



PILOTS NOTES
FIREFLY T67M-MkII

SECTION 2 LIMITATIONS AND PLACARDS

CONTENTS

	<u>Page</u>
2.1 Class and Category of Certification	2-1
2.2 Minimum Crew	2-1
2.3 Maximum Occupants	2-1
2.4 Engine Limitations	2-1
2.5 Airframe Limitations	2-3
2.5.1 Centre of Gravity Measurement and Limitations	2-3
2.5.2 Loading	2-3
2.5.3 Weights for Takeoff and Landing	2-3
2.5.4 Limiting Speeds (IAS)	2-3
2.5.5 Limitations for Aerobatics	2-4
2.5.6 Flight in Icing Conditions	2-4
2.5.7 Flight in IMC or at Night	2-5
2.5.8 Inverted Flight	2-5
2.6 Placards	2-5
2.6.1 Instrument Markings	2-5
2.6.2 Labels	2-7
2.7 Operational Limitations	2-12
2.7.1 Maximum Operating Altitude	2-12
2.7.2 Maximum Takeoff and Landing Altitude	2-10
2.7.3 Operating Temperatures	2-12
2.8 Paint Finish	2-12

Last effective page is P.2-12.



PILOTS NOTES
FIREFLY T67M-MkII

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PILOTS NOTES
FIREFLY T67M-MkII

2.1 CLASS AND CATEGORY OF CERTIFICATION

For the purpose of the First Schedule of the Air Navigation Order, this aircraft is classified as an Aeroplane (landplane).

The Slingsby T67M-MkII type of aircraft is eligible for certification in the United Kingdom in the Transport Category (Passenger). This aeroplane may, however, be restricted to another category and a particular use and this will be stated on the Certificate of Airworthiness.

When flown for public transport, compliance with performance Group E of the Air Navigation (General) Regulations must be established using the operating techniques and parameters laid down in the flight manual.

The Slingsby T67M-MkII type of aircraft has been certified by the CAA on the basis of compliance with U.S. CFR 14 part 23 - Airworthiness Standards: normal, utility & aerobatic category aeroplanes at amendments 23-27, plus special conditions as defined by the CAA.

Special Condition - Composite Material Construction.
British Civil Airworthiness Requirements, as follows:

Section K Light Aeroplanes, Issue 6 - April 1974, Chapters 2-2 to 2-5 inclusive, as necessary for the aircraft to be classified in Performance Group E.

Section N Noise, Issue 2 - November 1978.

Section R Radio, Issue 4 - April 1974.

Current Airworthiness Notices.

Electrical Power Supplies for Aircraft Radio Systems.

2.2 MINIMUM CREW

The minimum crew for operation of the aircraft is one pilot.

2.3 MAXIMUM OCCUPANTS

The total number of persons carried including crew shall not exceed two, nor the number of seats which is approved for use during take-off and landing.

2.4 ENGINE LIMITATIONS

RPM

The maximum engine speed is 2700 RPM. No overspeed is permitted.



PILOTS NOTES
FIREFLY T67M-MkII

Oil Contents

The maximum oil sump capacity is 8 US Quarts. The minimum safe quantity in the sump is 4 US Quarts.

Oil Pressure on Start-Up

The engine must be shut down if the oil pressure has not started to rise within 30 seconds of starting the engine.

Oil Pressures

	Maximum	Minimum
Normal Operating	6.2 bar (90 psi)	4.1 bar (60 psi)
Start and Warm-Up	7.0 bar (100 psi)	3.8 bar (55 psi)
Idling	-	1.7 bar (25 psi)

Manifold Pressure/RPM Limitation

The manifold pressure measured in inches of mercury must not be allowed to exceed the RPM measured in hundreds by more than an increment of 4, eg at 2200 RPM the manifold pressure must not be allowed to exceed 26 inches.

Oil Pressure During Aerobatic Manoeuvres

Avoid flight at zero 'G' state for more than 10 seconds as in these modes the oil system will not scavenge.

