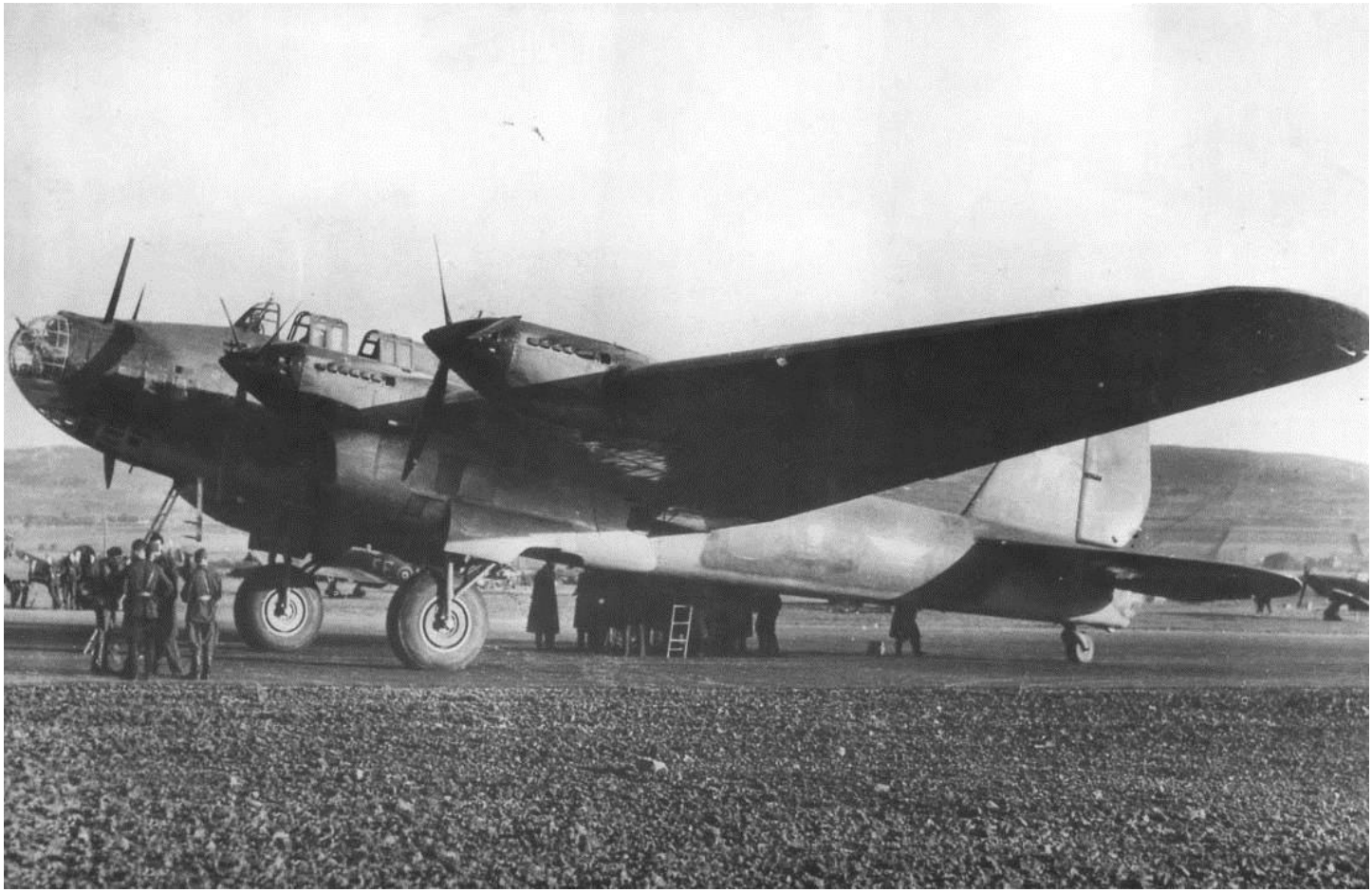
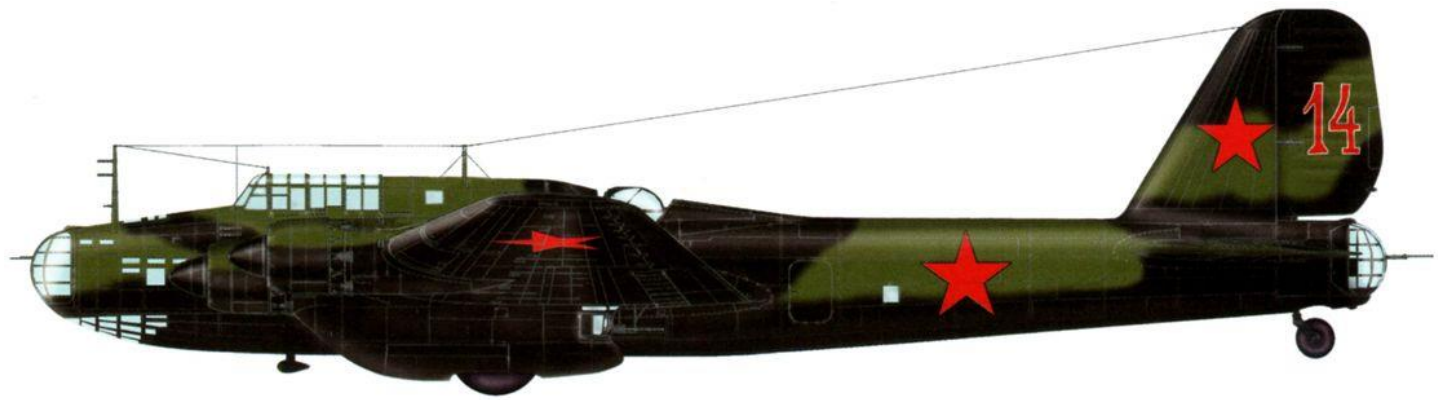
Petlyakov Pe-8



