U.S.S. PRINCETON (CVA-37)
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DECLASSIFIED

SECURITY INFORMATION

From: Commanding Officer, U.S.S. PRINCETON (CVA-37)
To: Chief of Naval Operations
Via: (1) Commander Task Force SEVENTY-SEVEN
(2) Commander SEVENTH Fleet
(3) Commander Naval Forces, Far East
(4) Commander in Chief, U. S. Pacific Fleet,

DOWNGRADED AT 3 YEAR INTERVALS: DECLASSIFIED AFTER 12 YEARS DOD DIR 5200.10

Subj: Action Report for the period 8 March 1953 through 3 April 1953

Ref: (a) OpNav Instruction 3480.4
(b) CVG-15 conf ltr ser 06 of 28 March 1953 (Air Attack Reports for the period 13 March through 18 March 1953)
(c) CVG-15 conf ltr ser 08 of 6 April 1953 (Air Attack Reports for the period 21 March through 28 March 1953)
(d) CVG-15 conf ltr ser 09 of 8 April 1953 (Air Attack Reports for the period 29 March through 31 March 1953)
(e) CinCPacFLT Instruction 3040.1

1. In accordance with reference (a) the Action Report for the period 8 March 1953 through 3 April 1953 is hereby submitted.

PART I GENERAL NARRATIVE

During the period covered by this report the U.S.S. PRINCETON (CVA-37) operated as a unit of Task Force SEVENTY-SEVEN.

Task Force SEVENTY-SEVEN was composed of the carriers U.S.S. ORISKANY (CVA-34) with ComCarDiv FIVE, RADM R. F. HICKEY, embarked, U.S.S. VALLEY FORGE (CVA-45) with ComCarDiv THREE, RADM A. SOUCEK, embarked, U.S.S. PHILIPPINE SEA (CVA-47), and U.S.S. PRINCETON (CVA-37) along with various heavy support and screening elements.

The mission of this task force was as set forth in CTF SEVENTY-SEVEN Operation Order No. 2-52.

Various missions were flown by PRINCETON aircraft during this period: Strikes were launched against the enemy's supply and troop concentration areas, industrial targets, and transportation

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facilities; Close Air Support, Night Interdiction, Electronic Countermeasures, Photography, and Armed Reconnaissance sorties were conducted almost daily; Combat Air Patrol and Anti-Submarine Patrol operations were carried out every day of flight operations.

On 9 March 1953, prior to joining the main body of the Task Force, Air Group FIFTEEN participated in a joint air defense exercise with the FORTY-FIRST Air Defense Division of the Japanese Air Defense Force. Two strikes of approximately twenty aircraft each were launched by the PRINCETON to make simultaneous "attacks" on Johnson Air Force Base. Air Force fighter aircraft conducted interception exercises against the Navy flights after which the strike groups returned aboard.

PART II CHRONOLOGICAL ORDER OF EVENTS

8 March

Departed Yokosuka, Honshu, Japan. Conducted non-combat refresher air operations. Eighty-four sorties were flown.

9 March

Conducted joint air defense exercise in conjunction with the FORTY-FIRST Air Defense Division of the Japanese Air Defense Force. Fifty-three sorties were flown. Returned to Yokosuka.

10 - 12 March

Enroute to Task Force SEVENTY-SEVEN via Van Diemen Straits in accordance with Commander Task Force SEVENTY-SEVEN conf dispatch 051306Z March 1953. Scheduled gunnery exercises were cancelled due to inclement weather.

13 March

Rendezvous with Task Force SEVENTY-SEVEN. Only thirty-six sorties flown due to prevailing weather conditions.

14 March

Conducted air operations. One-hundred-seventeen sorties were flown with primary effort devoted to the destruction of supply and troop concentrations in the front line area.

15 March

Replenished at sea. Conducted anti-aircraft firing exercises.

16 - 18 March

Conducted air operations. Flew 282 sorties. Attacks were concentrated on rear area supply storage shelters and vehicles.

19 March

Replenished at sea. Conducted anti-aircraft firing exercises.

20 March

Air Operations were cancelled because of bad weather.

21 March

Conducted air operations. Flew 103 sorties. Two major coordinated strikes with aircraft from the PRINCETON, ORISKANY, and PHILIPPINE SEA participating were launched against industrial targets in the Chongjin area. Heavy damage was inflicted upon warehouses and a mining and ore processing plant in that area; and a munition dump was destroyed.

22 - 23 March

Conducted air operations. A major portion of the 211 sorties flown were in close and deep support of U.N. front line troops.

24 March

Replenished at sea. Scheduled gunnery drills were cancelled because of inclement weather.

25 - 26 March

Weather conditions limited air operations to a minimum. A total of fourteen sorties were flown consisting entirely of close air support and reconnaissance missions.

27 - 28 March

Air operations were devoted to concentrated attacks on a major supply complex located approximately ten miles north of the eastern main line of resistance. Aircraft from the ORISKANY and PHILIPPINE SEA joined PRINCETON planes in saturating the one-and-one-half mile square area. Two-hundred-sixteen sorties were flown.

29 March

Replenished at sea. Scheduled anti-aircraft firing drills were cancelled as result of prolonged replenishment activities.

30 - 31 March

Two-hundred-eleven sorties were flown. PRINCETON aircraft continued to attack the supply and troop concentrations attacked on 27 and 28 March. On March 30 the pre-dawn hecklers took advantage of increased enemy rail and truck activity to score many kills.

1 - 3 April

Enroute from operating area to Yokosuka, Honshu, Japan via Van Diemen Straits.

PART III ORDNANCE

A. Performance and Casualties

1. Ship's

a. Fire Control Equipment

Performance of fire control equipment during this period was excellent. No serious casualties were encountered. The manning of directors and gun mounts during Condition III watches is on a rotational basis in order to provide maximum Condition III coverage and to allow time for the preventative maintenance that is necessary for efficient operation of fire control equipment.

b. Ordnance Equipment

The only serious casualty to ordnance equipment for the period occurred in the fuze-setting indicator-regulator (MK 9 Mod 1) of 5"/38 mount No. 57. The trouble was detected during a transmission check when it was found that the fuze-setting indicator-regulator was operating erratically in "automatic". Upon inspection, it was found that the micro-overload switch assembly (#66) was not functioning properly due to the open wiring of the winding assembly (#165), and that one right hand contact assembly (#25) was not functioning properly due to defective supports. The defective parts were replaced with spares and adjusted. The instrument was energized and tested. Erratic operation in "automatic" still prevailed. Upon further inspection, it was found that the springs (Ord. Dwg #212927 - 8 and 9) of the plate assembly (#48) were broken.

The control head assembly (#22) was removed and disassembled; the broken springs were removed and replaced with spares; and the control head was reassembled. Operation was then satisfactory.

c. Ordnance Expenditure

QUANTITY	CODE	DESCRIPTION
113	D1	5"/38 Projectile, AAC
113	D8	Cartridge, Full; Non-flashless
828	H1	40 MM Cartridge, Heit-SD (UG Lots)

2. Aircraft

a. Difficulties were encountered with the Acro 14-A rack. There were only six instances, however, of malfunction directly attributable to mechanical failure of this rack.

b. During this operating period VF-153 put the finishing touches on a complete working model of the F9F-5 "Fire Control System", including APG-30. Accurate maintenance records, parts usage, and trouble shooting data is being compiled and will be released at a later date. See Part VI section A.2.b, page 18.

c. The presence of two jet squadrons aboard demands high-speed rearmament. To improve the efficiency of this operation, it is felt that an increase in the squadron personnel allowance is required. Therefore, four additional AOAN'S or AN'S have been requested.

d. The difficulties encountered in re-arming are being smoothed out as new and inexperienced men become intergrated to their respective ordnance divisions.

