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Rules Docket Office (29547)
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20591

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OFFICE OF THE CHIEF COUNSEL RULES DOCKET

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Subject: Docket number 29547; 207 Minute Extended Range Operations with Two-Engine Aircraft (ETOPS) Operation Approval Criteria

Although some of the requirements in the proposed policy letter may be in excess of that technically necessary to meet the necessary level of safety, the Boeing Company strongly urges the FAA to approve the 207 Minutes ETOPS Operation Approval Criteria published in the subject docket.

ETOPS is well established, has been in place for over fourteen years, and has resulted in an outstanding reliability and safety record:

1. Twins, operating under ETOPS, dominate North Atlantic traffic; there are more twins flying in the North Atlantic than three and four engine airplanes combined. Twins constitute over 70% of North Atlantic traffic for US. airlines operating on the North Atlantic, while three and four-engine airplanes account for less than 30%. Even when US and European airlines are considered, twins still dominate with more than 50% of traffic frequency (flights).

2. As of March 31, 1999, Boeing twins (B757/767/777) have flown a total (all flights) of more than 41.5 million hours (in excess of 83 million engine hours).

3. Boeing twins have flown more than one and one-half (1.5) million ETOPS flights around the world, and the reliability record is excellent,

4. On a worldwide basis, 58% of B757/767/777, airplanes are equipped for ETOPS (a total of 1028 airplanes out of 1788). Of the

operators of the B757/767/777, 61% operate them on ETOPS routes (103 are ETOPS operators of the 169 total).

5. The B767 was the airplane that totally changed traffic patterns in the North Atlantic; we believe the B777 will have a similar impact in the North Pacific.

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6. There are already over 200 B777's in service and all of them are equipped for ETOPS. The B777 has already flown over one million hours (i.e., in excess of two million engine hours). The average twelve month rolling average inflight shutdown rate for the 777 fleet is .007/1000 engine hours, significantly better than the FAA recommended target rate of .02/1 000 engine hours. Of the operators of the B777, nineteen are operating, or are soon to operate, on ETOPS routes.

7. Data shows that twins have a lower number of both diversions and turnbacks for propulsion related causes than four engine airplanes.

Despite their excellent record, twins are still subject to requirements that are significantly more restrictive than those which apply to three and four-engine airplanes. While these restrictions may have been prudent fourteen years ago, when the industry did not have sufficient data reflecting operation of twins on long range flights, they now appear conservative. With the success of ETOPS and the reliability of twins, it is now appropriate to review the requirements levied on type design approval and operation of twins. Some of the restrictions placed on twins may unnecessarily compel an airline to operate an economically inefficient route, or revert to use of an older three or four-engine airplane with a statistically higher accident rate. Boeing concurs with the draft policy statement regarding the need to review requirements for all long range operations and the importance of enroute alternate airports for all operations.

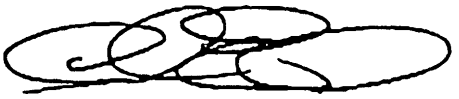
The 207 minute proposal submitted by the Air Transport Association, Air Line Pilots Association and the Independent Association of Continental Pilots also includes an executive summary of the B777 reliability study. As stated in the executive summary of the B777 reliability study, the probability of an airplane caused catastrophic event (even under the most extreme circumstances) is judged to be extremely improbable. In fact, this analysis confirmed B777 airplane design and systems reliability are sufficient to support operations well in excess of the proposed 15% extension.

Based on the Boeing study of weather data in the North Pacific and the availability of enroute alternates, the actual use of 207 minutes operational extension by airlines will, in all likelihood, be very infrequent. Studies show that 207 minutes operational extension may, in the event of an actual diversion, actually permit an airline to fly a shorter route to an alternate airport (a route based on 207 minutes may be closer to enroute alternates than a route based on 180 minutes), In other words, on the North Pacific, use of 207 minutes for flight planning purposes may actually reduce diversion time and risk, when compared to a flight planned under 180 minutes diversion time!

BOEING

Boeing supports the 207 Minute Extended Range Operation with Two-Engine Aircraft (ETOPS) Operation Approval Criteria and encourages the FAA to adopt the proposed policy as soon as possible.

Very truly yours,



C. L. Ekstrand

Note - Two typographical omissions:
page 22667, third column under Discussion, second paragraph, the word "only" may be missing (...airplane operation has not *only* been maintained, but . ..)

page 2268, third column, under Approval Basis, under item 2, should read 222 minutes, instead of 2202 minutes