

IMPORTANT.

COMMONWEALTH OF AUSTRALIA

Enclosure 1
SECRET

9/52/32

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ROYAL AUSTRALIAN AIR FORCE,
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IN REPLY PLEASE REFER TO FILE NO. 805/1/Eng./16363.

29th November, 1944.

T.S.I.E.

110 J.H.
25/11/44

The Secretary,
Department of Air,
MELBOURNE.

For : D.T.S.

18/11

MOSQUITO PERFORMANCE.

We forward data originated by the Makers, as follows:-

- (i) Further single copies of Operational Performance Notes for Mosquito with single and two stage engines.
- (ii) Enclosure A - Brief speed comparison of various marks including the fighter bomber fitted with Merlin 100 engines and the long range P.R. version.
- (iii) Enclosure B - Brief performance figures for the P.R. long range aircraft with alternative engines.
- (iv) Enclosure C - Approximate range charts for single and two stage engined Mosquito under maximum power weak mixture and economical cruising conditions.
- (v) Enclosure D - Table summarising the effect on speed and range of the various external fittings and stores.
- (vi) Enclosure E - Brief tabulated combat climb performance for aircraft types given in Enclosure B.

2. Enclosures B and E apply for aircraft with no external stores or fittings apart from snowguards.

3. As a rough rule the fighter versions are 5 m.p.h. slower on the average than the P.R. versions. The service ceiling is roughly reduced by 2500 ft. for a weight increase of 2000 lbs.

4. It is estimated that the increase in speed for a Mosquito fitted with a 3 speed 100 series engine operated at +30 pounds boost as compared with a similar aircraft operated with a standard Merlin 100 at +25 pounds boost will be approximately:-

- + 10 m.p.h. at .S.L.
- + 10 m.p.h. at F.S. Peak.
- + 30 m.p.h. at 30,000 feet.

5. The Mark X aircraft has reached the trial installation stage but development is not being pushed. It will be noted that the effect of the current type R.P. on performance is somewhat more adverse than expected.

G.D. Marshall
(G. D. MARSHALL) W/Cdr,
for Air Vice Marshal,
Air Officer Commanding.

Encl.

Weight	Merlin Engine	Boost	Sea Level	M.S. Peak		Change Gear		F.S. Peak		Speed at Altitude		Aircraft
				'		'		'		'		
19,000 lbs.	25	+ 18	340	5000'	364	9000'	364	12500'	379	25000'	365	F.B. Mark VI
		+ 25	361	S.L.	361	4000'	364	7000'	378	25000'	378	
20,000 lbs.	100	+ 20	337	10000'	384	15000'	383	22000'	413	30000'	401	Possibly Mk. X
		+ 25	360	5200'	384	11000'	384	18000'	414	30000'	401	
20,000 lbs.	76	+ 18	326	14500'	394	21700'	391	27500'	415	30000'	411	P.P. XVI
		+ 25	347	9800'	393	16700'	394	22500'	419	30000'	411	
20,000 lbs.	113	+ 18	322	16800'	402	23800'	397	30500'	425	35000'	413	P.R. Mk. 34
		+ 25	352	11000'	404	18200'	402	25000'	428	35000'	413	

25th September, 1944.

MOSQUITO P.R. MARK 34 LONG RANGE VERSION.

Engines	Merlin 77	Merlin 113 (R.M.16.S.M.)
All-up Weight	25,100 lbs.	25,100 lbs.
Fuel capacity	1255 galls.	1255 galls.
Still air range at 20,000 ft.		
(a) Most economical cruising speed	3755 miles at 290 m.p.h.	3325 miles at 290 m.p.h.
(b) Max. economical cruising speed (2650 r.p.m. +7 lbs.)	2865 miles at 330 m.p.h.	2765 miles at 345 m.p.h.
Maximum level speed at 20,000 ft. (3000 r.p.m. +18 lbs/sq. in.)	399 m.p.h.	410 m.p.h.
Maximum level speed at F.S. gear full throttle height. (3000 r.p.m. +18 lbs/sq. in.)	422 m.p.h.	432 m.p.h.
(Speeds quoted for no external tanks or snow guards)	.	
Altitude for above ft.	28500	31700
Weight of cameras	310 lbs.	310 lbs.