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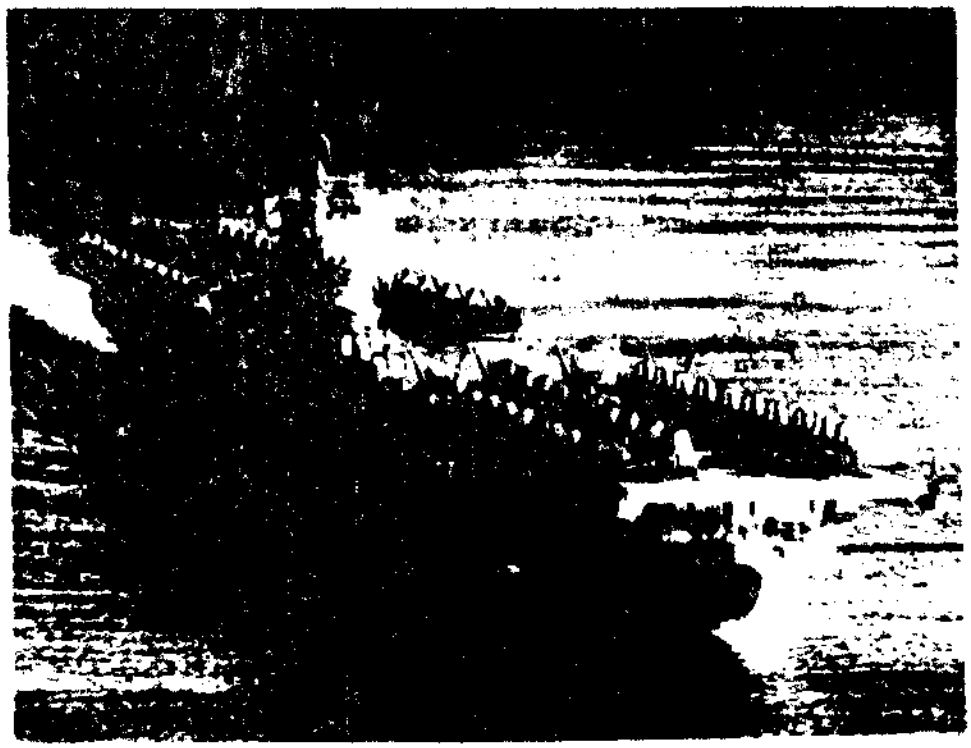
U.S.S. PRINCETON CV-37
AND
CARRIER AIR GROUP NINETEEN

ACTION



REPORT

16 AUG 1952 TO 20 SEP 1952

[redacted]

SECURITY INFORMATION

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SECURITY INFORMATION

From: Commanding Officer, U.S.S. PRINCETON (CV-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

Subj: Action Report for the period 16 August 1952 through 20 September 1952

Ref: (a) OpNav Instruction 3480.4
(b) CVG-19 conf ltr ser 036 of 20 September 1952 (Air Attack Reports for the period 18 August through 17 September 1952)

1. In accordance with reference (a) the Action Report for the period 16 August 1952 through 20 September 1952 is hereby submitted.

PART I GENERAL NARRATIVE

On 16 August, pursuant to Commander Task Force SEVENTY-SEVEN confidential dispatch 080022Z of August 1952, the U.S.S. PRINCETON with Carrier Air Group NINETEEN embarked departed Yokosuka, Honshu, Japan and proceeded to the operating area. On 18 August the PRINCETON rendezvoused with Task Force SEVENTY-SEVEN.

Task Force SEVENTY-SEVEN was composed of four aircraft carriers, the USS PRINCETON, USS BOXER, USS ESSEX and the USS BON HOMME RICHARD, with various heavy support and screening ships. The USS BOXER was relieved by the USS KEARSARGE late in the operating period.

The mission of this force was as set forth in Commander Task Force SEVENTY-SEVEN Operations Order No. 22-51 (Second Revision).

[redacted]
SECURITY INFORMATION

Throughout this period of combat operations the PRINCETON furnished strikes against industrial targets, supply areas, troop concentration areas, and the transportation system of North Korea. In addition to the strikes, close air support, naval gunfire spot, electronics counter-measures, combat air patrol, anti-submarine patrol, and photographic and visual reconnaissance missions were flown in support and defense of the United Nation Forces in Korea.

The major efforts were directed against enemy supply activities, including storage areas, transportation facilities to these areas and the few industries remaining in North Korea. Strikes against these targets took the PRINCETON aircraft from coast to coast and from the front lines to the Manchurian and Russian Borders.

On 20 August the PRINCETON launched a deck load strike against a large supply area at Changp-yong-ni on the West Coast of Korea. In a coordinated Navy, Air Force and Marine attack within easy range of the large enemy concentration of MIG-15 fighters, PRINCETON pilots attacked their targets with excellent results. Twelve Panther Jets from the PRINCETON were engaged by six MIG's for five minutes. The MIG attacks were easily countered and no damage was sustained by the PRINCETON planes.

A similar coordinated Navy, Air Force and Marine attack was made on Pyongyang, the capital of North Korea, on 29 August with equally good results.

On the first of September a strike was flown against the Aoji synthetic oil plant, which is located four miles from Manchuria and only eight miles from Russia. In the attack, which caught the enemy so much by surprise that no opposition was offered, the PRINCETON planes inflicted heavy damage upon the plant.

Flying even closer to the Manchurian border on 13 September, an attack was made on the city of Hoeryong, located on the border and one of the main gateways into Korea from Manchuria. Two maximum effort launches were directed against storage areas, factories, transportation facilities and barracks areas in the city with very good results. The only opposition encountered was meager small arms fire.

During the period strikes of smaller size were launched against lumber mills, mines, brick plants, cement factories,

power plants, boat factories, supply storage areas and troop concentrations throughout North Korea.