Au cours de la Seconde Guerre mondiale l'aviation soviétique fit un usage intensif des bombardiers. Durant la première partie ce fut en soutien de son allié nazi. Puis après qu'Adolf Hitler ait décidé d'attaquer l'Armée Rouge ce fut contre les forces allemandes. Sauf que la doctrine d'emploi soviétique reposait principalement sur l'emploi des bombardiers légers et moyens, et que cette aviation disposait finalement de peu de bombardiers lourds. L'un des rares dans ce cas, et le seul véritablement moderne à cette époque était un avion construit finalement en très petite série : le **Petlyakov Pe-8**. En juin 1934 Moscou émit un cahier des charges auprès du bureau d'étude Petlyakov visant au développement d'un bombardier lourd quadrimoteur de nouvelle génération. Le futur avion se devait d'être capable de franchir 5000 kilomètres avec une charge de bombes de 3500kg en soutes. Le programme fut confié au principal ingénieur de l'avionneur : Andreï Tupolev, celui-ci avait l'habitude de travailler sur de tels avions. Lui et son équipe travaillèrent assez vite, respectant les codes de leur temps. Le prototype de l »avion désigné **Petlyakov ANT-42** fut assemblé au milieu de l'année 1936. Il se présentait sous la forme d'un monoplan à aile médiane cantilever de construction totalement métallique. Le train d'atterrissage tricycle s'escamotait dans les nacelles des moteurs intérieurs pour l'avant et sous la tourelle défensive arrière pour la roulette de queue. L'armement justement se composait de 4000 kilos de bombes en soute et de plusieurs mitrailleuses en positions mobiles. Deux de calibre 7.62mm étaient jumelées dans la tourelle de nez. Les nacelles des moteurs intérieurs accueillaient en plus du train d'atterrissage chacune un poste de tir à découvert pour une mitrailleuse de calibre 12.7mm. Enfin le poste de tir de queue abritait un canon de 20mm servi par un mitrailleur qui s'asseyaient sur un siège monté sur la roulette de queue lorsque celle-ci était relevée. Une arme similaire fut installée dans une tourelle dorsale. La motorisation de cet ANT-42 était assurée par quatre moteur Mikouline M-100 d'une puissance unitaire de 1100 chevaux entraînant une hélice bipale en métal. L'avion était servi par un équipage de onze militaires. C'est dans cette configuration que le premier vol eut lieu le 27 décembre 1936. Les premiers essais démontrèrent que l'**ANT-42** était sous motorisé malgré sa conception très moderne. En janvier 1937 il fut lourdement endommagé lors d'un atterrissage manqué.

