

UNCLASSIFIED

AD NUMBER

AD883468

LIMITATION CHANGES

TO:

Approved for public release; distribution is unlimited.

FROM:

Distribution authorized to U.S. Gov't. agencies and their contractors;
Administrative/Operational Use; 14 NOV 1970.
Other requests shall be referred to Office of the Adjutant General (Army), Washington, DC 20310.

AUTHORITY

AGO ltr 29 Apr 1980

THIS PAGE IS UNCLASSIFIED

THIS REPORT HAS BEEN DELIMITED
AND CLEARED FOR PUBLIC RELEASE
UNDER DOD DIRECTIVE 5200.20 AND
NO RESTRICTIONS ARE IMPOSED UPON
ITS USE AND DISCLOSURE.

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION UNLIMITED.



DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

12
B

AGDA-A (M) (20 Apr 71) FOR OT UT 704220

7 May 1971

SUBJECT: Operational Report - Lessons Learned, Headquarters, 520th
Transportation Battalion, Period Ending 31 October 1970

SEE DISTRIBUTION

1. The attached report is forwarded for review and evaluation in accordance with para 4b, AR 525-15.
2. The information contained in this report is provided to insure that lessons learned during current operations are used to the benefit of future operations and may be adapted for use in developing training material.
3. Information of actions initiated as a result of your evaluation should be forwarded to the Assistant Chief of Staff for Force Development, ATTN: FOR OT UT within 90 days of receipt of this letter.

BY ORDER OF THE SECRETARY OF THE ARMY:

VERNE L. BOWERS
Major General, USA
The Adjutant General

1 Incl
as

DISTRIBUTION:

Commanding Generals

US Continental Army Command
US Army Combat Developments Command
US Army Materiel Command

Commandants

US Army War College
US Army Command and General Staff College
US Army Armor School
US Army Aviation School
US Army Engineer School
US Army Field Artillery School
US Army Infantry School
US Army Missile and Munitions School

UNCLASSIFIED REPORT

DISTRIBUTION LIMITED TO U.S. GOV'T AGENCIES ONLY;
TEST AND EVALUATION 9 APR 1971. OTHER REQUEST
FOR THIS DOCUMENT MUST BE REFERRED TO THE ASSIS-
TANT CHIEF OF STAFF FOR FORCE DEVELOPMENT (ARMY)
ATTN: FOR OT UT, WASHINGTON, D. C. 20310

D D C
RECEIVED
MAY 13 1971
C VB

Protective marking cancelled when
separated from inclosure.

FOR OFFICIAL USE ONLY

52

AD No. 883468
DDC FILE COPY

DEPARTMENT OF THE ARMY
HEADQUARTERS, 520TH TRANSPORTATION BATTALION (AM&S) (GS)
APO 96289

AVGFP-0

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970
RCS CSFOR-65 (R2)

1. Operations: Significant Activities

a. During this quarter the battalion intensified the supply and maintenance visits. These visits serve two purposes: one - personal contact with supported customers and the opportunity to observe and assist the customer at their base of operations, two - by assisting the units with problems at their locations the DS units and the GS units of the battalion have a much easier time in their support of the customer.

b. The 165th Transportation Company (ADS) was relocated from Bien Hoa to Phu Loi. This move was started on 12 September 1970 and was completed on 10 October 1970. To facilitate the move maintenance support for the customer units was assumed by other battalion units on 14 September 1970. Supply support was provided by the 605th DSSA at Phu Loi. Customer supply support by the 165th DSSA was reinitiated on 21 October 1970 after all stock was inventoried and warehoused at the new location. Relocation of the 165th Transportation Company (ADS) and the realignment of battalion supported units has necessitated a change in the customer support structure of the battalion, (see inclosure 1).

c. In addition to normal customer support, the battalion was given the mission to accept selected UH-1H's for transfer to the VNAF. While these aircraft accepted were found to be in a flyable condition, numerous maintenance discrepancies were detected on all aircraft. Safety of flight discrepancies were corrected and the initial thirty-one (31) aircraft were transferred by 30 September 1970.

d. The battalion personnel section in-processed 23 officers and 271 enlisted personnel and out-processed 28 officers and 269 enlisted personnel. Lack of skill and experience in the maintenance and supply fields continues to have an effect on the battalion in accomplishing its overall mission. The critical shortages are being felt particularly in the following MOS's: 76P2G3, 67W20, 67N30, 67V20, 67V30, 67U20, 67U30, 67Z40. The problem in the supply field relate directly to

FOR OT UT
704220
Inclosure

FOR OFFICIAL USE ONLY

AVGFP-O

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

experienced NCR 500 operators and maintenance personnel. The machines presently used in the battalion have been operating in the adverse climate of RVN for over 3 years and continually experience maintenance difficulties which are unusual and require highly skilled maintenance and operating personnel to keep them running. The lack of experienced technical inspectors and mechanics will be addressed in para 2a(1) below. The shortage of maintenance supervisors directly affects the accomplishment of this battalions supply and maintenance mission, particularly in view of the lack of experience of the maintenance personnel. Without an adequate number of supervisors, many errors in maintenance can go undetected and the unit OJT program which is used to up-grade the skills of all maintenance personnel suffers appreciably.

e. The battalion presently supports a total of 1004 aircraft. The decrease of 111 aircraft supported is a result of units being de-activated and other units transferring their aircraft to VNAF. A total of 708 aircraft were repaired and returned to the user; 584 of these were repaired by the battalion direct support companies and 124 by the general support company. The increase in the number of aircraft repaired by the general support company is due to an increase in back up direct support maintenance during the move of the 165th Transportation Company (ADS) to Phu Loi. The present maintenance manhour back log is 20,805 hours. The percentage of aircraft in shop over 30 days has continued to decrease from 30.5% last quarter to 10% at the end of this quarter. In addition, aircraft repaired and returned to the user in less than 10 days has increased to 53% from 49.5% in the last quarter. There have been an average of 7.9 aircraft produced per day.

f. A total of 2291 non-programmed aircraft components were received for repair. Of these 2157 were repaired and returned to the user or the supply system. The battalion is once again participating in the Theater Aircraft Repairables Program (TARP). The 539th Transportation Company (AGS), in co-ordination with the FAMF and other general support companies within 34th General Support Group, will repair components in support of the aviation supply system. Although the battalion TARP program is not scheduled to start until 1 January 1971 the 539th General Support Company (AGS) has received and is already repairing UH-1 short shafts and tail rotor drive shaft hanger bearings and has completed 162 of these items.

g. The Army Aviation Refresher Training School (AARTS) has expanded its' operations since the last quarter. After completion of the move from Vung Tau to Phu Loi on 1 May 1970, initially only 4 courses were offered. At the present time 8 courses of instruction are available. These include courses on UH-1, CH-47, T53-L13, Armament UH-1 & AH-1G (officers), Armament UH-1 & AH-1G (enlisted), Aviation Supply (PLL), Technical Inspector and T55-L7. In addition, OH-6A and AH-1G helicopter courses are projected to start in the near future. In order to accomodate these courses, the main classroom building was renovated, to include complete painting, inside and out. Two additional buildings are being readied at the present time for additional courses as scheduled by Headquarters, USARV. During this quarter, AARTS graduated 492 enlisted students and 42 officer students. Students were from all major commands in RVN and from the armed forces of Viet Nam, Thailand, Korea and Australia. The school continues to be limited due to a lack of qualified instructors. A few qualified instructors were obtained by Commandant of AARTS corresponding with the Directorate of Instruction at Fort