Magneto Check

Maximum RPM drop when switching either magneto off at 1800 RPM. 175 RPM

Maximum difference between left and right magneto RPM drops at 1800 RPM. 50 RPM

Cylinder Head Temperature

Maximum permissible temperature 260°C

Oil Temperatures

Maximum permissible 118°C



PILOTS NOTES
FIREFLY T67M-MkII

Fuel

The minimum fuel grade is 100LL.

Tank capacity 2 x 17.75 Imp Gall (80.7 litres).
Unusable fuel is 2 x 0.44 Imp Gall (2 litres).

Ground Running

The maximum CHT of 260°C must not be exceeded during ground running and operation at full throttle should not exceed 3 minutes.

2.5 AIRFRAME LIMITATIONS

2.5.1 Centre of Gravity Measurement and Limitations

The datum for measurement of the centre of gravity is as follows:

- > a) The horizontal datum is achieved by use of a rigging board (T67C Maintenance Manual) along the top of the fuselage.
- b) The fore and aft datum is the forward face of the bulkhead firewall.

The limits of the centre of gravity at MTWA are as follows, being measured aft of datum: <

>	Forward limit	860mm AFD	Note....	
	Aft limit	917mm AFD	For limits at other weights refer to Section 8 (8.1 and 8.2)	<

2.5.2 Loading

- a) The maximum number of occupants 2
- b) The maximum baggage load in baggage compartment 30 kg (66 lbs)

2.5.3 Weights for Take-off and Landing

The maximum weight for take-off and landing 953kg (2100 lbs)



PILOTS NOTES
FIREFLY T67M-MkII

2.5.4 Limiting Speeds (IAS)

VNE Never exceed speed	180 kts
VNO Normal operating limit speed	140 kts
VA Manoeuvring speed	140 kts
Flap limiting speeds	
Post Mod 656	
Takeoff position (18°)	120 kts
Landing position (40°)	98 kts
Pre Mod 656	
Both flap positions	88 kts

> 2.5.5 Limitations for Aerobatics (Pre Mod 734B/D) (For Post Mod 734B/D see Supplement F) <

Aerobatic manoeuvres with flaps extended are not permitted.

Tail Slides and Inverted Spins are not permitted.

'g' Limitation - struct temp below 50°C

Flaps up	+6g -3g
Flaps down	+2g -1g

When structural temperature reaches 50°C or more DO NOT carry out aerobatics or impose loads which exceed:

Flaps up	+4.4g -2g
Flaps down	+2g -1g

Maximum permissible structure temperature for aerobatics is 50°C

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	(Refer Section 3, Paragraph 3.7)

> 2.5.6 Flight in Icing Conditions

The aircraft is not cleared for flight into known icing conditions. <



PILOTS NOTES
FIREFLY T67M-MkII

2.5.5 Limitations for Aerobatics For Post Mod 516 Addendum 1 & 2 (Works Numbers 2116, 2121) see Supplement F)

Aerobatic manoeuvres with flaps extended are not permitted.

Tail Slides and Inverted Spins are not permitted.

'g' Limitation - struct temp below 50°C

Flaps up	+6g	-3g
Flaps down	+2g	-1g

When structural temperature reaches 50°C or more DO NOT carry out aerobatics or impose loads which exceed:

Flaps up	+4.4g	-2g
Flaps down	+2g	-1g

Maximum permissible structure temperature for aerobatics is 50°C

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	

(Refer Section 3, Paragraph 3.7)



OAT/Structural Temperature Gauge (For Mod 516 Addendum 1 & 2 (Works Numbers 2116, 2121) see Supplement F).

Structure temperature
maximum

Red line

55°C

Vacuum Gauge

Green arc

4.5 to 5.5 in Hg





**PILOTS NOTES
FIREFLY T67M-MkII**

2.5.7 Flight in IMC or at Night

Flight is permitted in IMC day and for night flight.

For flight by night or IFR refer to the Air Navigation Legislation for equipment required.

