NAVAL AVIATION NEWS

88th Year of Publication

NOVEMBER 1956

NavAer No. 00-75R-3

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THIS IS SUEZ

The USS Hornet, CVA-12, is shown in transit through the Suez Canal in 1954. Flat, sandy, arid country stretches as far as the eye can see. Note how the giant carrier dwarfs the width of the canal. First U. S. carrier to transit the Suez was the USS Valley Forge during her world cruise ending in June 1948.

PATUXENT TESTED AND APPROVED

TO THE MEN of the Navy who fly Navy planes, the words, "Tested at the Naval Air Test Center Patuxent," are a badge of high quality of materials and proved reliability of performance.

Navy airmen know that they are furnished with only the best in aircraft, in airborne equipment and armament. They know that before any new type of plane or aeronautical material is accepted for naval service, it must first pass stringent evaluations conducted by naval and civilian technicians operating at the Naval Air Test Center, located aboard NAS PATUXENT RIVER, Md.

Though the aircraft test program is now a closely knit organization, it was not always so well coordinated. Only 15 short years ago the Navy's aviation testing facilities were scattered over Maryland, Virginia, the District of Columbia, and Pennsylvania.

A BUAER Plans officer said in 1939, "The existing arrangements for experimental flight test work have grown up because of expediency to the point where they are definitely unsatisfactory."

AT PATUXENT, F4D-1'S AWAIT DELIVERY TO FLEET SQUADRONS

SQUADRON PILOTS MET AND MASTERED THESE SKYRAYS AT NATC

At the Naval Air Station, Anacostia, testing was done for performance, general characteristics, gun installations, and radio. Planes were ferried to Dahlgren, Va., Proving Ground for spins, dives, and bombing; to NAS Hampton Roads (Norfolk) for rough water and accelerated service tests; to the Washington, D. C., Navy Yard for seaplane catapulting; and to the Naval Aircraft Factory, Philadelphia, for landplane catapulting and deck landing.

Difficulties arose and were compounded over administrative matters. Who should ferry planes from one testing station to another? Which pilots, in the various commands, were to carry out the different tests? Which work was to be given priority, the regular tasks of the stations, or the testing of planes for the Bureau of Aeronautics.

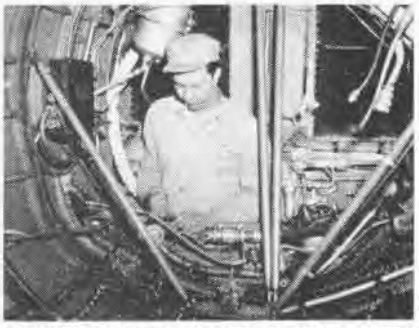
The same BuAer Plans officer, Capt. (later RAdm.) D. C. Ramsey, summed up problems in flight testing in a memorandum to his Chief: "Experimental flight testing as carried on at present is done under difficulties, and attended with increasing interference to itself and to many organizations, particularly operating units. The greatest difficulty is not the inconvenience, but that important and valuable work is either not done at all, or when done, is not done properly."

"Duke" Ramsey, himself destined to be the Chief of BuAer, went on to recommend: "The best solution for these difficulties is to form an experimental flight test unit placed in a suitable locality where there will be no mutual interference with other activities. This would enable the work to be done by the least number of aircraft and pilots and those pilots would have the maximum familiarity with the aircraft and the problems involved, resulting in the work being done expeditiously, and being done well."

Early in 1941, as support for the Navy's aviation program, a Flight Test Center was authorized as a necessary facility for the development and test of aircraft and of airborne equipment.

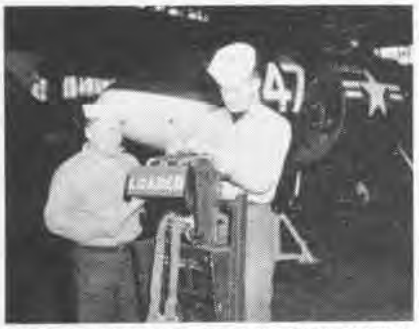
The board appointed to recommend possible sites for the "Naval Aviation Experimental Station" faced a difficult task. The specifications called for the center to be readily accessible to Washington, D. C., and to other East Coast aircraft installations; suitable for the operation of both landplanes and seaplanes, and removed from congested aircraft operation areas. The center must also furnish target area for all types of gunnery practice and armament testing. It must have adequate rail service and highway availability, and yet be isolated enough to protect the security of classified tests. And it must also be isolated enough so as to involve no conflict with any other military activity.

PHOTOS MAY SHOW WHAT EYES CAN'T SEE



MAINTENANCE OF PLANES IS VITAL WORK

PILOT NANCE AND CREW CHECK NOSE WHEEL



SKILLED ORDNANCEMEN LOAD SEAT EJECTOR

CHIEF NOBLITT ADJUSTS PILOT'S O2 MASK

EVERY MASK GETS A PERIODIC INSPECTION

Since none of the existing stations in the Navy met the above requirements or was suitable for the work involved in the plans for the center, an entirely new location had to be selected.

By September 1941 the survey board had covered many miles of the East Coast on foot, as they scrutinized eight different areas. One site seemed to fulfill most of the needs listed. This was at Cedar Point, Md., at the junction of the Patuxent River and Chesapeake Bay, about 60 miles southeast of Washington, D. C.

The time table of subsequent events indicated the urgency of the need for this new station that was to be the home of the Flight Test Center, and the East Coast base of the Naval Air Transport Service assigned to operate in the Atlantic area. On 22 Dec. 1941, RAdm. J. H. Towers, Chief of BuAer, requested SecNav to approve the location, and to authorize the construction of the Center at Cedar Point, Md. On 7 Jan. 1942, Secretary Frank Knox added

MUCH TEST DATA IS GAINED FROM THIS EXPERIMENTAL R5D, AN ELECTRONIC FLYING LABORATORY CAPABLE OF LONG RANGE FLIGHTS

his approving endorsement, and on 18 Feb. a contract was let for the first increment of construction. Ground was broken on 4 April for what Adm. Towers called the "Navy's most needed base." Less than a year later, on 1 April 1943, the station was placed in commission, and operation of the Naval Air Test Center got underway.

Shortly after the first ground was turned, it was realized that the name, "Cedar Point Air Station" was being confused with the Marine Corps Air Station, Cherry Point, N. C., also under construction. Accordingly, the Cedar Point installation was designated the U. S. Naval Air Station, Patuxent River, Maryland, and was so commissioned.

During the first year or so after commissioning, operations at NATC were somewhat less smooth than they are now. Construction continued unabated. But none of this was allowed to interfere with the activity for which the station was created. Then, as now, all other activities and functions of the station were in support of the main activity, the testing and evaluation of naval aircraft.

Commanded at the present time by RAdm. C. H. Duerfeldt, himself a test pilot at NAS ANACOSTIA 20 years ago, the Naval Air Test Center is composed of five Divisions: Flight Test, Service Test, Electronics Test, Armament Test, and the Test Pilot Training School.

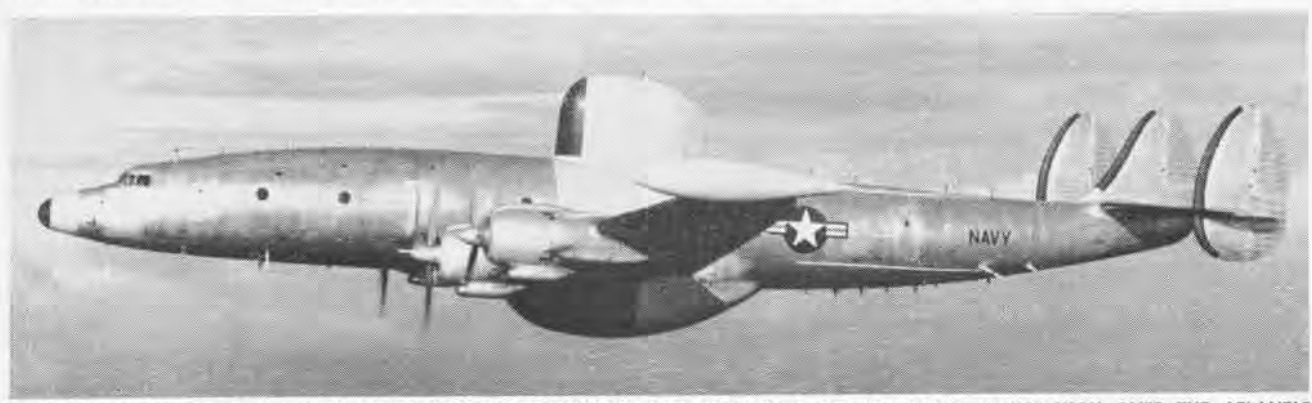
The Flight Test Division conducts trials to test and evaluate experimental and service type aircraft and general aeronautical material. Pilots attached to this Division test-fly every new type of fighter, attack plane, seaplane, cargo plane, or helicopter to assure that they meet the Navy's rigid specifications for performance and safety. In these new planes pilots go aloft under varying weather conditions, by day and by night, loaded or light, to determine such factors as service ceiling, climb ratio, gross weight, critical altitudes, fuel consumption and endurance capability.

Planes are put through these exhaustive tests to guarantee that nothing will be left to chance when they are delivered to operating squadrons of the fleet.

An important task of Flight Test, performed by its Carrier Suitability Branch, is to ascertain the compatability of gear with new planes, and vice versa. A good example of this was the NATC testing of the steam catapult and new arresting gear, developments made necessary by the advent of sonic and supersonic aircraft.

The Service Test Division determines the service capability of new aircraft. Answers must be found to such questions as "How will this airplane stand up under constant and prolonged flying?" Service Test telescopes months of hard use of planes into a much shorter test period. It discovers overall capabilities of a plane and any material defects it, or its equipment, might have. The point of view of the pilot in the fleet and the long hours of use he gives his aircraft and its equipment, is kept in mind.

By determining airframe and engine usage, Service Test can formulate maintenance methods and procedures peculiar to those aircraft, and thus aid the fleet in the future maintenance of the aircraft. This division also makes accurate estimates of the kinds and quantities of replacement parts, to be kept in supply depots, with the fleet or air station, and in the 'pipeline,' to establish an adequate flow of spare parts at the time and place they are needed.



FLYING ELECTRONICS-LOADED WV-2 SUPER CONNIES, PATUXENT-BASED MEN OF A VW SQUADRON CRUISE HIGH OVER THE ATLANTIC

A detachment from this division is assigned to Eglin Air Force Base, Florida, to conduct cold weather tests in the climatic hangar there. Results from these tests have proved to be of great value in cold weather flying, most recently in Arctic and Antarctic operations.

Keeping step with new aircraft design has been the development of complex armament. It is this armament that makes possible the chameleon characteristics of our planes. As the occasion demands, they are attack planes, fighters, interceptors; patrol or anti-submarine planes.

Responsible for the fire power of naval aircraft, the Armament Test Division tests every item of fire power, except guided missiles, that is developed for use by U. S. Navy planes. Under varying temperature conditions, in specially constructed chambers on the ground, and at different altitudes in flight, ATD men test-fire these weapons. Guns, mines, bombs, rockets, and associated equipment, all are tested minutely for accuracy and for reliability.

Fire Control Section of Armament Test is charged with turret test and sight assessment projects. Included are electronic fire-control equipment and optical instruments such as fixed sights, bomb sights and flexible gun sights.

R3Y TRADEWIND COMES UP RAMP UNDER SELF POWER AT NATC

TEST PILOT FELITON READIES HIS F8U-1 FOR CHECK FLIGHT

PHOTO PLANES ARE THE EYES OF THE FLEET. THIS F9F-8P, UNDER TEST AT PATUXENT RIVER, RANGES HIGH FOR PICTORIAL DATA

CARRIER SUITABILITY TRIAL: F4D ON CVA-59'S STEAM CATAPULT

SERVICE TEST PILOTS GIVE HELICOPTERS RIGID WORK-OUTS

INSIDE SHIELDED HANGAR, A P2V-5 UNDERGOES A NOISE TEST

AT NIGHT F7U'S FLAMING AFTERBURNER IS IMPRESSIVE SIGHT

The Tow Target Section tests aerial tow targets, and associated equipment, and develops towing techniques.

For high-speed aircraft, electronics installations that activate radio and radar, fire control, navigational and instrument flight aids are of top importance. Around the clock, the NATC Electronics Test Division tests entire electronic and electrical systems, and parts of systems to determine their suitability and value for operational use in specific types of Navy planes.

In a shielded hangar which excludes all outside electrical interference, the largest of its kind in the world, much of this testing takes place.

For years, simulated electronic systems were tested within shielded rooms with consistent results. But in a plane with normal antennae connected, the same tests yielded erratic results. Background noises were a plague of the technicians and engineers.

As an answer to an evident need for an electronically shielded space large enough to permit evaluation of electronic systems and equipment actually installed in aircraft, this "noise hangar" was built.

Insulated with galvanized iron wire mesh in the deck, and galvanized iron hardware cloth on walls and ceiling, the hangar offers interference-free testing of any and all electronic systems and of other equipment in planes and in all types of mobile vehicles.

Additionally, in large planes equipped as flying laboratories, electronics and men are in the air constantly over land and sea, in clear and stormy weather, operating and testing electronic equipment. The "Navy Theta" standard cargo R5D-3 modified for testing, is, to the uninitiated, an amazing assemblage of be-dialed, removable, test and monitor panels, of duplicate navigation and communications equipment, of wiring ducts and spare lead terminal boxes.

But this airplane, the product of much experience, is considered the finest flying laboratory of its type in existence. It has already been invaluable in furnishing data on safe all-weather flying that could not have been obtained in a laboratory on the ground.

Obviously the work involved in testing the increased performance required of complex modern military aircraft is not entrusted to fledgling pilots. Specialized flight testing techniques require a high degree of skill and operational experience. From volunteer pilots nominated by fleet aviation commands come the naval aviators who are trained at the Test Pilot Training School at NATC.

Such a school was found necessary in late 1944 when the Test Center had reached the peak of its expansion under the load of wartime contracts. Fleet pilots highly trained in operations, strategy, tactics, and maintenance were found to know little of the specialized methods of flight testing to determine performance, stability and control, handling qualities, and fuel consumption.

First solution to this problem was a ten-week indoctrination course for the pilots with presentations on aircraft and engines, on stability and control, performance testing and instrumentation. This was expanded into a formal Test Pilot School in mid-1949.

CURRENTLY, these pilots undergo, for five and a half months, an intensive course which includes academic study in aerodynamics and related aeronautical engineering subjects and in practical test flying and data reduction. They spend mornings in classroom lectures and in study. Afternoons they test-fly.

Graduates of this school may be assigned to test activities of NATC or to other stations requiring expert test pilots.

There are shining names among the test pilot student rolls: In August 1953 LCdr. James B. Verdin (now deceased) flew a batwing F4D-1 *Skyray* to a straight course record over a low altitude three-kilometer distance; his speed of 752.943 mph remains the official record. Lt. Gordon L. Gray piloted a Douglas A4D-1 *Skyhawk* around a 500 kilometer closed course at Edwards Air Force Base in Oct. 1955 to set the existing world record of 695.127 mph. Most recently, Cdr. R. W. "Duke" Windsor flew his F8U-1 *Crusader*, this past August, to set the U. S. speed record of 1015.428 miles an hour.

Supporting the work of the Test Center, and the fleet units based at Patuxent River, the Naval Air Station, under command of Capt. T. B. Neblett, is one of the Navy's largest. Its 11,800-foot main runway, its other take-off and landing areas, its seaplane basins, its hangars and experimental divisions, all have only one purpose. And that one purpose is to make naval aviation developments as safe and effective, and the nation as secure as is humanly possible.

GRAMPAW PETTIBONE

What's the Pitch?

The pilot of a P2V-3 took off in late afternoon on a four-hour flight to ferry his aircraft to NAS ATLANTA. Forecast weather enroute was a minimum ceiling of 400 feet, maximum cloud tops of 35,000 feet, thunderstorms with moderate to heavy turbulence, and a minimum flight visibility of one-half mile. The flight to Atlanta was uneventful although instrument weather was almost constant.

Arriving over the field after dark, the pilot was informed of an estimated ceiling of 1000 feet broken, 1500 feet overcast, three miles visibility with light to *moderate rain*. The pilot was cleared to runway 20 and given surface winds of 200 degrees at six to ten knots. He requested to land on runway 16 which is 3,980 feet long, 230 feet longer than runway 20. He was cleared to land on runway 16, but was not informed that a severe squall line had passed over the station one hour previously, leaving the runways covered with water.

A normal approach was made to a full-flap landing with the aircraft touching down at a point 1050 feet down the runway, leaving 2930 feet of usable runway for stopping. A quarter-inch sheet of water covered the upwind end of the runway. Immediately after touchdown, the pilot pumped his brakes intermittently for 1335 feet,

then locked them for the remainder of his toboggan ride. When it became evident that he was fast running out of runway, the pilot intentionally ground-looped his P2V to the right by applying full throttle to the port engine.

Skidding sideways, a million dollars worth of airplane slid off the end of the runway, plunged down a 35-foot embankment and crashed to a stop in the pine trees. The whole area was heavily saturated with fuel when one of the fuel cells burst. By extraordinary good luck, no fire ensued. The aircraft was a strike, but the five occupants escaped from the plane unhurt.

The pilot did not utilize reverse thrust during the rollout or make any attempt to initiate a wave-off. He had 3500 total flight hours; 280 in the P2V of which 37 hours had been flown in the last three months.

