

DEPARTMENT OF TACTICS  
UNITED STATES ARMY AVIATION SCHOOL  
Fort Rucker, Alabama

File No. 571-4

SECTION III

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO SECOND REQUIREMENT

a. The primary duties of aviators in a brigade aviation section are -

(1) Aviation section commander. As the title implies, he commands the aviation section. He is also the aviation officer on the brigade special staff. In the role of brigade aviation officer, he acts as a special staff member, usually under the direct supervision of the brigade operations officer (S-3). His duties are to assist in the planning of operations involving Army aviation and to advise the brigade commander and his staff on employment, capabilities, and limitations of organic and supporting Army aviation elements.

(2) The primary duty of the other aviators in the section is to pilot the aircraft assigned to the section. When required, they act as aviation liaison officers to the subordinate elements of the brigade and as aviation officers on the supported units' staff.

b. The major additional duties required to operate the aviation section are -

- (1) Aircraft maintenance officer.
- (2) Supply officer.
- (3) Operations officer.
- (4) Petroleum storage and handling officer.

(5) Others (duties dictated by special situations). The TOE for the headquarters and headquarters company, brigade, does not provide sufficient personnel to accomplish all required duties in the aviation section. Consequently, officers can expect to perform additional duties which have a bearing on the officers' efficiency and the successful operation of the section.

c. Two of the crew chiefs are assigned the additional duties of light truck driver and the petroleum storage specialist is the assigned driver of the 2 1/2-ton truck (1,200-gallon fuel tanker). These three individuals are responsible for performing preventive and driver maintenance. The wheel vehicle mechanics of the company headquarters brigade perform all other organizational maintenance and repairs.

d. The aviators perform some organizational maintenance by preflight and conducting engine runup checks and test flights. However, the majority of the maintenance is performed by the crew chiefs assigned one per aircraft and the supervision and quality control is the responsibility of the maintenance supervisor. The TAM company provides backup organizational maintenance and direct support maintenance.

## 2. SPECIAL SITUATION CONTINUED

a. You have been assigned the additional duty of aircraft maintenance and supply officer. Although the TOE authorizes six observation helicopters, the section has been issued four OH-13 helicopters and two O-1E airplanes. The aviators and mechanics of the section are qualified in both types of aircraft. Other personnel and equipment of the section are as stated in the TOE.

b. The section commander informs you that your first priority is to update the PLL (prescribed load list) for the section. As you already know, one function of the PLL is to list repair parts and supplies required to be stocked by the section. Since the brigade aviation section is responsible for organizational maintenance, you should refer to the -20P, "Organizational Maintenance Repair Parts and Special Tool Lists," for parts and supply data on the type aircraft concerned.

c. In studying the instructions on the use of the -20P, you learn the following:

(1) The -20P lists repair parts, special tools, ground support equipment, and maintenance supplies authorized and required to be on hand or on requisition at all times for organizational maintenance.

(2) The allowance factor designated reflects the quantity of an item authorized and required to support 100 aircraft for a 15-day period under combat conditions in average terrain and climate.

(3) These factors, expressed in subcolumn "O" are to be used to compute permanent stock levels of repair parts authorized and required to be on hand or on order at all times.

(4) Computation of quantities to be stocked will be made using the following formula:

$$\frac{\text{Number of aircraft supported} \times \text{allowance factor}}{100}$$

(a) A minimum quantity of one will be stocked when the computed allowance results in a quantity lower than one. (Example:  $0.4 = 1$ .)

(b) Computations resulting in a fractional quantity will be rounded off to the nearest whole number. (Example:  $1.3 = 1$ ;  $1.5 = 2$ .)

(5) The authorized maintenance echelon capability for an item indicated in the maintenance level column by O (organizational), DS (direct support), GS (general support), or D (depot). Maintenance echelon capabilities are designated for items as follows:

(a) A factor shown within any allowance factor subcolumn indicates that the item is authorized and required both for stockage and use at that maintenance level.

(b) An asterick (\*) indicates that the item is authorized for use at that level, but is not authorized to be stocked, assembled, or manufactured. When such an item is required, it must be requisitioned for immediate use from the next higher echelon activity until demand experience is used to compute stockage.

4 X 2.04 2 X 288 8.76  
4.08  
100

(c) An AR code indicates that an item is authorized for use at the level indicated, but is to be requisitioned as required and a minimum quantity to be stocked. This code applies only to common hardware and bulk material. No entry in the PLL is required for this type of supplies.