2.5.8 Inverted Flight

When wing tanks are less than half full the fuel supply for inverted flight will be limited to the amount contained in the collector tank.

This should be enough for up to 5 min of continuous inverted flight.

2.6 PLACARDS

2.6.1 Instrument Markings

Oil Temperature

Caution range	Yellow arc below	40°C
Normal operating range	Green arc	40°C to 115°C
Maximum allowable	Red arc above	115°C

Oil Pressure

Minimum pressure	Red arc below	1.7 bar	<
Low oil pressure	Yellow arc	1.7 to 4.2 bar	
Normal operating range	Green arc	4.2 to 6.2 bar	
High oil pressure	Yellow arc	6.2 to 7 bar	
Maximum pressure	Red arc above	7 bar	

Cylinder Head Temperatures

Normal operating range	Green arc	100°C to 230°C	
Caution range	Yellow arc	230°C to 260°C	
Maximum allowable	Red arc above	260°C	<

Tachometer

Normal operating range	Green arc	700 to 2,700 rpm
Maximum rpm	Red line	2,700 rpm



**PILOTS NOTES
FIREFLY T67M-MkII**

ASI Markings

VNE	Radial red line	180 knots
Cautionary zone	Yellow arc	140 to 180 knots
Normal operating range	Green arc	56 to 140 knots
Flap speed range (Landing flap 40°)		
Post Mod 656	White arc	49 to 98 knots
Pre Mod 656	White arc	49 to 88 knots

> OAT/Structural Temperature Gauge (Pre Mod 734B/D) (For Post Mod 734B/D see Supplement F) <

Structure temperature maximum	Red line	50°C
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Vacuum Gauge

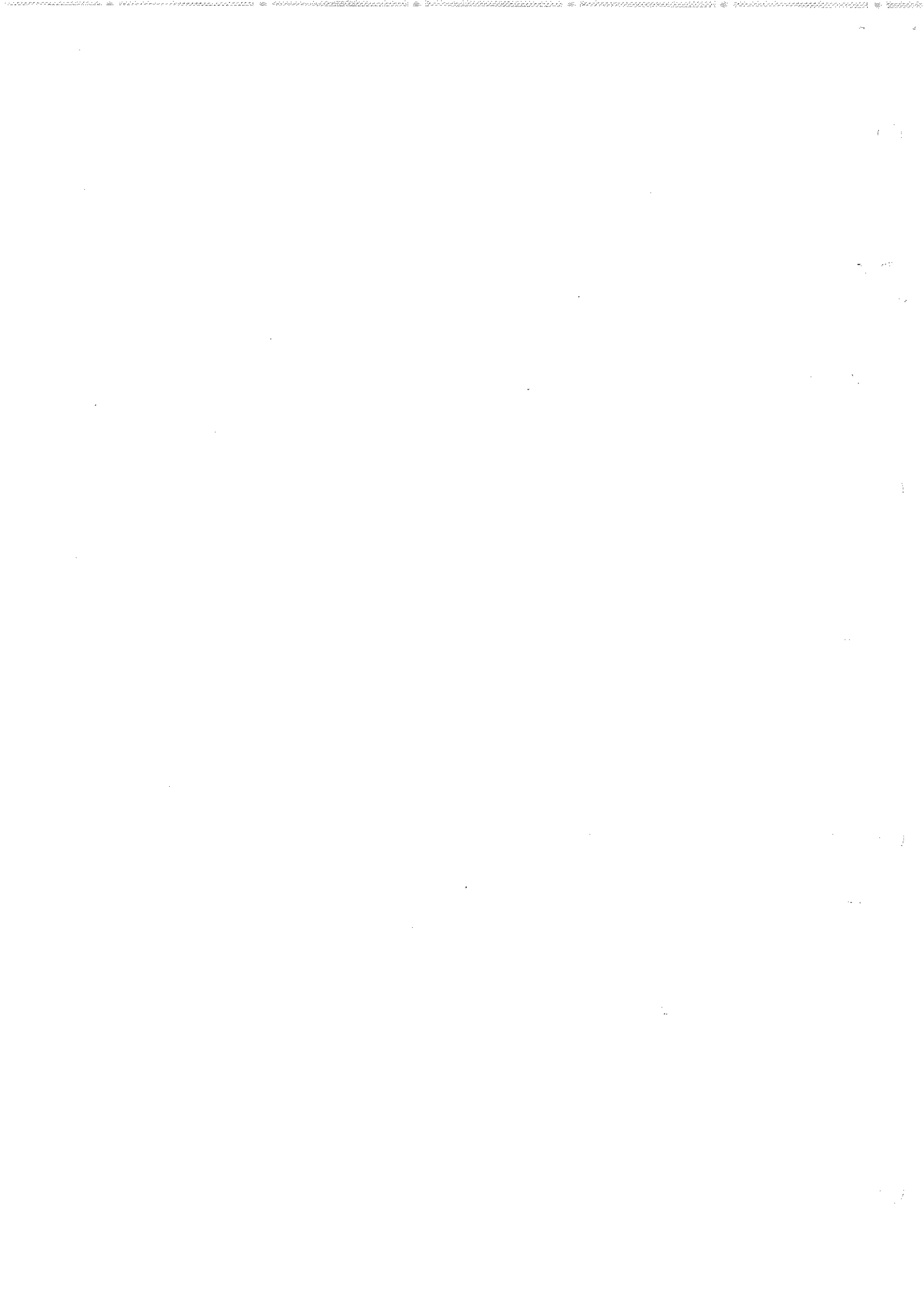
	Green arc	4.5 to 5.5 in Hg
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Section 2 Para 2.6.2 Labels