Grampaw Pettibone Says:

Gaspin' guppies! This one takes the cake. It's beyond me why an experienced pilot would choose to take off into instrument conditions and bore blindly through forecast thunderstorms in the first place. But landing after dark on a short, wet runway with no thought of using reverse pitch really stumps me. It's gross misjudgment and downright foolishness. All five occupants must have been thinking pure thoughts all day to come out of this one without a scratch.

Ferry movement of multi-engine dual control aircraft under IFR conditions is according to Hoyle (OPNAV INST 3710.6) when the point of departure and the destination are VFR (and destination will remain so for ETA plus one hour), but the intervening IFR conditions must be caused by a stable air mass with no icing. In my book, thunderstorms aren't stable. Besides, it just ain't smart to go charging through thunderheads unnecessarily.

This pilot had flown out of Atlanta for a year. He knew the length of the runways and the characteristic of the overrun areas to drop off abruptly into the toolies. He knew it was dark, and the fact that it was raining should have clued him that the runway would be wet, with resultant poor braking.

Following the accident, the NAS established a system of periodic briefing of tower operators to insure that pilots are advised of any unusual field or runway conditions.

In his statement, the pilot allowed as how if reverse pitch had been used immediately, the accident might have been prevented. He gave no inkling as to why he didn't give it a try.

The aircraft accident board figured there were additional ways of preventing the accident—like proceeding to his alternate, Robins AFB with its 10,600-foot runway, Dobbins AFB (at Atlanta) with its 10,000-foot strip, or Atlanta Municipal with its 5500 to 7860-foot runways. It's that simple.

Dear Gramp:

While reading the July issue of the *Naval Aviation News*, I was particularly interested in your lead story about the fella with the accidentally inflated Mae West. That same problem has confronted me at about 30,000 feet.

The first time I really gave that Mae West a "fit" with a puncture tool that was taped to the instrument panel for just such an emergency. My radar operator (we were in an F3D-2 *Skyknight*) happened to see me sitting there apparently beating my chest. Discovering the cause of my exertion, he promptly relieved the situation by simply removing the small CO2 bottle from its holder. The air went out of the vest, and we continued our trip to Cherry Point.

I've asked quite a few of the pilots recently what their plan of action was to be if they inflated their Mae Wests by accident while in flight and *all* of them said they would puncture the vest. My personal experience is that punching a hole in that vest is no simple operation, and that it's much more expedient to simply remove the expended cartridge from its holder.

—MAJOR, USMC

Grampaw Pettibone Says:

The volume of response to that life vest piece makes it pretty evident that the problem needs a little more discussion. There are plenty of convictions, but they're not all right.

There's disagreement as to the number of compartments in a life vest as well as to the number and effect of oral inflation tubes. For emergency deflation, some say punch holes in it, some say don't. It reminds me of the three blind men with different opinions as to what an elephant would look like. All were partly right; it all depended on their individual angle of approach to the critter.

If you haven't worn a life jacket lately, you may just remember the old type that had two compartments, two oral inflation tubes and two CO_2 bottles. Because of their age, the odds are that most of these are no longer in service so there is no point in going into this phase.

A more common vest is the Mark II with one oral inflation tube for inflating the separate oral inflation chamber, and with two other compartments fillable only by CO_2 bottles.

The Mark IV or "integrated" life jacket is composed of two underarm cells, fillable either by bottle or tube.

It isn't necessary to know the Mark number to use your equipment effectively. If there are two oral inflation tubes, the vest should be deflatable by any of three ways: depressing the base of the tubes, underscrewing the caps to the CO_2 bottle compartments, or by stabbing. If there is only one oral inflation tube, it leads to a separate compartment and is useless for deflating a bottle-filled compartment.

Pilots disagree as to the accessibility of bottle container caps and oral inflation tubes when a life jacket is inadverently inflated beneath shoulder straps, parachute harness and seat belt. But if the gent in the cockpit is familiar with his equipment, it shouldn't take him long to set things right.

As one of the letters pointed out, when a life jacket inflates, it's a simple matter to determine which CO_2 bottle has been expended—just feel which bottle is cold. Unscrewing that bottle container cap should permit the vest to deflate—unless some joker left a valve core in after testing the vest in the shop.

If the pilot is suffering acute discomfort or has great difficulty in breathing and can't readily depress the appropriate oral inflation tube *or* reach the offending CO_2 bottle receptacle cap, he should promptly grab and stab. He's the best judge of the urgency of the situation. Since life jackets are carried for their life-saving qualities, there's no point in unnecessarily punching holes in one that might be needed later in the flight. But under any circumstance, a frog-stabber's a handy thing to have along.

Given Enough Rope

A Ltjg. took off in a *Panther* on a scheduled gunnery tow flight. On reaching the range, he streamed his starboard banner which was canted. Releasing it, he attempted to stream the port banner. When it wouldn't stream, the pilot aborted the tow flight. Enroute to base he "decided to inspect the area for possible 'ditching' points—places where the ground was smooth."

Approaching some railroad tracks, the pilot concluded the adjacent ground should be fairly level and went down to make an inspection. In the pilot's own words, "The air was bumpy and I felt a slight jar, but dismissed it as being of no consequence." Upon returning to base and taxiing to his parking spot, the line crewman told the pilot that he had a line trailing. The

pilot in turn told the O-in-C that perhaps something had happened, to which he received the reply, "We'll have to wait and see."

They soon got a line on the JG's activities. Unknown to the pilot, the port banner had streamed prior to his low pass on a freight train. The nylon towline swished through a very small community, scaring the wits out of the local folks. Then, kicking up a few stones, it broke the rear window in an occupied caboose of a moving freight train before catching on an automatic signal along the railroad track and leaving a 100-foot line as evidence—enough to hang the pilot!

Grampaw Pettibone Says:

The local press pictured the towline as slicing through town like a giant knife. The citizenry weren't the only ones to take an unkind view toward this type of shenanigans. A Field Naval Aviator Disposition Board also took a dim view of the situation.

While it frequently occurs that no personnel injury results and very little property damage is done, the fact can't be overlooked that flathatting not only endangers the life of the pilot and a good many others, but it frightens the pants off the populace.

Remember, it's not enough for the *pilot* to feel that nobody is actually endangered—but no person must *think* that he is. Damage to Navy public relations is something that just can't be marked on price tags.

THE BLACK DIAMONDS SPARKLE

BLACK DIAMONDS OVER SOUTH CHINA SEA

AWARDS, AWARDS, and *more* awards! This is the history of the relatively new squadron, VA-216. Ever since its commissioning, this attack squadron has been making its brother organizations look to their laurels.

VA-216 was commissioned at NAS MOFFETT FIELD on 30 March 1955, as a unit of ATG-4. Starting from scratch, the *Black Diamond* squadron entered the training syllabus at Moffett in late April, with its 16 AD's.

Stressing day and night conventional and special weapons delivery and low level navigation, the *Black Diamonds* were ready to enter competitive fleet exercises in the fall of 1955. After the smoke had cleared away, 17 pilots had achieved a grand total of 49 "E's" for an overall average of almost three "E's" per pilot.

In November 1955, each of the 11 special weapons pilots copped an "E" in the special weapons delivery competition at China Lake. The *Diamond* mean radial error for this exercise is believed to be a fleet record. During the ADMAT inspection in the following month, RAdm. F. T. Ward, COM FAIRALAMEDA, awarded an outstanding to the squadron personnel.

On 19 March 1956, the *Black Diamonds* sailed out of Alameda aboard the USS *Yorktown*. In the first quarter of the year, squadron pilots logged over 1,000 carrier landings, including the *Fighting Lady's* 50,000th, made by Ltjg. L. M. Dierdorff.

During the cruise, VA-216 logged 1820 accident-free landings. This total broke down to 358 night and 1462 day landings. The squadron averaged over 100 landings per pilot, and 12 aviators qualified to join the *Lady's* Century Club. Flight time for the cruise averaged 190 hours per pilot, of which 35 were night hours.

Since commissioning, VA-216 has logged 10,059 hours. It three times garnered the COMAIRPAC quarterly safety award during fiscal 1956.

During the six-month cruise, officers and men of VA-216 made a complete tour of the Orient. Among the ports of call were Hong Kong, Manila, Sasebo, Kobe, Yokosuka, Honolulu, Okinawa, and Beppu. However, no port visited was quite as welcome as the sight of the Golden Gate framing San Francisco harbor on the morning of 13 September 1956, as the *Yorktown* brought the *Diamonds* home from their first Far Eastern tour.

Cdr. F. W. Ault led the squadron from its commissioning day through the months of deployment aboard the *Fighting Lady*. He was relieved in September by Cdr. Hope Strong, Jr.

PILOTS OF VA-216 ABOARD THE 'FIGHTING LADY' IN THE HARBOR OF SASEBO, JAPAN

Reservist Advisor on Film

Movie to Feature WW I Aircraft

LCdr. Frank Tallman, a Naval Air Reservist from Chicago, has been engaged by Warner Brothers as aviation technical advisor on a motion picture to be entitled "C'est la Guerre." The film will be a story of the Lafayette Escadrille, to be directed by William Wellman, who was a member of the Lafayette Flying Corps.

LCdr. Tallman owns and flies some of the vintage aircraft such as are to be used in the picture ("Reservist Has Hobby with a Past," NANEWS, August 1955) and is assisting in assembling the numerous old planes which will be used. Some of those gathered are the early French *Bleriot* planes, one of which is the same model as that which made the first flight across the English Channel in 1910. Other planes being collected for the picture are four *Penguins*, two *Nieuports*, a *Spad*, a Sopwith *Camel*, and a *Fokker*.

Most of the planes belong to collectors or are in private museums. They are in good condition and flyable. They have often been on exhibition.

Honors for RAdm. Hobbs

Becomes Yorktown Plank Owner

RADM. HOBBS RECEIVES YORKTOWN PLANK

RAdm. I. E. Hobbs, ComCarDiv-3, has become a plank owner aboard his flagship, the USS *Yorktown*.

Cdr. Robert Stickles, Staff Supply Officer, detached after 20 months service, gave the plank to Adm. Hobbs, in the presence of Cdr. I. D. Dewey, Staff Surface Operations Officer, who is next in line for the plank. The officers on board claim Hobbs is the first Admiral ever to be a plank owner of a carrier division staff.

Adm. Hobbs, Naval Academy class of 1925, has spent all but 10 of his 31 years of Naval service at sea.

NEW VCNO IS NAVAL AVIATOR

IN SEPTEMBER, Naval Aviator No. 3505 stepped into the No. 2 spot in the Navy when he became Vice Chief of Naval Operations, successor to Adm. D. B. Duncan. The wide and varied background of Adm. Harry D. Felt fits him admirably for his new post. He was most recently Commander, Sixth Fleet and Commander, Striking and Support Forces, Southern Europe.

The new VCNO was designated a Naval Aviator 27 years ago on 9 August 1929, six years after his graduation from the Academy. After two years with Scouting Squadron 3-B aboard the USS *Lexington*, a tour as flight instructor at Pensacola, and duty at the Naval Aircraft Factory, he was transferred to the USS *Houston* as Senior Aviator. Then came a year as Exec of Utility Squadron 2-F.

In 1937 Adm. Felt became Engineering Overhaul Superintendent at NAS SAN DIEGO, and later assumed command of Bombing Squadron Two. Shortly after Pearl Harbor, he reported aboard the USS *Saratoga* as CAG-3. In this capacity, he won the Navy Cross for leading an air attack "which resulted in the damaging or sinking of an aircraft carrier, the damaging of a heavy enemy cruiser and the sinking of a Japanese destroyer" in the Solomon Islands area.

Adm. Felt was also awarded the Distinguished Flying Cross for "heroism and extraordinary achievement" in the Guadalcanal area. In Oct. 1942, he became Air Officer of the *Saratoga*.

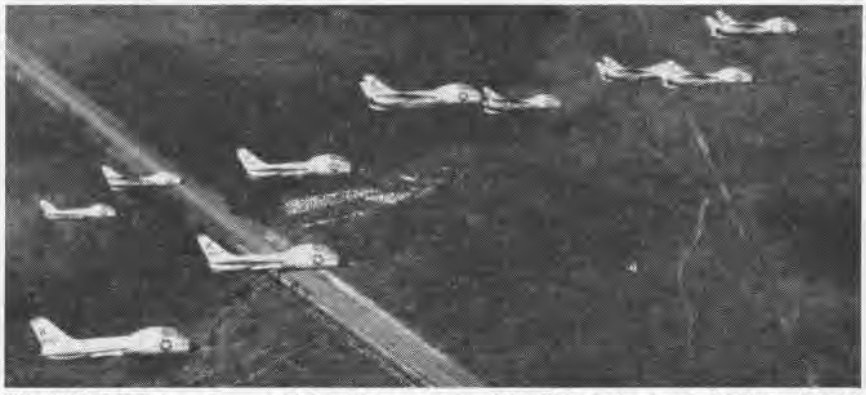
After tours as CO of NAS DAYTONA BEACH and NAS MIAMI, he was sent with a Military Mission to the USSR. In 1945, he went back to the Pacific as commanding officer of the USS *Chenango*. Adm. Felt won the Legion of Merit with Combat "V" for action with his ship near the Ryukyus.

ADM. FELT 'WELCOMED ABOARD' BY SECNAV

Thereafter came a tour with the office of CNO, and study at the National War College. Upon completion of the course, Adm. Felt assumed command of the USS *Franklin D. Roosevelt*. When he was relieved, he went to the Naval War College as staff member and later Chief of Staff.

In 1951, he assumed command of the Middle East Forces, until he reported to CNO as Assistant Director of Strategic Plans. In 1953, he became Commander of Carrier Division 15. Nine months later he transferred to the position of ComCarDiv-3.

A few months later, Adm. Felt became Assistant Chief of Naval Operations (Fleet Readiness). From there, he was sent to command the Sixth Fleet in the Mediterranean.



THIS TEN-PLANE *formation of F7U-3 Cutlasses, piloted by VA-34, heads for NAS Cecil Field. Several days earlier the squadron participated in an air show over Brunswick, Ga. Skippered by Cdr. C. W. Pittman, the fighter squadron is now engaged in intensive bombing training.*

EVERY DAY IS CHRISTMAS DAY

WATER COLOR PRINT BY YOU HANG KOO OF ORPHANAGE HOME

THIS IS A HEALTHY, HAPPY LAD. YOU HANG KOO, AND FRIEND

FOR MOST people, Christmas comes but once a year. But for three little South Korean boys in an orphanage near Seoul, for these three lucky little boys who have been "adopted" by Air Transport Squadron Two, Christmas is every day, all year long. And most especially, Christmas is every time mail comes from the United States of America. In that mail, there's just bound to be a letter—and maybe a package from their foster father, the men who fly the big, big airplanes across the Pacific Ocean, all the way from America!

This "adoption" program started in VR-2 at Christmas time in 1953, and was the idea of Lt. William B. McSharry (now Cdr. retired). A veteran pilot of VR-2 he had had a lot of time to think about many things as he had made his more than 400 crossings of the Central Pacific totaling more than 5,000 hours in the JRM *Mars*. It occurred to him that instead of spending money to finance an annual Christmas squadron party for their own children, who already had so much in the way of this world's goods, VR-2 men might rather wish to use the money to help the cause of some children who were so much less fortunate than their own.

But there must be something more lasting than just a party. There must be a gift that would be of value and benefit to the children long after the party was just a memory of a wonderful day and dinner, and some toys and an outfit of clothes. Lt. McSharry decided that VR-2 should "adopt" some Korean youngsters, orphaned during the hostilities there, when war washed across the hills and valleys of Korea, leaving many children parentless and alone. But they should adopt them on a permanent basis, not just for the season when it is so easy to give to others; the squadron should undertake the financial care of the youngsters as a continuing mission!

The adoption plan was enthusiastically endorsed by all hands. But enthusiasm and a willingness to contribute money for a child's support aren't enough. One doesn't adopt a child merely by being willing and able to do so. In such "planned parenthood," there has to be a starting place somewhere, a meeting ground for the parents-to-be and the prospective children. There has to be an adoption agency. The adoption agency in this case was The Foster Parents Plan for War Children, Inc., a non-profit organization with headquarters in New York City.

A committee from the squadron contacted Foster Parents, seeking to learn how contributions could best benefit some needy children, and also requesting that some specific children be designated to be recipients of the squadron's financial assistance.

The Foster Parents people supplied the names of Kang Tae Won, You Hang Koo, and Park Kil Yong, three little Korean boys, all under ten years of age, who were being cared for at a sponsored orphanage and school outside of Seoul. These children, victims of the war, had lost their parents and all they possessed when the world as they had known it had been destroyed during the long months that Seoul was a battle-ground.

Correspondence flew back and forth across the Pacific Ocean, from NAS ALAMEDA to Seoul, Korea. Pictures were exchanged, and friendships grew.

KANG TAE WON BEFORE VR-2 ADOPTED HIM

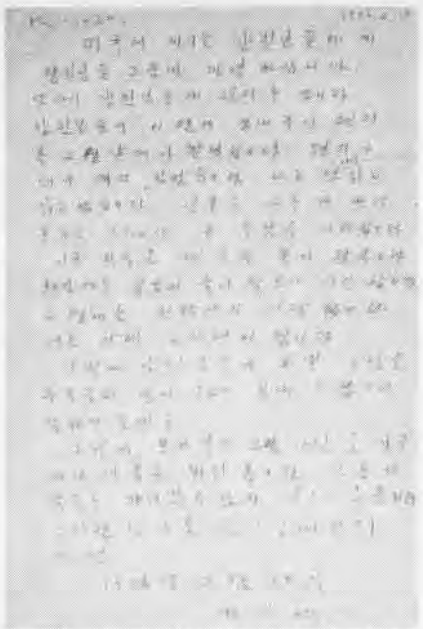
Three pathetic little waifs who might otherwise have grown up in a bleak world of want, have instead learned what is really meant by the spirit of the brotherhood of man. Through the three years that they have been under the financial care of VR-2, they have grown into healthy, alert young lads, a credit to the Republic of South Korea, and a joy to their American foster fathers.

