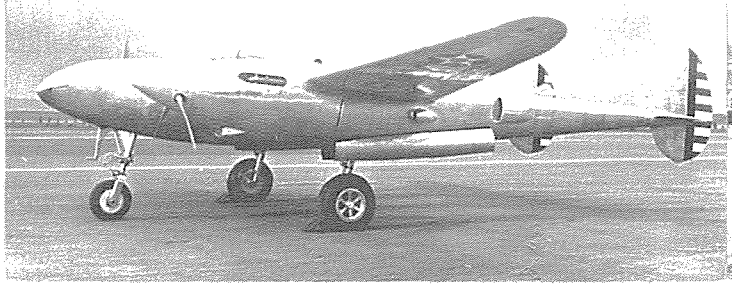
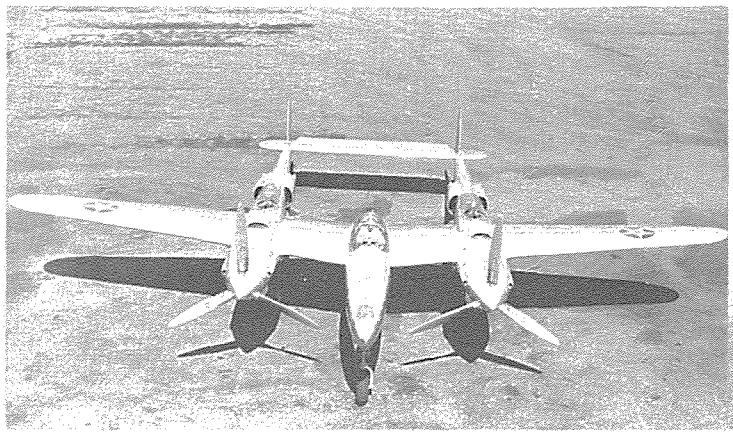
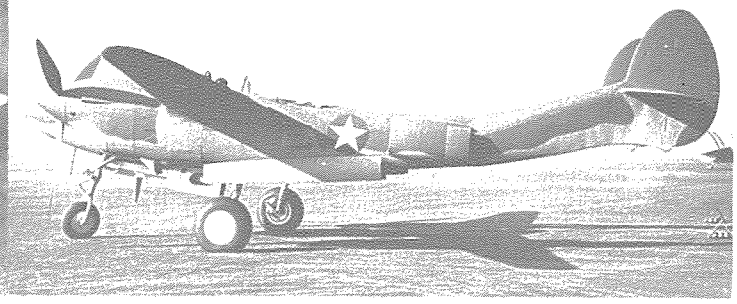


XP-38 (Model 22)

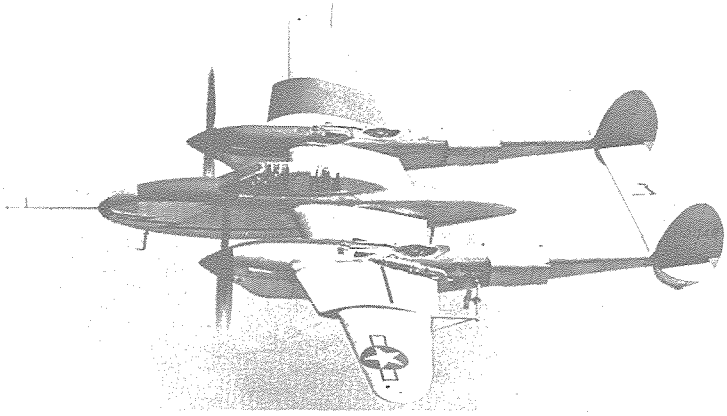
YP-38 (Model 122)



