



T67M MkII G-BNSP

LYNEHAM FLYING CLUB

SLINGSBY FIREFLY T67M MkII

FLIGHT CHECK LIST



LFC Edition 9

**FULL CHECK A**

Before entering the aircraft check that surfaces are clear of snow, ice, hoar frost or mud. No Leaks apparent.

COCKPIT PREPARATIONS

1. Control lock Remove from aircraft
2. Rudder pedals Adjusted, matched, secure
3. Fire Extinguisher Check
4. First Aid Kit Check
5. Canopy Breaker Check
6. Parking Brake ON
7. Magnetos OFF, key out
8. Master switch ON
9. Alternator warning Cancel Flasher
10. Pitot heater ON
11. Strobe light ON, Check, OFF
12. Landing lights ** ON, Check, OFF
13. Nav lights ** Check
14. Trim Neutral
15. Stall warning Check light and horn
16. Pitot heater Check operation, then OFF
17. Structure temp Check below 42°C L and R
18. Master Switch OFF
19. Flaps Lower (Max)

** These items may be omitted provided no part of the planned flight takes place at night.

PORT WING

1. Flap Condition, play, stiff nut, operating arm
2. Undercarriage (rear) Tyre, torque link, brake leaks
3. Aileron Condition, play, drains, stiff nut
4. Wing Condition, movement, play, stiff nut, drains
5. Wing Tip Check condition, security, Nav light
6. Leading edge Check condition
7. Fuel Cap Correctly fitted and locked
8. Fuel Drain Check for Water contamination
9. Access Panel Security
10. Pitot head Remove cover, hole clear
11. Undercarriage (front) Condition, oleo 3 inches, Tyre creep/inflation/condition. Brakes – leaks/damage.
12. Flap underside Condition, drains clear

**FRONT FUSELAGE**

1. Fresh air intake Clear
2. Cowling (left) Secure, 2 pins, 7 fasteners, oil leaks
3. Landing lights Undamaged
4. Propeller Condition, Spinner
5. Nosewheel..... Condition, extension,
tyre cuts/creep/inflation
6. Engine air inlet Foam filter clean
7. Cowling (right) Secure, 2pins, 6 fastners
8. Propeller Check condition
9. Spinner Check condition, security
10. Engine cooling inlets Clear
11. Oil Check, Min 5, Max 8 US Quarts,
(maintain between 6-7 qts)
panel secure
12. Fresh air intake Clear. Temp probe

STARBOARD WING

1. Leading edge Check condition
2. Fuel Cap..... Correctly fitted and locked
3. Fuel Drain..... Check for water contamination
4. Undercarriage (front)..... Condition, extension.
Tyre creep/inflation/condition.
Brakes damage/leaks.
5. Flap underside Check condition, drains clear
6. Wing surfaces Check condition
7. Access panel Secure.
8. Wingtip Nav light
9. Aileron Check condition, play, drains,
movement, stiff nut
10. Wing Drains
11. Undercarriage (rear)..... Tyre, torque link, brake-leaks
12. Flap Condition, play, stiff nut,
operating arm
13. Aerials Condition, security/undamaged



REAR FUSELAGE AND TAIL SECTION

1. Canopy Condition, clean/cracks
2. Static vent (starboard) Plug out, clear
3. VHF Aerial Condition, security
4. Fin Fairing Secure
5. Elevator Condition, movement, play, drains
clear
6. Inspection Cover Secure
7. Strobe Light Condition
8. Rudder DO NOT MOVE. Condition, stiff nuts,
nav light, lock removed
9. Trim Tab Position, security, play, stiff nut
10. Tail bumper Unmarked
11. Static vent (port) Plug out, clear
12. Canopy Condition, clean, cracks



TRANSIT PRE FLIGHT CHECKS

(to be done in place of FULL CHECK A on second and subsequent flights of a day)

COCKPIT PREPARATION

1. Rudder pedals Adjusted, matched, secure
2. Parking Brake ON
3. Magnetos..... OFF, key out
4. Master switch ON
5. Fuel Contents Check
6. Structure Temp Check below 42°C
7. Master switch OFF
8. Flaps..... Lower (Max)