The enemy railroad lines along the east coast were under constant attack by the PRINCETON Air Group. Bridges and sections of the railroad difficult to repair were hit again and again in an effort to stop the enemy's flow of supplies. Night heckler and daylight armed reconnaissance missions were flown in an effort to catch the enemy trains and trucks on the move.

During the seventeen days that flight operations were conducted 1807 sorties were flown and about 1200 tons of ordnance were dropped on the targets. Three Corsairs and one pilot were lost due to enemy action and one Corsair and one pilot were lost due to operational causes during the period.

PART II CHRONOLOGICAL ORDER OF EVENTS

16 - 17 August

Departed Yokosuka, Honshu, Japan. Enroute Task Force SEVENTY-SEVEN via Tsugaru Strait.

18 - 19 August

Joined Task Force SEVENTY-SEVEN. No Air operations due to adverse weather conditions.

20 - 21 August

Conducted air operations. Two hundred nine sorties were flown.

22 August

Replenished at sea.

23 August

Conducted air operations. Eighty sorties were flown.

24 - 25 August

No air operations due to adverse weather conditions.

26 August

Replenished at sea.

27 - 29 August

Conducted air operations. Two hundred Twenty-three sorties were flown.

30 August

Replenished at sea.

31 August

Captain W. R. HOLLINGSWORTH, U.S. Navy, relieved Captain Paul D. STROOP, U.S. Navy, as Commanding Officer of the PRINCETON. No air operations due to adverse weather conditions.

1 - 2 September

Conducted air operations. Two hundred forty-two sorties were flown.

3 - 4 September

No air operations due to adverse weather conditions.

5 September

Replenished at sea during the morning. Conducted air operations during the afternoon. Forty-one sorties were flown.

6-7 September

Conducted air operations. One hundred seventy-eight sorties were flown.

8 September

Replenished at sea.

9-10 September

Conducted air operations. Two hundred fifty-one sorties were flown.

11 September

Replenished at sea.

12-14 September

Conducted air operations. Three hundred seventy-five sorties were flown.

15 September

Replenished at sea.

16-17 September

Conducted air operations. Two hundred eight sorties were flown.

Departed Task Force SEVENTY SEVEN at the completion of air operations.

18-20 September

Proceeded to Yokosuka, Honshu, Japan.

PART III ORDNANCE

A. Performance

1. Ship's

a. Fire Control Equipment

The following casualties to fire control equipment were caused by a tropical storm (MARY) on 2-3 September even though Typhoon Condition I (modified) was set and all prescribed precautions were taken:

(1) GFCS MK 63, radar MK 34, system #41 - This system required approximately three days of extensive drying before being restored to operation. Although the amount of water actually entering the compartment was negligible, critical components of the system became water-soaked from condensation of moisture in the atmosphere. The present ventilation is inadequate; the moisture entered through the natural exhaust vent during the storm.

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(2) GFCS MK 63, radar Mk 34, system #42 - This system became completely water-soaked due to entry of salt water into the compartment through the natural exhaust vent. No water-tight fittings were provided for this opening. Extensive drying procedures were employed, however, the system lost an indicator unit in the Mk 34 radar due to water entering plastic enclosed power cables.

(3) GFCS MK 56 director #52 - Secant attenuator R2452 and cosine attenuator R2451 in the MK 56 Mod 2 director burned out due to salt water corrosion in the director itself. The Type 1F Synchro receiver also suffered casualty due to salt water corrosion. This corrosion resulted from salt water spray received during the storm.

The magnetrol Type 2J51 V1121 in the Mk 35 radar proved defective and required replacement. The cause of the casualty has not yet been established. This has been reported to the Inspector of Naval Ordnance in the GFCS Mk 56 Casualty Report.

(4) The following casualty was encountered in the after Mk 37 director: The stabilizing fields in the cross-level motor Model 5BBY79AB7, Assembly Dwg. BuOrd #297749, G.E. #T-5818120, burned out and rewinding of the motor was required. Considerable difficulty was encountered in repairing this motor as no prints of the motor are carried on board. An excessive amount of time was required to restore this motor to operating condition because of insufficient technical reference material.

b. Ordnance Equipment

The following casualties were encountered:

(1) The elevation motors of 40MM mounts numbers 41 and 43 were out of commission due to a short in the wiring. This was caused by excessive salt water moisture resulting from heavy weather.

(2) The elevation power unit of 40MM mount number 416 also sustained a casualty. The cause has not been definitely established, however, present estimate of the damage is such that it is believed the ship's force will be able to effect repairs.

c. Recommendations:

One possible solution for preventing future casualties of the types listed in sub-paragraphs 1. a (1) and (2) above is to equip the natural exhaust vents with water tight hatches that can be secured during stormy weather.

2. Aircraft

a. 20MM Guns

Outboard link chutes and outboard gun mounts for AD-4 aircraft have been ordered but not received. (These parts are virtually unobtainable in the forward area).

Outboard gun mounts on AD-4 aircraft have been cracking. It is recommended that guns with cracked or damaged mounts not be fired due to the fact that the gun charger will not remain properly engaged with the breechlock to insure positive safetying of the gun.

b. Test of New Firebomb, Igniter and Fuze.

Fifty Mk 78 Mod 1 firebombs together with M-173 fuzes and M-23 igniters were tested during this operating period. These were found to be inferior to the old Mk 78 Mod 0 firebomb, M-157 fuze and M-15 and M-16 igniter combination in that:

(1) The fuzing operation takes thirty to thirty-five percent longer when the Mk 78 Mod 1 firebomb is used.

(2) The igniter adapters on the Mk 78 Mod 1 firebomb itself, because of their location, are readily susceptible to damage which cannot be repaired quickly, if at all.

(3) The M-173 fuze has a tendency to "bind" in the M-23 igniter, making it difficult to seat the fuze fully.

(4) When the M-173 fuze is fully seated in the M-23 igniter, it is possible for the fahnstock clip to jam the vanes of the fuze, thus preventing arming.

