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P-1
P-40FARMY AIR FORCES
MATERIEL CENTER
FLIGHT SECTIONMEMORANDUM REPORT ON
Single Engine Pursuit P-40F, AAF No. 41-13635

HJB:da:19

Date April 3, 1943

SUBJECT: Propeller Test

BRANCH: ~~ENGINEERING~~ Flight Test

SERIAL No. FS-M-19-1578-A

Contract No. _____
Expenditure Order No. 577-57
Purchase Order No. _____A. Purpose.

1. Report on performance of P-40F airplane equipped with three-bladed constant speed propeller, Dwg. No. 101344-24 and standard spinner. Memorandum Report No. FS-M-19-1549-A lists comparative performance with five other propellers. Airplane equipped with V-1650-1 engine and flown with wing flaps neutral, wheels up, carburetor cold, mixture "auto-rich", auto boost "off", high blower ratio, radiator flap neutral for level flight and wide open for climb, full gas and oil load at take-off, six .50 caliber wing guns with ball type blast tubes in place, no ammunition, and belly tank shackles in place. Horsepower figures obtained from power charts.

B. Test Results.

1. Level flight speeds at 18,100 feet.

Belly Tank Sway Braces Installed (Without Tank)			Belly Tank Sway Braces Removed.		
True Speed MPH	RPM	b.h.p.	True Speed MPH	RPM	b.h.p.
369.5	2950	1100	374	2950	1100
336	2650	890	342	2650	890
311	2400	760	317.5	2400	760
283.5	2200	635	291.5	2200	635
258	2000	530	266	2000	530
233	2000	445	240	2000	445
194	2000	360	200	2000	360

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April 3, 1943

2. Maximum rate of climb at wide open throttle and high blower, 2850 RPM. Belly tank sway braces installed (without tank).

Altitude Feet	True Airspeed MPH	Rate of Climb Ft/Min.	b.h.p.
18,000	201	2185	1040
22,000	207	1725	915
25,000	212	1360	820
28,000	217	1040	710

3. Results of take-off tests obtained by photographic method will be reported by the Aircraft Laboratory.

Concurrence:

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