2
FOR OFFICIAL USE ONLY

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

Eustis, Virginia and the Department of Maintenance at Fort Rucker, Alabama. AARTS requested copies of orders for any of their instructors being assigned to RVN. Upon receipt of these orders USARV was notified and selected individuals were assigned to the AARTS upon their arrival in USARV. It is recommended that the Department of the Army, office of Personnel Operations begin a program with USARV to identify qualified instructors inbound to the theater. Assignment procedures of this nature will insure AARTS receives personnel necessary to operate this vital school. The TDA for AARTS was approved by USARV during the last quarter and AARTS is authorized 2 officers and 33 enlisted personnel. AARTS will introduce training on the XM-35 armament system in both the officer and enlisted armament courses in the near future. The 6 part engine conservation guide has been incorporated into the engine and technical inspector courses. The guide consists of the following: 1. DER (daily engine recording), 2. TEAC (Turbine engine analysis check), 3. Jet Cal (checking EGT system & N1 accuracy), 4. Go-No-Go chart, 5. Engine vibration check, 6. ASOAP (Army Spectrometric Oil Analysis Program).

h. The Aviation Electronics Support Company, Central (Provisional) has moved its platoons to a central location in Phu Loi. During the quarter 13,340 avionic work orders were processed. OJT for 4 VNAF enlisted personnel was conducted on radio repair for a period of two months. This training was primarily on the AN/ARC-51, AN/ARC-54, and the AN/ARC-59.

i. The three direct support supply activities (DSSA's) within the battalion received a total of 52,558 requests for repair parts during the quarter. 46,398 of the requests matched the authorized stockage list (ASL) for an overall 88% demand accommodation. ASL issues totalled 34,366 which produced 76% demand satisfaction.

j. The battalion consolidated aircraft recovery section (Pipesmoke) accomplished 147 maintenance evacuations and 71 field extractions during the current reporting period. These figures include all aircraft rigged recovered and/or evacuated by Pipesmoke. The estimated dollar savings to the government resulting from aircraft recovered from the field during the period is over 17 million dollars.

k. The battalion daily courier flights transported 3,907 passengers and 91 tons of cargo.

l. The armament maintenance shops completed 1362 maintenance work orders for repair & return to the user or theater stock. In addition, 14 AH-1Gs were modified and had XM-35 (20MM) System installed.

m. The maintenance instruction team composed of battalion and USARV personnel and equipment completed their tour of United States Aviation installations in RVN. During the tour the team gave practical instructions and formal classroom instruction on the following subjects:

- a. Jet - Cal Analyzer
- b. Vibration Meter

FOR OFFICIAL USE ONLY

AVGFP-0

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (CS) Period Ending 31 October 1970, RCS CSFOR-65.(R2)

- c. Oil Analysis
- d. Correct POL handling
- e. Daily Engine Recording (DER)
- f. Go-No-Go Placard
- g. Turbine Engine Analysis Check (TEAC)

In a high percentage of the aviation units visited there were definite indications of unauthorized "tweaking" (adjusting the military trimmer of the fuel control) of engines which allowed the engines to be operated at excessive torques and high EGT. Unauthorized adjustment of this nature are probable contributions to creating the high rate of engine failures in RVN.

n. The battalion's units participated in 350 hours of mandatory refresher training which included range firing and drug abuse classes. The 14 hour block of instruction for newly arrived personnel has been continued during this quarter. Requirements as prescribed by USARV Regulation 350-1 are included in the new arrivals block of instruction. Six aviators were trained and/or transitioned through formal training at Vung Tau. One in the OH-58A, two in the AH-1G and one in the OH-6A. Two pilots completed the UH-1 instructor pilot course and are now unit instructor pilots within the battalion.

o. The battalion provided refreshments for the opening day celebration on 10 September 1970 at the An My school. Representatives from all of the battalion units attended and the school year started on a happy note.

p. Battalion Organization: During this reporting period, the battalion consisted of a Headquarters and Headquarters Company, the 20th Transportation Company (ADS), the 165th Transportation Company (ADS), the 605th Transportation Company (ADS), the 539th Transportation Company (AGS), the Aviation Electronics Company, Central (Provisional), and the Army Aviation Refresher Training School (AARTS). The organizational structure of the reporting organizations is contained in inclosure 3 through 7.

2. Lessons Learned: Commanders Observation, Evaluation and Recommendations

a. Personnel:

(1) Shortages in experienced personnel

(a). Observation: Personnel problems continue to plague the units maintenance operation. Shortages of experienced and qualified technical inspector and senior aircraft mechanics in 67 and 68 series MOS is most critical. Most newly assigned personnel with 67, 68 series MOS lack sufficient training and experience to function effectively for the first six months. This necessitates an

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

extended OJT program plus constant supervision. Since there is a lack of qualified technical inspectors and senior aircraft mechanics, such detailed supervision is not always available.

(b) Evaluation: In the technical inspector area, MOS 67N30, 67V30, and 67W30 many companies have less than 50% of authorized strength. In addition to this serious shortage, the caliber of the incoming technical inspectors is suspect. Specific instances have occurred of maintenance being performed incorrectly or totally unaccomplished and being cleared by technical inspectors. These type errors cause delays in productivity as well as a danger to personnel who operate aircraft. This battalion has received graduates of the newly instituted technical inspector course at the USATSCH, Fort Eustis, Virginia. While these individuals are well motivated, they do not have the experience or sufficient knowledge of the aircraft, forms and records; and Army Aviation maintenance concepts to insure quality maintenance. Due to the extreme shortage of technical inspectors these individuals are required to inspect various types of aircraft which are maintained by this battalion, though they may be marginally qualified or trained on model aircraft being inspected. The lack of adequately trained 67, 68 series repairmen also hampers the maintenance support mission of this battalion. The majority of these individuals, like the technical inspectors, are well motivated but lack sufficient knowledge to perform proper, unsupervised maintenance. Many of these individuals are not familiar with the proper techniques of extracting or applying data gained from the technical publications or in the basic Army Aviation maintenance concepts.

(c) Recommendation: That service schools responsible for the training of aviation maintenance personnel reevaluate their training programs. This reevaluation should be oriented toward insuring that (1) only personnel possessing high aptitude potential are selected for training; (2) sufficient hands-on experience is afforded to trainees to insure that they have a firm grasp of all basic maintenance principles, troubleshooting procedures and maintenance procedures; (3) only those personnel who actually demonstrate the true ability to perform proper maintenance and a thorough knowledge of maintenance are awarded the MOS. Current policies and procedures that allow virtually all personnel entering a course of instruction to graduate with the MOS must be discontinued if quality maintenance is to be expected to be performed on Army aircraft.

b. Intelligence: None

c. Operations:

(1) Collective freeze on the AH-1G

(a) Observation: When bleeding the accumulator after shut down of the AH-1G the collective will freeze in position on the first stroke.

