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Navy Bat Missile

Helicopter Usage

NavAer 00-75R-3

JUNE 1950

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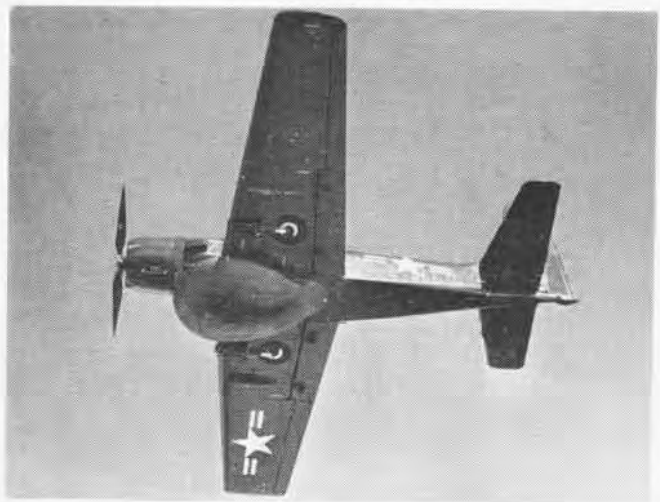
CAN YOU IDENTIFY?

Things are looking up—at least you are looking up at four of the Navy's newer combat planes. Check your recognition and don't skip the two radomes. *Answers on last pg.*



THE NAVY'S 'BAT'

First Operational Guided Missile

AN OBSCURE little steel and plywood missile, the Navy's *Bat*, with an electronic mind of its own, was the nation's first operational guided missile. However, little has been heard of it since it saw action in the Pacific during the war—the reviews were not good. Nonetheless, the *Bat* is still in operation today, and it is doing a notable job of retrieving its damaged prestige.

Utilizing radar guidance, the ASM-2, air-to-surface missile, is 12 feet long, has a 10-foot wing span, carries a heavy general purpose bomb and is accurate and effective when properly maintained and correctly launched. After launching, its homing is automatic. Having no motive power, it glides toward its target, making corrections by radar up to the moment of impact. Thus, it is equally effective against moving or still targets, with certain limitations, of course.

Evasive action may be employed by the carrier aircraft prior to the launch, providing only that the plane be straight and level, the *Bat* "locked" on, the launching conditions complied with at the moment of drop.

Guided missile warfare is admittedly in its infancy. So was aerial warfare just following World War I. The airplane played a relatively minor role in the first global grapple. It was "big dog" in the last free-for-all. One may perceive a pencilling on the palisades. The guided missile played a small part in World War II; another war certainly would see it taking a top-ranking billet. Though "old hat" when compared to new missiles in the advanced test stages, the *Bat* still is a training aid for squadrons and men.

WITH A BOMB SLUNG UNDER EACH WING, PRIVATEER FROM VP-25 WINGS OUT TO SEA TO TEST THE MISSILE AGAINST FLOATING BARGE TARGET

Ships Best Targets for Glide Missile; War Needs Rushed 'Bat' Into the Fray

SHIPPING targets are tailor-made for the Bat, although it can be used against some types of land targets which give extremely bright return, such as bridges, oil storage tanks and isolated buildings. Any future conflict for some time to come will require large numbers of ships to handle supply and personnel movement demands. Merchant ships well-protected by surface and submarine escort and equipped with the latest type of anti-aircraft weapons would be a real problem for low-altitude and glide-bombing patrol planes. *Bat*-equipped patrol planes, on the other hand, would receive little more than target-practice opposition from such a force.

The ASM-2 got off to a brilliant start, even to the extent of skipping several normal stages of development, and went directly into combat, practically from the laboratory. Then, after an indecisive war effort, the *Bat* program bogged down for a couple of years while the Navy was primarily concerned with more immediate post-war problems. The project received another shot-in-the-arm when two operational *Privateer* squadrons were designated *Bat* squadrons, VP-24 in the Atlantic fleet, VP-25 in the Pacific.

The Bureau of Ordnance began work on the *Bat* project in 1943. By late 1944, development was progressing so satisfactorily that BUORD recommended the weapons be sent immediately into action for combat evaluation.

There was a natural enthusiasm and desire on the part of project personnel to see the *Bat* win its spurs in battle. Undoubtedly it was fully realized that placing a weapon, as yet not service tested, into action, might be questioned. But the *Bat's* backers felt the vehicle would quickly prove itself in the field. What better proof than ships sunk? And the ships were scheduled to start sinking when the *Bat* arrived at the correct altitude and position for launching.

So permission was obtained to go into action, and eager *Bat* men took their beloved creation into the Pacific. This was early in 1945. Project personnel cagily predicted ultra-conservative performance figures. The *Bat* would create its own reputation.

Units and individuals designated to take the new weapon into combat, heretofore completely unfamiliar with the test program, were wary of the "bird's" value against the enemy.

Squadron commanders were worried about the length of time it would take to train personnel in the weapon. They wondered about the electronics maintenance problems in the forward area. And they pointed out that proved weapons were winning the war, and questioned taking a gamble on an unproved "Buck Rogers" missile.

Squadrons were also concerned about structural modification which would be required on their planes before the *Bat* could be carried, and the time these modifications would consume. In addition, pilots were considerably worried about sticking the missile's 1600 pounds of weight far out under each high-performance wing of the *Privateer*. Would the wing take the added stresses in flight? What was to happen to maneuverability and speed?

THE SPECIALISTS from BUORD were not to be denied. They had anticipated most of these questions, and had a ready answer for them all. Infinite faith, based on a thorough knowledge of the *Bat* and its performance, made it easy to be glib.

"Plane crews, pilots, radar operators and technicians, can become qualified *Bat* crews after only two hours of instruction . . . We are prepared to handle our own maintenance with well-trained ground electronics maintenance personnel which will accompany squadrons into the forward areas. . . . . Modification is a minor problem, it can be done with a maximum of 300 man hours and requires no major structural alterations to aircraft. . . . Manufacturers assure us the PB4Y-2 can handle the *Bat* with practically no loss of safety factor . . . The *Bat* configuration is an excellent aerodynamic design and will carry most of its weight on its own wings at cruising speeds. . . . Aircraft speed and maneuverability is but slightly affected by the *Bat*."

The initial problems were solved as planned. Three squadrons were designated to modify their planes as *Bat* carriers and launchers. The planes were on the way to the forward area in April, 1945.

A detailed report from one of the project officers who accompanied the *Bat* into combat gives a particularly good account of "what happened." Difficulties which appeared minor in the early stages on the road to combat had lasting effects:

"Due to the short time available before VPB—'s departure, it was necessary to simultaneously work on plane modifications, glider assembly and a training program for prospective operators. . . . When the (first) squadron left,

most of its planes carried four complete units, one on each wing, and two additional in the afterstation. . . .

"The only part of the program that suffered from all the speed with which VPB—was equipped and sent out, was the *training of the operators*. . . . This consisted of about 2 hours flying time per plane with an instructor, during which two and sometimes three crew members operated the gear. . . ."

IN OTHER words, each individual operator received from 30 to 60 minutes of instruction. Pilots received little more than a familiarization briefing on the *Bat*. There was no time for training as a team. The report continues:

"The first combat squadron to carry *Bats* went to Palawan, P. I. Palawan, as many will remember, has an emphatic climate. The rain is either coming down in hogsheads, covering everything with black mud and water, or else the sun—some 500 miles from the equator—is baking the earth into the mixture of gumbo and coral dust that pervades the atmosphere and enters everything not hermetically sealed. These conditions unearthed a major problem, neither anticipated nor taken care of:

". . . Heat, humidity and fungus combined to make a nightmare for the technicians who were attempting to keep the electronics gear in operating order. The detachment was obliged to set up shop on the edge of an airstrip without shelter. The gear was subjected to having its electronic and other delicate parts covered by dust from the prop wash of planes turning up (and taking off) the strip—personnel was subject to sniper fire and frequent air raids. . . ."

Owing to a scarcity of targets in the Palawan area, it was decided to order VPB — to Yontan, Okinawa. The first operations of the squadron at Yontan were conducted under even worse conditions than at Palawan. The (*Bat*) detachment had no tents or transportation. Continuous rains for the first two weeks along with ankle deep mud, inadequate shelter and almost constant air raids at night made

BAT APPROACHES ITS TARGET IN POSTWAR TEST AGAINST OLD VESSEL

SLUNG UNDER WING OF PRIVATEER, BAT IS READY TO BE RELEASED

work on the equipment difficult.

"The squadron got one direct hit (DE), three within 75 feet of the target (SBS, FTB and Transport), one within 500 feet (DD) and three within 1500 feet (SCL, DD, FTB)."

Around the end of May, 1945 the second squadron equipped with *Bat* gear arrived at Okinawa and relieved the first *Bat* outfit.

"Due to the weather the same troubles were encountered in the equipment as were previously encountered by VPB —. . . . No positive results were obtained . . . as a result of many factors. Very few good targets were available. However, even success against these was never obtained. . . . There was lack of proper consideration for glide ratios, type of target, and choice of approach to eliminate interference from background objects. The pilots had mediocre enthusiasm for the missile and preferred established techniques to a new and relatively untried device. . . . This led to a diminution of activity. Many . . . were jettisoned."

BUT EVEN from these ill winds some benefits were derived: "With little demand for (*Bats*), the service crew concentrated on improvement to their facilities. This was an up-hill fight. . . . However, wooden test facilities were built to protect the equipment from moisture. Gear was dried out. . . . Progress was very slow as the specialized equipment needed was just not available. . . ."

The third squadron equipped with *Bats* arrived at Yontan in June. A limited number of *Bat* units were left in supply, and the "word" was going around to the effect that the *Bat* wasn't living up to advance billing—not by a long shot!

"The squadron was very reluctant to use the *Bat* except under almost ideal conditions."

About this time, the boys calling the signals decided the *Bat* wasn't worth its weight and knocked off *Bat* hops entirely. But—

"A complete investigation . . . proved to the satisfaction of the wing that the failures were not due to malfunction of the equipment, but to operating errors, the Wing permitted two planes to be loaded with (*Bat*) each day and to stand by in preparation for a strike in case a suitable target was sighted."

During this standby period, one plane made two drops apparently using good techniques. One *Bat* struck within the turning circle of the target, the other *Bat* was last seen heading toward the target but, owing to cloud cover, was not seen to hit. Black smoke was observed rising over the target through clouds, but no hit could be claimed.

TECHNICIAN AT PT. MUGU ASSEMBLY SHED WORKS ON TAIL SURFACE

TORN SCREENS, FURROW IN DECK MARK BAT HIT ON BOMBING TARGET

Better Tests Showed Value of the Bat; 14 Drops Made, with 12 Hits on Target

After the war BuOrd took a wry and incredulous look at the record and instituted another short test program on the *Bat* under controlled conditions. These tests only served to prove the original consensus—that the *Bat* was a good, though much, apparently, misused missile. An example of these tests was the one made on the target ship *Fleetwood* shortly after the end of the war. Fourteen *Bats* were launched against the ship. Twelve damaging "hits" were obtained—nine direct hits, three short skips—two misses were chalked up.

It didn't add up. About this time a report by one of the former *Bat* development officers, who had accompanied the *Bat* to war, was received by the Chief of BuOrd. This is the report much quoted above, written by LCdr. H. H. Mann.

After reviewing results of the most recent tests, BuOrd wrote "finis" to their *Bat* evaluation program and turned the weapon over to BuAer for further development and operational utilization. At the same time, the Chief of BuOrd made a strong recommendation to CNO that the *Bat* program be followed up by designating operational squadrons and setting aside a limited number of the missiles on hand for expenditure by these units.

A considerable period of time elapsed between this recommendation made in 1946 and the formation of the two *Bat* squadrons. During this time however, *Privateers* were modified to handle the *Bat* and a nucleus of electronics personnel were trained in *Bat* operation and maintenance in the states, and sent to join the chosen squadrons. Patrol Squadron 25—then VP-HL-13—was designated a *Bat* unit in the Pacific; VP-24—was designated the *Bat* squadron in the Atlantic. VP-25 now is decommissioned.

Patron 25 received its PB4Y-2B's and missiles early in 1948. . . . Qualified *Bat* maintenance and operator personnel were received aboard prior to this time. These people helped institute a training program in the squadron and during the 18 months VP-25 operated as a *Bat* unit, 120 *Bats* were dropped.

Two types of targets have been used, one a radar-screen barge 28 by 28 feet in size, and the other a large rock jutting some 25 to 50 feet above the water, just off shore Maui, T. H.

VP-25's *Bat* operations were conducted in conjunction with all the normal functions of any other patrol squadron. Glide bombing and low altitude bombing are as much a part of the squadron's training as is *Bat* work. In 1948, in fleet competition, the squadron won the coveted "meatball." This competition included all the functions of patrol squadron work in addition to *Bat* drops. So obviously no other Patron-type training has been de-emphasized at the expense of the special weapon.

Inasmuch as the *Bat* is merely an additional function to Patrol Squadron 25, personnel of the squadron had the unique opportunity of seeing the *Bat's* performance in comparison to the performance of accepted offensive weapons used in the last war. So far as statistics are concerned, *Bats* dropped by "25" maintained a parallel or better percentage of hits than has been obtained by low-altitude and glide-bombing techniques applied by the same pilots and crew.

A recent joint operation allowed the squadron its first opportunity to make simulated *Bat* attacks independently on a surface force which employed air coverage. Attacks were carried out at night as well as day. Fighter interception was equally effective during night and day attacks. Of 20 attacks made on the carrier force, only two planes were put out-of-action before launching their *Bat*. Fourteen successful simulated launches were made prior to interception.

NOW WHAT conclusions can be drawn from the past record of the *Bat?* Does the fact that the *Bat* has a good peacetime record and a poor wartime record mean it is strictly a "fair-weather" weapon, or is its wartime record due to factors which are not inherent in the missile today? Of what value is the *Bat* at the present time, keeping in mind new weapons in advanced development stages?

First of all, some minor modifications have been incorporated into the *Bat* since its wartime service which have improved its performance somewhat. Some of the modifications to the gyro system and the radar intelligence have also alleviated the maintenance problems, and it is better adapted for all weather operation.

A successful patrol plane *Bat* team is necessarily comprised of four fundamental elements, a pilot, a radar operator, a *Bat* operator and an electronics maintenance crew. Any member of this team can nullify the efforts of the other three. This team must be trained individually and collectively, and trained well if it is going to do its job.

This article on the *Bat* was written by LCdr. W. H. Huff, ex-feature writer of the News, who formerly was with VP-25 and now is attached to VR-6 flying to Europe with MATS.

IN PATROL Squadron 25, before any member of the *Bat* team actually participated in *Bat* drop, he received at least eight hours of flight indoctrination and eight hours of ground instruction. In addition, all except the pilot got a thorough practical and working knowledge of the missile in the maintenance shop before going out on a drop. A newly trained member of the team worked in with three other experienced teammates, and in the case of an operator, his launchings were monitored by thoroughly trained personnel for some time.

The fact that this training is important is apparent from the history of the *Bat* in "25". Of the 120 drops made by the squadron, 60 were made during the second nine months of operation. Sixty were made under the direction of men well-trained in *Bat* operation in established schools. Percentage of hits was pretty good. However, percentage of hits obtained during the last 9 months was 11% higher than those made during the first 9 months. And a great many more experimental launchings were made during this latter period. The year of operational training paid off smartly!

Another important factor was the preparation or lack of preparation the ASM equipment received prior to entering combat. The *Bat* had come almost directly from the laboratory to a combat theater. The missile had not been prepared for the hand-to-hand battle with the elements, which it encountered. Sensitive and critical electronic components of the *Bat* were ready meat for rust, corrosion, fungus and allied tropical mechanical ailments. This condition has been somewhat corrected by modifications later installed as a direct result of the lessons learned in the forward areas.

Operational and service testing of the weapon had been eliminated in favor of speed. A Navy aircraft is designed and constructed on the basis of the whole background of aviation. Then the aircraft is tested and modified by the manufacturer. Next, it goes to the test center at Patuxent River, where it undergoes tactical, electronic, armament, flight and service testing. From these rigid tests, additional modifications and polish come. Finally, it goes to the fleet. Here, operational conditions and requirements extricate additional "bugs". There are still more modifications and at last the aircraft is considered combat ready.

This intricate test program itself, is the result of all the years of aviation development. New aircraft and all their components are based on thoroughly proved basic designs and techniques.

The *Bat's* electronic guidance was an entirely new concept. It had to be worked out from an absolute beginning. There were no tried and true methods of radar guidance to draw from.

BAT WITH ITS BOMB IS CARRIED TO PLANE ON THIS HOIST LOADER

GUIDED missile tactics is another field, still wide-open, to which the *Bat* squadrons will contribute. In the course of routine training in *Bat* attacks, it is impossible not to consider tactical problems. Various types of *Bat* attacks involve the development of guided missile tactics simply because right now no guided missile tactics exist. Therefore, each new "drop" if different from any other heretofore made, automatically involves experimenting with new tactics. This type of experimentation does not hinder the primary task of training; in fact it aids that function by giving pilot and operator practical experience in solving the unexpected situation which invariably arises in actual combat.

The fact that the *Bat* or any guided missile becomes an automatic homing weapon once it has been launched does not solve tactical problems. It merely means that the primary problem of insuring a "kill" can be solved at longer ranges from the target. This longer-range makes the secondary problem, that of insuring a safe "getaway," a little simpler of solution. But it does not preclude the necessity for good tactical planning. There will always remain, regardless of the type of weapon employed, the problem of obtaining "hits" and at the same time minimizing losses. Only a crystal ball will know the answers.

RADAR SCANNER IN NOSE OF BAT GUIDED IT IN GLIDE TOWARD TARGET

SQUADRON BAT EXPERTS ADJUST RADAR MECHANISM WHICH GUIDES BAT

GRAMPAW PETTIBONE

Heads Up Thinking

A mechanic working on the line on a very dark night noticed a trail of oil on the taxi way. He traced the oil back to the line where, a few minutes before, a plane had taxied away. This was reported to the line chief who immediately telephoned the information to the tower. The plane had not yet taken off and was recalled to the line. Inspection showed that the right engine had developed a serious oil leak and considerable oil had been lost just in taxiing.

Grampaw Pettibone says:

Say now, that's really using the old noggin'. Chances are that a situation such as this would never occur during daylight operations because someone would have seen the oil leak before the plane ever got out of the chocks. This man's alert action may well have prevented a very serious accident.

Come Up and See My Cards

Every once in a while someone asks, "What finally becomes of the Aircraft Accident Reports?" Not long ago I discovered that some pilots have the notion that these reports wind up in their official records over in the BUPERS files. This just ain't so!

The main reason for the investigation and report of each accident is to learn what the cause was, so that we can correct some defect in the plane or try to keep somebody else from making the same mistake.

The accident reports wind up in the files of the Bureau of Aeronautics where the reports are arranged in chronological order by type of plane. Nothing in the AAR goes in the pilot's official record unless his commanding officer has initiated separate disciplinary proceedings.

I mention this as a plea for honesty. If we don't get a complete and honest report of each accident, we may be off on the wrong track in trying to prevent that type of accident from happening again.

Before going to the files a summary of each accident report is placed on an 8 x 10 card. The edges of this card contain a code which can be punched to indicate a great many facts about the accident, the type of plane, the location, the extent of damage or injury and the causes of the incident.

You might be interested to know that since this system was instituted in 1941 over 38,000 accidents have been analyzed and recorded. If you're ever in Washington, you can drop into the

Flight Safety Office and ask to see the card on that crack-up you had a few years ago.

By the way, this might be as good a time as any to talk about the cost of aircraft accidents. There are several ways of figuring cost and, at best, its a rough job. Down in the front office where they are constantly trying to figure out how much can be done with next years appropriation for new planes, aircraft accidents are thought of in terms of replacement costs. In other words if someone busts up an F6F that cost about $80,000 five years ago, these people have to think in terms of what it will cost to replace that plane with a new type fighter. Present fighter types and the ones that will be purchased in the next couple of years cost four and five times as much as the F6F's and F4U's that were purchased a few years ago. Twenty-five years ago Naval Aviators gasped when they heard that new planes were going to cost $26,500 apiece. Nowadays you may be flying a plane that cost as much as we used to pay for a destroyer.

Treat 'em right, 'cause they sure come high.

Dear Grampaw Pettibone:

I am a Naval Reserve Officer on inactive duty. I would appreciate it if you would answer three questions for me:

(1) May I be allowed to ride as a passenger in a Navy plane on a space available basis, merely by presenting my Naval Reserve Identification Card.

(2) Do I have to have a set of orders issued by competent authority to make such a flight?

(3) Would I be required to be in uniform for the duration of the flight?

Many thanks,
LT. ———, USNR.

Grampaw Pettibone says:

The answers to your questions are contained in Army-Navy-Air Force Joint Letter 49-670, published in the Navy Department Bulletin, 15 September 1949.

Personnel of the Naval Reserve, both officers and men, may be authorized by competent authority to ride as passengers upon presentation of proper identification on a space available basis after all priority requirements have been satisfied. Orders are not required, nor need the reservist sign a release from claim for injury and death. He must, however, sign a certificate stating that the transportation supplied is not for personal gain or conducting business which will result in remuneration.

Normally the uniform of the day should be worn. However, Commanding Officers may authorize the wearing of civilian clothes in exceptional circumstances.

Some Commanding Officers prefer to issue a set of training duty orders without pay to cover the period of the flight, but this is not mandatory.

From the above you can see that you may ride on your ID card under certain circumstances. This is a *privilege*, however, and not a *right*. The permission of competent authority is required, and competent authority in this instance is defined as an official bearing the title of Commanding Officer or higher in the chain of command.

Dear Grampaw Pettibone:

If you haven't already read the accident report, you will soon. I think the cause of the accident will read something like "Pilot misjudged point at which to remove power." There's a lot more to it than just that, a combination of supreme conceit about my own ability and overconfidence of a variety that is rare.

This accident started a long time ago and ended in a heap on the end of the runway. Since the fatal day, I've been doing some thinking and examining myself objectively. The results aren't so good.

Let's look back—It started in "A" stage on one of the progress checks. I had flown a good hop and knew it. When I climbed out of the plane I threw out my chest, looked the instructor in the eye and said "How was it?" It sounded like "Good, wasn't it?"

My solo check was good too, in fact, the check pilot let me solo immediately which wasn't being done at the time. My opinion of my ability went up, confidence, I called it.

"B" stage was easy too. I learned fast and had reached a point where I could set the plane down at any spot designated with power, without power, "S" turn, anyway you wanted it.

"C" and "D" stages were also easy. While other people sweated about it, I took everything as a big joke. After all I had this thing in the palm of my hand, didn't I?

My first set-back came in formation flying when I got my first down, but unfortunately it was given me by a famous downcheck man, so I took it with a grain of salt.

I'm not sure just when I decided my own judgment as a pilot was better than anyone else's, but what happened in advanced training didn't help any.

On my second hop in a *Bearcat*, the instructor on the runway portable was talking me in. Then he got excited and told me to level off. From the cockpit, I looked high. But I figured he knew best. Fact is, I dropped in from about five feet and established the world's record for the highest bounce ever taken by a *Bearcat*. I got the plane on o.k. but began to wonder if the man knew what he was talking about. After all, if I had leveled out when *I* wanted to, that wouldn't have happened, would it?