Never a month goes by that the youngsters don't write to their Navy fathers. Letters, written in character script, aligned vertically, but reading horizontally, in "Western style," are translated word for word by teachers at the school, and both copies are forwarded to the squadron at their home base in Alameda.

Typically boyish, the notes reflect all the vim which any healthy child puts into his endeavors. Sometimes almost lyrically poetic, they describe, with detail the daily goings-on in their life at school and at the orphanage. All letters are placed on the squadron bulletin board and are answered immediately. These letters, in turn, relate squadron personnel experiences here in the United States, and are often accompanied by photographs of VR-2 men and of American scenes.

Just such a newsy letter from the boys was the one that came to the squadron early this year. Except for the phraseology, and for the items mentioned, it could have been written by any well mannered child who is writing a letter to say "Thank you."

KANG TAE WON IS A DIFFERENT BOY NOW



TRANSLATION: THANK YOU. I LOVE YOU

Dearest my Foster-Parents of the Squadron:

On the Christmas morning I was very glad and joyous to receive a lot of wonderful X-mas gifts consisted of a doll, a top, string, a belt, notebooks, a towel, a box of crayons, a mirror, a small calendar, a comic-book, a toothbrush, a toothpaste, a piece of soap, a soap-case, a pencil-case, pencils, a balloon, a ribbon, sweets which the Plan in Korea purchased with the cash gift you especially sent me for X-mas. A thousand thanks for these.

Recently I spend much of my free times to skate with a wooden-sled on the thick ice. It is a lot of fun. The happy holiday of the New Year is over, and I have become 12 years old in Korean way of age-counting. On the 27th of last month, our school closed for winter-vacation. So I am at home every day, and am cheerfully playing on the ice.

The other day I received my school-report from teacher. The three subjects of Arithmetic, Gymnastics and Singing were *BETTER*, and other four subjects of National-language, Social-life, Natural-study and Drawing were *GOOD*. I will study harder for myself at home during this vacation to make much better records.

This vacation will last until 4th of February. I will good-bye today, with much loves to you. I wish you be always happy during this year.

Every yours,

YOU HANG KOO

Fifteen dollars per month is required for adequate care of each youngster. During the past three years, well over $1600 have been contributed to this cause by the approximately 500 officers and men attached to VR-2. On a pro rata basis, all hands contribute semi-annually, officers two dollars, chiefs one dollar, and other rates, fifty cents. Always subscribing one hundred percent to the appeal, personnel donate additional amounts at Christmas so that each boy might have some presents of his own choosing.

Not only has this been a rewarding personal experience for all members of Air Transport Squadron Two, but it is one more example of our "hands across the sea." In such a manner, multiplied many times, both by individuals, and by the nation, has our democracy been made a vital force in working for the rehabilitation of those who suffer in war-torn lands.

TRUST REPLACED FEAR IN PARK KIL YONG

IBTU Now at Corry Field

Transferred from Forrest Sherman

Instructors Basic Training Unit has been transferred to NAAS CORRY FIELD where it originated in 1940. Until recently it has been based at Forrest Sherman Field.

Mission of the unit is to develop qualified flight instructors for all heavier-than-air flight training units within the Basic Training Command.

Cdr. W. C. Bender is Officer-in-Charge of the instructors' training unit.

YORKTOWN RETURNS TO ALAMEDA

VF-23 BANSHEES FLY OVER MANILA IN HONOR OF V. P. NIXON

FIGHTING LADY IS IN FIGHTING TRIM WITH NEW ANGLED DECK

THE YORKTOWN is home again! NAS ALAMEDA welcomed the USS *Yorktown* (CVA-10) as it returned from the Far East. The "Fighting Lady" was commanded by Capt. Emmet O'Beirne, and during the last three months of the six-month tour served as flagship for ComCarDiv-Three, RAdm. Ira E. Hobbs.

It was the *Yorktown's* third cruise to the Far East since her recommissioning in December 1952. She had aboard Air Task Group Four commanded by Cdr. John K. Kennedy.

Home port for the *Yorktown* in the Far East was Yokosuka, Japan. Between operating periods with the Seventh Fleet, CVA-10 visited Sasebo, Kobe, and Beppu, Japan; Subic Bay and Manila, Philippine Islands; Hong Kong; and Okinawa.

On July 4 in Manila, the *Yorktown* was the principal American ship taking part in joint Philippine-American Independence Day celebrations, and squadrons from the "Mighty Y" flew over the city.

A day later, Yorktowners manned the rail to render honors to Vice President Richard M. Nixon and Philippine President Ramon Magsaysay as they passed by in the presidential yacht.

An air show put on by ATG-4 celebrated the occasion. LCdr. C. A. Knight, an ex-*Blue Angel*, led the "Black Knights" division through high speed passovers and diamond and echelon rolls.

During the course of the cruise nearly 14,500 persons visited the *Fighting Lady*. Over 13,500 of these came aboard in Kobe when the carrier held open house on Armed Forces Day.

On three occasions, groups of orphans were entertained aboard the carrier. At Beppu, Japan, the *Yorktown* played host to 90 little girls from the Small Lily House, an orphanage of the Salesian Order.

The *Yorktown* devoted hours to underway training and operational exercises. At the end of the cruise, 18 pilots had qualified for the "Century Club," an organization of Navy pilots who have made 100 or more carrier landings during one cruise. Every pilot of VF-23, commanded by Cdr. W. H. Neal III, qualified for day and night work aboard the *Yorktown* during the qualification phase of operations.

Training was stressed on the cruise. Chief Radioman Warren T. Kuhn taught 12 students the fundamentals of radio receiving and transmitting. In another course conducted by T. E. Greenhagen and J. A. Griffis, boilermen first class, 16 pupils were taught the main essentials of the boilerman rating—boilers, evaporators, and some knowledge of ship's propulsion.

JAPANESE ORPHAN AT YORKTOWN PARTY

A number of programs designed to promote education and morale of the crew were also supported by the Captain. Among those were informal classes dealing with basic high school subjects, conducted by John G. Aidoock, BM2.

More than 1000 men went up for advancement in rating during the August fleet-wide examinations. This figure is an all-time *Yorktown* high, according to available records.

A closed-circuit television system was installed during the cruise by the electronics division. *Yorktown* TV featured air operations and movies.

The *Yorktown* Broadcasting System was de-mothballed after its long silence while the ship was operating around the States. YBS, as it is called, broadcast nine hours of music and news every day the ship was at sea.

The ship also published two newspapers: one a weekly paper limited to shipboard and Navy news; the other, devoted primarily to world events.

Immediately after the *Yorktown's* return to this country, Capt. E. E. Colestock became the new CO, and the *Yorktown* entered a three-week overhaul at Hunter's Point Naval Shipyard. It has now resumed training along the West Coast and will head back to the Far East sometime next spring.

THE MIGHTY *Fighting Lady is shown leaving Alameda for a one-day cruise during which wives of the crew were the honored guests.*

REUNION FOR SONS OF THE 'FIGHTING LADY'

AN IDEA, sparked on 15 April 1948 in New York City, has grown into a solid, enduring organization. On Friday morning, 25 January 1957, members of the USS *Yorktown* Association, Inc., the result of that idea, will board the grand old *Fighting Lady* at NAS ALAMEDA, and take part in the tenth reunion of the Association.

Almost nine years ago, a group of former shipmates met at Ruppert's Brewery in New York. These kindred souls felt that the spirit bred in combat during WWII was too precious an asset to be lost. They believed that they had lived through a great experience aboard the big 'Y' and wanted to keep it alive in memory. Finally, they felt that the ship had been great because its professional complement from the Regular Navy had worked in harmony and good relations with those drawn from civilian life by the war. And so, at that meeting, the USS *Yorktown* Association was born.

The principles and objectives stated at that first gathering have become the backbone of the Association. It has grown into a legal corporation with elected officers and a Board of Directors, and has 500 active dues-paying members. It is still growing and has a more vigorous membership than at any time in its history. Its ninth reunion, held at the Hotel Belmont Plaza in New York City last April, was the most successful meeting since the first.

In the association, regulars have met with reserves, and the latter have been kept abreast of important developments and improvements in today's Navy. Former and present enlisted men have mingled with officers, and both have served as officials of the Association, thus keeping alive the spirit of team-work which meant the success of the mighty *Fighting Lady*.

During the nine reunions, the Association has, to date, honored four of the ship's war-time skippers: Adm. J. J. Clark, who commanded the Seventh Fleet during the Korean War and was recently retired; VAdm. Ralph E. Jennings, who, when he was retired, was Deputy Commander of Eastern Sea Frontier; VAdm. Thomas S. Combs, at present DCNO (Fleet Operations and Readiness); and Adm. Walter F. Boone, who, following a tour of duty as Superintendent of the Naval Academy, is C-in-C, Naval Forces Eastern Atlantic and Mediterranean.

In 1951, the Association presented a beautiful oil painting of the *Yorktown* to the Naval Academy. The picture now hangs in the Naval Academy Museum, the only one of an *Essex*-class.

In many respects, the recent ninth reunion was the most memorable. Adm. and Mrs. A. W. Radford attended, not only as honored guests, but because the present Chairman of JCS had his flag in the *Yorktown* for the major part of his combat career as a flag officer. Along with Adm. Radford on the dais were the Hon. James Smith, then Asst. SecNav(Air), and Adms. Clark, Jennings, Combs, Waller and Browder.

Plans for the 1957 reunion are not entirely firm at this time, but they point to its being the topper. As previously stated, members will board the *Fighting Lady* on 25 January.

The ship will operate off the coast of California that day and will return to NAS ALAMEDA late in the afternoon. Air operations will be conducted.

The following morning, in conjunction with the ship's regular inspection, a bronze plaque, honoring Lt. E. T. "Smokey" Stover, will be unveiled on the flight deck. Adm. J. J. Clark will be the main speaker at the dedication.

Further information about the reunion may be obtained from Mr. James T. Bryan, Jr., care of Dunn & Fowler, 52 Wall St., New York 5, New York.

Navy Scientist Honored
Given Meritorious Service Award

ADM. FELT, VCNO, AND DR. VAN STRATEN

On 18 September in the office of the Vice Chief of Naval Operations, Dr. Florence W. van Straten, meteorological engineer in the Aerology Section of the Flight Safety Division, received the Meritorious Civilian Service Award from the Chief of Naval Operations.

This high honor for civilian achievement was given for Dr. van Straten's work in providing a method for computing radioactive fall-out.

In the absence of Adm. Arleigh Burke, Adm. Harry D. Felt, VCNO, presented the award on his behalf and read a letter from Adm. Burke to Dr. van Straten containing the citation. Dr. van Straten also was given a check for $250.00 granted by the OpNav Employee Appraisal Board. Present for the ceremony were VAdm. G. L. Russel, Op. 02, and RAdm. F. M. Kivette, Op. 05B; Capt. Paul L. Drouilhet, Op. 533, and Capt. Russell H. Maynard from the Office of Naval Material.

Dr. van Straten has been associated with the Navy since her military service began in the fall of 1942. In 1946, she elected to remain with the Navy as a civilian scientist. She is a commander in the U. S. Naval Reserve.

'Photomouse' Makes a Bow
VFP-62 Has 'Anymouse' Specialist

The Navy's famous "Anymouse," that aerial goof who is always getting into self-inflicted trouble and getting away with it, has received specialist training in the finer points of doping off around a photographic squadron. VFP-62 of NAS JACKSONVILLE did the training and assigned him the monicker of "Photomouse."

Photomouse has learned his lessons well. Several times recently, he has taken off in his *Cougar* or *Banshee*, and had the large camera bay door come up to the horizontal position. Flight characteristics of the planes were not improved thereby. Also, he learned by these experiences that when the camera bay door comes open in flight, baggage and miscellaneous cross-country gear make a hurried exit.

Another neat trick he pulled took place during the towing of a *Cougar* parked near the hangar. The man in the cockpit called for a stop. Photomouse stopped the mule he was driving, looked around, thought the cockpit man was unduly nervous about the probe clearing the hangar, and drove on. Then came that expensive sound. Result, a wing change and an elevator change on two *Cougars*.

He's becoming expert, but his antics teach squadron personnel safety.

'Flight Leader' Program
MAW-2 Initiates New Designation

MGen. J. C. Munn, Commanding General of the Second Marine Aircraft Wing, has inaugurated a program of awarding official certificates designating selected pilots as "Flight Leaders." Under the new plan, commanding officers may designate "Flight Leaders" when they are qualified in all respects to lead flights under combat conditions.

Experience of a "Flight Leader" must include a minimum of 500 hours total flight time; 200 hours in class; 50 hours in model; and possession of a valid instrument card. He must have demonstrated proficiency in field carrier landings, if appropriate to type of aircraft; a thorough technical knowledge of aircraft being flown; as well as ability to lead cross country flights under day or night, visual or instrument conditions. He must also have a thorough knowledge of flight planning, cruise control and navigation.

Furthermore, the "Flight Leader" must be judged by his commanding officer to be the kind of leader to whom the CO would willingly entrust his squadron in a combat situation. This qualification is considered the most important. It will not be an easy requirement to meet.

In making their selections for "Flight Leaders," CO's consider the attributes of maturity, judgment, aggressiveness, motivation, ability to instruct, and the ability to make others want to follow the orders he gives.

Lex CO at NAS Olathe
Attends Jet Training Course

CAPT. GANNON GETS A PRE-FLIGHT CHECK

Capt. J. W. Gannon received his wings before the age of jet flight. But his first opportunity to fly beyond Mach 1 occurred when he entered the Senior Officer's syllabus at the Jet Transitional Training Unit, Olathe.

The syllabus includes a rigid 10-day course. Emphasis is on jet tactics, high speed flight problems, and characteristics associated with transonic carrier-based aircraft. Highlight of the course is a flight into the realm of the supersonic, called the "boom hop," in a *Cougar* jet.

After completion of the course, Capt. Gannon reported to the USS *Lexington*, as the new commanding officer.

Pilot Training Change
Navy Preps for All-Jet Air Arm

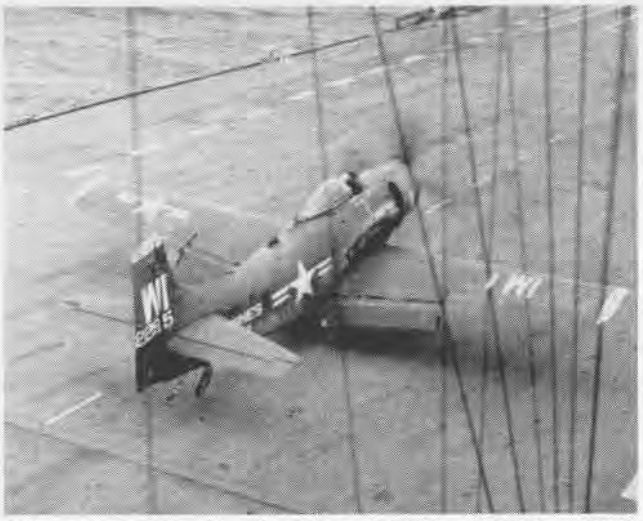
A new practice in Naval aviation training, announced by CNABTra and approved by CNO, is in prospect.

Under the new system, aviation students indicate their choice of flying assignments at the end of primary training instead of at the end of their final schooling at Pensacola. Basic training will be separated into two divisions to give future pilots more specialized training in the fleet.

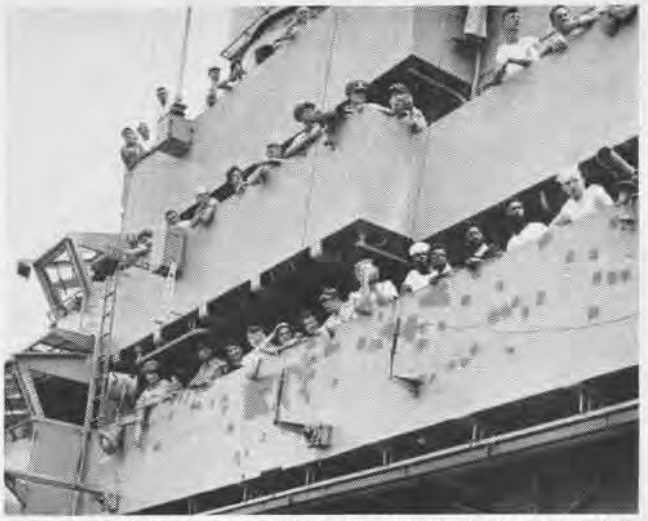
Fledgling jet pilots will take attack-fighter training in the T-28 *Trojan*, and ultimately in the basic jet trainer. Multi-engine students will fly the SNJ single-engine and SNB multi-engine trainers, and later the T-28 and S2F. The program also reduces student moves from five to three.

During the program, the changeover from the SNJ *Texan* to the T-34B *Mentor* is expected to be completed.

By 1960, the attack-fighter syllabus will be conducted in jets operating from Whiting and Sherman Fields.



AD'S PARTICIPATE IN CARQUALS DURING 'TEACHER CRUISE'



JACKSONVILLE TEACHERS WATCH OPERATIONS FROM FDR ISLAND

TEACHERS TAUGHT NAVY WAYS ABOARD FDR

GUESTS POSE ON ROOSEVELT FLIGHT DECK

A GROUP of 50 high school teachers from Jacksonville, Florida, were invited aboard the FDR to observe carrier operations at sea. The one day cruise was aimed at indoctrinating the teachers in the ways of the Navy.