Quatre membres d'équipage furent grièvement blessés et Moscou imputa ces défauts à la conception de Tupolev. Pourtant une enquête interne de Petlyakov démontra que cela résultait autant du mauvais temps que de la sous-motorisation résultant de l'absence du compresseur pourtant prévu à l'origine. Une technologie que les ingénieurs soviétiques ne maitrisaient pas. Andreï Tupolev ayant préconisé d'en obtenir auprès des États-Unis, de la France, ou du Royaume-Uni il fut accusé d'intelligence avec l'ennemi et envoyé au goulag. Un compresseur de soute ATsN de conception soviétique fut monté sur le second prototype qui vola le 26 juillet 1938 alors que son concepteur et une grosse partie de son équipe d'ingénieurs et de designers croupissaient au fond de leurs geôles en Sibérie. En avril 1939 la production de l'avion débuta enfin. Sauf qu'il n'avait plus rien de révolutionnaire. Le prototype du Boeing XB-15 américain était passé par là et avait démontré que l'**ANT-42** était pleinement dans son temps mais sans être innovant. La désignation de série fut modifiée en **Petlyakov TB-7**. L'une des grosses améliorations fut l'abandon du compresseur central pour des moteurs turbocompressés, des Mikouline AM-35 de 1280 chevaux. Les premiers exemplaires entrèrent en service en mai 1940 mais furent rapidement considérés comme décevants. Ces avions ne permettaient même pas de surpasser les Tupolev TB-3 pourtant nettement moins modernes dans leur conception. Les équipes de Peltyakov, avec l'aide d'ingénieurs d'origines extraits de leur goulag, eurent alors l'idée de doter les bombardiers de moteurs Mikouline ACh-40 d'une puissance de 1400 chevaux, des moteurs qui avaient la particularité d'être diesel. Sauf que le froid intense russe ne jouait pas en faveur de cette motorisation. Et au bout d'une demi-douzaine d'exemplaires assemblés le programme diesel fut abandonné. On rééquipa à la hâte les avions assemblés avec des Mikouline AM-35A de 1350 chevaux entraînant une hélice tripale. Pourtant les généraux soviétiques croyaient dur comme fer dans le moteur diesel. Si bien que vers la fin 1940, début 1941 une vingtaine d'exemplaires fut assemblée avec des moteurs diesel Mikouline ACh-30B développant 1500 chevaux. Et là les résultats furent plus probants, à condition de conserver les avions sur le front occidentale. Dans la nuit du 7 au 8 août 1941 un total de dix-huit **TB-7** dotés de moteurs diesels mirent le cap sur Berlin afin de bombarder la capitale allemande. Le résultat fut des plus mitigés. Bien que la DCA hitlérienne était inexistante et que la *Luftwaffe* n'attendait pas un tel raid a moitié des bombardiers soviétiques ne rentra jamais en URSS. Un fut abattu en vol par deux chasseurs Messerchmitt Bf 110 qui… revenaient d'un vol d'entraînement de nuit, tandis que les huit autres connurent différentes pannes et se posèrent en catastrophe dans la campagne allemande. Leurs équipages furent capturés et emprisonnés par l'armée allemande. Les avions qui réussirent à réaliser l'aller-retour frappèrent à côté des centres industriels et/ou politiques berlinois, une banlieue résidentielle. Le raid tua une centaine de civils dont plusieurs dizaines d'enfants mais ne causa que des dégâts mineurs. L'attaque fut largement relayée par la propagande nazie pour illustrer ce qu'elle estimait être une atrocité contre des personnes innocentes. À Moscou on décida de ne pas retenter ce genre de bombardements. La production de l'avion fut stoppée quelques semaines plus tard, nous étions en octobre 1941. C'est d'ailleurs à cette époque que le TB-7 devint le **Pe-8**. Moins performant donc que le Tupolev TB-3 le **Petlyakov Pe-8** fut renvoyé en usines à la fin 1942. Quarante-huit exemplaires virent en effet leurs différentes motorisations déposées au profit d'une unique : le moteur à quatorze cylindres en double étoile Shvetsov ASh-82FN développant 1700 chevaux. C'est le même modèle qui équipait alors le chasseur Lavotchkin La-5 ou encore l'avion d'attaque au sol Sukhoi Su-2. Et cette fois le bombardier fut à la hauteur des espérances soviétiques. À tel point même qu'en mai-juin 1943 l'un d'entre-eux réalisa un raid de propagande vers les États-Unis afin de montrer la technologie soviétique. Mais comparer aux versions les plus récentes des Boeing B-17 Flying Fortress et Consolidated B-24 Liberator le quadrimoteur soviétique ne tenait pas la distance. À l'instar de ce qui se passait au Royaume-Uni avec les Avro Lancaster B Mk-I Special de la RAF cinq **Petlyakov Pe-8** furent modifiés afin d'emporter une seule bombe FAB-5000Ng de 5000 kilos l'unité. Ils furent notamment engagés dans des raids vers la fin de la guerre contre des sites industriels présumés abritant des armes de haute technologie. L'emploi de ces bombes nécessitait la dépose des mitrailleuses et canons de défense, à l'exception des armes des nacelles moteurs. L'équipage était alors réduit à six membres. Les résultats ne furent jamais probants.