In Advanced Carrier Qualifications, another thing happened that didn't help any. During Field Carrier Landing Practice, one LSO let me make approaches that only experienced pilots are supposed to be able to do well, no straightaway. When another LSO tried to change my way of thinking, I thought he was just a hard-headed lug who didn't like to see students enjoy themselves.

Next high point in my climb to a fall came at the Jet Training Unit. Coming in from a familiarization hop, the man on the runway portable told me I was low and slow and to take a wave-off. I know darn well I was low, but not slow. I was *positive* I was fast, the gauge said so, didn't it? And wasn't my attitude correct? I figured he knew best and rammed the power to it, put a slight back pressure on to check my rate of descent and ballooned, I'd been fast after all.

After that, Grampaw, I was from Missouri, and anyone offering advice would have to prove what he said and it wouldn't have done any good because by this time I wasn't listening.

When I was assigned to a jet squadron, I was very pleased and on reporting found out I was one jump ahead of almost everybody. Only four pilots had had previous jet experience, and the rest hadn't checked out as yet. That didn't help either.

So there I was believing myself infallible and when a person is perfect, he makes no errors and therefore needs no margin of error. I finally cut my margin to zero when I began shooting for the end of the runway, instead of up the strip a short distance.

Then it happened. I brought her in at 105 kts., cut my power where I figured it would put me on the end of the strip, but I misjudged the rate of descent for that speed and left my landing gear on the seawall.

Misjudged? Yes, partly, but more than that I misjudged because of a classic case of overconfidence.

I've read the handwriting on the wall, Grampaw, and believe me, from here on out I'm striving to be an *old* pilot instead of a *bold* pilot.

I write this in the hopes that the bold pilots who may read it will stop and examine themselves *before* they have an accident. I walked away from mine, but they might not be so lucky.

Lt. (jg) USN

Grampaw Pettibone says:

Thanks for this interesting letter. Sometimes it takes a rough and costly accident like this to make a fellow stop and take a close look at himself. However, when you consider that new jet fighters like the one you busted up cost close to half a million dollars, the process is mighty expensive.

I hope that some of the potential "hot pilots" who read your letter will take heed *before* they find themselves trying to explain how an accident happened.

Next Time Tie It Down

The F6F pictured above was being warmed up and tested by a plane captain. After letting the engine run for several minutes, the plane captain revved it up to 2100 RPM in order to check the mags. At this time the port chock began to slide and another plane captain standing by the wing attempted to signal the man in the cockpit to retard throttle.

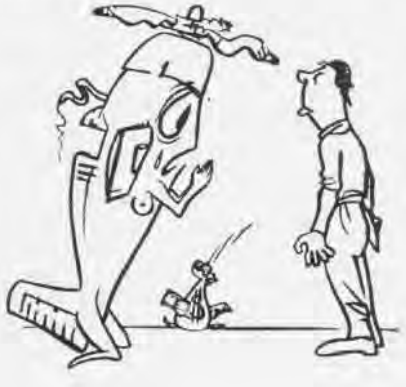
The latter was concentrating on power settings and did not see the signal. The port chock then freed itself from the wheel and the aircraft immediately swung around 180 degrees to the right, jumped the starboard chock, and headed for the operations building.

The plane captain put on the brakes but forgot to retard the throttle, and the prop and engine of the F6F went through the corner of the operations building. When the landing gear hit the foundation of the building, the plane lost its forward motion. Fortunately no one was injured.

The accident board recommended that all planes be tied down during preflight checks involving high power.

Grampaw Pettibone says:

That sounds like a good safety measure. However, I had the feeling when reading this report that this fellow had not been fully instructed in the correct procedure for checking the mags. In the first place he should have had his feet on the brakes, and the brakes on, before turning up to 2100 RPM. Secondly, he should have been trained to take a look around and make sure that the plane was holding before directing his attention to the instrument readings.



COAST GUARD HELICOPTER PICKS UP INJURED WOMAN IN NEWFOUNDLAND

MARINES USE PIASECKI TRANSPORT PINWHEEL TO PACK MOUNTAIN GUN

Helicopters Fill Many Jobs

A SMALL brush fire, resulting from a miniature bomb drop, started at a bombing target near Cherry Point.

A helicopter carrying fire fighters from the Marine Corps air station went out to reconnoiter the scene of the fire from the air. The pilot brought his plane over the flames to give the men a better look at what they were up against.

Hovering over the flames, he speeded up his rotors. The down-draft from the spinning blades blew out the fire. No ground crew of fire-fighters had to be sent out.

That example is just one of dozens coming to light these days as the Navy and other armed services find new uses for helicopters. The Navy has been flirting with the flying pinwheel since 1916, but only since the war has it really gone to the altar with it. Since then the record of these Handy-Andy's has been nothing short of sensational.

The probable reason for this original slowness might have been the difficulty in getting some of the "bugs" out of helicopters, or it might have been lack of funds for anything but fighting planes. But whatever it was, the helicopter now has joined the fleet and shore establishments with a vengeance. It made friends in a hurry when it began snatching dozens of pilots out of the water around carriers and performing all manner of weird rescue and first-aid missions.

The fire-fighting incident above is only one of dozens such stories turned up by NAVAL AVIATION NEWS or the companies that make Sikorsky, Bell or Piasecki helicopters. One or another of those three types figured in all of the following unusual uses to which the Navy has put helicopters.

HELICOPTER DELIVERS RUSH JOB PHOTOGRAPHS TO SHAH OF IRAN SHOWING HIS ARRIVAL ABOARD

Two big triumphs in the helicopter's book came when the fleet took scout planes and catapults off battleships and cruisers and substituted helicopters for spotting naval gunfire and utility flying. The second to come since the war was the Navy's decision to use helicopters for plane guard duty when planes are landing or taking off carriers.

The old reliable destroyer which used to be the plane guard was quickly crowded out of the picture by the faster-acting helicopter, which often picked downed pilots out of the water before they had been in it more than a minute.

Then there are the usual jobs the helicopter does for the fleet, like flying high officers from ship to ship while at sea, flying mail and orders between vessels, spotting gunfire and in general acting like an aerial taxicab. Over a period of three years, scores of other interesting uses have been found for the pinwheels, all the way from saving lives to "blowing" errant guided missiles out of the sky with rotor slipstream.

Following is a compilation of some of the unusual tasks helicopters have performed, as culled from the pages of the NEWS or reported by helicopter companies:

A helicopter at Pensacola landed on the beach near an out-of-gas jeep with a picnic party and refueled it so the party could return to base.

Transferring doctors to other ships at sea to treat sick men.

Carrying a load of ice cream from a carrier to a ship which had rescued one of the carrier's pilots from the water.

Taking aerial photographs of a naval

air station to aid in a traffic survey.

Transferring the harbor pilot back to Norfolk after the *Roosevelt* cleared Hampton Roads. The pinwheel picked up six *Roosevelt* pilots from water crashes in a 10-day period.

Landing on a gun turret of the Missouri so the Secretary of the Navy for Air could visit.

Delivering a chaplain to other ships in the fleet to hold religious services.

A Lakehurst pinwheel helped New Jersey state police and search parties locate a missing war veteran wandering around the countryside with a .38 revolver. The helicopter finally spotted the man, who had died of exposure.

A YTB was disabled offshore, so Corry Field's helicopter flew a mechanic out and lowered him on the deck of the ship. He repaired its engines and it proceeded to port under its own power.

A helicopter picked up an improvised stretcher from a thickly-wooded area near Cherry Point. In it was a Marine pilot with both legs broken. The pinwheel flew him to a hospital.

Up at Quonset Point, a helicopter went that one one better. It picked up a seaman suffering from acute appendicitis, transferring him from the LST at sea to shore. It landed on the lawn of the dispensary and half an hour later the doctor had operated on the man.

Another Quonset helicopter took bottles of oxygen to a seriously-ill girl on Block Island offshore. The island was cut off from the mainland by high seas that made it impossible to bring aid by ship. Later the girl was transferred to the mainland, along with her doctor and her mother, via helicopter.

During war games off Cuba, the "umpire" rode in a helicopter to plot mine and bomb drops and determine accuracy of operations.

The downdraft from the helicopter's rotors has been used in at least a couple of occasions for good purposes. An Air Force pilot in a life raft was being swept to sea by tide rips. The pinwheel hovered overhead and by skillful maneuvering used its rotor blast to "blow" the life raft to safety.

MARINES DROP LIFE RAFT TO PILOT IN WATER

ADMIRAL SHERMAN RETURNS TO USS ALBANY IN HELICOPTER AFTER A VISIT TO 'PHILIPPINE SEA'

Down in Panama, a guided missile got out of control and endangered residents and property. A helicopter chased it. Using downdrafts from the rotors, it turned the robot away from the area. It then dropped a small smoke flare on the missile, which sent it into a spin.

Scores of people are alive today, thanks to the life-saving abilities of the helicopter. When heavy snow hit the Middle West a year ago, pinwheels flew in food and medical supplies to isolated farms. One Army sergeant was flown in to one farm and acted as midwife at a childbirth. He also attended a Nebraska farmer with a broken leg and treated six other persons for severe frost bite.

Out on the outer banks of Cape Hatteras, residents have come to rely on helicopters when trouble strikes. Coast Guardsmen fly expectant mothers inland, transport injured persons to hospitals. Down at Pensacola, the rescue helicopter flew a doctor in to an inaccessible swamp area to treat a pilot who was injured. An Air Rescue Service helicopter from Clark AFB Luzon flew out to the CV *Boxer*, landed and took off an officer who had suffered a heart attack.

When the *Midway* was refueling, one of the fueling crew was knocked overboard when the hose parted. The rescue helicopter had him out of the frigid Atlantic in three minutes. A Reserve F6F crash-landed on a shoal sandbank in the Gulf of Mexico off Pensacola. The rescue pinwheel lowered him a sling and he was hauled aboard, without getting his feet wet.

Coast Guard helicopters rescued 18 survivors of the Belgian airliner crash at Gander, Newfoundland. The helicopter was dismantled, loaded in a transport plane, flown north and reassembled for the short rescue hops.

When the Air Force was unable to rescue a planeload of survivors marooned on the Greenland icecap for weeks, the Navy loaded a horde of Piasecki 10-man helicopters on the *Saipan* and sent it north to pick them up. Just before it arrived the Air Force got its men off.

A carrier's boxing team was flown over to a nearby ship to participate in matches with that ship's team.

Fleet commanders and leaders meet together to hold conferences during maneuvers these days instead of having to depend on radio or blinker messages. The helicopter flies them to the "meeting place" in a matter of minutes.

Out at San Diego, a helicopter flew a drone control officer out to sea to

SOUTH POLE PHOTOGRAPHERS USED HELICOPTERS

CORRY HELICOPTER DRIES FIELD FOR MODELERS

catch a destroyer which had left port without him. Helicopters found plenty to do on the South Pole expedition of 1947, flying ice pack reconnaissance to spot open water for the ships and taking aerial photos of the polar regions.

Several fishing vessels were long overdue off Pensacola, so the Corry helicopter went out and found them in the Gulf.

The helicopter also acts as an incentive to work. Laborers at Patuxent were doing landscaping work along a runway but mostly were leaning on their shovels. So Admiral Soucek dropped in on them by helicopter to check on progress of the work. After that, the dirt flew and the supervisor requested frequent "fly overs" by helicopter—just any helicopter.

A VU-10 helicopter flew over Cuban jungles searching for two Venezuelan F-47 pilots downed after a midair collision. It wasn't the helicopter's fault the Cuban police already had found the two brothers and tossed them in the bastille.

Helicopters have found many military uses, such as transporting fully-equipped Marine assault troops to special landing spots, carrying jeeps and mountain artillery aloft for transportation elsewhere, coordinating submarine operations with the fleet, helping with radar calibration on ships and making ship to shore trips in amphibious landings.

One admiral got in his required submarine dives in the Caribbean by flying from his flagship to a sub, making the dives and returning, all in an hour, thanks to the ubiquitous helicopter.

Some kids wanted to hold a model airplane meet at Corry field but the field was too wet. So the helicopter hovered a few feet off the ground and dried off the water with its rotor blast. Buzzards got too thick for safe test flying at Patuxent. A marksman with a shotgun went aloft in a helicopter to clear the air of them. Hunters marooned on a sandbar in a flood-swollen river near Port Angeles, Wash., were rescued by a helicopter.

In addition to the above listed special jobs handled by helicopters, Cdr. F. D. Foley, skipper of HU-2 at Lakehurst, reported a number of other unique tasks pinwheels have handled:

- Locate rocks and shoals for hydrographic survey.
- Count muskrat hutches for Federal Wildlife Service.
- Fly security patrol for air station.
- Hunt and shoot wild dogs, formerly war dogs, in Sandy Hook area. The animals had become a menace to the residents.
- Rescue a fawn from a forest fire.
- Count cars and take photos of overloaded traffic circles for New York Federal Highway Service.
- Haul soap for destroyer's washing machine.
- Fly shark patrol for swimming call.
- Fly commanding officer around his ship to inspect the sides.
- Chase torpedoes during firing practice.
- Take fisherman's child 40 miles to Cartwright, Labrador, hospital after the child had fallen off a cliff.
- Take lead line soundings in area where water too rough for boat.
- Retrieve mail dropped by parachute from Navy plane.
- Transport engineers and instruments to mountain peaks and other inaccessible places for survey purposes.
- Fly anti-poaching patrol for government reservation to spot deer poachers.
- Shot caribou and tied same to wheel to carry back to ship.

Candidate *for the tallest basketball center at any naval air station is the young man in this photo from NAS Los Alamitos. If you look closely you can see his fore part in the aircoop and the legs protruding from the exhaust pipe of this jet FJ-1.*

Plane Hitch-Hiker Is Caught

Spencer Field is Scene of the Crime

NAAS CORRY FIELD—Carrier Qualification Training Unit 4 is scheduled to conduct the first intra-unit court-martial in history. The big event will take place in the near future.

The charges will be: *1.* Unauthorized flight in a naval aircraft, *2.* Participating in said flight without wearing prescribed articles of flight clothing, *3.* Failure to wear a parachute while engaged in aerial flights, failure to sign yellow sheet before boarding aircraft, being a stowaway.

The defendant in the trial is T. Cat, CMM. There is little doubt but that the verdict of the court will be "guilty", as several reliable witnesses are reported to be ready to testify.

The trial will be interesting in that it is the first of its kind to be recorded.

The scene of the crime was Spencer Field. There, a flight of SNJ's was being turned up prior to a period of field carrier landing practice. T. Cat CMM, who had been seen in the vicinity of the parked aircraft just prior to the hop, was suddenly missing.

After the hop returned to the line, it was found that Cat had hitch-hiked a ride in the wheel-well. This Chief Mouser's Mate was somewhat chastened.

To date, Cat's comments on the ride have been unintelligible.

Bureau of Aeronautics *and Bureau of Yards and Docks experts are figuring out ways to lick a new problem which has arisen since jet aircraft began operating off asphalt runways and wooden plank carrier decks. The trouble comes when high-temperature jet exhaust blast melts the asphalt on the runways and the caulking between the planks. So far the main trouble has arisen from the F9F Panther. The three pictures above illustrate the angle of attack of three Navy jet fighters, the F2H Banshee, which is giving no trouble at all, as can be seen from the parallel angle when it squats on the runway; the F9F and the F7U Cutlass. Since no F7U's are in squadrons yet, no reports of runway burning have arisen from its use. Trouble mainly comes from stationary planes, not moving.*

YOU DON'T SEE MANY OF THESE N3N'S ANYMORE

N3N Biplanes For Middies

Norfolk Refits Yellow Peril Planes

NAS NORFOLK—Believe it or not, the Navy is still flying in N3N's.

On the apron at Chambers field are eight yellow single-engine biplanes, the famous *Yellow Perils* of World War II training days and before. They have just been overhauled and repaired and are to be sent back to NAF ANNAPOLIS. Their wheels detached, pontoons fastened to the wings and fuselage, they will be used as seaplane trainers for midshipmen at the Naval Academy taking aviation indoctrination.

All of the planes are eight to 10 years old. Aviation cadets at Pensacola no longer start their flying in N3N's or her sister biplane, the N2S. They begin right in SNJ's.

The N3N was made by Naval Aircraft Factory, Philadelphia. They had a maximum airspeed of 100 mph and 400-mile range. Flanked on all sides here by the high powered jets, they look more like something for the Smithsonian Institution.

Mount Fujiyama, *the goal of American fighter planes during the war, forms an interesting backdrop for two VC-61 photo pilots flying over Japan during recent operations. Piloting the two callers on Nippon were Lt. H. A. Tompkins and Lt. (jg) B. W. Decker. They were aboard the carrier Boxer during its Asiatic jaunt and shot photo maps of the western Pacific area while attached to CAG-19. The detachment reported good liberty at Yokosuka, Yokohama, Tokyo and Kamakura, while Hong Kong was voted an ideal recreational spot.*

Ensign Swims Under Carrier

Boxer Cuts Plane, Keelhauls Pilot

VF-192, SOUTH CHINA SEA—Have you been run over by a 27,000-ton carrier lately? Ens. Fred Newman has and does not recommend it as conducive to good health.

While taking off for a routine flight from the *Boxer*, Newman overcorrected for a swerve to the left and left the deck on the starboard side before reaching the bow. His starboard gear struck a gun mount as he left the ship and, owing to insufficient flying speed, his F8F stalled and spun to the left directly in the path of the carrier. It entered the water in an inverted position at an angle of about 80°.

With the carrier bearing down on him, Ens. Newman was just able to leave the cockpit before the bow of the ship cut the plane neatly in half. He was not sighted again until he reached the surface directly in the wake after passing the entire length of the ship under water.

He was quickly picked up by the plane guard destroyer the USS *Thomason*. Ens. Newman's injuries consisted of minor lacerations of the face and head. He also was fully checked out on the taste of South China Sea water.

Two of the *Air Force's latest jet fighters are the YF-86D (left) and YF-93A., both built by North American. The former plane is the conventional Sabre with a solid nose and airscoop under the chin while the second is a solid-nose version with cheek scoops. The first is powered by the GE J-47 jet engine and the second the P&W J-48. Both fighters have afterburners which are expected to boost their speed above the record-holding F-86.*

BEARCAT HITS GUN MOUNT, SPINS TOWARD SHIP

Nation Honors Lost Men

THE NATION has awarded the Distinguished Flying Cross to four officers and six enlisted men, members of an unarmed *Privateer* from VP-26 which was lost on a flight across the Baltic Sea on 8 April.

Meanwhile, the Navy still tried to piece together evidence which would clear up the mystery of what happened to the plane, widely publicized in the press as having been shot down by Russian fighters. The Russians never admitted doing the shooting, but decorated four of their fighter pilots for chasing away a B-29 which they said had trespassed on their territorial waters. There is little resemblance between a PB4Y-2 and a B-29, some of which the Russians interned during the war.

Men given the DFC's, via their next of kin, were Lt. John H. Fette, Lt. Howard W. Seechaf, Lt. (jg) Robert D. Reynolds, Ens. Tommy L. Burgess, Frank L. Beckman, Joseph J. Bourassa, Joe H. Danens, Jr., Edward J. Purcell, Joseph M. Rinnier, Jr. and Jack W. Thomas.

Parts of the plane were picked out of the Baltic sea several days after the plane disappeared. A *Privateer* nose wheel was found by a Swedish fisherman. A life raft recognized by members of the squadron as belonging to that group was picked up by the British steamer *Beechland* on 16 April and a second raft by the Swedish fishing vessel *Hittade* on 21 April, all a considerable distance from Russian territory.

With the rafts was recovered a copy of *Nemedri*, routing instructions for surface craft, issued by the British Admiralty, London, in October, 1948. The publication contains routing instructions for areas declared dangerous due to mines in North European and Mediterranean waters. One corner of the publication was stained with orange dye marker. What a patrol plane crew would be doing with such a publication, designed for surface craft use, has not been explained.

The *Privateer* had been on a routine training flight from Wiesbaden to Copenhagen, Denmark. It reported by radio it had crossed the German coastline two and a half hours after leaving Wiesbaden.

The two life rafts were returned to this country after being inspected at various European military headquarters. One was undamaged while the other was burned in a folded condition. This and the nose wheel suggest explosion either in midair or upon impact with the water. There were no bullet holes in any of the equipment or the chart book.

Standing orders governing operation of naval patrol planes in the Baltic area require that they stay well clear of the territory and territorial waters of Russia and Russian satellites.

One member of its crew, Stephen J. Zacklin, was left at Wiesbaden because of illness. He said plane was unarmed.

Taken aboard *the CVB Midway on her recent cold weather exercises is this shot of VA-17A in front of one of its AM-1's. They are, left to right, front: Midn. Robert L. Pelton, Ens. Norman W. Haupt, Lt. John F. Driscoll, LCdr. Harold E. Vita, CO; Lt. (jg) Lawrence C. Baldwin, Lt. (jg) Gordon R. E. Ranney. Second row, Lt. (jg) Ogden D. King, Lt. (jg) Paul F. Werner, Ens. Delis Negron, Jr., Lt. Dale R. Annesley, LCdr. William R. Pittman, now with VF-53; Lt. James E. Stevenson, Ens. Leroy O. Mosher, Lt. (jg) John J. Gallagher, Ens. Herbert W. Gewehr, and Ens. Theodore E. Daum. The men all wear exposure suits.*

It doesn't *make much news when a naval aviator makes a "thousandth" landing on a carrier. But when the Air Force does it, then it's news. Capt. Curtis N. Metcalf, attached to VF-172 as an exchange pilot, made the 22,000th landing on the CV Philippine Sea during Portex. He was flying a Banshee. The ship's bakers made him a 650-pound, 12 layer cake, 8'x2½'. In the photo RAdm. M. T. Schoeffel, ComCarDiv 6, congratulates Metcalf, C. L. Hagaman, plane captain and Cdr. V. De Poix, skipper of VF-172 look on as the king-size cake is presented.*

Coats To Carry Rank Pins

Officers To Change Over July, 1952

Modification of male naval officer raincoats to have shoulder straps and adoption of metal rank insignia to be worn on the shoulder straps have been adopted by the Secretary of the Navy. Thus it will be possible to tell an officer's rank when he has his coat on.

This is applicable to the officer blue and khaki raincoats and to the tan aviation winter working overcoats, which heretofore have borne no indication of officer rank.

Effective immediately, the new shoulder straps may be worn attached to the coats, but it will not become compulsory until July 1, 1952. The metal insignia will not be worn at all until that date when it becomes compulsory.

The insignia will be the size now worn on coats by the Marines and Air Force. This is larger than the Navy collar insignia, but slightly smaller than the Army insignia. Chief petty officers, who wear this type of coat, will not wear insignia on the shoulder straps.

FLIGHT A-144 . . . CLEARED . . . STRAIGHT IN! . . .

RACKED BY A TERRIFYING EXPLOSION AND GASPING HER LAST, THE MARSHALL MARS BURNS ON THE WATER OFF JOHN RODGERS SEADROME AT HONOLULU

MARSHALL MARS BURNS

AVR PULLS IN CLOSE IN TRY TO STOP FLAMES

STREAKS OF FROZEN CO_2 SHOW ON WING TOP

THE UNBLEMISHED safety record of VR-2 came to an end April 5 when the *Marshall Mars*, one of five JRM's, was destroyed by fire off Honolulu.

