



Rebirth of an Italian Legend

Photographs by DAVID A. ANDERTON

Today the oldest airworthy Italian airplane is a beauty to behold, reflecting the flair for line and shape, and the craftsmanship of the best woodworkers, so characteristic of Italian designs. This Ansaldo S.V.A. 9, one of Italy's truly unique and great airplanes, awaits return to its native land to excite the aeronautical world to the greatness of Italian aerial achievements of more than a generation ago.

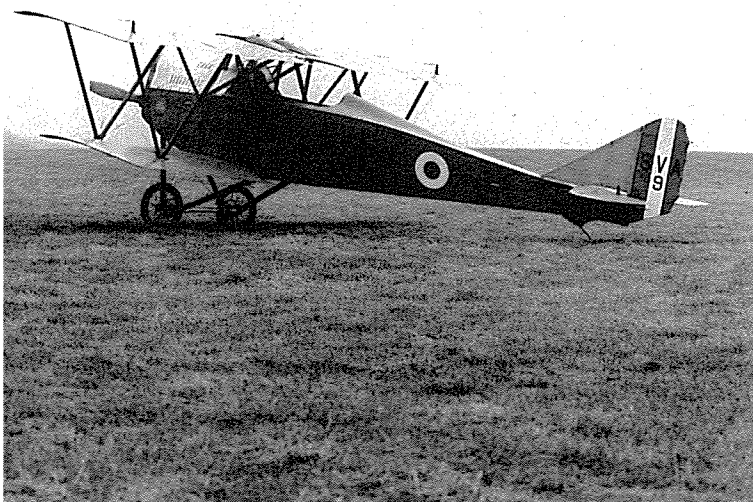
Arturo Ferrarin, one of Italy's foremost pilots, flying an S.V.A. 9, made an epic journey from Rome to Tokyo in the year 1920. To appreciate that, it should be remembered that in the post-WWI world, not too friendly, the flight covered trackless deserts and jungles by way of Baghdad, Karachi, Calcutta, Rangoon, Bangkok, Canton and Pusan. Ferrarin, with his mechanic, Gino Capannini, started from Rome on February 14th, 1920, and was first to reach Tokyo on May 31st. Ferrarin left his airplane in Tokyo on completion of the journey, where it remained on display in the Imperial War Museum until (probably) destroyed in the bombings of WWII. Herb Fyfield's restoration, now complete, looks as fresh as the day it rolled from the factory.





il Grande Viaggio





Arturo Ferrarin was breveted a military pilot in 1917 and served with distinction as a fighter pilot until the end of the War. Immediately following he was sent to represent Italy in aerobatic displays in France, Belgium and Holland. Preparations for the flight from Rome to Tokyo were begun in 1919, and his was the only one of eleven airplanes to complete "Il Grande Viaggio." The route shown on the map (opposite page) covered 17,200 kilometers (10,700 miles), and one by one the accompanying airplanes dropped out due to crashes or engine trouble, and in one case, near capture by Arab tribesmen.

Ferrarin's copilot and mechanic was Gino Capannini, who was later to participate in several Italian TransAtlantic flights including the Italo Balbo flight of 1933.

Their flight to Tokyo was, in addition to one of intense concentration and sheer adventure, also marked by minor mishaps such as wiping out the landing gear, but proceeding each time as repairs were made by Capannini. Ferrarin and Capannini delivered the first air mail delivered to China and were generally accorded a tumultuous welcome along the route.

Guido Masiero and his mechanic, Robert Maretta, accompanied Ferrarin as far as Canton, where they crashed and their Ansaldo destroyed. Both survived the crash and were able to join the triumphal party on return to Rome.

Arturo Ferrarin later participated in the Schneider Cup Trophy race on Chesapeake Bay in 1926, and made a

world-famous flight from Italy to Brazil, 7,181 kilometers (4,500 miles) in 1928. He was killed in a crash near Rome on July 12th, 1941. Capannini was killed at Tobruk, Libya, in one of the first actions of the War on June 28th, 1940.

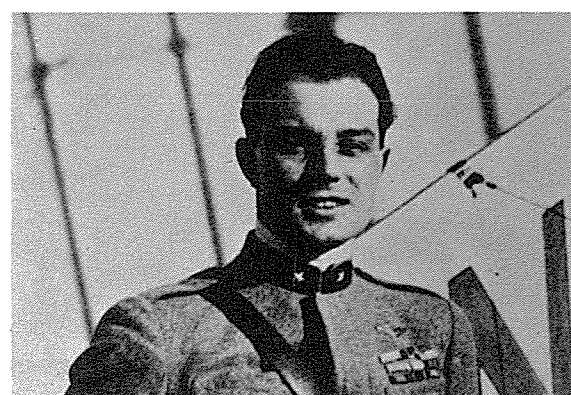
The list of participants in the Rome to Tokyo flight:

Pilot	Passenger	Airplane & s/n
Edoardo Scavini & Carlo Bunalumi	---	Caproni Ca.3 Biplane N.23180
Luigi Garrone & Enrico Abba	Alfredo Momo & Alfredo Rossi	3-eng.- Isotta Fraschini Caproni Ca.4 Triplane N.5380
Leandro Negrini & Giovanni Origi	Dario Cotti	3-eng.-Fiat A.12 bis. Caproni Ca. Biplane N.23181
Virginio Sala & Innocente Borello	Antonio Sanita	3-eng.-Isotta Fraschini Caproni Ca.5 Biplane N.11928
Guido Masiero	Roberto Maretta	3-eng.-Fiat A.12 bis. Ansaldo S.V.A. 9 N.13157
Arturo Ferrarin	Gino Capannini	Same N.11849
Guiseppe Grassa	Mario Gordesco	Same N.13179
Umberto Re	Bixio Alberini	Same N.13195
Ferruccio Ranza	— Brigidi	Same N.13197
Amedeo Mecozzi	Bruno Bilisco	Same N.13200
Ferruccio Marzari	Guisepe Damonte	Same N.13196