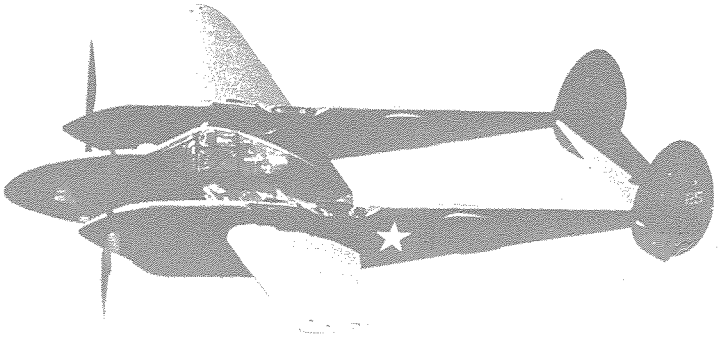
P-38 (Model 222)



P-38 (Model 222) Upswept booms

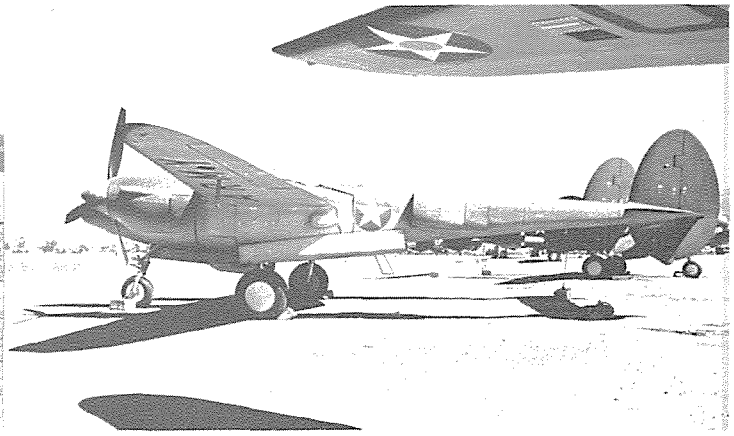


P-38 (Model 222) "Swordfish"



RP-38 (Model 222)

XP-38A (Model 622)



P-38D

All photos courtesy LOCKHEED AIRCRAFT CORP. (Erik Miller)

WORLD WAR II PHOTO PAGE*

by

Gerald H. Balzer

"DER GABELSCHWANZ TEUFEL"

Called "Der Gabelschwanz Teufel" (Forked-tailed devil) by the Germans, the P-38 Lightning first rose to prominence in the North African campaign where it proved to be more than capable of performing in a support role as well as raising havoc among the bombers and air transports supporting Rommel's Afrika Korps. Admittedly not as maneuverable as the Spitfire or the FW-190, the P-38 provided exceptional range, lethal gunnery, and twin-engine reliability.

The "Lightning" was able to perform with a measure of success all tasks assigned to it, ranging all the way from casualty evacuation to the incredible long-range interception of the heavily escorted Ki. 21 of Admiral Isoroku Yamamoto of the Imperial Japanese Navy.

It is interesting to note that all of the more-than-25 variants and/or modifications of the P-38 were developed from seven basic production models: model 22, 122, 222, 322, 422, 522, and 622.

No. 1: XP-38 (22). Born out of an Air Corps specification for a high-altitude, high-speed interceptor, the design of the XP-38 was begun in 1937. Powered by two Allison V-1710-C9 engines, the XP-38 first flew on 27 January 1939. Several weeks later, on 11 February, the aircraft was destroyed upon landing at the end of a cross-country flight. On this flight ground speeds as high as 420 mph. were achieved.

No. 2: YP-38 (122). The thirteen service test YP-38's differed from the XP-38 primarily in the installation of the Allison V-1710-F2 engines. These engines had spur reduction gears instead of the epicyclic gearing in the C9 engines. This resulted in elevating the thrust line and the redesign of the engine cowling.

No. 3: P-38 (222). The P-38 was the first production model and was identical to the YP-38 except for the installation of armor plate, bullet-proof glass, and 4 calibre .50 machine guns in place of the 2 calibre .50 and 2 calibre .30 machine guns.