Further details are contained in a report submitted by this command to COMSERVRON THREE.

c. Hung Ordnance Report

Type Ordnance	AERO 14 A	MK 8 Mod 2	Mk 51	Mk 55	Douglas Bomb Ejector	Totals
100#	5			3		8
Frags	3			5		8
250#	12			4		16
500#		1				1
1000#						
2000#						
Napalm Incend.	1					1
	21	1		12		34

Disposition of hung ordnance.

Type Ordnance	Later manual release	Release by jerking	Remaining on racks	Drop offs on landing	Totals
100#			8		8
Frags		1	7		8
250#			14	2	16
500#	1				1
1000#					
2000#					
Napalm Incend.			1		1
	1	1	30	2	34

Of the 6739 bombs carried, a total of thirty-four bombs or .50 percent hung up.

B. Expenditure

QUANTITY	DESCRIPTION
160	2000# GP
585	1000# GP
932	500# GP
2247	250# GP
1526	100# GP

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Expenditures (cont'd)

QUANTITY	DESCRIPTION
6	350# Depth Bomb AN-Mk 54
603	220/260# Frag
388	100# INC Cluster
788	Fuze, Nose, AN-M103A1
3841	Fuze, Nose, AN-M139A1
1012	Fuze, Nose, AN-M140A1
212	Fuze, Nose, VT, T50E1
49	Fuze, Nose, VT, T50E4
247	Fuze, Nose, VT, AN-M168 (T91E1/91)
16	Nose Fuze, AN-Mk 219
4639	AN-M100A2 (ND)
998	AN-M101A2 (.025)
688	AN-M102A2
6	Hydrostatic Fuze, AN-Mk 230
4037	Primer Detonator M14 (0.01)
98	3.5" Rocket Head Solid Mk 8 Mod 1
98	3.25" Rocket Motor Mk 16 Mod 5 W/fin
1164	6.5" Head (ATAR) Mk 2
1187	5.0" Rocket Motor Mk 10-5
55643	20MM HEI, M97
55638	20MM INC, M96
43782	20MM AP-T, M95
153453	Link, 20MM, M8E1 (M10)
36080	Cal. .50, API, M8
36080	Cal. .50, INC, M1
18340	Cal. .50, API-T, M20
90200	Link, Cal. .50, A/C M2
322300	Cal. .50 Belted, (2-2-1)
2975	Napalm, Type 1 or N3 (lbs)
44	Igniter, WP, M15 or M215
44	Igniter, WP, M16 or M216
87	Fuze, M157, W/Burster C8R1
44	Gas Tank, F51 Type
50	Gas Tank, Mk 78 Mod 1
80	Xylenol
34	Igniter, M23
79	Parachute Flare, Mk6
18	Parachute Flare, Mk 8 Mod 2
19	Parachute Flare, AN-M26
89	Signal, Drift, (N) AN-Mk 5
238	Bomb Ejector, Ctg. Mk 1

PART IV BATTLE DAMAGE

A. Own

The ship sustained no battle damage. See reference (b), Air Attack Reports 281-52 through 393-52 for battle damage sustained by PRINCETON Aircraft.

B. Enemy

See reference (b), Air Attack Reports 281-52 through 393-52 for damage inflicted upon the enemy.

PART V PERSONNEL

A. Personnel Count

The average on board count was:

	Officers	Enlisted	Total
Ship's Company	130	2022	2152
Marine Detachment	2	59	61
Air Group	134	654	788
	266	2735	3001

The following rates were transferred (transients not included):

ICC	1	GM2	1	SK2	1	AB3	1	AK3	1	SA	2
FTC	1	AD2	2	SD3	3	AD3	3	MU3	1	FA	1
ETC	1	AO2	1	BT3	1	PH3	1	CS3	2		
DC1	1	AB2	2	YN3	3	AC3	1	SN	5		
GM1	1	RM2	1	MM3	2	AM3	3	AN	3		
MM2	2	AF2	1	AO3	3	RM3	1	FN	3		

The following rates were received for duty (transients not included):

MEC	1	SH1	1	EM3	1	FN	2	TA	2	PVT	2
YNC	1	BT1	1	SN	1	SA	33	SSGT	1		
BTC	1	ET2	1	AN	10	AA	1	PFC	15		

B. Transient Personnel

On occasion the PRINCETON has been requested to transpor enlisted personnel to the operating area for further transfer to

other ships. On other occasions enlisted personnel for ships not present in Task Force SEVENTY-SEVEN have been transferred from replenishment ships to the PRINCETON to await arrival of the ship to which they had been ordered to duty. A draft of sixty-seven enlisted men was received from the U.S.S. CIMARRON (AO-22) on 22 August for further transfer to the U.S.S. IOWA (BB-61). This draft was transferred on 29 August. The majority of men in this draft had not been paid in over a month, although an average of about twenty days had been spent at receiving stations in Japan. On the previous trip to the line 181 men were aboard for periods of three to eleven days under similar conditions. Initially, the Welfare Fund extended funds to provide these men with needed cigarettes, soap, razor blades and other health and comfort items. As the men continued to remain beyond their expected departure their pay records were opened and they were paid. The berthing of large drafts of transients presents a serious problem during operational periods. Hangar deck areas and spaces below deck where cots could be set up during peace-time steaming are used at night for aircraft servicing, arming and maintenance.

C. Performance

During this last operating period on the line personnel performance was excellent. The pilots exhibited the highest degree of flying proficiency, as evidenced by the fact that there were no barrier accidents, no major flight deck accidents and keen competition for all flights. Ordnance, maintenance and aircraft crews continued their past outstanding performances.

D. Morale

While operating on the line, athletics were curtailed by lack of space and time. Weight lifting, bag punching and ball throwing were available. Calisthenics were scheduled for the baseball squad on the flight deck. A big interest was shown by the crew in judo, and this was practiced on improvised mats on the hangar deck when room was available. The Forward Decontamination Room was used by aviators for work-outs and steam baths.

