

New York, 19 May 1955

Messrs. Carter, Evans and Kemp:

Confidential

We had what I thought to be a very interesting discussion at the meeting this week, about aircraft for the future, and I am sorry that you could not be with us, to contribute to the discussion.

There seem to be two obvious conclusions about the trend for the future:

1. The long transcontinental runs will eventually be operated with turbo-jet aircraft and we should make our long range plans on that basis.

When that will come there is no way of knowing at this time. Most of the estimates come within a year or two, one way or the other, around 1960.

There is nothing to be done about turbo-jet aircraft at this time except to remain alert and informed, and to keep the company in position to purchase such aircraft when their use becomes a reasonable requirement.

2. The turbo-prop engine will eventually take the place of the reciprocating engine. The principal reasons for that conclusion are these:

- a. Basically the turbine engine is simpler in construction and ultimately should be a more dependable engine;
- b. The turbine engine weighs less per pound for horsepower developed, which has the effect of increasing the payload;
- c. The turbine engine has smaller frontal diameter, which reduces relative drag and increases relative speed.

I notice in typing that that I say that the turbo-prop engine will take the place of the reciprocating engine; I should say that the turbo-jet and the turbo-prop together will accomplish that.

One of our principal problems in American, like any other airline operation, is to minimize the number of aircraft types which we will operate, for that will reduce capital investment and permit uniformity and economy.

If a suitable medium-sized, medium range turbo-prop airplane can be developed with operating flexibility sufficient to take care of the short routes as well as the medium routes, it may be possible, on long range, to do the American Airlines job with two airplanes; that is our objective.

PS: In reading this over I notice that I leave out delivery schedule: we would hope to get a limited number of airplanes in 1958, but most of them in 1959.

C. R. Smith

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Some of the things we have considered and abandoned:

1. We took a good look at the Viscount plane (British with Rolls-Royce Dart engines). This is about a 300 mile airplane seating about 48 passengers. We came to the conclusion that the airplane was too small and too slow for our operation and that we ran the risk that it would soon be obsoleted by a faster, more efficient airplane;

2. We tried developing a better airplane around the Dart engines but came up with the conclusion that the airplane, to cruise about 350 mph, would also be too slow to last a reasonable time in the service;

Some months ago we gave both Douglas and Lockheed a new specification:

1. The airplane to be designed around engines approximating 3750-4000 hp, turbo-prop, with ability to take larger engines later along;

2. Medium-sized, not too large, to seat about 64 first class and 80 air tourist (5 abreast), with the fuselage wide enough to seat 5 abreast with comfort (this would be about 10 inches wider than the DC 7;

3. Cruising speed 410 mph or better with 3750 hp;

4. 3000 ft. altitude pressure at 30,000 ft.

5. Range with full payload and necessary reserves for 1850-2000 miles, with the ability to go longer distances with added fuel capacity;

6. Airplane not to cost more than the DC 7, which is about \$ 1,900,000; (this was an informal requirement, not a part of the written specification)

Both Douglas and Lockheed have submitted their specifications and they both reasonably meet our requirement, although the Douglas design is a bit on the large side. We are still negotiating about price. We still believe that the airplane should cost no more than the DC 7 and there is reasonable prospect to reach that objective.

If the objectives can be reached, including fair price, the Directors authorized the purchase of 35 aircraft. There is to be an option for an additional 25 airplanes at the same price.

We should have all the data we need within a couple of weeks and then be in position to make a decision in keeping with the authorization.

This is for your information and I would be grateful if you would keep it on a confidential basis for the time being, for the status of the negotiations make that necessary.

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C. R. Smith