



OXC-3361
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16 April 1962

MEMORANDUM FOR : Deputy Director (Research)

SUBJECT : Evaluation of OXCART Escape System in Comparison with B-58 Capsule

REFERENCE : Letter from Mr. C. L. Johnson to General Don Flickinger, Dated 22 March 1962 re A-12 Escape System (OXC-3245)

1. In connection with your question about Flickinger's view of Kelly Johnson's appraisal of the methods of the A-12 escape system when compared to the B-58 capsule, I have finally succeeded in obtaining from Flickinger a memorandum dictated over the phone just prior to his departure 14 April for Milan on a conference appearance. It reads as follows:

"I have made a very careful analysis of all the current escape systems, including the B-58 capsule, which are now either undergoing development, test or actual operational usage. I have gone back and reviewed again the statistics from Flight Safety which indicate the majority of the ejections are made at altitudes below 5,000 feet and in the neighborhood of 300-350 knots indicated air speed. I am completely convinced, and I think that any careful analysis will support my contention, that the current system for escape which we have in the A-12 represents the most significant advance in escape devices that exist in the Services today. The question of whether or not one could utilize a scaled-down, reduced-weight version of the B-58 becomes almost completely academic since in its current configuration its deprecation of performance capability and actual inability to be incorporated in the current geometry of the aircraft makes it completely impossible for consideration. However, what is, I think, more significant to your knowledge is the fact that even were we able to use the device in the A-12, I personally would recommend against it since it would not give us the safe envelope in operations--it

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would not give us the same scope of safe envelope that we now have in the current system. In other words, if we were to go to a similar type capsule system, assuming such could be incorporated, I would feel that margin of safety for the pilots under all emergency considerations would be reduced by at least 50 per cent. This is based upon the fact that what advantages the capsule has for our purposes are far outweighed by the very definite and proven advantages that our system has in simplicity, reliability, and low level escape capability. If you wish this documented to a greater detail statistically or technically, I will be glad to do so."

2. You may recall that I had asked Flickinger to obtain this comparison for you as background for possible inquiries by the DCI into this subject. Since the Director is keenly interested in the OXCART Program and appears to approach it one system at a time, I felt it was only a matter of time before he questioned why we did not follow the B-58 route in developing a capability, especially in light of recent publicity on successful supersonic ejections using the latter configuration. I think you now have the information you need to answer any question Mr. McCone may bring up. You may even find it useful to show the Director these papers before he asks for a comparison in the event the subject was not covered during the West Coast trip.

JAMES A. CUNNINGHAM, JR.
Acting Chief, DPD

Attachment
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