EXTERNAL CHECKS

1. Aircraft Surface/Controls Check
2. Flaps..... Check
3. Fuel Contents Visual Check
4. Landing Gear Check, Oleos 3 inches
5. Canopy Clean
6. Oil Contents..... Min 5, Max 8 US Quarts
7. Propeller and spinner Check
8. Pitot head Unblocked
9. Static vent..... Clear



BEFORE STARTING ENGINE

- 1. External Check..... Complete
- 2. Cockpit Check for loose articles
- 3. Harness Both fastened (if solo secure other)
- 4. Headset Plugged in
- 5. Tacho Note reading
- 6. Flying controls Elevator/Aileron full, free and correct
- 7. All Lights and Avionics OFF
- 8. Master Switch..... ON
- 9. Manifold Pressure Note
- 10. Pitot heater OFF
- 11. Alternator warning Cancel Flasher
- 12. Clock Correct
- 13. Instruments..... ASI, Zero. VSI +/-100ft
- 14. HSI Slave
- 15. Emergency static vent..... Closed
- 16. Accelerometer Reset
- 17. Throttle Full, free movement, leave closed.
- 18. Propeller Check full and free leave max RPM
- 19. Mixture..... Full, free movement, leave full RICH
- 20. Fuel cock..... ON (lowest tank)(Pull out to turn on)
- 21. Fuel contents..... Check (both tanks)
- 22. Circuit breakers All in
- 23. **Parking brake ON (Pump brakes)**
- 24. Flap Full, check, leave UP
- 25. Trim Full, free movement Set N
- 26. Canopy Closed, secure
- 27. Start Clearance (if required)..... Obtain, **Radio OFF**
- 28. Propeller..... Clear

STARTING ENGINE

- | | <u>COLD</u> | <u>HOT</u> |
|-------------------|---|---|
| 1. Throttle | Open (1/4" to 1/2") | Closed |
| 2. Mixture..... | Full Rich | Idle/Cut-off |
| 3. Fuel Pump..... | ON | ON |
| 4. Fuel Pump..... | OFF 2 secs after
fuel pressure reads | OFF after 30 secs |
| 5. Mixture | Idle/Cut-Off | Idle /Cut-Off |
| 6. Magnetos..... | LEFT | LEFT |
| 7. Throttle | 1/2" Open | Full, retard slowly
to 1/4 open while cranking |
| 8. Starter..... | Press, release shortly after engine fires | |
| 9. Mixture..... | FULLY RICH Promptly | |

STARTER LIMITS:

- (a) Max 10 seconds per attempt.
- (b) Max total 30 secs in 15 min period.
- (c) Allow 15 mins cooling after 30 secs operation.



AFTER ENGINE START

- 1. Magneto Switch.....BOTH
- 2. RPM (Throttle).....Set 1200 RPM
- 3. Oil Pressure.....Rising in 30 secs (if not, stop engine)
- 4. Starter engaged light.....Out (if not, stop engine immediately)
- 5. Alternator.....ON
- 6. Magnetos.....Drop not stop
- 7. Fuel pressureCheck
- 8. Radios and Nav aidsON As required
- 9. SuctionIndicating
- 10. HorizonErecting – Adjust datum
- 11. HSISynchronised
- 12. AltimeterCheck setting
- 13. Alternator warning lightOut
- 14. Ammeter.....Positive Charge
- 15. Taxi clearance.....Obtained

TAXYING

- 1. BrakesCheck
- 2. Flight instruments.....Check
- 3. Rudder.....Check full movement

POWER CHECK

- 1. PositionSafe and clear
- 2. Parking BrakeON
- 3. Fuel cock.....Change to other tank
- 4. CanopyClosed and locked
- 5. Engine T's and P'sCheck in green (Min 4 mins after start)
- 6. Mixture.....Full Rich
- 7. ThrottleSet 1800 RPM
- 8. Magnetos.....Check, Max mag drop 175 rpm
Differential 50 rpm

- 9. *Propeller control****Move toward lower RPM position until RPM starts to drop*
- 10. *RPM***.....*See RPM drop, do not allow more than 500 RPM drop*
- 11. *Propeller control****MAX RPM*
- 12. *Propeller control test****Repeat** items 3 more times from step 9, for first flight of day only.*