The following information is to be furnished on placards well within sight of pilot.

Mod 516 Addendum 1 & 2 (Works Numbers 2116, 2121) Aircraft

LIMITATIONS	
NO SMOKING	
VNE	180 KIAS
MANOEUVRING SPEED VA	140 KIAS
FLAP OPERATING SPEED	
TAKEOFF POSITION (18°)	120 KIAS
LANDING POSITION (40°)	98 KIAS
MAX TOTAL WEIGHT AUTHORISED	975 KG
MAX g LOADS	STRUCTURAL TEMPERATURE
UP TO AUW 975KG (2150 LB)	BELOW 42°C ABOVE 42°C
	(CAT 'A') (CAT 'U')
FLAPS UP	+6g -3g +4.4g -2g
FLAPS DOWN	+2g -1g +2g -1g
FLIGHT PROHIBITED ABOVE 45°C	
ALTITUDE LOSS IN A STALL RECOVERY	150 FT (46M)
FLIGHT INTO KNOWN ICING CONDITIONS PROHIBITED	
AIRCRAFT CERTIFIED FOR FLIGHT IN IMC, DAY AND FOR NIGHT FLIGHT	
AEROBATIC MANOEUVRES - UP TO ALL UP WEIGHT	975 KG (2150 LB)
	ENTRY SPEEDS KIAS
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)





PILOTS NOTES
FIREFLY T67M-MkII

2.6.2 Labels

The following information is to be furnished on placards well within sight of pilot.

Post Mod 537, 656, 757A and 734B/D (For Mod 516 Addendum 1 & 2 (Works Numbers 2116, 2121) see Supplement F)

NO SMOKING			
LIMITATIONS			
VNE (KTS) (IAS)			180
MANOEUVRING SPEED VA (KTS) (IAS)			140
FLAP LIMITING SPEEDS (KTS) (IAS)			
TAKEOFF POSITION (18°)			120
LANDING POSITION (40°)			98
MAX TOTAL WEIGHT AUTHORISED (KG)			975
MAX g LOADS (FLIGHT PROHIBITED ABOVE 55°C)		STRUCTURAL TEMPERATURE	
		BELOW 50°C	ABOVE 50°C
FLAPS UP	+6g -3g		+4.4g -2g
FLAPS DOWN	+2g -1g		+2g -1g
ALTITUDE LOSS IN A STALL RECOVERY			150 FT (46M)
FLIGHT INTO KNOWN ICING CONDITIONS PROHIBITED			
AIRCRAFT CERTIFIED FOR FLIGHT IN IMC, DAY AND FOR NIGHT FLIGHT			
AEROBATIC MANOEUVRES - UP TO ALL UP WEIGHT 975 Kg (2150 lbs)			
MAXIMUM PERMISSIBLE STRUCTURE TEMPERATURE FOR AEROBATICS IS 50°C			
		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



