasons:

a. The requirement is placed on the sponsoring unit to request all necessary construction for incoming units. Quite often the sponsoring unit does not have any personnel who are familiar with the procedures required in determining what facilities are required and what agency is responsible for supplying these facilities. The initial request is usually incorrect and sent to the wrong agency.

b. Since a maximum lead time is necessary for programming of construction, it is important that all requests be submitted expeditiously and be correct upon initial submission.

Observation: It is recommended that the engineer section at 1st Aviation Brigade be utilized to help alleviate this problem. Upon receipt of notification of the proposed location for an incoming unit, one of the members of this section should be sent to the sponsoring unit to:

a. Insure that the project officer is adequately briefed on the requirements and has the appropriate references available for submission of requirements.

b. Coordinate with the base development board to insure an adequate area is available for the incoming unit.

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c. Determine the engineer requirements for construction of required facilities, and coordinate with the supporting engineers to determine if they can program the facilities by the projected arrival date. If available support appears inadequate to meet the requirements, make an estimate of the additional time or support required to complete the required facilities.

d. Upon completion of the liaison visit, he should make a brief report stating:

(1) Whether an adequate area is available at the programmed installation.

(2) What additional support will be required to meet the required completion date.

(3) Any additional problem areas he anticipates will require action at Brigade level. These would include such items as re-consideration of location and possible delay on arrival date for the new unit.

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P. (U) Maintenance

1.(v)Source: Debriefing, Operation 27-67, in support of 3d Bde, 25th Inf Div, 1 September 1967.

Item: Smoke ship maintenance.

Discussion: Recent operations have proven conclusively the benefit of the smoke aircraft. The requirement to have this aircraft mission ready predicates that such maintenance priority be established as would guarantee immediate attention to repairs on this ship at all times.

Observation: The smoke ship should have a priority 1 for maintenance.

2.(v)Source: Lessons learned, 116th Assault Helicopter Company.

Item: Training of crew chiefs.

Discussion: Newly arriving crew chiefs assigned to this unit are assigned to either the service platoon or the 392d Transportation Detachment. The duration in the assignment varies with the individual's background and his ability to learn. This period generally averages six to eight weeks.

Observation: This time spent in aircraft maintenance has proven to give invaluable experience to personnel who will shortly assume duties as crew chiefs. The crew chief not only gains knowledge of his aircraft but also gains an appreciation of the problems encountered by maintenance in a combat environment. Further, this eliminates crew chief maintenance that must be performed by maintenance elements.

3(v)Source: Lessons learned, Battalion Maintenance Officer.

Item: Spare parts stockage from supporting DSU.

Discussion: The 20th Transportation Company (DS) became operational

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on 1 June 1967, and throughout the reporting period continued to increase ASL parts stockage to support the three assault helicopter companies within the Battalion. Although steady improvement is being made, spare parts shortages continue to force an additional cannibalization work-load.

Observation: Newly activated DS units should be provided a more realistic ASL upon arrival and not be required to build on ASL based on demand data.

4(v)Source: Lessons learned, Battalion Maintenance Officer.

Item: T53 L-13 engines.

Discussion: A considerable amount of maintenance man-hours are expended in replacing L-13 engines every 300 hours. Not only the preparation of the engine for installation but also the cleaning, preservation, and transportation problems involved, particularly for outlying units, are time consuming.

Observation: Maximum effort should be made to provide special tools and training required to the organic DS detachments to permit the units to perform their own hot and inspections.

5(v)Source: Lessons learned, Battalion Maintenance Officer.

Item: T53 L-13.

Discussion: Performance of the L-13 engine in this Battalion has been very satisfactory. Oil consumption has not been a problem. Only apparent weakness of the L-13 is its susceptibility to FOD damage. All premature removals of L-13 during the reporting period have been a result of FOD.

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Observation: Investigate improved methods of engine inlet protection.

6.(v)Source: Lessons learned, Battalion Maintenance Officer.

Item: Tail rotor hub inspections.

Discussion: Change in the tail rotor hub inspection requirements from 300 hours to 100 hours has created many lost days of availability. To date, only one location, VUNG TAU, RVN, can perform the required inspection in this area. Time lost in handling and transportation is considerable.

Observation: More inspection facilities should be provided.

7.(v)Source: Lessons learned, Battalion Maintenance Officer.

Item: Maintenance of UH-1B gunships.