Pilot LCdr. Glenn E. Simmons had the plane at 1,500 feet three miles off the seadrome at John Rodgers airport when crew members saw a ball of flame under the cowling. The prop was feathered and the fire extinguisher popped. L. J. Rolando, ADC, tried twice to crawl into the wing with an extinguisher to quell the blaze, but was forced back by the flames.

After flames from #3 engine refused to go out, an emergency landing was made at sea. The test crew of seven, trying out a new engine, escaped.

Soon after landing, the crew tossed out life rafts and abandoned ship. An AVR loaded with dynamite picked them up, while the submarine *Sea Fox* and a helicopter stood by.

Other crew members were LCdr. R. T. Jennings; V. O. Hughes, AD1; Tingler, ADC; Taylor, AL2; Upton, HM2.

ALERT PHOTOGRAPHER SHOT DEADLY EXPLOSION

FIRE TUG PULLS AWAY WITH BATTLE HOPELESS

Reserves Gear for Big Year

PREVIEW OF 1951—RESERVE PLANES LIKE THIS ONE WILL SOON BE SET FOR CARRIER TAKE-OFFS

FOR THE first time since the war, Naval Air Reservists on the West Coast will requalify aboard carriers during their annual two-weeks cruises. Six squadrons from NAS LOS ALAMITOS, five from NAS OAKLAND and four from NARTU SEATTLE are slated to take carrier refresher training this coming year.

Fifty-five other Organized Reserve fighter, attack and composite squadrons will also go aboard carriers for the first time in fiscal 1951 according to the action-packed cruise schedule just posted by the Naval Air Reserve Training Command. And 10 additional squadrons will requalify if carrier schedules can be tailored to fit.

This means that approximately 50% more Organized Reservists are slated to get carrier training in 1951 than received it in 1950. It also shows how far the Naval Air Reserve program has come since its start in the summer of 1946, when only a handful of pilots turned up for two-weeks duty and did a little flying around the base.

Two new stations on the Reserve circuit, NAS SPOKANE and NAS BIRMINGHAM, have all of their three squadrons on the carrier schedule. NAS DENVER, NAS COLUMBUS, NARTU JACKSONVILLE, NARTU MEMPHIS and NAS OLATHE also are putting squadrons aboard carriers for the first time.

The remainder of the 19 stations and units on the Reserve circuit, which have squadrons slated for requalifications in 1951, are those at Anacostia, Atlanta, Glenview, Grosse Ile, Minneapolis, New Orleans, New York, Dallas and Willow Grove. Squadrons from these establishments successfully blazed the carrier trail in 1949 and 1950. This year's crop are determined to pile up even more impressive records and once more demonstrate that Naval Air Reservists are a combat-ready team.

Twenty-eight of the 70 squadrons definitely on the carrier schedule will take their cruises at fields in the Pensacola area and will requalify aboard the CVL type carrier assigned to the Naval Air Training Command. At present, the *Cabot* is assigned to this Command, but she is due to go into the Navy Yard soon and is slated to be replaced by the *Wright*, which in turn is slated to be replaced later by the *Saipan*.

Underscoring the excellent support given by the Regular Navy to the Reserve program is the fact that 42 Reserve squadrons are scheduled to take requalifications aboard Fleet carriers.

Squadrons from Denver, Los Alamitos, Spokane, and Oakland will fly aboard either the *Badoeng Strait*, the *Sicily* or the *Boxer*. They will operate either from NAS EL CENTRO or NAS SAN DIEGO, except for three squadrons from Los Alamitos which will fly from their own station. The rest of the squadrons will qualify aboard the *Palau* and the *Mindoro* of the Atlantic Fleet. They will operate from NAAS OCEANA, except three from NAS WILLOW GROVE which will fly from that base.

Actual requalifications aboard the carriers are scheduled to last for from two to four days with the remainder of the cruise devoted to advanced base training.

The weekend warriors from NAS GLENVIEW and NAS OLATHE will fly their recently acquired F8F's aboard carriers for an Organized Reserve first in this type of plane. If the projected Glenview cruise comes off, VA-727 will also be first Reserve squadron to fly its newly acquired AM's aboard a carrier. Otherwise carquals will be conducted in the usual F6F's, F4U's and TBM's.

And these carrier cruises make up only a part of the ambitious schedule for the 310 Reserve squadrons, which the training department at the Naval

AND ONCE AGAIN AIRCRAFT FROM RESERVE STATIONS WILL BE LINED UP ON PENSACOLA FIELDS

NORFOLK RESERVISTS PILKENTON, BAUMBACH AND SWANSON CHECK JET

ATLANTA PIO RENTZ SWEARS HIS SON INTO THE NAVAL AIR RESERVE

Air Reserve Training Command has arranged for fiscal 1951. Ninety-eight other Organized Reserve VP, VR, VC, VF, VA, FASRons and ZP squadrons are slated to take their cruises away from their home stations.

Here again, the working relationships that exist between the Reserves and the Regular Navy are paying off. Ninety-four of these squadrons will cruise at Regular Navy establishments located at Atlantic City, Quonset Point, Lakehurst, Patuxent, Norfolk, Jacksonville, Corpus Christi, San Diego, El Centro, Miramar, Alameda and Seattle.

Significant here is the fact that Reserve VR squadrons, slated to take their two-weeks duty with Fleet Logistic Air Wing, will again this year take their place side by side with Regular squadrons and will take over regularly scheduled FLAW flights.

The remaining 132 Reserve squadrons, including all types, are scheduled for cruises at their home stations. Even here, many will probably set up advanced base operations at local outlying fields. Minneapolis Reservists, for example, will undoubtedly go to Bemidji. Others from inland stations which lack bombing and rocket firing facilities will go to nearby Reserve stations for that type of practice.

On all the cruises, Reservists on the wing staffs at all of the 27 stations and units in the Reserve chain will back up squadron operations.

To support the top-flight cruise program, the training department at the Naval Air Reserve Training Command has set up an equally impressive Reserve airlift schedule for the heavy cruise months of July, August, and September.

In all, 118 VR flight movements, employing 33 R4D aircraft are scheduled. In fact, the primary mission of Reserve transport squadrons during this period is to provide logistic air support for squadrons taking two-weeks duty away from their home stations or NARTU's.

Approximately 13,000 personnel and 438,500 pounds of cargo are slated to be transported via this Reserve airlift.

When you consider further that the split-second timing for the flights will require 100 % availability for scheduled R4D's and the fact that R4D's from as many as six different Reserve stations are to be utilized in a single flight movement, you get an even better idea of the scope of the operation. And you realize again that teamwork is the cornerstone of the Reserve training cruise program.

Atlanta PIO Makes It 100% Navy

When he administered the Naval Oath to his youngest son, William, LCdr. Thomas H. Rentz, PIO at NAS ATLANTA made it 100% Navy for his family.

Less than three years ago, he swore in his oldest son, Thomas H. Rentz Jr., who is a member of FASRON-671 at Atlanta.

Billy, now a senior at North Fulton High School plans to enter the Naval Academy in 1951 after a tour of duty in the Organized Reserve. He also plans to follow in his dad's footsteps and become a naval aviator.

Good News for VR Co-Pilots

Co-pilots in Organized Reserve VR squadrons may now be designated "reserve plane commanders" by fulfilling the requirements of CNART Air Training Instruction # HTA 50-2.

The requirements are broad enough to include any aviator with VR experience, who has an interest in continuing his education and proficiency in transport flying.

In addition, this instruction provides a relatively inexperienced co-pilot with the opportunity of being designated "reserve first pilot" and having the privilege of commanding certain flights.

Reserves Escort Uruguayan Planes

Multi-engine escorts were provided by NAS DALLAS and NAS MIAMI for a flight of 6 TBM's and 3 SNJ's ferried from Dallas to Uruguay by Uruguayan naval personnel.

The itinerary included New Orleans, Pensacola, Jacksonville, Miami, Guantanamo, San Juan, Antigua and Trinidad.

The Uruguayan aircraft were given 60-hour checks at NAS MIAMI. On the over-water phases of the trip, they were escorted by two Miami PBY-5A's, manned by Reserve crews.

Station Round-Up

● NARTU JACKSONVILLE—Reservists in VP-741, led by CO Charles Rogers, recently got in some good antisubmarine warfare practice when they engaged in a joint weekend training maneuver with the Fleet type submarine *Medregal*, which was manned by Organized Submarine Division 6-43.

● NAS NIAGARA FALLS—Squadron VF-852 conducted joint GCI exercises with the "400" Reserve Squadron, RCAF, Toronto, Canada. Canadian GCI vectored the "400" *Vampire* jets against VF-852's *Corsairs* for many interceptions. The simulated combat drills took place over Lake Ontario.

● NAS OLATHE—When bad weather over Kansas City forced the United Air Lines DC-6, carrying the "Bob Hope Show" to land at this station, stationkeepers volunteered to drive Bob and his troupe to Kansas City in their personal cars to meet their scheduled afternoon show. Hope, in appreciation, invited all station personnel to be his guests at the evening performance.

● NARTU NORFOLK—The eight jet *Phantoms* are getting a good workout. Pilots from all squadrons who were checked out last summer in jet flying, are serving as instructors for other squadrons fighter pilots and ground crewmen, who got the word on maintenance and operation of jet aircraft at factory schools, are passing on their know-how to squadron members during line operations each weekend.

● NARTU SEATTLE—All squadrons are getting ready for their scheduled operations aboard the *Boxer* in July. A carrier deck has been painted on the field by the aircraft maintenance department, and actual aircraft spotting, handling, and simulated carrier launch of each flight is giving the weekend warriors plenty of practice. Experienced personnel instruct new trainees. When the Fox flag is two-blocked to the truck pilots brush up on CV starting procedures, wing spread, engine turn-up and launch by "Fly one."

A LETTER FROM GRAMPAW

Midshipman E. R. W———
Naval Air Station
Pensacola, Florida

Dear Buster,

My, how the years roll by! It doesn't seem any time since you were interrupting poker games with demands for your two a.m. feeding. When your Dad breezed in the office this morning and told me you were getting your wings next week, I felt as old as Methuselah.

Your father seemed to think that just because I read aircraft accident reports all day, I ought to write you a letter and tell you how to keep from killing yourself during your next two years with the fleet. I tried to tell him that you wouldn't pay any attention to an old Geezer like me, but he made me promise to write just the same.

BRUSH UP ON YOUR DITCHING PROCEDURE

Actually it's pretty hard to know where to start. You've been around Naval Air Stations long enough to know that you haven't chosen the world's safest way of making a living. Anyway you figure it, you're going to be exposed to a lot more hazards in the next couple of years than you would be if you'd kept that job with Montgomery Ward.

About the only advice that I can give you that may improve your life expectancy is this: DON'T WORRY ABOUT WHAT MAY HAPPEN TO YOU, BUT WORRY LIKE HELL ABOUT WHAT YOU'RE GOING TO DO WHEN IT HAPPENS.

For instance, some fine day you may be cruising along without a worry in the world and suddenly pop, boom, poop—an engine quits. Don't expect your heart to stay in the right place because it will come roaming right up past your Adam's apple. The thing that will help you to get it back in the right spot is knowing all the things you can try to get that engine going again . . . shift tanks . . . mixture rich

POP, BOOM, POOP—YOUR ENGINE QUITS!

. . . reduce throttle . . . booster pumps on . . . work the wobble pump . . . maybe lots of other things in the new fangled planes that you'll be flying.

If you do all these things and it still won't start, you aren't going to be feeling a bit better, but you aren't licked yet. If you're in a twin engine plane and you've practiced single engine operation, you'll breeze right on back just like nothing happened. You may have to jettison some weight and you may lose a little altitude before you get all squared away, but you'll be darn glad you had practiced flying on one fan.

IT TAKES PRACTICE TO FLY ON ONLY ONE FAN

Of course, if the engine that won't run is the only one you've got, your troubles multiply. You've got to decide quickly whether you want to get out or ride it down. Don't let this develop into a prolonged debate, or you won't have any decision to make. One thing that should comfort you is that you probably won't be the first guy to jump from that particular type. If you've paid close attention to the squadron bail-out instructions and know just how and what to do, you'll have a nice scenic ride, a membership in the Caterpillar Club, and something to tell your girl friend about.

If you're over water, the chances are that you'll want to forego all these benefits in favor of a ditching. This gives you more time to tell folks where you are and offers a better assortment of survival equipment. Here, too, you probably won't have to pioneer the job. Chances are pretty good that someone will have ditched the same type plane. Even if you are the guinea pig for that type you can rely on the tests that were made with carefully scaled models before the plane was ever built. Your squadron will have a Ditching Bill drawn up in black and white. If you know everything that you're supposed to do, and don't forget such important items as having your shoulder harness tight and locked, you'll come out smelling like a rose. Ditching is one emergency that you can't practice, except in the "DUNKER," but you can memorize the few important items on the Ditching Bill.

Now a word about getting lost. If you fly long enough and far enough, you're sure to get lost sooner or later. Getting lost in an airplane is nothing to be ashamed of, it happens to the best aviators now and then. The thing to avoid is STAYING LOST.

The first time you come back from a Navigation Flight and find that the carrier isn't there, or that some son of a gun has moved the airfield, you can be sure that you'll get a funny feeling in the pit of your stomach. You're temporarily lost, but DON'T LOSE YOUR HEAD. Just take a deep breath and remind yourself that it's happened to thousands of experienced pilots. Go right ahead with your standard lost

YOU'RE LOST, BUT DON'T LOSE YOUR HEAD

plane procedure, and don't let *pride* keep you from grabbing the mike and telling someone about your predicament. Chances are very good that in a few minutes you'll be wondering why you thought you were lost.

Well, that's about all the advice I can offer. Don't worry about the bad things that might happen—just be darn sure that you know what *you* can do in each type of emergency to minimize the dangers. Learn all you can about the plane that you're flying

IF YOU HAVE TO JUMP, THEN DON'T DEBATE

and the area in which you are operating. This knowledge is your best life insurance.

Sincerely,
GRAMP

Navy Gets VS Units Again

ASW Crews Fly Grumman Guardian

The Navy has VS squadrons again, but today's outfits are antisubmarine squadrons instead of scouting and will fly the new Grumman AF *Guardians* instead of the old SBD's and the like.

Seven VS squadrons have been redesignated to identify their primary mission—detection and destruction of submarines. They are at present flying AD *Skyraiders* and TBM's and formerly were known as VC (composite carrier aircraft) squadrons.

AF-2W GUARDIAN HAS A RADOME ON FUSELAGE

Contracts totalling $41,308,714 have been let this fiscal year with the Grumman company for production of the *Guardian*. The plane has the P&W R-2800 engine and carries a crew of four men, although it is only slightly larger than the one-man AD attack plane.

Five of the newly-designated VS squadrons will be in ComAirLant and the other two based on the West Coast. One of the eastern squadrons is slated to be moved to the Pacific fleet this summer.

GCA BOX SCORE

An overall total record of GCA approaches was set in the month of March 1950 when 13,663 were made. The box score follows:

March Instrument Approaches	13,663
Instrument Landings	662
Total Instrument Approaches	336,736
Total Instrument Landings	11,740

GRAMPAW BOWS TO VR-6's ACE

VR-6, WESTOVER—That labyrinth of instruments in the R5D panel is unnecessary for the most part—if you don't believe it, ask Lt. R. B. Poston, one of the squadron's new plane commanders.

At absolutely no extra expense, some instruments, heretofore considered vital, can be handily replaced by steel nerves and a nonchalant air. He found it out over Stephenville, Newfoundland on 9 January. Perfect test conditions existed—the weather was not good—ceiling 800′, visibility one and a half miles. According to the weatherman, it might get worse—blowing snow made ceiling and visibility variable.

Shortly after a normal takeoff, Lt. Poston noted fluctuation of all pressure instruments, then complete failure. This failure was nicely timed, just as the plane entered the overcast. The alternate pressure source failed to correct the situation. Both pressure lines were choked with ice. So, in the cold, cold soup above Stephenville, with no altimeter, airspeed or rate-of-climb indicator, Lt. Poston held on the range and called GCA.

Back in the days when *Grampaw Pettibone* was known as plain Pettibone, instrument flying was done on needle, ball and airspeed. A little later on, after the advent of attitude instruments, an artificial horizon and rate-of-climb indicator replaced the needle-ball combination to some extent.

However, the airspeed indicator remained a basic requirement for instrument flight. And it is very difficult to fly instruments without this fundamental device. Nevertheless, Lt. Poston did it. He returned Flight AV-117 safely to the deck under borderline GCA minimums.

ANY GRAY HAIRS ON HEADS OF POSTON, PINE?

The radio altimeter on the flight deck was used to check altitude on the way down, and the available gyro instruments were utilized fully. But it wasn't easy. Reticent Robert gave considerable credit to second helpings of Wheaties and his four co-pilots—God, Gravity, GCA and LCdr. R. E. Pine.

Col. Joseph E. Barzynski, Jr., Westover base CO, presented Lt. Poston with a letter of commendation which read in part: "You and your crew have saved your aircraft and passengers from disaster."

- NAS CORPUS CHRISTI—After one year of operation, the All Weather Flight School has turned out 404 students and issued 510 instrument cards. School planes flew 28,776 hours.

- NAS OAKLAND—At the request of COM 12 operations office, several searches have been flown on weekends by Reservists to investigate reports of unidentified submarines off the West Coast. Fortunately the results of all the searches were negative.

After weeks *of delay, caused by engine and propeller adjustments, the Navy's new XP5Y-1 seaplane finally made its first flight on 18 April at Consolidated Vultee's San Diego plant, a hop of 30 minutes. The turboprop seaplane with its counter-rotating blades is touted to be in the 350 mph class. Note the long slim fuselage that rides in the water.*

PB4Y'S FIND DISABLED SHIP

VP-28 crew: *Front—Zinn, Watson, Marklin, Miller, Kramer; back—Williams, Swann, Patterson, Johnson, Toyn, Minnard, Campbell.*

VP-22 *crew: Front—Gorecki, Phillips, Thompson, Shelby; back—Peebles, Benson, Jenista, Lindsley, Duncan, Bravo, Stitt, Dumont.*

TWO NAVY Patrol squadrons proved that when they are sent on a search the results will be quick.

The occasion was the finding of the USS *Elder* (AN 20) which, enroute from Pearl Harbor to Eniwetok, suffered complete power failure because of an explosion and fire.

A part of the crew abandoned ship on a boat and life rafts while three officers and 11 men remained aboard.

On 13 March she was sighted by another Navy ship but there was a heartbreaking failure to establish contact.

When the ship failed to make position reports for eight days, Commander Hawaiian Sea Frontier sounded an urgent call for an immediate search.

Patrol Squadron Twenty-Two, not-too-long back in Hawaii from Guam on normal rotation of duty, got the call and in one hour had nine planes ready for search. Four planes took off for the search area 2,000 miles away between Johnston Island and Eniwetok.

Four other PB4Y-2's of VP-28 were sent to Kwajalein and started a search.

One Privateer of VP-22 piloted by Lt. (jg) J. N. Lindsley, 1,787 miles and 10.8 hours out of Hawaii, picked up a blip on the radar screen. Shortly afterward an alert crewman, F. M. Dumont, AD1, spotted a lifeboat and several life rafts barely visible in the long Pacific swells.

The four planes of VP-22 joined forces and orbited the wildly waving survivors. Messages were sent to the surface units in the vicinity; the USS *Piedmont* and the USS *Comstock* immediately rang up flank speed and headed for the spot.

In the meantime two planes of VP-22 rendezvoused at the sighting scene and commenced a square search for the *Elder*. Several hours later a plane piloted by Lt. (jg) Bobby S. Macklin discovered the *Elder* and five minutes later was joined by Lt. (jg) W. R. Preston. The planes circled and sent amplifying reports.

Rear Admiral *M. R. Greer, Commander Fleet Air Wing Two congratulates F. M. Dumont, AD1, who first sighted the USS Elder's crew in rafts; pilots Lindsley and Adams beam approval.*

THE ELDER appeared to be in a seaworthy condition. She had makeshift sails rigged and a sea anchor over the stern. Both planes made low altitude passes to take photographs and to try to count the number of survivors on board. One plane left the scene to check course and distance to the *Piedmont*, the nearest surface rescue unit. Upon the return of this plane, blinker light communication was established with the *Elder* and she was notified that a ship would soon be there plus the news that the remainder of the crew had been rescued.

The two planes continued to circle the *Elder* and as night approached float lights were dropped to assist in marking the ship's position. The *Elder* lighted a torch on her bow to help the planes maintain contact. Low fuel forced the planes to leave when the *Piedmont* was five miles away but within sight contact. Another VP-28 plane soon arrived and dropped flares to illuminate rescue operations.

For the squadrons and surface units congratulations were soon forthcoming from top commands.

From Commander-in-Chief Pacific Fleet came a "Well Done" for the search covering half a million square miles of ocean. "It was well coordinated and efficiently executed reflecting great credit on all who participated," stated CinCPac about the operation.

PBM Crew Saved Off Haiti

Pan American Pilot Circles The Rafts

Ten more eligible members for the *Sea Squatters* club have turned up in the persons of PBM crew members from VP-34 who were rescued from rubber life rafts after ditching their plane near Haiti during *Portrex* operation.

While on an operational night flight, the plane was forced down by engine failure and had to make a dead stick landing. A Pan-American World Airways plane on a regular flight from New York to San Juan heard the PBM's distress signals and located its position.

The pilot, Capt. John Speers, stayed at the scene for two hours until rescue vessels and aircraft were directed to the drifting airmen. They were picked up before dawn by the converted destroyer, USS *Hobson*, cold, wet and hungry.

JACKSON, TODD, ROOF ADVISE YOUNG PILOTS

From left to right in the photo, they are: Front—Lt. (jg) Howard L. Weigle; Lt. William H. Westray, plane commander; Lt. (jg) Jack M. Manherz. Standing—Dymtro Andrichuk, Karl E. Schneider, Irving G. Reuter, Voight H. Shealy, Marion Pasquan and Milton Blake.

Weekly *classes in star identification at a Springfield, Mass., planetarium give VR-6 navigators a chance to brush up on celestial navigation. The device projects stars on a dome ceiling. Left to right: Lt. R. B. Tate, Ens. R. C. Thompson, LCdr. F. E. Reck, Lt. (jg) R. A. McClelland, Ens. J. E. Corbett, Lt. T. C. Beavers, Lt. (jg) W. J. R. Dunseath, Lt. A. D. Ronimus, Lt. V. E. Short, Lt. (jg) W. P. Page, Frank Korkosz, astronomer; Lt. (jg) J. L. Lincoln, Lt. Paulding.*

Ain't it always the littlest guy in the brass band who has to carry the bass drum? Well, it seems to work that way in the Marine Corps too. Cherry Point air station sent in the above picture showing Hedron II personnel carrying aerial cameras in inverse proportion. Left to right, Cpl. Furman, Pfcs. Theirault, Spayer, Poole, Whitley and TSgt. W. H. Query. Of course, the cynics will sneer that it's always the sergeants who do the least work.