The teachers expressed amazement at the technical skills required to run a ship. They came to realize the variety of complex and specialized training a high school graduate may receive if he enlists in the Navy.

Tours were arranged throughout the carrier, from engine room to island structure. During the cruise, 50 miles off the Florida coast, the teachers watched carrier qualifications by Navy and Marine pilots.

FDR's guests learned about the Navy and had a thoroughly good time.

OFFICER TELLS WHAT MAKES A SHIP TICK

TEACHERS AND THEIR GUIDES TAKE TIME OUT FOR A LUNCHEON

A SKYRAIDER IS PUT THROUGH ITS PACES FOR JAX TEACHERS

FURY JET
NORTH AMERICAN

LATEST OF FURY SERIES IS THE FJ-4. IT WAS COMPLETELY DESIGNED AND PRODUCED AT THE COLUMBUS DIVISION OF NAA

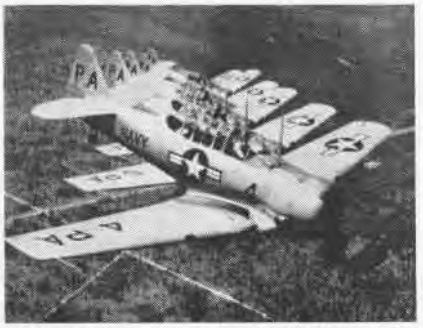
A JET, A carrier, and a fighter squadron! On 10 March, 1948 these ingredients went together to mark a milestone in Naval airpower. Witnesses on board the USS *Boxer* thrilled to the sight of North American FJ-1's roaring on and off the flight deck with members of VF-5A at the controls. Though not the first American jet aircraft to land and take off from a carrier at sea, these early models of the famous *Fury* series were the first jets to carry out *operational* landings and takeoffs aboard a carrier underway.

This was the beginning of the *Fury* operations with the Fleet. But the history of North American Aviation's service to the Navy's air arm dates back to over four years before America's entry into World War II.

Claiming to be the airframe company which has built more airplanes than any other company in the world,

★ ★ ★ ★ ★ ★ ★

What companies manufacture aircraft for the Navy's air arm? This question is being answered in current NANEWS *features about companies which have built and are building planes for the U.S. Navy. This is the fourth in this special series of articles.*



FORMATION OF SNJ'S ON TRAINING FLIGHT

North American, with its annual payroll of more than $375 million, has gone far from its awakening days in 1928. Originally including a number of airline, airframe, engine and instrument firms, by 1934, NAA sold most of its interests to concentrate on one—the manufacture and sale of airplanes. J. H. "Dutch" Kindelberger was named directing head of the firm at its plant in Dundalk, Md. Kindelberger, now board chairman, and J. L. Atwood, now president, with their small plant and 75 employees, designed and built the BT-9 for the Army Air Corps. This two-place, basic trainer was NAA's first major airplane contract.

On the strength of this order, the firm built a new plant in Inglewood, Calif., near what is now the Los Angeles International Airport. It occupied the initial unit of the new plant, which consisted of 158 thousand square

feet of floor space in January 1936. The first group of employees numbered about 150. This plant, with subsequent additions, has been in continuous operation since its completion over twenty years ago.

First NAA designed and produced plane for the Navy was the NJ-1, a modification of the Army Air Corps' BT-9B. The contract and delivery of 40 of this plane-type was in 1937.

The BC-1 basic combat type airplane was an outgrowth of North American's first trainer, which was going through a transition development with regard to requirements of the Navy and Army Air Corps. An experimental version known as the NA-26, equipped with retractable landing gear instead of the fixed type of the original BT-9, was demonstrated at Wright Field in March 1937. It was known as the BC-1. The AT-6 *Texan* and SNJ types later built

CARRIER LANDING BY T-28C ON TARAWA

for the Air Corps and Navy were almost identical in external appearance to this model.

The year 1939 marked the appearance of the venerable SNJ series. It is still found in most training facilities, and literally thousands of Naval Aviators have been trained with various models of this aircraft. The SNJ-1 had an all-metal fuselage and integral fuel tank. A year later, the SNJ-2, an improved model, appeared at Naval Air Training Centers. In 1940, large quantity production of the SNJ-3 began, followed in 1941 by the SNJ-4, -5.

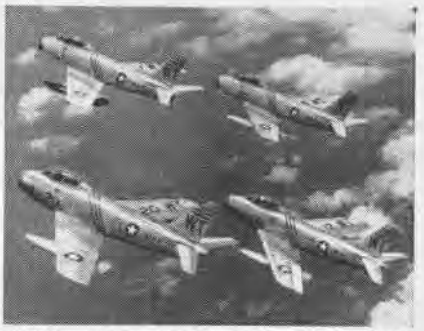
Just prior to America's entry into WW II, and during the hectic first two years of the war, North American developed basic new designs for our allies and for the Army Air Corps. Among these were the P-51 *Mustang* and the B-25 *Mitchell* bombers. B-25's were used by the Marines during the war, carrying the Navy designation PBJ. They were first used in combat by Naval Aviators in an attack on Japanese strongholds at Rabaul, New Guinea, with VMB-413 at the controls.

In January of 1945, the Navy placed a contract for the XFJ-1, a carrier-based fighter, the first of the *Fury* series, destined to become an integral part of the Navy's air arm. During a dive while on a test run in 1947, the XFJ-1 prototype reached the highest speed which had been attained by

FJ-1 WAS THE FIRST OF THE FURY SERIES

an American fighter up to that time.

Production models of NAA's first jet model resembled a flying bomb. It was almost barrel-shaped and had short, stubby wings. The craft featured super-thin, high speed, laminar-flow wings. The FJ-1 was the first American jet fighter to employ a single, straight ram duct with its entrance in the nose. Powered by a General Electric Allison J-35-3 (TG-180) engine, the FJ-1 had a speed of over 550 mph



VMF-232 FLEW THESE FJ-2 FURY JETS

and a rate-of-climb of a mile a minute.

The first *Fury* models were received by VF-5A, of San Diego, in November 1947. It was this squadron which evaluated the craft aboard the *Boxer*. It was the beginning of *Fury* operations with the Fleet, when Cdr. Evan Aurand, VF-5A skipper, landed the first jet aboard the carrier. He was followed by LCdr. R. M. Elder, squadron executive officer.

The next Navy contract was for the carrier-based AJ-1 *Savage*, a husky attack bomber, powered by two reciprocating and one jet engine. The *Savage* was the first post-war Navy plane designed to carry an atomic bomb off the deck of a carrier. It was followed by the AJ-2, the AJ-2P photo reconnaissance model, and a tanker version.

The first AJ-2 was flown on February 19, 1953. It featured a higher vertical fin on the tail. The production was completed during 1954.

'FURY FOURS' ON PRODUCTION LINE AT NORTH AMERICAN PLANT, COLUMBUS DIVISION

'FURY THREE', FIRST LINE FIGHTER WITH NAVY AND MARINE SQUADRONS, IS CAPABLE OF COMBAT AT NEAR SONIC SPEEDS

PRODUCTION AND design of all NA aircraft for the Navy is now handled exclusively by the Columbus Division. In 1951, the first of the current series of swept-wing *Furies* was produced, an XFJ-2 model. Full production of the FJ-2 was undertaken at Columbus. The second *Fury* model features a swept-back, thin wing. It has hydraulically powered irreversible controls with artificial feel for the all-movable horizontal stabilizer and ailerons. In the 650 mph class, the FJ-2 is powered by a J-47 turbojet engine. It was on duty with Marine fighter squadrons at home and in the Far East for two years, and has now been replaced by the FJ-3. The earlier model is now used by some Naval and Marine Reserve squadrons.

Both the AJ-2 and its photographic version were made at the Columbus Division. The 25-ton AJ-2, one of the largest of carrier-based bombers in the Navy's arsenal, is powered by two P&W reciprocating engines and an Allison J-33 turbojet. Carrying a crew of three, the bomber-tanker-reconnaissance *Savage* operates at speeds up to 425 mph. It has folding wings and folding vertical stabilizer to facilitate handling and storage below decks.

The FJ-3 is now on front line duty with Navy and Marine squadrons all over the world. It has a wing span of approximately 37 feet, and is slightly over 37 feet long. Powered by a Wright J-65 engine, this *Fury* flies at near sonic speeds. Combat range is more than 900 nautical miles with a service ceiling of over 45,000 feet.

With the FJ-4, the Columbus Division came into its own. For this latest of the *Fury* line was completely designed, engineered and produced there. The prototype of the *Fury Four* made its first flight on 28 October 1954, and the first production model appeared in February 1955.

AJ-1 SAVAGE, THREE ENGINE NAVY BOMBER

TANKER VERSION OF NORTH AMERICAN AJ-1

PHOTO RECONNAISSANCE PLANE, THE AJ-2P

Capable of operation at higher altitude and greater speeds over a greater range than earlier *Fury* jets, the FJ-4 features a new principle in wing design. Thinner but with a greater area, the wing on the new carrier-based fighter carries "integral" fuel. This means that it uses the "wet wing" principle—the storing of fuel in the space between upper and lower wing skins, eliminating the need for wing fuel cells.

An added attraction of the wing is a droopable leading edge. The edge angle can be controlled by the pilot to improve low speed handling characteristics. The new wing also incorporates four degrees of "washout" or twist at the wing tips, and a special cambered airfoil section to further improve low speed handling.

North American is keeping pace with the evolution of pilot training needs in the jet age. The T-28C trainer, latest of the T-28 series, is now going from production lines to Navy fledgling aviators at Pensacola and Corpus Christi.

This model has a tailhook for carrier arrestments, and is powered by a Wright R-1820 engine. Its top speed is 300 knots. The T-28 was the first training airplane designed and built since WW II and is used by both the Navy and Air Force for the transition of pilots into high speed jet aircraft.

A new jet trainer, the T2J is now being developed for the Navy by

FJ-4 FEATURES DESIGN ELIMINATING WING FUEL CELLS. FUEL IS STORED IN SPACE BETWEEN UPPER AND LOWER WING SKINS

NAA. Designed to be operated from aircraft carriers, the two-place basic trainer will have a top speed in excess of 400 knots and a service ceiling above 40,000 feet. Its stall speed will be about 65 knots. The T2J is the first jet trainer to be developed for the Navy by North American.

The Columbus Division is working on another Navy plane, the A3J, a two-place twin jet. Described as a "weapons system" rather than an aircraft, it will feature integration of the weapons systems. This concept is a departure from past airframe-design approach whereby aircraft have been built to accept existing prepackaged components. The development contract for the supersonic carrier-based attack weapon is valued at $86,000,000.

Under the direction of C. J. Gallant, vice-president of NAA, and general manager of the Columbus Division, the Ohio section has grown from a plant which employed 1,965 during its infant days, to a production and engineering facility which today employs more than 15,000. Covering an area of 288 acres, the Division has more than 3,000,000 sq. ft. of floor space.

During its history, North American Aviation, Inc., has claimed many "firsts." The FJ-1 was the first American jet aircraft to carry out operational landings and takeoffs aboard a carrier at sea. The AJ-1 was the first post-war Navy plane designed to carry an atom bomb off the deck of a carrier. NAA's T-28 was the first new, post-war Navy trainer, and the first with tricycle landing gear. Its T-6, Air Force version of the SNJ, was the first trainer to shoot down a Japanese *Zero* during WW II. The P-51 *Mustang* was the first fighter to cross the English Channel into Occupied Europe, and the first single-engine plane based in England to penetrate into Germany. The B-25 *Mitchell* bomber was the first airplane to bomb Japan, taking off from a Navy carrier in Doolittle's raid.

The NAA's B-45 *Tornado* bomber was the first four-jet plane to fly in the United States, first jet bomber to fly nonstop across the Pacific, and to drop an atom bomb in official bomb tests. First U.S. production plane to break the sound barrier was the F-86 *Sabre Jet*, and this plane carried the world's first jet ace, James Jabara, to victory over Communist MIG's in Korea. The F-86D was the first fighter to use rockets exclusively for armament and was America's first one-man all-weather jet interceptor. The NAA F-100 *Super Sabre*, first operational supersonic fighter in America, was the world's first airplane to break the speed of sound in level and climbing flight.

North American Aviation, Inc., today has a peacetime employment peak of 70,000 persons. It has diversified its operations into the related aeronautical fields of guided missiles, large rocket engines, electromechanical equipment, and atomic energy. Thus the company is assured of maintaining a vigorous organization which can continue to help provide the means of safeguarding the defense of the American nation and its people.

WORK IS NOW UNDERWAY ON T2J JET TRAINER. TOP SPEED WILL EXCEED 400 KNOTS

FIRST ROW *left to right: Mr. Frederick E. King, 245; Mr. Henry R. Benjamin, 238; Mr. James S. Otis, 127; Mr. Kenneth R. Smith, 87; RAdm. David S. Ingalls, USNR, 85; RAdm. Erl C. B. Gould, USNR (Ret.), 68; Mr. John Jay Schieffelin, 124; Cdr. William I. Warburton, USNR, 163; Mr. W. F. Mudge, 157; Mr. Stuart Butler, 150; Mr. Wellesley Laude-Brown, 65½; Mr. D. H. Read, 145; Mr. Merrill P. Delano, 104; Mr. George Crompton, Jr., 100; Cdr. George W. Shaw, USNR (Ret.), 171; Mr. Percival S. Fuller, 131; Mr. Gardner D. Dumas, 198; Mr. L. B. Hutchinson, 203; RAdm. G. L. Compo, USN (Ret.), 201; Mr. J. C. Foster, 142; Mr. F. R. Lynch, 88; and Mr. E. R. Greenfield, 217.*

SECOND ROW *left to right: RAdm. A. C. K Mr. C. W. Greenough, 192; LCdr. T. P. Mr. R. L. Biggers, 215; VAdm. C. P. McDonnell, USNR (Ret.), 18; Mr. Henr Cdr. R. N. Hyde, USNR, 181; Cdr. T. E 197; Mr. Kenneth Keyes, 182; Mr. W. C. A. Walker, 69; Mr. D. B. Alvord, 225 Bell, 106; LCdr. Gibson Gardner, 344;*

NAVY'S PIONEER AVIATOR

For four days in September, a part of the Navy re-lived the days of World War I. At the invitation of the Secretary of the Navy, 62 of the earliest Naval Aviators took a cruise aboard the USS *Forrestal*, renewing old acquaintances and getting the feel of Naval Aviation today.

The mere thought of organizing the party into any logical order of precedence must have given Cdr. Tom Quillman, the official escort officer, nightmares weeks in advance. The group included one Congressman, three vice admirals, one lieutenant general, five rear admirals, one of whom was an ex-Secretary of the Navy for Air, three captains, 10 commanders, three lieutenant commanders, three lieutenants, and a lot of misters. There were aboard one Medal of Honor winner, a dozen or more entitled to wear the Navy Cross or Distinguished Service Medals, and others who had numerous marks of honor and achievement.

But any questions or doubts there may have been about precedence were quickly dispelled. This group was neither concerned with nor impressed by rank. Before the end of the cruise, they had all promoted themselves to admiral. Whatever formality there may have been at the operations desk at NAS Anacostia on 16 September disappeared on the flight down. As they went aboard the *Forrestal* at Mayport, Florida, it was quite clear that the men had begun operating on the standard principle of the old swimmin' hole—"The last one in is a sissy!"

Of course, there were many enthusiastic greetings and "How the hell are you's" and "Well, you old so-and-so's," but there was a lot of peering at name cards too. Many meetings were the first since demobilization after World War I. Some had had practically no personal contact with the Navy since that time. Many had had sons in the World War II Navy, some had been in it themselves, others had given the Navy their life-long service. At least one of the group began his Naval career under sail; several had served under the water in submarines before taking to the air; and some are still flying.

A quick run-down of the roster made the affair look like a reunion of the Yale flying unit. This unit was first organized at Yale University in 1916, and in 1917 went on active duty in the Naval Reserve. There were 15 men from the first two units on board plus their first commanding officer. But the real school tie turned out to be the gold wings of the Naval Aviator. Numbers meant more than rank. In the caption above, his number appears after the Naval Aviator's name. Adm. Bellinger's is lowest—eight.

N (Ret.), 24; Congressman J. M. Vorys, 73; nor, USNR, 210½; Mr. John Pertin, 202; USN (Ret.), 52; VAdm. Edward O. L. n, 93; Lt. Francis I. Amory, USNR, 144; nan, USNR (Ret.), 249; Mr. E. S. Brewer, kefeller, 81; Mr. J. T. Remey, 187; Cdr. . C. Rodman, USNR, 125; Mr. Colley W. dm. Campbell Keene, USN (Ret..) 1423.

THIRD ROW: *RAdm. M. E. Arnold, USN, ComCarDiv-4; RAdm. D. S. Cornwell, USN, ComFAirJax; VAdm. P. N. L. Bellinger, USN (Ret.), 8; Mr. R. Livingstone Ireland, 84; Capt. H. C. Richardson, USN (Ret.), 13; Mr. J. V. Farwell, Jr., 76; Mr. E. G. Chamberlain, 96½; LCdr. H. W. Scofield, USNR (Ret.), 28; Cdr. Anthony Feher, USN (Ret.), 95; Cdr. Noel Chadwick, USNR, 107; Capt. E. A. Wenz, USNR (Ret.), 224; Cdr. S. S. Walker, USNR, 86; Lt. R. M. Strader, USNRF, 97; Lt. R. L. Atwood, USNR (Ret.), 292; Capt. B. G. Leighton, USNR (Ret.), 40; Mr. L. V. Lamar, 246; Mr. C. F. Beach, 75; Cdr. T. E. Quillman, USN (Escort Officer); and Mr. Roland Palmedo, 188. Mr. Guy McLaughlin, 90, was in sick bay.*

S MEET ON THE FORRESTAL

Monday morning, the 17th, the ship was underway, and after being formally welcomed by the Skipper, Capt. W. E. Ellis, the group clad in the informal sport clothes of privileged observers took over the ship.