Quand la Seconde Guerre mondiale se termina en août 1945 seuls trente **Petlyakov Pe-8** étaient encore en état de vol. La majorité fut désarmée et utilisé jusqu'en 1952 comme avions de transport de fret à longue distance pour le compte de l'institut soviétique d'étude Antarctique. Ils permirent l'établissement de bases scientifiques. Après-guerre, le Pe-8 ne fut pas codé par l'OTAN. Avion emblématique des conceptions d'Andreï Tupolev avant-guerre le **Petlyakov Pe-8** est souvent considéré à tort comme le seul bombardier quadrimoteur soviétiques de la Seconde Guerre mondiale. C'est oublier un peu vite le Tupolev TB-3 dans l'ombre duquel il vola la plus part du temps. Pour mémoire le principal bombardier de l'aviation soviétique à cette époque était le North American B-25 Mitchell, un avion livré par l'Amérique au titre de la loi de prêt-bail. Il ne reste aujourd'hui plus aucun Pe-8.



Source : https://www.avionslegendaires.net/avion-militaire/petlyakov-pe-8/

Version anglaise Wikipédia

The **Petlyakov Pe-8** (Russian: Петляков Пе-8) was a Soviet heavy bomber designed before World War II, and the only four-engine bomber the USSR built during the war. Produced in limited numbers, it was used to bomb Berlin in August 1941. It was also used for so-called "morale raids" designed to raise the spirit of the Soviet people by exposing Axis vulnerabilities. Its primary mission, however, was to attack German airfields, rail yards and other rear-area facilities at night, although one was used to fly the People's Commissar of Foreign Affairs (Foreign Minister) Vyacheslav Molotov from Moscow to the United States in 1942. Originally designated the **TB-7**, the aircraft was renamed the Pe-8 after its primary designer, Vladimir Petlyakov, died in a plane crash in 1942. Supply problems complicated the aircraft's production and the Pe-8s also had engine problems. As Soviet morale boosters, they were also high-value targets for the Luftwaffe's fighter pilots. The loss rate of these aircraft, whether from mechanical failure, friendly fire, or combat, doubled between 1942 and 1944. By the end of the war, most of the surviving aircraft had been withdrawn from combat units. After the war, some were modified as transports for important officials, and a few others were used in various Soviet testing programs. Some supported the Soviet Arctic operations until the late 1950s.