FARMER-PILOTS SEE PENSACOLA

NAS PENSACOLA—The Air Navy was introduced to 525 *Flying Farmers* from the prairie states who spent a week visiting this training command as the guests of the Navy and VAdm. John W. Reeves, Jr., Chief of NATC.

Some 170 private planes filled the skies over Chevalier field as the pilots flew in with wives, children and friends to see how the Navy trains its aviators. They came from Illinois, Indiana, Michigan, Wisconsin, Kentucky, Tennessee, Texas and Iowa.

Their week-long visit began with an hour and a half tour of the CVL *Cabot*, and the destroyers *Corry* and *Forrest Royal*, the carrier's plane guards. Later the soil-tillers visited NAAS CORRY FIELD where student pilots in SNJ's gave a sneak preview of their capabilities before going into land-based carrier landings on the 'Bounce Field.'

The visitors also saw a rescue helicopter demonstration, a flyover by TO-1 jet trainers, and an acrobatic demonstration by the *Blue Angels* in their F9F's.

VISITORS SEE DENTIST AT MEDICINE SCHOOL

One day's doings ended with a fish fry at Barrancas Beach. Pouring rain curtailed carrier operations scheduled for the following day, but the visiting pilots attended educational movies and lectures by experienced naval aviators.

On the two succeeding days, while half the farmers were aboard the *Cabot* observing student carrier qualifications, the remainder toured the old Spanish forts, San Carlos and Barrancas, and watched classes in pre-flight, ground school and aviation medicine school.

They saw assembly line procedure of aircraft maintenance in the O&R shops and toured the survival museum, the acceleration unit and the Dilbert Dunker where pilots practice bailing out of a ditched plane under water.

Three *Naval officers were among a group of MATS officials who recently studied United Air Lines operations at Denver to learn more about payload, ground services, engineering and routing. They are Capt. E. C. Renfro, chief of operations for MATS, (third, front row); Cdr. E. B. Gibson, next to him; and LCdr. R. C. Payne, extreme right in the rear row.*

COMPOSITE SQUADRON 27

MEMBERS OF COMPOSITE SQUADRON 27 OWE THEIR NICKNAME 'SAINTS' TO LESLIE CHARTERIS' PROUD HERO OF WHODUNIT FAME AND FORTUNE

BEARING the insignia inspired by Leslie Charteris' *Saint*, Composite Squadron TWENTY-SEVEN participated in the invasions of the Palau Islands, Mindoro Island, Luzon and Subic Bay Peninsula, and performed outstandingly in the Battle for Leyte Gulf. The squadron chose the *Saint* because it typified a force that strikes courageously and effectively against its enemy. The celebrated author of "whodunnits" was happy to have his trademark become a battle device for a combat unit.

VC-27 was commissioned on 5 November 1943 at NAS SEATTLE under the command of Lt. Cdr. Percival W. Jackson, USN. After a 10-month period of training, the squadron, aboard the USS *Savo Island*, left Tulagi Harbor on 6 September 1944 to participate in the invasion of the Palau Islands.

It was no light assignment for the newcomers, and only the rugged, thorough training accounted for the success with which VC-27 carried out its missions. In the 18-day operation, VC-27 flew 544 sorties for a total of 1,899 hours, each of the 28 pilots averaging nearly four hours per day. So outstanding was the close air-ground support VC-27 gave that the Commander Support Aircraft and Commander Land Forces praised its effectiveness. Much of the support called for bombs 150-200 yards ahead of our troops, and the squadron established a 4.0 record for pin-point bombing. There were no bad drops.

Keyed to combat pitch, the *Saints* were eager to fight, and fight they did. They went after their targets with precision—troop concentrations, gun emplacements, bivouac areas, ammunition dumps, barges, warehouses, blockhouses, and pillboxes. Although there was no

★ THIS IS the twenty-sixth of a series of sketches of squadrons in World War II. It is based on reports filed with Aviation History and Research in DCNO(Air).

air opposition, the land-based anti-aircraft units really let loose with multiple barrages. Only one FM-2 pilot went down; he was picked up uninjured.

On 30 September, the *Savo Island* was ordered to set sails for Manus Island to report to Commander Seventh Fleet for duty. From October 3rd to 12th, the pilots enjoyed daily liberty on Manus, relaxation which came appropriately on the eve of battle.

On the 12th, the *Savo Island* with VC-27 aboard sailed with eleven other CVE's from Carrier Divisions 22, 24, 25 and 27, and several battleships, destroyers and auxiliary vessels. The size of the forces involved suggested some great project was at hand, but little did VC-27 pilots dream that they were to be involved in one of the greatest air-sea battles in all history, the Battle for Leyte Gulf.

The invasion of Palau had given VC-27 pilots confidence, sharpened their eagerness to be in an undertaking that called for the united efforts of the armed forces, ashore, afloat, and airborne. The sea campaign of late 1944 was to break the back of Japanese power and open the way to war on the home islands of the Empire.

As the approach was made to the target area, VC-27 furnished part of the air protection for Task Group 77.2. On 17 October when the ship had reached the Central Philippines, a severe rain and wind storm—a third-rate typhoon—kept all aircraft to their ships, but on the 18th, VC-27 was able to fly two support missions, stage a strike on the Visayan area, and carry out patrols and reconnaissance searchers.

There was no pause from that day on; VC-27 was in the thick of the fight. Pre-invasion strafing attacks, anti-shipping sweeps, combat air patrols, bombing and torpedo attacks, fighter interceptions and direct air support for ground troops on Leyte Island were VC-27's contribution to victory.

ON THE day when the large Japanese Fleet was "decisively defeated and routed," VC-27 made six torpedo and bombing strikes against the enemy task force and intercepted a large enemy raid which was closing in on its task unit.

On the big day, October 25, the skipper, Lt. Cdr. Jackson in his TBM scored a hit on a *Mogami*-class cruiser, which caused a small explosion and started a fire, hit a *Kongo*-class battleship just aft of the main battery, fired his rockets into the superstructure of a heavy cruiser and scored two bomb hits on the port side of the same ship.

Five other TBM pilots shared honors in blowing off the stern of a CA. Lt. S. T. Bitting, Lt. G. R. Henry, Lt. (jg) C. C. Nathan, Jr., Lt. (jg) J. M. Yeaman, and Ens. R. H. Wand each released a torpedo in the same flight. Somewhat after the manner of a firing squad at an execution, they must remain forever in ignorance as to which torpedo was the lethal clincher.

On 24 October, fighter pilot Lt. R. E. Elliott shot down four *Franceses*; on the 25th, he encored with two *Tojos*. He had also claim to half a *Val* in a joint attack with Lt. (jg) F. M. Leighty. In the same period, Lt. G. H. Davidson destroyed four Jap planes and partici-

CAPT. C. E. EKSTROM CONGRATULATES LCDR. PERCIVAL W. JACKSON

HERE THE CVE SAVO ISLAND ENTERS THE SULU SEA, PHILIPPINES

pated with three other pilots in the destruction of a fifth.

FROM 13 October through 29 October, VC-27 flew 366 operational sorties for a total of 1,425 hours, destroyed 28½ enemy planes airborne, seriously damaged eight others, severely damaged six ships ranging from a BB to a 3,000-ton cargo ship, damaged 10 others, and heavily attacked ground and harbor targets.

On 30 October, the *Savo Island* with ships of Task Groups 77.2, 77.3, and 77.4 left the Leyte Gulf area for Manus. On the morning of 3 November, the pilots flew off the ship for Ponam Island where they were to rest until 19 November. They deserved a break.

On that day, the *Savo Island* began operations with Task Unit 77.4.6 and provided air cover for convoys enroute to and from Leyte Gulf. From 23 to 27 November, VC-27 flew 186 operational sorties for a total of 620 hours. Since they never sighted the enemy on the surface or in the air, the duty was monotonous, especially after the excitement of the Leyte campaign.

VC-27's next assignment was to escort and protect Task Group 78.3, the Mindoro Attack Group, from enemy air, surface and undersea craft enroute from Leyte Gulf to Mindoro Island. The squadron was in tip-top condition, ready for duty and anxious to sharpen its teeth on the enemy again. To augment the fighter strength for this operation, five pilots from VC-76 were assigned to VC-27.

From 10 to 19 December, the VF pilots performed this mission in a highly efficient manner. To its already impressive score, VC-27 added nine enemy planes destroyed in the air, seven on the ground, and continued to hold top rank among the four squadrons of Carrier Division 27.

On 29 December 1944, the squadron learned its new battle assignment. One of the greatest of all amphibious operations was scheduled for 9 January 1945, the invasion of Luzon in the Lingayen Gulf area with major elements of the U. S. Sixth Army supported by VAdm. T. C. Kincaid, USN. The *Savo Island* was assigned to Task Unit 77.4.2 with five other CVE's.

While entering the Mindanao Sea in the early evening of 3 January, the ship was called to General Quarters to repel an enemy air attack. This attack was easily stopped, but the raid was the forerunner of a series of increasingly intensive attacks through 7 January. VC-27, called upon for a number of scrambles, shot down a score of enemy planes in air battles.

On 4 January, the CVE *Ommaney Bay* was hit by a *kamikaze* and set afire. The fire got out of control and the ship had to be abandoned. Later it was sent to the bottom by one of our destroyers.

The very next day a *kamikaze* hit the *Savo Island*. The accurate AA fire and evasive ship maneuvers kept the *Oscar* from hitting the bridge toward which is was headed. The Jap plane managed to strike the mast, damaging it and knocking out the ships' radar equipment.

From 3 to 18 January, VC-27 destroyed 25 enemy planes—ten of them in one fell swoop—sank an enemy submarine, one 1500-ton transport, and five small surface craft. All this was in addition to the heavy destruction it dealt out to ground installations. Credit goes to Lt. (jg) Wand who sank the submarine while it was undergoing repairs off Luzon. Two successful rocket hits did the job. The transport went down 6 January when fighter pilots J. T. Ross, T. S. Mackie, F. W. Barnett and F. L. Vocke banded together in a strafing attack on the ship.

IT WAS A GREAT DAY IN THIS PILOT'S LIFE

THE EVENING of the 17th the Task Groups departed from the Lingayen operating area and proceed to a new location west of Mindoro Island. From the 18th to the 31st, Task Group 77.4, of which the *Savo Island* was a member, cruised west of Mindoro to protect the line of communications from there to Lingayen Gulf, furnish protection to the Mindoro garrison against surface craft attack, and give direct support to additional Luzon landings. On the 31st, the Task Group departed for Ulithi.

Had VC-91 arrived a day earlier to relieve VC-27, it would have been a memorable Valentine Day. But the 15th of February did just as well, and VC-27 hearts beat high as the tour ended.

A recapitulation of the score during the eight-month tour indicates that the *Saints* had done their part. They had destroyed 62 airborne enemy planes, seriously damaged 9 more; knocked out six enemy planes on the ground and damaged 15 more. They had sunk one submarine, destroyed 18,650 tons of enemy shipping, damaged an additional 40,900 tons, and rained destruction on shore facilities.

The squadron was re-formed on its return to the United States. While the *Saints* were being trained for their second round, the Japanese surrendered.

Only then could the *Saints* relax. Some day they'd be recounting their adventures. Years later they'd be saying, "And I said to the Admiral . . ."

Photos Aid Plane Search

VC-61, MIRAMAR — For the first known time in the Navy during or since the war, photographic reconnaissance and interpretation technique was used to search a large uninhabited area for a missing airplane.

Such a task fell to this squadron during its wintertime photo recco and mapping training program in preparation for future Alaskan operations. On 10 February, Ens. Charles E. Butler flying an F4U attached to VF-53 on the *Valley Forge* was missing in the Los Angeles-San Diego area. When last seen, he was over MCAS EL TORO and entered a cloud formation on the western edge of the Santa Ana mountains. He lost both visual and radio contact with five other *Corsairs*.

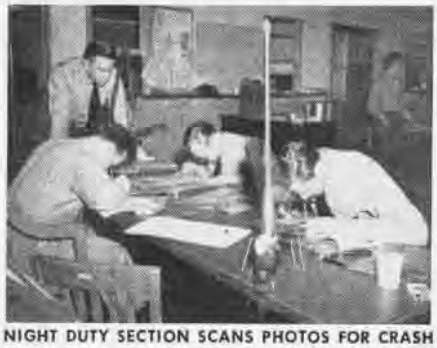
6,000 AERIAL PHOTOS TAKEN OF 350-MI. AREA

In the following three days, an intensive air search of southern California mountainous and offshore areas produced negative results. Estimating the Santa Ana mountains to be the most probable region concealing the missing pilot and aircraft, ComAirPac ordered VC-61 to photograph a 350-square mile rectangle enfolding the Santa Anas and to interpret the coverage in search of a possible parachute or plane crash.

On 13 February, VC-61 employed four *Liberators* photographed the mountains on a scale of 1:10,000 with K-17, 12" cameras and simultaneously on a scale of 1:5,000 with K-18, 24" cameras. Thirty-two rolls of aerial film containing 6,000 individual pictures were printed and turned over to VC-61 photo interpreters for intensive study over a continuous 48-hour period.

Pocket stereoscopes and magnifying glasses were used for preliminary study. Where light reflecting objects, disrupted natural vegetation or other unnatural terrestial features indicated a possible crash site, a magnifying Fairchild stereoscope was used to check these pinpoint images. Some of these objects were less than 20' in diameter on the earth's surface.

Supervised by officers experienced in photo interpretation and photogrammetry, both the aerial coverage assigned and the photo interpretation was considered as complete as possible for purposes covering a large area, acre by acre, for a minute object.



NIGHT DUTY SECTION SCANS PHOTOS FOR CRASH

Three possible crash sites located stereoscopically in the most rugged and forested section of the Santa Anas near Santiago Peak, 5,696 feet, were reconnoitered at low altitude by a VC-61 Beechcraft.

In these cases, a small landslide and bright, angular rocks appeared similar to swathes through trees and a scattering of aircraft fragments. The intensive photographic search was negative in solving the mystery of the missing plane and pilot. However, it was a valuable training exercise which always offered the possibilities of unique success.

It was concluded that the possible crash either was in some other geographical area, or so broken up it could not be spotted through photo interpretation on the scale considered feasible. When no crash was found, VC-61 sent planes to known crash sites in the Leguna mountains near San Diego to see how easy or difficult a crash site might be to detect.

In one of the accompanying photos, the night duty section of interpreters and pilots search photos for the lost plane. They are, left to right, Lt. (jg) J. W. Rutledge, Lt. S. J. Whiteman, Lt. W. H. Harris, Lt. (jg) D. W. Kennedy. In the other shot are shown some of the 6,000 Sonne prints which were turned out within 36 hours in the emergency search. K. E. Bryson, AF3, places a roll on racks to dry.

● NAS NEW ORLEANS—A change to the R-2809 exhaust coupling insert reaming stand built from a design developed at MCAS EL TORO which was published in the NANEWS, was made at this activity. It was found that the odd-numbered cylinders would not fit on the stand owing to a difference in the holes in the mounting flange. This difficulty was overcome by elongating the mounting holes so the stand is now a universal type.

Planes Cost $557.5 Million

Fiscal 1950 Funds To Buy 798 Craft

Total aircraft purchases, in numbers and money, made from fiscal 1950 funds were recently revealed by the Navy. For 798 new planes $557,500,000 will be spent.

Of this sum $375,900,000 represents contracts for airframes, $174,700,000 for Government Furnished Equipment for the planes, and $6,900,000 for related equipment not chargeable to specific models.

Amounts indicated below represent contracts let to date for both airframes and other aircraft equipment.

Model	*Contracts*	*Manufacturer*
F3D	$61,666,933	Douglas
AD	12,121,360	Douglas
F9F	92,902,841	Grumman
AF	41,308,714	Grumman
P2V	36.700,942	Lockheed
TO	1,265,000	Lockheed
P5M	31,406,562	Martin
F2H	68,637,434	McDonnell
AJ	16,583,982	N. American
HUP	4,156,064	Piasecki
F4U	9,112,000	Ch. Vought

Airman Saves TBM Wreck

Spots Batten, Battles the Slipstream

VA-15, ATLANTIC—Alert action on the part of Charles R. Wallace, ADAN, saved a possible crash by a TBM which was about to take off the *Philippine Sea* with a batten on the aileron.

Wallace saw the plane taxiing to the launching spot with the batten in place. With the plane turning up at takeoff power just prior to launch, he ran up the deck against slipstream and removed the batten, thereby preventing a possible accident, loss of plane and crew.

In so doing, he risked being blown into the propellers of planes turning up behind him. Wallace later was given a Commendatory Mast for his performance at the risk of his own personal safety above the normal call of duty.

When John *F. Floberg, Assistant Secretary of the Navy for Air inspected MCAS El Toro on his nationwide tour of bases, he was accompanied by VAdm. John Cassady, DCNO (Air). Greeting him were MGen. Field Harris, CG of Marine Air Wing One; Col. Edward C. Dyer, CO of MAG-12 and Maj. Joseph F. Quilty, exec of VMF-311.*

Squall Hits NAS Key West

Alert Radar Crew Prevents Damage

Radar warning of an approaching squall line prevented possible damage at NAS Key West recently.

A snap squall with winds up to 70 miles per hour swept through the area in March. As soon as the GCI radar picked up the disturbance all boat lines were doubled up and planes secured.

Because of the advance warning no damage resulted. The President's plane, the *Independence*, was on the field at the time.

Although Key West is usually balmy, March lived up to its name with peak winds during the month.

Sitting in *the seat of a Navy helicopter aboard the Newport News, flagship of the Mediterranean fleet, is none other than the Queen of Greece, Fredericka. She indicated she would like to ride in one but when VAdm. John J. Ballentine explained what it would be like, she withdrew her request. In this photo Pilot Lt. Harold J. Treon explains to her how a helicopter operates.*

Tiny Baby Flies To Surgery

Pensacola Transport In Mercy Hop

NAAS CORRY-FIELD—One of the youngest passengers ever to board an R4D here was James Chase, Jr., two-month-old son of Photographer's Mate and Mrs. James Chase. He was suffering from a brain abscess or hemorrhage, and doctors decided he should be operated on by a brain specialist at once.

Cdr. Richard Baxter, USCG, Utility Unit commander and Lt. George R. O'Bryan, USN, took off in the transport on a mercy flight to NAS ANACOSTIA and the baby was taken by ambulance to the Naval Hospital at Bethesda late at night. The operation was successful, and the baby recovered.

Is that a *new kind of propeller on the inboard engine of the XP5Y-1? This first photo showing a turboprop engine turning up on the Navy's new high speed seaplane may puzzle the uninitiated. Actually the "four bladed prop" is a ground vibration balance rig put on the plane for testing only. Four General Motors T-40 turboprop engines will power the new plane. When the aircraft drops the "X" from its title, it will become the first Navy operational plane to have counter-rotating props although the AF and British have them.*

MEMPHIS POLISHES OPERATIONS

NAS MEMPHIS—Because all visitors, VIP's or otherwise, get their first impression from the operations building, this station has instituted a program of making it shine like a quarterdeck.

Gangways are kept spotless. The command's three aircraft gangways, one for the JRB, one for the R4D and one for R5D and larger aircraft, were given a complete beauty treatment, replete with silver and black paint job, shining white duck side curtains and hand rails.

One of the big problems of a pilot clearing out on a flight in bad weather is copying verbatim the lengthy flight instructions transmitted by the tower just prior to takeoff. Flight clearance forms issued by NAS Operations now carry an outline of this information on the back. All that is necessary is to insert the given information in the spaces.

Time zones now are illustrated on the master flight planning chart map of the U. S. in Operations lobby. Pilots now can pinpoint the exact places where zone time changes en route.

A flight-planning table is being built in the Operations lobby, next to the Aerology counter. Everything necessary for the complete planning of flight will be mounted permanently on this table, and a step will take the pilot to current weather information.

A small lounge has been created in the southern end of the lobby for transient pilots and crews. Lockers are provided for safe stowage of their gear.

A "follow me" truck is available to guide pilots, who are unfamiliar with the field, to the point of takeoff.

A form is submitted to each pilot on arrival, upon which he enters information pertinent to his flight, services requested of this activity, aircraft discrepancies he wishes repaired, dispatches he wishes sent and the like. When he leaves he is given a questionnaire soliciting his ideas on services and treatment at the field and requesting suggestions for improvement.

Blue Angels Luring Cadets

Fancy Fliers Visit Reserve Activities

NAS PENSACOLA—The Navy's exhibition flight team, the *Blue Angels*, are busy this year doing performances at open houses at Reserve air stations to stimulate aviation cadet procurement.

Their schedule the rest of this year includes the following dates: June 17, Willow Grove; June 18, Squantum; June 25, Niagara Falls; July 2, Grosse Ile; July 9, Glenview (Chicago Plymouth Model Meet); July 30, Dallas (National Model Meet); August 6, Lincoln; August 20, Olathe; Sept. 17, St Louis (Air Age Exposition); September 24, Denver; Oct. 8, Seattle; Oct. 15, Oakland; Oct. 22, Los Alamitos; Nov. 12, Birmingham, and Nov. 19 at New Orleans.

They already have appeared at Atlanta, Miami, Jacksonville, Memphis and New York Reserve air stations in connection with NavCad procurement.

FRANCE'S NEWEST JET IS THIS NORD 1601, WHICH CARRIES TWO MEN

EXTRA FINS HELP DIRECTIONAL STABILITY OF FRENCH NAVY NC 1080

FRENCH CARRIER JETS

IN RECENT years the French Navy has been operating *Seafires* and SBD's off their two carriers *Arromanches* and *Dixmude*. Under the Mutual Defense Assistance Program, however, they are now receiving F6F's and SB2C's. Although such aircraft will be very useful for the immediate future, the French hope eventually to replace them with more advanced types of native design and manufacture. Toward this end the French Navy has instigated a five-year program of research and development.

The program was initiated in 1946 and thus far has centered around the construction of three specific Navy carrier-based jet prototypes, the NC 1080, VG 90, and the NORD 2200. In addition to the actual Navy program there are three other jet prototypes, MD 450, NC 1071, and NORD 1601, which have received naval attention during the past 21 months.

Although series production of these French jets, with the possible exception of the MD 450, is not anticipated, experience has been gained in the design and construction of jet aircraft which should pay off in the future.

The *Societe Nationale de Construction Aeronautiques du Centre* (S.N.C.A.C.), which designed and built this aircraft, recently went into liquidation, but one plant is continuing the construction and development of the NC 1080. Recognition-wise there is a very strong resemblance between the NC 1080 and the British Supermarine 510; both aircraft have sweptback wings, sweptback empennage, and air intakes in the fuselage sides with jet exit out the tail.

On the ground an apparent recognition difference is the NC 1080's tricycle landing gear. The aircraft first became airborne at the testing station at Villaroche on the 29th of July 1949. Ill fortune, however, overtook the first prototype and on 7 April 1950 during its final test flight the NC 1080 went into a spin at about 9,800 feet. When the pilot released the anti-spin parachute, the action of which proved briefly effective, the parachute either became torn away or else was released by the pilot and the aircraft started spinning again. The test pilot was killed in the ensuing crash.

Estimated maximum speed powered with a single, French-built, 5,000 pound thrust, Hispana-Suiza *Nene* engine is 508 knots at sea level. As an interceptor fighter, the NC 1080 will have a designed range of over 700 nautical miles. The rate of climb to 29,500 feet is approximately 11 minutes 20 seconds. Empty weight of the aircraft is 10,660 pounds while the permissible total weight is 15,660 pounds.