3. Hung Ordnance and Ammo Stoppage Report*

Type Ordnance Hung	Later Manual Releases	Releases By Jerking	Dropoffs On Takeoff	Remaining On Racks	Type Rack Used
100#GP	-	4	1	1	Acro 14A
250#GP	-	-	-	12	Acro 14A
260#GP	-	3	-	6	Acro 14A
500#GP	-	-	-	2	MK 51
500#GP	-	-	-	1	Douglas Bomb Ej.
1000"GP	6	-	-	2	MK 51

Type Ordnance Hung	Later Manual Releases	Releases By Jerking	Dropoffs On Takeoff	Remaining On Racks	Type Rack Used
2000#GP	3	-	-	1	Douglas Bomb Ej.
NAPALM	3	-	-	0	MK 51
HVAR	-	-	-	14	Aero 14A

* Of 4,497 bombs expended, 0.8% hung and 0.3% were returned aboard.

1. .50 cal. Machine Guns
   (a) .50 cal. rounds expended 64,440
   (b) Number of stoppages 17
   (c) Average One stoppage per 3,790 rds.

2. 20MM Machine Guns
   (a) 20MM rounds expended 99,866
   (b) Number of stoppages 45
   (c) Average One stoppage per 2,219 rds.

4. Total Ammunition Expended 13 March Thru 31 March 1953

QUANTITY	CODE	DESCRIPTION
78	K1	2000# GP
442	K2	1000# GP
314	K3	500# GP
2,432	K4	250# GP
511	K5	100# GP
28	K6	1000# SAP
8	K7	500# SAP
4	K8	350# DEPTH BOMB, AN-MK 54
680	K9	220/260# FRAG.
13	K19	FUZE, NOSE, AN-M103A1
2,850	K20	FUZE, NOSE, AN-M139A1
1,185	K21	FUZE, NOSE, AN-M140A1
387	K26	FUZE, NOSE, VT, T50E1
44	K27	FUZE, NOSE, VT, T50E4
121	K30	FUZE, NOSE, AN-MK 219
121	K31	ANTI-PERSON BOMB FUZE EX
3,399	K35	AN-M100A2
296	K36	AN-M101A2 (.025)
444	K37	AN-M102A2 (.025)
26	K40	FUZE, TAIL M117 (4-5)
11	K42C	FUZE, TAIL M124/A1(6 hr)
11	K42D	FUZE, TAIL M124/A1(12 hr)
28	K43C	FUZE, TAIL M125/A1(6 hr)
32	K43D	FUZE, TAIL M125/A1(12 hr)

QUANTITY	CODE	DESCRIPTION
4	K48	FUZE, BOMB, TAIL, (HYDROSTATIC), AN-MK 230
100	K49C	PRIMER DET. M14 (0.1)
900	K49D	PRIMER DET. M14 (0.01)
4	L1	3.5" ROCKET, SOLID, Complete Rd.
188	L5	5" HVAR, Complete Rd.
33,337	M1	20MM HEI, M97
30;339	M2	20MM INC, M96
36;190	M3	20MM AP-T, M95
97;465	M4	LINK, 20MM M8E1(M10)
24;572	M6	Cal. .50, API, M8
24;572	M7	Cal. .50, INC, M1
12;286	M8	Cal. .50, API-T, M20
61;430	M9	LINK, Cal. .50, A/C M2
3,000	M10	Cal. .50, BELTED, (2-2-1)
490	M1	NAPALM THICKENER, M2 (ASRS CODE 60440-C)
12	N2	IGNITER, M15 OR M215, EXTERNAL, WP
12	N4	IGNITER, M16 OR M216, INTERNAL, WP
14	N7	GAS TANK F51 TYPE (78-0)
10	N10	XYLENOL GALLONS
188	P3	FLARE, PARACHUTE, MK6
3	P9	FLOAT LIGHT AN-MK 6
24	P10	DISTRESS SIGNALS, DAY & NIGHT
194	P38	BOMB EJECTOR CARTRIDGE, MK 1
19	P39	BOMB EJECTOR CARTRIDGE, MK 2
3	U38	DESTRUCTORS MK 2-0

PART IV BATTLE DAMAGE

A. Own

The ship sustained no battle damage. See references (b), (c), and (d) for battle damage sustained by PRINCETON Aircraft.

B. Enemy

See references (b), (c), and (d) for damage inflicted upon the enemy.

PART V PERSONNEL PERFORMANCE AND CASUALTIES

A. Performance

Performance of Ship's Company and Air Group personnel was outstanding.

B. Breakdown of Ship's Complement

The average on board count during the period was as follows:

	OFFICERS	ENLISTED	TOTAL
Ship's Company	119	2,056	2,175
Marine Detachment	2	61	63
Air Group	131	635	766
	252	2,752	3,004

C. Training and Education

1. A series of lectures is being given for all personnel who are making their first cruise to the Far East aboard the PRINCETON. Lectures on the following subjects are included in this program:

General Orientation
Recreation and Athletics
Korean Situation
Berthing and Ship's Cleaning Policies
Sex Education
Legal Matters
The Supply Department
Religion
Educational Opportunities
Medical Orientation
Responsibilities of Citizenship
Military Personnel in Japan
Dental Hygiene
Personnel Matters
Ship's Regulations
Air Department Safety
Marriage and Family Life

2. There is an acute shortage of Electronic Technicians aboard the PRINCETON. The situation on board this vessel, in fact, seems to be more critical than on other AIRPAC CVA'S. The following table, compiled from the monthly equipment trouble reports for February 1953, will illustrate this point:

COMPARISON OF ET STRENGTH OF VARIOUS CVA'S

Ship	Rated ET's	Non-Rated School Grads	Others	Total
VALLEY FORGE				
	1 ET1 7 ET2 10 ET3	14	1 SA	33

Ship	Rated ET's	Non-Rated School Grads	Others	Total
ESSEX				
	7 ET2 20 ET3	1	1 QMC	29
KEARSARGE				
	1 ETC 3 ET1 6 ET2 10 ET3	5	2 SN 1 SA	28
ORISKANY				
	1 ETC 5 ET2 15 ET3	None	5 SN 9 SA 2 EM3 1 BT3	38
PRINCETON				
	1 ETRC 1 ET2 12 ET3	7 ETSN	1 AA 1 SN	23

A vigorous shipboard training program is being pursued aboard the PRINCETON to help overcome the ET shortage. A method of instruction similar to that outlined in the "Junior Officers Note Book" has been established. A man first completes a course on the equipment on which he is working and, then, is started on a course covering a different type apparatus. After completion of the second course, trainees are assigned to work on equipment of the type they have recently finished studying.

