

Why Sanjay Died

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The Inquiry Report on the Pitts S-2A, Advance Aerobatic aircraft which killed Mr Sanjay Gandhi and Mr Subash Saxena on June 23, '80, in essence, states that the cause of the accident was due to the entry of the aircraft into an unintentional spin and the failure of Mr Sanjay Gandhi, the Commander of the aircraft, to initiate timely recovery action. The verdict is "Pilot's Error" and it is contestable.

The pivotal point made in the Report is that the aircraft entered into an Unintentional Spin. The causes of an Unintentional spin, as related to the Pitts advanced aerobatic aircraft, could be due to: The inexperience of the Pilot; Lack of familiarisation and ignorance of the limitations of the aircraft; The sudden or momentary failure of the engine at the crucial stage at the apex of the climb, when the airspeed was close to the stalling speed; The jamming or failure of the elevator controls, immediately the aircraft was put into a steep climb.

Inexperience of the Pilot: Training and the issue of Licences come under the aegis of the Directorate of Civil Aviation. Schedule II, Chapter II, Sections C and D of the Indian Aircraft Rules, deals exclusively with the mandatory formats for training and issue of Licences to Pilots. The Rules specifically emphasise that the flying proficiency tests, besides other manoeuvres, should include stalling and spinning and recovery. The Pilot has to demonstrate his competency to the satisfaction of the Pilot Examiner, who is directly responsible to the Directorate of Civil Aviation. If Mr Sanjay Gandhi was deficient in expertise or experience he had no business to be cleared for the fatal flight and the Directorate was ill-advised to issue him with an Instructor's Rating.

Lack of familiarisation: The Pitts advanced aerobatic aircraft is a very sensitive aircraft and has been designed for advanced Aerobatic manoeuvres. It was incumbent, as per Indian Aircraft Rules, for the Directorate of Civil Aviation to ensure that Mr Sanjay Gandhi had the necessary expertise to fly this aircraft before permitting him to command the fatal flight. The Directorate was fully aware that Mr Gandhi had no experience in aerobatic manoeuvres and that he was totally ignorant of the limitations of the Pitts Aircraft and the idiosyncrasies of its flying characteristics. The Directorate was further aware that this aircraft was far superior in performance and manoeuvrability than any aircraft flown by Mr Gandhi. The Pitts aircraft was fully aerobatic while those flown by Mr Gandhi were non-aerobatic. Therefore, the Pitts aircraft could not be covered by his Open Rating. Rule 4, Section II, Chapter II clearly specifies that the holder of an Open Rating can fly conventional types of aeroplanes having an "all-up" weight not exceeding 1500 kgs. The Pitts advanced aerobatic aircraft does not come under the category of 'Conventional', when weighed against the limitations and performance of the other aircraft flown by Sanjay. The Pitts aircraft, therefore, comes under a special category, divorced from the conventional and non-aerobatic endorsements on his licence and, as such, fresh endorsements checks, as per the Rules, were necessary before clearance to fly in command could be given.

Further, it may be germane to note that the Open Rating only clears the Pilot to operate aircraft fitted with the mandatory basic flying instruments as specified by Rule 52, Part VI, Chapter II of the Indian Aircraft Rules. The Pitts advanced aerobatic aircraft was issued a certificate of airworthiness without these instruments. Thus this aircraft came under a special category, which precluded it from coming under the purview of the Open Rating. It, therefore, could not enjoy the provision of a Conventional Aircraft and, as such, Mr Gandhi had to carry out the full tests prescribed by the Rules, before he was cleared for flight.

An unintentional spin due to the sudden or momentary failure of the engine, at the crucial stage of the climb, when the airspeed was just above stalling speed: The Pitts aircraft was issued with an export certificate of airworthiness by the relevant authority of the United States over three and a half years before the aircraft was brought to Delhi. As per Rule 55, Part VI, of Indian Aircraft Rules, the validity of the certificate of airworthiness had expired after 12 months from the date of its first issue. Therefore, the aircraft and engine came under the purview of Section E, Schedule II of the

Rules, whereby the aircraft had to be issued with a fresh certificate of airworthiness, necessitating inspections, repairs, testing and certification of all components and equipment as per the laid-down proforma specified by the Rules.

The carburettor installed in the engine of the Pitts aircraft has rubberised diaphragms, which may have deteriorated due to age and disuse. In any case, the carburettor had to be sent for inspection, bench-test and certification by a competent engineer. This was not done. This failure of ensuring the complete serviceability of the carburettor may have caused a momentary or permanent structure in the fuel flow, at the critical stage of low airspeed, at the apex of the climb, resulting in the airspeed plummeting below stalling speed and causing the subsequent unintentional spin.

The jamming or failure of the elevator controls could have caused the unintentional spin and the subsequent failure of recovery action. This situation cannot be ruled out unless irrefutable evidence is produced to the contrary. The flying controls of the Pitts aircraft are operated through a system of push-pull rods, anchored to the fuselage by bolts attached to brackets. These rods actuate the control surfaces via bearings which are fitted and rivetted into the rods. Any distortion caused to the brackets, rods, failure of the attachment bolts or rivets will immediately cause the failure or jamming of the controls. A thorough and unbiased investigation will possibly reveal that the Test Flight and the subsequent flights, prior to the fatal flight, may have caused stresses which may have buckled and or twisted the fuselage and may have damaged the push-pull rods and distorted the brackets.

The validity of the certificate of airworthiness, issued by the directorate for the Pitts aircraft, is questionable. The directorate did not certify the aircraft on the basis of a full inspection for a renewal of the certificate of airworthiness, as required by the Rules. The aircraft was assembled and test flown by Capt. Kaminder Singh, who was not qualified or eligible to command the Pitts aircraft for the test flight.

Assembly of an aircraft comes under the category of a production aircraft and as such, the test flight has to be carried out by a pilot from the manufacturing company. Capt. Kaminder Singh did not come under this category. Further, since the Pitts aircraft was being certified under a special category, because the aircraft did not have the basic flying instruments as required by Rule 52, Part IV, Chapter II of Indian Aircraft Rules, Capt. Kaminder Singh's open rating did not qualify him to fly this aircraft. Without a test flight certification by a qualified pilot the certificate of airworthiness is invalid. Sanjay Gandhi and Subhash Saxena were killed flying an uncertified aircraft.

The pilot is technically, legally, morally and ultimately responsible for the safe operation of the aircraft, it is true. But, should the pilot be killed in the event of a crash, then the poor man is defenceless to counter the charge of "pilot's error".

The foregoing situation is further compounded when the investigating authority belongs to a discipline of aviation, which has a major responsibility to ensure that the aircraft is airworthy and conforms to the norms, rules and formats, within the ambit of the aviation safety system. The Directorate of Civil Aviation is the governing body of civil aviation and the involvement of the directorate in the Pitts tragedy was total and complete and, as such, this involvement is open to investigation. It is, therefore, legally, morally and ethically incorrect for the directorate to conduct the inquiry into the Pitts crash.

Safety is the fulcrum around which all disciplines of aviation revolve and function. Rules and systems are continuously evolved to ensure that "safety", at no time, is breached. Under no circumstances can these rules and systems be subverted for any reason whatsoever. This is a fundamental "must" in any disciplined and well-organised body, regulating, supervising and controlling the destiny of millions of passengers and expensive aircraft. Therefore, the persons within the Directorate of Civil Aviation who bent the rules, are guilty of gross dereliction of duty and must face the consequences. The nation cannot stand unconcerned when the very fundamentals which protect aviation are eroded.