

11: AM

Bill landed the de Havilland at Yuma four hours flying time from Clover Field with the consummate skill of the good pilot he was. The field was dusty and the weather warm. He borrowed the field attendant's car and drove into town for food, while I attended to my first love, "the Liberty 12". I serviced the DH with gas, oil and water, then checked the engine for any leaks. It was clean and there were no signs of defects.

We left Yuma about 1 P.M., and I lunched on the sandwiches and milk Bill had brought, while we were enroute to Lordsburg, New Mexico where we would stop over night. The next four hours were uneventful, but the barrenness of the country made us glad we had installed a new engine before we left Clover. Bill was as good a navigator as he was a pilot and we hit Lordsburg right on the nose. We landed and taxied up to the lone hangar, both very tired, hungry and with a thirst water would not quench.

Leaving the plane for the Sergeant attendant to service, we drove into town with a salesman who had stopped to watch us land. After a hot bath, a change to clean clothes and a good dinner, we felt better. Bill, having been up late before our start, was all in and retired for the night. But me, this was all new, and I didn't want to miss anything and the salesman and I did the town.

Before the evening was over, I found out what he was selling--an item the Volstead Act (prohibition of the sale of alcoholic beverages) forbade. I guess I had impressed him with aviation talk, for before I retired to the hotel, he gave me a pint of the vile gut remover. The next morning it had its effect on me. I tried vainly to live up to its name, so when Bill and I arrived at the field, early in the morning, I had more pressing personal problems to contend with. However, I asked Bill to let me check the fuel, oil and water before I cranked up the engine. He shook his head, saying the sergeant had taken care of that and that I should attend to my personal problems while he warmed up the engine. So it was done Bill's way.

A short while later we took off on the third leg of our flight and headed for Dryden, Texas. About two hours out, flying at 12,000 feet, we found our oil pressure gauge fluctuating. Dropping the nose of the plane, we registered low oil pressure; raising the nose, we got a little higher pressure reading, but still under normal. We both knew we were low on oil, and a quick glance at the map showed we were about 25 miles or so from Marathon, Texas.

Bill reduced power and bobbed the nose every few minutes to get what oil we had to the oil pump at the rear of the Liberty engine. The best aid we had though, was the 12,000 feet of altitude which sure helped stretch our glide until Bill could pick a retired grain field east of Marathon and set the DH down very gently.

In a short time, the population of the town came out

to see us while we investigated and found there was less than a quart of oil in the tank. Bill checked the plane's log book and then turned to me.

"Jim, that sergeant didn't add oil when he serviced the plane. Our hours in the air and the last oil I put in at Yuma check with oil consumption."

So we knew. The sergeant had forgotten that we used oil, too. Bill drove into town with one of the townsman and before long, a gas truck was out to service the plane. There was also more food for Barton.

Quite a crowd had gathered around the plane and many took pictures of Bill and me. Then he turned to me and said that the next time I wanted to check our own plane for fuel, oil and water, to go right ahead and pay no attention to him. (Many years later I was to learn that Bill, despite all of his flying experience, learned a lifelong lesson that day, but we will come to that.)

We left the fair city of Marathon and again headed for Dryden and more gas, oil and water. It was late in the afternoon when we took off from Dryden for the fourth and last leg of our flight. Kelly Field was our goal, and shortly after sundown Bill motioned for me to lean forward and asked me if we should sit down in a field or go on to Kelly. It was a bright evening, the engine was running smoothly, so I yelled to him that he was the pilot and it was O.K. with me to go on. He gave me a big grin, made brighter by the griminess of his face. Yes, both of our faces were grimy from the engine's exhaust.

So it was that about 9:30 P.M. we saw the long rows of white hangars that again said Bill's navigating had been right on the nose. We landed and were escorted to the transient hangar by the officer of the day, and he asked us who we were and where we were from. Bill replied we were Lt Taylor and Sergeant Barton from Crissy Field, and the O.D. held up a jug and said, "Welcome to Kelly."

That anti-Volstead juice sure perked our own oil pressure up, especially Bill, who was dead tired after flying the entire trip--there were no controls in the rear cockpit. We washed up a bit in the O.D.'s quarters and then were driven into the St. Anthony Hotel in San Antonio where almost the entire "Wings" troupe was in the lobby to greet us.

In 1938, at the Cleveland Air Races, I again met Bill. He was then flight commander of a pursuit squadron from Selfridge Field that was flying Seversky P-35s. Bill greeted me like a long lost brother. We talked about many things, but as we parted Col. Taylor said, "Jim, that lesson I learned from you at Marathon, since that day I never took anybody's word about my aircraft's fuel. I always checked it myself and twice it paid off. I want to thank you, Jim." We shook hands and parted.

God took his arms from around Bill a few years ago and he flew west. But He still has His arms around me.