Design and development

Development of the Pe-8 began in July 1934, when the Soviet Air Forces (VVS) issued requirements for an aircraft to replace the obsolete and cumbersome Tupolev TB-3 heavy bomber. These requirements specified a bomber that could carry 2,000 kg (4,400 lb) of bombs 4,500 km (2,800 mi) at a speed greater than 440 km/h (270 mph) at an altitude of 10,000 metres (32,808 ft), figures that were twice the range, speed and service ceiling of the TB-3.[1] The task was assigned to the Tupolev Design Bureau (OKB) where Andrei Tupolev handed the work to a team led by Vladimir Petlyakov and the project received the internal bureau designation of ANT-42. The resulting aircraft, a four-engined, mid-wing cantilever monoplane, was initially designated as the TB-7 (Russian: Тяжёлый Бомбардировщик, *Tyazholy Bombardirovschik*—Heavy Bomber) by the VVS and owed more to the streamlined design of the Tupolev SB than to the block-like design of the TB-3.[2] The bomber was built mainly of duralumin, with two steel spars in the wings, although the ailerons were fabric-covered. The pear-shaped monocoque fuselage required the pilots to sit in tandem, offset to the left. In the prototype, space for a fifth engine, an auxiliary Klimov M-100, was reserved inside the fuselage, in a fairing above the wing spars and behind the pilots. It was intended to drive a supercharger that supplied pressurized air to the Mikulin AM-34FRN engines, with the installation designated ATsN-2 (Russian: *Agregat tsentral'novo nadduva*—Central Supercharging Unit), an idea pioneered in 1918 by the Zeppelin-Staaken firm in the German Empire, and refined further for the Third Reich Luftwaffe's Do 217P and Hs 130E experimental bomber designs. Subsequent models of the Pe-8 omitted the internal engine, and provided seating for a flight engineer and radio operator, behind and below the pilots. The bombardier sat in the nose and manned a turret armed with a 20-millimeter (0.79 in) ShVAK cannon that covered a 120° cone ahead. A prominent chin gondola, nicknamed the 'beard', protruded beneath the nose. The dorsal gunner sat at the rear of the ATsN fairing with a sliding hood covering a 7.62-millimeter (0.30 in) ShKAS machine gun and another ShKAS mounted in a ventral hatch. The tail gunner had a powered turret with a ShVAK and, most unusually, there were manually operated ShVAK cannon mounted at the rear of each inner engine nacelle. Crewmen had access to these positions through the wing or by a trapdoor in the upper wing surface. The large internal bomb bay racks held up to 4,000 kg (8,800 lb) of bombs; external racks held a single 500-kilogram (1,100 lb) FAB-500 (*Fugasnaya AviaBomba* - high explosive bomb) bomb under each wing.[3][4][5] The maiden flight of the unarmed prototype, piloted by M. M. Gromov and without the ATsN installation, occurred at Khodynka Aerodrome on 27 December 1936.[6] After successful initial trials, the ATsN system was installed for the State acceptance trials in August 1937 and the AM-34RNB engines were fitted during the tests.[7] Gromov reported that the rudder was ineffective and that the outer engines overheated. Subsequent wind tunnel testing identified a problem with the aerodynamics of the radiators and nacelles. To solve this problem, the outer engines' radiators were moved into deep ducts under the inner nacelles. The Pe-8 now featured only two pronounced radiator intakes, one under each inner engine, each shared by both inner and outer engines, one of the distinctive and unique features of the aircraft. The rudder was also enlarged and redesigned with a smooth skin.[8] Construction of a second prototype began in April 1936, incorporating lessons from the first aircraft and feedback from the VVS. Designers widened the fuselage by 100 mm (3.9 in); the 'beard' was also widened and the tail section was modified to lessen resistance and improve rudder function.

A reconfigured control system included an autopilot and the engineers redesigned portions of the electrical system. The engines were changed to the more powerful AM-34FRNVs and a redesigned undercarriage was fitted to the airframe. Two additional fuel tanks increased the craft's range. The defensive and offensive armament was revised, and the bomber's weaponry expanded to twin ShKAS guns in the nose, nacelle barbettes and tail turrets and a dorsal turret with a ShVAK; this design eliminated the ventral gun. The bomb bay was modified to allow for a single 5,000-kilogram (11,000 lb) FAB-5000 bomb to be carried and provisions were added to carry VAP-500 or VAP-1000 poison gas dispensers under the wings.[8] The arrests of both Tupolev and Petlyakov in October 1937, during the Great Purge, disrupted the program and the second prototype did not make its first flight until 26 July 1938.[9] Although this prototype served as the basis for the series aircraft, further modifications were made to the armament. New weaponry included a retractable ShVAK in the MV-6 dorsal turret, another ShVAK in a KEB tail turret and a 12.7-millimeter (0.50 in) Berezin UBT machine gun in each ShU barbette in each inner engine nacelle, on the underside of the wing covering the lower rear arc of fire to left and right, respectively. Another fuel tank further increased the range, and the 'beard' was removed entirely, replaced by a more streamlined nose.[9] Authorization for production was slow for several reasons, including the Great Purge, but also due to the scarcity of resources, and a shortage of workers. Although production facilities in the Kazan Factory No. 124 were ready as early as 1937, the order to begin was not given until 1939.[7]

