

# CONFIDENTIAL

## WAR DEPARTMENT AIR CORPS, MATERIEL DIVISION

MEMORANDUM REPORT ON  
Bell, P-39D, A. C. No. 41-6897

NRR-da

Date May 22, 1942

SUBJECT: Report of Flight Tests

SECTION Flight Section

SERIAL No. PHQ-M-19-1385-A (Addendum No. 1)

Contract No. \_\_\_\_\_

Expenditure Order No. 430-4-62

Purchase Order No. \_\_\_\_\_

### A. Purpose

- To report correction to Memorandum Report, Serial No. PHQ-M-19-1385-A. This report replaces the original which should be destroyed.
- To report on flight tests of Bell P-39D airplane, A.C. No. 41-6897. Airplane equipped with Allison V-1710-35 engine and three-bladed constant speed propeller, blade design No. 6114-1cl.5-21 blade angle range 51.5° to 21.5°, at 42 inch radius. Airplane loaded to an approximate gross weight of 7800 pounds not including a 75 gallon belly tank installation. Wheels up; wing flaps neutral; oil cooler and prestone shutters flush and carburetor cold. Four .30 caliber wing guns, two .50 caliber synchronized guns and one cannon. Gun barrels and openings taped. Airplane as tested was fitted with winterized equipment. Horsepowers obtained from power curve dated March 25, 1941. Engine was equipped with manifold T-type screens, individual intake port screens removed.

### B. Test Results

- Speeds in level flight at 13,000 feet.

Belly Tank Brackets & Shackles Removed MPH	Belly Tank Removed Shackles & Brackets in Place MPH	Belly Tank (Full) Shackles & Brackets in Place MPH	RPM	Chart BHP	Throttle Position	Mixture Setting
358	---	---	3000	1170	W.O.	A.R.
336.5	328	---	2600	974	W.O.	A.R.
---	349	---	3000	1165	W.O.	A.R.
---	---	311.5	3000	1145	W.O.	A.R.
---	---	294.5	2600	967	W.O.	A.R.
321.5	312.5	282.	2280	850	Part	A.L.
301.	292.	264.	2200	700	Part	A.L.
276.	267.	241.	2100	550	Part	A.L.
257.	247.	221.	1900	450	Part	A.L.
222.	212.	184.	1700	330	Part	A.L.

*This revision is practically the same as the original report, but shows slightly higher speeds (order of 15-20 mph) and lower h.p.'s (order of 20 hp) for the throttle.*

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### C. Remarks

1. The reworked (winterized) carburetor heat control lever as installed in this airplane is unsatisfactory. It is so located that the lever is inadvertently tripped when trim tabs are adjusted and the carburetor heat control then springs to the full hot position. (Speed tests were conducted with the heat control wired in the full cold position.)

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Prepared by Nathan R. Rosengarten  
NATHAN R. ROSENGARTEN, 2nd Lt., A.C.  
(Name)

Approved by George J. Eppright  
GEORGE J. EPPRIGHT, Colonel, A.C.  
Acting Chief, Flight Section

Approved by W. E. Carroll  
W. E. CARROLL, Colonel, A.C.  
Chief, Exp. Engr. Section

Concurrence:

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