

Address Reply & ENVELOPE to:

Commanding General  
AAF Materiel Command  
Engineering Division  
Reference: Dept. 51  
Wright Field, Dayton, Ohio

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26 JUL 1944  
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Performance Data  
on Fighter Aircraft

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AUTH: COMMANDING GENERAL  
AAF MATERIEL COMMAND  
DATE:  
INITIALS:

Commanding General,  
Army Air Forces,  
Washington 25, D.C.

Attention: Asst. C/AS, MMD,  
Devel. Engr. Br., Maj. W.D. Hoyt.

CLASSIFICATION CHANGED  
TO: CONFIDENTIAL  
AUTH: CG, ATSC  
BY: H.D. Lippman  
DATE: 30 Oct. 1944

1. On 22 June 1944 Major W. D. Hoyt requested information on the rate of climb, diving speed, radius of turn, and rate of roll for the P-38J, P-47, P-51B, and P-80A airplanes.

2. Since it was believed that these data were required for comparative purposes, they have all been prepared for a density altitude of 10,000 feet and for representative weights. The rates of climb given are based on military rated power at 10,000 feet. Where available, diving speeds have been quoted from the applicable technical orders. The diving speed for the P-80A is the design limit speed and has not been flight checked. The radii of turn have been computed for a steady turn at a normal acceleration of 4g at the estimated maximum power-on lift coefficient and do not necessarily represent constant altitude turns. The normal acceleration of 4g was selected since this is the maximum continuous acceleration that the average pilot can withstand without blacking out. The rates of roll are the maximum attainable at 400 mph with a 50-pound stick force in the case of the P-47B and P-51B airplanes, while for the P-38J an 80-pound wheel force was used. On the latter airplane two values are given, the first of which is without aileron boost and is based upon actual tests, and the second is the estimated value for the airplane with aileron boost. No data are available on the rate of roll of the P-80A.

3. The data requested are contained in the inclosed table.

For the Commanding General:

1 Encl.  
Table

WISCONSIN 8 13 44

F. O. CARROLL,  
Brig. General, U.S.a.  
Chief, Engineering Division.

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TABLE I CONFIDENTIAL

Airplane	Gross Weight lb.	Rate of Climb fpm	Indicated Limit Diving Speed mph	Radius of Turn ft.	Max. rate of roll <sup>a</sup> at 400 mph deg/sec
P-38J	15,000	2960	420	838	39 (no boost) 120 (with boost)
P-47	13,000	2165	500	990	63
P-51B	9,000	3000	505	883	78
P-80A	10,000	5800	580	1170	No data

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