(d) An allowance shown in brackets or parenthesis indicates that the item will be stocked at that maintenance level as an insurance or safety item in a minimum quantity of one per unit pack.

(e) An REF code indicates that the item is a duplication of an item listed previously and the required quantity per assembly with the first listing.

(f) An R as a suffix to the allowance factor indicates that the item may be stocked by USAR units in a maximum quantity of one unit pack. Such stockage is not mandatory.

d. Once a PLL is established, a record of demands must be maintained in accordance with AR 735-35. If an item on the PLL receives no demands in a 12-month period, it may be deleted from the PLL. Any item not included in the PLL which receives three demands in a 12-month period should be added to the PLL (AR 711-16).

### 3. THIRD REQUIREMENT

#### a. Questions:

(1) Can the magneto assembly (engine type) for the O-1E, part No. 10-51365-17, be included in your PLL? Explain.

*no not allowed on PLL*

(2) What is the total number of spark plugs you are required to stock?

*~~2~~ 604 974-16*

(3) Should the lockwasher, part No. 1218-00, be included in your OH-13H PLL?

*yes it is required, but never shall be used*

(4) Should the gasket, part No. AN4027-1, be included in your OH-13H PLL?

*may be used but not required to stock,*

(5) In the event that you had an aircraft down for an engine tachometer and a second aircraft EDP (equipment deadline for part) for a starter, could the tachometer from the second aircraft be transferred to make the first aircraft flyable?

*yes if it were one in -20° off pitch.*

*who mission require  
if allowed on one organization's unit  
not not allowed those supply.*

(6) Who can authorize the transfer of a part from one aircraft to another  
(cannibalization)

commodig ~~Sioux~~ Co.

AR750-1500-8

b. Information to answer questions 1 through 4 is provided in this section.  
Answer question 5 based on your maintenance training.

c. Extract of -20P for O-1 (Bird Dog) and OH-13 (Sioux) attached.

FIGURE AND INDEX NUMBER	TECH SPEC CODE	S/N RECO	S/N WASH	S/N CODE	FEDERAL STOCK NUMBER	PART NUMBER	MODELS USABLE ON	DESCRIPTION	UNIT OF ISSUE	E X P	QTY PER ASSY.	ALLOWANCE FACTORS										
												O	DS	GS	D							
86	-2	P O R			2925-294-4143	ND NUMBER 10-51365-26	HE-1 HO-1 HO-2 HO-3 O-1 O-2 O-3	IGNITION SYSTEM..... ..MAGNETO, IGNITION RPL-BY.... 2925-585-4024 ..MAGNETO, IGNITION RPL-BY.... 2925-585-4024 ..MAGNETO, IGNITION RPL-BY.... 2925-585-4024 ..MAGNETO, IGNITION-LH SEE.... FIG. 245A FOR DETAIL BREAKDOWN ..MAGNETO, IGNITION-RH RPLS--. 2925-294-4143, 2925-528-6284, 2925-554-9804 SEE FIG. 245A FOR DETAIL BREAKDOWN ATTACHING PARTS ..NUT, PLAIN, HEXAGON..... ..WASHER, LOCK..... ..WASHER, FLAT- -<IMO 25>..... ..GASKET, MAGNETO- <IMO 25>..... <USAR> ..NUT..... ..GROMMET..... ..SPRING, HELICAL, TORSION..... NOTE 1 ..PLUG, TERMINAL GROUND. NOTE 1 ..SPARK PLUG..... ..GASKET..... ..SHIELD ASSEMBLY..... ..PLATE <IMO 5>..... ..CONNECTOR, IGNITION HARNESS. <IMO 10> ..CLAMP, LOOP..... ..CLAMP, LOOP..... ..CLAMP, LOOP..... ..CLAMP, LOOP..... ..BRACKET, ANGLE..... ..LEAD SET, IGNITION..... SHIELDING ..CONTACT, IGNITION TERMINAL. <IMO 5> ..SLEEVE, IGNITION TERMINAL.. ..SLEEVE, SPARK PLUG ELBOW... INNER <IMO 25> ..CONDUIT ASSEMBLY, MAGNETO.. CYLINDER NO. 5T ..CONDUIT ASSEMBLY, METAL, ... FLEXIBLE-CYLINDER NO. 3T ..CONDUIT ASSEMBLY, METAL, ... FLEXIBLE-CYLINDER NO. 6T ..CONDUIT ASSEMBLY, MAGNETO..	EA	1	*											
					2925-528-6284	10-52350-15																
					2925-554-9804	10-52350-18																
					2925-684-2361	10-52350-22																
					2925-585-4024	10-52350-23																
					5310-167-1345	AN315-5R																
					5310-186-7510	1218-00																
					5310-038-2363	STD1727																
					2810-479-1628	45663																
						10-30299																
						AN3105-10																
						AN3105-2																
						AN3105-3																
					P O	2925-670-0325																
					P O	5330-285-3589																
					AD O	E3561																
					P O	2925-442-0896																
					P O	2925-533-6262																
						E1405-1-1																
						E1405-1-2																
						E1405-2-1																
						E1405-3-1																
					P O	2925-559-8710																
					AO O	E1046-41-8																
						E4256																
					P O	2925-533-6264																
						E4240																
					P O	2920-319-5048																
					P O	2925-386-8745																
						E1181-30-1																
					P O	2925-592-5531																
						E1199-603-0604																
					P O	5975-556-0846																
						E1199-602-1200																
					P O	5975-556-0846																
						E1199-602-1200																
					P O	2925-592-5528																
						E1199-602-0908																