First order of business was a group picture on the flight deck. Then there was a fast move to points of vantage on the island to observe flight operations.

F3H *Demons* and A3D *Skywarriors* flew in parade over the ship and made touch-and-go landings on the angled deck. F9F-8 *Cougars* of VF-174 were launched from the catapults for actual carrier qualifications. Next day AD-6's of VA-15 came aboard.

Excitement ran high when the F8U *Crusader* with "Duke" Windsor at the controls, landed on the deck. There was so much to see. No part of the varied operations was missed. Heads moved almost as if a tennis match were in progress as planes landed at the stern and others took off from the bow. There were many comparisons as to how the same things had been done on the *Langley*.

The Pioneer Aviators were impressed, but a little disappointed too, to find that much of the fun and adventure had been replaced by seriousness and efficiency. This was utterly different from the old *Aeromarine* which someone described as having a "40-mile take-off speed, a 40-mile cruising speed, and a 40-mile landing speed."

Wherever the men gathered and whatever they saw, there were many comments that went straight to the point. Down in CIC, one retired officer took a careful look around and observed, "It appears to me that the Navy has at last succeeded in organizing confusion."

There were hundreds of stories to tell of the early days and the great adventures. A daring stunt that had once so nearly ended disastrously was now good for a laugh. Shown a movie depicting the history of Naval Aviation, the men applauded the old planes and the exploits of some present just as the kids applaud the hero in westerns.

The program given each guest ended with these words: "Everyone in your Navy from Secretary Thomas and Admiral Burke to the boys who'll handle your luggage, hopes you have a wonderful time during your reunion."

And they did! When the cruise drew to a close and the Navy's honored guests left the *Forrestal* and headed for NAS JACKSONVILLE, there were nostalgic remarks about this being the end of a gay reunion. But they'd been glad to see the modern part of the story of Naval Aviation. After all, they'd helped to write the very first chapters.

THIS STRIKING *picture of Supermarine N.113 suggests the power of this sweptwing fighter developed for the British Fleet Air Arm. It is powered by two Avon engines and will probably be used on the Royal Navy's two largest carriers. It has undergone its carrier trials.*

FARNBOROUGH POSTSCRIPT

The emphasis in British Aviation today is on engines and aircraft accessories, rather than on spectacular, new technical achievements. Popularity of British aircraft abroad is encouraged, and while few completely new types were on display at Farnborough, the selection was wide. New varieties of familiar shapes included such airplanes as the Supermarine N113 and the de Havilland 110 fighter.

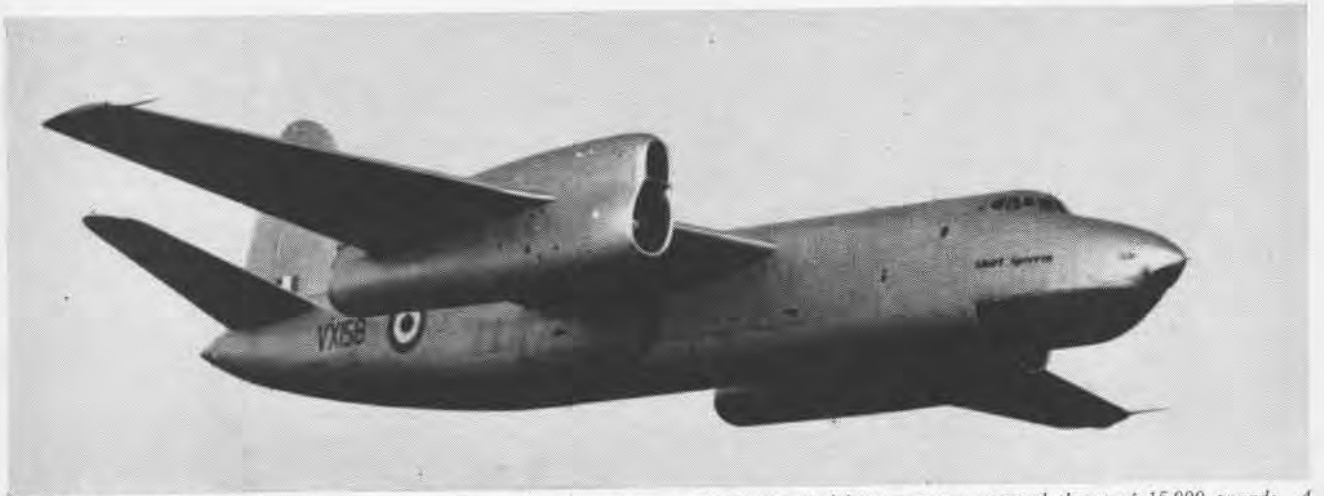
THE FIRST *of six Folland Gnat light jet fighters ordered by the Ministry of Supply has successfully completed its ground firing trials and the first phase of its air firing program. India has signed a contract for delivery of 25 of these aircraft for her armed forces.*

ON ITS FIRST *flight overseas, this RAF Avro Vulcan, a delta-wing, four-jet bomber, landed at Melbourne, Australia, in September. The medium bomber is equipped with a new wing with a slight bend in the leading edge. It is scheduled for operational service very shortly.*

RAF NO. 2 SQUADRON *flies the Supermarine Swift Mk. 5 aircraft in formation. This plane flew at Farnborough. It was originally designed as a jet interceptor, but its role has been changed to photographic reconnaissance and ground attack. It is equipped with an afterburner.*

ONE OF THE *highlights of the show at Farnborough was the Rolls-Royce reverse thrust unit installed in a Hawker Hunter Mk. 6 which makes it possible to reduce the ground runs.*

COLORED *smoke was used to demonstrate clearly the reverse thrust effect of the engine.*

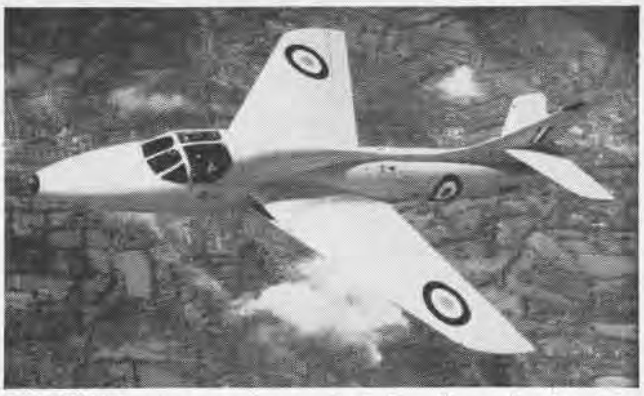


THE GYRON *installation, lower large vent in the starboard engine nacelle, is shown mounted on the Short Sperrin. This brand new engine was tested last year at a reported thrust of 15,000 pounds. A Gyron junior is being developed with approximately half the thrust.*

A VALIANT *bomber is fitted with two de Havilland Super Sprite rocket engines. Engines are in canisters which permit jettisoning them.*

THE SUPER *Sprite engine enables the Valiant to carry an additional load or take off from much shorter runways with a standard load.*

WESTLAND WIDGEON *is an executive vehicle which carries a pilot and four passengers. It is a variant of a Sikorsky design built in Britain.*



THIS HUNTER *trainer was the one which Gen. Blagoveshensky, senior test pilot and Soviet Flying School head, flew with Hawker test pilot.*

SOME 338 manufacturers, 20 more than last year, had on display at Farnborough in September everything from complete aircraft and engines to tools and radar equipment.

Last year there were 6000 guests from overseas; this year over 6500 from a total of 120 countries. For the first time since 1947, delegations from the Soviet Union were invited. Two came, one representing the Services and led by the Chief of the Soviet Air Staff Marshal P. R. Zhigarev; and the other, delegates from the Soviet Ministry of Aircraft Production led by Gen. P. V. Dementyev.

A highlight of the flying display consisted of a flight in the *Hunter* Mk. 7 trainer by Soviet Lt. General Alexel Blagoveshensky, a senior test pilot and Air Force Commandant of a Soviet flying school. He flew with Mr. A. W. Bedford, test pilot of Hawker Company. This was in line with the policy of giving selected guests an opportunity to fly certain aircraft.

The Soviet groups spent a day touring the Gloucester engine factory to study every stage in the manufacture of the Armstrong-Siddeley *Sapphire* engine. Gen. Dementyev told his British hosts that they must visit the USSR, and "When you come," he said, "we will really fillet the fish."

The flying display began with 100 troops boarding the large *Beverly* transport, now in service with the RAF. The next three aircraft flew in this order: the *Sperrin* fitted with two *Gyrons*, a *Britannia* with two turboprop *Proteus* 705's, and then a *Canberra* fitted with the *Scorpion* rocket engine. A Tyne turboprop engine fitted to a *Lincoln* test bed and R.A. 29's installed in a *Canberra* were also flown.

Another group featured single and two-seater military and research aircraft ranging from the *Aiglet* and jet *Provost* trainers to the lightweight jet fighter *Gnat*.

The three V-bombers—*Vulcan*, *Victor* and *Valiant*—headed another group. The latest *Viscount* and the long-nosed *Britannia* then went through their paces.

Engine firms showed in the air or on static display the widest range of aircraft gas turbines ever presented.

BRITISH AVIATION *is very proud of the experimental Fairey Delta 2 which, piloted by Peter Twiss, established an official world speed record of 1132 mph. Designed for research into problems of supersonic flight, its razor thin delta wings are swept back 60 degrees.*

RESERVISTS OPEN FALL SCHEDULE

With summer deployments at an end, Naval Air Reservists are in top-notch condition. *Warriors* all over the country are now beginning their fall schedule, and like all military organizations, inspections are the first thing on the stations' agenda.

CNO Inspects Anacostia Unit

There was a ship-shape crew on board the National Guard Armory in Washington, D. C., in early September. For the first time in its history, the *Week-end Warriors* of NARTU Anacostia were inspected by the Chief of Naval Operations. A reception was later held at the Sheraton Park Hotel.

Adm. Arleigh Burke paced off the officers and men of the Unit's 19 Air Reserve squadrons during an evening inspection. The ceremony was the high point of the year's training effort for the Naval and Marine Reservists.

Stationkeeper personnel received an inspection by RAdm. D. V. Gallery, Chief of Naval Air Reserve Training, at the air station earlier in the day.

ADMIRAL ARLEIGH BURKE, *CNO, reviews men of the Anacostia Naval Air Reserve Training Unit. With him is Capt. L. E. Harmon, Unit CO. Event was at the D. C. National Guard Armory.*

THE RED *carpet treatment was given to VR-674, upon return from West Coast training.*

Welcome Home for VR-674

When members of NAS Atlanta's VR-674 returned from two-week training on the West Coast, they got the real red carpet treatment. At the end of the carpet was a welcoming committee, and lots of good, hot coffee.

The Atlanta squadron spent their annual training cruise aboard the Naval Air Station at San Diego.

Pictured above is Cdr. S. W. Hopkins *(2nd from left)*. With him *(L to R)* are station officers, Cdr. E. W. Pacek, XO; Capt. R. E. Stiller, CO; Cdr. L. D. Macomber, Training Officer; and Cdr. W. R. Harman, Operations Officer at the Atlanta station.

New S2F's for Reservists

Bright, shiny, brand-new S2F *Trackers* are being picked up these days at the Grumman Aircraft Bethpage Plant, for delivery to Naval Air Reserve stations and units all over the country.

RESERVISTS *Ltjg. John Mixson and Lt. Russell picked up S2F Tracker at the Grumman Plant.*

A good number of these planes, coming from the production line, are slated for Reserve activities. The one shown below with the ferry pilots, was destined for Floyd Bennett.

S2F *Trackers* are now being flown at NAS Akron, NARTU Anacostia, NARTU Jacksonville, NAS Los Alamitos, NARTU Oakland, NAS New Orleans, NAS Floyd Bennett, NARTU Norfolk, NAS Oakland, NAS Seattle, NAS South Weymouth, and NAS Willow Grove. Eventually, S2F's will replace all Reserve AF *Guardians* now in operation.

Oakland Warriors at Sea

Aboard the USS *Philippine Sea* for a week's training duty were Naval Air Reservists from the 85-day accelerated training program at Oakland.

The recruits sailed out of Long Beach, Calif. While on board, each Reservist performed the regular chores of the real sea-going bluejacket.

An additional thrill came for the young men when M-G-M came on board to film a forthcoming movie, *Wings of Eagles*. Oakland Reservists had the opportunity to see in the flesh such flicker greats as John Wayne, Dan Dailey, and Director John Ford.

MEMBERS OF *Grosse Ile's 85-day Recruit School get a choice view of proceedings from bridge of USS Leyte enroute to Quonset Point.*

RESERVISTS *from Glenview feed pigeons in Trafalgar Square, London. VP-721 and VR-721 went overseas for annual active duty cruise.*

Detroiters Go to Sea

Fifty members of NAS GROSSE ILE's 85-day Recruit School went aboard the USS *Leyte* for a three-day indoctrination cruise. The event was arranged by Capt. M. T. Martin, the station CO, who is scheduled to become skipper of the *Leyte*.

The group was air-lifted from Grosse Ile to NAS NORFOLK. From there, liberty boats took the Detroiters out to the carrier in Chesapeake Bay.

During the visit, the recruits had an opportunity to visit every nook and cranny of the ship, from crow's nest to engine room. It didn't take them long to get their "sea legs."

The greatest thrill for the youngsters was being on a man-of-war underway at sea. For while the recruits were aboard, the carrier completed a speed run from Norfolk to Quonset Point, R. I.

Capt. Harlan Johnson is the commanding officer of the attack carrier USS *Leyte* (CVS-32).

Reservist Presents Trophies

Capt. L. A. Merritt, pioneer Naval Reservist and the first Wing Staff commander at NAS COLUMBUS, has retired. The 38-year veteran officer was honored with traditional retirement ceremonies by his shipmates and the station commanding officer, Capt. L. L. Koepke.

In retiring, Capt. Merritt presented two incentive trophies. The Supply Department of Wing Staff was awarded permanent possession of the Merritt Attendance Trophy after winning the attendance award for the third time.

Capt. Koepke accepted the presentation of a four-foot gold trophy to be awarded annually to squadrons achieving the highest tactical proficiency. It will be known as the "Lester A. Merritt Combat Readiness Trophy."

In civilian life, Capt. Merritt is a safety engineer with the Industrial Commission for the State of Ohio.

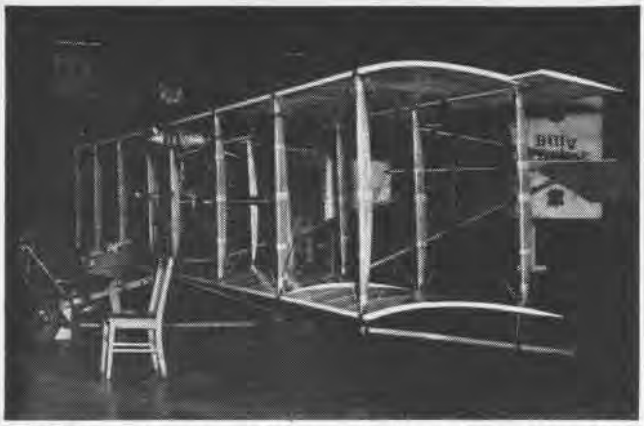
VP-721 and VR-721 Tour

Two Reserve squadrons from Glenview have returned from a two-week overseas deployment. VP-721 and VR-721 flew six P4Y-2 patrol bombers and three R5D transports to Port Lyautey.

During the cruise, squadron members had a chance to see London, Paris, Copenhagen, Rome, Athens, and other major European cities. Stops were made at Newfoundland and at the Azores.

CAPT. L. L. KOEPKE, *NAS Columbus CO, accepts Combat Readiness Trophy from Capt. L. A. Merritt, during the retirement ceremonies.*

WILLIAM CODY, *AA, "riding herd" on Navy jets during accelerated training program at Dallas, is a descendant of "Buffalo Bill."*



THIS 1912 *pusher-type airplane was displayed during Open House celebration at NAS Denver, a sharp contrast to the jets overhead.*

MEMBERS OF *VP-2 point out the finer operational parts of the J-34 engine to ground crew group of VP-711 during instruction at Denver.*

Training, Open House at Denver

Warriors of VP-711, NAS DENVER, were hosts for three days to a group of officers and men of VP-2.

Given the job of bringing the Denverites up-to-date on the Navy's latest aircraft, two P2V-7 crews of VP-2 checked out the Reservists in the J-34 jet engine.

The importance and maintenance of the J-34 fuel control, as well as overall operation was emphasized. Officers of VP-2 instructed pilots of the Denver Unit in effective operations of the P2V-7.

Denver's Open House drew a crowd of more than 100,000 spectators. An aerial performance of the *Blue Angels* was the highlight of the day.

Different types of military aircraft, a 1912 pusher-type airplane, and other displays filled the hangars and dotted the air station aprons.

To furnish an added touch of festivity to the Open House, the happy toot of a calliope provided music.

THESE SPOKANE *Reservists check a Cougar during training cruise at NAS Glenview, Ill.*

News from Spokane

Members of the Spokane Naval Air Reserve, numbering 252, completed their annual training cruise at Glenview.

