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WAR DEPARTMENT
AIR CORPS, MATERIEL DIVISION

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MEMORANDUM REPORT ON
Consolidated Heavy Bomber (B-24C), A.C. No. 40-2376 LHS-BC
Date December 20, 1941

SUBJECT: Acceptance Performance Tests

SECTION Flying Branch

Contract No. W-535 AC-13261
Expenditure Order No. 425-4-17
Purchase Order No.

SERIAL No. PRQ-M-19-1326-A

A. Purpose

1. Report on tests of B-24C conducted at the manufacturer's plant. Airplane equipped with four (4) Pratt and Whitney R-1830-41 engines and turbo superchargers and three-bladed constant speed propellers, blade design No. 6153A-12. Gross weight as tested 41,000 lbs. except where otherwise stated. Engine cowl flaps closed on high speed and fuel consumption tests. B.H.P. figures obtained from torque meters.

B. Test Results

1. High speed at 25,000 ft. is 313 mph at 1200 bhp per engine at 2700 rpm.
2. Fuel consumption was 1008 lbs/hr (168 gals/hr at 6.0 lbs/gal) at 221.5 mph at 1850 rpm at 579 bhp per engine at 25,000 ft. with mixture control in the auto-lean position. *40-407*
3. Fuel consumption was 1780 lbs/hr (296.5 gals/hr at 6.0 lbs/gal) at 274 mph at 2230 rpm at 825 bhp per engine at 25,000 ft. with mixture control in the auto-lean position. *40-54*
4. All of the original data obtained during testing of this airplane were destroyed by fire. The results listed above are from notes made by the pilot, those listed below are as remembered by the pilot.
5. Service ceiling was slightly above 34,000 ft.; engine cowl flaps wide open; propellers set for 2550 rpm; indicated airspeed for maximum rate of climb was 132 mph at 2000 ft. and 129.5 mph at 19,000 ft.
6. Total distance required to take off and clear a 50 ft. obstacle was 1750 ft. using 1/2 wing flaps at 2700 rpm at 48" Hg. manifold pressure.

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7. Total distance required to land over a 50 ft. obstacle was 1900 ft., wing flaps full down.
8. Approximate maximum altitude which can be maintained when flying on two left engines alone was 6000 ft.; on two inboard engines alone was 15,500 ft.; dead engine propellers feathered with cowl flaps closed, live engines at approximate normal rated power with cowl flaps wide open; it is necessary to drop a wing in order to fly in a straight direction when operating on the two left engines alone.
9. Airplane does not meet Air Corps cooling requirements under any of the conditions of flight listed above.
10. The indicated airspeed was approximately 2 mph higher than the calibrated airspeed throughout the normal speed range of the airplane with wheels up and flaps up.
11. Total distance required to take off and clear a 50 ft. obstacle at a gross weight of 48,115 lbs. was approximately 2700 ft., using 1/2 wing flaps at 2700 rpm at 45" Hg. manifold pressure.

Prepared by LOUIS H. SIBILSKY.....
(Name)

Approved by STANLEY M. UMSTEAD, Lt. Col., A.C.,
Chief, Flying Branch.....

Concurrence:

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Approved by E. G. CARROLL, Lt. Col., A.C.,
Chief, Exp. Engr. Section

Distribution: Chief, Exp. Engr. Section
(Attn: Flight Research Projs. Off.) Chief, Aircraft Laboratory
(Attn: Aerodynamics Unit) ✓
Chief, Prod. Engr. Section Chief, Propeller Laboratory
(Attn: Project Officer)

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