KEEPING THE AIRACOBRAS FLYING

A CREW CHIEF FROM THE 1st AND 31th PURSUIT GROUPS REFLECTS ON THE AMOUNT OF WORK IT TOOK TO KEEP THE NEW BELL P-39 OPERATIONAL

BY RAYMOND J. TELICZAN, SR. (LT. COL. USAF, RET.)

As noted in the story, the prototype Airacobras were things of beauty in gleaming polished aluminum and even looked like they were going fast when sitting still. In this photograph, Bell test pilot Jack Woolams has rolled down the right window in the auto-style entry door while he flies close formation on the camera plane.

From the initial introduction of the Bell P-39 Airacobra at Selfridge Field, Michigan, during early 1941 to the final, tearless farewell and abandonment of a field full of Airacobras at Grenier Field, New Hampshire, in late July 1942, my personal experiences as a crew chief with the Bell fighter may be something considerably less than wildly enthusiastic. With sincere and due respect for the designers of the basic airframe, the evolved machine which Air Corps' changers foisted on the maintenance people proved to be a heart-breaking, knuckle-busting experience in bitter frustration.

Disappointment was all the more keen because the aircraft was a really beautiful thing to behold. Why, it looked like it was doing 600 mph just sitting on the ramp! But alas, aesthetic admiration rapidly waned among the ground crewmen, giving way to piteous despair with each accumulated flying hour and each new tech order change. There was a popular theory as to how to end the war which made the rounds in the ranks during 1942. It suggested that the enemy be coerced into "capturing" all of the P-39s — they'd then be so busy keeping abreast of tech order compliances that they would have precious little time and energy left for fighting.

I suppose "disillusionment" would most aptly describe our emotion upon first encounter with the P-39. Earlier, we had been exposed to some advance data and publicity photos that extolled the fantastic performance characteristics of the "Airacobra Interceptor." Undoubtedly, that advance billing must have described the XP-39. The service versions of that machine, with their heavy armor plate, thick bullet-poof glass, girder-like turn-over structure, etc., quickly earned themselves the unglamorous title of "Lead Sled." The P-39s even came equipped with those flat profile tires, presumably to keep them buoyant over sodden terrain.

Right from the start, the P-39 literally and actually smelled like trouble — brake trouble which plagued the type for a long time. The brakes were disc affairs but wholly unlike the latter-day single plate and caliper variety. They had a multiple plate mechanism consisting of plates (discs) alternately flanged to the wheel and to the hub, so that as the wheel rotated one set of discs continually spun with it, sandwiched between it and the stationary set held to the hub. Hydraulic pressure, exerted by an inboard mounted circular-shaped bladder expanding, squeezed the plates together to produce braking action. Even when properly adjusted for clearance, the plates rubbed against each other and this generated heat.

A combination of these things acted in consort to create one of our most troublesome and recurring headaches —burned-out brakes. Apparently, the relatively short runways at Selfridge and the unfamiliarity of the pilots with tri-cycle landing gear operation were basic to the problem. One must remember that our pilots were transitioning from P-40s (and, in some instances, from Seversky P-35s). Once the P-39 hit the runway on all three points, it presented a very clean, razor-sharp frontal area to the relative wind, and did not have the ground effect resistance of the angled wing and empennage of the typical taildragger to which our pilots were accustomed. There was only one way for them to stop that heavy, rolling mass — stomp on the brakes. The Airacobra stopped all right, but in a cloud of rubber smoke and steaming hydraulic fluid!

Often, and I really do mean often, the generated braking heat fused the discs together as though they were welded. Many times, we had to tow fighters back from the end of the runway due to locked wheels, burned flat tires, or boiled out hydraulic fluid. For a period, many aircraft remained grounded for lack of replacement brake plates and tires, the mortality rate of these items being so high. Some of us instituted the practice of leaving off the wheel well cowling and wheel dust plate to facilitate changing tires and brakes. Even during "normal" operations, the brakes heated

Dramatic view of P-39D Airacobras assigned to the 31st Pursuit Group (39th, 40th, 41st Pursuit Squadrons) at Selfridge Field. As war drew closer, the markings began to be toned down. For example, the individual aircraft numbers and the group number had been painted in yellow but this changed to black (compare with the "Contents" page image in the August 2024 issue). The "car doors" were ideal places on which to paint the unit insignia.