They are members of VF-901, 902; FASRon-901; and Wing Staff 90.

The 1850-air mile trek to Glenview, Ill., is the longest trip ever made by the NAS SPOKANE Reserve squadrons.

Reserves at Moffett

Two Reserve squadrons took their two-week active duty cruise at Moffett Field. They are VF-681, from Birmingham, and VA-922, from St. Louis.

The Birmingham squadron flies the AD-4 *Skyraider*, and VA-922 currently pilots the F9F-5 *Panther*.

Leading VF-681 is Cdr. B. P. Burch; the XO is Cdr. C. D. Garrison. VA-922 is skippered by LCdr. F. P. Boro; LCdr. J. A. Poepper is executive officer.

Summer Training Ends

With the coming of September, the accelerated training program aboard NAS NEW ORLEANS ended. A total of 72 airmen recruits had graduated.

The 85-day program was under the direction of LCdr. A. A. Reese. Instructors included three chiefs and six petty officers.

A 12-hour liberty was given the "boots" each week to break up the rigorous training schedule.

Training not only included drilling and classroom-work, but shop work was set up in the various departments on the station, so that the young men could learn by doing. Thorough shipboard training was given aboard the escort carrier USS *Saipan* (CVE-48).

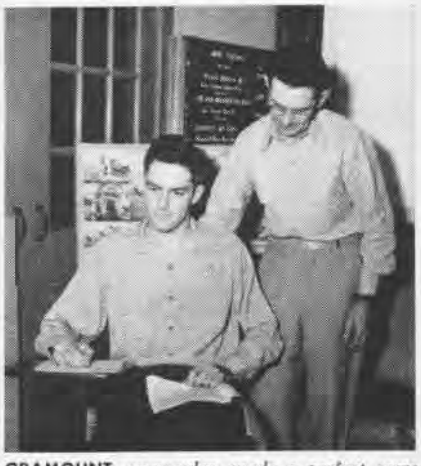
During the summer, "Nationwide Monitor" on the NBC network, broadcasted personal interviews concerning the accelerated training program with the air station's commanding officer, Capt. W. A. Hood, Jr.; LCdr. Reese, division officer of the program; and Cdr. L. J. Muery, training officer.

Atlanta 'Quiz Kid'

An ex-regular enlisted man, Victor H. Gramount, Jr., aviation technician first class, made a perfect score of "73" on the Navy's Applicant Qualification Test for entry in the Atlanta Naval Reserve.

W. L. Brannon, recruiting chief, administered the test.

Gramount enlisted in the Reserve in 1947, and shipped over into the Regular Navy in 1948. He served as a Regular until his discharge in 1955.



GRAMOUNT, *ex-regular, made a perfect score on the Navy's Applicant Qualification Test.*

LET'S LOOK AT THE RECORD

VP-47 Wins Battle 'E'
Presentation by ComFAirAlameda

As the outstanding seaplane patrol squadron in the Pacific Fleet, VP-47 of NAS ALAMEDA was awarded the ComAirPac Battle "E" for fiscal year 1956.

RAdm. R. F. Hickey, ComFAir Alameda, presented the award, a bronze plaque, to VP-47 CO, Cdr. L. E. Sloan.

The squadron had previously won the 1955 dual-piloted Safety Award by accumulating over 7,150 accident-free flight hours. This achievement, plus high marks in inspections and competitive exercises, contributed to the Battle Efficiency "E."

VP-47 is making preparations for its fifth deployment to the Far East.

LTJG. D. H. *Stechmann landed his S2F aboard the Boxer for the carrier's 78,000th arrested landing. Members of the flight: back (L to R) Ens. Becker, C. Miller, ADAN, Stechmann; front, J. Beeland, AT3, M. Evans, AD3.*

O&R Men Commended
Alameda Team Repairs Kodiak P2V

Five employees of the O&R Department at NAS ALAMEDA have been commended for an efficient job of emergency repair on a crippled P2V-5F *Neptune* in Kodiak, Alaska.

The aircraft, belonging to VP-28, was damaged when a power turbine exploded during the ground run-in of a new engine. The repair team, summoned from Alameda, completed in five days a repair task expected to last more than two weeks. Members of the team included L. J. Ellis, Patrick Driscoll, Ira Eckert, Claude Howell, and James Benerou.

In a letter to Alameda's CO, the skipper of VP-28 wrote in part: "This command wishes to express its appreciation for a job well done."

IN AN HRS *'copter, Lts. D. B. Waldron and J. K. Donaldson flew over 13 hours without refueling, topping old 11-hour record. Maj. V. D. Olson, HMS-1 CO, gave congratulations.*

Laurels for ATU-202
Chalks up Outstanding Flight Time

During August, ATU-202, at NAAS KINGSVILLE, flew 4571 hours. This number exceeds the hours flown by any jet training unit in the Naval Air Training Command during any of the past 12 months.

Cdr. C. A. Crow is O-in-C of the Unit which uses Grumman *Panthers*.

The training complement consists of 51 permanent duty officers, about 80 students, and 491 enlisted men.

Civilian Receives Award
Shows Valor and Quick-Thinking

Cdr. J. W. Williams, XO of VA(AW)-33, NAS ATLANTIC CITY, presented a commendation to Edward W. Farrell of Beech Avenue, Estell, New Jersey.

Farrell received the award for his courage and initiative in coming to the assistance of a downed squadron pilot. When a Navy *Skyraider* crashed in the woods near Farrell's home, he was the only witness to the crash.

After notifying State Police, he pressed through heavy underbrush to the crash scene. He then helped direct a Navy helicopter to the site.

FOR THE FIFTH *year, NAS Columbus received SecNav Motor Vehicle Operation and Industrial Safety awards. Cdr. T. G. Bondurant, exec, congratulates safety specialist Max Battin.*

VP-9 Wins AirPac Award
Cops Battle 'E' for Second Time

Efficiency, safety and overall top performance during fiscal 1956 has brought VP-9, of NAS ALAMEDA, the Commander Air Force Pacific Fleet Battle "E" for the second consecutive year.

RAdm. R. F. Hickey, ComFAir Alameda, presented the award to squadron CO, Cdr. T. H. T. Norris.

Among other activities, early this year the unit spent over three months training Japanese pilots, and sent two squadron aviators to Japan with the first P2V-7's to be turned over to the Japanese under MDAP.

VP-9, with a total of 28,000 accident-free flight hours since 1952, left for the western Pacific in August.

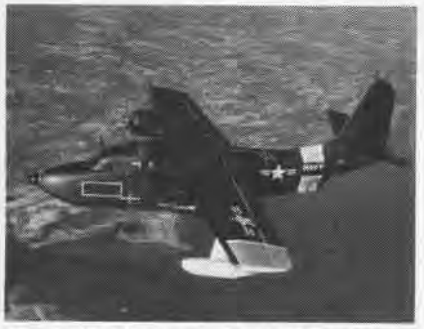
VA-85 Chalks up Record
Credits Maintenance Department

Attack Squadron-85, commanded by Cdr. C. H. Jaep, III, has returned to NAS OCEANA after a six-month Mediterranean deployment aboard the USS *Intrepid*. The group claims to be the first AirLant squadron to accomplish an assigned mission without a single aircraft grounded for parts during its entire deployment period.

The squadron embarked on the *Intrepid* on 10 February 1956, with 15 AD's. During the cruise, it logged a total of 3,818 hours with an aircraft availability of 86 percent. A total of 4,131 hours have been flown since its last plane was grounded for parts.

The achievement was made possible by the teamwork and efforts of the maintenance and material crews, and the logistic support provided by the supply department of the *Intrepid*.

IN FOREIGN SKIES



ALBATROSS HAS MADE DRAMATIC RESCUES

Albatross Planes Ordered

Grumman Aircraft Engineering Corporation has received a $5,500,000 contract from the Republic of Indonesia for the production of UF-1 *Albatross* air-sea rescue amphibians.

The Indonesian Air Force will use the twin engine aircraft for both rescue and utility work. It is the first *Albatross* contract to materialize from increasing interest in this aircraft by several foreign nations.

Produced by Grumman as the standard rescue amphibian for the Navy (UF), USAF (SA-16), and Coast Guard (UF-1G), the *Albatross* has achieved fame in rescue and utility roles.

The contract calls for the delivery of the first *Albatross* in 16 months and one per month thereafter until the agreement is completed.

Red Fleet in Nuclear Field

Nation's Business, July 9, 1956, reports that a "New step-up program moves Soviet navy into nuclear weapons field.

"Aware of their lethal opportunities in shipboard use, Red fleet is acquiring guided missiles. . . . New huge Soviet navy has:

"More than 400 submarines, 27 cruisers, 175 destroyer-type ships, about 3,000 naval airplanes for fleet support.

"High percentage of these units are new, modern."

Soviet Powered Glider

The Soviet has published a picture of the MAK-15 MP powered glider with a 30 horsepower, five cylinder engine. According to reports, it has a gross weight of approximately 700 pounds.

The MAK-15 is a small glider with a wing that fairs into its stabilizer. The cockpit is located in a bulbous nose. Three of these gliders without engines were displayed at the Soviet Aviation Day Show.

Air Conference in Montreal

On 18 September, a conference of the International Civil Aviation Organization opened in Montreal to deal with problems involving the airworthiness and operation of aircraft. It is an extended conference of several weeks duration attended by technical experts representing more than 20 nations and international organizations.

Topics include qualifications of pilots flying international routes, the use of rearward-facing seats, and aircraft navigation lights.

There are 70 member states in ICAO.

Soviet Flying Boat

According to reports, the twin-engined flying boat named *Madge* is the Beriev Be-6. It is powered by two

MAXIMUM SPEED IS REPORTED AS 240 MPH

2000-hp Ash 73 radial engines and weighs approximately 60,000 pounds.

A number of Be-6's have been seen at Khimki Lake north of Moscow alongside Soviet-built *Catalina* flying boats. The *Madges* bore civilian markings.

In the air, Be-6's appear majestic but slow; their maximum speed is about 240 mph. A turbojet development of *Madge* with two Klimov VK-1 jet engines has also been reported and is probably designated the Be-8.

Japanese Middies to U. S.

Due to arrive at Pensacola are 26 Japanese midshipmen, who will undergo Naval Aviation Cadet training. The young men are members of Japan's Self Defense Forces.

The future pilots, who received a rigid physical and mental examination at NAS ATSUGI, will leave for the States when they have completed a basic course in the English language.

A FORMATION *of Saab-32 Lansen transonic all-weather attack aircraft is flown by Royal Swedish Air Force pilots. The Lansens are coming off production lines on the double, and within a short time, the Lansen will become the mainstay of the SAF's attack force. Fitted with a Rolls-Royce Avon RA.7 engine with afterburner, the Lansen is an over-700 mph. combat plane.*

J. A. ZAPAR, AN, PERFORMS 12-HOUR CHECK ON SKYRAIDER

J. MORALES AND J. NEUBERT COMPLETING ENGINE BUILD-UP JOB

ALAMEDA'S BUSY 'OLD-TIMERS'

By Ed Copeland

One of the busy 'old-timers' aboard NAS Alameda is FASRon-8. Right now this squadron is doing twice the work it was originally designed to do. It supports seven Alameda-based squadrons, plus any visiting or Reserve squadrons in training.

The mission of a Fleet Aircraft Service Squadron is to provide an organization to acomplish peacetime maintenance of fleet aircraft. To the uninitiated, this sounds easy, but it involves many hours of back-breaking labor, and 'burning the midnight oil' to enable repaired planes to reach the Fleet on schedule. The squadron must also be capable at all times of rapid and orderly expansion in the event of war.

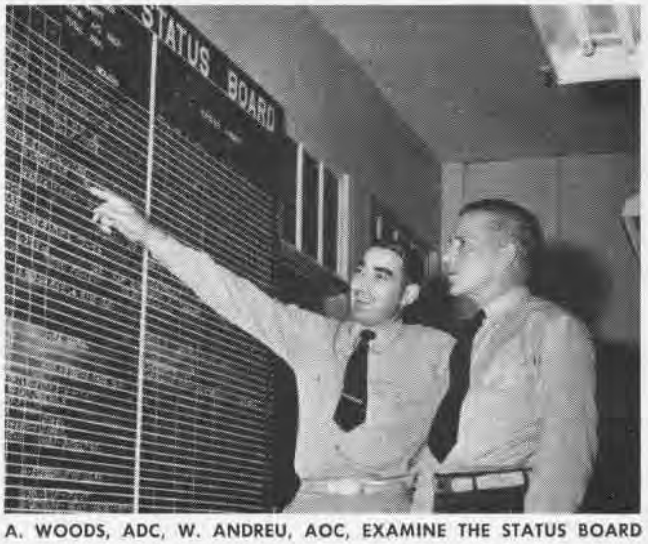
A major job of FASRon-8 is to incorporate new service changes in the fleet aircraft. A great amount of revised, improved and new equipment is almost constantly being put in aircraft to keep them up-to-date. In one instance, nearly 200 changes were incorporated in one AD *Skyraider*.

Other tasks performed by the squadron, under the command of Cdr. W. L. Conley, include preparing aircraft for preservation and shipment overseas, inducting planes into overhaul and repair, performing maintenance inspections, and repairing damaged fleet aircraft.

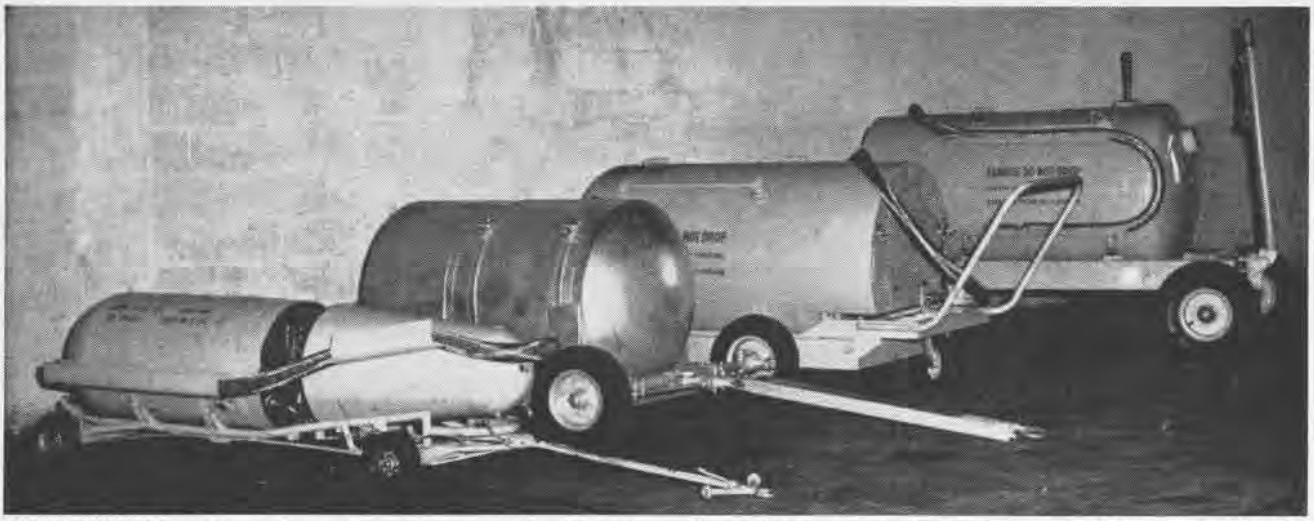
According to LCdr. D. L. Donaho, maintenance officer, 172 pool aircraft and 110 transit planes of 29 different models were processed in one six-month period. FASRon-8 also keeps 16 planes ready for staff and ship personnel to use in proficiency flights.

Commissioned at Alameda in 1944 as CASU-6, FASRon-8 is entitled to be called "an old-timer," and on the basis of a full and varied work schedule, "an efficient workhorse."

TRAINING IS CARRIED ON DURING RADIO MECHANISM REPAIRS



A. WOODS, ADC, W. ANDREU, AOC, EXAMINE THE STATUS BOARD



LIQUID OXYGEN *transfer trailers under evaluation are lined up for inspection. First is a 15-gallon shipboard unit, followed by a 30-gallon trailer for either ship or shore base. Next are the 50-gallon shipboard and the standard 50-gallon shore-based transfer units.*

FLASKS FULL OF LIQUID LIFE

WHEN JET AIRCRAFT were introduced into Naval Aviation, they brought with them myriad problems. True, jets could fly faster and higher than their prop-driven predecessors. But the big question was—for how long? Range, or rather lack of it because of high fuel consumption, was the major stumbling block to the full military application of jet aviation.

Like all problems that are attendant to progress, a solution was found. As it was militarily impractical for jet planes to return to the carrier or the airfield for fuel after all too brief sorties, tip tanks and other external fuel reservoirs were hung onto the airframes. Even this extra supply of fuel did not suffice to satisfactorily extend the range of the notoriously thirsty turbojet powerplants. The only answer was to take a "filling station" up to the planes. Practical in-flight refueling was born.

But the solution begat another problem. Theoretically, with repeated in-flight refueling, a plane could stay airborne until the engines needed overhauling, the pilot needed sleep or in multi-place aircraft, the crew had to come down to reenlist.

Fuel for the engines was now available in unlimited quantities but what about the other fuel that was needed for personnel? The fuel of life itself—Oxygen. For reasons not only of tactical advantage, but also for economy, jets always fly at high altitude. The use of breathing oxygen is routine on every jet flight.