3. The PRINCETON's outstanding school education program is being continued with excellent results.

D. Morale

1. During the period covered by this report the morale of both the air group and ship's company was outstanding. A number of reasons can be given for this high state of morale:

a. The short period served on the line during

this tour.

b. The low accident and casualty rate among pilots and aircrew personnel.

c. The excellent work of the Ship's Company. The outstanding work of the flight and hangar deck crews and the Supply Department eased considerably the work of the Air Group and promoted a greater harmony among all personnel.

d. The ship's policy of providing three showings of the evening movie; this arrangement enabled most personnel to see one showing regardless of other duties.

e. The excellent food served in both the ship's general mess and the officer's wardroom.

2. The Medical Officer's report for this period highlights the advisability of short tours of operations. This report states:

"A comparison of the morale, low accident rate, and general physical status of the crew and air group pilots with our observations during our last deployment points significantly to the fact a three week period of combat is the optimum efficient time for this type of operation."

3. About sixty percent of the ship's company enlisted personnel are making their second cruise aboard the PRINCETON in Korean Waters. A smaller but significant percentage (twelve percent) are making their third cruise. There are indications that a third cruise reduces morale--a point which is evidenced by the large number of unauthorized absences in CONUS among men who knew they were going to make their third cruise.

4. Every effort is being made to provide for the recreation needs of the crew within the limits imposed during Air Operations. Band concerts are held on the mess deck whenever bomb break-out will permit. Three movies are shown nightly. The responsibility for planning and producing "Happy Hours" is being rotated among the Departments.

5. Because the letter recommending removal of ship's bands from naval vessels (except in a temporary duty status) originated from this command, a summary of the band's activities is included in the current action report:

E. Casualties

1. Ship's Company personnel suffered no casualties.

2. One pilot was lost to enemy action; one pilot was wounded in action; sixteen pilots were grounded for short periods of time; three pilots were grounded pending medical evaluation.

a. On 17 March 1953, ENS Joseph HALL, VF-153, crashed in his F9F-5 while on a Recco Mission north of Tanchon. Rescaps failed to locate either aircraft or pilot.

b. On 22 March 1953, LT C.B. PURCELL, VF-152, received wounds on the left fore-arm from enemy automatic weapons fire while on a Close Air Support Mission. He made an emergency landing on K-18, and was subsequently returned aboard.

F. Medical Department Statistical Summary of Air Group and Ship's Company:

1.	Admission to sick list, enlisted	65
2.	Admission to sick list, officers	7
3.	Total visits to sick call	1,727
4.	Minor injuries treated	21
5.	Major injuries treated	5
6.	Minor surgical procedures	24
7.	Major surgical procedures	6
8.	Pilots killed, enemy action, not recovered	1
9.	Pilots temperarily grounded, medical reasons	16
10.	Pilots injured, enemy action, recovered	1
11.	Pilots permanently grounded, pending medical, evaluation	3
12.	Average number daysgrounded	2.8
13.	Crewman grounded, medical reasons	0

Venereal Disease Cases and Non-Specific Urethritis:

1.	Gonorrhea	20
2.	Chanoroid	19
3.	Syphilis	0
4.	Non-Specific Urethritis following sexual exposure	37
5.	Penicillin tablets issued during last period in port	5,109

PART VI SPECIAL COMMENTS

A. Air Group FIFTEEN

1. Operations

a. General

Air Group FIFTEEN with attached VC detachments flew 1,154 sorties for a total of 2,457 hours during 10.5 operational days of this combat tour. One-hundred-thirty-seven sorties for a total of 249 hours were flown during preparatory non-combat operations on 8 and 9 March 1953. Four days in the combat area were utilized for replenishment; inclement weather conditions precluded operations on an additional 4.5 days.

Offensive and defensive efforts by sortie and aircraft type are as follows:

	F9F5	F4U4	F4U5N	AD4	AD4W	AD4N	F9FP	Totals
STRIKES	287	151	-	171	-	-	-	609
RECCO	106	-	24	-	-	23	-	153
CLOSE AIR SUPPORT	-	31	-	32	-	-	-	63
CAP	172	-	1	-	-	-	-	173
PHOTO & PHOTO ESCORT	39	-	-	-	-	-	42	81
ECM	-	-	-	-	-	10	-	10
ASP	-	-	-	18	19	-	-	37
RESCAP	8	4	-	-	-	-	-	12
TARCAP	16	-	-	-	-	-	-	16
TOTALS	628	186	25	221	19	33	42	1154

Offensive operations during the period were primarily devoted to deep support and interdiction. Supply and troop concentrations, vehicles, and rolling stock constituted the principal targets. Some close air support missions were flown by F4U's and AD's with good to excellent results.

b. Flak Suppression Tactics

Flak suppression by the jets was effectively utilized on heavily defended targets. A typical strike force of this type would consist of ten AD's, ten F4U's and eight jet's. It was found most effective to have the jet's rendezvous with the props in the near vicinity of the target (jets being eighteen to twenty thousand feet and the props at twelve thousand feet). Immediately preceding the

prop attack the jets would come down to the props level and commence their runs by division. The first props would push over almost simultaneously with the jets. The jets would pull up sharply after their run and come down again behind the last props thus covering them in their pull-outs. Flak suppression was effective and appeared to reduce the quantity and quality of flak encountered.

c. Jet Flight Planning

In spite of the high fuel consumption rate of the F9F-5 very little difficulty has been experienced in completing assigned missions with adequate fuel remaining. In accomplishing this, however, certain procedures must be considered. The conclusions of this group as a result of the first period of operation on the line were:

(1) Rendezvous after launch should be conducted at low altitude (five-thousand feet or below) at low power settings. This procedure considerably reduces the time required for rendezvous. To further facilitate rendezvous when both jet squadrons are flying, the rendezvous sector has been divided in half with one squadron using the clockwise half at odd altitudes and the other the counterclockwise half at even altitudes. Pilots taking off in the latter part of the flight should use high power settings, build up speed, locate flight and "zoom" into position. The last plane should report "all aboard" when all planes obviously have the flight in sight (not when all planes are joined up in parade formation) and then effect a running rendezvous toward the target.

(2) Cruise Control must be mastered by every pilot in the flight. An early return to the ship might be necessitated by one low fuel state. The difference between VMR and VME is essential knowledge. The technique of "killing time" without using fuel must be mastered. Procedures used by jets of Air Group FIFTEEN are roughly as follows:

Thirty-five minutes for rendezvous, climb and cruise to target area at twenty-thousand feet.

Twenty to thirty minutes in the target area.

Thirty to forty minutes to return to the force and land using VME power settings.

Flights generally have arrived over the force five to ten minutes prior to recovery time with a minimum of 1,400 pounds of fuel remaining.

(3) Pitching deck technique - A pitching deck can materially increase the recovery time due to the number of wave-offs necessitated. In order to keep this time to a minimum, it is mandatory that pitching deck technique be understood thoroughly by pilots, LSO's, and ship's personnel. Pilots must master the technique of landing from a somewhat higher, earlier cut position. Diving for the deck must be continually guarded against.

d. Day Familiarization Missions for Night Pilots

Night pilots were given three daylight recce missions over the beach for familiarization. These proved to be of immense help. This policy is recommended for all new night pilots.

e. Flying Own Aircraft

Almost without exception, pilots of the jet squadrons have flown planes of their own squadrons. This is very desirable from a standpoint of both pilot and crew morale. Rendezvous is somewhat complicated by this procedure, however, since time will not allow spotting the planes in the right order for launch.

f. Increase in Ordnance Load for AD4N's

ComAirPac Restricted dispatch 18Ø121Z of March 1953, raised the catapult restrictions on the AD4N to 25,000 pounds gross. Local restrictions were raised to 22,000 pounds gross from 20,500 pounds gross. This allows a load of one 500 pound GP, five 250 GP and four 260 pound frags.

g. Aileron Snatch in F4U's

During this period ten cases of aileron snatch were encountered by the F4U squadron. Each of these occurred after the two outboard Aero 14 rocket launchers had been removed, but with the base still attached. One case was at 270 knots and the others were from 320 to 380 knots. Angle of dive varied from thirty to seventy degrees. Loads varied from no load to 1,500 pounds. There seems to be a definite possibility that the cause is structural warping which is little affected by changes in rigging or trim. Study of this problem is being continued.