E. Casualties

One pilot was lost to enemy action; one pilot was killed in an operational accident; eleven pilots were grounded and three were hospitalized for short periods of time.

Summary of pilots lost from the Air Group from 16 August to 20 September 1952:

Deaths	2
Psychological	0
Injury	0
Disposition Board	0
	Total 2

12 September: LT(jg) H. W. WESTERVELT, VF-192, was killed in action when his F4U-4 crashed into a hillside following a bombing run on an industrial target near Kowon. The cause of the crash is believed to have been enemy ground fire.

17 September: LT O. F. WILLIAMS, VF-193, was killed when his F4U-4 crashed on take-off. The aircraft exploded and burned on contact. The pilot was not recovered.

Ship's company personnel suffered no casualties during this period.

PART VI SPECIAL COMMENTS

A. Air Department

1. Catapults

An effort was made to use the new F9F Forged Eye Pendant (R90NAF-313949-1) and the pendant arrester as described by H4B Catapult Bulletin No. 93. The latter was fabricated by the ship's force as directed. The results were as follows:

a. Pendant No. 1 - The first pendant lasted for one shot. It was badly smashed and kinked by the plane's tail skag. It was also creased on one of the small securing eyes by the tail skag. The skag sustained a similar crease.

b. Pendant No. 2 - The second pendant lasted for two shots. The first shot resulted in damage to the fuselage of the plane. The second resulted in damage to the plane's inboard flap, and the pendant was smashed and kinked near the forged eye by the tail skag. It was then decided that the pendant arrester as described by H4B Catapult Bulletin No. 93 is entirely unsatisfactory. Due to the design of the arrester the pendant is free to flip forward, forged eye end over. This results in damage to the airplane first, and then damage to the pendant by the skag.

The catapult crew designed and built a different type of arrester. This arrester lasted for eleven shots before breaking. The results were encouraging but further experimentation is necessary before making a full report. One problem which will have to be solved regardless of the arrester used is the denting of the catapult track plates due to the considerable weight of the F9F forged eye pendant. This problem may be overcome by the installation of heavier plates.

2. Arresting Gear

Frequent delays in recovering jet aircraft have been encountered due to the tail hook of the jets engaging the webbing of the Davis Barricade when the jets are taxing forward after recovery. The metal basket used by the hookmen to secure the tail hook has been employed in order to look the tail hook while the plane is in the gear, but the advantage gained is off-set due to the increase in interval required between jet landings.

On several occasions where a jet aircraft has landed directly on a yielding element it has caused the yielding element housing to collapse sufficiently to bind the yielding element arm in a looked down position. To release the arm it has been necessary to chisel away the protruded steel. A method is now being devised whereby an electric drill fitted with a rough emery wheel can be used to grind away the protruded steel thus saving several man-hours.

3. Gasoline Handling

At 0734I on 7 September 1952 gasoline ignited under a VA-type aircraft parked next to the ship antenna abreast the after edge of number one elevator. The aircraft had developed a leak in the defueling valve and was dripping on the vanes of a bomb lying under the aircraft awaiting a loading crew. An ordnanceman went to the airplane to move the bomb and as he reached for the bomb skid handles the gasoline ignited.

The fire was extinguished and an investigation revealed that an induced current strong enough to produce a one-eighth inch spark was present in aircraft parked within less than eight feet of the antennae when in the upright position and energized. With the antennae in the horizontal position, the plane parked next to the antenna had an induced current strong enough to produce a small spark. The aircraft parked over the area where the gasoline ignited was not grounded.

The following safety precautions have been taken to minimize the possibility of igniting gasoline or firing ammunition by current induced from high frequency transmitting antennae:

a. Positively insure that the TAJ transmitter and the TBM transmitter located in Radio II and the one TBM transmitter located in Radio III are secured. This automatically de-energizes the two whip antennae starboard side forward and the one whip antenna starboard side aft that have been causing the induced current difficulty.

b. Make a positive ground wire check on each aircraft prior to servicing.

The F9F tip tank fuel caps have in many instances failed to seal properly and thus have caused an excessive amount of gasoline spillage. The use of masking tape over the caps has reduced the spillage and loss of caps when catapulted, but a positive sealing cap would be more desirable.

Gasoline spillage has been encountered on the AD-W type aircraft when filling the wing tanks due to air being entrapped in the tank baffles and then bubbling up causing the tank to overflow. This became a serious problem when refueling several aircraft after a strike in preparation for the next operation.

4. Ordnance Handling

a. For more safe and efficient handling of loaded bomb skids on the flight deck, the following recommendations are made:

(1) That the solid aluminum ramp for the upper (or after) end of the jet barricade be made three-fourths inch higher and with a more gradual incline (about twenty degrees). With the present degree of incline there is a strong tendency for the brakes on the bomb skid to hit the top of the ramp or to drag across the nylon edge of the barricade after the wheels of the skid have crossed the apex of the present style ramp.

(2) That a ramp of similar type be made availabl for crossing the Davis Barriers and such conventional barriers as have no trough in the flight deck to accomodate them.

Bomb skid ramps of boiler plate, fabricated on board, have been used to some extent for pushing bomb skids across the barriers. During respot, however, it is inevitable that aircraft and tractors also cross these ramps. The resultant distortion soon negates the value of the ramps for bomb handling purposes.

B. The following safety orders are in effect and compliance enforced in order to minimize accidental gun firings and attendant fire and explosive hazards:

1. Only qualified personnel will check or work on aircraft machine guns. During operations each type squadron or detachment shall have a reliable petty officer in charge at all times; this petty officer shall exercise positive control in the assignment of personnel for making pre- and post-flight inspections.