The Many Faces of 22-1117

Tests of radiators with equal cooling ability, to determine which position of mounting would afford maximum airplane speed, were made between 14 February and 12 August 1924 at the Air Service Engineering Division, McCook Field, Ohio. A de Havilland DH-4B, 22-1117, with steel engine mount which was readily adaptable to the installation of radiators in different positions, was used for the tests. (See photos, next two pages.)

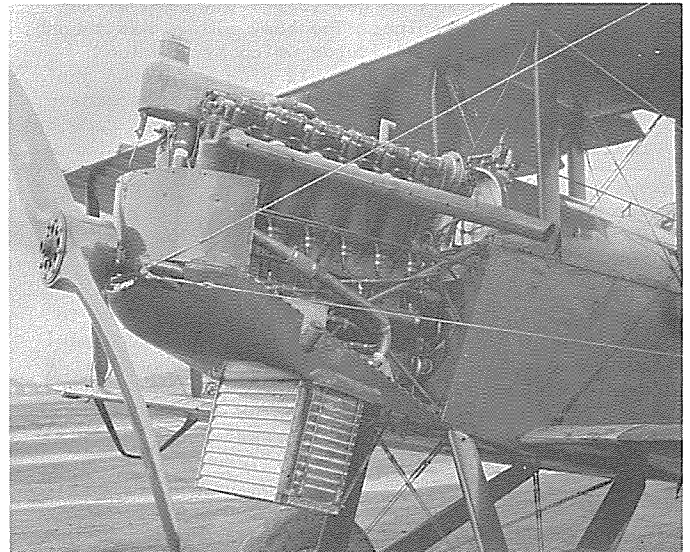
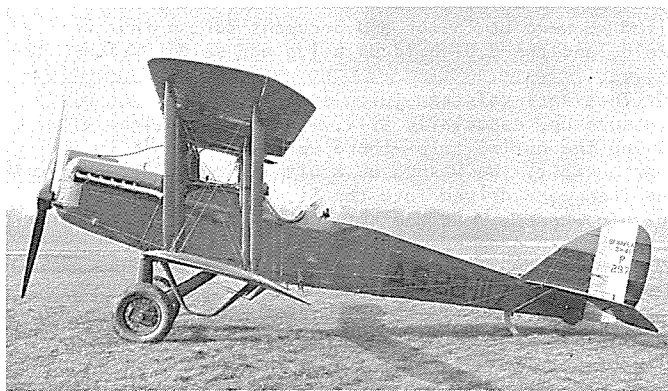
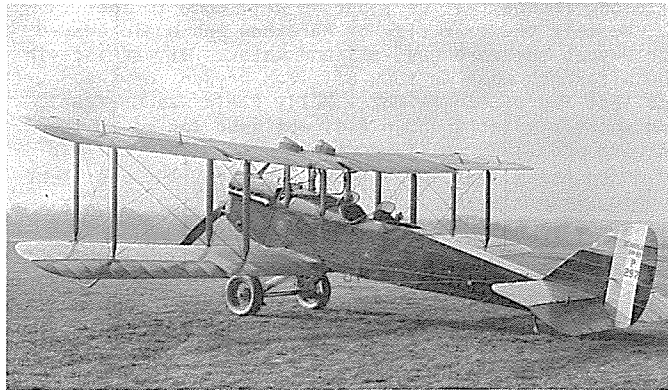
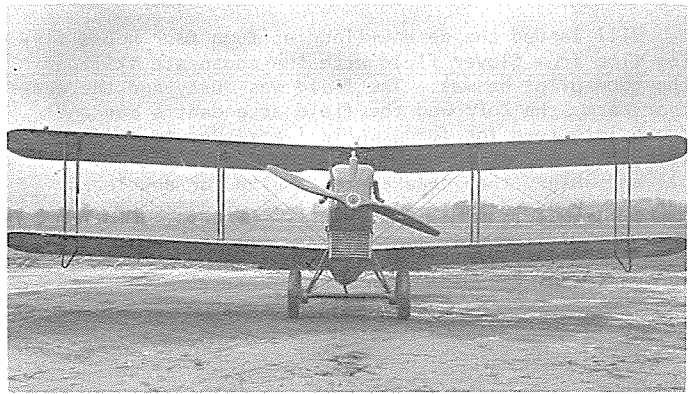
No. 1 was the Curtiss "Wing Skin" radiator with an overall span of 14.7' covering 81 sq ft of wing area and having a total cooling surface of 243 sq ft. With it engine developed 415 hp, plane reached 125.6 mph, but it failed cooling requirements in level flight by 20°C.

No. 2 was a free air radiator mounted below the en-

gine with a frontal area of 3.52 sq ft and having a total cooling surface of 291 sq ft. With it the engine developed 397 hp, plane reached 117.25 mph, but it failed cooling requirements in level flight by 50°C.