FIGURE AND INDEX NUMBER	STOCK NUMBER	PART NUMBER	DESCRIPTION	QTY PER ASSY	MODELS USABLE ON TO-1-E TO-1-D TO-1-A								UNIT OF ISSUE	ALLOWANCE FACTORS			
					O	DS	GS	D	O	DS	GS	D		O	DS	GS	D
95-		NO NUMBER	IGNITION SYSTEM-ENGINE SEE FIG. 94 FOR NHA	REF	X	X	X	X	X								
-1		NO NUMBER	•HARNESS INSTL-IGN SYSTEM.. SEE FIG. 98 FOR BKDN	1	X	X	X	X	X								
-2	2925 670 0325	REM39N	•SPARK PLUG.....	12	X	X	X	X	X					P	S	EA	288R
	2925 580 4931	SH20A	•SPARK PLUG-ALTERNATE.....	12	X	X	X	X	X					S	S	EA	*
	2925 287 8794	C27S	•SPARK PLUG-ALTERNATE.....	12	X	X	X	X	X					S	S	EA	*
-3		10-51365-17	•MAGNETO ASSY-ENGINE TYPE.. S6LN-21 SEE FIG. 96 FOR BKDN	2	X	X	X	X	X					PE	R	EA	4.0R
	2925 628 8175	10-51365-43	•MAGNETO ASSY-ENGINE TYPE.. S6LN-21 SEE FIG. 96 FOR BKDN	2	X	X	X	X	X					P	R	EA	4.0R
			ATTACHING PARTS														
-4	5310 489 5657	356-524	•NUT-SHEET SPRING.....	2	X	X	X	X	X					P	S	EA	*
-5	5310 268 6442	AN121503	•NUT-PLAIN.....	2	X	X	X	X	X					P	S	EA	*
-6	5310 478 8657	401506	•WASHER-PLAIN.....	2	X	X	X	X	X					P	S	EA	*
-7	2810 510 1533	535324	---*--- •GASKET-MAGNETO.....	2	X	X	X	X	X					P	S	EA	5.0R

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SECTION IV

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO THE THIRD REQUIREMENT

a. No. Since no allowance factor or code is given, this part cannot be stocked at organizational level.

b. 14. The total number required must be computed separately for each type aircraft. Using the formula:

$$\frac{\text{Number of aircraft} \times \text{allowance factor}}{100}$$

$$\text{O-1E PLL} = \frac{2 \times 288}{100} = 5.76 \text{ or } 6$$

$$\text{OH-13H PLL} = \frac{4 \times 204}{100} = 8.16 \text{ or } 8$$

$$\text{TOTAL} = 6 + 8 \text{ or } 14$$

c. No. This lockwasher is common hardware and will be requisitioned as required. It may be stocked in minimum quantities, but will not be included in the PLL.

d. No. The asterick (\*) indicates that the part will be requisitioned for immediate use when required. It is not authorized for stockage at organizational level.

e. Yes! The term commonly used is cannibalization, and is authorized at organizational level, provided the following criteria as outlined in AR 750-1500-8 are met.

(1) When the aircraft, engine, quick-change assembly, major component, or assembly from which the parts are to be removed is likewise out of commission for parts or is damaged, wrecked, or is undergoing extensive time-consuming maintenance or modification.