↑
X4
First
Flight
↓

- 13. SuctionCheck in green (4.5 to 5.5 in Hg)
- 14. Engine T's and P'sCheck in green
- 15. ThrottleClose, check idling >800 rpm
- 16. Throttle1200 rpm



PRE-TAKE OFF

- 1. Trim Set N
- 2. Flaps..... Take Off (Rotate speed 55kts)
- 3. Magnetos..... Both
- 4. Fuel PUMP ON
COCK ON
Contents sufficient
- 5. Mixture..... Full rich
- 6. Throttle friction Set
- 7. Pitot heater ON (if conditions require)
- 8. Radios and Nav aids ON set as required
- 9. Canopy Closed and locked
- 10. Engine Ts&Ps + Ammeter..... Green (beware parallax on ammeter)
- 11. Strobe light ON
- 12. Suction Green
- 13. Flight Instruments..... Check
- 14. Harness Tight and locked
- 15. Controls Full and free movement
- 16. ATC Clearance..... Obtained
- 17. Transponder ALT, code as required
- 18. Emergency Brief..... Complete

TAKE-OFF

- 1. Full Throttle RPM 2550 minimum
- 2. Ts & Ps..... Green
- 3. Fuel Pressure 5-10 PSI
- 4. ASI..... Increasing

AFTER TAKE OFF / MISSED APPROACH

- 1. Toe brakes ON/OFF
- 2. Flaps..... Raise (not below 73 kts)
- 3. Climb 77kts
- 4. Engine T's and P's Check
- 5. Fuel pump OFF (above 1,500ft AGL)
- 6. Mixture (Fuel Pressure)..... Set 5 PSI (above 1,500ft AGL).
Monitor CHT – Set Mixture-RICH to cool
- 7. RPM Set 2600 RPM (above 1500ft AGL)

IN-FLIGHT CHECKS

- 1. Fuel Contents check
Cock ON
Pump OFF (ON if changing tanks)
- 2. Radio Frequency correct
- 3. Engine RPM Check/Ammeter Charging, Mixture
Set/Alternator Warning Light, Temperature
and pressure check
- 4. Direction HSI Synchronised
- 5. Altimeter Correctly set

**PRE-LANDING CHECKS**

1. Brakes OFF
2. Mixture..... Fully RICH
3. RPM MAX
4. Fuel Pump ON
Cock set fullest tank
Contents checked
5. Instruments..... Set
6. Altimeter Set
7. Engine T&P + Ammeter Green
8. Fuel Pressure Check
9. Harness..... Tight and locked
10. Flaps..... As required

AFTER LANDING CHECKS

1. Strobe light OFF
2. Landing light..... OFF or as required
3. Pitot heater OFF
4. Fuel Pump..... OFF
5. Trim Neutral
6. Flaps..... UP
7. Radios and nav aids..... OFF except radio in use

SHUT DOWN

1. Parking brake ON
2. Throttle Set 1800 rpm for 15-20 secs then
set 1200 rpm
3. Radios and Nav aids and lights OFF
4. Alternator..... OFF
5. Magnetos..... Drop not stop
6. Throttle CLOSED
7. Mixture..... CUT OFF

When engine Stops

8. Magnetos..... OFF, key out
9. Master Switch..... OFF
10. Fuel Cock OFF
11. Throttle Friction Loose
12. Flaps..... Down
13. Tacho Note Reading
14. Parking brake Leave on if aircraft not chocked



PRE-STALLING / SPINNING / AEROBATIC CHECKS

1. HSIFREE
2. HeightSufficient to recover by 3000ft agl
3. Airframe.....Flaps up or as required
No loose articles
Harness tight and locked
Canopy Closed and locked
4. SecurityNo Loose articles, Harnesses Secure
5. EngineTemperature and pressures
Mixture fully rich
Fuel in balance (max 14 litre diff'nce
for ideal handling)
Set 2600 RPM
6. Location.....Clear of airfields, controlled airspace,
danger areas and built up areas
7. Look Out.....All clear