2. Personnel working on machine guns will do so in teams only, with at least one person who is thoroughly checked out in the cockpit and armament system of the particular type plane on each team while checking guns. No one is to be permitted in the cockpit who is not well checked out. Should it be necessary to release the bolts or breech-blocks to battery or cycle the guns during performance of assigned work, the man in the cockpit, who is to do the releasing or cycling, will inspect personally each and all guns to insure that they are clear of ammunition immediately prior to operation. In no case will this rule of personal inspection be disregarded.

3. At no time will a live round be charged into the chamber of a gun aboard ship, except in the case of specially authorized test firing.

4. No work shall be performed on any one gun until all guns in the aircraft have been cleared of ammunition.

5. All gun and armament switches, charging controls and gun chambers shall be checked visually for proper position and clearance before loading the ammunition into the feedway or winding in the feed mechanism.

6. In the operating area, ammunition will be led up to the feedway or wound in ONLY when the aircraft is readied for the next flight that day. Ammunition will be removed from the feedway and the feed mechanism will have tension and loose rounds removed at all other times. Bolts and breech-blocks normally shall be in the battery position. When readying aircraft guns for operations, they shall be inspected to see that they are in battery prior to placing ammunition in the feedway or tensioning the feed mechanism, except on aircraft where the chargers have a tendency to creep back. A loaded gun will not be charged on board.

7. In checking the operation of a gun, live ammunition will never be used.

8. Each returning aircraft will be met and checked immediately after being spotted to insure that all switches are off and each gun's chamber is clear, that ammunition is pulled back from the feedway so that it cannot possibly slip back, and that all chargers are in the "SAFE" position. A visual check will be made on each gun prior to removing ammunition, feed mechanism or lifting cover. If the gun appears to be jammed, put something, (e.g., screw driver, etc.) ahead of the bolt or breech-block in such a manner that the gun cannot possibly fire until the aircraft is pointed in a "safe" direction and the jam cleared. The feed mechanism shall be removed from 20MM cannons when checking for a clear chamber.

9. Stockpiling of ordnance in an assembly or breakout area is prohibited, except in amounts necessary to meet scheduled operations. An effort will then be made to segregate the types, and they shall be placed so that rapid movement and jettisoning are possible.

10. Bombs normally shall be hung or loaded on aircraft that are parked on the flight deck. Exceptions may be made by the Aircraft Service Officer or Air Ordnance Officer to hang bombs on aircraft spotted on the hangar deck to maintain scheduled operations. Bombs shall not be loaded on aircraft to meet schedules any earlier than necessary prior to the flight. Incendiary or butterfly clusters, and bombs having long delay fuzes will never be loaded on the hangar deck, nor will aircraft ever be sent to the hangar deck with this type of load. All bombs will normally be removed from aircraft prior to sending them to the hangar deck. In a case where it is necessary to send a loaded aircraft below it will be unloaded at the earliest possible moment. All bombs and rockets will be moved from spare aircraft if the aircraft is not going out on the next scheduled flight.

11. Bombs shall not be fuzed in magazines, or in or near breakout or assembly areas but shall be fuzed prior to, or immediately after loading on racks or shackles. Nose fuzes normally shall not be inserted until after bomb suspension, to avoid handling damage.

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the Air Force concept of requiring all Group I Staff Aviators concerned with air operations to fly regularly with the groups under their control be adopted. It is felt that this would be beneficial to both the air groups and carrier division commander in that the latter would have members of his own staff who could provide him with realistic, first hand information as to the status, conduct, and effectiveness of current air operations.

Experience has proved that the time-tested battle concept of concentration of force still holds true and that the size and importance of the target must be the determining factors in selecting the tools to do the job. This group has found that large strike groups, concentrating on a selected target during a short period of time, will do more damage and suffer fewer losses than the same number of planes, in smaller elements, attacking the same target over an extended period of time. These results are attributed to adequate flak suppression made available to the bombers, dispersal of anti-aircraft fire by the multiplicity of attacking planes and the inability of the enemy to bolster his existing defenses before the target is destroyed.

Flak suppression tactics by jet aircraft and secondary flak suppression by prop aircraft, diving from ninety degrees to one hundred eighty degrees at variance with the bombing run, were continued on all strikes with highly successful results. It was noted that about forty percent of the flak sighted on the approach to large and heavily defended targets was rendered inactive and held down from the time of the jet run-in until completion of the strike and retirement from the target area.

During the latter half of this period, spare aircraft were launched on all strikes, thereby adding to the strength and composition of the strikes and eliminating the unnecessary work of respotting and de-arming these aircraft.

Several strikes completed their missions within two hours after being launched. This reduction of flight time is recommended whenever possible as it helps aircraft maintenance, reduces flight fatigue, and eliminates not-too-productive and often costly post-strike reconnaissance.

Coastal familiarization flights were scheduled for both VFN and VMN detachments during the mornings of days that the USS PRINCETON was the late carrier. This scheduling did not interfere with the night heckler missions and was extremely beneficial to the individual pilots of both detachments in

reorienting themselves to the coastline, terrain, location of cities, and general layout of target areas, thus increasing the efficiency of their night missions. It is recommended that new groups schedule this type familiarization flight for the night teams as early as possible after arriving in the area.

Since Communist supply traffic now moves almost exclusively at night, a successful prosecution of interdiction warfare requires night flights. In fact, the limited success of the interdiction program to date seems to be caused by three conditions: (1) the enemy's rapid repair of bridges and rail lines; (2) the enemy's effective use of tunnels and caves for daytime shelter of trains and trucks; and, (3) our own small night attack effort. We can only alter the third condition. In the past, night flights from our carriers have destroyed impressive numbers of trucks and trains. The actual slowdown of the enemy supply system by the night hecklers' harassment alone cannot be measured. It is known, however, that the mere presence of night planes overhead causes trucks to scatter from the roads, extinguish their lights, and stop, while trains usually take cover in tunnels and lose boiler power. Thus, from the offensive standpoint, night sorties are extremely valuable. It is realized, moreover, that with the present daytime workload, the scale of desired night operations necessarily is limited by the length of time that deck crews and support personnel reasonably can be expected to work on a continuing basis.