Pre Mod 537, 656 and 757

NO SMOKING

LIMITATIONS

VNE (KTS) (IAS)	180
MANOEUVRING SPEED VA (KTS) (IAS)	140
FLAP OPERATING SPEED (KTS) (IAS)	88
MAX TOTAL WEIGHT AUTHORISED (KG)	953

	STRUCTURAL	TEMPERATURE
MAX g LOADS	BELOW 50°C	ABOVE 50°C
FLAPS UP	+6g -3g	+4.4g -2g
FLAPS DOWN	+2g -1g	+2g -1g

ALTITUDE LOSS IN A STALL RECOVERY 150 FT (46M)

FLIGHT INTO KNOWN OR FORECAST ICING CONDITIONS PROHIBITED

AIRCRAFT CERTIFIED FOR FLIGHT IN IMC, DAY AND FOR NIGHT FLIGHT

AEROBATIC MANOEUVRES - UP TO ALL UP WEIGHT 953 Kg (2100 lbs)

MAXIMUM PERMISSIBLE STRUCTURE TEMPERATURE FOR AEROBATICS IS 50°C

	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



On Canopy Transparency Mod 516 Addendum 1 & 2 (Works Numbers 2116, 2121) Aircraft

**THIS AIRCRAFT IS RESTRICTED TO
OPERATION IN THE U.K. ONLY**

Section 3 Paragraph 3.1.1 Initial Check

(Structural temperature Rotary switch
in hot conditions) Check structural temperature Left and
Right
- on OAT gauge below 45°C





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PILOTS NOTES
FIREFLY T67M-MkII

On canopy transparency (Mod 734D aircraft)

THIS AIRCRAFT HAS GEOGRAPHICAL RESTRICTIONS. REFER TO
LIMITATIONS SECTION IN FLIGHT MANUAL

1

2

3

4



PILOTS NOTES
FIREFLY T67M-MkII

Forward of the parking brake lever - on the centre console

DO NOT OPERATE
MASTER SWITCH
WITH RADIOS TURNED ON

Notice above the luggage compartment

BAGGAGE
30 Kg MAX
FOR C OF G AND TOTAL
WEIGHT LIMITATIONS
SEE FLIGHT MANUAL

Aft of the refuelling caps - on the wing upper surface

FUEL - AVGAS 100LL
78.7 Litres
17.31 Imp Gal
20.77 US Galls

Post Mod 310B A/C

Fuel type and contents, as above, in Litres.
Imp. Galls and US Galls are combined on a fuel
filler/wing joint vinyl covering

At the foot of the flap control lever on the central fairing

Takeoff
Landing

> On the trim indicator in front of the trim control

D (Nose Down)
N (Neutral)
U (Nose Up)

On the underside of the oil filler access flap

OIL
MIL-L-22851
SAE 15W50 OR SAE 20W50



PILOTS NOTES
FIREFLY T67M-MkII

On canopy frame one each side of latch mechanism

CANOPY MUST ALWAYS REMAIN CLOSED
AND LATCHED DURING FLIGHT
UNLESS EMERGENCY EVACUATION IS INTENDED

Under side of canopy latch cover

PUSH UP HERE
TO RAISE CANOPY

On the top of the instrument panel

AEROBATIC MANOEUVRES
WITH FLAPS EXTENDED
ARE NOT PERMITTED

Alongside pressure bulb on canopy sill - port side (aircraft with Mod 129
Issue 1 fitted)