ERECT SPIN RECOVERY

1. Close the throttle
2. Raise the flaps
3. Check spin direction on turn needle
4. Apply full rudder in opposite direction to turn
5. **Hold ailerons firmly neutral**
6. Move control column centrally and progressively forward until spin stops

IMMEDIATELY AFTER SPIN STOPS

7. Centralise rudder
8. Level wings with aileron
9. Recover from the dive

INCORRECT RECOVERY

1. Check **FULL** anti-spin rudder is applied
2. Move control column **FULLY AFT** then **SLOWLY CENTRALLY FORWARD** until spin stops
3. Centralise the controls and recover to level flight



FIRE

ENGINE FIRE

1. ThrottleCLOSED
2. Propeller.....MIN RPM
3. Mixture.....CUT OFF
3. Fuel Cock.....OFF
4. Magnetos.....OFF
5. Fuel Pump.....OFF
6. Cockpit Heating.....OFF
7. RadioEmergency Call
8. Master switchOFF
9. Alternator.....OFF

Do Not Attempt to Restart

CARRY OUT FORCED LANDING

WARNING: The BCF extinguisher is toxic. Keep use to minimum necessary. Ventilate well.

ELECTRICAL FIRE

1. Alternator.....OFF
2. Master Switch.....OFF
3. Circuit Breakers.....Trip all

LAND AS SOON AS POSSIBLE. The engine will continue to run but all electrical services have been lost.

NOTE: After all circuit breakers have been tripped the battery power may be restored to enable selective resetting of circuit breakers if necessary. Should the ammeter show an excessive discharge when a particular circuit breaker is reset then leave that circuit breaker in the tripped position. Finally restore power to the alternator.



ENGINE FAILURE (1) PROP STOPPED

ENGINE FAILURE – PROP STOPPED

Mechanical Failure

If the engine stops with an unusual mechanical noise, DO NOT ATTEMPT RESTART but carry out a forced landing.

NO APPARENT REASON

1. Throttle ¼ open
2. Propeller MAX RPM
3. Mixture Fully rich
4. Fuel contents Check not zero (Both gauges)
5. Fuel Cock Set tank with fuel remaining
6. Magnetos BOTH
7. Fuel Pump ON
8. Fuel pressure Green
9. Master switch ON
10. Alternator OFF

Either:

Starter button PRESS

Or

Dive to 115kts

When engine starts:

Alternator ON

Throttle Increase power slowly allowing
Engine to warm up

DIVING TO START THE PROPELLER USES AT LEAST 600-800 FEET

Note: If the propeller stops during aerobatics, the engine may be restarted immediately using the starter button so long as there was no mechanical noise when the engine stopped.





ENGINE FAILURE (2) PROP TURNING

ENGINE FAILURE – PROP TURNING

Mechanical Failure

If there is no oil pressure or if there is unusual mechanical noise

1. ThrottleCLOSED
2. PropellerMIN RPM
3. Mixture.....CUT OFF
4. Fuel CockOFF
5. Magnetos.....OFF
6. Fuel Pump.....OFF

CARRY OUT FORCED LANDING

No Apparent Reason

Investigate Fuel Problems

Check:

1. Fuel CockON Left or Right
2. Mixture.....Fully Rich
3. Throttle¼ Open
4. Fuel Pump.....ON Check press
5. Fuel ContentsSufficient

Investigate ignition Problem

Check:

1. Magnetos.....Both

If not better, set

Magnetos to RIGHT, if no better

Magnetos to LEFT, if no better

Magnetos to BOTH

IF NO IMPROVEMENT – CARRY OUT FORCED LANDING



EMERGENCY LANDING

FORCED LANDING

The optimum flapless gliding speed is 80kts. This will give a still air gliding range of about 1.5nm/1,000ft.

1. Radio *Emergency Call
2. HarnessTight
3. ThrottleClosed
4. PropellerMIN RPM
5. Mixture *CUT-OFF
6. Fuel Cock *OFF
7. Magnetos *OFF
8. Fuel PumpOFF
9. Master Switch *OFF
10. AlternatorOFF

Items marked * must be completed even following an engine failure after take-off.