The Boeing 747 ARTURO FERRARIN



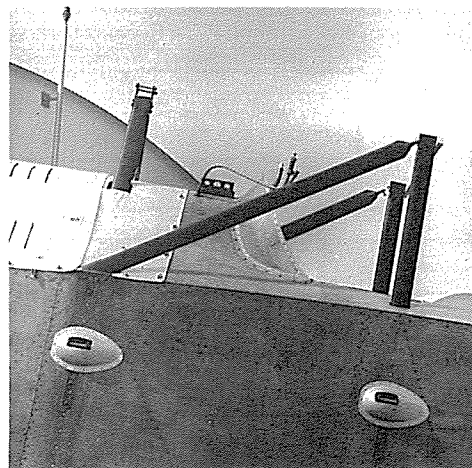
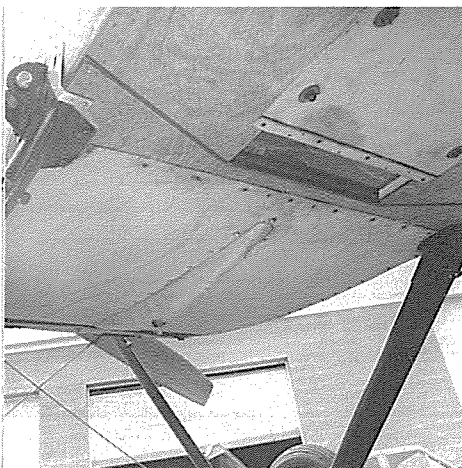
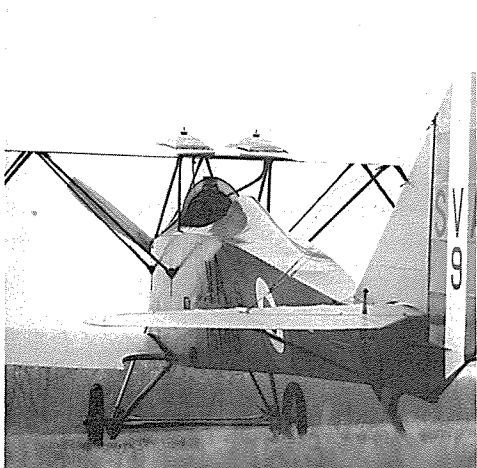
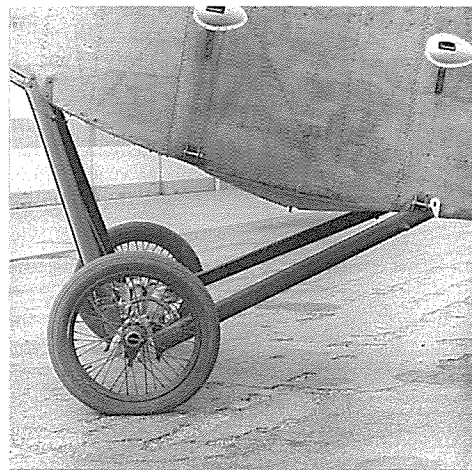
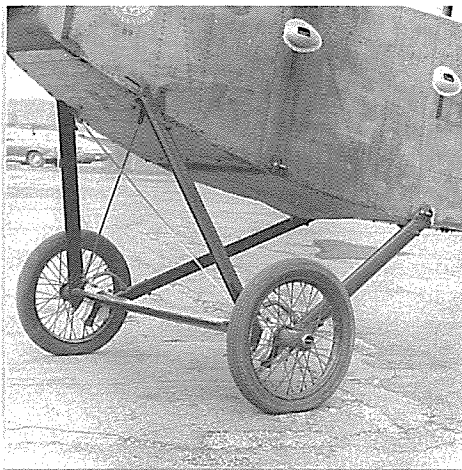
(Photo — Alitalia) Lt. Arturo Ferrarin, c.1920

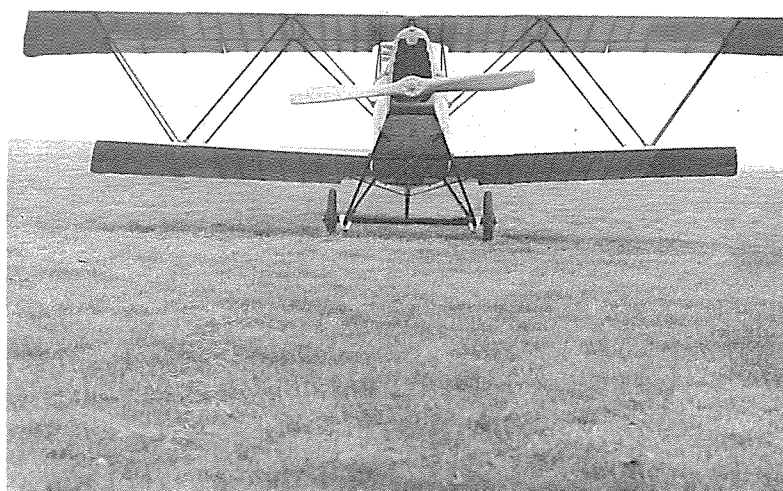




Probably no photographic essay can portray the completely restored airplane better than in the series of round-the-clock views shown here and pages 232 and 233. The camera has caught the symmetry of line, and all of the relationships of the S.V.A. 9 biplane; small wonder that its shape came from much windtunnel study and the craftsmanship from artisans long skilled in the use of wood. Few views shown here require explanation. The one at left of middle row shows minute wheels under the tailskid which are in actuality only skate wheels for ground handling. In bottom row, left, the fuel lines from wing to engine are quite