2. Maintenance and General Discussion of Equipment

a. Aircraft Engines, Air Frames, and Accessories

(1) R-3350 Engines

A major difficulty experienced with the R-3350 engines installed in the AD aircraft has been oil leakage around the pushrod housings. The only remedy so far has been continuous replacement of housings and packings. Propeller changes on these aircraft have been exceedingly difficult. The retaining nut is installed so tightly on these aircraft that all of the special hand tools were broken in an attempt to remove one prop recently and it was necessary to manufacture a special wrench in the ship's machine shop in order to remove the prop. Suitable tools should be made available at the squadron level for the proper performance of work that the squadron is expected to perform. (See Part VI Section G, Supply Department, for further discussion)

(2) F4U4 Engine Maintenance

Magnetos and spark plugs have been the source of the major portion of the powerplant troubles in F4U aircraft during this tour.

(3) Jet Engine Changes

Two jet engine changes were accomplished during the tour; one for overspeeding at altitude and the other for repeated hot starting and curling of the turbine blades. The first change was difficult as no suitable engine stand was available. One stand is now available and it is hoped that a second will be available soon. One jet engine will be due for change during the coming in port period; this engine operated with a minimum amount of trouble for the full three-hundred hours.

(4) Jet Fuel Evaluation

In view of the conflicting information presently available concerning the use of alcohol as an auto-acceleration deterrent, the two jet squadrons have adopted different operating practices in order to evaluate first hand the value of using alcohol. One squadron uses no alcohol in the fuel (three of their planes use the older type high pressure fuel pumps), but oil is mixed in the fuel of those planes for lubricating purposes. The other squadron is using

alcohol in the fuel, and is also adding oil in an effort to forestall corrosion in the fuel system. The latter squadron has changed two malfunctioning fuel controls during this tour. One of these was disassembled, under the direction of the Pratt and Whitney Service Representative and inspected for evidence of corrosion. No corrosion was present although the one case cannot be considered to be conclusive. The investigation is being continued.

(5) F9F5 Tail Hook Points

Contrary to predictions and expectations, the F9F-5 squadrons have experienced no serious hook point trouble. Only one hook has failed during this tour and it was damaged during take-off due to accidental extention and subsequent contact with the catapult toe fitting. Incorporation of F9F Aircraft Service Change No. 156 evidently has aided materially in the prevention of hook point failures. Each point is inspected carefully after each arrested landing; one squadron makes a practice of greasing the points prior to every takeoff. During the period of this report twenty-eight hook points have been replaced.

(6) F9F Tip Tank Leakage

Three tip tanks on the F9F's have had to be changed because of cracking in the sheath which carries the wires to the running light. Evidence of the failure appears as fuel leakage through the light itself.

(7) Shorts in F9F and AD Batteries

A recent check of the batteries used in the F9F's and AD's revealed that approximately one third have shorts between the terminals and case. This matter has just come to light and as yet the reason for the difficulty has not been determined.

(8) Master Aircraft Status Board

At the start of the operating period a Master Aircraft Status Board was erected on the hangar deck opposite the deck edge elevator. Such a board was recommended during the ORI. Previously the status board had been located in the compartment immediately aft of Flight Deck Control and was of little use to anyone. The board is manned by a talker during flight quarters. The talker is in continuous contact with both Flight Deck and Hangar Deck Control by means of sound-powered telephone. The operation of the board is still in the fluid stage with various procedures being tested in order to arrive at one that will be most beneficial to all concerned.

(9) Oxygen Recharge Equipment

Two replacement oxygen recharge pumps, ordered in 1952, to replace the worn out pumps presently on board, have not been received to date. Only one transfer pump is in a usable condition, with a maximum pumping capacity of 2,100 pounds. Keeping the oxygen carts filled with this one usable pump has made the workload of the oxygen transfer shop exceedingly high. Three oxygen carts are used to fill the bottles in the F9F-5 and F4U-4 type aircraft. Oxygen bottles from the AD aircraft are removed from the aircraft and filled in the transfer shop.

b. Electronics

Performance of electronics equipment during this period generally has been good to excellent. The following are discrepancies noted and recommendations for improvement.

(1) APG-30 Unit of the Aero 5A Fire Control System

There is a great need for a complete bench test setup for the APG-30 and Aero 5A Fire Control System as a unit. The Air Group with the invaluable assistance of NAESU Technicians has assembled the necessary test set-up but part of it is not included in the normal CVA allowance.

Contrary to previous reports on APG-30 projects the equipment will maintain alignment for a considerable number of carrier landings and does not require a prohibitive number of man hours devoted to maintenance. Maintenance and usage data will be the subject of a special report to BuAer after the next tour on the line.

(2) AN/ARC-1

The critical shortage of AN/ARC-1 spares may impair aircraft availability at any time. The reconditioned AN/ARC-1 sets are not holding up as well as could be expected and with few if any spares available an aircraft must be downed until the necessary repairs can be effected. Commander Fleet Air, Japan, is providing an additional three AN/ARC-1 sets to alleviate the shortage prior to the ship's return to the combat area.

During this first tour the F4U squadron attributed over one-third of its malfunctions to electronic discrepancies. The fact that this squadron has less than one-half of its allowance of electronics technicians has aggravated the situation.

(3) ECM Equipment

It is highly recommended that the AN/APA-70 be replaced in the AD4N aircraft by a PPI type presentation equipment for use on ECM missions. The present equipment necessitates the aircraft's turning toward the detected station to take bearings and in the majority of cases these stations immediately realize they have been detected and cease transmitting. The PPI scan would eliminate this turn to a station and increase the effectiveness of ECM missions a great deal.

(4) APS-31B Test Equipment

An adequate source of power for checking the APS-31B radar on the flight deck is not readily available aboard. The only two outlets suitable for this operation are on the hangar deck adjacent to No. Three Elevator.

It is recommended, therefore, that each team equipped with the APS-31B be issued as team equipment a waukeshaw or mobile power unit capable of the sustained high power output necessary to ground check this radar.

c. Aerial Photographic Equipment

The VC-61 detachment has experienced considerable difficulty with its K-38 thirty-six inch focal length cameras. The major difficulty encountered was repeated camera malfunction when a 390 foot film roll was used. This necessitated the use of two-hundred foot rolls and, consequently, limited photographic capabilities. This problem has been taken up with Commander Fleet Air, Japan. A complete check of cameras and magazines is being made by Fleet Air Japan personnel.