Carrier break-up doctrine has varied between USF-4 and ATP-1. Both have their advantages. However, ATP-1 is preferred by this Air Group.

Strict radio discipline during RESCAPS and a definite assignment of channels to be used by the RESCAP division and strike group have contributed in large measure to the success of these missions. Accurate plotting of the coordinates of the downed pilot and prompt escort of the helicopter to the scene by assigned aircraft cannot be overemphasized.

2. Electronics

IFF APX-6 Unit: An extremely high number of condensers, both in the I.F. strip and the high voltage circuit, have continued to short out. Accordingly, the following recommendations are proposed:

a. That a condenser of higher quality be used in these circuits.

b. That fuse ratings be lowered to protect the bleeder resistor network in the high voltage circuit when the above mentioned high voltage circuit condensor shorts out.

UPM-8 Unit: This unit, used for testing the APX-6 in aircraft, has not proved practical for shipboard use, due to the inconvenient location of the power outlets and also the lack of spare parts for maintenance. Accordingly, it is recommended that UPM-4 shop test equipment be made available for shipboard use.

3. Survival

The AN/CRC-7 radios have proved unreliable and unsatisfactory. Of the thirty-five radios and fifty batteries received by this command, only nineteen radios were found to be operative and twenty-one batteries strong enough to transmit. In periodic inspection of radios previously issued, many have been found to be inoperative due to dead batteries. Only one pilot has had any success with the radio when down, and his last only one hour. Pilots naturally have developed a lack of confidence in these instruments because of their repeated failure during emergencies. Again, it is recommended that a reliable lightweight radio, such as the Air Force URC-4, be made available for Navy combat pilots.

Until just recently, this command carried an ADSK-droppable survival kit on an outboard wing station of one AD aircraft in each strike group. During a recent strike, the parachute from one of these kits suddenly left its container and blossomed, throwing the plane out of control and very nearly forcing the pilot to bail out in order to save himself. At the time he was over heavily populated enemy territory and probably would not have been recovered. The survival officer of the Air Group personally had supervised the packing of the chute the previous evening and is completely satisfied that the parachute container was correctly closed and secured and the kit properly hung on the aircraft. The cause of the chute opening is not known; the pilot stated he had received no enemy ground fire which could have been responsible for the accident. Since this was the second such incident of inadvertent release, these kits are no longer carried on each hop but are kept available for immediate loading should the necessity for their use arise.

Pilots recommend that the wingman of a pilot who has had his aircraft damaged in flight call immediately on the

radio to determine his physical condition. This has proved helpful in three cases where the pilot was in a minor state of shock immediately after an anti-aircraft hit and was called upon by his wingman to institute emergency proceedings. One pilot that bailed out states that he was in such a state of mind that he might have gone down with the plane had such a call not been made.

This command has a doctrine of saving two guns during every strike for possible RESCAP use. This has proved invaluable in the four cases in which pilots have parachuted into enemy territory and have been protected until recovered by helicopter. It also is necessary for the protection of the helicopter during its flight to and from the position of the downed pilot.

A majority of the pilots of this Air Group wear the "G-suit" on their strike missions. It has been commented on many times as being an excellent item for flotation when in the water. Several pilots have used it in that manner and have stated that it materially aided them in remaining afloat. This was particularly true in two cases where the Mae West did not inflate properly due to faulty CO_2 bottles.

Further investigation is indicated for a satisfactory solution to the problem of carrying survival gear on the person. The wearing of the Air Force C-1 Survival Vest under the Mae West has made it difficult for pilots to reach across the body with the right hand to pull the D-ring of their parachute when bailing out. Many pilots have indicated a desire for some type of back-pack such as that used during World War II.

This command has lost four aircraft and two pilots during the tour just completed. One pilot was lost in combat and the other operationally on take-off, with no chance for survival in either case. The two pilots who were recovered left their aircraft in each case by parachute, one landing in the sea and the other on land in Korea. Recovery was made possible by the excellent bailout procedure of the pilots, well coordinated RESCAP procedures, and the outstanding efforts of the helicopter crews.

The policy of wearing goggles at all times while over enemy territory has proved to be sound. At least three cases of flying glass from broken windshields occurred in which the pilots eyes were protected from otherwise

dangerous glass splinters in the cockpit.

Difficulty was experienced by one pilot in reaching the D-ring after bailout from a F4U-5N. This same difficulty was experienced by another pilot earlier in the cruise. It is recommended that pilots be instructed to grasp the riser holding the D-ring with the left hand prior to jumping, thus assuring easy access to the ring. While both hands will be needed to get into position for the jump, the pilot should be able to grasp the left riser just before jumping.

The oxygen mask flutter valve has been found to be sticking at times when it becomes dirty. This can be alleviated by washing with plain water. None of the special washing compound is available and the ship has no allowance for obtaining it.

Buffet (hard-top) helmets should be improved for comfort and fit. This might be done by designing an adjustable lining. Goggles should be designed to fit the helmet, rather than the face.

VA-195 has recently started wearing "G-suits". The present plug-in fitting on the AD type aircraft has been found unsatisfactory because of the protrusion of the base which is in the direct path of the left hand when reaching the left console where trim tabs, emergency hydraulic pump, tailwheel lock, and other important controls are located. This could be greatly improved simply by lowering the disconnect trunk about eight inches.

4. Maintenance

During this period, ignition troubles have been greatly reduced by improved pilot technique during periods of engine idling. Most ignition trouble has been encountered by failures of ignition harnesses rather than plug fouling. Reconditioned RB 19-R2 plugs have averaged about sixty hours service on AD's and about 120 hours on F4U's. New RB 19-R2 plugs have been received and installed for sixty to seventy hours in the AD's without giving any trouble.