(2) When every possible supply action, including lateral supply, has been taken and an unacceptable delay is indicated.

(3) When the failure to authorize an item transfer would adversely affect the mission of the unit.

(4) When the man-hours required are not excessive and the item on which the transferred parts are to be installed can be made completely serviceable.

f. Organizational level cannibalization can be authorized only by the commanding officer of the unit to which aircraft are assigned. The brigade aviation section receives this authority from the brigade commander. The direct support or general support maintenance activity must authorize parts transfers which are beyond the capability of the organizational level maintenance unit.

## 2. SPECIAL SITUATION CONTINUED

a. Since your arrival to Vietnam, aviator replacements to the division have been slow because of the priority for replacements in the airmobile units. In addition, the division artillery aviation section has been understrength for some time. Consequently, you have been transferred to the artillery aviation section where you are assigned temporarily as division artillery aviation officer (a major's slot), and the additional duty of aviation section commander until a newly assigned major arrives. Upon your arrival to the division artillery command post, you find the division artillery staff reviewing the present combat situation involving all units of the division artillery. The artillery operations officer (S-3) gives you a briefing on the disposition of the artillery units in support of the 20th Infantry Division. One 105mm howitzer battalion with one battery 155mm howitzer attached is in direct support of each brigade. The 155/8-inch howitzer battalion minus is in general support of the division. The artillery aviation section is presently employed in general support of the division artillery.

b. You know there are three types of command and control relationships in the employment of Army aviation.

(1) Attachment. Attachment is to bind a unit or a detachment temporarily to a command other than its assigned command. A unit or part of a unit may be detached from its parent command for rations, quarters, supply, etc. However, unless limited by one or more of the foregoing or similar qualifications, attachment implies full responsibility for the unit's supply, administration, training, and operations. An exception is the responsibility related to transfer and promotion of personnel which is retained by the parent unit. Attaching a unit to another gives the gaining unit maximum control, but it also imposes a heavy logistical and administrative burden. In most instances, attachment below brigade level adds a prohibitive burden.

(2) Support. Support is generally divided into two types--direct and general support.

(a) Direct support. Direct support is a mission requiring one unit to support another specific unit and authorizing it to answer directly to the supported unit's requests for assistance. The direct support role provides for a direct mission request channel between units involved, with the supporting unit retaining the prerogative as to how the requested mission will be performed. Logistical support and the method by which the mission is accomplished remains with the parent unit.

(b) General support. General support is that support which is given the supported force as a whole and not to any particular subdivision thereof. Control of the unit remains with the parent unit and direct communications between the supported and supporting units for the purpose of requesting missions is not authorized.

(3) Operational control. Operational control comprises those functions of command involving the composition of subordinate forces, the assignment of tasks, the designation of objectives, and the authoritative direction necessary to accomplish the mission.

It does not include administration, discipline, internal organization, and unit training. Logistical and administrative responsibilities are not imposed on the supported unit. However, if requested, the supported unit may provide support in these areas.

c. A supported commander may not delegate any greater control over a supporting unit than has been given to him by higher headquarters.

d. Before determining how an aviation unit is to be employed, consider the aviation needs of the supported units. For example, the division artillery aviation requirements normally include -

- (1) Command and control.
- (2) Reconnaissance and aerial observation.
- (3) Flare missions.
- (4) Aerial photography.
- (5) Target acquisition.
- (6) Adjustment of artillery fires.

e. In addition, consider the following principles of employment:

(1) Immediate availability. How much of a time loss is acceptable from the time a requirement for a mission is known until the time the mission is flown. Considering the missions in paragraph d above, the aircraft in most cases should be immediately available. In layman's terms, it should be "within running distance of the old man's tent."

(2) Freedom of utilization. Whenever possible, each battalion should be given the prerogative of using its aviation support as it sees fit. These battalions should be given full latitude, placing priorities, and utilizing their support according to their individual desires.

(3) Economy of utilization. Proper coordination and control is necessary for effective employment of aviation elements without duplicating missions.

(4) Flexibility. It is important to place the greatest amount of support where it is needed most. Before parcelling out the aviation section, consider the amount of flexibility that should be maintained and what degree of flexibility would remain after the elements are employed.

### 3. FOURTH REQUIREMENT

a. Questions:

(1) Based upon the three types of command and control relationships and the principles of employment, do you feel that employing the aviation section in general support of division artillery adequately provides for responsive aviation support to the firing battalions? Yes or no.