Manufacture and supply problems

Engine supply problems complicated the construction of the aircraft. Production of the ATsN superchargers could not be organized in any systematic way and only the first four Pe-8s were equipped with them. Factory No. 124 shut down its Pe-8 production line at the beginning of 1940 while alternative engines were evaluated. Somewhere in the massive Soviet chain of command, the decision was made to proceed without the superchargers. The unavailability of the Klimov M-100 engine of the ATsN-2 installation required a design change, although this modification allowed a commander and radio operator to be carried in its place.[9] Then, to compound the problem further, the production of AM-34FRNV engines ended in the second half of 1939. Only two or four Pe-8s were equipped with them. Eighteen of the aircraft produced by the end of 1940 were fitted with AM-35A engines.[10]

A Soviet stamp that reads "Post USSR / 1 Rub / Petlyakov-8 / Heavy bomber"

In 1940, six aircraft without engines were fitted with Mikulin AM-35A engines, while VVS officials evaluated both the Charomskiy ACh-30 and Charomskiy M-40 aircraft Diesel engines. At least nine Pe-8s were fitted with diesel engines in 1941, but neither the ACh-30 nor the M-40 were entirely satisfactory, despite greatly increasing the range of the aircraft. All surviving Pe-8s were re-engined with AM-35As by the end of 1941. Production continued slowly at Factory No. 124; most of the factory's resources were devoted to the higher-priority Petlyakov Pe-2, a successful light bomber. At this time, most of these aircraft, re-designated as the Pe-8 after Petlyakov was killed in a Pe-2 crash on 12 January 1942, were built with out-of-production AM-35A engines.[11]

The 1,380-kW (1,850-hp) Shvetsov ASh-82 radial engine was proposed as a replacement to alleviate the shortage of engines and this modification went into production in late 1942. The exhaust arrangements of the ASh-82 were not compatible with the gun turrets in the rear of the engine nacelles and the guns were removed, reducing the aircraft's defensive capability. At the end of 1943, the nose turret was deleted in favor of a manually operated ShKAS machine gun in a more streamlined nose.[12] This version of the aircraft proved to have much the same range as the diesel-engined versions, but reliability was greatly improved. Production of the Pe-8s totaled 93.[13] The last Pe-8s were completed in 1944 as Pe-8ONs (*Osobovo Naznacheniya*—Special Mission) with Charomskiy ACh-30B engines and a fillet at the base of the vertical stabilizer. These were special VIP transports with a seating capacity of twelve and a cargo capacity of 1,200 kilograms (2,600 lb).[14] Sources disagree if the armament was removed and, if it was, whether partly or entirely.[15]