No. 4: P-38 (222-Upswept booms). Early flight testing of the P-38 brought to light a severe problem of tail buffeting. Inasmuch as the horizontal tail was in the wake of the wing it was thought that this was responsible for the buffeting. The upswept booms were an attempt to move the stabilizer up out of the wing wake. This experiment did not solve the problem and terminated in the tragic death of R. B. "Killer" Virden. The buffeting problem was eventually resolved by changing the stabilizer incidence.

No. 5: P-38 "Swordfish" (222). An early P-38 was modified to conduct high-speed tests with advanced airfoil designs. An engineering observer's cockpit was incorporated into the crew nacelle and equipped with a complete set of test instuments. The yaw meter protruding from the nose provided the "Swordfish" appelation for this aircraft.

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*Acknowledgement is made for the invaluable assistance of Lockheed Aircraft Corp. and Erik Miller who made this presentation possible.

No. 6: RP-38 (222). The RP-38 was an obscure modification of an early P-38, performed by Wright Field, which incorporated a second cockpit in the port boom. The purpose of this particular modification was the testing of pilot reactions to asymetrical flight conditions involving translation in addition to the normal rotation experienced in flight maneuvers.

No. 7: XP-38A (622). The XP-38A was a P-38 (222) modification which constituted an early attempt to develop a pressurized cockpit. Development of this project was abandoned.

No. 8: P-38D (222). The P-38D was identical to the P-38 except for the installation of bullet proof fuel tanks, low pressure oxygen system, retractable landing lights and the omission of landing flares. These changes were brought about by battle reports emanating from Europe and resulted in the first combat-worthy P-38.

No. 9: P-38E (222). The P-38E was identical to the "D" model except for the installation of a 20 mm Hispano cannon in lieu of the Oldsmobile 37 mm cannon, the relocation of the oxygen system in the RH boom, the heated armament compartment, and the modernized instrument panel.

No. 10: Model 322. The Model 322 "Lightning" was built for the RAF as the Lightning I. These aircraft were penalized from the onset by the fact that the higher powered Allison engines and the General Electric turbo-superchargers were not yet cleared for export. This underpowered condition resulted in the airplane being christened the "Castrated P-38". The 143 Lightning I's were modified and delivered to the USAAF as P-38F-13-LO, P-38F-15-LO, and P-38G-15-LO aircraft.

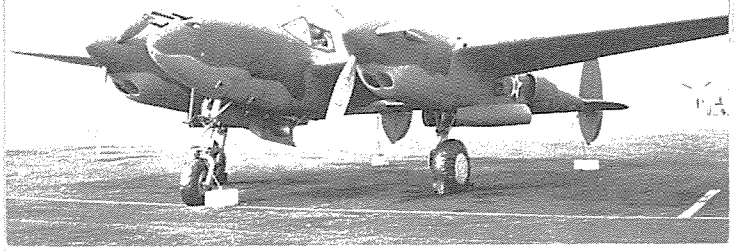
No. 11: P-38F (222). The "F" model was the first truly operational version of the P-38 incorporating underwing racks for bombs and/or fuel tanks. These racks were located between the booms and the crew nacelle and were capable of supporting 1,000 pounds each.

No. 12: P-38F "Piggyback" (222). The "Piggyback" was a training version of the P-38F modified to provide a measure of transitional training. The student pilot was seated (somewhat uncomfortably) on the wing spar behind the instructor. From this vantage point the student pilot became familiar with the flight characteristics of the P-38.

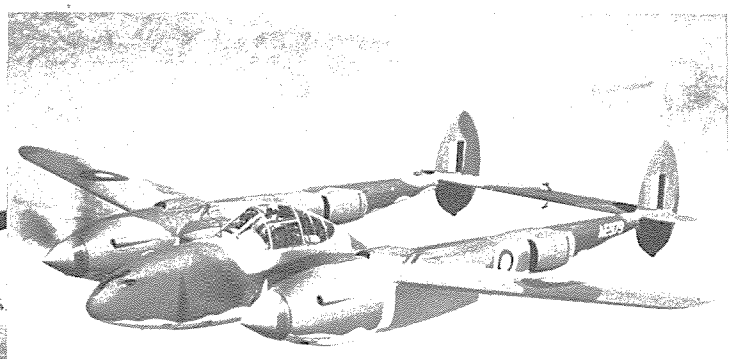
No. 13: P-38G (222). The P-38G is identical to its predecessors except for the installation of the more powerful V-1710-F10 engines and revised wing racks of 2,000 pounds capacity.