(2) Would you recommend aircraft be assigned down to the artillery battalions?  Yes or no.

(3) How would you assign the aircraft to support the division headquarters and the artillery battalions?

(a) One OH per battalion and six in general support of the division artillery.

(b) Two OH's per battalion and two general support of division artillery.

(c) Two OH's per 105 howitzer battalion, one to 155/8-inch howitzer battalion, and three general support of division artillery.

(d)  One OH per 105 howitzer battalion, and seven general support of division artillery.

b. Use the map overlay to assist you in answering the above questions.

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SECTION V

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO THE FOURTH REQUIREMENT

a. No. Since the aircraft are employed in general support of the division artillery, the firing battalions are not authorized direct communications with the artillery aviation section, but must request missions through the division artillery operations officer (S-3). As a result, keeping all 10 observation helicopters in general support does not provide for responsive aircraft support.

b. Yes. In considering the missions and the requirements for immediate availability, aviation support should be under the control of the battalions of the division artillery. In determining the degree of control and how much support, consider freedom of utilization, economy of utilization, and the degree of flexibility that should be retained.

c. One OH to each 105 howitzer battalion and seven retained under control of the division artillery headquarters.

DISCUSSION: No aircraft was assigned to the 155/8-inch battalion (1/48 Arty) since it is in general support of the division and three of its batteries (155mm) have been attached to the 105mm howitzer battalions. If the 1/48 Arty requires aviation support, then it will request aircraft from the division headquarters on a mission-type basis. Realize, also, that committing any more aircraft to the battalions will greatly reduce the support capability of the division headquarters since the availability rate runs between 60 and 70 percent. At any one time only six to seven OH's will be flyable. Whenever an aircraft supporting any one battalion is down for maintenance, it will be replaced by another from the division artillery headquarters (aviation section).

2. SPECIAL SITUATION CONTINUED

a. The division artillery operations officer informs you that the artillery aviation section is presently located at the division instrumented airfield and directs you to move the section out of that area as soon as possible. Furthermore, he would like to know whether the three aircraft under the operational control of the 105 howitzer battalions be based with the battalions or at the artillery aviation section heliport.

b. In selecting tactical airfields and heliports, you know that the best method is to select possible locations from map and aerial photographs, establish a priority for each, make an aerial reconnaissance, and finally, complete a ground reconnaissance prior to making the final selection.

3. FIFTH REQUIREMENT

a. Questions:

(1) In whose area will you select the artillery aviation section's heliport and base of operations?

(a) 1/48 (-) Artillery.

(b) 1/47 Artillery.

(c) 1/72 Infantry.

(d) 1/46 Artillery.

(2) Select the actual location of the heliport by coordinates.

N W corner of area

(3) Does the division artillery aviation section have the capability of night operation if only organic lighting equipment is used?

(4) Where should the three OH's, which have been placed under the operational control of the 105 howitzer battalion, be based?

(a) At the artillery aviation section heliport.

(b) At the command post of the 105 howitzer battalion.

(c) Wherever the battalion commander decides.

b. Refer to Discussion Points, Advance Sheet 571-4 and pages 26-37, Common Subjects and Reference Data.

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SECTION VI

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO THE FIFTH REQUIREMENT

a. The most desirable area is in the 1/72 Infantry area near the division artillery CP. The heliport is located within the defensive perimeter of the friendly infantry unit for defense against attack by small patrols or guerrilla action. In addition, all logistical and administrative support required by the aviation section is rendered by the headquarters battery, division artillery.

b. The location of the artillery aviation section heliport is BR 933455. Ample space is available for accommodating 10 observation helicopters. In addition, it is to the rear of the 1/72 Infantry defensive perimeter and will not interfere with any of the combat elements operations. Factors to be considered in the selection of any airfield or heliport are -

- (1) Proximity to the supported unit's command post.
- (2) Defensive aspects.
- (3) Physical features.
- (4) Obstructions.
- (5) Instrument approach factors (when applicable).

c. Yes. The division artillery aviation section has an organic emergency lighting set which can be used for night operation. (Page 38, Common Subjects and Reference Data.)

d. The three OH's should be based at locations decided by each battalion commander. When the helicopter is placed under the operational control of the commander, he has the perogative to base the aircraft wherever it best supports his mission. However, he has no responsibility for maintenance and administration. Therefore, if the helicopters are based at the battalion command posts, the artillery aviation section commander must make provisions for supporting the OH's logically. Distance, in this tactical situation, does not preclude the aircraft from returning to the division artillery heliport for maintenance and refueling. Each battalion commander should be advised that continuous aircraft support can be given him if the aircraft were allowed to return to the base heliport upon completion of the day's mission. Then, if one of the aircraft should be downed for maintenance, another one (from GS) can be used in its place. However, if this setup does not lend for immediate availability to any of the battalions, the aircraft will then be based with the battalions.