An electrical fire occurred in an AD while in flight which necessitated securing both generators and the battery during instrument weather conditions. The remaining instruments available for flight were the altimeter, rate of climb indicator, airspeed indicator, and standby compass.

These instruments are considered to be inadequate for successful instrument flight. It is recommended that the turn and bank indicator be of the vacuum type, thereby giving the pilot a partial panel for instrument flight in the event of an electrical failure.

Morale has been high and has contributed materially to the excellent availability during this operating period. The following are availability percentages by squadrons:

VF-191 and VC-61 (F9F's)	99.5%
VF-192 and VC-3 (F4U's)	95.7%
VF-193 (F4U's)	99.7%
VA-195, VC-11, and VC-35 (AD's)	96.3%

Complete test equipment for checking auto-pilots, G-2 compasses and other electronic and vacuum instruments is not yet available although these test instruments have been on order for several months. The absence of this test equipment forces a "trial and error" method of trouble-shooting.

Overall supply and cooperation by the Supply Department of the ship have been excellent; only a few AOG items have slowed supply service. High usage of bullet proof glass and all sections of windshields for F4U's and AD's depleted the onboard allowance early in the tour, and several days of availability were lost while planes were AOG for these items. One AD wrap cowl was completely blown off by flak and another damaged beyond repair. The cowl is not a section B allowance list item and parts of it are not carried in the Naval supply system. This item was replaced from duds, but several days were lost while duds were being located.

All gyro instruments are critical in this area and replacements are seldom available except on an AOG basis and then they are generally procured from the continental United States.

5. Awards

In the past, a great many of the awards have been delayed until just prior to the ship's departure from the Far East and in some cases until after the ship's arrival in the states. It is felt that this delay has removed the incentive factor from the basic concept of awards. Accordingly, it is strongly recommended that the authority to present strike/flight awards be delegated to Carrier Division Commanders

After two such failures, there were no spare connectors available, so repairs were effected by splicing the RG/U to the teflon. Upon inspection of the teflon cable, it was noticed that the teflon itself was apparently deteriorating. Dark spots that penetrated to varying depths had formed on the outside of the teflon. Shipboard checks were unable to prove that these spots decreased the insulating properties of the cable. After the fifth failure, ship's force bypassed the teflon sections with RG 27/U by splicing at the junction box at the foot of the mast. Prior to eliminating the teflon cable runs, seventy-five percent of all SX outage time was a result of modulation pulse cable failures. No such failures have occurred since the teflon has been bypassed. Recommendations will be forthcoming after an investigation by the overhaul activity during the vessel's next availability in the San Diego Area.

D. Gunnery Department

1. Personnel

The performance of fire control equipment during this period was very good in spite of the reduced number of fire control ratings on board. It is believed that this fine performance is due in part to the training program inaugurated immediately after this vessel was reactivated some two years ago. It has not been until recently, however, that this long range program has commenced to pay off.

In spite of the intense training program any further reduction in fire control ratings would be detrimental to the performance of the fire control equipment on board this vessel. The ship has a complement of fifteen fire control ratings in the chief, first class and second class petty officer grades. There is a total of four ratings in these grades on board (two first class and two second class petty officers); roughly twenty-seven percent of allowance.

2. Deck Seamanship

On 8 September, the provisioning from the U.S.S. GRAFFIAS (AF-29) was characterized by the highest rate yet attained on the modified house-fall rig at frame No. 72. This was achieved by the exclusive use of specially made six feet by six feet nets with short baskets. This station handled sixty-five loads in an hour, the loads being from six hundred to one thousand pounds. It is estimated that

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and Commanding Officers of carriers for presentation immediately following the strike or flight which fulfilled the requirements for the award, and that awards for bravery and distinguished achievement be presented by appropriate authority as soon after their occurrence as practicable. It is felt that this would not only give the recipients a "lift" at the correct psychological moment, but also would provide colorful and newsworthy items for public information releases.

Because of the intense, accurate, and stubborn anti-aircraft defense which all groups have been encountering recently on their strikes against the enemy, and in order to provide an equitable basis for strike/flight awards among the Navy, Marine Corps, and Air Force, it is recommended that the present requirement of twenty missions for an Air Medal be reviewed. It is felt that ten strike flights is a more appropriate number. It is further recommended that the Distinguished Flying Cross be awarded for the successful completion of forty, eighty and one hundred combat missions. During the 1950-1951 cruise Air Group NINETEEN pilots flew an average of forty-nine combat missions per pilot; during the current cruise the average will be about forty-seven combat missions per pilot.

Of the forty pilots who are presently on their second tour in the combat zone, seven have completed one hundred missions or more, however, Distinguished Flying Crosses for only two of the seven have been approved to date. Only five additional Distinguished Flying Crosses have been approved for other Air Group NINETEEN pilots.

In regards to the VC pilots, who are engaged solely in night flying, it is recommended that a different scale be used in determining awards due to the added hazards involved. It is felt that ten strike flights for each Air Medal and twenty-strike flights for each Distinguished Flying Cross would be more appropriate. Of the twelve VC night pilots assigned, the average number of combat flights is seventeen, and only six will have completed twenty missions or more by the scheduled termination of the cruise.

C. Engineering Department

Three failures have occurred in the SX Radar modulator pulse cables during this operating period making a total of five similar casualties since the ship's deployment to WESPAC. Each has occurred in or near the junction box at the base of the mast where the RG 27/U connects with the teflon cable or at the connectors at the base of the igloo.

twenty-six tons per hour rate was attained.

On 29 August, sixty-eight personnel were transferred to the U.S.S. ROGERS (DD-876) in one hour and thirty-nine minutes, all after dark. Red-lensed waterproof flashlights were used on the hook, the transfer chair, the men's life jackets, and the transfer stations.