No. 3 was a pair of Type D Lamblin radiators with a frontal area of 2.62 sq ft and having a total cooling surface of 230 sq ft. With these the engine developed 404 hp, the plane reached 117.7 mph, but cooling requirements were failed in level flight by 19°C.

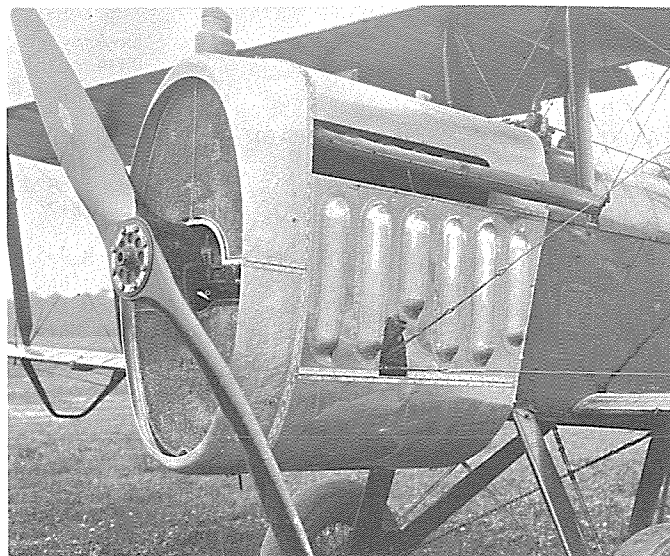
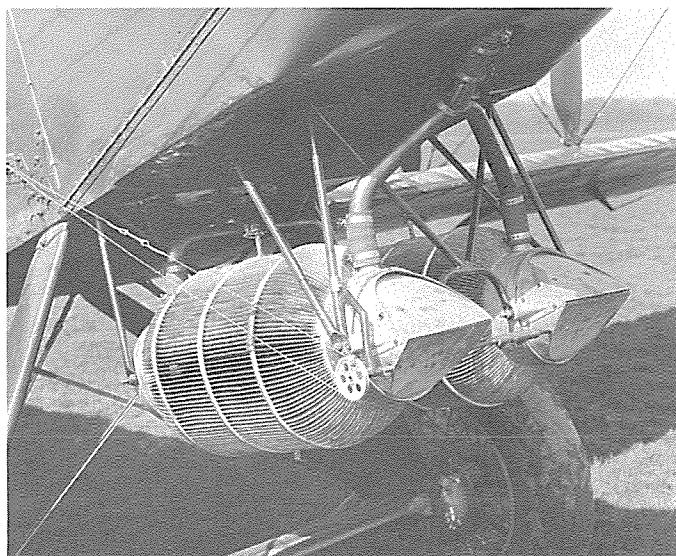
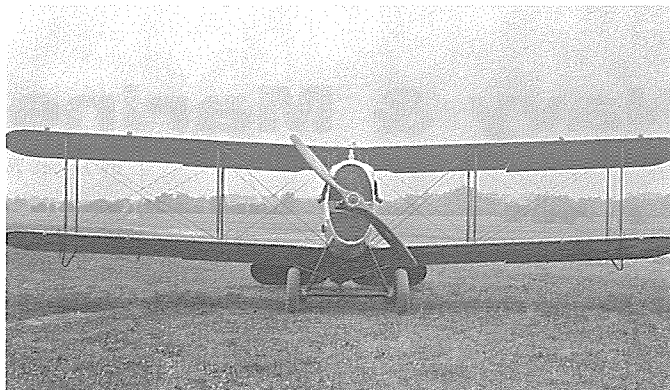
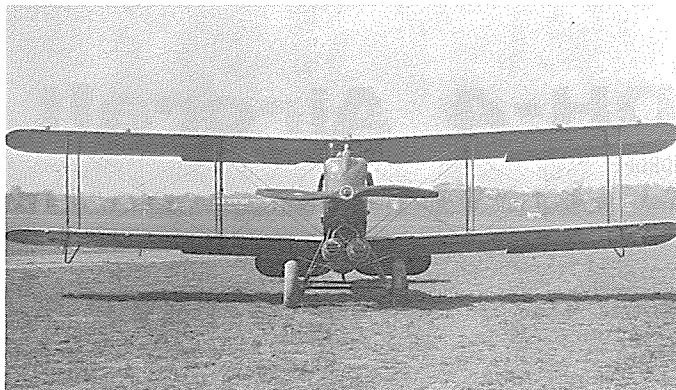
No. 4 was an Oval nose radiator of conventional type with a frontal core area of 6.4 sq ft and a total cooling surface of 310 sq ft. With it the engine developed 408 hp, the plane reached 117.2 mph, but cooling requirements were failed in level flight by 10°C.



Curtiss "Wing Skin" Radiator

Free Air (Underslung) Radiator

All Photos - USAAS from Walter M. Jefferies, Jr. Collection



Type D Lamblin Radiators
All Photos - USAAS from Walter M. Jefferies, Jr. Collection

Oval Nose Radiator