As can be noticed in the photograph, the NC 1080 features a distinct plank-like fuselage skin covering. This method is peculiar to S.N.C.A.C. and is employed on their experimental twin-jet NC 1017 torpedo bomber. The two small fins attached to the tips of the stabilizer are for additional stability.

VG 90

Of the three naval fighter prototypes, the lines of the Arsenal VG 90 can be regarded as perhaps the cleanest. The fuselage of this aircraft is slender and oval, tapering fore and aft to a well-shaped empennage. Data gathered from testing of the experimental VG 70 was used in design and construction of the VG 90.

These high swept-wing aircraft are similar in general lay-out but differ recognitionally in that the air intake has been relocated from the underside of the VG 70's fuselage to the sides of the VG 90's fuselage. This is considered to be a definite improvement, inasmuch as the jet intake of the VG 90 will not be as apt to pick up stones and debris while in the process of taking off.

A single Hispano-Suiza *Nene* jet engine gives the VG 90 a maximum speed of approximately 490 knots at 20,000 feet. Range is estimated to be 1,200 nautical miles. The weight of the naval fighter loaded is 17,800 pounds supported by a tricycle landing gear.

Plans call for the installation of three 30mm cannon and eight rocket projectiles. In addition, radar gear is to be provided.

Nord 2200

SNCA du Nord's most advanced jet fighter, the NORD 2200, made its first flight on 16 December 1949 at Melun-Villaroche. In its present form, the swept-wing NORD 2200 does not feature any military equipment nor a folding wing, but it has catapulting and arrester gear.

Air intake for the single Hispano-Suiza *Nene* jet engine is provided by a large oval-shaped inlet at the front of the fuselage. Jet exit is out the after end of the fuselage and just above is a sweptback stabilizer featuring a straight fin and rudder with a predominant dorsal fin. Very good vision is afforded by the placement of the cockpit in the extreme front of the fuselage above the air entry duct. To speed the pilot's exit in an emergency, the cockpit is equipped with a cartridge-operated ejector seat. Armament will be included in the fuselage.

The maximum speed is 505 knots at 16,404 feet; landing speed is 74 knots without power. Time to 32,808 feet is

FIRST FRENCH TWIN-JET PLANE TO FLY WAS THIS NC-1071, A BOMBER

VG 90 NAVAL JET HAS SWEPT WINGS, IS POWERED BY A HISPANO NENE

11 minutes and the range is estimated to be over 500 nautical miles. To boost take-off there is provision for the fitting of jet-assist rockets (RATO). Fully loaded the NORD 2200 weighs 17,394 pounds.

MD 450 "Ouragan"

The *Ouragan* (*Hurricane*) is a promising single-seat fighter which was designed and built in 18 months. Avions Marcel Dassault, one of the most successful of the privately-owned companies, built the MD 450 prototype without a government contract or even a promise of one. Dassault's confidence in the design has been borne out to some extent, as limited series production has been authorized for 12 aircraft.

The MD 450 was first flown in February 1949 and has since made numerous test flights. It is considered in many quarters as the best jet fighter produced in France to date. On frequent occasions the *Ouragan* has been mentioned as a possible naval interceptor. Its light loaded weight of 12,345 pounds indicates that it would be well suited for this role. Power is provided by a French-built *Nene* and reports indicate the fighter is capable of 525 knots at sea level. Armament will probably consist of four to six 20mm guns.

Recently an MD 450, both armed and pressurized, underwent flight tests at Bretigny flight test center for climb performance and maneuverability at 49,200 feet. These tests will be subsequently continued at the Marseilles-Marignane flight test center.

Recent reports indicate that Dassault is currently designing a larger version of the MD 450 with sharply sweptback very thin wings. It will carry a crew of two instead of one; have supplementary fuel tanks and complete radar equipment.

NC 1071

The first twin-jet French aircraft to fly was SNCA du Centre's NC 1071 which became airborne in October 1948. It is a jet version of the NC 1070 reciprocating-engine bomber which has been flying for some time. The NC 1071 intended as a torpedo and dive bomber is quite unorthodox in layout. Recognition enthusiasts need only a brief glimpse to size-up its peculiar configuration.

Power is provided by two French *Nenes* enclosed in nacelles, which are mounted on the wings. These nacelles are extended and used to form tail booms on which are mounted twin fins. The aircraft weighs around 30,000 pounds loaded including a 3,600 pound pay load and has a maximum speed of approximately 430 knots at 13,000 feet. Tests thus far have not been promising and the NC 1071 is expected to have no future insofar as the French Navy is concerned. A prototype NC 1072, an all weather-fighter, is in design and will be similar to the preceding one, but with much thinner wings in order to improve speed.

Nord 1601

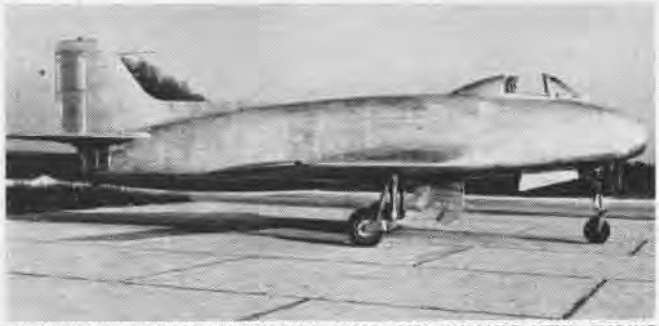
SNCA du Nord's most advanced experimental jet aircraft is the exceptionally clean looking NORD 1601. A first flight by this aircraft was made on 24 January 1950. The 1601 is a two-seat, side-by-side arrangement, twin-jet midwing monoplane which is being developed to conduct research into a number of problems associated with high speed flight. It is a sweptwing aircraft with two Rolls Royce *Derwent* 5 engines housed in the wing roots close to the fuselage. Estimated maximum speed of the 1601 is 490 knots at sea level. Its service ceiling is about 49,000 feet and its weight loaded 14,740 pounds.

Saufley GCA Saves Four

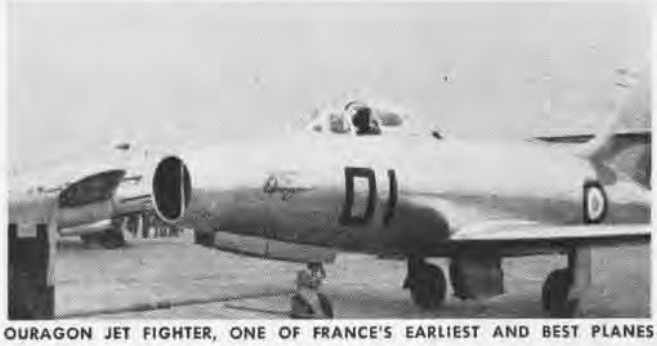
Rainstorm Maroons Navy, AF in Air

NAAS SAUFLEY FIELD—When it rains, it pours. On the night of 3 April, in the middle of heavy rainstorms, the GCA unit here in two hours brought in four planes that were lost up in the soup.

Two were Navy Planes and two Air Force. One was a T-6 (SNJ) which could not raise any Air Force radio aid and landed here under a 400-foot ceiling and heavy downpour. A Navy JRB was brought in after holding on the range 45 minutes while GCA hunted for a lost AF C-47 in the area. Ten minutes later a Navy R4D landed in the heavy rain, followed three minutes after that by the C-47.



NOSE SCOOP IN THIS SWEPT-WING NORD 2200 SUPPLIES NENE ENGINE



OURAGON JET FIGHTER, ONE OF FRANCE'S EARLIEST AND BEST PLANES

SKYSTREAK ENGINE AT OAKLAND

GIBSON, FUDGER CHECK EX-SKYSTREAK ENGINE

NAS OAKLAND—Did you ever wonder what happened to the J-35 jet engine that flew the D-558 I *Skystreak* to two world's speed records in 1948?

The engine, complete with its log showing the speed run entries in a few prosaic words, is now at this Reserve air station. It is installed in an FJ-1 *Fury* and is being flown daily by Reserve pilots checking out in jets.

'Ole #104,' with the *Skystreak* engine installed, is one of five jets the Reserves have used to check out 42 pilots since January 1. Because the Navy no longer is buying FJ's, the problem of getting spare parts to keep the planes flying is becoming increasingly difficult. But Oakland manages to keep most of its jets in the air.

Since the station got its first jet last September, pilot interest in the Reserve flying program has zoomed 1000%, according to LCdr. H. F. Greene, jet training officer. Pilots from the various VF squadrons at Oakland are selected to check out in jets. Before they do, however, they have to attend 20 hours of ground school classes and must have 15 hours flight time in conventional fighters in the preceeding 30 days before taking up a jet.

These ground school classes are unique in that the pilots come out to the air station at night and the time spent in them does not count toward monthly drill. Greene said Oakland hoped to have all of its fighter pilots checked out in jets before the end of a year. Greene, incidentally is the pilot who flew one of the FJ's down to Burbank, a distance of 325 miles, in 37 minutes.

Pilots checking out in jets are given five hours of solo time. On their first flight in the FJ's, an F6F chase plane goes aloft first and dives on the field just as the jet takes off. The F6F pilot talks to the new jet flier over his radio to give him instructions and to act as a calming influence.

Before any of the *Furies* is taken out for a flight, a daily check is given the engine by Line Chief J. N. Gibson, ADC, and his crewmen. The turtleback and canopy are removed and all fuel and other connections to the engine checked for tightness.

While the FJ is not the Navy's fastest jet, its use in the Reserve program has not only increased the interest of fighter pilots in the Reserve but others as well. The move indicates the Reserves will be receiving other newer-type Navy planes and this encourages

DAILY PREFLIGHT CHECK GIVEN EACH ENGINE

the TBM and patrol plane pilots as well. Some Reserve stations have F8F *Bearcats* or AM-1 attack bombers, newly turned over to them by the fleet.

Navy Makes Dollars Count

Survey Boards Check Every Activity

To insure that the nation gets the most for every defense dollar, the Navy is scanning its establishments throughout the country with an eagle eye.

Four on-site survey boards have swept through the districts and have fine-tooth-combed their naval activities. Now two other boards are making similar surveys of the Navy Department.

Job of these boards is to effect economies in operations, to streamline and consolidate facilities and to increase efficiency by seeing that personnel are usefully and fully employed.

At the same time, they must test all of their recommendations against the yardstick of mobilization requirements.

Heading the on-site survey boards, which were organized in CNO and which operated under DCNO (Logistics), were RAdm. Richard F. Whitehead, RAdm. Ernest E. Herrmann, RAdm. Henry S. Kendall and RAdm. Clarence E. Olsen. Their work was completed early in 1950 and the streamlining recommended in their reports is already underway.

RAdm. Whitehead and RAdm. Olsen are now in charge of the two management survey boards which are reviewing activities in the Navy Department. These boards are set up under Undersecretary of the Navy Dan A. Kimball

RADM. WHITEHEAD GREETED BY CAPT. NATION

who is personally directing their operations. He will submit their recommendations to the Secretary of the Navy for implementation.

In the picture, RAdm. Whitehead is shown arriving for his survey of NAS DALLAS, a station which he had helped develop and had had under his command only a few months before when he was serving as Chief of Naval Air Reserve Training.

New Marine Reserve Policy

Enlistments Are for Indefinite Period

Marine Corps Reservists will now be enlisted for an indefinite period, instead of for the four or six year periods now in effect for Regular Marines.

The policy, which sets a precedent in Marine Corps enlistment procedures, provides no disadvantage to Reservists since they will still have the peacetime privilege of being discharged at any time on their own request. It will simply make it more convenient to maintain continuous service.

Present members of the Marine Reserve will be discharged upon termination of their current definite-term enlistment and will not be affected by the new policy until such time as they reenlist.

Definite term enlistments will remain in effect for those having obligated service under the Selective Service Act.

One-year enlistees in the Marine Corps, who are to be enlisted in the Marine Corps Reserve, will still be required to serve in the Reserve for a six-year period. Others, discharged from the Regulars prior to completing a minimum of three years active service, must remain in the Reserve for at least five years if qualified in all respects for Reserve duty at the time of discharge from the Regulars.

● NAS ST. LOUIS—Two simple devices showing the operating principle of the counter-weight type of propeller have been constructed to help students visualize the action of counter-weights and the forward-moving cylinder in relation to pitch change. The devices required about two man-hours to construct. They were made from miscellaneous scraps of wood, tin cans and spools, plus a handful of washers and bolts.

THESE TWO CREWS LOCATED 10 MEN AT NIGHT

Flares Locate 10 in Rafts

Caribbean Scene of Rescue at Night

VC-24—The usual search and rescue situation of multi-engine aircraft coming to the aid of downed single-engine planes was reversed during this squadron's cruise aboard the *Palau*.

Two TBM's from this squadron located survivors of a downed PBM from VP-34. The plane, forced down at midnight by engine failure, sank. The crew of 10 were in four life rafts when spotted two hours later by planes piloted by Lt. D. B. LaPierre and Ens. G. L. Munter.

The survivors attracted the attention of the planes by using flares and float lights. Also attracted to the scene by the flares was a commercial airliner which circled, illuminating the area with its landing lights while destroyers were vectored to the scene by the *Turkeys*.

Rescue crews in the photo are, left to right: H. W. Stoke, AOC; J. D. Mamieson, AD1; Ens. Munter, Lt. LaPierre, L. R. Dunham, AL1, and T. C. Griffin, AO1.

It's Changed To CIC Again

Regulations 1948 Specifies Name

A dispatch from the Chief of Naval Operations dated 17 March 1950 specified the nomenclature of the center aboard ships which coordinates information of all kinds for tactical purposes.

The dispatch is quoted: THE DESIGNATION QUOTE COMBAT INFORMATION CENTER UNQUOTE AS USED IN ARTICLE ZERO NINE THREE ZERO UNITED STATES NAVY REGULATIONS NINETEEN FORTY EIGHT SHALL HENCEFORTH BE USED THROUGHOUT THE NAVAL SERVICE AND THE USE OF OTHER DESIGNATIONS FOR THIS CENTER SHALL BE DISCONTINUED.

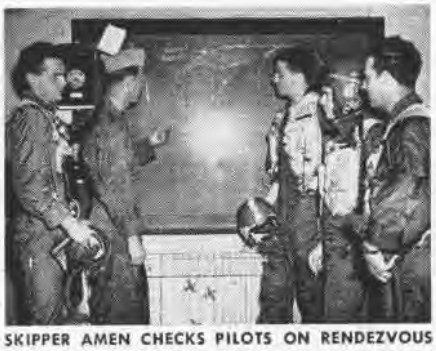
● NARTU MEMPHIS—A branch PubInfo office seems to be in making from members of the staff of WMCT (Television). So far, a photographer, a producer, an announcer and a sales representative from WMCT have signed up with the Organized Reserve and are members of the same squadron. The news editor is a member of the Marine Air Reserve at this air station.

CHANGING FROM PROPS TO JETS

A FEW OF the Navy's fighter squadrons have turned in their F8F's and *Corsairs* for jet *Banshees* or *Panthers*, but there are still many which are using the same propellered fighters they trained on at Corpus Christi.

Eventually, carrier-based planes will be all jets or turboprops. But the changeover is gradual, being limited by the Navy's budget. Jets are far more expensive to build and operate than propellered fighters.

Air Group Five at San Diego is an example of transition from reciprocating engines to jets. It received the first FJ-1's many months ago, but its squadrons still flew *Bearcats* until enough



SKIPPER AMEN CHECKS PILOTS ON RENDEZVOUS

F9F's came off the factory line to equip them with new jets.

Latest CAG-5 squadron to shelve their F8F's for the "blow torch specials" was VF-111, which completed the transition at the start of this year. Commanded by LCdr. William T. (Tom) Amen, it switched from F8F's to F9F-2's.

What was it like to fly one of these speedy jets after spending many hours in other types of planes? The question was put to several squadron pilots. LCdr. Uncas L. Fretwell, the squadron exec, said, "The greatest difference I noticed as did other pilots was the lack of rapid acceleration upon adding full throttle upon takeoff and the touchy aileron boost control."

The change would be especially noticeable to pilots who had been flying the F8F *Bearcat*, which will get off the ground in 100 feet and climb straight up. Jets won't do quite that good.

Lt. (jg) Carl A. Dalland, assistant engineering officer of the squadron, noted that after being used to hearing the roar of the engines in the conventional planes, the quietness of the jet cockpit was astounding. Ordinarily, he said, after a flight in a propeller-driven plane, the pilot comes down with his ears ringing. But in the jets all the noise shoots out the tailpipe, and the pilot hardly hears a sound.

Pilots like Lt. Peter I. Culbertson and Lt. James W. Waggoner found jets

PRESCOTT GIVES 'THUMBS UP' TO VF-111 PILOT

quite a contrast to previous aircraft they had flown. Culbertson formerly was a blimp pilot while Waggoner piloted Navy flying boats during the war and prior to that was a radioman on a DD for four years.

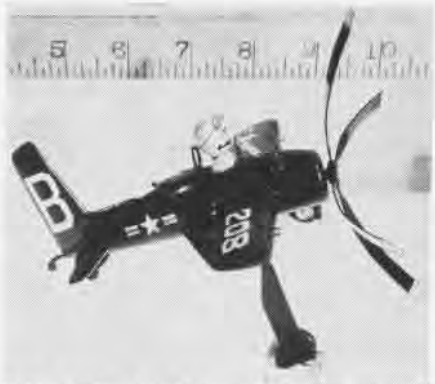
When the squadron got its first jets, it had only one pilot with previous jet experience. He was Lt. Richard S. Bates, who won the Navy Cross in the battles of the Philippine Sea. As he had 300 hours in jets with CAG-5, he was assigned to VF-111 to aid in familiarization with jets.

Although the change had been a gradual one for the squadron, involving schooling in jet plane systems, engines, cockpit checkouts, safety precautions and on-the-job training, it took only a week to make the actual switchover. Ground crewmen require longer training to learn how to maintain jet engines. That job falls to Ronald G. Prescott, aviation chief machinist's mate, who is line chief in charge of all planes in the squadron, with Don McCormick, another chief, as squadron trouble-shooter.

The maintenance job is not expected to be too tough, however, owing to the small number of moving parts and the simplified installation. Complete disassembly now takes only 12 hours.

There are many problems that only time and experience—and some groping—can iron out. The squadron has gone through its operational tactics, gunnery and navigation in jets. Enthusiasm of pilots and ground crewmen helped get it over the early humps. The next phase involves high altitude gunnery, FCLP at North Island and Miramar, then carrier qualifications this summer. Then comes duty with the Pacific fleet.

● NAS PENSACOLA—The USS *Corry* (DD 817), after 31 months duty as plane guard to training carriers, was relieved by the USS *Ingraham* (DD 694) 16 April 1950.



TINY MODEL IS PILOT'S IDEA OF THE BEARCAT

Model Illustrates Comments

Big Prop, High Struts Impress Fliers

NAAS CABANISS—Listening to his students' first comments on the F8F *Bearcat*, Lt. (jg) Carl R. Lambert, an instructor in ATU-2, got an idea.

The observations of the students have followed a definite pattern and usually consist of:

"Sure has a big prop!"

"Lookit that tail hook!"

"Boy, she sits high off the ground for such a small plane!"

Then, invariably, after the student sat in the cockpit and looked out at the small wingspan, "Cripes, where's the wings!"

Keeping the comments in mind, Lambert decided to build his version of the student's first impression of the F8F. The resulting model is illustrated here. Note the protruding eyeballs of the student.

● NAS NEW YORK—Ralph DeVito, AD2, won the All-Navy individual bowling championship for 1950, scoring 1859 in nine games. He averaged 207 for the series.

Check your *recognition skill on the two planes above. On the ground is the Grumman F9F-2, powered by the P&W J-42 jet engine with 5,000 pounds dry thrust. In the air above it is the XF9F-5. It has the new P&W J-48 jet with 6,250 pounds thrust. About the only external recognition feature of the new -5 is the triangular rudder, as contrasted to the rounded vertical fin in the -2 and -3. The -3 Panther has the J-33-A-8 jet engine by Allison, with 4,600 pounds thrust. The F9F-4 plane is not yet out but will have the J-33-A-16 jet engine. The -5 model is experimental.*

MOVING WEST? THEN READ THIS

VP-47, PACIFIC—Having moved its planes from San Diego to Sangley Point in the Philippines this year, this squadron can pass along some valuable dollar-saving and time-saving advice to other PBM squadrons going to forward areas.

Three detachments of three planes each made the flight, one going to Yokosuka, Japan, one to Sangley and one to Tanapag, Saipan, where command of the squadron was kept. When Tanapag was closed in the economy campaign, the three planes moved to Sangley. Here are some ideas gained from the moves:

1. Transpac takeoffs at the new maximum gross weight of 62,500 pounds were made without difficulty. In accordance with the BUAER directive authorizing this new gross weight, pilots made heavy load JATO practice takeoffs at San Diego using 1000-lb. sand-filled bombs for extra weight. Bomb bay tanks were removed at Kaneohe and takeoffs since then have been limited to 60,000 lbs. Weights over that are not recommended except for the initial San Diego-Kaneohe hop.

2. The exchange of heavy gear between relieving squadrons was made with little difficulty and is recommended for squadrons relieving in the future. The removal of armor plating, guns, ammunition racks and the like cut the gross weight considerably and the reinstalling of this equipment in the forward area presented no problem. A complete understanding by both squadrons as to exactly what gear is to be exchanged is important.

3. All planes were given 120-hour check prior to departure. Compasses were swung, planes were weighed and basic indices were recomputed.

4. A detachment commander's notebook was prepared before deploying. This notebook contains complete instructions for the detachment commander relative to administration of his unit, preparation and coordination of reports. It contains the codes for transmission of information for reports, as well as sample dispatches for his guidance.

5. Support facilities at Kaneohe are adequate. Little can be expected at other stop-off points in the way of spare parts.

6. Too much stress cannot be placed on the proper briefing of pilots before departure. This squadron was fortunate in having a pilot who was familiar with all seadromes in the forward area. His lectures at San Diego were of inestimable value in preparing crews for deployment.

7. PPC's should insure that all crew members are carrying sufficient funds to meet their needs in the event of a prolonged delay enroute. Morale problems may arise in the case of men who run out of money and are unable to be paid.

VP-7 Radar Navigation Pays Off

VP-7, GOOSE BAY, LABRADOR—'Twasn't a fit day out for man or airplane. Chief Technician J. C. Petersen had his eyes glued to the radar scope as if his life depended on it. As if? Brother, it did. And those of the other seven crew members, too.

There were peaks up to 4300 ft. to port and 2200 ft. to starboard. The undercast was so thick that sea gulls were observed walking on top of it. The starboard engine and starboard wing heater were out of commission and that wing was so loaded with ice that full aileron tab couldn't correct for the loss of lift.

Chief Petersen at his APS-33 navigated the partially disabled P2V in the soup through Hamilton inlet into Lake Melville where Goose Bay is located.

It all started when Cdr. R. J. Slagle, now CO of the squadron, took the P2V out to hunt "enemy" submarines during the northern fleet maneuvers. Weather in the Goose Bay area was CAVU, but outside a 20-mile radius, there was a blanket from the surface to 4500 ft.