No. 14: F-5A (222). The F-5A was one of a long series of photo reconnaissance aircraft consisting of the F-4 (P-38E), F-4A (P-38F), F-5A (P-38G), F-5B (P-38J), F-5C (P-38J), XF-5D (Reworked F-5A), F-5E (P-38J&L), F-5F (P-38J), and the F-5G (P-38L). No armament was carried by these aircraft, relying on their speed only for protection. Approximately one out of every ten aircraft produced was modified to the photo reconnaissance configuration.

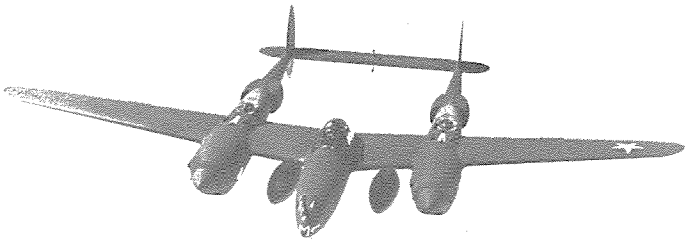
No. 15: P-38H (222). Similarly the P-38H differed from its predecessors by the installation of the V-1710-F15 engines rated at 1425 horsepower. The F15 engines were coupled with G.E. B-33 turbo-superchargers for improved altitude performance.



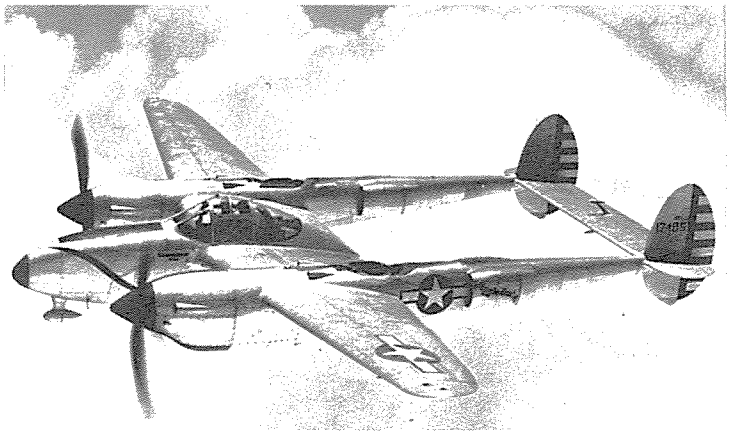
P-38E (Model 222)



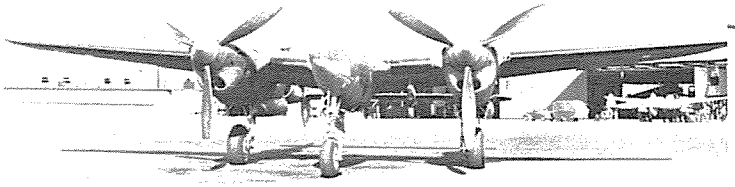
Model 322



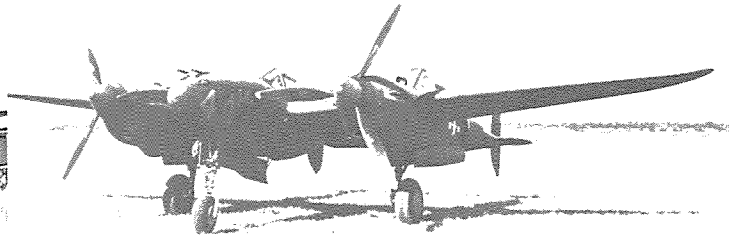
P-38F (Model 222)



