Work Order is in Engineering shop to modify the carburetor heat control lever. Inv. of Brelsford (Power Plant) is supervising the modification.
5-8-42

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WAR DEPARTMENT

AIR CORPS, MATERIEL DIVISION

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

NRR-da-19

Date May 2, 1942

SUBJECT: Report of Flight Tests

SECTION Flight Section

SERIAL No. PHQ-M-19-1385-A

Contract No.
Expenditure Order No. 430-4-62
Purchase Order No.

A. Purpose

1. 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. 614-1cl.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 wings, two .50-caliber synchronized guns and one cannon. 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

1. Speeds in level flight at 13,000 feet.

Belly Tank, Brackets & shackles removed M.P.H.	Belly Tank Removed Shackles & Brackets In place M.P.H.	Belly Tank (full) Shackles & Brackets In place M.P.H.	R.P.M.	Chart B.H.P.	Throttle Position	Mixture Setting
357.	-	-	3000	1190	W.O.	A.R.
335.5	326.5	-	2600	990	W.O.	A.R.
-	348.	-	3000	1185	W.O.	A.R.
-	-	311	3000	1160	W.O.	A.R.
-	-	295	2600	980	W.O.	A.R.
318.5	310.	281	2280	850	Part	A.L.
298.	289.	263	2200	700	Part	A.L.
273.	264.5	240	2100	550	Part	A.L.
253.	244.5	220	1900	450	Part	A.L.
218.	212.	184	1700	330	Part	A.L.

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Flight Section
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Remarks:

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.)

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

Approved by J.M. GILLESPIE, Colonel, Air Corps
Chief, Flight Section

Concurrence:

Approved by F. O. CARROLL, Colonel, Air Corps
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