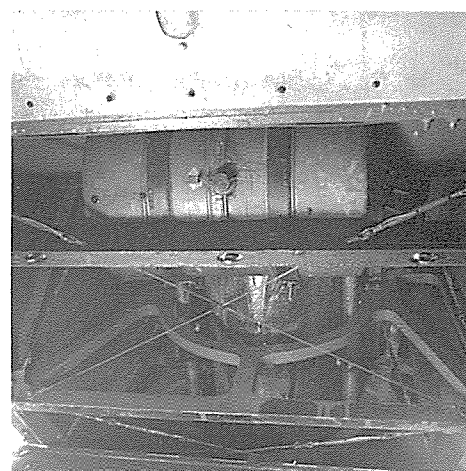
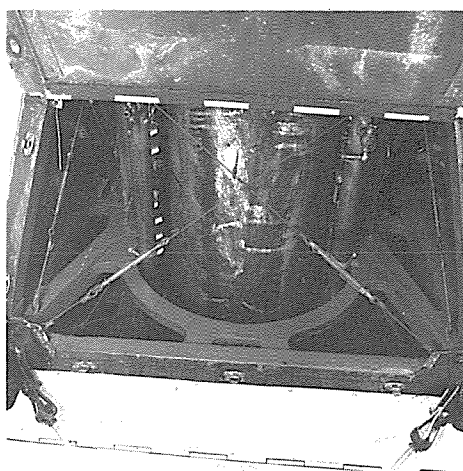
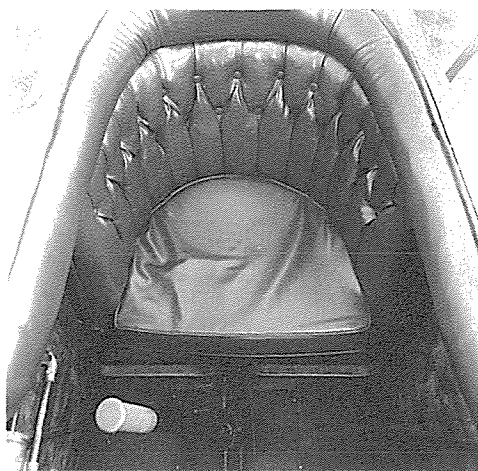
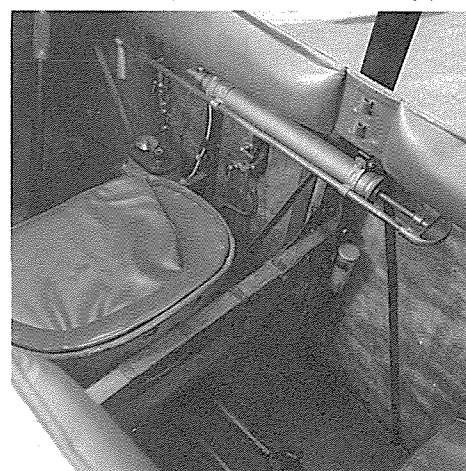
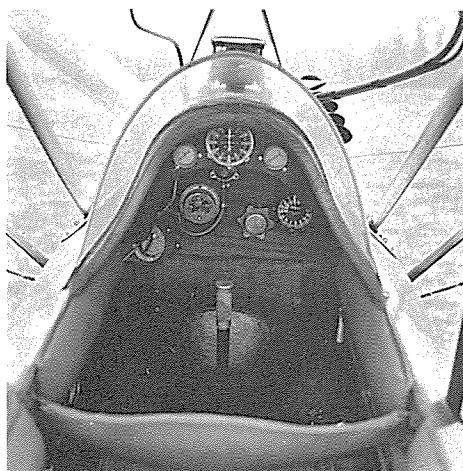
apparent. In bottom row, center, the window in the bottom of the fuselage is shown plus the rear aluminum access panel which allowed adjustment of the controls at the pilot's joystick and rudder bar from underneath. Teardrop shapes (in this case not original pieces) on side of fuselage were streamlining for the wing to fuselage struts which carried the loads into the transverse fuselage frame. Modern motorcycle tires, made by the original manufacturer, Pirelli, were procured and which exactly fitted, thus overcoming one of the chief problems in WWI aircraft restorations.

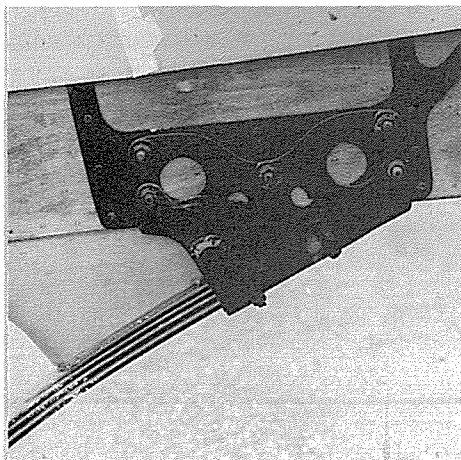
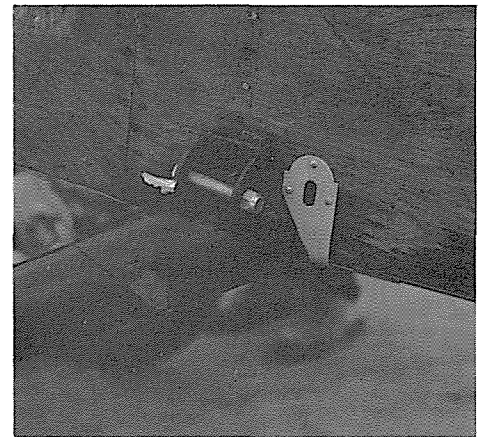
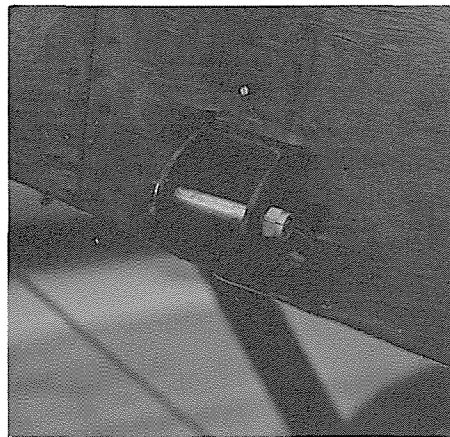
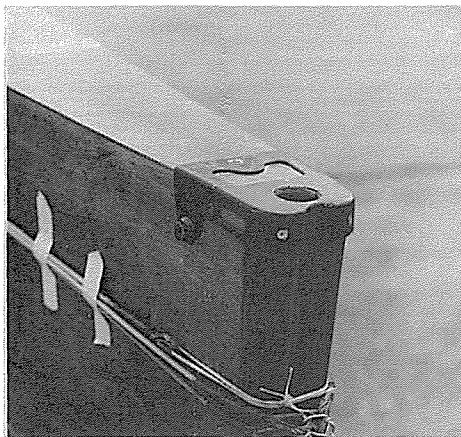
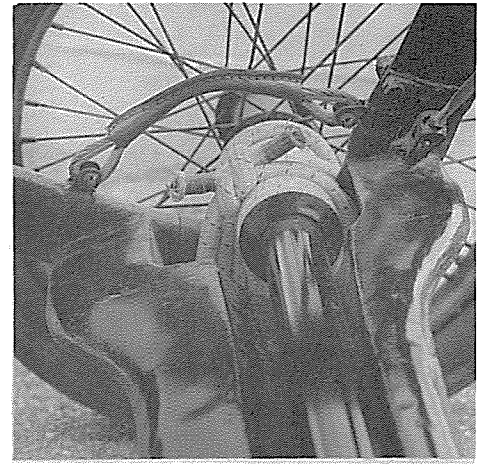
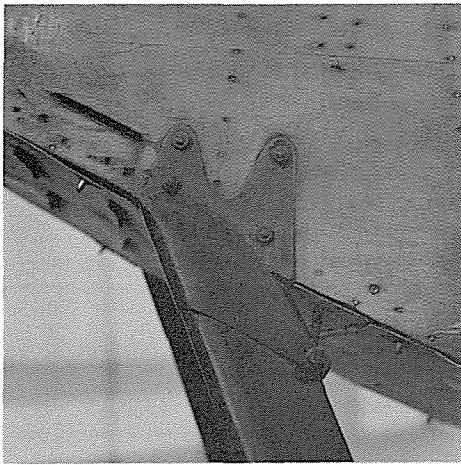
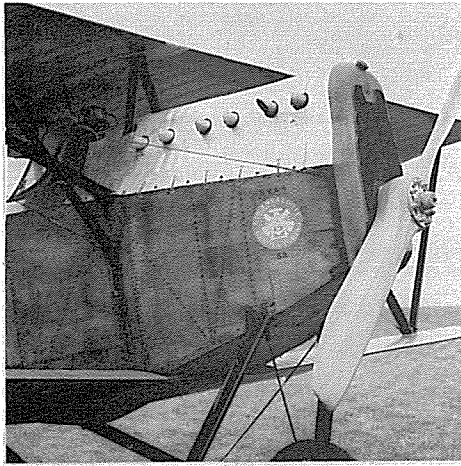