At about 150 miles from base, 30 miles from the nearest land and at an altitude of 7000 ft., the starboard engine went haywire with an overspeeding prop. Its abnormal operation continued until it had to be feathered and secured. It was immediately apparent what the plane was too heavily loaded for single engine operation. Precious altitude was being lost at an alarming rate. After the crew struggled with a balky salvo lever, the bomb bay tanks were jettisoned. Then S. L. Cottrill, ALC, and G. A. Hatch, AO2, went to town on everything that wasn't bolted or riveted down. Even the deck turret guns went overboard.

The plane finally settled down at 3500 ft. with PBY-like speed of 100 Kts. indicated airspeed.

Petersen guided the plane through the inlet, crossed Lake Melville and located the duty runway, entirely by radar. Fortunately, it was clear at base, so the P2V greased on to the runway and used an uncompleted 2,000 ft. extension before stopping.

● NAS SQUANTUM—The Air Wing Staff has proposed a plan designed to aid Reservists' arranging for their summer cruises. This plan involves an "Employer's Day," during which O. R. employers will be invited aboard the station for a well-guided tour. The Reservists' duties will be emphasized and the importance of having Reservists participate defense stressed.

NEW RESERVE POLICY BOARD

Civilian Components Policy Board members Gerow, McQuiston, Hardin, Maas; Stout, Adler, Hendrickson, Kreber, Cox, (2nd (exec.), Brent, Bendetsen, Faricy (former chairman), Burwell, row); Zistel, Finlay, Watkins, Milton, Parkinson (3rd row)

A NEW BOARD, destined to affect the military future of every Reservist, active and inactive, is now a going concern in the Department of Defense. This is the Civilian Components Policy Board, which is set up on the same level as the Joint Chiefs of Staff.

Authorized in June 1949 by Secretary of Defense Louis Johnson, the Board makes recommendations to him on all matters of major policy concerning the civilian components. On all other matters of policy, within its assigned field, the Board exercises the full delegated power of the Secretary of Defense and thus has broad directive authority.

Specifically it is the Board's job to develop overall policies, coordinate and maintain surveillance over the plans, policies and programs of the three military departments in the field of civilian components affairs. The components include the National Guard and the Air National Guard, as well as the Army, Air Force, Navy and Marine Corps Reserves.

In setting up this top-level Board, Secretary Johnson recognized the powerful role Reservists and National Guardsmen are playing today in the national defense picture as a "force in being" as well as the important job they will be called upon to perform in the event of a national emergency.

"In case of war," Secretary Johnson said in a recent speech, "our Regular forces will not be enough to cover all of our military requirement, and as always, we shall have to rely on Reserves to come up and take their places beside our Regulars. Our citizen soldiers, as in the past will be depended upon for final victory."

The Board itself is no rubber stamp outfit for any branch of the services. It is composed of men of executive caliber, thoroughly experienced and qualified for policymaking decisions. Twelve of its nineteen voting members are members of the civilian components of the three services. They are in constant contact with the operating components in the field and thus know the real score in regard to Reserve matters.

The Regular services are represented by an assistant secretary and a top-ranking officer of each department.

Heading the Board is Edwin H. Burgess, vice-president and general counsel of the Baltimore and Ohio Railroad. He succeeds William T. Faricy, president of the Association of American Railroads, the Board's first chairman, who will still serve in an advisory capacity. An outstanding railroad executive and lawyer, Burgess formerly was chairman of the Traffic Executives' Association for the railroads of the eastern territory and as chairman of the Trunk Line Association in the same territory. He was also associated with Lehigh Valley Railroad as assistant general solicitor and then as general solicitor.

One of the country's outstanding Reserve leaders, RAdm. I. M. McQuiston USNR has just been appointed by Secretary Johnson to serve as Military Executive of the Civilian Components Policy Board. He replaces BGen. Luke W. Finlay ORC, who is returning to his civilian position as counsel for Standard Oil of New Jersey.

A former member of the Board and a top administrator in the Naval Air Reserve for many years, RAdm. McQuiston brings with him a wealth of first-hand knowledge about civilian components affairs. As Coordinator for the Naval Air Reserve program in CNO since 1946, he has been largely responsible for welding today's Naval Air Reserve into a streamlined, combat-ready organization. During the war he performed invaluable service as Chief of Aviation Progress in DCNO (Air). His selection for the important military executive position with the Board is, in effect, a tribute to both the Navy and the Naval Air Reserve.

RANKING member of the Navy group is the Assistant Secretary of the Navy for Air, John F. Floberg. A lieutenant commander in the Naval Reserve, Floberg saw active duty during the last war in both Atlantic and Pacific engagements. As CO of the SC-770, he participated in the Sicilian and Salerno operations. As gunnery officer on the *Goss* (DE 444), he saw action at Iwo Jima and Okinawa and later served as exec and then as CO of the *USS Bivin*. A graduate of the Harvard Law School, Floberg was associated with Kirkland, Fleming, Green, Martin and Ellis, the largest law firm in Chicago.

Clayton L. Burwell, special assistant to Secretary Floberg, serves as his alternate on the Board. Also a lawyer and Naval Air Reserve commander, Burwell served as a CIC officer during the war. He saw 41 months of combat action in the Pacific aboard such carriers as the *Independence* and *Bennington*. He is a former member of the firm of Jones and Burwell in Charlotte, N. Carolina.

RADM. MCQUISTON AND CHAIRMAN BURGESS CLEAR DECK FOR ACTION BEFORE CCPB STARTS WORK

RADM. FRANK T. Watkins, a graduate of the Naval Academy with the class of 1922 and a submariner, is the Regular Navy member on the Board. He, too, saw combat action in the Pacific, as Commander of Submarine Division 102 and CO of the *USS Flying Fish*. After the war, he organized and became the first skipper of the Naval School (General Line) at Monterey. At present, he is Assistant Chief of Naval Personnel (Personnel Control).

Capt. George A. Parkinson, Director of the University of Wisconsin Extension Service in Milwaukee, is the fourth Navy man on the Board. A Reservist for more than 30 years and a veteran of combat action in the Pacific, Capt. Parkinson served as Commander of the Milwaukee Organized Reserve Brigade from 1946 to 1949. A well-known civic leader, he heads the Civil Defense of Milwaukee and prepared one of the pattern-making civil defense plans.

Marine Corps representatives on the Board are two prominent Reservists, Col. Melvin J. Maas and Col. Charles H. Cox.

As National President of the Marine Corps Reserve Officers' Association, Col. Maas keeps in touch with Marine Reservists throughout the country. He is also active in the Military Order of the World Wars and was recently granted their distinguished service award. During the Guadalcanal invasion and the New Guinea campaign, he served in Marine aviation. Later in the war, he commanded combat air bases at Okinawa. At present, he is skipper of Wing Staff VTU 5-27 and in civilian life is assistant to the chairman of the board of the Sperry Corporation.

Col. Cox also has a record of long association with the Marine Corps Reserve. During the war, he served in intelligence activities with the South Pacific Forces of the Navy, then was officer-in-charge of the Photographic Intelligence Center at Anacostia, and later served with the Strategic Bombing Survey in the Pacific Theatre. He is now attached to the Division of Reserve at Headquarters, Marine Corps, Washington, D. C.

Department of the Army representatives on the Board are: Assistant Secretary of the Army, Karl R. Bendetsen; LGen. Leonard T. Gerow, USA, Commanding General, 2nd Army; MGen. Leo M. Kreber, NGUS, Adjutant General of the Ohio National Guard; MGen. Norman E. Hendrickson, NGUS, Commanding General, 47th Infantry Division, who is with the Bethlehem Steel Company in St. Paul, Minnesota; MGen. Julius O. Adler, ORC, Commanding General 77th Infantry Division, who is well-known throughout the country as general manager of the *New York Times;* and BGen. Hugh M. Milton, ORC, president of the New Mexico Military Institute at Roswell.

The Air Force is represented by a group of equally outstanding men. They are: the Assistant Secretary of the Air Force, Harold C. Stuart; MGen. Victor E. Bertrandias, USAFR, Director of Flying Safety, USAF; BGen. Thomas O. Hardin, USAFR, Chief of the Reserve Division, USAF; BGen. John P. McConnell, USAF, Deputy Special Assistant to the Chief of Staff for Reserve Forces; BGen. Errol H. Zistel, ANGUS, Commanding General, 55th Fighter Wing, Ohio National Guard; and BGen. Oliver H. Stout, ANGUS, Chief of Air Staff, Indiana National Guard.

Heading the Board's Research and Planning Staff, which is set up on a full-time basis and is composed of a well-balanced group of Regulars, Reservists and National Guardsmen of the various services, are two men with long experience in Reserve affairs.

Director of the staff is Col. Alva L. Fenn, who has been active in the National Guard since 1920. Before taking over as director, Col. Fenn headed a group under the Facilities Committee of the Munitions Board which was charged with responsibility for effecting joint utilization of facilities and for making a survey throughout the country of all Reserve facilities. He is still in charge of this important project for the CCPB as part of his current duties.

Capt. Claudius G. Pendill, well-known for his post-war work in developing Naval Reserve Training Centers, is the Deputy Director of the staff. During the last war, Capt. Pendill served as port officer for Bristol Channel and later was operations officer for ports and bases in France. As former plans and policy officer in CNO for the Organized Reserve, he handled all phases of Naval Reserve work. One of his most important present duties is acting as chairman of the Ad Hoc Committee, set up by the CCPB to draft an Armed Forces Reserve Act.

Generally speaking, the Board's activities may be classified under two headings, legislative and non-legislative. In the former, the Board studies and makes recommendations on proposed legislation affecting Reserves. It also recommends legislation needed to implement a vital Reserve program.

Its non-legislative projects involve making studies on all Reserve matters, resolving differences between the services, setting up policies and seeing to their implementation on an across-the-board basis for all the services and preparing budget studies and recommendations.

TOPPING the list from a Reserve standpoint was preparation of a piece of "must" legislation which Secretary Johnson hopes to present to Congress for enactment in the near future. Known as the "Armed Forces Reserve Act of 1950," this bill, in effect, represents the broadening of the previously proposed "Roper Bill" (set up to modernize the Naval Reserve Act of 1938) to apply generally to the civilian components of all three military services. Since this bill might be described as the "Magna Charta for Reserves," it is the pivot for the whole Reserve program.

The Board has also reported to the Secretary of Defense that it regards the passage of the National Defense Facili-

ASST. SEC. FLOBERG (R) REVIEWS CCPB PROJECT WITH C. BURWELL

RADM. WATKINS POINTS OUT UNUSUAL ITEM TO CAPT. PARKINSON

ties Act, without the revisions proposed thereto by the Congressional subcommittee which considered the bill last year, as of critical importance. This bill authorized the construction of new facilities for Reserve training.

Also in the works is preparation of an ROTC bill to modernize legislation in this field and to make available to the Army and the Air Force provisions similar to those in the Holloway Plan of the Navy. Purpose of this bill, of course, is to bring new blood into the services and wipe out the present shortage of commissioned officers in the junior ranks.

To insure an effective team of Regulars and Reservists in time of national emergency, the Board recommended that at some appropriate time in their careers Regular officers be assigned, wherever practicable, for a tour of duty with the Reserve program. Through these assignments, Regular officers will get to understand the problems, state of training and psychological outlook of the citizen soldiers who, in turn, will receive the benefit of skilled professional guidance. This policy is now being put into effect at the operating level by all three services.

To squeeze the most out of every defense dollar, the Board is also pushing joint utilization of facilities. Here, a recent survey showed that in December 1949, 734 existing facilities were being used jointly, some by as many as seven different components. If funds are made available, the States have agreed that 169 additional State-owned facilities, now utilized only by National Guard units, may be expanded for joint use.

The Board is also focusing its attention on ways to improve the enlisted strength of the civilian components. The possibility of applying successful techniques developed by one service on an across-the-board basis is being studied. Here, the spotlight is directed to such dividend payers as the "boot training program" of the Naval Air Reserve.

In another study, the best type of organization for conducting Reserve training is being determined. The advantages of consolidating Reserve training under a single command—the set-up used by the Naval Air Reserve—will be weighed against the advantages of placing training under geographical commands which have various responsibilities—the Surface Reserve set-up.

Upon the recommendation of the Board, which is studying maintenance of an adequate Coast Guard Reserve, the Secretary of Defense has already lent his support to the provision of adequate appropriations in the fiscal 1952 Treasury Department budget for the reactivation of the Coast Guard Reserve, for which no funds have been appropriated since the war.

Other studies underway concern maximum-age-in-grade policies, standard promotion policies, and uniform policies for training pay and summer training for all services.

These, of course, are only a few of the projects undertaken by the Board since its first meeting in October, but they indicate the wide scope of its activities. And they show that the Board is chalking up a record of accomplishment in keeping with the hard-hitting reputation of its individual members.

STAFF OFFICERS HANSON, WOODBURY, PENDILL, HOLDZKOM, COLPOYS

COL. MAAS AND COL. COX SMILE OVER A TYPICAL MARINE EXPLOIT

CRIPPLED F7F NIGHT LANDING

NAS MEMPHIS—Trouble striking in the pitch black of night! That's the dread of every aviator. Utter darkness, when the earth is nothing but a black, forbidding blur under the wings, dotted here and there with tiny pinpoints of light.

Those who know say it's the loneliest feeling in the world. It knots up the pilot's stomach like a lead ball. Add to this the uncertainty of landing under such conditions at a strange field, coming in low over trees, poles and power lines that you know are there but can't see. Picture yourself "in the groove" with these questions gnawing at your vitals:

"Am I too low? Will the wheels snag something and flip me over? Or am I too high? Will I run out of runway, and into what?" At a time like this, the men are rapidly separated from the boys.

On a black night of 24 March, the tower here received a call from an F7F overheard requesting landing instructions. Seconds later, the *Tigercat* reported complete hydraulic failure, which meant no wheels, flaps or brakes. There were emergency procedures for working down flaps and landing gear, but that still left no brakes.

As all pilots know, when you're rolling down a dark runway at 90 knots or better with about seven tons of aircraft strapped to your anatomy, brakes are a mighty desirable item. Mighty desirable!

There was another small item to consider. The *Tigercat* happened to be carrying a belly-tank still containing a considerable amount of high octane fuel. When you're entertaining doubts as to what shape you'll be in when you stop rolling, that's not the healthiest piece of equipment on which to be sitting. You might as well be etching your initials on the side of a keg of dynamite with a blow torch.

The F7F was instructed to proceed to the Mississippi river, which was nearby, and shed his belly tank in the water. He then successfully lowered his flaps and wheels. A "rescue" plane was vectored over to the *Tigercat* to give things that once-over. He reported that the landing gear appeared down and locked, flaps were down and the belly tank gone. So far so good!

In the meantime, quite an impressive crash crew was assembled and geared for quick action. There were three fire trucks, two crash pick-ups, an ambulance, a light truck, a high crane, the fire chief and a mule with a towbar.

Then came the climax of the story which had been unfolding, the make or break part for the pilot—the landing. It was beautifully done. Making his approach as though he'd flown at Memphis all his life, the pilot greased his plane on well within the first third of the runway. Sure enough, though, no brakes. So he pulled the emergency air brakes.

Nothing happened! So he pulled again, and then—Wham! The brakes locked solid. The aircraft was thrown violently to starboard, 90° to the line of travel. Then it whipped around the opposite way in a vicious manner.

At this point the pilot brought the plane under control in a display of real skill. He brought his charging fighter to a stop all in one piece and right in the middle of the runway.

Stepping from the cockpit, he remarked, "I'm afraid the tires are flat." Flat? They were shredded! Pour a little milk over them and they'd pass for breakfast food.

You've probably been wondering who this airman was. He's one of the Navy's top aviators, and until just recently, was the Navy's chief test pilot. He was Capt. Fred Trapnell, commanding officer of Naval Air Test Center, Patuxent.

Some hours later, with his F7F in first class condition, Capt. Trapnell left Memphis, little the worse for his experience. He left behind some "impressed" fliers, too, who will long remember the cool emergency landing he so successfully made.

Air Force Pilot Cuts Cake

Makes 24,000th Landing on Wright

Cake presentation ceremonies for every 1,000th landing are fairly common, but it isn't every day that the honor goes to an Air Force pilot.

That's why the bakers did a superlative job for Maj. William H. Powell, USAF, 30, after he made the 24,000th landing aboard the USS *Wright*.

Maj. Powell, native of Milton, Ore., is presently attached to VF-33. He is one of the Navy-Air Force exchange pilots.

He enlisted in the Air Force as an aviation cadet in 1940, went to the Philippines for duty, was captured at Bataan, and remained a prisoner-of-war until liberated in 1945. He will be on duty with the Navy until Feb. 1951 when he returns to McGuire AFB, Fort Dix, N. J., his former station, for reassignment.

EPPES, MAJ. POWELL, ROBINSON, CAPT. PERKINS

SHALL WE PUT HIM IN THE WAGON NOW, OR WAIT UNTIL HE LANDS?

● VF-171, ATLANTIC—An Air Force Captain who is currently flying with this Navy jet squadron has his name and rank stenciled on the side of his plane according to custom. After it is the designation "USAF-SWD." "SWD" means "Salt Water Division."

Atlanta Exec Hits Bullseye

Cdr Greene Wins Two More Medals

For the second year in succession, Cdr. Richard J. Greene, executive officer of NAS ATLANTA, has placed second in the 22 cal. sharpshooters rapid-time fire contest at the National Midwinter Pistol Tournament held in Tampa.

This year, Cdr. Greene returned with two more medals for his collection.

Contestants in this meet were competing individually and not by teams, which sharpened the competition. Cdr. Greene, a Naval Air Reservist, is the only person at the NAS authorized to wear the Expert Pistol Marksmanship Ribbon.

ATLANTA'S 'DEADEYE DICK' AIMS AT BULLSEYE

Reserves Maintain Skills

The Naval Air Reserve program has a tremendous stake in sustaining the skills of thousands of men trained to maintain aircraft. Skill is dependent upon practice. If it is not put to use, it rusts as surely as a tool left out in the rain. It is, therefore, vital to the whole Naval Air Reserve program that those who were trained at great cost to repair and maintain aircraft keep their skill even though they have left active duty to take civilian jobs.

Right now more than 6,000 officers and 27,000 enlisted personnel are taking part in the organized program which has more than 2,000 aircraft assigned to 27 Reserve Air Stations and Training Units. Providing high aircraft availability for the "Weekend Warriors" is the primary goal of aircraft maintenance personnel.

Since the time available to Reserve personnel is limited, every possible aircraft must be available to provide maximum flight operations. Careful planning is required to make sure that the peak in aircraft availability coincides with the weekend peak of flight training.

The facilities which the Aircraft Maintenance Officer employs to fulfill this mission follow a standard pattern at all Reserve Air Stations and Units. These stations are designated as Class "C" activities, and this places them on a par with FASRons as far as the nature and scope of their maintenance responsibilities are concerned. This is the highest level of maintenance, short of that done at Overhaul and Repair Departments.

The standard organization of Aircraft Maintenance Departments at Reserve Air Stations and Units includes provisions for the administrative and planning functions necessary for the direct support of the Maintenance Division. This division is the largest in the Aircraft Maintenance Department and is divided into Structures, Electronics, Ordnance, and Line Maintenance Sections. The Line Maintenance Section, as its name implies, is charged with the daily maintenance of all assigned aircraft. The other sections accomplish all work on aircraft, engines, accessories and related parts beyond the scope of line maintenance crews.

In addition to providing high availability of aircraft, Maintenance Department stationkeeper personnel have a training duty to perform. As inspector-instructors, they take up where the Technical Training Department leaves off and provide practical, in-service training for weekend reserve maintenance personnel. The theory of maintenance operations is put into practice in the shops and on the line under the supervision of key stationkeeper personnel.

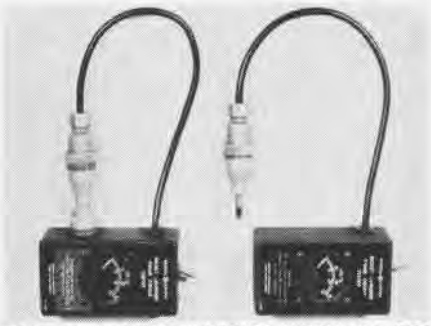
The ultimate goal of self-sufficiency for organized reserve squadrons—the ability to take over and operate independently of the parent station—depends upon the effectiveness of the maintenance training programs. It is essential that squadron maintenance personnel acquire and maintain an efficient working familiarity with their aircraft and related equipment.

The Naval Air Reserve Program represents a large investment in time and money. Its effectiveness is measured by the degree to which its organized and volunteer components represent a ready fighting potential. The difficulty of the task is exceeded only by its importance.

The success and progress of the program and the manner in which it accomplishes its mission are dependent to a great extent upon the calibre and efforts of the personnel concerned. The Aircraft Maintenance Department can look back over the record of the past four years and feel justly proud of their contribution to the success of the entire Naval Air Reserve Program.

Launcher Tester Improved

An idea submitted by David W. Hannah, Leadingman Electronics Mechanic, Overhaul and Repair Department, NAS SAN DIEGO, under the Navy Beneficial Suggestion program is expected to be useful to other



MODIFIED ROCKET LAUNCHER TESTER AT LEFT

Rocket launcher test set, ASO Stock # R94-K-300225, when used in accordance with BUAER Technical Order #44-48, detects the presence of stray voltages in the rocket igniter circuit, but there are no provisions for the self-testing of the range switch, cable or connector incorporated in the unit. Failure of either of these components might, therefore, go undetected and result in a false indication that the rocket igniter circuit was at zero potential.

In order to prevent this condition, Mr. Hannah's modification has been authorized. Here's how it works:

a. Remove voltage range selector switch and install S.P.D.T. switch, PART NO. R17-S-2856-20.

b. Drill 1⅛ inch hole in left side of case and install receptacle, PART NO. R94-A-10580.

c. Modify internal wiring in accordance with NAS SAN DIEGO sketch NO. 13759.

Make continuity test of set as follows:

a. Place voltage range switch in "1½ volt" position.

b. Insert test plug into the newly installed receptacle.

c. Depress "test" button; meter should indicate 1½ volts.

Activities interested in adopting this modification should write the Commanding Officer, NAS SAN DIEGO for further details and copy of NAS SAN DIEGO sketch No. 13759.

The banner *pictured above was brought back by a gunnery flight of six firing planes of VA-65, NAAS Oceana. A total of 197 hits were counted in the banner after the six AD-4's was carrying 150 rounds of ammunition had fired on it. Names of the pilots in the firing were, left to right: Lt. William G. Neville, Lt. (jg) David L. Munns, Ens. Joseph E. Puccini, Ens. Louis C. Page, Ens. Paul J. Bergdahl and Ens. James E. Williams. VA or VF?*

COVER HEATS ENGINES QUICKER

VR-6, WESTOVER—During the past nine months, VR-6 has flown 58,864 engine hours with only five engine failures. This mark was established under normal operating conditions on the North Atlantic MATS routes.

Nearly all takeoffs on the trans-Atlantic flights are made at the maximum R5D gross weight of 70,000 pounds. All trips are via Newfoundland and the Azores, or Labrador and Iceland. This means engines are normally subjected on practically every trip to atmospheric temperatures ranging from 30° F. below zero to 80 degrees above.