3. Survival

During our first tour on the line, the Air Group was fortunate enough not to have to make practical use of any of it's emergency survival equipment. All pilots returned aboard safely or made successful forced landings in friendly territory except in one case and there no chance for survival was possible.

a. Mark IV Exposure Suit

The Air Group's greatest survival difficulty occurred with the Mark IV exposure suit. Delivery was not made until the week of final deployment from the United States, leaving no time for fittings and exchanges.

It is recommended that suits be issued to squadrons at least three months before final deployment to ensure the correct fit for each pilot or aircrewman.

It was also found that many of the sizes issued in the Mark IV suit were impossible to fit to the person for whom they were measured. This was especially true in the larger sizes (44 and 48). In two cases it necessitated the using of an older Mark III suit in order to get a complete or comfortable fit. Therefore, it is recommended that if the Mark IV suit is to be "tailored" to each pilot's measurements, a more careful study be made of sizes in the larger suits to insure the proper fitting.

b. PSK-1 Kits

Another difficulty encountered was the lack of PSK-1, Personnel Survival Kits, in the forward area. In order to reduce the equipment a pilot would have to carry, the Air Group had planned to replace the water distiller in the Pararaft with the PSK-1 kit. However, since only forty-five kits were received from Commander Fleet Air, Japan, it was necessary to set-up a locally designed kit from whatever equipment the ship's Supply Officer was able to locate. We recommend that PSK-1 kits either become a permanent part of the parachute and pararaft and remain with the squadrons, or else be collected from each ship returning to the States and issued to the replacement Air Group.

c. PRC-17 Survival Radio

The PRC-17 Transreceiver was tested and found to be very effective. It was inserted in the pararaft in place of the radar reflector. The squadron parachute riggers constructed canvas bags with shoulder straps for the PRC-17 receiver and the PSK-1 kits. This would enable the downed pilot to have quick access to all his survival gear in an emergency.

4. Air Intelligence

a. AIO Advance Forward Area Tour

The Air Group was very fortunate in being able to send the Air Group Intelligence Officer and three of the four Squadron Air Intelligence Officers on the advance tour of the forward area. The lessons learned were invaluable since the Air Group had no Intelligence personnel with previous Korean duty. It is recommended, however, that the advance

party be sent out at least two months previous to the final deployment to enable the Air Intelligence Officers to make use of the lessons learned before the final departure from the States.

b. Briefing Spaces

The briefing space in Ready Rooms One, Three and Four is adequate for the type of operations being conducted in Korea. However, the space in Ready Five is entirely too small for effective briefings especially during the period when exposure suits must be worn. The debriefing space in Ready Rooms One and Five is not adequate and it would be highly desirable to have a central room on the 02 level to be used by both jet squadrons for debriefing purposes.

c. Briefing Aids

In order to facilitate speed in the preparation of briefings, one squadron Air Intelligence Officer designed a loose-leaf binder of acetate envelopes. The daily brief notes and the standing notes could then be clipped and inserted under the proper headings in the binder. Any additions to these notes could be put on in grease pencil and removed when no longer needed. This system tended to eliminate the preparation of long handwritten notes before each briefing.

d. Maps, Charts, and Target Photographs

The following information reflects pilot preference after experimenting with various combinations of charts, maps and photographs during this first combat tour:

(1) AMS L552 series 1:250,000 scale

This series is preferred and most generally used by all pilots of the Air Group; they consider it better than the USAF Approach Chart for identifying terrain features. (It should be noted, however, that pilots engaged in night flying prefer the USAF Approach Chart because its shaded terrain features more nearly duplicate radar presentation than do those of the AMS L552).

Since the two types of charts have different systems of terrain identification it is recommended that use of the AMS charts be emphasized considerably more in the pre-deployment training. Furthermore, it is strongly recommended that more emphasis be placed on pre-deployment map reading utilizing the AMS L552 series.

(2) AMS L552 Series Plastic Terrain Model

These charts have been very valuable in terrain identification and familiarization during this first period of orientation. Some flight leaders have experimented with cockpit use of single sections covering their target area. Aside from the cumbersome nature of these charts they have been found extremely useful in the cockpit, carried on a limited basis.

(3) Target Photographs

Target photographs are excellent in most cases and are of immense help in target identification. Commander Task Force SEVENTY-SEVEN's present system of target mosaic preparation and distribution is considered outstanding. The only difficulty encountered is in photographs of area containing no prominent identification features. Due to the nature of camouflaged supply areas and similar targets presently under attack, the large scale photograph is necessary for pinpointing individual targets. It is felt that a second mosaic of smaller scale covering the general target area would be desirable for briefing purposes, and in some instances for cockpit use. This type of mosaic would apply particularly to jet strikes.

B. Air Department

1. Training

a. During this period the Air Department has conducted an intensive training program for its crew.

2. Aviation Gasoline

a. An improved method of receiving aviation gasoline is being practiced. A Robb six-inch quick-release coupling assembled with two intermediate lengths of hose between the quick-release coupling and the ship's filling connection is used. Tankers are required to furnish a six-inch blank flange only. By using this procedure leakage does not occur, less difficulty is encountered in hooking-up, and the weight of the tanker hose is much less.

b. An alcohol and aviation lube oil mixture is being used by VF-154. Three gallons aviation lube oil and one gallon alcohol are mixed by hand and added to the main fuel cell. It is expected that this mixture may help reduce incidents of auto-acceleration and corrosion in the fuel supply system.

c. Total aviation gasoline used this period on the line was 732,674 gallons, alcohol 355 gallons, aviation lube oil 2,476 gallons.

3. Flight Deck

During the period of this action report, this ship experimented with sewing bright yellow patches on the plane director's foul weather jackets on the front, back, and bottom of the arms. Pilots reported the directors were very easily picked out even in the crowded areas of the flight deck. It is recommended that in periods of cold weather all personnel on the flight deck have the patches and markings identifying their work sewn on their jackets to enable the proper personnel to locate easily those required.

4. Maintenance

a. The V-4 Division has been hampered in its efforts to build quick change units of J48P6 engines because of a temporary shortage of adapter rings for the engine stands. Rings are on order, however, and delivery is expected in the near future.

b. Engines built up and issued to squadrons during this period include 1 R2800-18, 1 R2800-32 and 2 J48P6. Three Hamilton Standard propellors for F4U aircraft and two aero-products propellors for AD aircraft were built up and made ready for issue.

c. The aviation metal shop manufactured hardware for approximately 144 nylon tie-down straps, altered nine tow-bars to permit towing F9F aircraft from astern, repaired the right wing stub and changed outer panels on F9F-5 BuNr 125973, in addition to the repair of wing flaps, rudders, elevators and trim tabs, and the fabrication and installation of a hangar deck status board and a Flight Deck Control plane spotting trayplate.

d. The oxygen transfer equipment is worn out and in constant need of repair. The ship expects to receive a new unit from the ORISKANY upon her departure from WestPac.

e. Three "BuNr 40" series towing tractors became unservicable during the period; a cracked cylinder block, a housing, and a deck-edge elevator accident produced the casualties. Spare parts such as ignition coils, condensers,

distributor caps, breaker points, and fuel pumps are difficult to obtain and as a result automotive equipment tends to be out of commission for long periods.