Optimum gliding speeds after flap selection are:

- Clean80 kts
- T/off flap70 kts
- Threshold65 kts
- Landing.....65 kts





DITCHING

DITCHING

If above 2000ft AGL consider abandonment by parachute

WARNING: Ditching is best carried out whilst engine power is available to control the rate of descent.

In a strong wind, land into wind, onn wave crest, otherwise land parallel to the swell.

Carry out the Forced Landing checks (this card) aiming to ditch with:

WITH POWER AVAILABLE

1. HarnessTight and locked
2. CanopyClosed or Locked Open (post mod 283)
3. Flaps.....Fully down
4. Speed60 kts
5. Rate of Descent300 ft per min

DO NOT ROUND OUT. Continue descent into the water

WITHOUT POWER AVAILABLE

1. Forced landing checksComplete except canopy
2. CanopyClosed or Locked Open (post mod 283)
3. Flaps.....Fully down
4. Speed60 kts
5. Rate of DescentAs established

DO NOT FULLY ROUND OUT Check rate of descent but fly the aircraft into the water.

CAUTION

1. In both cases the aircraft may turn on its back. Release the seat harness and exit via the open canopy before inflating lifejackets.
2. With canopy open during flight suction controlled instruments will be more difficult to read due to indicator flutter.



OIL PRESSURE

PROPELLER

OIL PRESSURE FAILURE

WARNING: Prolonged use of power after engine oil pressure failure will lead to mechanical damage
Full throttle may be used in emergency but is likely to lead to engine failure.

If oil pressure fails, the propeller will revert to the minimum RPM (Coarse Pitch) position.

1. RPMControl with throttle
 2. ThrottleClosed – except for emergency
- CARRY OUT LANDING AT NEAREST SUITABLE SITE

PROPELLER GOVERNOR FAILURE

RPM WILL NOT INCREASE

1. Oil Pressure.....Check in Green (if not refer to Oil Press Fail above)
2. Manifold pressure.....greater than 15" - if not open throttle
3. RPM control.....Operate slowly through whole range

IF RPM DOES NOT RESPOND

4. RPM control.....Leave at mid range
- Use engine power observe RPM/Manifold pressure limits (inside back page)
LAND AT NEAREST SUITABLE AIRFIELD

RPM OVERSPEEDS OR WILL NOT DECREASE

1. ThrottleUse to keep RPM within limits – more than ¾ may cause RPM overspeed
 2. RPM Control.....Leave at mid range
 3. AirspeedMaintain 80 kts
- LAND AT NEAREST SUITABLE AIRFIELD



ALTERNATOR

FUMES

ALTERNATOR FAILURE

1. AlternatorOFF
2. Excitation c/bRESET
3. Alternator c/bRESET
4. Alternator.....ON

If output not restored:

AlternatorOFF

Reduce electrical loads to a minimum to conserve battery life. Try to gain and maintain VMC. LAND AT NEAREST SUITABLE AIRFIELD.

Battery life with all essential services operating is in excess of 30 minutes.

FUMES

1. Cabin heater / demisterOFF
2. Fresh air ventsFULLY OPEN

Check engine and electrical instruments for signs of malfunction.

If smell is electrical, carry out ELECTRICAL FIRE DRILL: Card 10

If smell is fuel, DO NOT MAKE ANY FURTHER ELECTRICAL SELECTION.

LAND AS SOON AS POSSIBLE.



COMMUNICATIONS

PITOT STATIC

COMMUNICATIONS FAILURE

1. Check volumes and selections on radios and control panel
 2. Check circuit breakers
 3. Try alternate frequencies
 4. Change headset if possible
 5. Plug mic/tel into other seat position and use other transmit button
 6. Turn off radios, allow to cool for 5 minutes then try again.
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PITOT STATIC SOURCE FAILURE

Choose one (A or B):