(b) Evaluation: Investigation shows that when this occurs, the feathering bearings are bad.

(c) Recommendation: The pitch change links for the main rotor system

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

should be removed and the main rotor grips be rotated to check for bad bearings on each periodic inspection. Caution must be used when performing this check. Do not rotate the grip more than 10 degrees or the T-T straps will be damaged. If the grip moves freely the bearings are all right. It has been found in some instances that the grip would not move at all and when the pilot tried to pull the collective up the control tubes would actually bend rather than the grips rotating.

(2) Fuel boost pump inoperative on the OH-58A

(a) Observation: The fuel boost pump on the OH-58A, like similar items on other aircraft, will occasionally fail. Inability to achieve an engine start is the main indicator of the problem.

(b) Evaluation: There are several misleading circumstances involved when this occurs. First, normally the pump will still continue to run and sound like a good pump. Secondly, the pump circuit breaker often doesn't pop. The fuel boost warning light however should activate.

(c) Recommendation: The following check should be made to determine if the fuel boost pump has actually failed. Loosen the B-nut fitting where the fuel line is attached to the engine fuel pump outlet and turn the battery switch on, making sure that the fuel boost circuit breaker is still in. If the pump is bad there will be no fuel coming out of the line. In the event that a fuel boost pump is replaced, the above check should be made to insure that the new pump is operating and priming the engine fuel pump.

(3) Shortage of radio crystals

(a) Observation: Crystals are difficult to acquire for aviation radios, and frequently difficult to replace. This is particularly true of the AN/ARC-51.

(b) Evaluation: The life of crystals which have ceased to function can often be extended through the proper application of heat.

(c) Recommendation: In cases where critical shortages of crystals exist the following interim measure is recommended to keep the radio operating: Heat the crystal with a small soldering iron until the crystal begins to function again. In order to observe that the crystal is again functioning the output of the crystal's associated circuitry should be monitored by an oscilloscope or sensitive RF voltmeter. The soldering iron should be held to the case of the crystal, with the power applied to the circuit for normal operation, until the oscillating begins. This procedure sometimes does not succeed; frequently it does. The application of excess heat to a quartz crystal may fracture the crystal and alter the frequency outside of tolerance. A final check on the circuit should be performed with a frequency counter to insure that this has not happened.

(4) New Tone Squelch

(a) Observation: Misunderstanding of tone squelch's intended use.

(b) Evaluation: Use of the new (tone) squelch on FM radios in RVN is

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

causing some problems as a result of confusion or a misunderstanding of its intended use. This problem is most prevalent when Command and Control aircraft attempt to communicate with ground stations. The general consensus of opinion appears to be that when two stations switch to tone squelch selective calling will be possible, and no other station will be able to hear you unless it is using tone squelch too. This is incorrect as far as operation in RVN is concerned. The purpose of tone squelch is to provide a station with the option of receiving all communications on the selected frequency or receiving only transmissions which are accompanied by a 150HZ subcarrier. The AN/ARC-54, among several other radios presently used in RVN, transmits the 150HZ subcarrier regardless of whether carrier or tone squelch is selected. When tone squelch is selected a serious problem arises in that the operator has no way of determining if his selected frequency is already in use by radios not transmitting a 150HZ tone before he begins to transmit. This results in many confusing, unreadable "double" transmissions. This problem led to the decision to lock out the tone squelch position on all control units before delivery. Removing the disabling device and permitting tone squelch operation will in no way relieve heavy traffic and channel/spectrum crowding problems. Satisfactory tone squelch operation may be obtained only when a separate frequency is dedicated to tone squelch operation. The tone squelch does not provide true selective calling in the sense that a transmission may be directed to one selected receiver and not be heard by others. The AN/ARC-54 radio, and many other FM radios in RVN, always transmit the 150HZ tone so no selection is necessary at the transmitting station. Additionally, tone squelch operation does not produce greater range or increase sensitivity.

(c) Recommendation: Block out all tone squelch positions on all control heads before delivery.

(5) Damage to fuel filler neck panel on the UH-1

(a) Observation: During refueling, both hot and cold, damage has been done to the fuel filler neck panel (P/N 205-030-191-7, FSN 1560-449-6562) and caused contamination to the honeycomb within the panel due to water and fuel entering through the damaged areas.

(b) Evaluation: The primary cause of the damage is the trigger guard on the fuel nozzle hitting the honeycomb material around the fuel filler neck when the nozzle is inserted into the neck all the way. Also, it is caused by accidental bumping and scraping with the nozzle.

(c) Recommendation: An aluminum plate may be installed under the filler opening. Fabricate an aluminum plate large enough to pick up existing rivets on forward and aft and lower panels around the filler neck opening, as depicted in inclosure 2, also shape the plate to the contour of the fuel filler opening to pick up the lower three bolts of the filler opening. Apply proseal 890, between mating surface and seal with bead of proseal around edges.

(6) Possible arming of the AH-1G weapon systems while in the safe position.

(a) Observation: Diode CR3, in the arm/safe circuit may fail (short out) thus arming the weapon system when the safe position on the switch is selected

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

When this occurs the master arm indicator (amber light) will be illuminated.

(b) Evaluation: To prevent inadvertent firing of the weapon system until the diode can be replaced extreme caution must be used. The system will not fire if the off position is selected or the armament circuit breaker is pulled.

(c) Recommendation: To correct the problem replace Diode CR3 on TB24 terminals 1 and 2 with a 30-037-5 BHC diode assembly. At the present time no federal stock number is available yet it can be ordered through the supply system.

(7) XM28, AH-1G weapons unclear indicator illuminated

(a) Observation: In many instances the XM28 system was thought to be defective because after firing the unclear indicator would be illuminated. A misunderstanding of the system has caused personnel to report the system as being inoperative and dangerous.

(b) Evaluation: The weapons unclear indicator is illuminated after each firing cycle if the clear/unclear selector switch is left in the unclear position. This indicator provides a warning that rounds are still chambered in the M134 (mini gun). The weapon unclear indicator will not be illuminated if the clear/unclear switch is in the clear position. This indicates that there should not be any rounds in the chamber or the weapon and it should be safe.

(c) Recommendation: When the armed indicator is illuminated it will not go out and the system will not be cleared until the clear position is selected and the weapon is fired. As a safety measure it is recommended that the system only be fired in the clear position.

(8) Jarring of the AH-1G airframe

(a) Observation: After several firings of the XM-35 (20MM) some of the instrument panels and several points on the airframe have become loose.

(b) Evaluation: Investigations have shown that the airframe indeed does absorb terrific shock during the firing of the XM-35 armament system.

(c) Recommendation: To prevent and help alleviate the amount of shock to the airframe, the XM-35 system was designed with a pair of recoil adapters. These adapters are time change items and must be changed after firing 45,000 rounds. In most instances where the airframe has suffered from shock it was discovered that the adapters were not being changed as required by TM9-1005-299-12. In order for the recoil adapters to do their designed job they must be changed as required by the above technical manual.