5. Catapults: Reported in accordance with reference (e).

a. Statistics

(1) Total Live Shots 768

Day Live Shots	741
Night Live Shots	27
Dead Load Shots	0
No Load Shots	1

(2) Breakdown of Catapult Shots

	Port	Stdb	Total
Day Shots	347	394	741
Night Shots	13	14	27
No Load Shots	1	0	1
Total			769

(3) Types of Aircraft Catapulted

Type Aircraft	Port	Stdb	Bridles Expd.
F9F-5	333	386	12
F9F-2	0	1	0
AD	18	7	4
F4U-5N	7	12	5
TBM	2	2	1
Total	360	408	22

b. Forged Eye F9F Pendant: (R90-NAF-31349-1)

(1) An average of sixty-four shots was obtained from the Bungee Pendant Arresters constructed according to NAF Drawing specifications "Nr 314289". They were found to be good for over three-hundred shots. The only pendants lost over the bow resulted from the tail skag not being in the retracted position. It is recommended that the tail skags continue to be placed in the retracted position for catapulting.

c. Pump History

This ship was recommissioned 28 August 1950, with all used pumps installed in the catapults. Pumps failed and were replaced in this sequence:

Catatpult	Pump Number	Date Failed	Number of Shots
Port	1	14 Sep 1950	17 Dead Loads
Port	1	19 Feb 1951	433
Port	3	11 Apr 1951	502
Port	2	20 Dec 1951	1,853
Port	4	25 Jan 1952	1,883
Port	2	30 Mar 1953	3,765
Stdb	1	3 Jul 1951	1,330
Stdb	4	3 Jul 1951	1,432
Stdb	3	24 Jan 1952	2,007
Stdb	2	28 Jun 1952	3,367
Stdb	1	28 Jun 1952	2,167
Stdb	3	8 Aug 1952	1,748
Stdb	4	8 Aug 1952	2,481
Stdb	1	7 Feb 1953	1,644
Stdb	1	14 Feb 1953	50
Stdb	1	31 Mar 1953	510
Stdb	2	31 Mar 1953	2,334

Condition of Pumps now in use

Catapult	Pump Number	Number of Shots	Out-put every 40 sec.
Port	1	5,385	4.5", should be replaced
Port	2	3,765	Failed
Port	3	5,316	5.75 inches
Port	4	3,735	6 inches
Stdb	1	510	Failed
Stdb	2	2,334	Failed
Stdb	3	1,946	6 inches
Stdb	4	1,792	5 inches

d. General Comments

(1) Since 1 January 1953, after having made change number thirty-six (which increased the maximum launching pressure to 4,000 psi.) 1,230 shots have been made on the port catapult and 1,140 on the starboard catapult. Four-hundred-eighty (480) of these launches were made at maximum firing pressure; two-hundred-eighteen (218) shots on the port and two-hundred-sixty-two (262) on the starboard machine. As a result of high pressure shots and

excessive vibrations this ship has experienced these malfunctions:

(a) Due to Excessive Vibration:

(1) Braces break loose as frequently as every three days and have to be re-welded.

(2) Faces and indicator needless in pressure gauges vibrate loose and give incorrect readings (One accumulator and cable tensioner gauge broke completely off).

(3) The entire crosshead must be slugged down daily after a normal day of operations.

(4) Leads in the electrical controllers have been broken loose.

(b) As a result of high pressures:

(1) Leaks at the base of the accumulator around the composite valve and pumps.

(2) Excessive wear on shuttle slippers.

(3) Expansion of the piping of the main gravity return line. (Caused by large volume of oil displaced plus excessive oil slippage through the three-way valve; due to too rapid crosshead retractions).

(4) Prestone is lost from the atmospheric vent on the runaway shot preventor after fast retractions. (As much as two gallons per machine is lost on a normal day of operations).

(5) Pieces of metal are chipping out of crosshead.

(6) The entire machine vibrates (two hours after a twenty plane launch at pressures of 3,700 psi. and over, the temperature of the sump tank oil was recorded as 58° C).

(7) Oil is absorbing large quantities of air causing excessive foaming.

c. Recommendations

(1) It is recommended that advisibility of sustained operations with F9F-5 Aircraft and the type H Mark 4B Catapult be further investigated.

6. Arresting Gear

a. Statistics

(1) Total Landings 1,190

Day landings	1,182
Night landings	8
Jet Landings	698
Prop landings	492

(2) Total Barrier and Barricade Engagements

Prop Barrier	5
Jet Barrier	4
Jet Barricade	2

(3) Average Wind 35 knots.

(4) Average Runout

Jets	132
Props	103

b. Description of barricade engagements

(1) On 21 March 1953, at 1825I, an F9F-5 (BuNr 125961) appeared to make a normal approach. On landing the tail hook hit the ramp of the flight deck causing it to lock in the "up" position. The plane proceeded up-deck and bounced over barriers number two (2) and three (3), but did engage the barricade which functioned properly. The plane sustained slight damage. There was no injury to the pilot or flight deck personnel and no damage to other aircraft. The barricade webbing was replaced and ready deck re-established in ten (10) minutes.

(2) On 13 March 1953, at 1708I, an F9F-5 (BuNr 126159), appeared to make a normal approach and received a cut from the LSO. The plane made a hard landing breaking the tail hook and then proceeded up-deck engaging barriers number two (2) and three (3) and the barricade, which functioned normally. The Davis Webbing and barricade were replaced and ready deck re-established in nine (9)

minutes. There was no injury to the pilot or flight deck personnel and no damage to other aircraft.

c. Description of Gear-up Landing

(1) On 22 March 1953, at 1552I, an AD4NA (BuNr 126911) made an emergency gear-up landing on this ship. The plane engaged cross deck pendant number two (2) and an arrested landing was effected. The under side of the plane sustained slight damage but the pilot was uninjured. Numbers seven (7) and eight (8) cross deck pendants were damaged and had to be replaced.

d. General Comments

(1) The remainder of arresting gear operations during this tour have been relatively routine with only the normal maintenance problems. Judging from its performance thus far the Mark 5 arresting gear appears to be adequate for operations with F9F-5 aircraft.

C. Gunnery Department

1. Deck Seamanship Evolutions

All operations have been performed with the highest regard for safety and speed. Personnel, both old and new, have responded with a commendable amount of initiative and a tireless effort to the demands of these operations. The per-hour tonnage handled has remained at a very high level in both ammo and provisioning handling. It is anticipated the previous high rates attained by this ship will be maintained as weather conditions improve and the new hands become better acquainted with their respective tasks.

2. Recommendations

It is suggested that the various AO's operating in the Korean area standardize fueling rigging (easing-out hooks, span-wire seizings, etc.) for purposes of more rapid refueling operations. Specifically, it is recommended:

a. That hooks all be of uniform size and spaced approximately ten feet from the end of the AO's outboard length of fueling hose.

b. That the necessary span-wire seizings to the fueling hoses be spaced three feet apart on the same length of hose.

c. And that these seizings be led clear of all other lines.