A). OAT BELOW 0°C

1. Pitot heatON

B). SUSPECTED BLOCKED STATIC SOURCE

1. Emergency static source.....OPEN



Conditions	MINIMUM Required Serviceable Equipment
All Flights	<ol style="list-style-type: none"> 1. Current Map/Chart. 2. Departure/destination and diversion information. 3. Seat belt with diagonal shoulder strap for front seats. 4. Seat Belts, rear seats (if occupied). 5. First Aid Kit 6. Fire Extinguisher. 7. Anti collision light (unless failed and being fixed at next practicable opportunity).
VMC flight in C.A.S.	<ol style="list-style-type: none"> 1. One comm radio.
Night	<ol style="list-style-type: none"> 1. Navigation Lights, serviceable at least until take-off. 2. Fixed Internal light, to enable crew to carry out duties. 3. One comm Radio. 4. Turn and Slip or Artificial Horizon and Direction Indicator (DI). 5. Altimeter. 6. One torch per pilot. 7. Landing Light.
If passengers carried	<ol style="list-style-type: none"> 8. Illumination in passenger compartment (overhead flood).
IFR flight outside C.A.S. (Class F+G).	<ol style="list-style-type: none"> 1. Turn and Slip or Artificial Horizon and Direction Indicator (DI). 2. Altimeter.
IFR Flight inside C.A.S. (class D+E)	<ol style="list-style-type: none"> 1. Turn and slip indicator 2. Altimeter. 3. Artificial Horizon. 4. Direction Indicator. 5. Timepiece (showing time in hours, minutes and seconds). 6. Power fail indication for gyro instruments. 7. Vertical Speed Indicator (VSI). 8. Outside Air Temperature (OAT) gauge in Celsius. 9. One comm radio. 10. Transponder with Mode A,C and S (unless ATC agree to its absence). 11. one ADF. 12. one VOR.
IFR Flight inside C.A.S. (class A,B or C). Note: flight in class A,B and C airspace requires an instrument rating.	<ol style="list-style-type: none"> 1. Turn and slip indicator 2. Altimeter. 3. Second Altimeter. 4. Artificial Horizon. 5. Direction Indicator. 6. Timepiece (showing time in hours, minutes and seconds). 7. Power fail indication for gyro instruments. 8. Vertical Speed Indicator (VSI). 9. Outside Air Temperature (OAT) gauge in Celsius. 10. One comm radio. 11. Transponder with mode A,C and S. 12. One ADF. 13. one VOR. 14. one DME.
Flight over water outside gliding range of landing area.	<ol style="list-style-type: none"> 1. Lifejackets with whistle and light.
Flight over water more than 10 minutes flying time from landing area.	<ol style="list-style-type: none"> 1. Survival emergency locator transmitter on 121.5 + 406 MHz. EXEMPT Or CAA General Exemption 682 2. Automatic emergency locator transmitter on 121.5 + 406 MHz. EXEMPT



RECOMMENDED SPEEDS AND POWER SETTINGS – T67M MkII

TAKE OFF

Normal	V_r 45 kts	Full Power	Take Off Flap
Lift off	55 kts	Full Power	Take Off Flap
	or 63 kts	Full Power	Clean
Climb	70 kts	Full Power	Take Off Flap
Climb	77 kts	Full Power	Clean

APPROACH

Downwind	85 kts	17" MAP	Clean
Normal	70 kts	11" MAP	Landing Flap
Flapless	75 kts	As required	Clean
Glide	80 kts	Idle	Clean
Glide	70 kts	Idle	Take-off Flap
Glide	65 kts	Idle	Landing Flap

NOTE: Add 5 knots to approach speeds for final turn speed.

STALLING SPEEDS

Power off / 975kg (2150lb)	Clean	57 kts
	Take off flap	54 kts
	Landing Flap	51 kts

SPEED LIMITATIONS

Never Exceed speed (V_{ne}).....	180 kts
Maximum Normal Speed (V_{no})	140 kts
Maximum Manoeuvre Speed (V_a)	140 kts
Max Speed Flaps at Take Off	120 kts
Max Speed Flaps at landing	98 kts
Maximum Crosswind	25 kts

LOADING

- Total fuel 2x17.75 Imp gallons (2x80.7 litres)
- Unusable fuel 2x0.44 Imp gallons (2x2 litres)
- Maximum Weight 2150 lbs (975 kg)
- Max in baggage compartment 66 lbs (30 kg)
- +6g -3g Flaps up
- +2g -1g Flaps down

ICING

Flight into known icing conditions is FORBIDDEN

ENGINE LIMITATIONS

RPM	2,700 No overspeed permitted
Temperature/Pressure	Red Sections on all gauges



AEROBATICS

Before commencing aerobatics SET 2600 RPM.