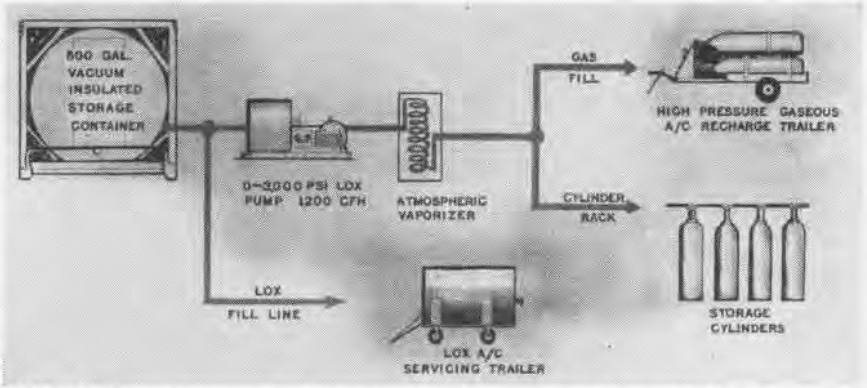


DIAGRAM OF *liquid oxygen ground storage and servicing equipment. From the 500-gallon, vacuum insulated storage container, LOX can be routed to LOX trailer or to gaseous conversion system.*

The newest type of oxygen regulators deliver 100% oxygen at all times. The tendency, even in planes using the diluter-demand equipment, is to rely on 100% oxygen a greater part of the time. This is expensive in terms of the amount of O_2 carried aboard. The range of the aircraft has far outstripped its capacity to carry sufficient breathing gas for the crew.

The addition of high or low pressure oxygen cylinders would create a weight and space problem. The Navy was forced to develop a safe, workable liquid oxygen system for its aircraft.

FIVE-LITER *converter, fully charged, is about equal to five 514 cu. in.-gaseous cylinders.*

The reason was simple. Oxygen in its liquid state could be "packed" into containers small enough and light enough to be carried in fighter aircraft without weight or space penalty and yet extend the "human range" of the aircraft hundreds of miles.

The Navy was experimenting with the use of liquid O_2 early in World War II. Original investigation started as early as 1936. Many misconceptions existed at that time about the safety of handling the material. On an air station the LOX (liquid oxygen) could be found out in the boondocks somewhere in the vicinity of the ammunition storage. It was regarded generally as capricious as well as dangerous.

One of the obstacles to its use in aircraft was difficulty with the development of a container, known as a Dewar Flask, that would operate efficiently in unusual attitudes and at all altitudes. Also the flask itself, similar in construction to a king-size thermos bottle in a brass housing, was heavy and cumbersome. But, as usual, necessity spawned invention and today's LOX flask for aircraft use is light, efficient and safe. Liquid O_2 has ceased to be a Frankenstein and has moved from banishment to the "West Forty" into the shop and hangar and onto the hangar deck and the flight deck.

In the field of carrier-based planes alone, three have come from the factory with the new system installed. These are the A3D, A4D and the F9F-8T. The new Temco trainer, now under evaluation, is also equipped, and the Beech trainer specifications call for it. The F5D will have the LOX system and other tail hook models will be retro-fitted until the flasks are put into the production line — including the F8U, F11F, F4D, and the FJ-3 and -4.

To service these planes 20 of our carriers, the *Forrestal*, *Saratoga* and the modernized CVA's have liquid oxy generators, storage and transfer equipment aboard. Air stations purchase liquid oxygen from commercial sources when they have been supplied with storage and transfer gear. As personnel are indoctrinated into the use of the modern system, they develop an appreciation of its advantages; lose their unfounded fears, while maintaining a healthy respect; and eventually prefer the new system to the old.

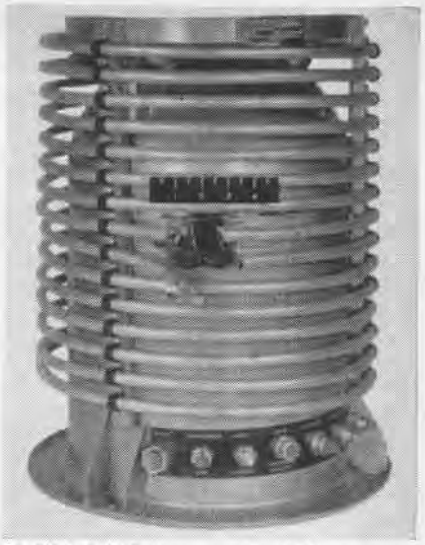
One hundred percent oxygen is derived from the air around us. The atmosphere is approximately 21 percent oxygen, 79 percent nitrogen with a smattering of other gasses mixed in. Formerly commercial manufacturers liquified O_2 in the reduction process, bottled it in gaseous form and delivered it to the consumer in 200 cubic foot cylinders. Now, the breath of life is delivered to major naval activities, or manufactured by them, in its liquid form. It can be used to recharge the LOX flasks in aircraft, or it can be converted to gas by a vaporization process and used to charge the O_2 bottles in the older systems.

A typical liquid oxygen handling system is in operation at NATC PATUXENT RIVER where the Aero Medical Branch of the Service Test Division under the direction of BUAER has done much of the work on evaluating the usage of LOX in aircraft.

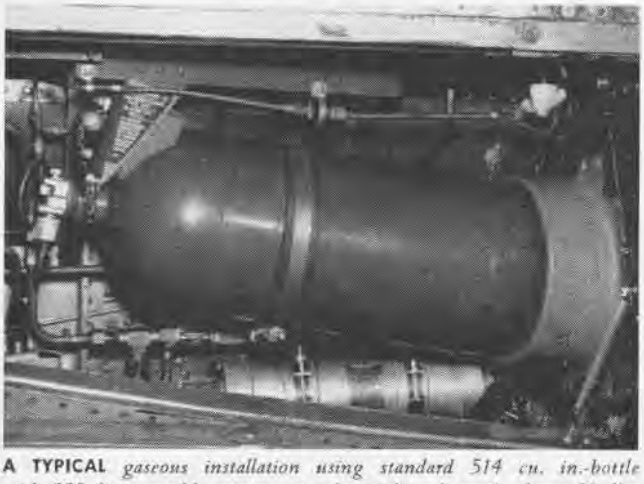
The liquid is purchased from a commercial producer who delivers it in a vacuum-insulated truck. The truck pumps force the LOX into two storage tanks, one 450 gallons and the other 500. Since the liquid is constantly vaporizing as it warms, despite the fact that it is contained in a vacuum insulated tank, it continually vents some gas to the atmosphere. The storage tanks are equipped with relief valves which prevent the pressure from becoming excessive in the event that the operator fails to open the vent.

Once the liquid oxy is tanked, its utilization is varied and flexible. It can be removed from the tanks for use in either liquid or gas form depending on the type of plane and the type of airborne oxygen system in which it is destined for use.

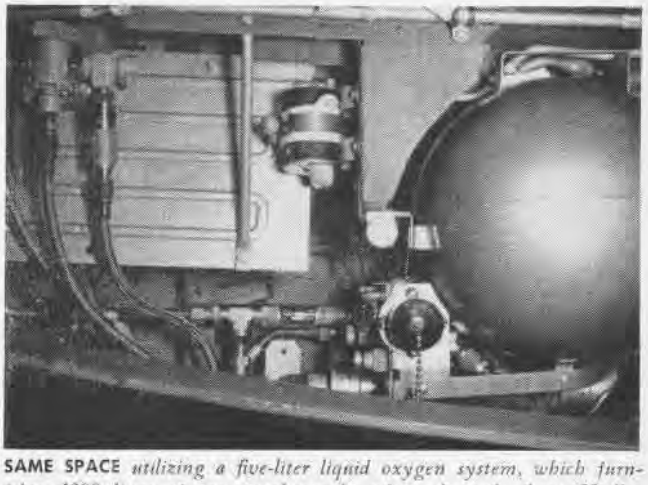
When the oxygen is to be used to



EARLIER EIGHT-*liter aircraft LOX converter tested for strength, combustion, by gunfire.*



A TYPICAL *gaseous installation using standard 514 cu. in.-bottle with 900 liters usable oxygen, total weight, charged, about 30 lbs.*



SAME SPACE *utilizing a five-liter liquid oxygen system, which furnishes 4300 liters of oxy, total weight when charged, about 28 lbs.*

service planes that use a liquid system, the LOX is taken from the storage tank into a mobile servicing trailer. Pressure is built up in the storage tank by closing the vent and allowing some liquid to drain into a pressure build up coil. This liquid gasifies and is piped back into the top of the tank. The pressure generated can be utilized to force liquid oxygen into the aircraft servicing trailer.

The trailer is towed to the aircraft and filling of the flask, or more correctly the converter, in the plane begins. The first operation in any transfer of LOX is to cool down the lines that carry the liquid. Liquid is allowed to escape into the line where it vaporizes and cools the transfer hose. Eventually when the hose is sufficiently cool, the end fitting is plugged into the plane filler valve and transfer to the aircraft converter starts.

Converters in aircraft are of various sizes. The one used most frequently in aircraft is of the five-liter capacity. No container is absolutely heat-proof, so vaporization is constantly going on. The loss is less than 20% in 24 hours.

Converters now in use are roughly spherical in shape and are surrounded by tubing through which the oxygen passes to be vaporized and warmed to ambient temperature upon demand from the plane crew. Newer converters, which will appear in planes in the immediate future, have the flask as a separate piece of gear and the vaporizing tubing is an integral part of the plane equipment. Some idea of the increase in oxygen-carrying capacity of the plane can be gained when it is realized that LOX expands 860 times upon vaporization and warming to room temperature.

MEANWHILE, back at the oxygen shop! The liquid oxygen in the storage tanks is also available for servicing planes that are still using the gaseous O_2 bottles.

The LOX is piped from the storage tanks to an electric reciprocating pump which forces it through vaporizing coils, where it warms to room temperature and builds up pressure. It is sent through a manifold and into gas storage bottles of 300 cubic foot capacity at a pressure of 2400 psi. These bottles in turn are used to recharge aircraft bottles to a standard pressure of 1850.

This ground converting system can furnish gas directly to the oxygen carts or trailer which service the aircraft.

Innovations like sulfa-drugs, antihistamines, radio-isotopes and new types of mouse traps generally produce two extreme human reactions: jump in with both feet, half informed, but because it is reported to be the best; or stay away from it entirely because it is new. The use of liquid oxygen is no exception. The tendency in this case is to err on the too cautious side. So many of the old misconceptions have persisted that many commands have viewed the introduction of LOX as a built-in accident looking for a place to happen, instead of a normal development in the progress of high speed, high altitude, long range aviation.

Few Naval personnel are unaware of the dangers in handling gaseous oxygen under high pressure. Any substance under high pressure deserves respect. But high pressure oxygen has the additional hazard of supporting violent combustions if certain hydrocarbons, particularly oil, are introduced into it. It may appear reasonable to believe that liquid oxygen is proportionally more hazardous for being a concentrate of the gas. Such is not true. Difficult to believe, the fact is that liquid oxygen is safer to handle than gaseous.

Exhaustive tests have been made by the Navy and by Douglas Aircraft on the risks involved. Repeated attempts to cause explosions determined that, handled properly, men and materials were safer in the presence of LOX than its gaseous counterpart. True, it will freeze some materials to the point of glass brittleness. True also, that allowed to remain in contact with the skin, it will cause burns. But the key to the whole situation is in the words "properly handled."

Under the title *Liquid Oxygen, Safety Precautions for Storage and Handling of,* BUAER has issued its Aviation Clothing and Survival Bulletin 5-56, dated 10 May 1956. This Bulletin gives all necessary information for the safe handling of liquid oxygen — the fuel that goes into the crew to make the planes go farther.

TYPICAL INSTALLATION *for converting LOX to gaseous form for use in aircraft systems. See diagram on opposite page for system details.*

A3D IS BEING *serviced with liquid oxygen from a standard, shore-based, 50 gallon transfer trailer. Plane has a ten-liter flask.*

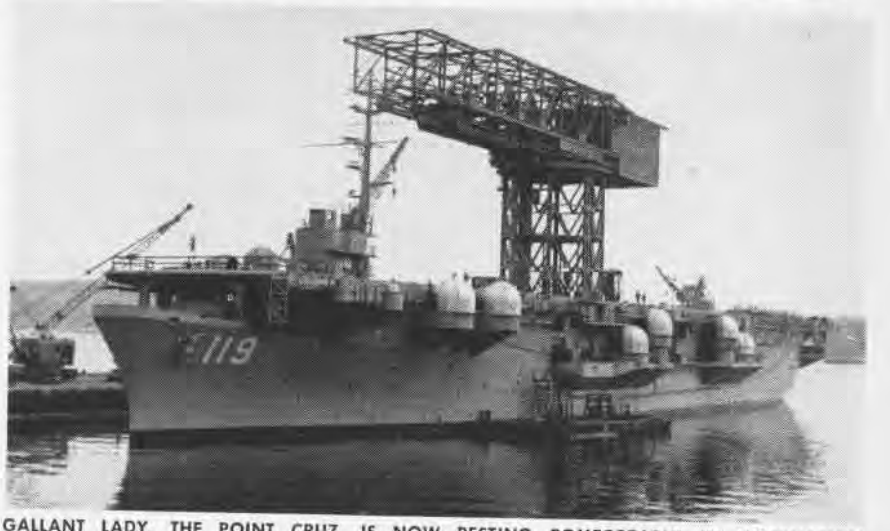
POINT CRUZ DONS HER PAJAMAS

FOR THE SECOND time in a decade, the USS *Point Cruz* (CVE-119) has been tucked in bed for some rest. The first time, the hard-working carrier was permitted to sleep for three years. But then the shooting started in Korea, and the gallant lady hurriedly put on her fighting clothes. The shooting has stopped and *Point Cruz* is again resting.

This is not so much a story of the gallant ship, but of the crew who performed the tasks required to prepare her for hibernation. The story is related by one of that crew.

"Most of us, Naval Aviators that is, have a vague idea that sometimes Navy ships of the line, even aircraft carriers, are 'moth-balled', and then turned over to the Inactive Fleets. The closest most aviators get to inactivating a ship is to spot a neat nest of igloo studded vessels, when flying over one of the Reserve Fleet anchorages near a major seaport. Here the ships stay until a day comes when they are needed. We realize that a certain amount of work is required to put a ship out of commission, but few of us think that we might ever be called upon to assist in the job, a job that really takes stamina. I know, because I was called.

"It began in March when the *Point Cruz* arrived in Bremerton and reported for duty. We had started to talk about inactivation, and what was to be done during the different phases, namely *Alpha* and *Bravo*. It was all 'Greek' to us. What could a Naval Aviator know about such things?



GALLANT LADY, THE POINT CRUZ, IS NOW RESTING COMFORTABLY IN HIBERNATION

Sure, we knew what rust looks like, and how clean, livable space should appear, but how to prepare a rust-free, dehumidified, properly preserved space is on a different frequency.

"Phase *Alpha* is the three-month overhaul period, when the ship's force and shipyard workers repair and overhaul all operational equipment. This is done so that should an emergency arise, the reactivated ship could be reasonably expected to operate for one year, without a further repair or overhaul. Phase *Bravo* is the four-month period utilized to preserve the ship in such a manner that a crew could place her in fighting trim in one month.

"During *Alpha*, all ammo is offloaded, all ship's equipment, machinery, inoperative items, etc., are worked over by the shipyard and/or ship's force. Vent blowers are re-worked for proper bearing balance, boilers are rebricked and re-tubed as necessary, instruments are calibrated, guns are reworked and aligned, pumps are repacked, and deck machinery and winches are put into first class operating condition. Catapults, arresting gear and elevators are overhauled and temporary repairs are made permanent.

"Early in *Alpha*, the crew moved off the ship, thus allowing us to secure the galleys and heads. We also began to off-load supplies, take inventories of equipage, spare parts, consumables, etc., and to assemble requisitions required to fill all of our allowances.

LT. N. L. BAUSCH, HULL OFFICER, CHECKS FLIGHT DECK WORK

C. VIATOR, AN, AND R. GOINS, SN, SPRAY BATTLE LANTERNS

Most of you have chipped paint, or watched someone else do it. Our crew became thoroughly familiar with the process, believe me. We chipped the sides, the forecastle, the fantail, mast, guntubs, sponsons, voids, tanks, and, in fact, every spot on the ship that contained rust.

"Work in spaces has to be coordinated with shipyard work, as well as with the ship's requirements for continued use of each space. It's a difficult thing to do, this coordinating, because there can be no idle hands. There is just too much work to do.

"Work performed in *Bravo* is, without a doubt, the most tedious, time-consuming, but none the less challenging job that any officer or enlisted man is called upon to perform in the peacetime Navy. First, the ship is put in dry dock. Immediately, a horde of 'men from Mars', who are really the sand blasters and spray gun painters, start to sand blast and paint everything that doesn't move. Our crew was moving all of the time.

"With the ship closed and sealed to keep out the sand, all our ventilation systems inoperative owing to preservation, and without our bracket fans, working conditions for the crew sometimes seemed 'touch and go.' But the work went on, and safely.

"An important item of inactivation of a ship, as in any other operation, is the safety of the crew, both from standpoint of injury and of health. Wearing of masks, protective goggles, and gloves must be mandatory during the entire inactivation process. Here is where careful supervision pays dividends. I'm glad to be able to state that our most serious injury was one broken toe. Of course we had cut fingers, bruises and bumps, scratches, and lots and lots of sore muscles, but the safety record is considered outstanding. Good safety practices, adhered to by the crew, saved thousands of man hours and contributed greatly to the success of our unusual venture.