(9) Accidental firing of the 2.75 rocket system

(a) Observation: Rockets have been fired accidentally injuring many personnel, sometimes fatally.

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

(b) Evaluation: Investigations have shown that in most cases of the rockets being fired accidentally, improper or no testing of the intervalometer had been conducted prior to installation into the aircraft system.

(c) Recommendation: Prior to the intervalometer being installed in the armament system it must be tested with the bench tester as prescribed by the technical manuals covering this system. This requirement must be adhered to in order to insure that the rockets will not fire inadvertently.

(10) Non-compliance with AR 750-23, Validating Removal of Installed Aircraft Engines

(a) Observation: Many units are removing aircraft engines without compliance with the provisions of AR 750-23.

(b) Evaluation: When questioned about the above regulation the majority of the maintenance officers did not know of its existence or said that if they were to get validation from general support for each engine that was removed, aircraft commitments could not be met.

(c) Recommendation: It is recommended that command emphasis be placed on compliance with AR 750-23. Many engines are removed that the general support engine shop could possibly make minor repairs or adjustments on and the cost of a new or overhauled engine would be saved. The regulations and the tools are available to all personnel to reduce the high cost of maintaining Army Aviation if the individuals concerned will use them.

(11) Allison Lube System Priming versus damaged bearings

(a) Observation: Bearings are being damaged on the Allison T-63 engine when the oil filter has been removed and replaced or when an oil line has been disconnected.

(b) Evaluation: Although the oil pump on the Allison T-63 is self priming it is a long way from the oil tanks to the pump and if the filter has been removed and replaced, or an oil line has been disconnected; it will take a while for the system to become primed again. When the engine is started without priming the oil system after performing either of the above maintenance operations, the bearings in the engine are being damaged due to lack of lubrication.

(c) Recommendations: When the oil filter has been removed or an oil line has been disconnected recommend the following steps be taken; remove the oil filter cover and fill the filter bowl with clean oil, replace the oil filter cover housing, motor the engine with the starter until an indication of oil pressure is obtained. PSI on the oil pressure gauge will assure that prime has been attained and bearings will be saved.

(12) Parts failure due to lack of lubrication

(a) Observation: Parts are constantly received at support maintenance activities that have failed due to lack of lubrication.

AVGFP-O

14 November 1970

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970, RCS CSFOR-65 (R2)

(b) Evaluation: Lubrication requirements of the PMD, PMI, PMP are not being observed and consequently valuable parts are being damaged because of lack of proper lubrication.

(c) Recommendation: The cause of the above problem can be traced to one thing, lack of supervision. This includes the unit commander, flight platoon NCO and the maintenance team leader. Everyone concerned with Army Aviation has made the statement "that the experience level of the mechanics is too low to get the job done", but time and time again the untrained mechanic is given the task of lubricating a certain component or system on an aircraft. Although he may think he is doing the job correctly he may not know the correct procedure for lubricating that particular item. A few minutes of an experienced maintenance technicians time with the "untrained" one may save a valuable piece of equipment and also lives. It is recommended that command emphasis be placed on getting the experience on the maintenance line and out from behind the desk, and give these young inexperienced mechanics the benefit of their experience. At the same time the Army will be saving many dollars on repair or replacement costs.

(13) Shorting of recoil switches on the 40MM armament subsystem and subsequent loss of relay A1ABK4 and sometimes A6, A7OR3.

(a) Observation: The recoil switches on the 40MM on the AH-1G have been shorting out causing the relays mentioned above to be blown.

(b) Evaluation: The recoil switches for the 40MM installed in the center casting have their terminals exposed. During some flight maneuvers the airstream has caused links from the 7.62MM to slip into the recoil switch cavity, shorting out the recoil switches which in turn blows the relays.

(c) Recommendation: The recoil switches' terminals should be covered with white silicone rubber cement, Hysol, or even taping. This will prevent the links from shorting out the recoil switches. This will wear off after a while so it should be checked anytime maintenance is performed in this area or every intermediate, whichever comes first.

d. Organization: NONE

e. Training: NONE

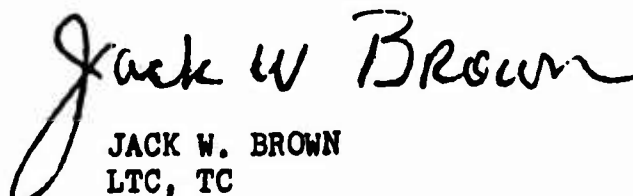
f. Logistics: NONE

g. Communications: NONE

h. Material: NONE

i. Other: NONE

7 Incls
as


JACK W. BROWN
LTC, TC
Commanding
10

FOR OFFICIAL USE ONLY

AVGF-B (14 Nov 70) 1st Ind

SUBJECT: Operational Report-Lessons Learned 520th Transportation Battalion
(AM&S)(GS) Period Ending 31 October 1970 RCS CSFOR-6(R2)

DA, HEADQUARTERS, 34TH GENERAL SUPPORT GROUP (AM&S), APO 96309 17 DEC 1970

TO: Commanding General, United States Army Vietnam, ATTN: AVHDO-DO,
APO 96375

This headquarters has reviewed the ORLL 520th Transportation Battalion (AM&S) and concurs with the exception of the following:


a. Ref para 2c(7) - The clear/unclear selector was built into the XM-28 system to preclude throwing non-expended 7.62mm ammo overboard when the mini gun clears itself after each burst. Use of the unclear mode will save from 50 to 100 rds. of a 4000 rd. load. Use of the unclear mode does present an additional safety hazard if the pilots forget to fire the last burst in the clear mode. The M-134 gun is also subject to more frequent jams when the unclear mode is used.

b. Ref para 2c(8) - Concurs that units should follow procedures in TM9-1005-299-12. The real problem is that there is no requirement in any regulations or TM's for the unit to maintain an accurate rounds fired count on the XM-35 system. Recommend that TM's and regulations be changed to require units to maintain a rounds count record on some specific form, either DA Form 2408-4 that is used to maintain round fired on artillery tubes, or have a special form designed for aircraft armament weapons.

c. Ref para 2c(10) - Non-compliance with AR 750-23, Validating Removal of Installed Aircraft Engines. One 28 Aug 70 the 34th Gen Spt Gp sent a message to all major USARV Commands calling attention to the requirement to validate engine removals.

d. Ref para 2c(11) - Allison Lube System Priming versus damaged bearings. The Maintenance Division, 34th Gen Spt Gp will investigate the reported problem and recommended solution and dispatch necessary information to aviation units as required.

FOR THE COMMANDER:


M. F. McALLISTER
MAJ, AGC
Adjutant

FOR OFFICIAL USE ONLY

AVHDO-DO (14 Nov 70) 2nd Ind

SUBJECT: Operational Report - Lessons Learned 520th Transportation Battalion
(AM&S) (GS) Period Ending 31 October 1970
RCS CSFOR-65 (R2)

Headquarters, United States Army Vietnam, APO San Francisco 96375 28 JAN 1971

TO: Commander in Chief, United States Army Pacific, ATTN: GPOP-DT,
APO 96558

1. This Headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1970 from Headquarters, 520th Transportation Battalion (AM&S) and comments of indorsing headquarters.