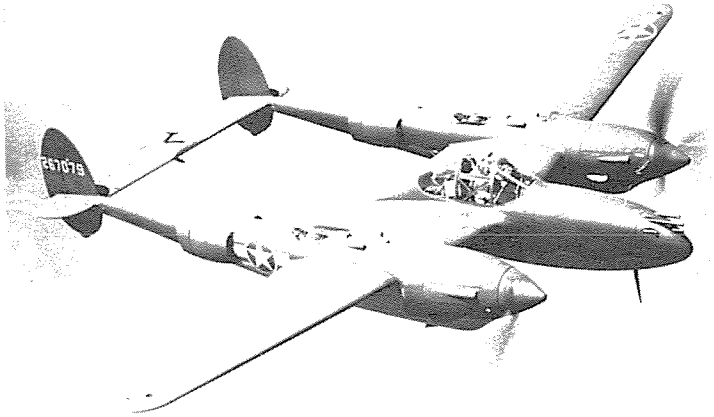
P-38F "Piggyback"



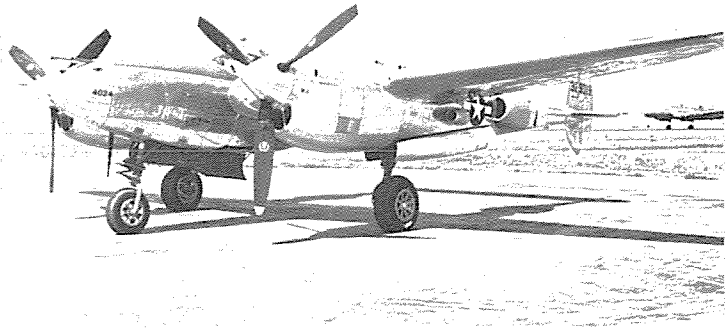
P-38G (Model 222)



F-5A (Model 222)



P-38H (Model 222)



P-38J (Model 422)

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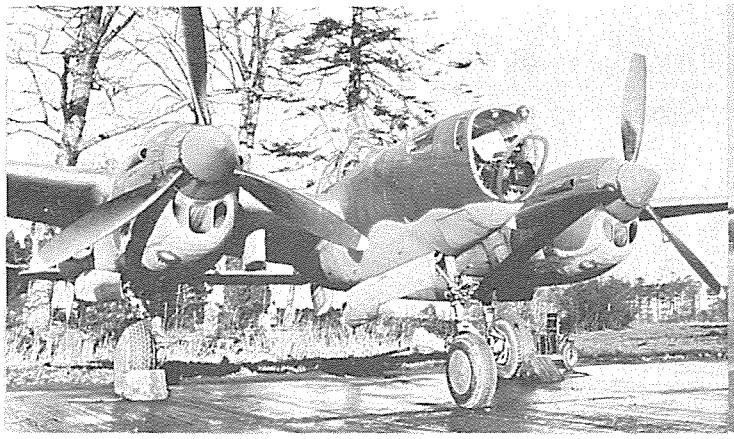
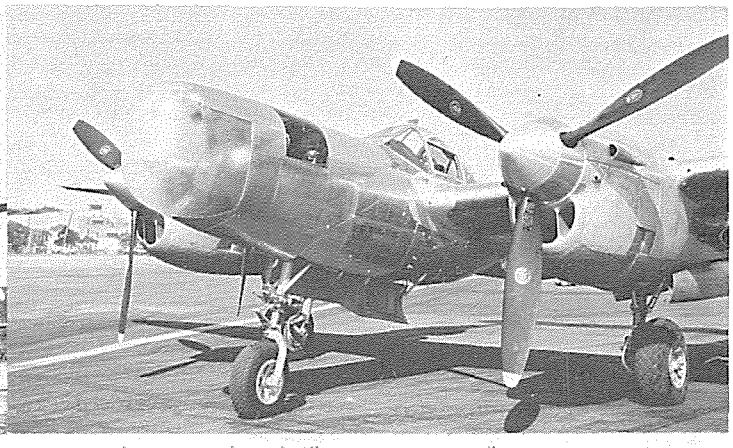
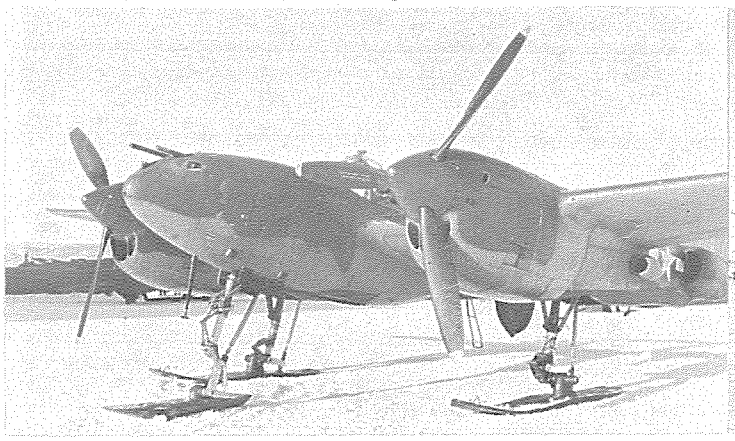