ENSURE SEAL IS DEFLATED
BEFORE CLOSING CANOPY

RECOMMENDED SEAL INFLATION
4 PUMPS ON BULB

Below fuel contents gauges

USABLE FUEL
34.62 IMP GALLS

Above radio panel (where applicable)

THIS AIRCRAFT IS EQUIPPED
WITH AN ALTITUDE REPORTING
SYSTEM OPERABLE TO
20,000 FT

On rear console above Frame 4 (between pilots seats)

FIRST AID KIT LOCATED
BEHIND SEATS IN BAGGAGE BAY

Above crash axe on Frame 5 Access Panel

IN CASE OF EMERGENCY
USE TO BREAK CANOPY



PILOTS NOTES
FIREFLY T67M-MkII

> Instrument panel top left corner (Mod 506A and Mod 506B aircraft)

CAUTION

UHF trans-
missions may
cause spurious
deflections
of slaving in-
dicator needle

Instrument panel above the right hand avionics stack in line with
UHF radio (Mod 506B aircraft)

CAUTION

UHF TRANSMISSION FREQUENCIES
WITHIN THE RANGE 300 TO 355 Mhz
MAY ADVERSELY AFFECT OPERATION
OF THE GLIDESLOPE SYSTEM

Nosewheel oleo leg forward face (Mod 468 aircraft)

WARNING
INFLATE SLOWLY USING
AIR OR NITROGEN

TYRE 50 PSI
OLEO 100 PSI

Mainwheel oleo legs outboard face (Mod 468 aircraft)

WARNING
INFLATE SLOWLY USING
AIR OR NITROGEN

TYRE 35 PSI
OLEO 80 PSI

Above radio panel (where applicable) (Mod 485 aircraft)

WHEN EMERGENCY STATIC IS OPENED
INDICATED ALTITUDE WILL INCREASE
ERROR +180 FT MAX UP TO 130 KT
ERROR INCREASES LINEARLY UP TO
+350 FT AT 180 KT



PILOTS NOTES
FIREFLY T67M-MkII

2.7 OPERATIONAL LIMITATIONS

2.7.1 Maximum Operating Altitude

The maximum permissible operating altitude is 12,000ft without oxygen equipment being fitted.

The aircraft should not be used without the carriage of oxygen equipment above the appropriate maximum altitude prescribed in the relevant Air Navigation Order applicable to the Country of aircraft registration.

The above limitation is 12000 ft for UK registered aircraft.

2.7.2 Maximum Takeoff and Landing Altitude

The maximum takeoff and landing altitude is 8000ft density altitude.

2.7.3 Operating Temperatures

Maximum operating temperature is ISA +23°C.

Notes....

For operations above OAT 38°C the following precautions must be observed:

- (1) Ensure structural temperature remains within limits stated on limitations placard (ref para 2.6.2)
- (2) Power plant cooling to remain within limits for cylinder head and oil temps (ref para 2.4.).

Minimum operating temperature is -20°C before winterisation is required.

Notes....

- (1) For operations below OAT -20°C consult the engine and propeller handbooks for procedure.
- (2) There is no defined lower limit for the aircraft structure.

2.8 PAINT FINISH

Certain areas of the aircraft have colour restrictions, these are indicated on the 3 View Plan (P.1-1).

Notes....

The above restrictions are to assist in keeping the critical areas of structure cooler.



PILOTS NOTES
FIREFLY T67M-MkII

2.7.4 Geographical Restriction (Mod 734D Aircraft)

This aircraft is restricted to operation within these nations:

AUSTRIA
BELGIUM
CZECH REPUBLIC
DENMARK
ESTONIA
FINLAND
GERMANY
HUNGARY
IRELAND
LATVIA
LITHUNIA
LUXEMBOURG
NETHERLANDS
NORWAY
POLAND
SLOVAKIA
SLOVENIA
SWEDEN
SWITZERLAND
UNITED KINGDOM

Operation within France, Italy and Spain is restricted to north of 43°N Latitude.

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