2. SITUATION CONTINUED

a. The division artillery operations officer (S-3) calls you into his office. He informs you that the division armored cavalry squadron has been directed by the division commanding general to clear and secure all the MSR's (main supply routes) used by the division support command. The 1/48 Artillery (-) has been placed in direct support of the armored cavalry squadron. Since all the aviators in the section have been committed to other tasks, the S-3 assigns you the mission of supporting the cavalry squadron by adjusting artillery fire for 1/48 (-) Artillery from an aerial OP.

b. You report to the armored cavalry squadron commander. He informs you that the air cavalry troop has been directed to search and clear the MSR's while the ground elements of the squadron clear the routes and establish outposts at strategic points and, therefore, wants you to work with the air cavalry troop commander.

c. To insure a thorough understanding of the operational capabilities of the air cavalry troop, you are reviewing the mission and organization of the unit as you proceed to the air cavalry troop location.

3. SIXTH REQUIREMENT

a. Questions:

(1) Is the air cavalry troop capable of conducting independent action?

*yes*

(2) Where is the air cavalry troop located, and from what landing areas will it normally operate during the conduct of missions?

*91/49 division air field*

(3) What element of the troop will probably be leading during the search operation?

*light fire teams (scouts)*

(4) What element of the troop would be most suitable to accomplish a detail search of an area, such as a wooded area or a village?

*squad of fifty if possible but  
the air scouts if possible  
not possible*

(5) Has the troop the capability of providing organic close-area fire support; if so, which element is most suitable for this mission?

*yes, long fire team.*

b. Refer to pages 72-82, Common Subjects and Reference Data for information on the air cavalry troop.

NOTES

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SECTION VII

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO THE SIXTH REQUIREMENT

a. Yes. The mission of the air cavalry troop is to extend the reconnaissance and security capabilities of the armored cavalry squadron, and engage in offensive, defensive, or delaying actions to seize and dominate lightly defended areas or terrain features. The air cavalry troop has capabilities to include -

- (1) Conducting reconnaissance and security missions over large areas including acquisition of nuclear targets and nuclear damage assessment.
- (2) Conducting chemical and radiological monitoring, survey, and collecting biological samples.
- (3) Conducting screening missions.
- (4) Acting as part of a covering force.
- (5) Performing rear area security.
- (6) Providing security between ground tactical elements.
- (7) Providing armed air escort for airmobile operations.
- (8) Seizing and dominating lightly defended areas or terrain features.

b. The troop is located at coordinate BR 912489. The air cavalry troop is primarily employed in close conjunction with the armored cavalry squadron's ground elements so that the capabilities of ground and air elements complement each other. However, the troop has the capability of performing various independent missions. Since the troop has limited personnel and equipment, it can only establish one primary landing area. This landing area is normally located with the squadron headquarters or trains and is occupied by the troop headquarters, operations section, and service platoon for the purpose of refueling, maintenance, and supply. The remaining elements of the troop operate throughout the division area, depending upon their mission, and locate at existing landing areas in their areas of operation.

c. AEROSCOUT PLATOON. The reconnaissance force of the troop is provided by the aeroscout platoon. It is comprised of a platoon headquarters, which provides the tactical control for the platoon; two aeroscout sections (light), which accomplish the bulk of the scout-type reconnaissance; and an aeroscout section (heavy), which provides the troop with an antitank and point target destruction capability.

d. AERORIFLE PLATOON. The maneuver element of the troop is the aerorifle platoon consisting of a platoon headquarters, the tactical control element which provides the airlift capability for the platoon, and four identical rifle squads. The platoon is normally employed in an airlanded ground role in missions such as limited vertical assaults, securing road blocks, and dismounted security.

e. AEROWEAPONS SECTION. The aeroweapons section provides close-area fire support for the troop and parent squadron. It may be employed as a unit or as a part of a platoon-size team, depending on the nature of the operation.

