= Tupolev Tu @-@ 70 =

The Tupolev Tu @-@ 70 ( NATO reporting name : Cart ) was a Soviet passenger variant of the Tu @-@ 4 bomber ( which was a reverse @-@ engineered copy of the American @-@ made Boeing B @-@ 29 Superfortress ) designed immediately after the end of World War II . It used a number of components from Boeing B @-@ 29s that had made emergency landings in the Soviet Union after running out of fuel after bombing Japan . It had the first pressurized fuselage in the Soviet Union and first flew on 27 November 1946 . The aircraft was successfully tested , recommended for serial production , but ultimately not produced because of more pressing military orders and because Aeroflot had no requirement for such an aircraft .

= = Design and development = =

After basic design work was completed on the Tu @-@ 4 bomber Tupolev decided to design a passenger variant with a pressurized fuselage given the internal designation of Tu @-@ 70 . It was intended to use as many Tu @-@ 4 components as possible to reduce costs and save development time . It was a low @-@ wing cantilever monoplane with a tricycle landing gear powered by four Shvetsov ASh @-@ 73TK radial engines . Design work on a mock @-@ up began in February 1946 and the Council of Ministers confirmed an order for a single prototype the following month . A production decision for the Tu @-@ 12 , as it was to be known , would be made after testing .

To speed up construction of the prototype a number of components were utilized from two B @-@ 29s . These included the outer wing panels , the engine cowlings , the flaps , the undercarriage , the tail assembly and some of the internal equipment . The wing center section was redesigned and its span increased . The pressurized fuselage was entirely new and changed the wing 's position from mid @-@ wing to low @-@ wing . The aircraft 's windscreen was changed to a more conventional " stepped " configuration . Three different configurations were proposed for the cabin layout , a government VIP version , a mixed @-@ class 40 ? 48 passenger model and an airliner configuration with 72 seats . The prototype appears to have been built in the mixed @-@ class configuration , but that cannot be confirmed .

The Tu @-@ 70 was completed in October 1946 , but did not make its first flight until 27 November . It began manufacturer 's trials in October , but an engine fire on the fourth flight caused it to make a crash @-@ landing . This was traced to a design defect in the American @-@ built supercharger control system , but identifying the problem and fixing it prolonged the manufacturer 's trials through October 1947 . It was redesignated as the Tu @-@ 70 when it went through the State acceptance trials which ended on 14 December . It met all the design goals , but was not accepted for production as all the factories were already committed to building aircraft with a higher priority and Aeroflot had no requirement for the type , being fully satisfied with its existing Lisunov Li @-@ 2 and Ilyushin Il @-@ 12 airliners .

It was sent to the NII VVS ( Russian : ?????? @-@ ???????????????? ???????? ?????? @-@ ????????? ??? ? Scientific @-@ Research Institute of the Air Forces ) for evaluation as a military transport aircraft in December 1951 . Afterward it was used during a variety of tests before being scrapped in 1954 . Its design was modified into a military transport as the Tupolev Tu @-@ 75 , but this was not placed into production either .

= = Specifications = =

Data from Gunston , Tupolev Aircraft since 1922
General characteristics
Crew : 6
Capacity : up to 72 passengers
Length : 35 @.@ 4 m ( 116 ft 1 ¾ in )
Wingspan : 44 @.@ 25 m ( 145 ft 2 ? in )
Height : ( )

Wing area : 166 @.@ 1 m ² ( 1 @,@ 788 ft ² )
Empty weight : 38 @,@ 290 kg ( 84 @,@ 414 lb )
Loaded weight : 51 @,@ 400 kg ( 113 @,@ 316 lb )
Max. takeoff weight : 60 @,@ 000 kg ( 132 @,@ 275 lb )
Powerplant : 4 × Shvetsov ASh @-@ 73TK radial engines , 1 @,@ 800 kW ( 2 @,@ 400 hp ) each
Performance
Maximum speed : 568 km / h ( 307 kn , 353 mph )
Range : 4 @,@ 900 km ( 2 @,@ 646 nmi , 3 @,@ 045 mi )
Service ceiling : 11 @,@ 000 m ( 36 @,@ 090 ft )
Wing loading : 361 kg / m ² ( 74 lb / ft ² )
Power / mass : 120 W / kg ( 0 @.@ 070 hp / lb )