The cockpit opening was well padded all around. The forward seat backrest, removed for photographing left and right side of cockpit, is shown in the center view looking forward. Throttle and carburetor mixture controls are at left side and fuel tank petcocks on both sides. At right side is the fuel tank pressure pump, manually operable from both cockpits. At the forward pilot's knee level, right side, is the engine starting magneto. Instruments in the upper panel were (center), the tachometer, and fuel tank pressure and oil pressure gauges left and right respectively.

A fuel tank safety valve is in the upper part of the more forward instrument panel. Then, from left to right are water temperature gauge, a water pump greaser (the six-pointed sprocket shape), and the altimeter. The ignition switch is at left on a corner bracket. The Sperry compass, mounted atop the cowl forward of the windshield, is one of the first designs made by the company. In the lower right photo is the view from below of the engine compartment. The oil tank is adjacent to the firewall. The lower engine cowl is hinged at forward edge and drops open for access. Center view is through door forward of landing gear.



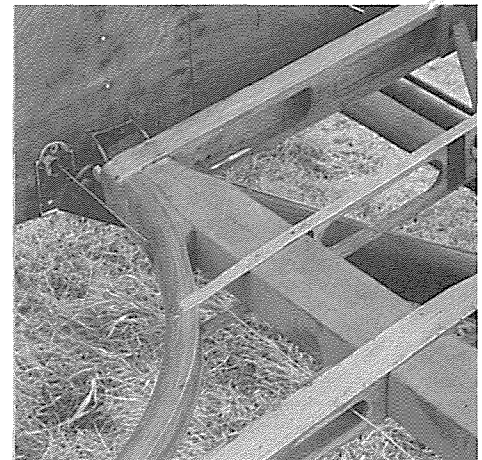


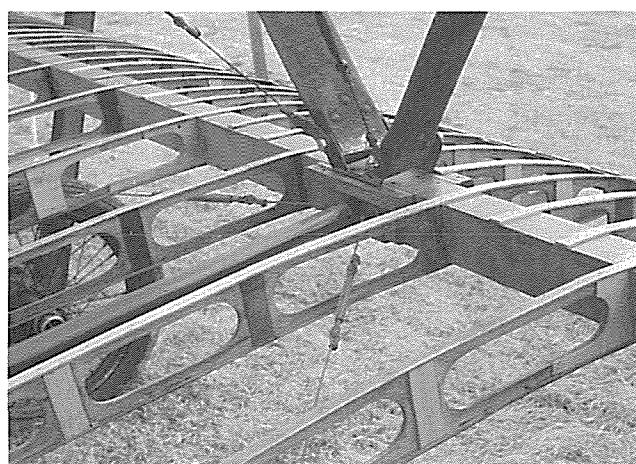
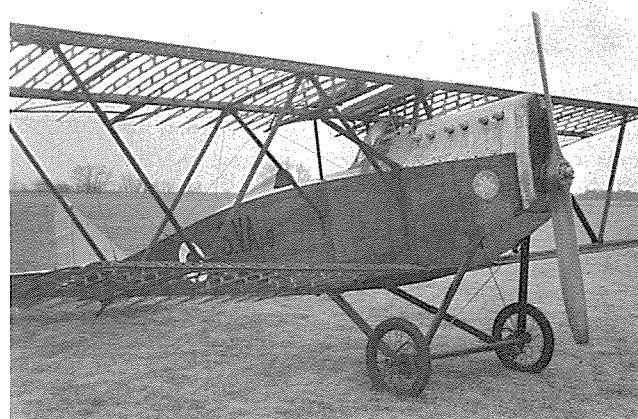
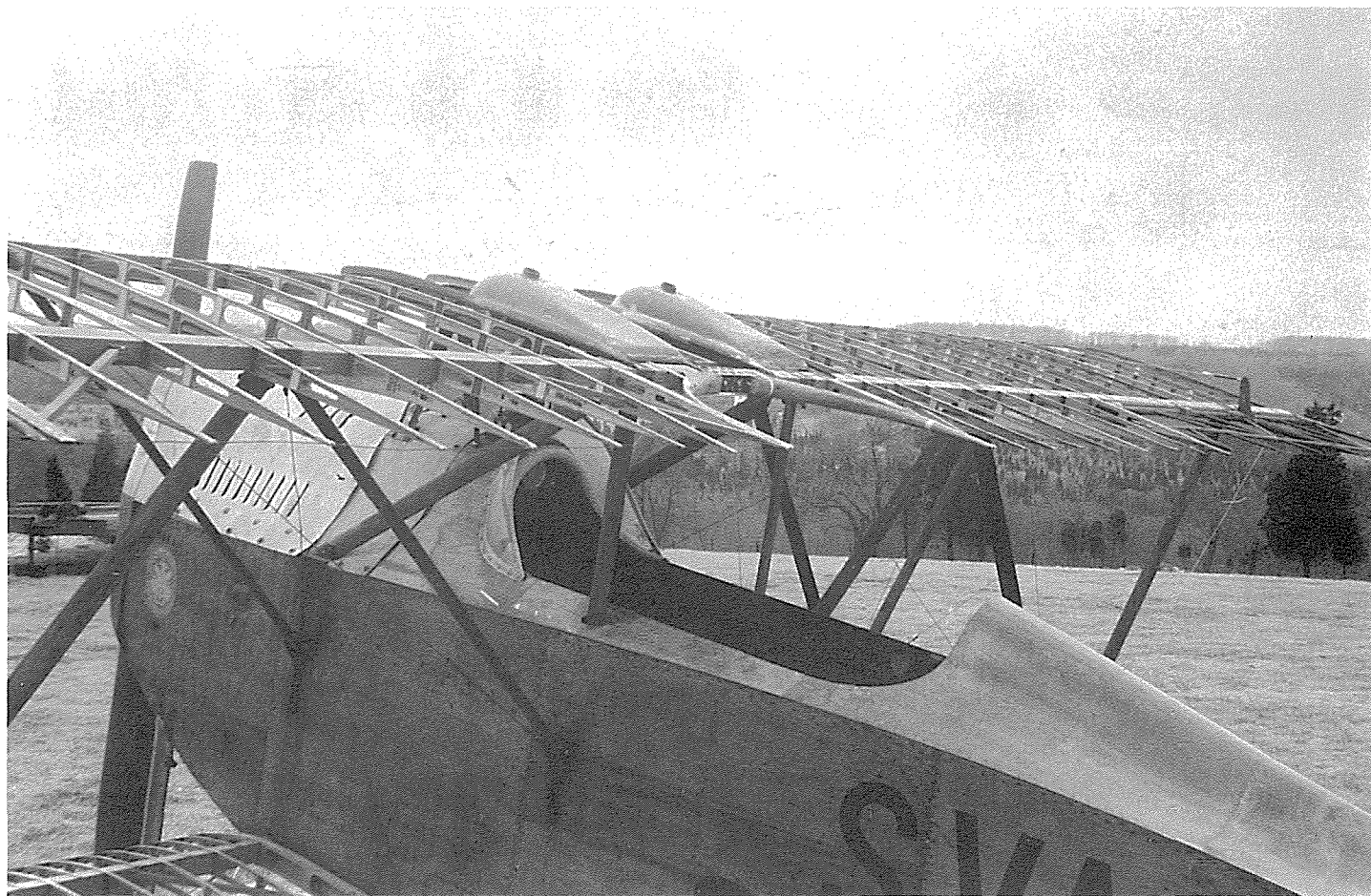
Detail views of the landing gear show careful attention to weight in the design. The landing gear was made chiefly of welded steel tubing. Rubber bungee shock cord went around axle and l.g. structure, with the ends knotted and the loose ends served with wire. A short steel cable was linked between forward and rear struts to act as a limiter to upward movement of the axle.

