

ROYAL AUSTRALIAN AIR FORCE
ENGINE TEENSVILLE

14th. March 1942.

FIFTY HOUR (140H) OPERATIONAL DATA.

The following data has been compiled from air tests carried out by No. 75 Squadron, Teensville.

Fuel consumption and Indicated Airspeed figures are average figures only.
 Temperatures at altitudes averaged 28 degrees F. above standard.

(A) Most Efficient Engine Operating Figures.
 Normal conditions

| | | R.P.M. | 42° Ng. | M.P. |
|-----------------|------|--------|-----------|------|
| Take off | 2970 | | | |
| High speed end | | | | |
| Climb | 2600 | do | 37.2° Ng. | do |
| Max' Cruising | 2280 | do | 30.2° Ng. | do |
| Economical do | 2190 | do | 26.2° Ng. | do |
| Max' for Diving | 3120 | do | 45.0° Ng. | do |

(B) Engine Limiting Figures.

| | | |
|--------------------|---------------------------------|-------------|
| Coolant | 85°C. Min for take off. | 125°C Max' |
| Oil Temp' | 40°C. do | 80°C. Max' |
| Oil Press. | 50-70 lbs/sq in Normal | 85 lbs Max' |
| | 15 lbs do Idling hot. | |
| Fuel Press. | 14-16 lbs | |
| R. .M. | 3000 Take off | |
| | 3120 Dive. | |
| Max' Press' | 45.5 Take Off at Sea level | |
| | 42.0. After clearing Aerodrome. | |
| Max' speed in Dive | 450 R.P.M. | |

(C) RATE OF CLIMB.

Take off at S/level and climb to 10,000ft
 2600 R.P.M. - 37.2° Ng. M.P. 8 mins at 145 M.P.H.

Take off at S/level and climb to 15,000ft.
 2600 R.P.M. - 37.2° Ng. M.P. 8 1/2 mins at do

(2)

(2)

INDICATED AIR SPEEDS.

| | | | | | |
|-------------------------|-----------|---------|-------|----------|------------|
| High speed level flight | 10000ft | 2600RPM | -37.2 | Hg. M.P. | = 220 MPH |
| do | 5000ft | do | do | do | = 225 MPH. |
| do | 10,000ft | do | do | do | = 230 MPH. |
| Max Cruising | 10000ft. | 2280RPM | -30.2 | Hg. M.P. | = 205 MPH. |
| do | 10,000 | do | do | do | = 210 MPH. |
| Economic Cruising | 10000 ft. | 2190RPM | -26.0 | Hg. M.P. | = 187 MPH. |
| do | 10,000 ft | do | do | do | = 193 MPH. |

(R)

FUEL CONSUMPTION .

| | |
|---------------------------------------------------------------|-------------------------|
| Take off at 2970 RPM -42° Hg. M.P. and climb at 2600 RPM-37.2 | |
| From sea level to 10000ft | - 9.5 galls. |
| From sea level to 15000ft. | -13.5 galls. |
| High speed level flights. | -70 IMP G.P.H. (Approx) |
| Max Cruising | -52 do |
| Economic Cruising | -38 do |

2

FULL POWER - CRUISE.

| ALT | RPM | MP | IAS | |
|-------|------|-------|-----|-------------------------|
| 9000 | 3000 | 45.0° | 140 | M.P. Restricted. |
| 10000 | 3000 | 42.0° | 220 | do |
| 12000 | 3000 | 42.0° | 235 | do |
| 15000 | 3000 | 39.0° | 230 | Max M.P. Full Throttle. |
| 18000 | 3000 | 35.0° | 210 | do |
| 21000 | 3000 | 30.5° | 197 | do |

3

FUEL CAPACITY WITH TAIL ON GROUND.

| | | |
|---------------|--------------------------|----|
| Fuselage Tank | 51 Imp. Gall. | |
| Wing Main | 40 do | 42 |
| Wing Reserve | 25 do | 21 |
| Normal Total | 116 do | |
| Belly Tank | 41.5 | 43 |
| All up total | <u>157.5</u> Imp. Galls. | |

(3)

4 (a) RECOMMENDED OPERATIONAL LIMITS.

| | |
|---------------------------------------|----------|
| Radius of Action | 175 min. |
| Safe Range in Still Air (normal fuel) | 750 min. |
| do (add up fuel) | 750 min |

Notes: When aircraft is fitted with belly tanks subtract 15% performance.
 With existing oxygen equipment max'operating altitude = ¹⁷⁶⁰⁰17000ft.

5 (a) THESE PRELIMINARY FIGURES ARE UNOFFICIAL AND MUST NOT BE USED OTHER THAN AS A GUIDE FOR THE COMPILATION OF OPERATIONAL DATA.

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