## 2. SPECIAL SITUATION CONTINUED

a. You are now at the air cavalry troop CP. The operations officer is briefing you on the concept of employment of the troop for the search and clear operation. The combat elements have been organized into balanced teams and each team assigned to work with one of the armored cavalry troops. He explains that there are three types of reconnaissance the troop normally conducts: route, zone, and area. The type to be employed is determined after a consideration of the information desired, where the information is to be sought, the known enemy situation, the terrain, the size of the reconnaissance force, and the time available for obtaining the information.

b. A radio message is received from team leader of team A notifying the operations officer that the aeroscout section (light) has located a Viet Cong fortified position at BR 898549 near Vinh Truong. Team A consists of one rifle squad of the aerorifle platoon, one aeroscout section (light) plus two aircraft from the aeroscout section (heavy) and two aircraft from the aeroweapons section.

c. Another radio message is received. Team leader Charlie states that one of his Hueys had an engine failure and is down in a rice paddy at coordinate BR 958378.

## 3. SEVENTH REQUIREMENT

### a. Questions:

(1) What type of reconnaissance is being employed for this operation?

(a) Area.

(b) Zone.

(c) Route.

(2) Does team A have the capability to neutralize or destroy the Viet Cong fortified position?

~~✓~~ M-22 yrs

(3) Would it be necessary for any of the teams to report to the operations section the fact that their sector is void of enemy?

yes negative reports are valuable

(4) What unit(s) will the operations officer notify to repair or evacuate the disabled helicopter from team C?

1 support maintenance  
direct support company

b. Use Common Subjects and Reference Data, pages 74-78 and 99-108 and your military experience to answer the questions.

NOTES

DEPARTMENT OF TACTICS  
UNITED STATES ARMY AVIATION SCHOOL  
Fort Rucker, Alabama

File No. 571-4

SECTION VIII

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO THE SEVENTH REQUIREMENT

a. The troop will conduct route reconnaissance. The following are definitions of the three types of reconnaissance:

(1) Route Reconnaissance - is a directed effort to obtain information of the route to include obstacles and enemy along the route. The terrain adjacent to the route, which if occupied by the enemy would affect movement along the route, is also reconnoitered (normally 2,000 meters to either side of the route).

(2) Zone Reconnaissance - is a directed effort to obtain detail information of all routes, terrain, and enemy forces within a zone defined by boundaries. Zone reconnaissance is more thorough and more time-consuming than other reconnaissance missions.

(3) Area Reconnaissance - is a directed effort to obtain detail information of all routes, terrain, and enemy forces within a specific and clearly defined area (localities such as towns, woods, crossing sites, etc.).

b. Yes. Team A has two aircraft from the aeroscout section (heavy) which are armed with the M-22 weapons subsystem. This is a wire-guided missile which is used for neutralizing or destroying armored vehicles or pinpoint targets.

c. Yes. It is imperative that negative information be reported. All information, including negative information, is reported to higher headquarters, and the fact that the route is void of aggressor forces is necessary information. The information may be processed by the troop, utilizing the AN/VRC-47. The troop commander can communicate directly with squadron headquarters and report any required information. Should he be authorized, he may also report to the division G-2 over the division intelligence net using the AN/GRC-19 radio.

d. The operations officer will notify the service platoon commander, who has the responsibility for organizational maintenance and supply. Because the majority of maintenance performed by the service platoon requires some form of direct support maintenance, the service platoon commander will contact the transportation aircraft maintenance company for assistance in recovering the downed helicopter.

DISCUSSION: The organizational aircraft maintenance will normally be performed at sites selected by the flying elements of the troop. All organizational maintenance will be performed wherever the elements might be located. However, the majority of the organizational maintenance will be performed by the maintenance section of the troop service platoon which is normally located in the squadron trains area. The direct support maintenance will normally be performed in the vicinity of the division instrumented airfield

by the TAM company's main support platoon. However, the forward support platoon of the TAM company has the capability of providing work parties for on-site repair of downed aircraft. Evacuation of downed aircraft is held to a minimum. Flyable aircraft will be flown to the main support platoon in the vicinity of the instrumented airfield, where direct support maintenance is performed. The main support platoon also performs direct support maintenance on all divisional aircraft. The air cavalry troop is capable of performing organizational aircraft maintenance, but it is not authorized to perform direct support maintenance. The direct support aircraft maintenance will be performed by the transportation aircraft maintenance company (TAM) of the division maintenance battalion. The troop performs its maintenance according to schedules. Close coordination is necessary between the air cavalry troop and the TAM company to facilitate rapid handling of maintenance problems. To eliminate any slow-up maintenance transaction, members of the troop maintenance section should be authorized direct contact with elements of the TAM company.