Preventive maintenance techniques such as the lowest practicable BMEP settings, rigid starting and engine check-out procedures and the use of the RB19R2 platinum spark plugs are considered contributing factors in setting the VR-6 record. Certainly one of the major "engine-saving" factors is felt to be the squadron policy of "no oil dilution."

Oil dilution practiced under ideal conditions and proper procedures is assuredly a safe and sound cold weather starting aid. However, VR-6 has found, where the majority of flight line maintenance is carried out by non-squadron —and often inexperienced—personnel, strict compliance with correct oil dilution instructions cannot be assumed or expected.

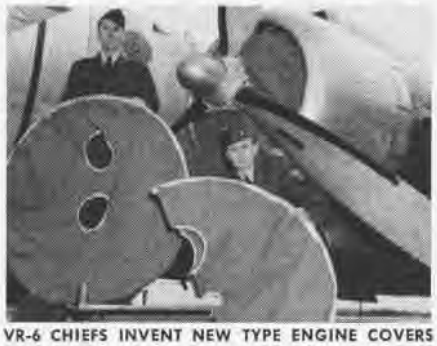
Therefore, the best answer in this squadron has been to halt oil dilution as a normal cold weather precaution. Ground engine heaters are used for all cold starting. This takes a bit more preflight planning, but it pays large dividends.

Westover, Mass., sub-zero weather and VR-6's policy of using ground engine heaters in place of oil dilution for cold weather starting resulted in (*1*) numb fingers, (*2*) red noses, and (*3*) a new and better engine heater cover.

Chiefs K. K. Kitson and G. W. McCauley enlisted the aid of VR-6 parachute loft and did something about the old hard-to-handle engine heater covers. They devised a small, slick circular canvas unit which clamps inside the speed ring directly in the nose of the R-2000 engine.

This traps all the warm air within the engine cowling and heats the engine is much less time than is required using the standard Navy cover. With the standard engine cover, much of the warmed air is lost between the engine cowling and the cover, which fits loosely around the entire engine.

Another trick to rapid heating has been accomplished in the squadron by putting a "Y" in one of the two hot air outlets from the Herman Nelson heater and directing air into the engine, the oil cooler, and the accessory section simultaneously.



VR-6 CHIEFS INVENT NEW TYPE ENGINE COVERS

Governor Adjustor For F9F

Master Sergeant B. W. Parker, Engineering Chief of VMF-115, has made a new device for adjusting the topping governor on the high pressure pump on the J-42 engine in the F9F-2. This special wrench saves time and simplifies maximum RPM adjustment. Pratt & Whitney does not supply a similar tool, but it is not difficult to make one.

The device consists of a socket wrench and a sleeve nut set in the chuck of a 45° drill attachment. A 90° attachment will work as well. This is extended by two 50 calibre cleaning rods and two universal joints. The sleeve nut screws on the pump in place of the lock nut and holds the wrench in place on the topping governor shaft. The extension rods extend through the air intake duct to the outside of the aircraft.

Previously it has been necessary to start the J-42 engine and employ a trial-and-error process of adjusting the governor, shutting down, readjusting the governor and restarting for each slight adjustment.

This new device allows the mechanic, standing clear of the aircraft, to make the adjustment while the aircraft is tuning up. Only one engine start is now required, and about one-fourth the man hours or approximately 30 minutes is needed for two men to adjust the topping governor.

PUMP GOVERNOR SETTING TOOL, PARTS INSET

Radio Noise Problem Solved

FASRON 8, ALAMEDA—A possible solution to one of the most irritating problems of the instrument flight instructor in the SNJ has been solved by an original innovation now being tested by FASRON 8's instrument flight training division.

Volume control of the ARC-5 receiver always has been a major problem to the instrument instructor in the SNJ. All too frequently the instructor must withstand the roar or ever-increasing volume in his own headphones as the aircraft approaches the range transmitter. He cannot adjust his volume without changing that of his student who is trying to work a radio-range problem.

This difficult and annoying situation can be eliminated by a simple addition to the existing audio circuit. An extension cord is connected across the headphone circuit in the rear cockpit and ends in front cockpit.

Before starting a problem, the instructor unplugs his headphones from the normally-used circuit, and plugs into this extension. This switches his volume control to the rear cockpit. The student now controls the volume of both headsets, and the instructor can tell how intelligently the student is using the control.

A further improvement is now being tested. It consists of a double pole, double throw switch placed in the front cockpit filter box. This switch will permit the instructor to switch from front cockpit volume control circuit to rear by a flip of the switch and will eliminate the necessity of unplugging the headset.

The modification was designed by Ens. D. E. Frazier and B. E. Johnston, ALC.

Trouble With Flap Lowering

VP-4, PACIFIC—A Fleet Air Wing Four Safety Bulletin is the result of an incident reported by this squadron involving flaps which lowered unequally.

One of the squadron P2V's reported a failure of the flap drive shaft universal coupling which resulted in the unequal operation of its flaps. As soon as the plane was airborne, the pilot, Lt. (jg) R. S. Tucker, found that full down aileron on the left wing would not hold the wing up. Reduction of power on the starboard engine was required for level flight.

Later aircraft trim was obtained by 20° flaps. This failure is believed to have been caused by the lowering of flaps above the allowable airspeed at some time unknown.

Parachute Rack Proves Useful

NAS MINNEAPOLIS—The R4D line personnel, under the direction of S. G. Erickson ADC and D. V. Durand ADC, have developed and installed an efficient parachute rack which makes the chutes readily accessible.

All of the chest pack chutes are held in individual, coated-canvas aprons, that encircle the chute and are secured to a tubing rack by small shock cord fasteners.

When a chute is removed for wear by a passenger, its position in the rack permits it to drop into the right position on the wearer's chest, ready for snapping on the harness loops. All harnesses are stowed, when the aircraft is on the ground, in specially-made racks near the entrance door.

VP-23 Does Quick Change

VP-23, MIAMI—During the Caribbean fleet maneuvers, this squadron set what it considers a pretty good record for speedy engine changes.

One of the PB4Y-2's lost an engine early one Thursday morning while operating out of NAS GUANTANAMO. Overhauled 1830-94 engines are scarce these days and although there was none at Guantanamo, VP-23 did have one at its home base at NAS MIAMI.

A dispatch was immediately sent to FAW-11 at Jacksonville requesting services of FASRON 109 to perform the engine lift. While the R4D was proceeding from Jacksonville to Miami, VP-23 personnel at Miami made ready the new engine.

Engine stand, oil cooler, spark plugs and special tools all were assembled and readied for shipment at noon the same day when the R4D landed. The engine was delivered at NAS GUANTANAMO at 1700R, still the same Thursday. It was mounted, run in and the plane test-hopped in short order and was back in Miami ready for further flight on Saturday.

Heat Explodes Gas Cylinders

During a recent inspection of pneumatic life vests at NAS GLENVIEW, five vests showed failures.

An investigation showed the vests often were placed under the seats of JRB/SNB aircraft by the passengers during flight. Because of the close proximity of the vests to the heater outlet, with the resultant increased temperature of the CO_2, the pressure of the gas excedeed the strength of the cartridge.

BuAer advises personnel to see that life vests are stowed so they will not come in contact with heating ducts or in the direct blast of heat outlets.

Weight-Cart Replaces Bags

Damage to tail surfaces from using sandbags when jacking up aircraft is eliminated by using a gadget built by a Chief Aviation Machinists Mate at NARTU JACKSONVILLE.

NO SANDBAGS DAMAGE TAIL USING THIS WEIGHT

K. B. Harrell, devised the cart-weight combination shown in the accompanying cut. It weighs about 500 lbs and can be handled easily by one man. It is equipped with web belting which is run around the fuselage of the plane and through eyes set in the concrete of the cart.

Detailed instructions for building the cart can be obtained from NARTU, Jax.

BOXER HONORS KOREAN PREXY

CAPT. MOSS (CENTER) WITH PRES., MRS. RHEE

USS BOXER, PACIFIC—Climaxing a three-day visit to the Republic of Korea, the aircraft carrier *Boxer* played host to President Syngman Rhee of that country on his first visit aboard a carrier on 8 April.

The President stood at attention on the quarterdeck of the *Boxer* as 21 guns of the saluting battery announced his arrival. He was accorded full honors as president of a nation.

Met at the side by RAdm. Walter F. Boone, Commander Seventh Fleet, and Capt. J. B. Moss, CO of the *Boxer*, President and Madame Rhee made a brief inspection of the ship. In the President's party were American Ambassador to Korea, Hon. John J. Muccio, and about 50 other Korean and American officials of state.

The President and his party were guests of Adm. Boone at a luncheon in the wardroom. Following this President Rhee gave a 12-minute speech to the ship's crew on the flight deck.

During the two previous days spent at anchor in Inchon Harbor, naval personnel were touring Seoul, the capitol of Korea. The Korean government provided train transportation for the 25-mile trip. Outstanding events of the visit included a dinner dance at Chang Duk Palace for all officers of the task group and a tea given by Pres. and Madam Rhee at the White House.

The task group's first introduction to the people of Korea came on 4 April when more than 50 aircraft from the *Boxer* flew in parade formation over Fusone and Chin Hai. Evidence of the welcome afforded the planes were the "USN" and "USA" formed in letters by school children of Chin Hai in their playgrounds.

KOREAN NAVAL CADETS HONOR BOXER VISITORS

Seabees Salvage a Corsair

Remember the Seabees? Well, they're still working for naval aviation down at Dam Neck Naval Base, Va.

When a *Corsair* fighter blew a cylinder in a routine flight and pancaked into soft terrain nine miles from the nearest highway, the job of "rescuing" the plane fell to Construction Battalion 105 at the base.

SEABEE SALVAGERS SAVE CORSAIR FROM TIDES

Because of the distance from roads, the usual salvage methods were impossible. Capt. J. W. Stryker, chief of staff to ComPhib 2, heard of the mishap and asked Cdr. H. L. Haworth, O-I-C of the battalion at Little Creek Va., if they could do the job. The Seabee motto is "Can Do."

Next day the Seabees moved in, waiting for low tide to begin operations. During the task, the crane broke and when it was repaired a high tide was on its way in. Finally, after 23 continuous hours of work, the plane on a trailer, was towed nine miles through sand to Dam Neck Naval Base.

Men in the salvage party in the accompanying photo were: left to right, W. H. Vickery, chief gunner's mate; Lt. F. D. Sears, Ens. R. R. Raber, Capt. J. W. Stryker, J. L. Billups, construction driver; G. J. Homewood, construction driver; Constructionman W. C. Windham, and Cdr H. L. Haworth.

Marking of Runway Lights

A method of marking the location of runway lights which may be found useful by other activities has been devised by Michael Mikkelson, Electrician Maximum, NAS LAKEHURST, under the Navy Employees' Suggestion Program. The improved type marker prevents damage to runway lights during snow removal in winter and grass cutting in summer.

It consists of a piece of strap iron 1¼" x 1-1/16" x 2" with a 6" round metal disk welded to the top end and painted yellow. Each marker is directly bolted to the light fixture marking the center of the light. This type marker is not affected by the weather, and there is a minimum of damage to planes by contact with the marker, since it will bend on contact.

SERVICE Test
INTERIM REPORT DIGEST

This digest covers the 15 April Interim Report of Service Test, NATC PATUXENT, and does not necessarily reflect BUAER policy.

F2H-1 (390 Hours)

Engine Report. The port engine has operated 296 hours and will be operated to 360 hours. The turbine assembly was replaced at 270 hours when the first stage turbine blade tip clearance was found to be less than .060". The starboard engine has operated 202 hours and will be operated to 260 hours.

Under Investigation. The failure of arresting gear solenoid valve and the burning of wiring to starboard wing tank transfer pump are being investigated.

F9F-2 (459 Hours)

The first 450 hours of the BIS trials have been completed. The trials have been extended for 300 additional hours in order to provide for a test of the J42-P-8 engine. Installation of this engine was completed on 3 April, and the test resumed.

P4M-1 (42 Hours)

Propeller. Investigation of vibration of the port engine disclosed that the propeller was out of balance:

1. The sponge rubber filled in blades No. 1 and No. 4 was dislodged.

2. Water, which had apparently seeped through a broken seal located underneath the propeller cuff, was present in blade No. 2.

Recommendation. Return the propeller to the contractor for investigation and correction.

Propeller Nose Spinner. An inspection of the port propeller disclosed that five rivets that attach the master gear bearing ring to the aft bulkhead of the nose spinner shield assembly had sheared. Vibration of the propeller may have contributed to the failures.

Electronic Tube. The radar operator's AN/APS33a indicator failed to operate. Investigation revealed that a tube in the circuit had been improperly installed. The pins were bent and did not make proper contact.

Exhaust Stack Support Clamp. Two exhaust stack support clamps failed on the starboard engine installation. These clamps are attached to the base of the engine shock mount and to the exhaust stacks for cylinders A7 and C7 and cylinders A5 and C5.

Support Installation. Two exhaust stack bolts that secure figure 8 exhaust stack clamps to the support ring clamp failed. The first failure occurred on the starboard engine after 28.9 hours of operation. The second failure occurred on the port engine after 33.4 hours of operation.

Pilot's Seats. The arm rest cushions on the seats of the pilot and co-pilot are only 7½" above the level of the seat and are only 7" in length. In their present position, they cannot be used comfortably by the pilots. *Recommendation*: Increase the height and length of the arm rests on the seats.

Jet Removal Door. An inspection, during the acceptance check of the aircraft, disclosed a crack in the center jet removal door of the starboard assembly. A small plate was riveted to the door assembly to strengthen the spacer lug. After 20.6 hours of operation, the door failed again. A similar failure was found on the port assembly. *Recommendation*: Redesign the spacer lugs on the door assembly to allow adequate side play.

Hydraulic Pump. A broken line in the hydraulic system resulted in the loss of hydraulic fluid, and the hydraulic pump operated approximately ten minutes without fluid. Post-flight investigation disclosed that the pump shaft had sheared. The pump was replaced. After 20 minutes of ground operation, the shaft of the second pump sheared. *Recommendation*: Provide a satisfactory hydraulic pump.

Brake Tubing. Investigation of a hydraulic leak revealed that the right brake tubing was cracked near the pressure reducing unit. The tubing originally installed was 61ST-6, but replacement tubing of this type was not available. After consultation with the G. L. Martin Co. representative, technicians substituted 52SO tubing. After five hours of operation and 13 cycles of the landing gear, the 52SO tubing failed at the same point and all hydraulic fluid was lost from the main system. *Recommendation*: Investigate and correct the cause for these failures.

RCM Antenna AT-130. A preflight inspection disclosed that the lower part of the left RCM antenna located at the waist camera compartment was loose. The lower sleeve was filled with water which had seeped through loose joint.

Under Investigation:

1. The failure of the coaming on the countermeasure escape hatch.

2. Excessive smoke in the after station of the aircraft during firing of the tail turret.

F2H-2 (42 Hours)

The project was delayed because of damage sustained when the canopy was lost in flight. Difficulties previously encountered in starting this aircraft appear to have been eliminated by the replacement of one of the engines. During the next month, it is planned to install a Scintilla low voltage, high energy ignition system on one of the engines and conduct an air start evaluation concurrently with this project.

Holley Fuel Control R46. When this aircraft arrived, the fuel was changed from AN-F-48 to AN-F-58 (JP-3) fuel, and the control was adjusted. It was extremely difficult to shut down the starboard engine even after repeated cycling of the starter. Fuel continued to burn in the combustion chamber with both the engine fuel control and the system fuel shut-off valve in the "off" position.

Investigation revealed that the fuel shut-off valve in the fuel control did not close fully when the throttle was closed. It is believed that the governor fuel shut-off control was so adjusted when the aircraft was received that the valve was barely closing. This marginal position of the valve, aggravated by shrinkage of the rubber seat caused by the change in fuels, is believed to have caused this failure.

As remedial action, the Allen screw cut-off adjustment has been reset to allow the shut-off valve to reach the full closed position. *Recommendation*: Advise operating activities to check the operation of the fuel control shut-off valve if a change is made from AN-F-48 to AN-F-58 fuel.

J34-WE-34 Engine. Shortly after experiencing combustor instability at an altitude of 46,000 feet, the port engine started to vibrate excessively and the tail pipe temperature increased to 1000° C. The engine was immediately shut down.

Post-flight investigation revealed that three first stage turbine blades had failed and passed through the second stage turbine nozzles and blades, causing complete failure of the turbine. This engine has been replaced with another J34-WE-34.

Fuel Controls. F2H-2 aircraft BU. NO. 123223 was flown from the MacDonnell Aircraft Factory to Patuxent for accelerated service test. Satisfactory starts were obtained using AN-F-48 fuel during the initial check flight, the ferry flight, and one subsequent flight in the Patuxent area.

Following this flight the fuel was changed to AN-F-58 (JP-3) fuel, and approximately 15 flights were flown. During this period, starting became increasingly difficult. After 18.4 hours of operating time, the port engine failed and was replaced. On attempting to ground-check this aircraft, it was found that neither engine could be started by normal procedure. (Ambient temperature had become much lower while the port engine was being replaced.) By varying the starting procedure, it was found that the engines could be lighted off while they were decelerating at approximately 8-9% RPM.

Investigation and comparison of these engines with other engines with which similar difficulties had been encountered, revealed that at least one spark plug on each engine was directly in line with a combustion chamber liner air hole. Engines which started satisfactorily were found to have the liner

air holes offset to either side of the plug. The air holes directly in line with the spark plugs were plugged temporarily, and, in an attempt to get the ignition spark further into the combustion chamber, several starts were tried with the spark plug gaskets removed.

Conclusions. The following conclusions have been reached:

1. Lower ambient temperatures have a definite effect on starting because of the atomization characteristics of JP-3 fuel.

2. Fuel/air ratio is more critical when JP-3 fuel is used.

3. Starting fuel flow must be more positively controlled from the cockpit during starting.

4. Combustion liner chambers must be so manufactured and installed as to prevent the placement of a liner air hole directly between the spark plug and the fuel nozzle.

5. The Holley R-46 type modified 22E784-1 fuel control provides positive control of starting fuel flow.

Parts List Correction. The part number 15-22016 for the elevator tip assembly listed on page 63 under Item NO. 37 in the F2H-2 Illustrated Parts List is incorrect. This is the part number for the elevator tip assembly for F2H-1 aircraft. The correct part number for the elevator tip assembly of the F2H-2 is 15-22126.

AM-1 (238 Hours)

Exhaust Coupling. The exhaust couplings on cylinders 7A and 7B failed. These are the first exhaust couplings that have failed during this test. Three similar failures occurred during a previous test of the AM-1.

Under Investigation:

1. The automatic cowl flap control unit failed to operate after 196.6 hours.

2. The right hand brake assembly failed after 196.6 hours.

UF-1 (118 Hours)

One hundred fifty water landings and 145 water take-offs have been made. Operations of the aircraft on a ramp with a 5° inclination have been satisfactory. Water operations have been discontinued until nickle-plated propeller blades, now under development, are available.

Main Entrance Door. The main entrance door is not equipped with a lock as required by specification.

Cabin Carpeting Installation. The cabin carpeting was not installed prior to delivery of the aircraft and is unsatisfactory in the following respects:

1. In several places, the snap type fasteners on the carpeting did not have matching fasteners in the deck.

2. Cut-outs were not provided in the carpeting to accomodate the radar-navigator's foot microphone switch or a litter stanchion in the after-cabin.

3. The various carpet sections have a tendency to curl and unravel at the edges, thus presenting a stumbling hazard to personnel.

Recommendations: (1) Require the manufacturer to install carpeting prior to delivery of aircraft. (2) Provide stiffeners on carpet edges so that they will lie flat and smooth.

Co-Pilot's Sliding Window. The co-pilot's sliding window cracked during a military power take-off. The crack originated at the upper hold of the handle that is used to open the window and continued forward and downward to the edge of the window. *Recommendation*: Investigate and correct the cause for this failure.

Instrument Lighting Panel. The oil pressure gage graduations below 100 psi and the pointer of the oil pressure needle cannot be seen by the pilot when he is sitting in a normal position in the seat. The fuel pressure cannot be read properly from the co-pilot's seat. *Recommendation*: Modify the instrument lighting panel cover so that the engine unit gages can be read by both the pilot and co-pilot.

Cabin Door. The window in the cabin door allows excessive light to enter the flight deck during night operations. *Recommendation*: Provide a curtain for the window in the cabin door.

Landing Gear Warning Light. The landing gear warning light, located on the main instrument panel, is excessively bright and partially blinds the pilot during night operations. The light flashes on when the gear is not fully retracted or extended, thus creating a hazard immediately following take-off and during approaches. *Recommendation*: Provide a dimmer on the landing gear warning light.

Hydraulic Reservoir. The hydraulic reservoir and filler neck are located in the port engine nacelle aft of the firewall, and the reservoir cannot be filled during flight. Specifications require that, except for fighter aircraft, there shall be provisions to fill the hydraulic reservoir during normal flight. *Recommendation*: Require manufacturer to comply with Specification AN-H-2a, para. E-13c(d).

Port Wheel Hull Door. Inspection disclosed that the port wheel hull door was damaged. The door is attached to the chine with a piano type hinge and, in the gear up position, is flush with the side of the hull. It is believed that the damage resulted from a collision with an object in the water when the aircraft was waterborne with the landing gear extended, and that the damage was aggravated by subsequent water landings.

Under Investigation:

1. Failure of the aircraft heating and ventilating system.

2. Erosion of the propeller leading edges and the propeller anti-icing elements.

3. A two-inch crack aft of the port pilot's window.

4. Crack in the port oil filler cover.

5. Inconvenience of the safety stops installed on the fuel selector panels.

P2V-4 (30 Hours)

A taxi accident occurred on 16 March 1950 which necessitated replacement of the varicam, right horizontal stabilizer and elevator. While waiting for replacement parts, removal and replacement time trials of various components were conducted.

Interphone Control Boxes. In their present location, the pilot's and co-pilot's interphone control boxes are difficult to reach, and the toggle switches are subject to inadvertent operation by the pilot's and co-pilot's elbows. *Recommendation*: Relocate the interphone control boxes so that the switches will be more accessible for normal operation and less in the way for unintentional operation.

Zinc Coat Licks Barnacles

VP-47, SANGLEY POINT—Collections of barnacles on the hull of this squadron's PBM's in Hong Kong harbor created maintenance problems not ordinarily met.

Aircraft remaining on the water for eight days or longer when the tender was absent were subject to barnacle accumulations. Hulls to the waterline now have been given thin exterior coatings of zinc chromate. Results have been very satisfactory.

One aircraft was waterborne for 14 days with no barnacle accumulation on the chromate surface. However, it was flown several times during the period. One aircraft without the chromate acquired a heavy barnacle load in Manila Bay in eight days, but it was not flown during the period.

At Hong Kong, the planes were tended by the *Salisbury Sound*. During a prolonged absence of the tender from the city, planes were tended by an APD with surprising efficiency.