At left above, the tail post socket for the vertical fin post. Control cables to rudder and elevators are shown temporarily tied to rear of fuselage during assembly.

At lower right, the lower wing attachment to fuselage.

At left (bottom row) the three-leaf spring tailskid attached to the bottom of fuselage with a metal fitting clasped around the structural fitting extending from bottom to top of fuselage. The structural fitting is better seen in the side views of the airplane on pages 232 and 234.

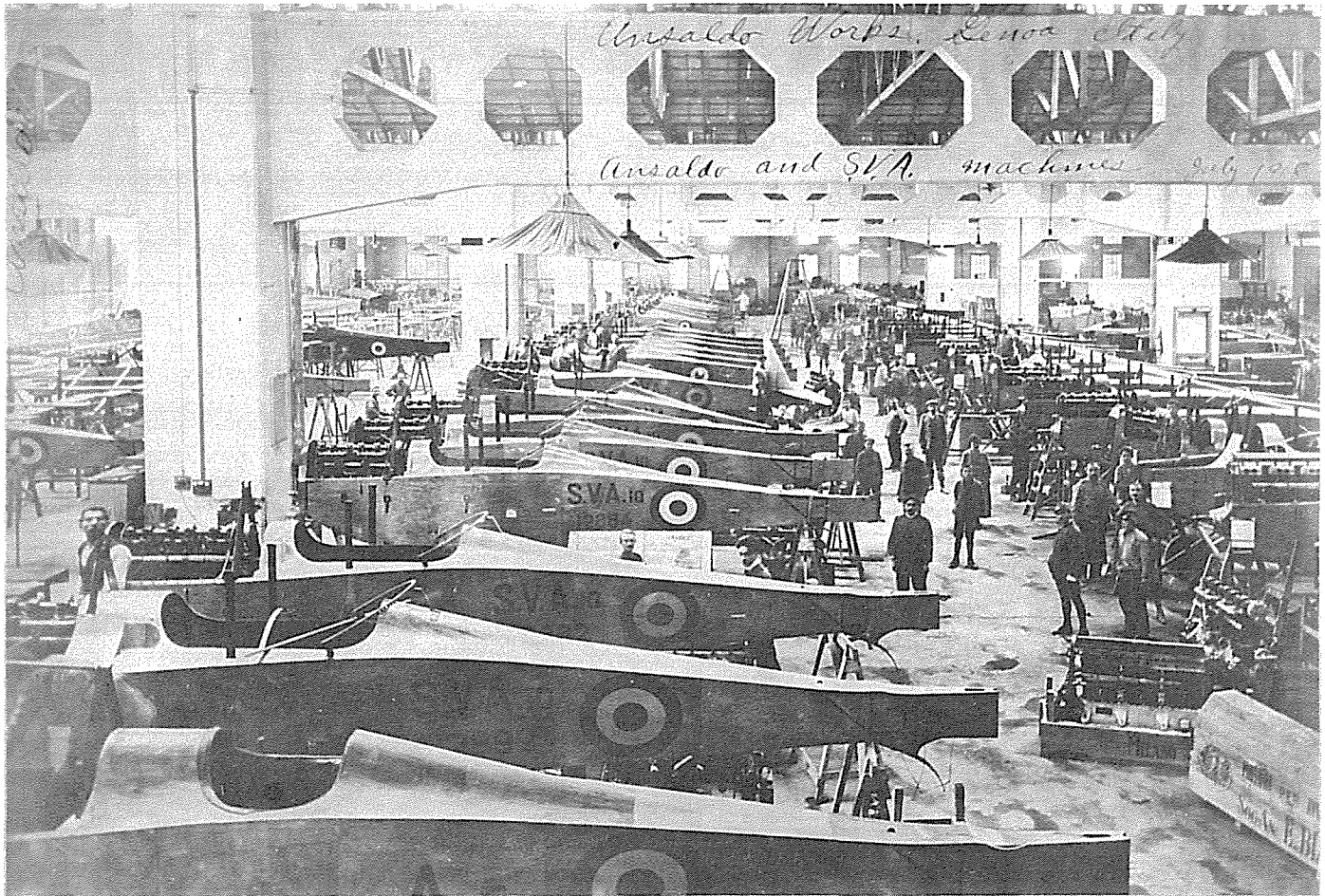




The Ansaldo S.V.A. 9 was discovered in a barn in Peekskill, New York by H.S. Fyfield in 1956. Several years later correspondence with Gen. Giorgio Pocek, Italian Air Attache in Washington, and personnel of Alitalia's Tokyo office, stimulated its refurbishment for display, possibly to be used at the EXPO '70 fair in Osaka, Japan.