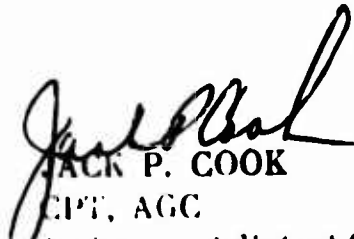
2. Comments follow:

a. Reference item concerning "Operations - Significant Activities," Section I, page 2, paragraph 1g: concur. A program to identify qualified instructors has been initiated by USARV AG Senior Enlisted Control Branch. Individuals with desired MOS's are interviewed by the 90th Replacement Battalion personnel during their initial in-processing to determine if they have past instructor experience. Qualified individuals are then assigned to 34th GS Gp for further assignment to AARTS. Unit has been so advised.

b. Reference item concerning "Shortages in Experienced Personnel," page 4, paragraph 2a(1). Shortages of specialized aviation technical inspectors and aviation maintenance personnel continues to be a matter of concern at all echelons of command. No action by USARPAC is recommended. Action by DA is recommended to evaluate the training of aviation technical inspectors and aircraft mechanics to insure only qualified personnel are awarded the MOSC. Unit has been so advised.

c. Reference item concerning "Non-compliance with AR 750-23, Validating Removal of Installed Aircraft Engines," page 9, paragraph 2c(10) and 1st Indorsement, paragraph 2c. Headquarters 34th GS Group published guidance for early removal of aircraft engines. However, ten conditions were not listed which are exempt from the requirements of AR 750-23. To correct this deficiency 34th GS Group will publish a "Newsletter" and give complete information on early removal of aircraft engines. No action by USARPAC or DA is recommended. Unit has been so advised.

FOR THE COMMANDER:


JACK P. COOK
CPT, AGC
Assistant Adjutant General

Cy furn:
34th GS Gp
520th Trans Bn

GPOP-DT (14 Nov 70) 3d Ind
SUBJECT: Operational Report of HQ, 520th Transportation
Battalion (AM&S)(GS), for Period Ending 31 October 1970,
RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 19 FEB 1971

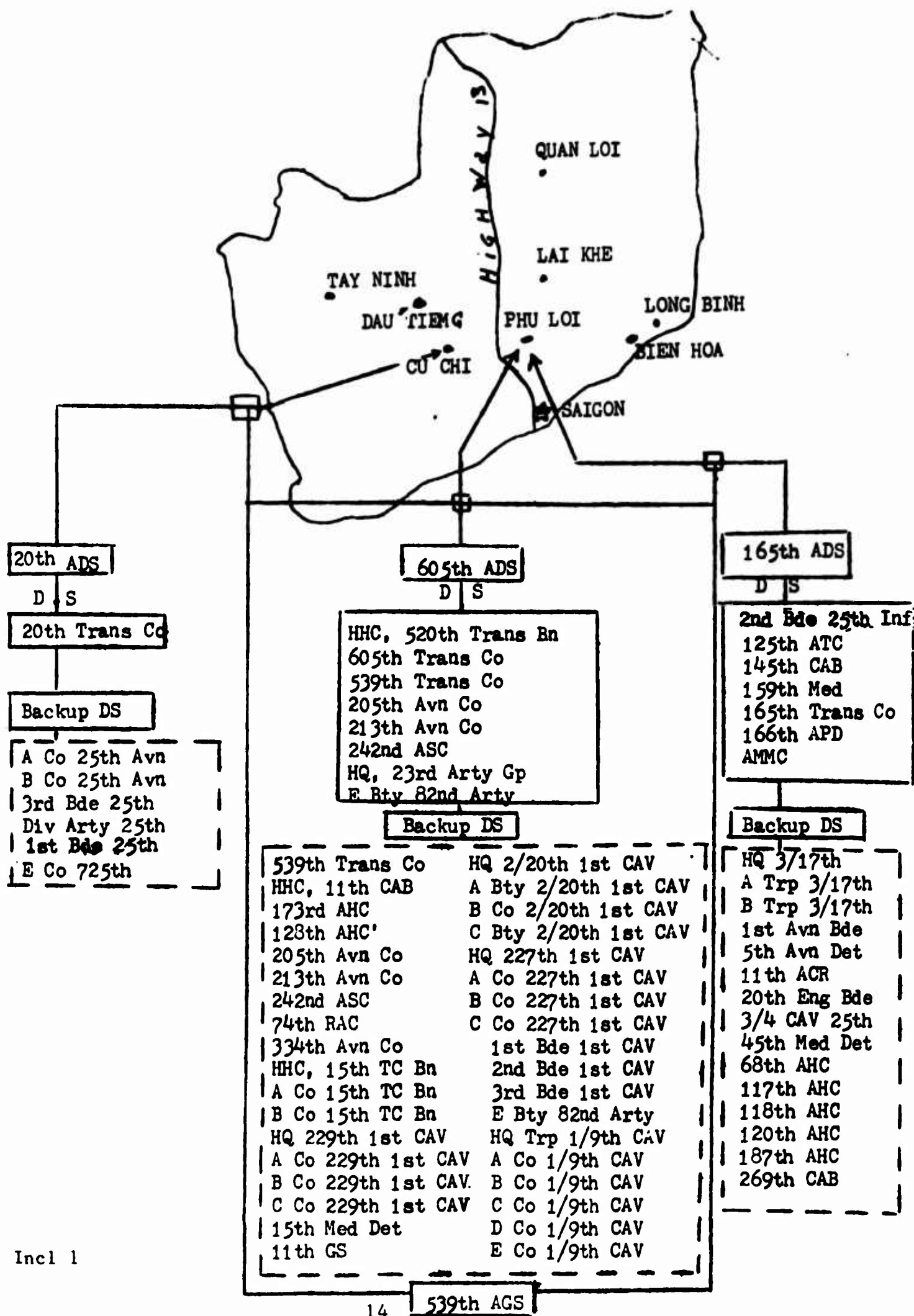
TO: Assistant Chief of Staff for Force Development, Department
of the Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