## 2. SPECIAL SITUATION CONTINUED

a. You accompany the troop commander to the scene of the disabled helicopter. Elements of the troop maintenance section and one rotary wing section of the forward support platoon, TAM company are busily engaged in changing the engine.

b. While the troop commander is checking on the present situation, you decide to make conversation with the forward support platoon commander and the aircraft maintenance technician (WO), who had just flown in a replacement engine for the UH-1B. You ask him, "Hey, Lt Botts, how's everything with the TAM company?" Lt Botts states that when he left the CP the "ol' man" was highly perturbed. The maintenance battalion and support commanders want the two UH-1's from the TAM company for their own use. Also, the maintenance battalion commander insist that the rotary wing sections of the forward support platoon be attached to the supported units, i.e., brigades.

## 3. EIGHTH REQUIREMENT

a. Questions:

(1) In your opinion, are the maintenance battalion and support command commanders authorized to use the TAM company's helicopters?

*yes.*

(2) For what are the two UH-1D helicopters assigned the TAM company used?

*gather parts & assist down  
air craft.*

(3) From where in the division should these two commanders obtain aircraft support?

- (a) Airmobile Company, Aviation Battalion.
- (b) General Support Company, Aviation Battalion.
- (c) Brigade Aviation Section.
- (d) Artillery Aviation Section.

(4) Who will probably fly the aircraft out of the rice paddy after the engine change is completed?

- (a) Aircraft maintenance technician.
- (b) Troop commander.
- (c) Forward support platoon commander.
- (d) Pilot of downed aircraft.

b. Use Common Subjects and Reference Data, pages 99-108 and information learned in your maintenance classes.

## NOTES

- (a) *Grassmann-Grassmann-Yutsman* generation  
    *Grassmann-Grassmann-Grassmann-Yutsman* generation  
    *Grassmann-Yutsman-Yutsman* generation  
    *Grassmann-Yutsman-Yutsman-Yutsman* generation
- (b) *Grassmann-Yutsman-Yutsman*  
    *Grassmann-Yutsman-Yutsman-Yutsman*  
    *Grassmann-Yutsman-Yutsman-Yutsman-Yutsman*  
    *Grassmann-Yutsman-Yutsman-Yutsman-Yutsman*

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SECTION IX

EMPLOYMENT OF AVIATION ORGANIC TO COMBAT AND SUPPORT ELEMENTS

1. SOLUTION TO THE EIGHTH REQUIREMENT

a. Yes. The TAM company is organic to the division maintenance battalion, which is a part of the support command. Therefore, under the provision of their command authority these commanders can establish policies for the subordinate units of their command. However, any use of men and equipment by any commander for purposes other than what they were intended would seriously hamper the operational capability of subordinate units.

b. The two utility helicopters, UH-1D's, are authorized for transport of contact maintenance teams and emergency delivery of parts to supported units. They also provide the unit with a limited capability for air evacuation of nonflyable aircraft.

c. The general support company of the division aviation battalion has the mission of providing aviation support for the division headquarters, the support command, and other units without organic aircraft. Ten OH's from the tactical support section and six utility helicopters from the utility section are available for this purpose. Mission requests from the support command are made to the AAE (Army Aviation Element) at the DTOC (Division Tactical Operations Center) for aviation support. The AAE will, within established policies, forward the request to the division aviation battalion S-3 for execution.

d. The test pilot, who is one of the aircraft maintenance technicians (WO) of the test and inspection section TAM company, will probably fly the aircraft back to the air cavalry troop heliport. Since the engine change is the responsibility of the direct support unit, the aircraft cannot be flown by the troop until it is released by the TAM company. However, test flights can be performed by an aviator qualified in the aircraft, and often, when burdened with a heavy maintenance load, the direct support unit will call on the supported units to provide pilots to accomplish test flights.

2. SUMMARY: You have completed requirements dealing with problems peculiar to aviation organic to combat and support elements of the ROAD Division. Although the basic concepts for employing these various elements are basically the same, there are principles of employment used that are different and characteristic to individual type units. You have learned that there is more to aviation than "throttle and stick." You now have an inside view of the problems that you may encounter during your next assignment.