Discussion: EDM percentage has continued to increase on UH-1B gunships. Primary time loss items were repair of both the obsolete XM-16 weapons system and fatigue skin cracks on the UH-1B helicopter. During the reporting period one aircraft was evacuated to CONUS for repair because of excessive structural cracking.

Observation: Revive the UH-1B Depot Exchange program at the earliest possible date.

8.(v)Source: Lessons learned, Battalion Maintenance Officer.

Item: Transmission damponer mounts.

Discussion: Numerous incidents of cracked transmission damponer mounts have been found in all assigned assault helicopter companies. Shortages of items have forced units to use back-up maintenance support

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units to fabricate replacements.

Observation: Investigate possibility of strengthening these mounts to preclude such widespread failures.

9(u) Source: Lessons learned, Battalion Maintenance Officer.

Item: Prepack parts stockage.

Discussion: The 242d Assault Support Helicopter Company deployed to RVN during July and August 1967. Information provided from Sharpe Army Depot to the 242d indicated that the unit's prepacked ASL was approximately 85% filled at the time of deployment. Upon receipt of prepack in RVN, stocks were inventoried and the percentage of fill was determined to be 40% instead of 85%.

Observation: Advise all deploying units to inventory prepack conexes prior to shipment to insure that an accurate status is known and the corrective action can be accomplished prior to the unit's becoming operational.

10(u) Source: Lessons learned, Battalion Maintenance Officer.

Item: Dispersion of helicopters.

Discussion: To reduce the possibility of damage to aircraft from mortar attacks, a dispersion plan requiring a minimum of 150 feet between aircraft has been established for all helicopters parking with revetments of appropriate height and design. At DAU TIENG Airfield space limitations force helicopters to be parked throughout the post area. Problems associated with maintenance in these distant parking areas are:

a. Minimum supervision of maintenance crews.

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b. Lack of sufficient organic lighting to support several work areas.

c. Unprepared areas surrounding the parking locations restrict access of support equipment.

In addition, a limit as to the number of aircraft necessitates some maintenance to be performed in the revetment area.

Observation: Additional night lighting sets should be provided all aviation units in RVN required to operate under these conditions.

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Q. (U) Aviation Medicine

1(v) Source: Lessons learned, Battalion Flight Surgeon.

Item: Personnel complain of itching after showers in all areas of the command.

Discussion: On many occasions water samples have been taken and the water has been shown free of micro organisms.

Observation: It is felt that the ubiquitousness of fungal organisms, especially in clothing, infect the skin generally and are stimulated to itch by the shower water; it is not believed that the skin is infected by the water itself.

Recommendation: All laundry that will come in contact with human skin should be washed well, with soap and water and clothes should be thoroughly dried, preferably sun-dried.

2(v) Source: Lessons learned, Battalion Flight Surgeon.

Item: There is observed in the 116th Assault Helicopter Company and HHC, 269th Combat Aviation Battalion, an extremely high rate of skin infections besides the subjective itch described above. These infections are fungal or combined fungal-yeast infections.

Discussion: These infections occur widely and persist an extremely long time despite thorough and adequate medical treatment, other than the controlled and supervised laundering of clothing.

Observation: It has been observed that where medical treatment has failed and a patient washes his own clothing, paying particular attention that he washes them well with soap and water and that he dries clothes thoroughly in the sun, his rash will then disappear. When clothes are sent to either the presently established Quartermaster laundry or to

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CU CHI private laundries, the rash reappears. In most cases aviation work responsibilities prohibit the men from doing their own laundry and the rash persists.

Recommendation: Hootch maids should be allowed to do laundry. Clothes lines and wash areas with adequate water supply should be provided to accomplish this. Otherwise, problems of Quartermaster and the CU CHI laundries should be rectified.

3(c) Source: Lessons learned, Battalion Flight Surgeon.

Item: There exists a very resistant strain of Neiseria Gonococcus in Vietnam.

Discussion: Treatment of gonoccal uretheritis with penicillin or tetracycline alone inevitably results in recurrence of signs and symptoms of the disease. Drugs must be combined and given in recommended doses as noted below for CU CHI.

Observation: No recurrence results after the treatment scheduled below.

Recommendation: Treatment schedule: procaine penicillin, 1.5 million units intramuscularly, twice a day for five days. Tetracycline, 250mg by mouth four times a day for five days.

4(u) Source: Lessons learned, Battalion Flight Surgeon.

Item: Uneconomical use of medical personnel and equipment under present TOE for aviation units in Vietnam.