Its restoration to flying condition was a time-consuming process, taking almost exactly two years, and was not completed in time. It was done with the advice and assistance of many people in Italy, notably Mrs. Arturo Ferrarin, Mrs. Maria Fede Armani Caproni, and Piero Vergnano, as well as in the United States. Now certificated as fully airworthy by the Federal Aviation Agency, it has several hours of operation time on the engine.

Restoration was done by Reno Benner of Aviation Techniques, Inc., Irwinna, Pennsylvania, using mostly the original structure as a guide, and two original instruction manuals. The propeller was replaced with a new one carved using the original as a pattern. Some of the metal fittings were replaced due to corrosion. The serial number is of an Ansaldo S.V.A. 9 although not necessarily this particular one.



A view of the Ansaldo factory at Genoa in mid-1918.

(Photo - USAF Museum, #35771, File D52.1/28, courtesy of Royal Frey)

The firm of Gio. Ansaldo & Co., Borzoli, Bolzaneto, Genoa, and Turin, Italy, was listed in Jane's 1919 as owned by the sons of the late Comm. F.M. Perrone. At that date not much was known outside Italy of the large engineering firm which had only recently leapt into the aeroplane business with a record-breaking biplane and other aircraft. Some 30,000 workpeople, of a total of 60,000 were then employed in the aircraft manufacturing portion. It was, as usual in many European countries, family-owned.

The famous (in Italy) engineering and shipbuilding concern, Societa Gio. Ansaldo of Genoa, undertook to make aircraft upon a very large scale. This firm, then comparable with Vickers', Armstrong's, or Beardmore's in England, or in Germany with Krupps', was governed by the brothers Pio and Mario Perrone, both of whom were then slightly past forty years of age. Both had shown enterprise in every department of engineering; their aeronautical products were equally original and successful.

The Ansaldo firm had, in 1917, incorporated the S.I.T. (Societa Italiana Transearea, Turin), which held the Bleriot and Voisin licenses for Italy, and the F.I.A.T. Saint-Georgio factory for the manufacture of engines. It was also reported to have absorbed the O. Pomilio Aircraft Company of Turin during 1918 when the Pomilio brothers went to the United States to aid in the production of aircraft. At least one of the Pomilio designs came to the U.S. and was tested at McCook Field, an FLV-8.

The Ansaldo firm built a factory at Borzoli, near Genoa, building on green fields and completed within eight months of its initiation in 1917. An airport site was purchased

about six miles from the factory, the surrounding terrain being unsuited to this purpose. A number of houses were pulled down to clear the ground, and a first-class testing depot was established.

Owing to the difficulty of procuring steel tube suitable for aircraft work, the firm also laid down tube mills to make its own. And as first-class wing fabric was scarce, they installed a silk-weaving plant to make special fabric for themselves.

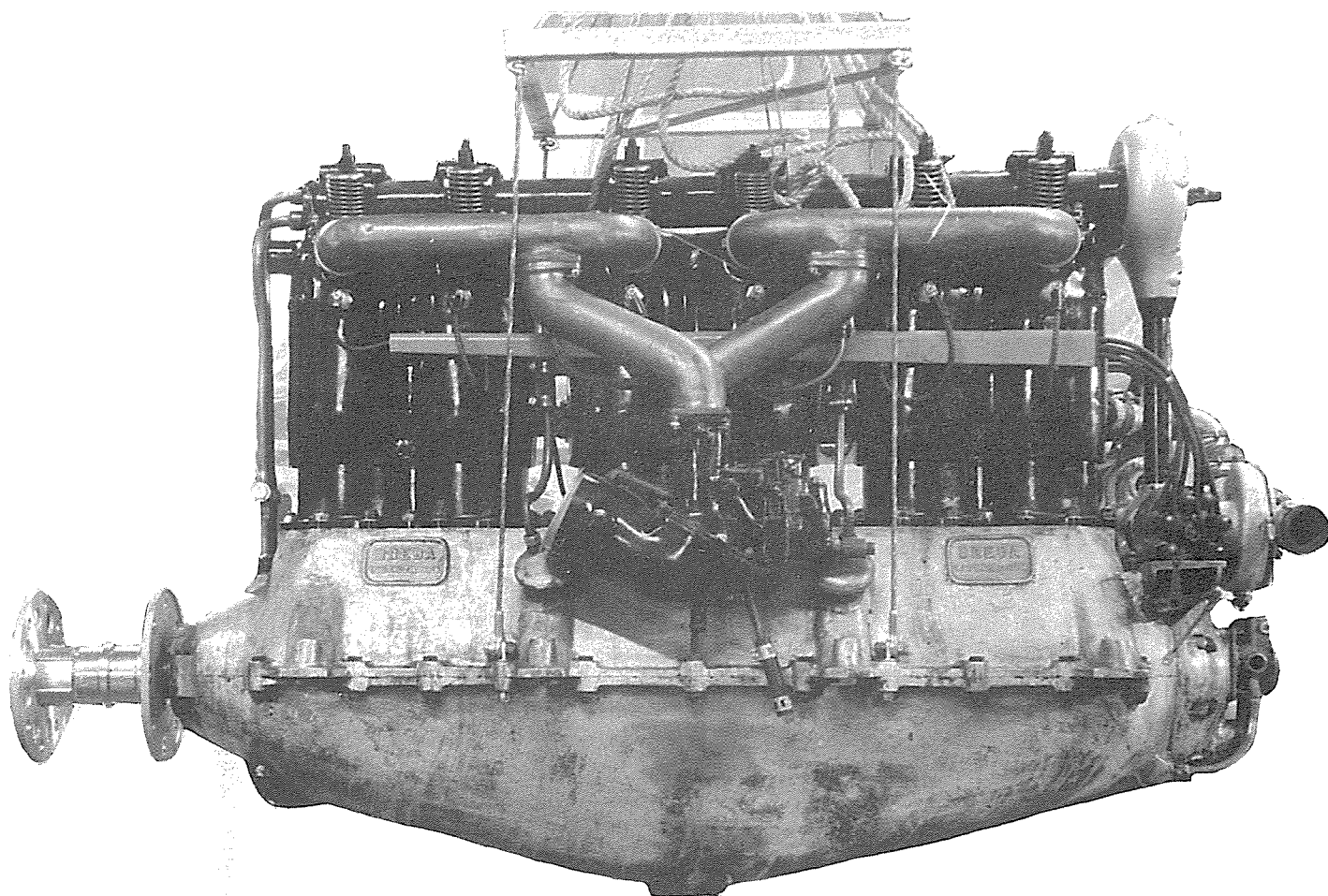
Several of the S.V.A. biplanes of similar design were under construction simultaneously, the S.V.A.5, 9 and 10 types. The designer was the Verduzio in the name - SPA, Verduzio, Ansaldo - S.V.A. Although the engine firm was SPA - Societa Piemontese Automobili - of Turin, the exact connection within S.V.A. is unknown. (Also, the engine in the Fyfield Restoration is a SPA made under license by Breda Works.)