"Another important item was, naturally, 'morale.' That problem is nothing new in the Navy, but it was made particularly important in our case by the tedious work, and heavy demands on each man. Also, very little progress seemed evident to each individual as a result of his time-consuming tasks. To help compensate for the hard work, the enlisted personnel were put on a six section liberty. In addition, complete

CLEANING DC-MG SET IN ENGINE ROOM

R. M. TEAFF, SN, HAS CLOSE QUARTERS

C. G. JOLLY, SN, TAKES A BREATHER

H. MAYS, AN, AND E. SMITH, AN, CLEAN PLUMBING FIXTURES FOR THEIR FUTURE USE

weekend liberties were granted. The ship's recreation fund was used liberally for picnics and parties, and all hands were encouraged to utilize fully nature's facilities in that beautiful Northwest country. This approach to the problem proved most successful, and is highly recommended to those who might be in a similar position in the future.

"It turned out that disciplinary problems were of a minor nature, with most infractions being of the overleave variety.

"During *Bravo*, the general duties of department heads remained about the same, but with a changed emphasis. The priority was cleaning, preservation, inactivation, stowage, supervision, inspection, maintenance and security of records and equipage. In addition

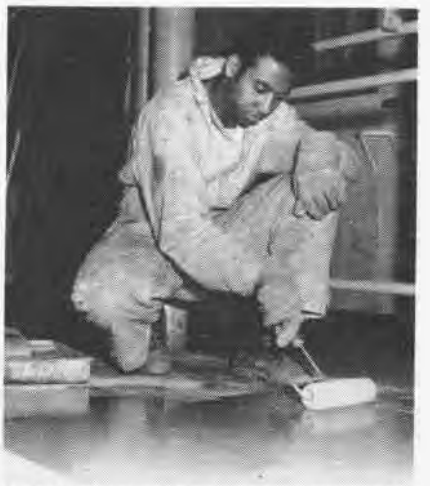
to the regular department heads, an Inactivation Staff was established. It consisted of an Inactivation Officer (our XO), a Preservation Officer, a Progress Officer, Records Officer, Stowage Officer, and an Allowance Officer. We could have used the regular ship's organization, but found that by setting up a three department organization (Hull, Engineering, and Inactivation Staff), we had a better working organization. Programming of work was handled more easily and efficiently by the Progress Officer. This man was directly responsible to the Inactivation Officer for the progress of all work during *Bravo*.

"Here's another tip. Unless you use your manpower wisely, you're in trouble. During *Alpha*, your normal operating strength is reduced to 70%.

INSTRUCTION IN THE USE OF POWER TOOLS IS GIVEN SEAMEN BY R. G. LUMLEY, PHI

ALL DECKS HAD TO BE CHIPPED AND PAINTED

S. R. CARLISLE, SN, MIXES POT OF PAINT



V. SVARVERUD, AB3, PAINTS CREW'S HEAD

This lasts through one month into *Bravo*, and then you are sliced to 50%, which you may have another month. The last two months, your crew is 35% of normal strength. Every available man has to be used to the fullest possible extent.

"Paper work? Egad! The saying around the records office during the zipper job was, 'When the weight of the paper reaches that of the ship, then she is ready for decommissioning.' Actually, the amount of paper wasn't all that great, but it had to be accurate. The Reserve Group, which is the watch-dog of inactivation operations, inspects the paper work to make sure that the necessary information and data is on the record in order that the ship could be re-activated within a very short time, with little trouble.

"To evaluate our work progress, phase *Bravo* was watched constantly by representatives of the Reserve Fleet, through interim inspections. A major problem evolved from the rework done by the Navy Yard in spaces which had been tentatively 'sold' to the Group inspectors. This rework, which cluttered spaces with paint, rust chips and slag, was disconcerting. On the surface, it appeared to be the result of poor planning, but it was certainly necessary at times.

"Major field days were held by ship's personnel on an evening over-time basis, just prior to inspections. This was an all hands operation, as regular preservation work had to continue during working hours.

"About half way through *Bravo*, with the ship and all its equipment torn asunder and scattered to the four winds, we arrived at a 'pessimistic' feeling. Everyone was positive that we would never get the ship back together again in time for decommissioning. However, as the time approached for the first inspection (about one month prior to decommissioning) by the Pacific Reserve Group, everyone pitched in, worked longer hours and harder, and the end of the seven-month job seemed a possibility.

"It was a hard, long job. At times, the incredibly numerous obstacles seemed insurmountable. But at last it was done. Its completion gave us a feeling of great pride in accomplishment. We had put a gallant lady to bed, spanking clean, and ready to spring back to life at the first sign of combat. *Point Cruz* is now asleep."

CREW WITH RECENTLY PULLED JET ENGINE

First 'Full Time' Engine

Top Limit Reached with J-65 W4B

The first J-65 W4B jet engine to reach the top time limit allowable by BuAer is being sent for overhaul and analytical examination. It operated 360 hours with Alameda-based VF-64.

Shown with the engine is the crew which kept it in top operating condition. From left are: S. A. Stover, ADC, power plants chief; R. J. Nastali, AD2; L. J. Cayan, AN; D. W. Kobeman, ADAN; L. J. Hand, AD2; and R. H. Libby, AD3. Not in the photo, but part of the team are Ltjg. R. L. Norris III, power plants officer, and Lt. D. L. Hancock, maintenance officer.

Allowable operating time has been increasing in increments of 60 hours with critical examinations being made of each engine reaching the new time levels. This system of trials with no errors has enabled BuAer to determine that 360 hours will probably be the maximum allowable operating time for this type of engine with its present type of compressor blades.

'Believe It or Not'

Lucky Seven Aboard the Boxer

Cdr. O. T. Knight, returning from a routine mission over the Japanese coast, added another tally to the record of arrested landings aboard the USS *Boxer*.

When Knight set his S2F down on the flagship of RAdm. W. M. Nation, it marked the 77,777th landing for the *Busy Bee*. Ltjg. Stanley Cotton, co-pilot, had logged his 777th flight hour prior to the landing. To reinforce those solid sevens, the *Boxer* is part of the Seventh Fleet.

Crew members with Cdr. Knight, VS-23's operations officer, were J. Cooley, AD1, and G. Thompson, AE3.

P6M Now in Production

New Contract Awarded to Martin

The Navy has issued a contract to the Glenn L. Martin Aircraft Co. for a sizable number of P6M *Seamasters*. Production of the giant, jet-powered seaplanes is slated to start immediately.

The second prototype of the plane has been flying for some time, undergoing extensive and successful tests.

GARRISON *Norton, Assistant SecNav (Air) receives full military honors upon arrival aboard USS Salem. Event marked his first visit to the Sixth Fleet. With him is VAdm. C. R. Brown, Commander of the Sixth Fleet.*

VX-5 Moves to China Lake

New Home Base Closer to Test Site

After five years of activity at Moffett Field, VX-5 has been transferred to NOTS China Lake. The squadron has been using Moffett for its day, night, and all-weather operations, while its actual test and development flights were flown near China Lake.

The move is designed to give VX-5 a home base closer to its test site and increase its operational efficiency.

Commissioned in 1951, VX-5 has been engaged in tactical developments for the delivery of special weapons.

Navy Accepts New AD-7

Latest Model Received in August

The first AD-7 model of the famed *Skyraider* series was delivered to the Navy in August by Douglas Aircraft Company. The plane appeared one month ahead of schedule.

An advanced model of the Navy's famed *Skyraider* series, the AD-7 is the 50th version of the popular aircraft since the first prototype took to the air in March 1945.

The AD-7 is similar to its predecessor, but has an improved Wright reciprocating engine for added power. Its wings are "beefed up" to prolong service life under heavier loads.

Officers Guests of NACA

Tour Ames Lab at Moffett Field

Pilots and ground officers of VF-193, at the invitation of NACA, toured the Ames Laboratory at NAS Moffett Field. Mr. D. S. Wentz, Aeronautical Information Specialist, acted as host.

Facility highlights were the wind tunnels, one of which can accommodate a full scale aircraft, and the lab's electronic "brain" center. A series of lectures was arranged, explaining NACA's role in aeronautical research.

Pilots of VF-681 also toured the Ames Lab during their annual active duty training cruise at Moffett Field.

THE USS TARAWA, *CVS-40, while temporarily operating out of Norfolk, was host to 30 high-ranking liaison officers attached to Headquarters, SACLant. Representing ten NATO countries, the visitors viewed the latest anti-submarine warfare techniques. During their four days in the carrier, they observed flight operations, hunter/killer maneuvers and underway refueling.*

BREAD-WINNER *for this family of four Cougars is a Convair R3Y-2 Tradewind. This is the first instance of multiple refueling operations conducted from a seaplane. The 80-ton Tradewind transport carries enough fuel in its wing tanks for eight fighter "bread-baskets."*

NANews Enters 38th Year

Complete Records Sought for File

With this, the November 1956 issue, NANEWS enters its 38th year of continuous publication. From its modest beginning as a one-page letter, to the present time, it has served Naval Aviation. This publication has aided training, increased safety, issued professional information, and broadened technical knowledge. It is a periodical frequently quoted by the press.

Articles and pictures have come in from all parts of the world, and they continue to come. The Editors and staff count on and appreciate this cooperation.

In order to preserve this factual record of the growth and growing pains, victories and difficulties of Naval Aviation, a microfilm copy of all editions up to the present is being made. This is being done in cooperation with the Library, U. S. Naval Postgraduate School, Monterey, and the Library, Air University, Maxwell AFB.

Lost in the limbos of dusty files somewhere, are the editions covering two early periods. They are from 8 October 1920 to 8 October 1921, and from 28 October 1922 to 7 April 1923. If any of our readers can help us to complete our file, we and the Naval Aviation Historian will be most grateful. It is believed that during those periods, the publication was then called the *Daily Aviation News Bulletin.*

IFR-IQ?

What is 'SCAT?'

Answer on Page 40

CVG-15 Puts on Show

Participates in Cubi Dedication

CVG-15 added the crowning touch to the dedication of NAS CUBI POINT with an air show. The new air station is at the mouth of Manila Bay.

Adm. A. W. Radford, Chairman, Joint Chiefs of Staff, was guest speaker at the ceremony. He committed Cubi Point to the task of defending the Philippines, and adding another link in the SEATO defense network. The installation is the largest naval air station in the Far East.

The arrival of Ramon Magsaysay, President of the Philippine Republic, was marked by a 21-gun salute from the USS *Wasp.*

After a mass fly-over by CVG-15, a series of division and single plane maneuvers followed. These included a coordinated simulated attack on the field by VA-155, led by Cdr. Jack Jones, and strafing attacks by Cdr. Lawrence Abbott's VF-153 and Maj. Victor Allen's VMA-223.

This was CVG-15's second air show in the Western Pacific. The first was at Guam on Armed Forces Day.

Aerial Map Being Made

VMC-3 Engaged in Aerial Survey

Marine Composite Reconnaissance Squadron Three, based at MCAS EL TORO, is working on a major assignment. The squadron lab is making an aerial map of the U. S. Government Gunnery Range near Yuma, Arizona.

Capt. George Glauser made 27 runs over the area, covering more than 1573 square miles. He logged in 54.2 flight hours on the project, including 15 hours actually spent over the target.

The Marine pilot flew his F9F-5 photo-jet at a 25,000-ft. altitude and made a total of 1150 exposures with his aerial cameras.

A "rough" of the map has already been worked up by the VMCJ-3 photo lab crews. The finished map will take about a month to complete.

It will be used to orient pilots as to the boundaries of the gunnery range.

NTDC Office at Corpus

TraDev Service is Extended

The Naval Training Device Center has added an area office to its nationwide organization. Located at NAS CORPUS CHRISTI, the office is under the management of Area Representative, Mr. Charles Owens, Jr.

The new establishment will provide faster and more efficient service to Naval training activities in the area. It is equipped to deal with problems relating to installation, maintenance, utilization, and new requirements for training devices in the states of Texas and Oklahoma.

Other area offices of NTDC are located in San Francisco, San Diego, Pensacola, Great Lakes, Norfolk, Seattle, Wash., Jacksonville, Florida.

LATEST GROUP *of exchange pilots to head for Air Force assignments pose with VAdm. W. V. Davis, Jr., DCNO (Air), after being briefed on their new jobs by CNO staff specialists.*

LETTERS

SIRS:

In a recent issue, there appeared an article concerning a Wave Tradevman who was given instruction in instrument flying (NANEWS, May 1956, p. 39) that she might better serve pilots in the link shack.

May I suggest the same thing for Air Controlmen? If such training can benefit pilots in the link shack, then it can certainly be of value under actual operating conditions. I believe that most Air Controlmen could provide much more service to the pilot if they knew and understood the pilot's problems, what was happening in the cockpit, and the limitations of the aircraft.

Increasing demands on pilots will place more responsibility upon Air Controlmen and reconstruction of the air traffic control procedures will require that traffic controllers have more than a basic knowledge of what makes an airplane fly.

EDWARD S. SISSON, AC1

SIRS:

Your photograph of the *Badoeng Strait (Bing Ding)* in the September issue is noteworthy for two reasons. First, a Royal Navy Rear-Admiral's flag is flying.

RAdm. E. G. A. Clifford, R.N., boarded the ship by hi-line from HMS *Birmingham* on 8 December 1952 and with special permission of CNO, hoisted his flag as OTC. At the time, Admiral Clifford was Commander Blockade and Escort Group and the immediate superior of the *Bing Ding* Task Unit. The *Bing Ding*, with *Checkerboard* Squadron embarked, was operating in the Yellow Sea as a Carrier Task Unit.

Admiral Clifford (now Vice Admiral and Chief of the Naval Staff) departed by hi-line on 10 December and continued his visits to front line elements of his command through the Christmas and New Year holidays. He believed this to be the first time an officer of the Royal Navy hoisted his flag as OTC in a warship of the U. S. Navy. Is this correct?

Second, the photograph was taken on 9 December 1952 (not February 1953) by the *Bing Ding* chopper which, incidentally, did not fail in rescuing a pilot during the 8 months deployment.

H. L. RAY, CAPT.

CO, BING DING
1952-1953

¶ Do any readers know the answer to the Captain's question in the third paragraph?

SIRS:

There are many Naval Officers in an unusual category, who are interested in locating classmates.

Ex-Aviation Midshipmen that desire to receive a Naval Aviation Midshipman Locator Newsletter, please send your name, address, and Pre-Flight class number to Lt. F. I. Nulton, JTTU, NAS Olathe, Kansas.

F. I. NULTON, LT.

SIRS:

I have just read the article, "Swept and Shaped for Speed" by Joe Stein, in the September issue of NANEWS and should like to be one of the many to add my heartiest congratulations for an excellent piece of writing. One of the most difficult jobs of communication is to take a technical subject and break it down for the layman without appearing to "talk down" to him. This is exactly the job Mr. Stein has accomplished.

JULIAN C. S. FOSTER, LT.

NACA to Build Reactor

Facility Ground-Breaking in Ohio

Ground-breaking ceremonies were held for the Plum Brook Research Reactor Facility of the National Advisory Committee for Aeronautics, near Sandusky, Ohio.

The new $5,000,000 facility will be used by NACA in the study of problems of aircraft nuclear propulsion systems. The reactor unit will be staffed and operated by the Lewis Laboratory, located at Cleveland.

IFR-IQ?

According to OpNav Air Traffic Control Procedures Section SCAT is short for 'Security Control of Air Traffic.' "All pilots and aviators are directed to guard a CAA or Control Tower frequency at all times. In the event of an emergency (concerned with Air Defense activities), SCAT directives will be broadcast over these frequencies. VFR flights may expect to be ordered to land at the nearest facility. IFR flights will proceed as directed by ARTC."

Ref: RaFacs dtd 29 August 1956, page 214.

CONTENTS

● COVER

Sidewinder, new, inexpensive member of Navy's guided missile family is now in use with units in the Sixth and Seventh Fleets.

● SUBSCRIPTIONS

Naval Aviation News is now available on subscription for a $2.25 check or money order made payable to Superintendent of Documents, Government Printing Office, Washington 25, D. C.

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● Printing of this publication has been approved by the Director of the Bureau of the Budget, 12 April 1955.

NAVAL AVIATION

Published monthly by Chief of Naval Operations and Bureau of Aeronautics to disseminate safety, training, maintenance, and technical data. Address communications to Naval Aviation News, Op-05A5, Navy Department, Washington 25, D. C. Office located in room 5E573 Pentagon; Telephone extensions 73685 and 73515.

SQUADRON INSIGNIA

THE E(X)TERNAL triangles, worn on the jackets of Navy men on opposite sides of the world gives a change of pace from circular squadron patches, and a chance for a 'Bennett Cerf.' Heavy Attack Wing Two's eagle offers an olive branch of peace, or a weapon of devastating attack. The motto, translated, means "We shall find a way or we shall make one." FAW-6, of Iwakuni, boasts "Deeds Not Words." On the shores of ol' Virginny lives NAOTS Chincoteague, testing grounds for much of Naval Aviation's ordnance. And back in the Far East is NAS Iwakuni whose patch, with FAW-6's, features the Grand Torii of Itsukushima shrine.

HAtWing-2

FAW-6

NAOTS Chincoteague

NAS Iwakuni

TRAVELLING RESERVISTS

NAVAL AVIATION
NEWS

Two Weekend Warriors are shown with the familiar Rock of Gibraltar in the background. A member of the RAF obligingly identifies a point of interest. It happened during an annual training duty cruise of two Glenview Reserve squadrons, during which they covered the Mediterranean area. While travelling, these men are learning, adding to their military skills, and serving their country. They are increasing their personal incomes and earning points for future retirement income. You can join them in the Naval Air Reserve. Contact the nearest Naval Air Reserve activity. You'll like it!