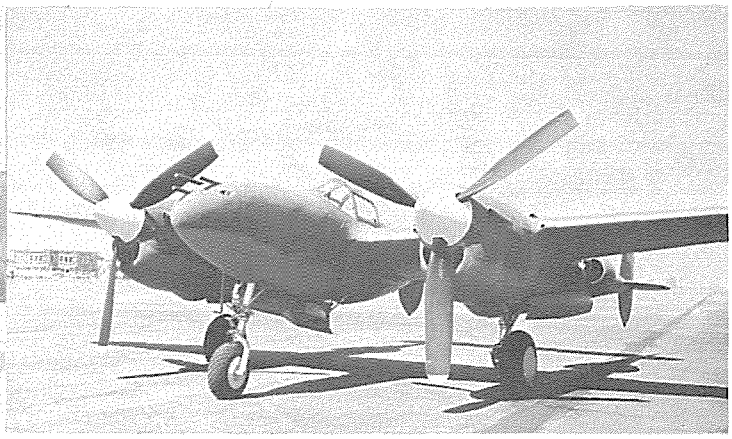
P-38J (Model 422) "Droopsnoot"



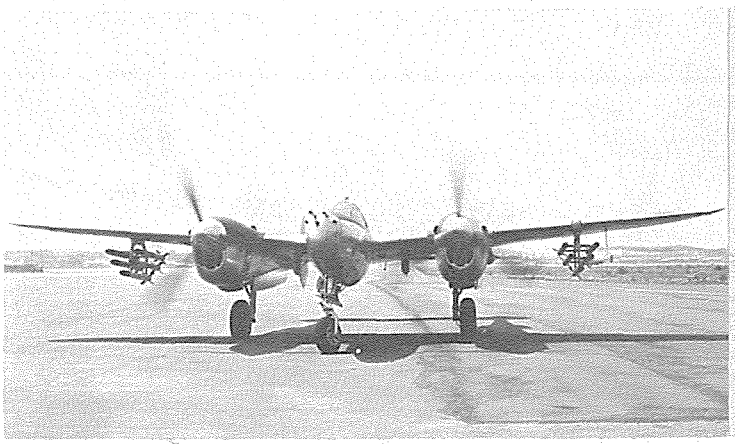
P-38J (Model 422) "Pathfinder"



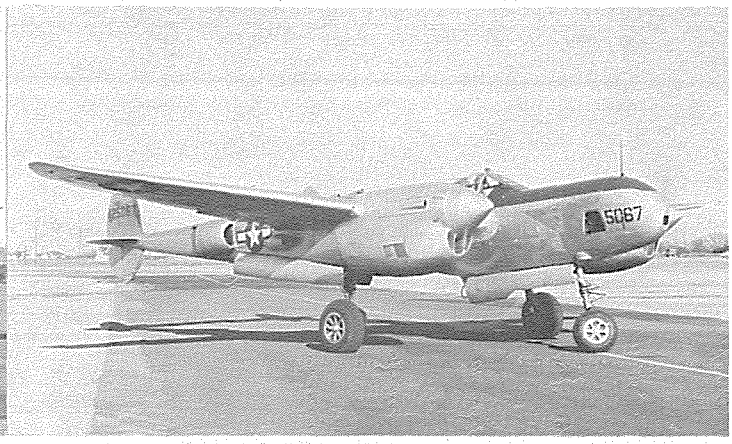
P-38J (Model 422) Ski Mod.