One of the most notable flights of an Ansaldo prior to the end of hostilities was the one by Major D'Annunzio leading a flight of S.V.A. 5's over Vienna on August 9, 1918. The single-seat Ansaldo's made a round trip of more than 700 miles to the Austrian capitol to drop leaflets urging the Viennese to surrender. Major Gabriele D'Annunzio was then commander of the Italian Squadron 87.

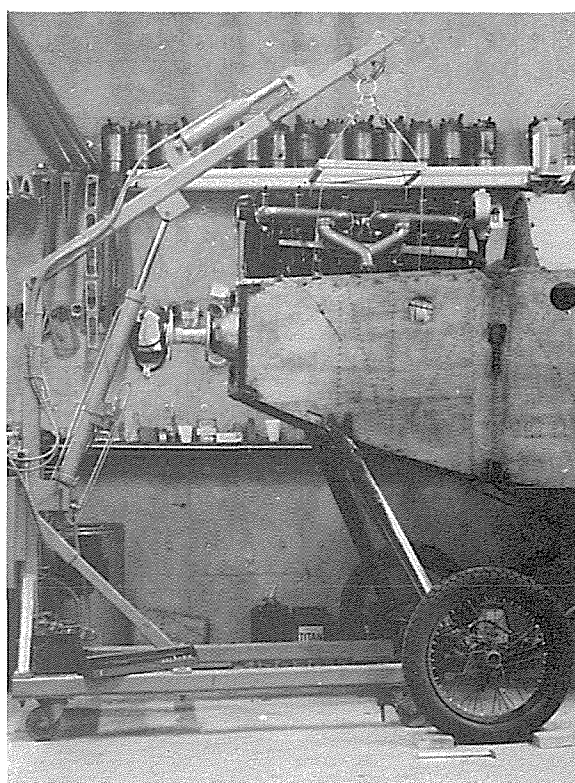
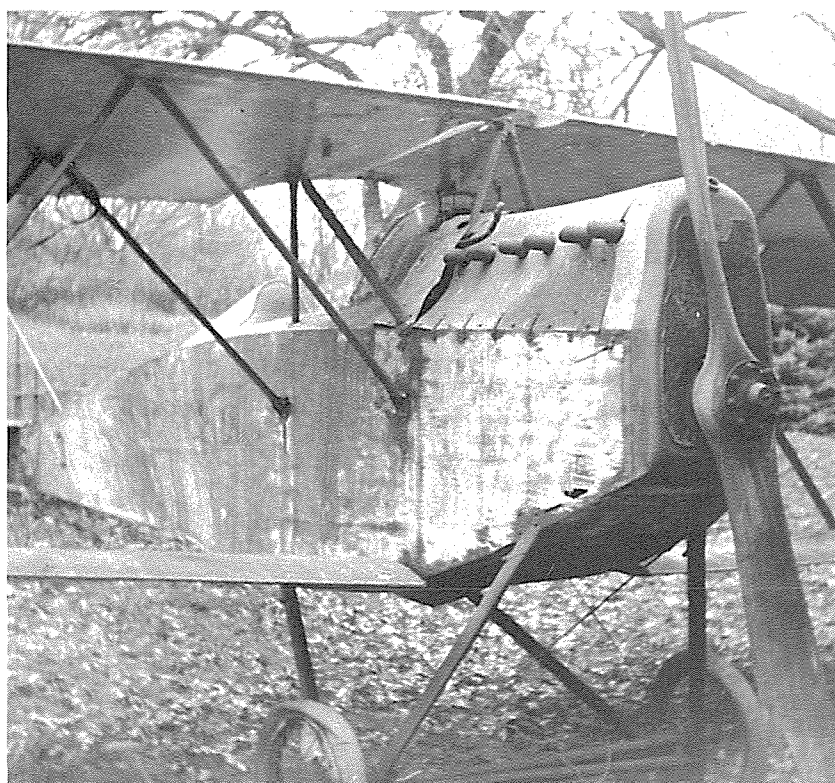
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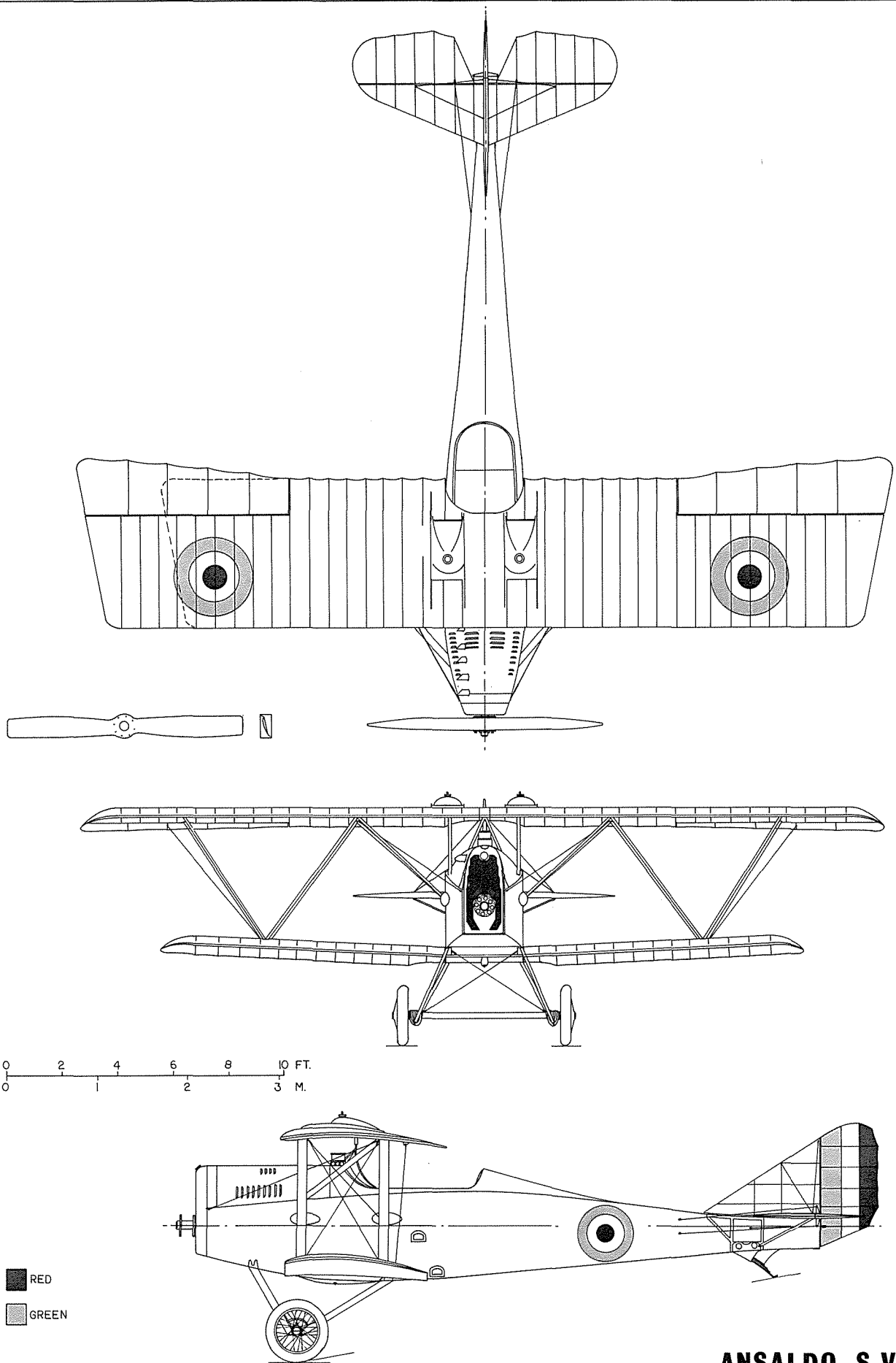
Romera, Luigi. *Roma-Tokio su ali de tela*. Rome: Stato Maggiore Aeronautica, 1970.



