Jet Airliners Not Around: The Corner: Expected in '58

NEW YORK, Aug. 30 (Sp):— C. R. Smith, head of American Airlines, in a statement issued Saturday, predicted that ultimately jet power will become the principal power for air transporation but it is not "just around the corner."

The progress in design and production of more efficient jet engines during the last five years has been amazing, Smith said, but he expects it will be 1950 before there will be any jet transports in domestic operations and those will be on long transcontinental runs. Smith's statement follows:

We are often asked when the airliners will be operating jet transports. Perhaps we are asked the same question. There are, generally, two kinds of jet engines: one, with the power plant geared to a jet-stream, called the turbo-jet; the other, with no propeller, utilizing its power directly through thrust, called the true jet.

There are many views about the relative merits of the two types of power plants. Each has its advantages, and in certain respects. Generally, the airplane equipped with a turbo-jet will operate more efficiently at high altitudes, will require shorter runways for take-off and landing, but will be slower.

The true jet engine is not efficient at low altitude; its best performance is around 40,000 feet. An airplane equipped with that engine also will need runways longer than take-off, and long runways are required, to allow smooth take-off, to slow power, and after landing, and long runways are required, to allow the jet to coast longer. The true jet has superior ability to provide high speed and transport at low altitude, will require short runways for take-off and landing, but is not usable when the jet engine is operating with a power plant geared to the jet stream.

The real problem for the engine is to produce a jet engine which will have greater fuel economy and, until that problem is solved, there will be few jet transports in operation. In military airframes high speed is essential, irrespective of cost of operation. But the test in the design of a jet engine is to show that it will operate with profit at the greatest engine efficiency.

Thus, the engine is the test in the design of a jet engine which will have greater fuel economy. It is the test of the economics that the Douglas DC-6B consumes 8.9 pounds of fuel per mile. The jet.5 engine, of about the same size, in spite of its much higher speed, will require about 20.4 pounds of fuel per mile.

The engineering cost for the development of a new jet transport is estimated at $25,000,000 to $39,000,000 and nearly all of that will need to be expended before a single production model is available. The production models may cost $2,000,000 to $4,000,000 each, dependent on size and quantity produced.

Perhaps you are asked the same question. There are many views about the relative merits of the two engines, and you, like the group of experts, have been faster than its predecessor passenger mile and per ton mile. As each new airplane type is designed for the future, the development of a new jet transport will be more difficult to justify an additional capital investment to assure a production machine which will have a higher production cost per unit per the earlier machine. Until the new machine can show a substantial operating economy there is little economic reason for its purchase.

Jet power is a modern development with great promise for the future. It will be of interest to strive to justify its purchase in the development of the future. It is probable that the first jet transports in this country will be equipped with the true jet, and it is probable that an efficient turbo-jet installation will come along later.

In Service About 1958.
Both models, Douglas and Lockheed transports in domestic operations, must be competitive with other manufacturers in the United States. They must be competitive with other characteristics of operating economics, such as safety and efficiency. The jet engine is not yet as reliable as the reciprocating engine. It will need to be overhauled more often and its overall operating life will be shorter. Its initial capital cost may be about five to ten times the cost of the reciprocating engine. It can per...