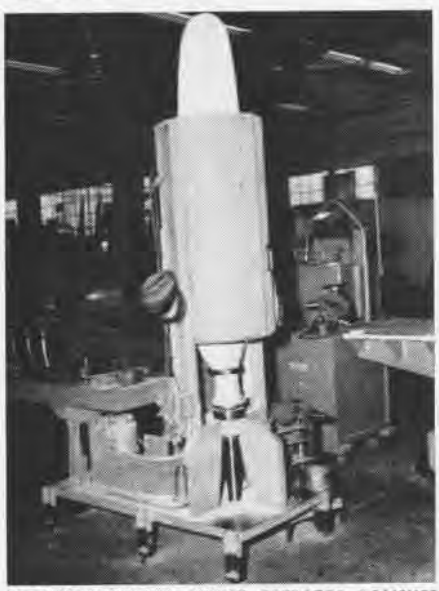
Prop Shank Polishing Easy

Buffing and polishing the shank of a propeller blade by hand is slow, tedious, work. If there is a little corrosion, the job takes two hours or more.

The O&R shop at NAS SAN DIEGO has two machines which mechanize this work to a great extent. The machines hold props upright and rotate them for rapid buffing by the operator.

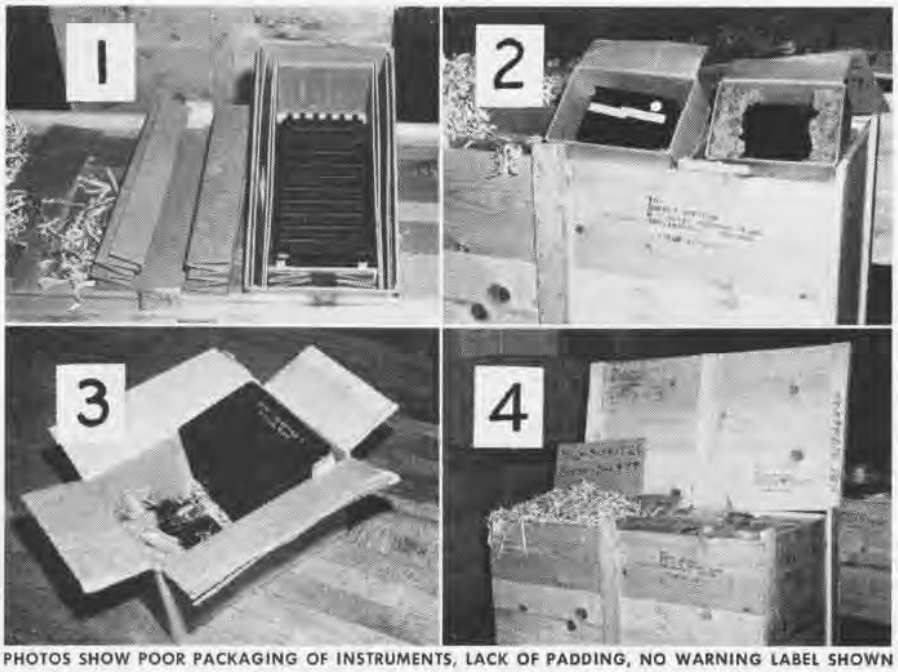
The blade sits upright on a shank which fits inside the bushing of the blade. Adapters are needed for various shank sizes. An adapter fits on a spindle that is ball seated through a stand. A three speed pulley connected to a motor by a drive belt turns the blade from 100 to 200 rpm. The time for the job is reduced to one-half hour.

For safety, a wire guard surrounds the blade except for a cutaway portion where the operator works. O&R can furnish details of the machines.



PROPELLER ROTATES WHILE OPERATOR POLISHES

AVIATION ORDNANCE



PHOTOS SHOW POOR PACKAGING OF INSTRUMENTS, LACK OF PADDING, NO WARNING LABEL SHOWN

Pack That Gear Right!

Reports received from Naval Ordnance Plant, Indianapolis, indicate that, all too frequently, various items of *aircraft fire control equipment*, such as sight units, computers, power supplies, and other optical and electronic equipment being returned from field activities for rework have been subjected to additional damage caused by inadequate packaging by field activities prior to shipment.

The accompanying photographs illustrate some of the conditions that have been found upon receipt, i.e., *(1)* lack of adequate padding to prevent units from shifting within containers, as shown in Figures 1 and 2; *(2)* inadequate covering of gear trains and relays to prevent packing or wadding material becoming enmeshed, thus requiring additional cleaning or readjustment, as noted in Figure 3; *(3)* no marking on outer container to indicate delicate instruments, to be handled with care, as noted in Figure 4.

Inasmuch as this equipment is becoming more expensive, along with becoming more complicated and delicate, the need for careful handling by field activities, even when it is known that the equipment is inoperative, is increasing. In many cases, it has been found that the inoperative conditions were due to some minor mechanical or electrical defect and the cost of repair would have been slight. However, owing to the additional damage inflicted on the equipment as a result of inadequate packaging, the cost of repair has, under some conditions, been increased by as much as ten-fold.

To insure that no additional damage occurs on returning of equipments for repair or overhaul, all activities must use the best possible care to insure that the packaging is accomplished in an adequate manner. It is recommended that the procedures as described in Chapter X of NavAer 00-85A-502, *Handbook on Preservation, Packaging, and Packing of Naval Aeronautical Material*, be used.

Signal Accidentally Fired

BuOrd recently received a report of accidental firing of a *miniature practice bomb signal, Mk 4*.

A signal accidentally fired when the victim, seated on a box in a stake body truck, loaded a miniature practice bomb AN-MK 23 MOD 1 with a miniature practice signal, Mk 4.

Although the cause of the explosion is undetermined, it may have been caused by forcing the signal or the firing pin assembly, by accidentally dropping the loaded bomb, or the ammunition may have been defective. *Whatever the cause, the effects could have been minimized or even avoided had the instructions for loading in OP 1280 been followed and the safety precaution been observed.*

▲ ***BuOrd Recommendations:*** **It is recommended that naval air activities using miniature practice bomb signals review the instructions in OP 1280. The major points covered are:**

1. Loading shall be in a suitable location on a *work bench* with provisions for holding the bomb vertical, tail fins down.

2. Components (bomb, signal, and firing pin assembly) shall be inspected for defects during the loading procedure and loading shall be carried out using no force on either the signal or the firing pin assembly.

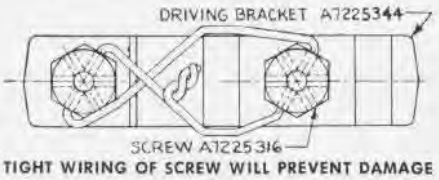
3. Extreme care must be used to guard against dropping or jarring signals or loaded bombs. Under no circumstances is either end of a loaded bomb to be pointed toward oneself or another person.

Feed Mechanism Difficulties

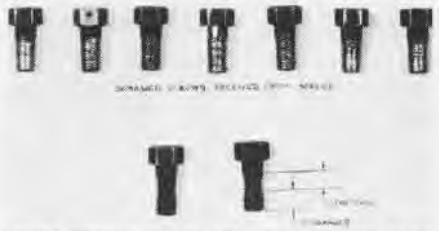
The Overhaul and Repair department, MCAS, Cherry Point, reported thread failure of driving bracket screws, 20 mm feed mechanism AN-M2. Upon removal of the driving bracket assembly, the screw threads were found to be damaged. Several damaged screws received from Cherry Point are shown in the photograph.

▲ ***BuOrd Comment:*** **Examination by the Naval Gun Factory revealed that the screws were properly manufactured. From the photograph, it is evident that the threads are damaged throughout their entire length, although engagement in the gun receiver body is approximately 50 percent of the available thread. It was also noted that the protective finish under the heads of the screws was undisturbed.**

Torque tests on two new screws resulted in stretching of the section between the head and the point of engagement in the receiver body. Refer to the two screws shown in the lower portion of the photograph. The protective finish under their heads was partially removed. No damage occurred to the engaged threads within the receiver body.



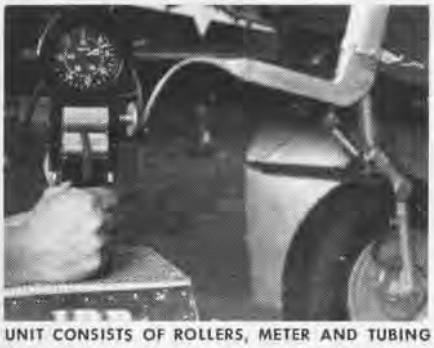
TIGHT WIRING OF SCREW WILL PREVENT DAMAGE



LOWER SCREWS SHOW STRETCHING AFTER TESTS

It is the opinion of the Bureau of Ordnance that damage resulted from insufficient tightening and improper safety wiring. Continuous pounding on the loose bracket, which is subjected to heavy recoil and counter-recoil loads, further loosened the screws and eventually caused the damage shown in the photograph.

Recommendation: BuOrd recommends inspection of driving bracket screws assembled to guns for tightness and proper safety wiring. When assembling the driving bracket to the gun receiver, seat the screws with a torque of 20 footpounds. Tightly safety wire the screws as shown in the sketch. Replacement screws, stock number J941-S-1108, are contained in the line maintenance spare parts set, 20 mm feed mechanism AN-M2. Refer to NavOrd Lists 21416, Revision "B", and 22992, dated 1 November 1949.



UNIT CONSISTS OF ROLLERS, METER AND TUBING

Dahlgren Airspeed Tester

NPG, DAHLGREN—An airspeed test unit that can be readily carried in the hand was designed and built for the instrument shop at the Naval Proving Ground.

Its creator was R. K. West, AM2, who is attached to the Naval Air Facility.

West made the unit from scrap material. It consists of a frame, airspeed meter, rubber tubing and a set of rollers to compress one section of the rubber tubing, thereby providing air pressure to activate the airspeed meters.

The other section of the rubber tubing is slipped over the end of the pitot tube of the aircraft whose speed indicating system is under test. This test unit provides a rapid and accurate functional test of the airspeed system of a plane while it is on the line.

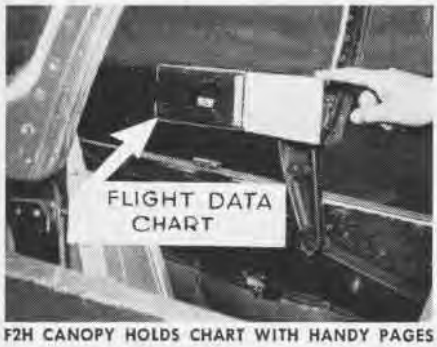
▲ ***BuAer Comment*** **— Similar portable testers are already in use by the Navy and are carried in supply under stock numbers R88-T-837 and R88-T-838. They employ the same principle as this, namely, a master indicator, rubber tubing and clamps for squeezing the rubber tubing.**

Canopy Device Helps Pilot

VMF-122, CHERRY POINT—This squadron has developed a handy chart to be put on the canopy of jet fighters to make data on radio and the check-off list readily available.

The F2H-2 had no good arrangement in the cockpit to carry the data, so Capt. G. V. Hodde and S/Sgt. G. W. Masson worked out a device with two pieces of clear lucite, 3½"x6¾". Hinged at one end, it has a spring clip attached to the opposite end. To the lucite were attached copies of information the squadron wanted the pilot to have. By flicking open the device, data on the inside sheet is visible.

The holder presently contains check-off lists, emergency operating instructions, a current YG homing beacon chart, a current VHF channel guide on radio installations in the *Banshee*. In the near future there will be inserted a chart showing headings, distances, fuel consumption data and radio information to airfields within emergency operating distance of the squadron's home field.



F2H CANOPY HOLDS CHART WITH HANDY PAGES

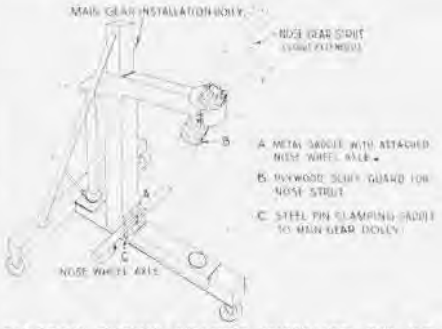


DIAGRAM SHOWS ADAPTER INSTALLED ON JIG

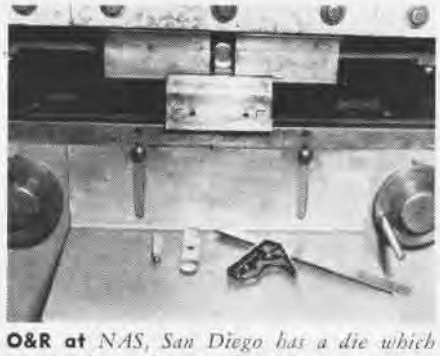
The Nose Gear Installer Jig

The Bureau of Aeronautics Committee on Awards has approved the nose gear installer jig, submitted under the Navy Suggestion program by Clyde L. Zappa, ADC, VR-44, NAS MOFFETT FIELD.

Heretofore, installing nose landing gear assemblies required the use of an "aero" work stand to provide the lift and three or four men to guide the assembly into the correct position for installation. This method involves a hazard as the assembly is not rigidly supported and may fall, causing injury to personnel or material damage.

Chief Zappa's suggestion involves the use of a single adapter on the portable jig now in use for installing main landing gear assemblies. The proposed adapter provides a rigid mounting which will hold the nose landing gear assembly in the correct position for installation without any danger of slipping. The assembly can be moved to the aircraft and installed by one man.

This method has been used in the heavy maintenance of R5D aircraft by the Structures Division of Air Transport Squadron 44 and has resulted in a saving of an estimated 240 man hours per year in addition to eliminating the accident hazard.



O&R at *NAS, San Diego has a die which can bend metal to 180° with one operator in one operation. The die is adjustable.*

Engine Container Overhaul

NAS, ALAMEDA—Any tin can worth over $300.00 is worth saving to use again. Such is the case with the 2,000-lb. cans used here for engine storage.

These cans, 5'2" in diameter and 8'2⅛" in height, cost the Navy $323.00 each. They

RUST, OLD PAINT, ARE SANDBLASTED FROM CAN

were developed to package aircraft engines for storage and shipping.

They are made in two sections. The lower section acts as a stand during final checkup before processing. When ready for sealing, the upper half is fastened down with 44 bolts.

During shipment these cans are damaged in many ways. O&R at Alameda is overhauling them for re-use. They are tested then for 1.6 hg of mercury for a minimum of 20 minutes, and, when put in use again, are constantly checked with humidity indicators.

Only reciprocating engines are stored in this manner.

Aerial Film Can Is Useful

HEDRON 2, CHERRY POINT—The photo unit has developed a technique of dropping film and photographs to troops in the field.

A shell, designed by the unit and made by VMR-252 metal shop, was constructed to fill a need for an adequate and accurate drop method. The shell can be hooked on any aircraft having a bomb shackle with 14" between lugs.

The drop solenoid is by-passed, and the hot line attached to shell solenoid to operate the shell doors. Film containers are expelled by air pressure entering a 5" circular hole in front of the shell. This shell has been proved by test and real drops.

Marines Build F4U Tail Jack

NAS NEW ORLEANS—Marine aircraft maintenance personnel at this station are quick to spot a good thing. After observing equipment used at MCAS EL TORO during annual maneuvers last summer, they built the *Corsair* tail jack, shown in the picture.

The jack, which is built from salvaged parts, has two handles for ease of carrying and utilizes a one-gallon hydraulic fluid can as a reservoir. The lifting cradle is heavily padded to prevent damaging the underside of the fuselage.

F4U TAIL JACK BUILT BY NEW ORLEANS MARINES

LETTERS

SIRS:

Your recent article (March 1950) concerning 10 pilots with the rank of lieutenant or below who had accumulated 56,850 hours of air time has come to the attention of VR-2. You mentioned raising an eyebrow—would you like to try for two?

Reluctant as we may be to detract from the glory of any group within the brotherhood of naval aviation, we have found after a quick check of log books that we have 10 lieutenants with a combined total of 49,797 air hours, or, to put it another way—five years, eight months, nine days and nine hours in the blue.

We therefore proclaim ourselves as the new champions, until dethroned by some other unit. Our claim to fame is backed by the following figures:

V. Solomon	5,586	W. M. Bartley	4,506
L. F. Kellerman	6,323	W. M. Flenniken	4,453
F. O. Bergstrasser	5,366	W. D. Emerson	4,369
W. F. McSharry	5,018	W. M. Nelson	4,253
D. Nicholson	4,769	W. W. Dootson	4,154

VR-2 operates the JRM *Mars* seaplanes, and already holds several world's records. These include the longest flight ever made by a seaplane (4,748 statute miles from Honolulu to Chicago), the largest passenger lift of any aircrew anywhere (301 passengers and a seven-man crew from Alameda to San Diego), and the heaviest payload ever lifted by a seaplane (68,282 pounds, Patuxent River, Md., to Cleveland, Ohio).

LT. W. F. MCSHARRY
PUBLIC INFORMATION OFFICER
VR-2, ALAMEDA

SIRS:

With appropriate and becoming modesty, NAS ST. LOUIS reluctantly admits that compliments from the civilian population in and about Saint Louis are not unusual. But when the compliment comes as a result of confinement in the station brig, it is a little out of the ordinary.

The letter below was received from the father of a bluejacket who spent a few days as a guest of the Security Department of NAS ST. LOUIS, as a result of allowing his commanding officer to start a cruise from an eastern port without the benefit of his (the prisoner, that is) presence aboard. The letter from the sailor's father after the boy's incarceration follows:

"Sir,

I am an old Soldier and first of all I have no beef or complaint to make. But what I have to say will mean nothing to you and your staff. I would like to commend you and your staff on the humane treatment of prisoners at your base. You are what I call damn good Sailors.

In Army lingo. Brass or low private in the rear rank. That to me is the highest praise a Soldier expects ever to get. Tho' my words may mean nothing to you. I thought I would like to let you know your staff acted like the best of Sailors to me and my family.

There was no smart answers, just humane treatment. I'm a poor man not working, but if there's anything the prisoners need that you don't provide let me know. I will try and provide same. You see Sir, I know what some guys need. I was there.

(signed) O. M. E.

I salute you sir—"

BART J. SLATTERY, LCdr.
PUBLIC INFORMATION OFFICER
NAS ST. LOUIS

SIRS:

Is there at the present time a club or organization similar to the *Caterpillar Club*, for airmen who have ditched their aircraft in water due to an emergency?

If so, what is the name of the club, and where may I receive complete information on membership?

GEORGE MINARIK, ADE1
VP-811
NAS MINNEAPOLIS

¶ During the war, a company which made CO_2 cartridges for life rafts started the "Sea Squatters Club" for fliers and crewmen whose lives were saved by use of life vests or rafts. You might try writing to the club at 675 Main St., Belleville 9, N.J. for an application blank.

SIRS:

Are the Marines at it again? We read an article in your April issue which states in part: "T/Sgt. Grebey is the only enlisted final GCA controller in the naval service at present."

In looking over our monthly reports from other Navy GCA units, we find 57 enlisted men whose primary operating position is final controller, 73 more who have qualified as final controllers after leaving school at either Gainesville, Ga.; Banana River, Fla.; or Olathe, Kansas.

At present this unit has five qualified final controllers. Incidentally, the Marine Corps has two more enlisted final controllers.

THE CREW, GCA UNIT #7.
NAS MOFFETT FIELD

¶ The article about Sgt. Grebey talking down MCAS El Toro's 8,000th GCA landing was apparently erroneous. It was presented in the News as it was received from the news source. GCA Unit #14 at NAS New York also spotted the error.

SIRS:

We have received quite a few letters of inquiry and compliments concerning the article on the Earth's atmosphere which you carried in the Naval Aviation News [early this year]. I would like to add my compliments to these in the manner in which you handled the presentation of the data which was contained in the original paper.

Thank you very much and congratulations on a very fine magazine.

HOWARD E. ROBERTS,
AERO-THERMODYNAMICS ENGINEER
DOUGLAS AIRCRAFT COMPANY, INC.
EL SEGUNDO, CAL.

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● THE COVER

The new P2V-4 antisubmarine version of the Neptune soars over San Francisco, with famous Fisherman's Wharf and the north shore below. Wingtip tanks give it more range. The ASW belly guppy can be seen below the fuselage. Photo by Lockheed Aircraft Corp., Erik Miller.

● RECOGNITION QUIZ

(Inside front cover)

Top—F2H-2 *Banshee*, wings set far aft, wide chord next to fuselage, long pointed nose, straight leading edge, tapered trailing edge.

Middle—Left, AD-3W *Skyraider* with plastic radome to house its ASW radar. Two supplementary vertical stabilizers beside main tail not readily visible. *Right*—F9F-3 *Panther*, long pointed nose, chopped off fuselage below tail. Wing shape similar to *Banshee*.

Lower—P2V-4 *Neptune*, antisubmarine version of the famous long-range aircraft, carries magnetic detection gear and sonobuoys to bolster radar in guppy. Wing tanks on this version lengthen range.

● THE STAFF

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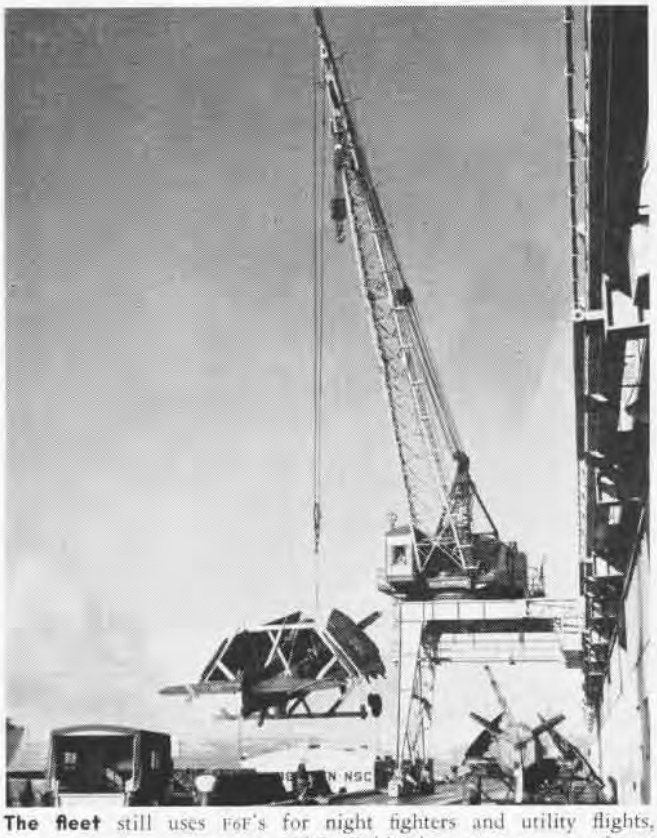
Out in Seattle Sandi Gore, U. of W. drama student who was *Miss Task Force* poses for Lts. L. N. Crawley and J. A. Wallace

Reserve pilots at NAS Oakland are checking out in FJ-1 jets; receipt of jets boosted interest in Reserve program greatly

Large and small of it—David G. Larson, ex-SBD tail gunner at Guadalcanal with his *Corsair* model at Seattle model meet



The fleet still uses F6F's for night fighters and utility flights, here a gantry crane at NSC Oakland puts one on barge

RECOGNITION EXPERTS, WHAT IS THIS? LOOKING LIKE A PAIR OF BINOCULARS WITH WINGS IS THE PRODUCTION MODEL F7U-1 AT DALLAS, TEX.

NAVAL AVIATION NEWS

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