The SPA 6A engine, six-cylinder, 200 hp. The bore was 5.31 inches, stroke was 6.69 inches, and full horsepower was developed at 1,600 rpm.

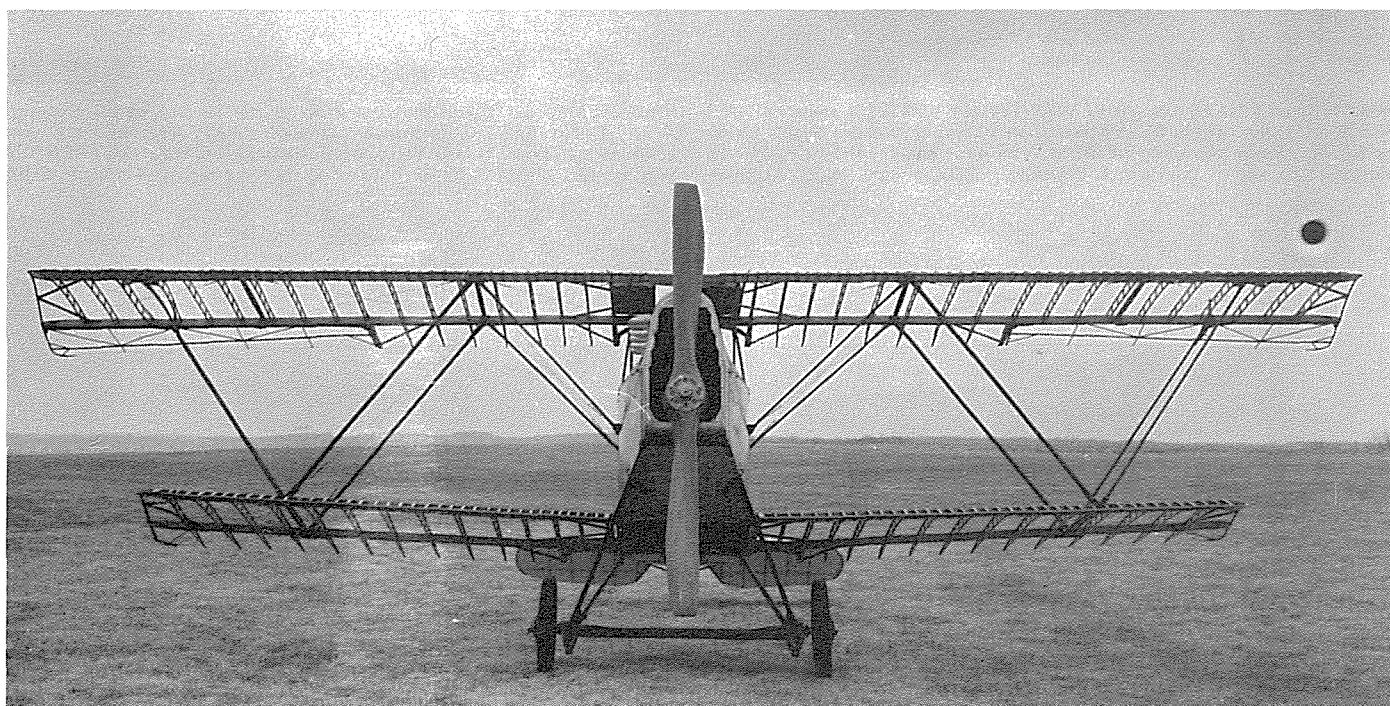


At left, the Ansaldo S.V.A.9 as found by H.S. Fyfield), in the usual state of disrepair of antiques, in 1956. The propeller had been fractured in a crash in 1923. At right, installing the refurbished engine in the shop at Aviation Techniques, c. 1969.





A handwritten contemporary note on the original of this photograph states, "One day's production of Ansaldo works, July 1918." (Photo - USAF Museum, #35772, File D52.1/27, courtesy of Royal Frey)



At left, Fyfield surveys the restoration from the rear cockpit with the professional air of a former Navy pilot. The S.V.A.9 was one of a series of designs put up in the last year of the War which were noted for their speed and excellent flight characteristics.



At right, where the rebirth of this classic began, Aviation Techniques, Inc., at Irwinna, Pa.