D. Engineering Department

1. Electronics

a. During the period of this report, there was a major casualty in the YE-2 which gave erratic performance although front-panel indications were normal. An inspection of the Barce rotating joint of the antenna revealed severe corrosion. High winds and cold weather delayed further work on the apparatus until the ship's arrival in port.

b. The AN/SPS-6B radar has a false echo on all bearings between 4,000 and 6,000 yards on long pulse; thus it presented a doughnut on all PPI's. The 1850-ohm resister recommended in the July 1950, ELECTRON (p. 23) did not correct the defect. A new pulse transformer (T-109) has been ordered on priority "A" but has not been received. Dragging and side lobing on this radar are still problems. An expanded metal skirt on the antenna gave some small improvement but is inadequate for continuing operations.

c. ShipAlt CV345 (Installation of UHF Radio Equipment) has not been completed in that the CU-255/URR multicouplers are not installed. When the conversion from VHF to UHF is made, present antenna facilities may be inadequate. This problem is being made the subject of separate correspondence.

d. The PRINCETON is operating two TBS's in parallel on the primary tactical circuit. There are now no blind spots in the radiation pattern. The connection is made by a patch cord between chest set jacks on the bridge remotes. A disadvantage is that if one TBS is turned off, the other TBS keys continuously.

e. During the period of this report, ship's force repaired one AN/ARC-1 for a destroyer.

2. Auxiliaries

An insulation break-down in the number six main-feed booster-pump caused a zero ground, and consequently burned out the motor. Ship's force is rewinding the motor. Separate correspondence (Material Analysis Card) covers trouble report.

E. Medical Department

1. Medical Department supplies were adequate and there was no significant break-down of equipment.

2. There is a shortage of Hospital Corpsmen on board and it has been a difficult problem to fulfill all the requirements of the department with only seventy-six percent of allowance on board.

3. Medical Department evaluation of Air Group and Ship's Company: the health and morale of the crew and air group has been excellent. The epidemic of upper respiratory infections so prevalent during the ship's deployment has now disappeared.

(For Medical Department Statistical Summary, and morale recommendations see Section V).

F. Operations Department

1. Aerology

a. Summary of Weather Conditions

High pressure prevailed over the operating area most of this period except when low pressure systems passed over area on the following days: 8 March (1001.3 MB. Low), 12 March (1007.6 MB. Low), 19 March (1001.8 MB Low), and 25 March (972.0 MB. Low).

The average temperature in the area was forty-eight degrees fahrenheit; the average sea temperature was fifty-three degrees fahrenheit; the average wind velocity was fifteen knots, and the prevailing wind direction was West.

b. Communications

Facsimile was received from Fleet Weather Central Yokosuka, Japan on 4545 KC and 9427.5 KC. There was very good reception on both these frequencies except on rare occasions when atmospheric conditions caused interference.

Radio-Teletype-AIF (Tokyo) reception and coverage was satisfactory on 6880 KC days and 5479 KC at night except on occasions when frontal weather existed between the operating area and Tokyo. At those times AIE (Guam) was received on 8105 KC and 13,007.5 KC days and 5452.5 KC at night

with satisfactory results.

2. CIC

a. Radar Navigation

The technique of radar plotting and navigation using the MK 25 fire-control radar for sortie and entry was continued during this period with very satisfactory results. A permanent navigation team is assigned to this detail, and while their work is paralleled by conventional surface search radar navigation, fire-control fixes are relied upon for such operations as approaching buoys and anchorages where fine accuracy is required.

b. Training Program and Personnel Problems

In anticipation of the future loss of key personnel, a training program has been followed with the object of qualifying CIC Officers to perform a variety of jobs from Surface Watch Officer to Air Controller. At the same time, enlisted personnel have been systematically rotated through all watch-standing positions in order that they obtain proficiency at varied operations. Elsewhere in the field of training, further effort was made to qualify CIC Officers as underway OOD's. A number of meetings between CIC Watch Officers and Deck Watch Officers were held to iron out minor difficulties and to promote a better understanding of the problems involved in each watch. Close liaison and maximum cooperation have been the goals.

Due to a personnel shortage a six-hour, three-section watch schedule was tried on a tentative basis early in this period. However, it proved less satisfactory than a six-hour, four-section watch. The latter, used now for a considerable period of time, has been found to produce the optimum in efficiency and continuity.

c. Vertical Plot on Navigation Bridge

A new service extended by CIC is the maintenance of a vertical plot on the bridge for the Captain's evaluation during general quarters. Raid information is plotted on a thirty inch square plexiglass arrangement by a radarman permanently assigned to this general quarters station. He monitors the 81JS sound-powered circuit and is supplied with information by a talker in CIC.

the post office of the U.S.S. PRINCETON conducted business as follows:

(1) Stamp sales in the amount of $1,510.00

(2) Money order sales in the amount of $83,586.09

(3) Total mail handled 552 bags

4. Intelligence

a. The ship's Air Intelligence Office encountered no great difficulties in the initial period of the present tour. Cooperation between the Intelligence Officers of the Air Group and the Ship's Air Intelligence Officers has been and continues to be excellent.

b. The following factors have contributed to the ease with which this office was able to operate during the first combat tour:

(1) Half of the staff, both officers and enlisted men have made at least one previous cruise in an Air Intelligence capacity.

(2) Pre-deployment requirements were easily met through the excellent services of Commander Air Force, Pacific Fleet Intelligence and Air Navigation Offices.

(3) Ship's Air Intelligence Officer and four of the Air Group Intelligence team made an advanced tour of combat activities, returning to the ship during its stay at Pearl Harbor.

(4) The turnover of current Intelligence materials by the U.S.S. KEARSARGE (CVA-33) Air Intelligence Officers was complete; excellent cooperation was given. The coordination of this program by Commander Fleet Air, Japan AIO and the additional aid provided through the ComFairJAPAN AIO and Air Navigation Officer also were excellent.

Late Escape and Evasion information was given to the Air Group by the ComNavFE Air Intelligence Officer enroute from Yokosuka to the operating area. This period is considered the best for conducting lectures of this nature.

c. Operating Procedures

The operation of the ship's Air Intelligence Office generally is in consonance with procedures employed by other CVA's currently assigned to Task Force SEVENTY-SEVEN. The present program of target mosaic preparation and distribution referred to on page 22, paragraph(3), of this report has standardized and greatly simplified requirements for target graphics. Large mosaics are provided for briefing and eight by ten inch reproductions are provided for each pilot. AMS L751 Series 1:50,000 scale charts are issued to each pilot for use in briefing and in the cockpit.

Flak plots are maintained on 1:50,000 and 1:250,000 scale charts. The 1:50,000 scale charts are set-up in nine-sheet sections, covered by acetate and backed with heavy paper. Although these are more cumbersome than the four-sheet plots used by most carriers, it is felt that the added coverage of areas surrounding any specific target is invaluable.

See Air Group FIFTEEN Air Intelligence section, page 21, paragraph d., for map and chart preferences of Air Group pilots.

d. Air Intelligence Rate for Enlisted Personnel

The enlisted men who are attached to the Air Intelligence Office are not required to be of any particular rate or designator, although it is the practice to train Yeomen and Quartermasters for this duty. It is the opinion of the Ship's Company Air Intelligence Officers that this arrangement, prevalent throughout the service, is highly unsatisfactory. There are a number of reasons for this opinion not the least of which is the fact that while the men become highly skilled specialists in the field of Air Intelligence, they fail to become developed in their respective rates. The result is that they must perform intensive outside study for all their advancement examinations.

It is recommended, therefore, that a permanent "Air Intelligence Specialist" rate be created within the Naval Service. Such a rate would not only eliminate the shortcomings of the present specialist arrangement, but would stimulate interest in the field of Air Intelligence in a continuing number of men of superior caliber.

5. Photo Interpretation

It is again recommended that distribution of photography to other carriers in the local area be discontinued except on special occasions. The present system whereby target mosaics are submitted by each ship and negatives of selected targets are kept on file makes such distribution entirely unnecessary. In addition to the time and materials expended, the storage problem is considerable.