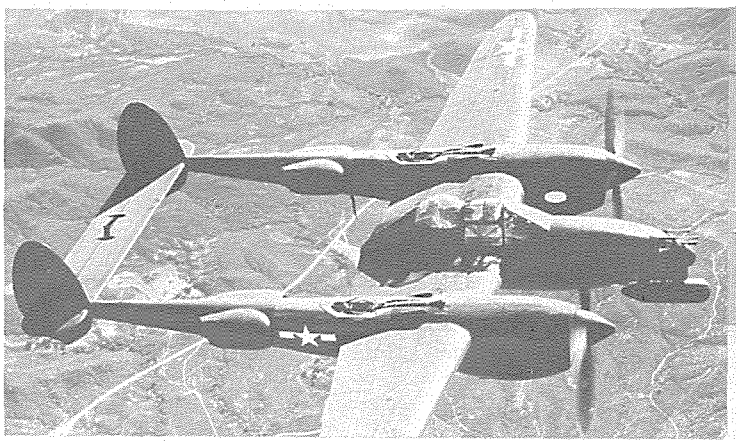
P-38K (Model 422)



P-38L (Model 422)



F-5G (Model 422)



P-38M (Model 422)

XP-49 (Model 522)

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No. 16: P-38J (422). The "J" model although similar to the "H" produced the first major configuration change. This change consisted of a chin type radiator which incorporated the oil coolers and the intercooler air inlet. The P-38J, powered by V-1710-F17 engines of 1425 HP., was the fastest of the Lightning series with a maximum speed of about 420 mph. at optimum altitude.

No. 17: P-38J "Droopsnoot" (422). The Droopsnoot was a service modification which incorporated a bombardier's position in the nose. Lightning formations, with each aircraft carrying two 2,000 pound bombs salvoed their loads, upon command from the bombardier in the lead P-38 (Droopsnoot), on targets deep in Germany.

No. 18: P-38J "Pathfinder" (422). The Pathfinder modifications of the P-38J (and some P-38L's) carried an early form of ground mapping radar which could locate targets at night or in inclement weather with sufficient accuracy to provide an all-weather bombing capability.

No. 19: P-38J Ski-mod. (422). The P-38J was one of a number of aircraft investigated by the USAAF for ski modification as part of a feasibility study for winter operations.

No. 20: P-38K (422). The "K" model of the P-38 was a limited quantity modification of the P-38J incorporating a larger Aeroproducts propellor.

No. 21: P-38L (422). The P-38L was basically a "J" model with Allison V-1710-F30 engines and "Christmas tree" rocket launchers under the wing. These rocket launchers augmented the Lightning's normal armament with ten 5-inch rockets.

No. 22: F-5G (422). The F-5G was the photo version of the P-38L. This model ended the long series of P-38 photo conversions.

No. 23: P-38M (422). The P-38M's were modified "L" models equipped with radar for night fighting duties. These modifications included a raised rear cockpit for the radar operator and an ASH type radar mounted in a streamlined package under the nose. In spite of this increase in weight the P-38 carried its normal complement of armament and fuel and proved to be an effective night fighting aircraft.

No. 24: XP-49. (522). The XP-49 was a heavily modified P-38. (222). Among these modifications were the installation of the Continental XIV-1430 engines, two 20 mm cannon and four calibre .50 machine guns, and a pressurized cockpit. This airplane was used for high altitude research, flying regularly above 40,000 feet proving out pressurization equipment.