During the Typhoon Karen encountered on 18-19 August, No. 8 life raft, located at frame No. 7, port side was carried away. As the bow of the ship plunges, water jets up from the flare of the bow, striking these rafts with tremendous force. In order to prevent the loss of more life rafts, the remainder were removed from their racks and secured to the overhead near the centerlines in the protected part of the forecastle. As soon as the ship enters port, an investigation will be made to see if the rafts can be secured to the racks in some other manner since the present method is not satisfactory during heavy weather.

E. Medical

1. The general health of the crew continued at its previous excellent level. Some tension and anxieties of an operational fatigue nature are beginning to manifest themselves among both Ship's Company and Air Group Personnel. There were no serious diseases or injuries. There were twenty-eight surgical operations performed during this period.

2. The venereal disease rate has remained at a high level. There were sixty-nine admissions to the sick list for venereal disease and one hundred-thirty five were treated as outpatients for non-gonococcal urethritis.

3. There were two casualties which were the results of the mission of the ship.

F. Operations Department

1. Aerology

a. General

Throughout the period of this report, the PRINCETON operated under the influence of weak high pressure cells with average to good flying conditions except for the following:

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"Typhoon "Karen". Typhoon "Karen" moved northward through the East China Sea on 16 August, into the Yellow Sea on 17 August and across Korea, emerging in the region of the 38th Parallel, at 2000I on 18 August. The Task Force was in the southern sector of "Karen" and encountered heaviest seas and highest winds after the passage of the center two hundred miles to the North. The maximum wind velocity encountered was southwest forty-two knots at 0430I on 19 August. Winds of gale force (thirty-four knots) began at 0330I and ended 1530I 19 August 1952.

Tropical storm "Mary". Tropical storm "Mary" moved inland over China from the Bashi Channel on 2 September, then north-east over the Yellow Sea and entered area in the region of the 37th Parallel at 1500I on 3 September. It emerged at the 39th Parallel about 2100I. A secondary "Eye" formed at 38 degrees north 130.5 degrees east at 0900I 3 September. This secondary "Eye" rapidly intensified then moved northeast. The Task Force was located in the northern sector of each "Eye" encountering winds of gale force (thirty-four knots) at 1310I 3 September and ending at 0750I 4 September 1952. A maximum wind of seventy-four knots occurred at 2000I 3 September. Both "Eyes" passed approximately twenty to thirty miles south of Task Force."

b. Communications

Facsimile - Reception in general was good with the exception of interference from CW transmission and during periods when the ship was in the area of storms.

Radio-teletype, Guam - Reception was good but coverage of the Korean Area in broadcasts was incomplete for our purposes.

Radio-teletype, Tokyo - Reception was good except when storms or active fronts existed between Tokyo and the operating area. Coverage of Korean Area reports by Tokyo was good.

c. Rawins (upper air winds taken by radar)

The Mark 37 and Mark 56 Directors were used with success for Rawins.

2. Combat Information Center

a. Training

(1) During the period covered by this report, an all-out effort was exerted to train all officers and men in jobs for which they were not already qualified. The future loss of experienced and key personnel was a prime consideration in this program.

(a) Four CIC Watch Officers were qualified as Underway OOD's. Two more stood numerous JOOD watches underway.

(b) All CIC Officers were qualified as CIC Watch Officers during flight operations.

b. Air Control

(1) It has been found expedient to monitor the transfer of all aircraft taking off from this ship to the frequency assigned for CAP, ASP or Strike Control when assigned to another ship. This insures, in the absence of an AC net, that the transfer is effected satisfactorily. Many times this monitoring prevents the aircraft from returning to land-launch frequency and reporting that they were unable to contact their controller. This was especially true during the first launch of the day.

3. Air Intelligence

a. General

Permanent briefing boards, preferably sliding panels, should be installed in all ready rooms. There should be a minimum of eight panels, at least three feet by five feet.

Due to the crowded conditions on board, it is necessary that the squadron air intelligence officers keep their equipment in their respective ready rooms. Some provision should be made for stowage of maps, photos, and classified reference material for ready accessibility. A chart table with a three tumbler lock and file drawers would provide the stowage space needed, as well as much needed working space.

As has been stated before in previous action reports, this Air Group has been using maps and charts enclosed in plexiglass envelopes. These have been used for five months and have given excellent results. The plexiglass is still in excellent condition and from all appearance will give many more months of service.

AMS Series L751 (Scale 1:50,000) maps have been used almost exclusively in briefings. Flight leaders and alternate flight leaders have been provided with plastic envelopes into which are placed the 1:50,000 maps of the target area, making it possible to use a grease pencil to plot flak. It is recommended that the approach to the target area be included in this folder in order to show the area in which flak concentrations exist. This aids the flight leader in planning his approach, attack, orbit of the area, and retirement.

When there are alternate or secondary targets, the maps are put back to back and placed in the same envelope. The flight leader then has pertinent information on both targets instantly available.

It is very helpful to all pilots to have a picture of the target area. However, it is recommended that the photography show sufficient detail or be enlarged to a size suitable for pin-pointing specific targets.

During this period of operations, photo coverage of targets has been excellent. By this coverage, briefing and debriefing have been made much easier and target assignment and damage assessment more accurate.

b. Photo Interpretation

During this period, a method of making flak studies was adopted which is both easier and faster than previous methods. This consisted of plotting the flak, by tail sectors, on AMS Series L751 (scale 1:50,000) maps and reproducing them photographically. Since only a day or two is required from the time the photography is taken until finished studies are distributed, the information presented is more timely. This method is considered superior to the previous mosaic type touraids.

G. Supply

F4U wing panels, F9F wing fold cylinders and F9F tip

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tank caps are in extremely short supply, but unceasing maintenance and steady follow-up have enabled the planes to be "up" on time. The role of ASA Guam in intercepting and filling ASB Yokosuka "passes" to AMO Oakland is not to be underestimated. Several times Guam action on "A" priorities averted AOG's in the operating area during this period.

W. R. HOLLINGSWORTH

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