Operational history

Wartime use

When Operation Barbarossa began on 22 June 1941, only the 2nd Squadron of the 14th Heavy Bomber Regiment (*Tyazholy Bombardirovochnyy Avia Polk*—TBAP), based at Boryspil[16] was equipped with Pe-8s, but was not ready for combat.[17][18] Two of its nine Pe-8s were destroyed by German air strikes shortly after the war began, before the Pe-8s were withdrawn out of reach of German bombers to Kazan. Stalin ordered that the squadron be reformed into a regiment, and that it strike targets deep inside German territory. Theoretically, this tactic would boost Soviet morale by demonstrating the vulnerability of the enemy. The squadron was re-designated on 29 June as the 412th TBAP and began training for long-range missions.[16] On or about 27 July it was again renamed, this time as the 432nd TBAP.[19] On the evening of 10 August, eight M-40-engined Pe-8s of the 432nd TBAP, accompanied by Yermolaev Yer-2s of the 420th Long-Range Bomber Aviation Regiment (DBAP), attempted to bomb Berlin from Pushkino Airfield near Leningrad. One heavily loaded Pe-8 crashed immediately upon take off, after it lost an engine. Only four managed to reach Berlin, or its outskirts, and of those, only two returned to their base. The others landed elsewhere or crash-landed in Finland and Estonia. The aircraft of the commander of the 81st Long-Range Bomber Division, Combrig Mikhail Vodopianov, to which both regiments belonged, was attacked mistakenly by Polikarpov I-16s from Soviet Naval Aviation over the Baltic Sea and lost an engine; later, before he could reach Berlin, German flak punctured a fuel tank. He crash-landed his aircraft in southern Estonia.[20] Five more Pe-8s were lost during the operation, largely due to the unreliability of the M-40s.[21] Seven Pe-8s were lost during the month of August alone, rendering the regiment ineffective. During this period, the surviving aircraft were re-equipped with AM-35As, which gave them a shorter range, but a more reliable engine.[22] By 1 October 1941, the regiment mustered fourteen Pe-8s after having been replenished by new aircraft from the factory.[17] It spent the rest of the year conducting night raids on Berlin, Königsberg, Danzig and as well as German-occupied cities in the Soviet Union. The regiment was re-designated as the 746th Separate Long-Range Aviation Regiment (Russian: *Otdel'nyy Avia Polk Dahl'nevo Deystviya*—OAPDD) on 3 December.[19] No aircraft were reported on hand two days later after this designation, but eleven were on strength on 18 March 1942.[17] During the winter of 1941–42, the regiment was assigned the destruction of a railroad bridge over the Volga River, near Kalinin. In April 1942, one aircraft flew diplomatic personnel and mail on a non-stop flight from Moscow to Great Britain.[22] This was a test run for a flight carrying Soviet Foreign Minister Molotov and his delegation from Moscow to London and then to Washington, D.C., and back, for negotiations to open a second front against Nazi Germany (19 May – 13 June 1942). The flight crossed German-controlled airspace on the return trip without incident.[23] From August 1941 to May 1942, the regiment flew 226 sorties and dropped 606 tonnes (596 long tons; 668 short tons) of bombs. In the course of these missions, they lost 14 bombers, five in combat, and the rest from engine malfunction. The regiment received 17 Pe-8s as replacements.[22] Sixteen aircraft were on hand on 1 May 1942, but the number had increased only to seventeen two months later; the regiment was losing aircraft almost as fast as they were being replaced.[17] The 890th Long-Range Aviation Regiment (Russian: *Avia Polk Dahl'nevo Deystviya*—APDD) was formed on 15 June 1942[24] and both regiments were used to bomb German-held transportation centers of, among others, Orel, Bryansk, Kursk and Poltava. The pace of activity increased and the regiments flew as many missions in August as they had in the first ten months of the war.[25]

By the eve of the Soviet counterattack at Stalingrad, Operation Uranus, on 8 November the regiments had fourteen Pe-8s on hand.[17] Under the command of the 45th Long-Range Bomber Aviation Division (Russian: *Dal'nebombardirovochnaya Aviatsionnaya Diviziya*—DBAD), they did not participate in the Stalingrad air attacks.[26] In 1943, from the division's primary airfield at Kratovo, southeast of Moscow, the regiments bombed transportation centers, airfields and troop concentrations. The railroad yard at Gomel was a favorite target and the regiment dropped approximately 606 tonnes (596 long tons; 668 short tons) of bombs there between February and September 1943. It is not clear if these sorties were made by Pe-8s alone or in combination with other aircraft. In addition, the regiment dropped the first FAB-5000 bomb on Königsberg in April 1943, continuing the pin-prick attacks against targets deep in the German rear.[25] In May 1943, efforts shifted to disrupt the German concentration of forces for the Battle of Kursk. In one sortie, the 109 bombers of the 45th DBAD struck the rail junction at Orsha during the evening of 4 May, most of which were not Pe-8s; the German High Command reported the destruction of 300 rail wagons and three ammunition trains.[27] By 1 July, the regiment had 18 Pe-8s for deployment during the early phase of the Battle of Kursk. The long-range aviation units continued to attack targets in the German rear areas at night, supporting the Soviet ground offensive in the Orel Bulge, called Operation Kutuzov, that began on 12 July. The Germans had transferred the nightfighters of the Fourth Group of the 5th Night Fighter Wing (IV./Nachtjagdgeschwader 5), flying a mix of Junkers Ju 88 and Dornier Do 217 aircraft, to counter the Soviet raids near the Orel area. Initially, the night fighters were ineffective against the Soviet raids, until the deployment of their ground radar "eyes". Once the Germans had use of their radar, after the night of 17–18 July, Soviet losses increased sharply. Although the Germans flew only fourteen sorties that night, they claimed eight kills (of course, throughout the war, night or day, the number of kills *claimed* was inevitably significantly higher than the actual number shot down, regardless of nationality or aircraft type). On the night of 20–21 July, Captain (Hauptmann) Heinrich Prinz zu Sayn-Wittgenstein, commander of IV./NJG 5,[28] claimed to have shot down three himself.[17] The exhaust plume of the ASh-82 engine may have been a contributing factor; the engines lacked flame dampening exhausts, making their plume visible from a distance.[25] Despite its losses, the 746th was re-designated as the 25th Long-Range Guards Aviation Regiment (GAPDD) on 18 September 1943 in recognition of its achievements.[19]

