LYNEHAM FLYING CLUB

SLINGSBY FIREFLY T67M MkII

FLIGHT CHECK LIST

LFC Edition 8

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℃ 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℃
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. Propeller ..... Clear
28. Start Clearance (if required) ..... Obtain, radio OFF

STARTING ENGINE	**COLD**	**HOT**
1. Throttle	**Open (¼" to ½")**	**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	**½" Open**	**Full, retard slowly to ¼ 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. RPM (Throttle)..... Set 1200 RPM
2. Oil Pressure..... Rising in 30 secs (if not, stop engine)
3. Starter engaged light..... Out (if not, stop engine immediately)
4. Alternator..... ON
5. Magnetos..... BOTH
6. Fuel pressure ..... Check
7. Magneto ..... Drop not stop
8. Radios and Nav aids ..... ON As required
9. Suction ..... Indicating
10. Horizon ..... Erecting – Adjust datum
11. HSI ..... Synchronised (Switch free / slave)
12. Altimeter ..... Check setting
13. Alternator warning light ..... Out
14. Ammeter..... Positive Charge
15. Canopy..... Closed and locked
16. Taxy clearance..... Obtained

TAXYING

1. Brakes ..... Check
2. Flight instruments..... Check
3. Rudder..... Check full movement
4. Mixture..... Lean approx ¼ travel

POWER CHECK

1. Position ..... Safe and clear
2. Parking Brake ..... ON
3. Fuel cock..... Change to other tank
4. Canopy..... Closed and locked
5. Engine T's and P's ..... Check in green (Min 4 mins after start)
6. Mixture..... Full Rich
7. Throttle ..... Set 1800 RPM
8. Magnetos..... Check, Max mag drop 175 rpm
   Differential 50 rpm

*9. Propeller control** ..... Move toward lower RPM position*
*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. Suction ..... Check in green (4.5 to 5.5 in Hg)
14. Engine T's and P's ..... Check in green
15. Throttle ..... Close, check idling >800 rpm
16. Throttle ..... 1200 rpm

PRE-TAKE OFF

1. Trim ..... Set N
2. Flaps ..... Up or Take Off (63kts Up / 55kts TO)
3. Magnetos ..... Both
4. Fuel ..... Contents sufficient
   COCK ON
   PUMP ON
5. Mixture ..... Full rich
6. Throttle friction ..... Stiff
7. Pitot heater ..... ON (if conditions require)
8. Radios and Navaids ..... 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, free and correct 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 at 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.	Fuel	Pump ON Cock ON (L/R) Contents checks
4.	Instruments	Set
5.	Altimeter	Set
6.	Engine T&P + Ammeter	Green
7.	RPM	MAX
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 navaids	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 (check warning light operates)
5.	Magnetos	Drop no 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.	Flaps	Down (Leave down, unless using control lock)
12.	Tacho	Note Reading
13.	Parking brake	Leave on if aircraft not chocked

PRE-STALLING / SPINNING / AEROBATIC CHECKS

1. HSI ..... FREE
2. Height ..... Sufficient to recover by 3000ft agl
3. Airframe ..... Flaps up or as required
   No loose articles
   Harness tight and locked
   Canopy Closed and locked
4. Security ..... No Loose articles, Harnesses Secure
5. Engine ..... Temperature 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 when spin stops

7. Centralise rudder
8. Look for the horizon
9. Level wings with aileron
10. Recover from the dive

INCORRECT RECOVERY

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

FIRE

ENGINE FIRE

1. Throttle ..... CLOSED
2. Propeller ..... MIN RPM
3. Mixture ..... CUT OFF
3. Fuel Cock ..... OFF
4. Magnetos ..... OFF
5. Fuel Pump ..... OFF
6. Cockpit Heating ..... OFF
7. Radio ..... Emergency Call
8. Master switch ..... OFF
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)

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)

ENGINE FAILURE – PROP TURNING

Mechanical Failure

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

1. Throttle ..... CLOSED
2. Propeller ..... MIN RPM
3. Mixture ..... CUT OFF
4. Fuel Cock ..... OFF
5. Magnetos ..... OFF
6. Fuel Pump ..... OFF

CARRY OUT FORCED LANDING

No Apparent Reason

Investigate Fuel Problems

Check:

1. Fuel Cock ..... ON Left or Right
2. Mixture ..... Fully Rich
3. Throttle ..... ¼ Open
4. Fuel Pump ..... ON Check press
5. Fuel Contents ..... Sufficient

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. Harness.....Tight
3. Throttle.....Closed
4. Propeller.....MIN RPM
5. Mixture *.....CUT-OFF
6. Fuel Cock *.....OFF
7. Magnetos *.....OFF
8. Fuel Pump.....OFF
9. Master Switch *.....OFF
10. Alternator.....OFF

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

Optimum gliding speeds after flap selection are:

Clean.....80 kts
T/off flap.....70 kts
Threshold.....65 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. Harness ..... Tight and locked
2. Canopy ..... Closed or Locked Open (post mod 283)
3. Flaps ..... Fully down
4. Speed ..... 60 kts
5. Rate of Descent ..... 300 ft per min

DO NOT ROUND OUT. Continue descent into the water

WITHOUT POWER AVAILABLE

1. Forced landing checks ..... Complete except canopy
2. Canopy ..... Closed or Locked Open (post mod 283)
3. Flaps ..... Fully down
4. Speed ..... 60 kts
5. Rate of Descent ..... As 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. RPM .....Control with throttle
2. Throttle .....Closed – except for emergency

CARRY OUT LANDING AT NEAREST SUITABLE SITE

PROPELLER GOVERNOR FAILURE

RPM WILL NOT INCREASE

1. Oil Pressure.....Green
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. Throttle .....Use to keep RPM within limits – more than ¾ may cause RPM overspeed
2. RPM Control.....Leave at mid range
3. Airspeed .....Maintain 80 kts

LAND AT NEAREST SUITABLE AIRFIELD

ALTERNATOR
FUMES
COMMUNICATIONS
PITOT STATIC

ALTERNATOR FAILURE

1. Alternator .....OFF
2. Excitation c/b.....RESET
3. Alternator c/b.....RESET
4. Alternator.....ON

If output not restored:
Alternator.....OFF

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

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

FUMES

1. Cabin heater / demister.....OFF
2. Fresh air vents .....FULLY 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 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 info other seat position and use other transmit button
6. Turn off radios, allow to cool for 5 minutes then try again.

PITOT STATIC SOURCE FAILURE

OAT BELOW 0℃
1. Pitot heat .....ON
SUSPECTED BLOCKED STATIC SOURCE
1. Emergency static source.....OPEN

INTENTIONALLY BLANK

Conditions	MINIMUM Required Serviceable Equipment
All Flights	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.	1. One comm radio.
Night	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	8. Illumination in passenger compartment (overhead flood).
IFR flight **outside** C.A.S. (Class F+G).	1. Turn and Slip **or** Artificial Horizon and Direction Indicator (DI). 2. Altimeter.
IFR Flight **inside** C.A.S. (class D+E)	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.	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.	1. Lifejackets with whistle and light.
Flight over water more than 10 minutes flying time from landing area.	~~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

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
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

CRUISE	TAS	Approx SL Pwr Setting	Mixture	Fuel Consumption
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.

Pressure Alt (ft)	Time (mins)	Fuel Used (gals/lit)	Distance (Nms)
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℃ a bove 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 to 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