Tail slides and Inverted spins are NOT permitted.
Recommend entry speeds for an inexperienced pilot.

Entry Speeds (kts) (IAS)

Slow Roll	110
Stall turn entry	110
Stall turn rotate	50
Loop	115
Roll off the top	125
Flick roll max	70
Spin	see Flight Manual

AFTER AEROBATICS

Throttle	Max
Fuel Pressure	Check both tanks feeding, then Lean to 5 PSI Fuel Pressure (With Full Throttle Set)
Temp & Press.....	Green
Artificial Horizon	Erect
HSI	Slave and check alignment
RPM	Max or as required
Fuel Pump	Off



M MKII PERFORMANCE DATA

RANGE IAS 100kts
 Power.....As Reqd (not greater than 25")
 RPM.....2100 RPM
 Mixture 1.3 PSI
 Fuel Consumption 8 gals(36Lit) / hr (approx.)

ENDURANCE IAS 80 kts
 Power.....As required (approx 15" (22"max))
 RPM..... 1800 RPM
 Mixture 0.8 PSI
 Fuel Consumption 4.4 – 5.5 gals / hr
 Fuel Consumption 20 – 25 Lit / hr

<u>CRUISE</u>	<u>TAS</u>	<u>Approx SL Pwr Setting</u>	<u>Mixture</u>	<u>Fuel Consumption</u>
3000 ft	100kts	21" / 2600 RPM	1.7 PSI	10 gal (45lit) / hr
3000 ft	120kts	25" / 2600 RPM	3.5 PSI	12 gal (55lit) / hr

Note: At higher altitudes, fuel consumption will improve.

CLIMB PERFORMANCE:

Conditions: Flaps UP, FULL Throttle, Mixture 5PSI, standard temp, zero wind and weight 975kgs, starting at sea level.

<u>Pressure Alt (ft)</u>	<u>Time (mins)</u>	<u>Fuel Used (gals/lit)</u>	<u>Distance (Nms)</u>
1000	3.1	0.2 / 1	3.8
2000	4.2	0.4 / 2	5.3
3000	5.4	0.6 / 3	6.9
4000	6.7	0.8 / 4	8.7
5000	8.2	1.1 / 5	10.8
6000	9.8	1.3 / 6	13.0
7000	11.6	1.6 / 7	15.6
8000	13.6	1.9 / 8.5	18.5
9000	15.9	2.2 / 10	21.7
10000	18.4	2.6 / 12	25.4

Note 1: Increase all figures by 10% for each 10°C above ISA

Note 2: Add 0.5 gals (3 Lit) for Start, Taxi and Take-off

Note 3: The figures in this table for Time and Distance have been increased from those in the Slingsby documents and have been confirmed by operating experience.



ENGINE HANDLING WITH CONSTANT SPEED UNIT

The constant speed unit works by providing a continuously variable pitch on the propeller to maintain the same engine RPM when the engine is operating at cruise and climb power settings. It could be equated to an automatic gearbox on a car with lots of gears which is changing frequently and quickly to keep the engine running at the same RPM while at different roadspeeds.

Similar to a car engine it will be damaged by being in a gear which is too high for the conditions.

To ensure the engine is not working too hard:

Manifold Air Pressure (MAP) must be less than hundreds of RPM plus 4.

i.e. With 2200RPM, Max MAP=26”Hg

With 2300RPM, Max MAP=27”Hg

Etc.

The general rule to ensure these limits are not broken while changing RPM or throttle settings:

WHEN INCREASING POWER – “REV UP” FIRST

WHEN DECREASING POWER – “THROTTLE BACK” FIRST

SIMPLE RULE:

ALWAYS HAVE

RPM LEVER FULLY FORWARD (MAX RPM)

WHEN MAKING

LARGE THROTTLE MOVEMENTS

T67M MkII G-BNSP