Discussion: The Department of the Army has established that there should be one medical OA detachment for each aviation company and a

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battalion medical section in each battalion. In RVN presently the working concept is to assign one OA detachment per two aviation companies. The use of Army aviation in Vietnam in its supporting role has been far different and greatly increased from what was expected when medical support was planned originally.

Discussion: Under the present organization in Vietnam an OA detachment does not need to have a laboratory specialist or as many medical aidmen. The allocated equipment is too meager for accomplishing the mission of providing comprehensive aviation medical support. With one OA detachment per two companies, one company is overly covered while one is neglected medically. Furthermore, there is no flexibility of control of medical resources with medical personnel organic at the company level.

Recommendation: A battalion medical platoon should be established from resources of OA detachments and dispersed in sections with deploying companies. The battalion should provide one large dispensary to provide comprehensive aviation medical support. Each section in support of a company away from the battalion location would provide aid station type support.

5(v) Source: Lessons learned, Battalion Flight Surgeon.

Item: A flight surgeon, in an aviation battalion, is rendered almost ineffective by the cumbersome and almost unreasonable assignment of functioning through the S-4 in advising the Commanding Officer.

Discussion: Because the S-4 is mainly concerned with aircraft, maintenance, roads, vehicles, ordnance, etc, he forgets about medical

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support places much responsibility jointly upon commanding officer and flight surgeon, which leaves little place for anyone between them. An S-4 is not sensitive to the same things a commanding officer is and therefore does not react appropriately.

Observation: Some aviation battalions have the surgeon serving directly under the commanding officer, reporting through the executive officer for convenience. This has been judged more satisfactory.

Recommendation: The battalion should, on a trial basis, employ the flight surgeon as a staff officer reporting to the commanding officer through the executive officer rather than the S-4.

6(u) Source: Lessons learned, Battalion Flight Surgeon.

Item: Aviation requires a special type of medical support with personalized contact being rendered individual aviators on a regular basis and thus should be organic to aviation battalions.

Discussion: There is much duplication of medical resources in Vietnam with aviation dispensaries being involved quite frequently. It does not help aviation medical support for it to consolidate with non-aviation medical units. However, aviation units can consolidate with each other as well as non-aviation medical units can consolidate.

Observation: Experience in Vietnam to date has shown that as many as three aviation battalions can work efficiently and economically in the same facility while maintaining the integrity of an aviation dispensary.

Recommendation: At CU CHI the 25th Aviation Battalion and the 269th Combat Aviation Battalion should combine medical resources in establishing a consolidated flight dispensary which will render comprehensive aviation medical support on an area basis to CU CHI, TAY NINH, and DAU TIENG.

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SECTION II

PART II

Commander's Closing Comment (U)

(v) Item: Operational Report--Lessons Learned.

Discussion: The compilation of data for this report has been a tedious process requiring extensive debriefings following Battalion operations, submission of input data from primary and special staffs and all units at subordinate level, and a considerable and scrupulous editing of much material. Certainly, all this documented information is not pertinent to each aviation unit involved in combat operations. However, should some of the data, when extracted, serve of benefit to a company or battalion, the efforts expended will have been well worth the while.

Observation: The documenting of our lessons learned has afforded this Battalion a keen introspection into problems recurrently encountered by a combat aviation battalion in a tactical environment. It has also substantially assisted in improving the operational procedures of this unit. It is my hope that in the future commanders will place additional emphasis on the importance of the documentation of the difficulties encountered in combat operations and the techniques discovered in their satisfactory resolution. It is a commander's duty to have recorded all such data which directly affects the success of his unit in combat. The mutual exchange between commanders and staffs

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of compilations of this nature can assist immeasurably in the development and continued success of Army Aviation in the Republic of Vietnam.

James H. Merryman

JAMES H MERRYMAN
LTC, Arty
Commanding

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Inclosures:

- 1-The 269th Combat Aviation Battalion
- 2-Summary of Accidents
- 3-Strength Status
- 4-Gains and Losses for Next 90 Days
- 5-Glossary of Terms

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Inclosure 4

SUMMARY OF GAINS AND LOSSES FOR NEXT 90-DAY PERIOD

LOSSES

	<u>30-DAY</u>	<u>60-DAY</u>	<u>90-DAY</u>
OFFICERS	3	8	20
WARRANT OFFICER	6	13	22
ENLISTED	41	82	194

GAINS

	<u>30-DAY</u>	<u>60-DAY</u>	<u>90-DAY</u>
OFFICERS	2	5	10
WARRANT OFFICERS	9	13	19
ENLISTED	37	78	183