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May 24, 1932

Martin 333 Engine
for TC-14 Airship.

The Glenn L. Martin Company,
Baltimore, Maryland.

1. In the development of an Air Corps airship, it would be extremely desirable to have a power plant installation composed of three engines, two to be used for propelling the ship at high speeds and the third, a smaller engine for low speed cruising. As shown by Drawing No. X32B5608, inclosed, this engine will be installed as a pusher at the rear of the car. It is proposed to use a controllable and reversible pitch propeller on this engine, and the direction of rotation will be opposite that normally used to accommodate a propeller which is already available. The shaft end should be S. A. E. No. 30, and an effective power at the propeller of 90 horsepower is required. With the engine installed as shown, the cooling characteristics will be the influencing factors governing the design and information on the following is desired:

- a. Can the engine manufactured by your company have the direction of rotation readily reversed?
- b. Will your engine cool in the positions shown on Drawing No. X32B5608 at 90 horsepower and 34 miles per hour and at 50 horsepower and 27 miles per hour?
- c. If you do not believe that the air cooled engine will cool in this position, would you consider the application of liquid cooled cylinders to your engine, and how much would this increase the weight?

2. The Division would appreciate an immediate reply to the above questions and any additional suggestions you may wish to offer, since an early decision must be reached on this project.

For the Chief of the Materiel Division:

C. W. HOWARD,
Major, Air Corps,
Chief, Engineering Section.

Incl.
B/P X32B5608

Cy - Aircraft Br.

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