Removal from combat

The loss of Pe-8s to all causes—mechanical, combat, friendly fire—had steadily increased from one aircraft per 103 flights in 1942 to one per 46 sorties in 1944.[29] Despite the losses, production kept pace with need. The number of aircraft belonging to the 45th DBAD continued to rise; 20 were on hand on 1 January 1944 and 30 on 1 June.[17] The Pe-8s flew 276 sorties in 1944 against such targets as Helsinki, Tallinn and Pskov. Aviation historian Yefim Gordon maintains that the Pe-8 flew its last mission on the night of 1–2 August 1944,[29] but the Statistical Digest of the VVS contradicts this claim, showing 31 Pe-8s assigned to 45th DBAD on 1 January 1945 and 32 on hand on 10 May 1945.[17] However, during this period the 45th DBAD only had three regiments, none of which used the Pe-8 as their primary aircraft, so while the 45th DBAD may have had Pe-8s, these may not have been in use as the primary combat aircraft.[30] The 890th began to fly Lend-Lease B-25 Mitchells in the spring of 1944 and was itself re-designated as the 890th Bomber Aviation Regiment on 26 December 1944.[24] The 362nd APDD was formed in early 1944 with four Pe-8s received from the other two regiments, but these were returned in the spring of 1944, when the regiment began to convert to the Lend-Lease Mitchells.[31]

Post-war use

After the war, the Pe-8 was used extensively as a testbed for trials involving Soviet derivatives of the German V-1 flying bomb and it was designated as the Pe-8LL for prototype piston engine trials. It was also used as a mother ship for the experimental rocket-engined Bisnovat 5 in 1948–49.[14] Aeroflot received several of the surviving Pe-8s for polar exploration. Their military equipment removed, they had additional fuel tanks installed, were painted orange, and had their engines upgraded to either ASh-82FNs or Shvetsov ASh-73s. One landed at the North Pole in 1954[15] and others helped to monitor the drift ice stations NP-2, NP-3 and NP-4 during the late 1950s.[14]

Specifications (Pe-8/AM-35A)

General characteristics

- **Crew:** 11
- **Length:** 23.2 m (76 ft 1 in)
- **Wingspan:** 39.13 m (128 ft 5 in)
- **Height:** 6.2 m (20 ft 4 in)
- **Wing area:** 188.66 m^2 (2,030.7 sq ft)
- **Airfoil: root:** TsAGI-40 (19%) ; **tip:** TsAGI-40 (15.5%)[32]
- **Empty weight:** 18,571 kg (40,942 lb)
- **Gross weight:** 27,000 kg (59,525 lb)
- **Max takeoff weight:** 35,000 kg (77,162 lb)
- **Powerplant:** 4 × Mikulin AM-35A V-12 liquid-cooled piston engines, 999 kW (1,340 hp) each
- **Propellers:** 3-bladed constant-speed propellers

Performance

- **Maximum speed:** 443 km/h (275 mph, 239 kn)
- **Range:** 3,700 km (2,300 mi, 2,000 nmi)
- **Service ceiling:** 9,300 m (30,500 ft)
- **Rate of climb:** 5.9 m/s (1,160 ft/min)
- **Wing loading:** 143 kg/m^2 (29 lb/sq ft)
- **Power/mass:** 0.140 kW/kg (0.085 hp/lb)

Armament

- **Guns:**
  - 2 × 20 mm (0.8 in) ShVAK cannons (dorsal and tail turrets)
  - 2 × 12.7 mm (0.50 in) UBT machine guns (engine nacelles)
  - 2 × 7.62 mm (0.30 in) ShKAS machine guns (nose turret)
- **Bombs:** Up to 5,000 kg (11,000 lb), including the FAB 5000 5,000 kg bomb

Source : https://en.wikipedia.org/wiki/Petlyakov_Pe-8