This unit has used the six-inch K-17 camera in an effort to plot photography more accurately. Single exposures are made at the beginning and end of each K-38 run. The resulting small scale photography makes plotting relatively easy on occasions when the pilot is a victim of false orientation.

G. Supply Department

1. General

The overall aviation supply situation has been good. There were only six cases of ACOG's during this period. Of these, four ACOG's for a period of twenty-four days were the result of non-allowance items; only two ACOG's for a period of two days were the result of allowance items. All non-allowance items were obtained from dud aircraft aboard.

2. Aero Products Prop Shaft Nut Wrench

Stocks of Aero Products Prop shaft nut wrench (R87-APD-6500685) were exhausted by excessive breakage in use. Three were broken in removing one prop from an AD barrier engagement. Two others were broken without budging the nut of another AD prop, and a wrench borrowed from the ORISKANY was permanently deformed with no more success. While in the early cases it is impossible to evaluate what effect improper seating of the wrench may have had on the failures, in the last four cases maximum precautions against canting or cocking the tool were taken and there is no doubt that tool failure occurred when working to overcome an initial torque application far in excess of the two thousand foot pounds prescribed for installation of the nut. The nut most difficult to unseat (referred to above) finally yielded to a special tool with internal teeth machined from heavy boiler plate welded on the toothless stub of the former tool. It is recommended that application of excessive torques to AD prop shaft nuts (possibly by the use of "Sweeny" hydraulic wrenches) be carefully avoided in order that afloat maintenance may be

performed with the tools provided. Requisitions for newer, and presumably stronger, Aero Products wrenches (R87-APD-6501411) have been filled uniformly to date by the substitution of the 6500685 wrench.

PART VII SUMMARY OF RECOMMENDATIONS

Personnel Performance

Reference Page 10, Para. 7 (Length of combat Tour)

A comparison of the morale, low accident rate, and general physical status of the crew and air group pilots with our observations during our last deployment points significantly to the fact that a three week period of combat is the optimum efficient time for this type of operation.

Air Group FIFTEEN

Reference Page 14, Para. 1,c,(1),(2), and (3) (Jet Flight Planning)

Rendezvous after launch should be conducted at low altitude and at low power sittings.

Cruise control must be mastered by every pilot.....

....it is mandatory that pitching deck technique be understood thoroughly by pilots, LSO's, and ship's personnel.

Reference Page 15, Para. 1,d. (Day Familiarization Missions for Night Pilots)

Giving night pilots daylight reece missions over the beach for familiarization is recommended.

Reference Page 16, Para. 2,a, (1) (Propeller changes to AD Aircraft)

Suitable tools should be made available at the squadron level for the proper performance of work that the squadron is expected to perform. (Also see Supply Department recommendation Page 35, Para. 2).

Reference Page 18,Para. b.(1) (Test quipment for Aero 5A Fire Control System)

There is a great need for a complete bench test set-up for the APG-30 and Aero 5A Fire Control System as a unit.

Reference Page 19, Para. b.(3) (ECM Equipment)

It is highly recommended that the AN/APA-70 be replaced in the AD4N aircraft by a PPI type presentation equipment for use on ECM missions.

Reference Page 19, Para. b.(4) (APS-31B Test Equipment)

It is recommended....that each team equipped with the APS-31B be issued as team equipment a waukeshaw or mobile power unit capable of the sustained high power output necessary to ground check this radar.

Reference Page 19, Para. 3.a. (Mark IV Exposure Suit)

It is recommended that (exposure) suits be issued to squadrons at least three months before final deployment....

.....it is recommended that if the Mark IV suit is to be "tailored" to each pilot's measurements, a more careful study be made of sizes in the larger suits to insure proper fitting.

Reference Page 20, Para. 3.b. (PSK-1 Survival Kits)

We recommend that PSK-1 kits either become a permanent part of the parachute and pararaft and remain with the squadrons, or else be collected from each ship returning to the States and issued to the replacement Air Group.

Reference Page 20, Para. 4.a. (AIO Advance Forward Area Tour)

It is recommended.....that the advance party (AIO) be sent out at least two months previous to the final deployment to make use of the lessons learned before the final departure from the States.

Reference Page 21, Para. c. (Intelligence Briefing Spaces)

.....it would be highly desirable to have a central room on the 02 level to be used by both jet squadrons for de-briefing purposes.

Reference Page 21, Para. d. (Use of AMS L552 Series Charts)

.....it is recommended that use of the AMS charts be emphasized considerably more in the pre-deployment map reading utilizing the AMS L552 series.

Reference Page 21, Para. d.(3) (Target Mosaics)

It is felt that a second mosaic of smaller scale covering the general target area would be desirable for briefing purposes, and in some instances for cockpit use. This type of mosaic would apply particularly to jet strikes.

Air Department

Reference Page 23, Para. 3 (Distinguishing patches for flight deck personnel's foul weather gear)

It is recommended that in periods of cold weather all personnel on the flight deck have the patches and markings identifying their work sewn on their jackets to enable the proper personnel to locate easily those required.

Reference Page 24, Para. 5.b.(1) (Use of F9F Forged Eye Pendant R90-NAF-31349-1)

It is recommended that the (F9F) tail skags continue to be placed in the retracted position for catapulting (use of Forged Eye F9F Pendant (R90-NAF-31349-1).

Reference Pages 24 to 27, Paras. a,b,c,d and e (Advisability of sustained operations with F9F-5 aircraft and the type H Mark 4B Catapult)

It is recommended that advisability of sustained operations with F9F-5 aircraft and the type H Mark 4B Catapult be further investigated.

Gunnery Department

Reference Page 28, Para. 2 (Rigging for refueling at sea)

It is suggested that the various AO's operating in the Korean area standardize fueling rigging (casing-out hooks, span-wire seizings, etc.) for purposes of more rapid refueling operations. Specifically, it is recommended:

a. that hooks all be of uniform size and spaced approximately ten feet from the end of the AO's outboard length of fueling hose;

b. that the necessary span-wire seizings to the fueling hose be spaced three feet apart on the same length of hose;

c. and that these seizings be led clear of all other lines.

Operations Department

Communications

Reference Page 32, Para. 3c (Pneumatic Tubes)

It is recommended that the double-ended type of carrier be furnished for longer life and trouble free service.

Intelligence

Reference Page 34, Para. 4d (Air Intelligence Rate for Enlisted Personnel)

It is recommended that a permanent "Air Intelligence Specialist" rate be created within the Naval Service.

Photo Interpretation

Reference Page 35, Para. 5

It is recommended that distribution of photography to other carriers in the local area be discontinued except on special occasions.

Supply Department

Reference Page 35, Para 2 (AD prop shaft nut wrenches)

It is recommended that application of excessive torques to AD prop shaft nuts (possibly by the use of "Sweeny" hydraulic wrenches) be carefully avoided in order that afloat maintenance may be performed with the tools provided.

W. R. Hollingsworth
W. R. HOLLINGSWORTH

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Supply Department

Reference Page 35, Para 2 (AD prop shaft nut wrenches)

It is recommended that application of excessive torques to AD prop shaft nuts (possibly by the use of "Sweeny" hydraulic wrenches) be carefully avoided in order that afloat maintenance may be performed with the tools provided.

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