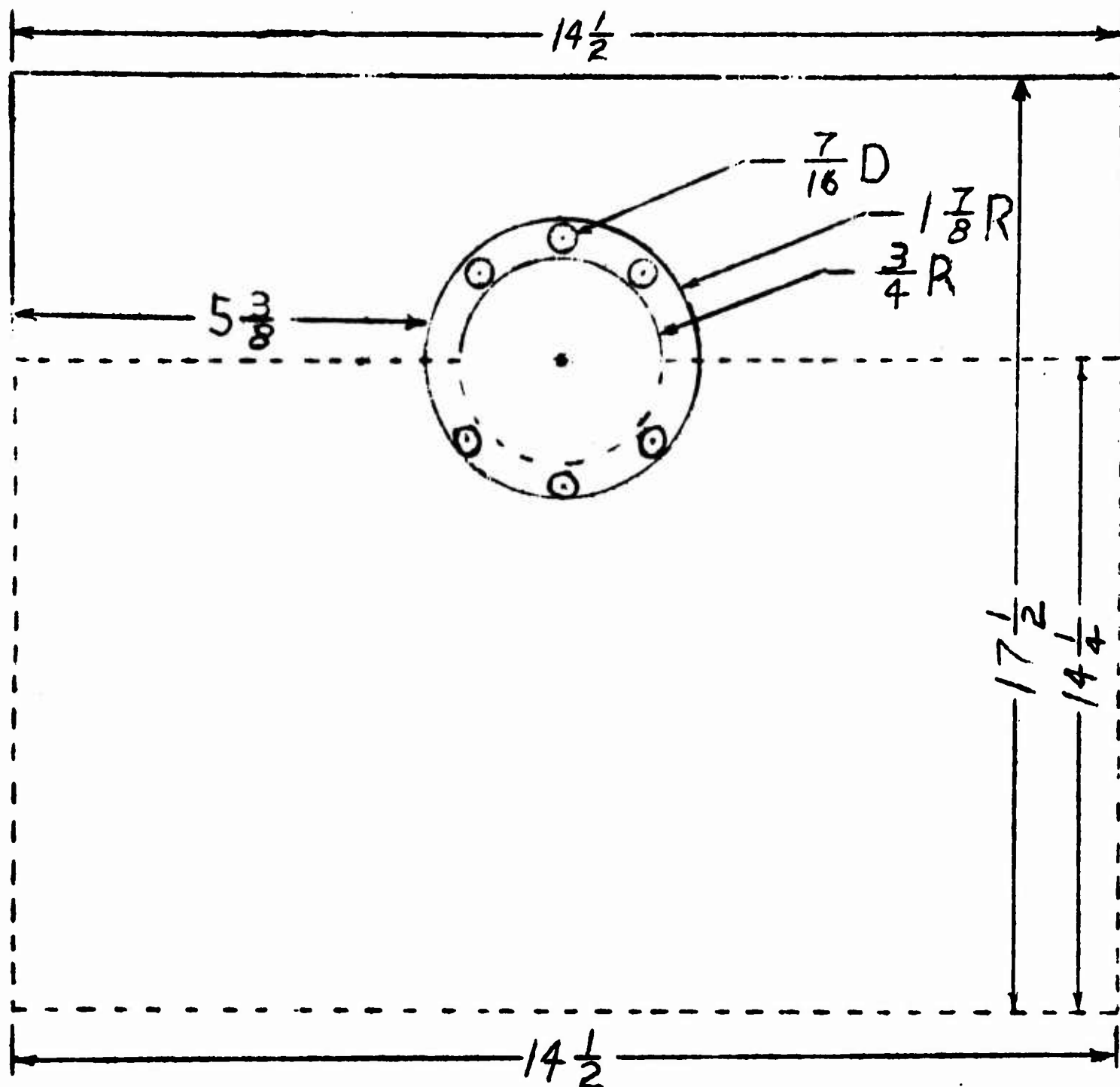
L.M. Ozaki 127 AGC

L.M. OZAKI
CPT, AGC
Asst AG



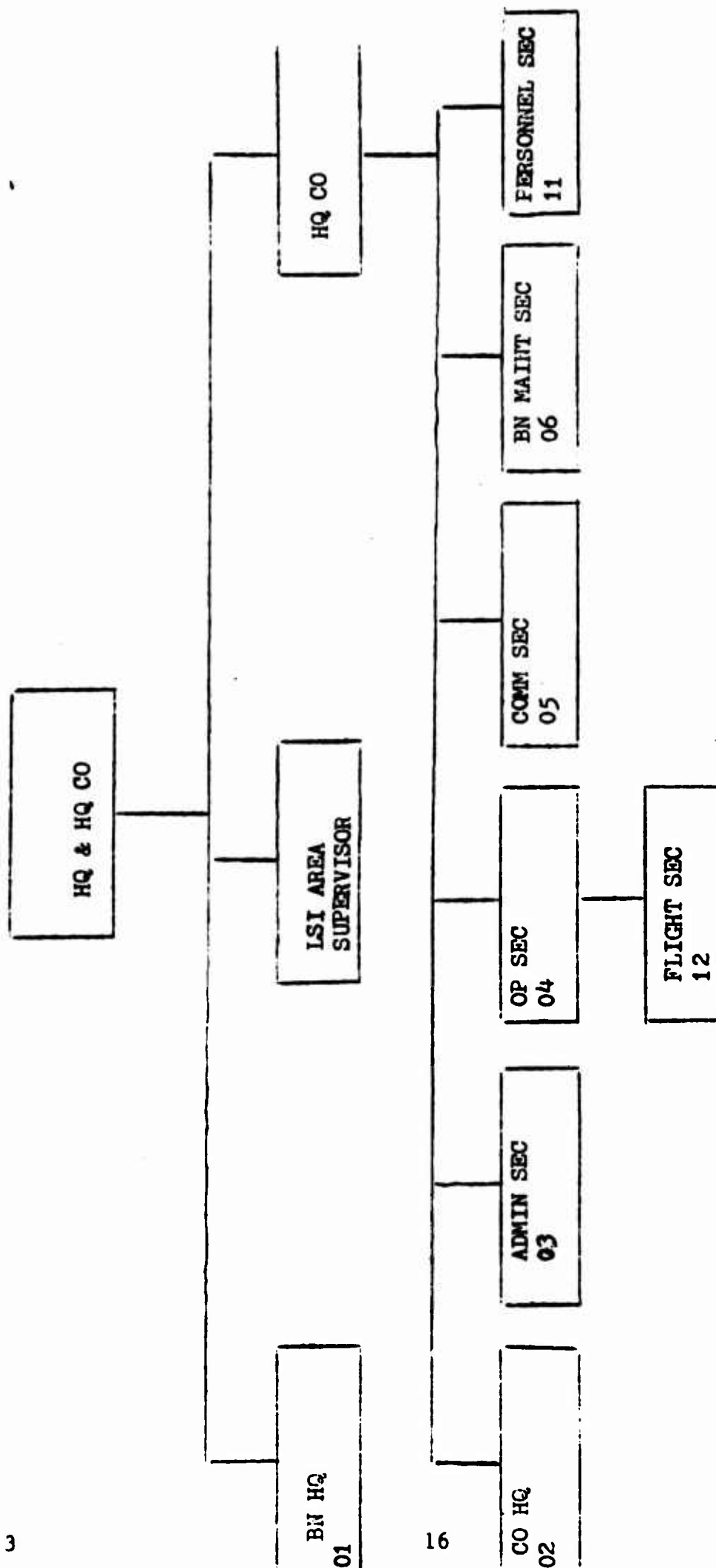
Incl 1

FOR OFFICIAL USE ONLY



----- PROPOSED FIXTURE

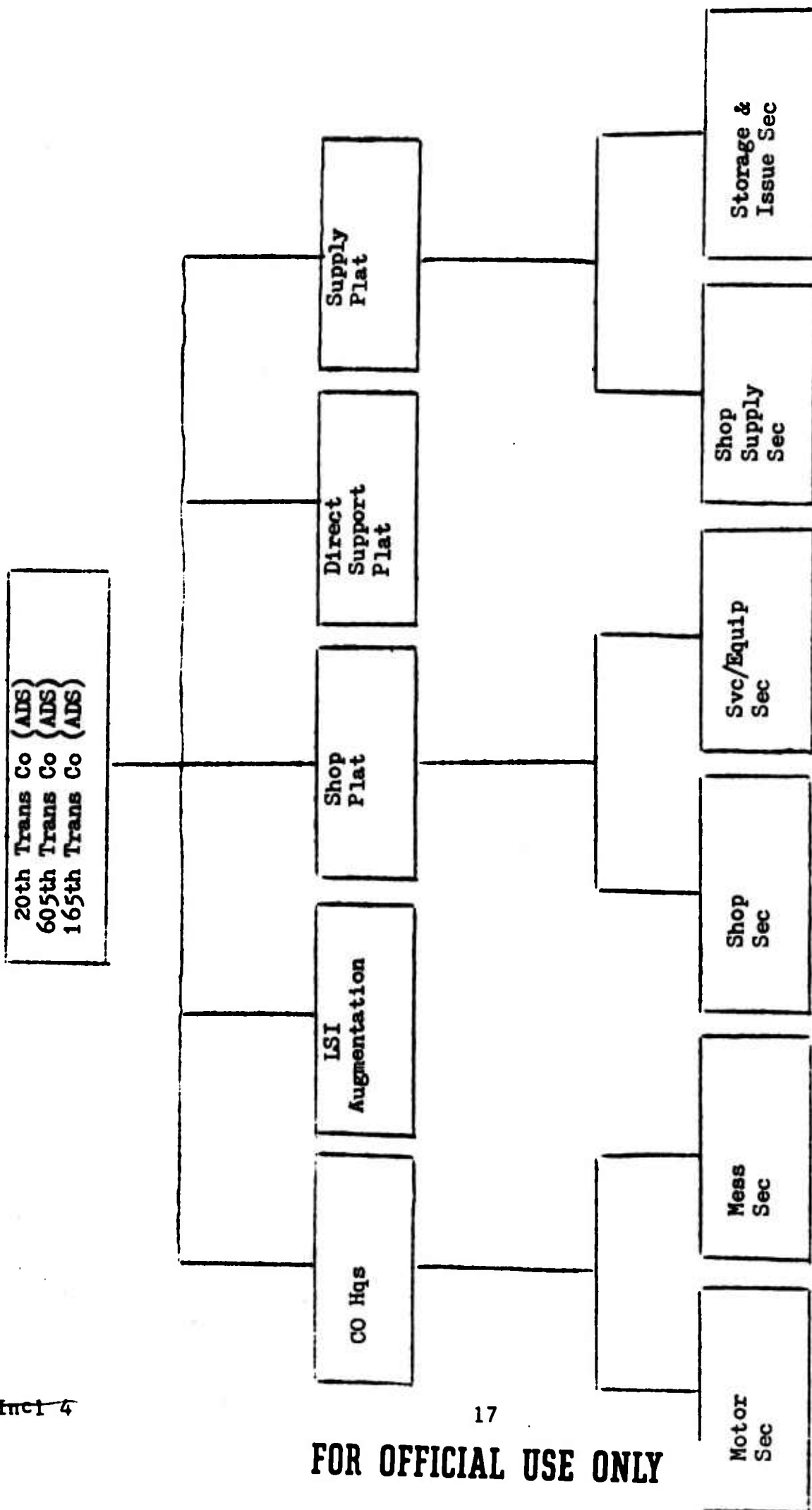
Incl 3



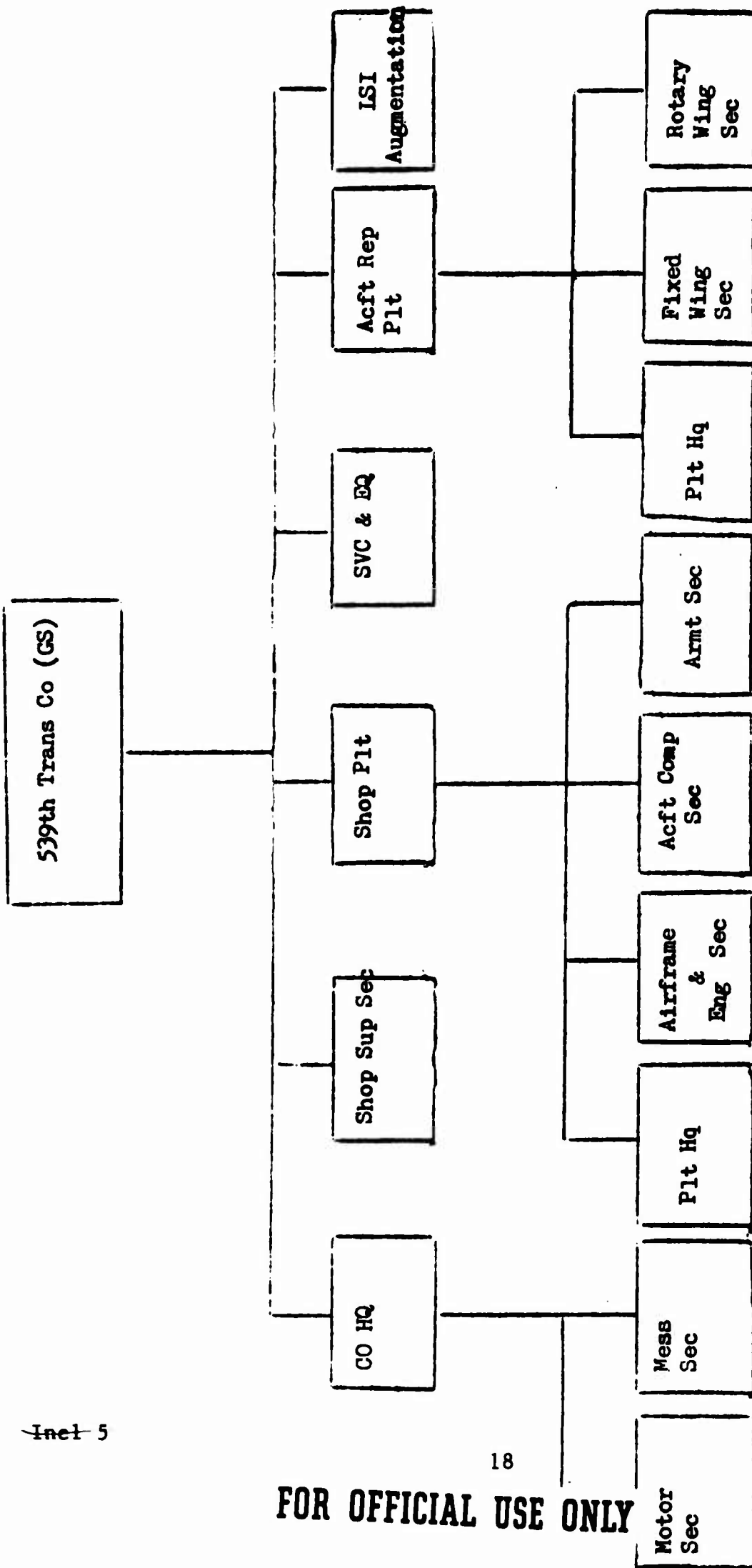
16

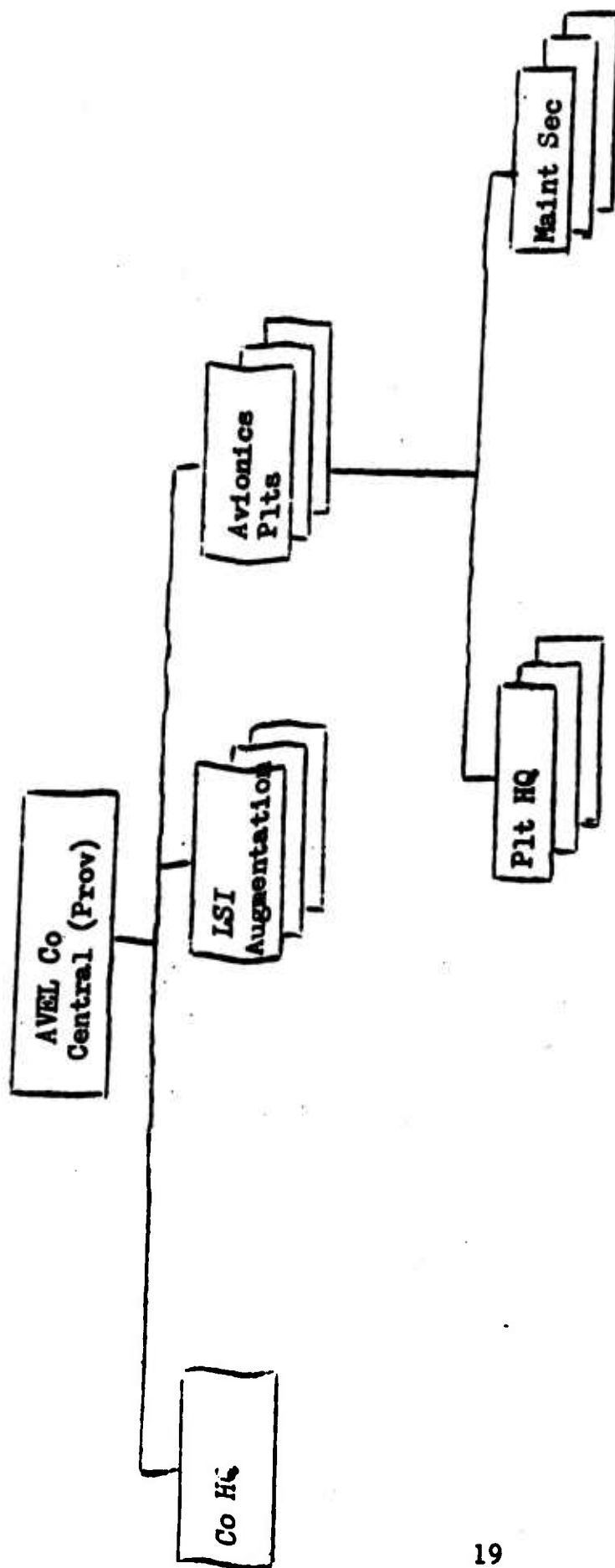
FOR OFFICIAL USE ONLY

~~Incl 4~~



Incl 5



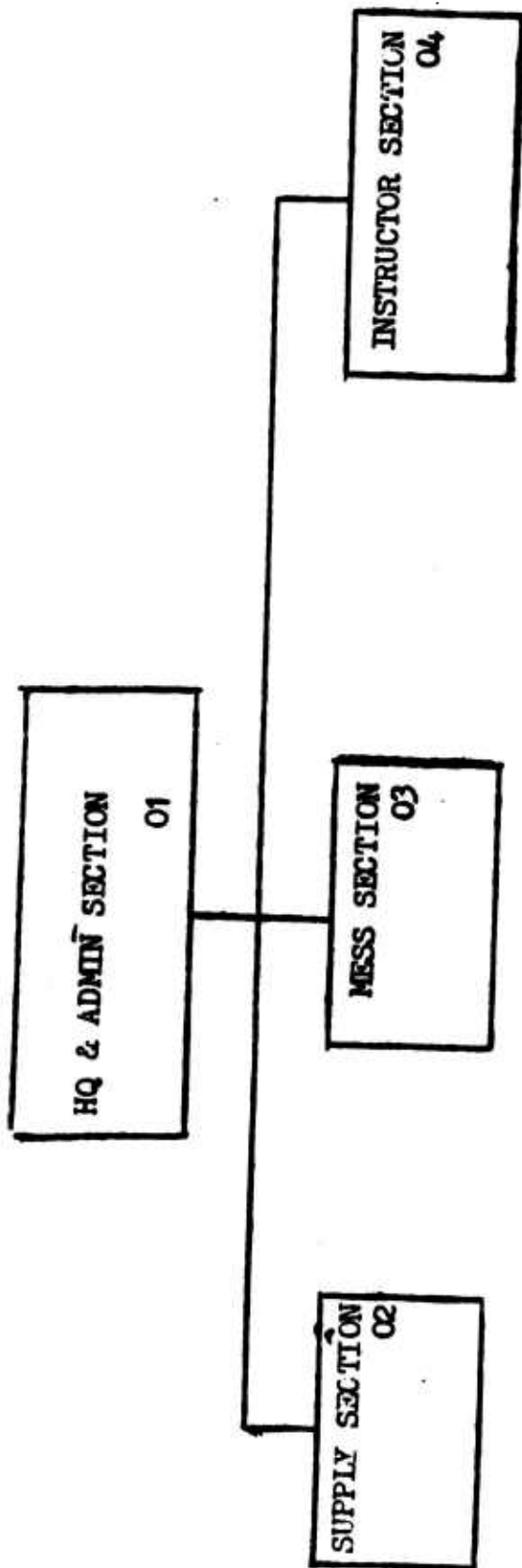


~~Incl 6~~

Incl 7

ARMY AVIATION REFRESHER TRAINING SCHOOL
ORGANIZATIONAL CHART

TDA P5-WDFH99-00



TDA P5-WDFH99-00

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) HQ DA, OACSFOR, Washington, D.C. 20310		2a. REPORT SECURITY CLASSIFICATION FOR OFFICIAL USE ONLY	
		2b. GROUP	
3. REPORT TITLE Operational Report - Lessons Learned, HQ, 520th Transportation Battalion			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Experiences of unit engaged in counterinsurgency operations 1 Aug to 31 Oct 1970.			
5. AUTHOR(S) (First name, middle initial, last name) CO, 520th Transportation Battalion			
6. REPORT DATE 14 November 1970		7a. TOTAL NO. OF PAGES 23	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO.		8b. ORIGINATOR'S REPORT NUMBER(S) 704220	
b. PROJECT NO. N/A		8c. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
c.			
d.			
10. DISTRIBUTION STATEMENT			
11. SUPPLEMENTARY NOTES N/A		12. SPONSORING MILITARY ACTIVITY DA, OACSFOR, Washington, D.C. 20310	
13. ABSTRACT			
21			

DD FORM 1473
1 NOV 66

UNCLASSIFIED

Security Classification