

Card 1  
(AL4)

January 1974  
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AP 101B-2305-14  
Issue 3

## FLIGHT REFERENCE CARDS

# JET PROVOST T Mk 5 & 5A

### NORMAL DRILLS

#### AIRCRAFT 'SAFE FOR PARKING'

The aircraft is safe for parking when safety pins are inserted in:

- Both ejection seat face-screen firing handles
- Both ejection seat seat-pan firing handles
- Both ejection seat manual separation handles
- The canopy MDC handle (other pin stowed)

Prepared by Procurement Executive,  
Ministry of Defence, in collaboration  
with RAF Handling Squadron

BY COMMAND OF THE DEFENCE COUNCIL

## NOTES TO USERS

1. These Flight Reference Cards are complementary to the Jet Provost T Mk 5 and 5A Aircrew Manual (AP 101B-2305-15). The same conventions are used and amendment procedure is similar.
2. Where necessary, separate checks are included for the T Mk 5 and T Mk 5A, the Mk 5A cards being identified by blue edges: other differences between the two marks of aircraft, eg limitations, are made clear on the appropriate cards.
3. Comments and suggestions regarding these Flight Reference Cards should be forwarded to the Officer Commanding, RAF Handling Squadron, Boscombe Down, Salisbury, SP4 0JF.

## LIST OF CARDS (AL4)

<i>Card No</i>	<i>Issued by</i>	<i>Card No</i>	<i>Issued by</i>
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7*	AL1	18	AL1
8	AL1	19	AL2
9	AL4	20	AL4
10	AL3	21	AL4
11	AL4		

\*Cards marked thus should incorporate manuscript amendments.



External  
Checks

EXTERNAL CHECKS

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Engine intake blanks removed, intakes clear

Pitot head cover removed

External surfaces undamaged

Panels and filler caps secure

Landing gear:

Ground locks removed

Oleo extensions equal and normal

Tyres free from cuts and creep

Brake leads secure, no hydraulic leaks

Static vent plugs removed

Jet pipe:

Cover removed

Free from wrinkling and distortion

Canopy and windscreen clean and undamaged

## COCKPIT CHECKS

Carry out the 'Safe for Parking' checks, then:

Canopy clutch ... .. Engaged  
 Hand fire extinguisher ... Secure, not discharged  
 Check for loose articles

### Ejection Seat

Main oxygen hose at seat break point ... ..	Connected
Emergency oxygen bottle	Hose connected, safety pin removed, not fired
Barometric time release unit ... ..	Static rod secured by quick-release pin
Face-screen firing cable	Attached to ejection gun sear and to canopy disintegration gun sear
Canopy >< MDC gun sear ... ..	Safety pin removed
Ejection gun sear ... ..	Safety pin removed
Drogue withdrawal line	Routed over drogue link line. Secured to drogue gun piston rod
Top latch ... ..	Internal plunger flush with housing
Parachute withdrawal line	Connected and routed through guillotine (behind yellow guard)
Drogue gun ... ..	Safety pin removed
Drogue gun static rod ...	Secured by quick-release pin
Mic-tel plug ... ..	Fully engaged
Guillotine firing unit sear	Safety pin removed; torque rod attachment connected
Manual separation handle	Down and engaged
PSP lanyard ... ..	Exposed length not beyond red line
Combined harness ...	Tug the lap and shoulder straps to check for security

Note: For solo flying leave the right seat safety pins in position but have both canopy >< MDC firing unit safety pins removed. Check equipment restraining apron is securely fastened.



# T Mk 5

## PRE-STARTING CHECKS

Cockpit  
checks/  
Pre-starting  
Mk 5

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Strap in  
Safety pins ... All stowed  
Parking brake ... On  
Landing gear ... DOWN buttons in  
Battery switch ... ON (cancel SWS)  
External supply ... On if required  
UHF NORMAL/  
STANDBY switch ... STANDBY  
Flying controls ... Full and free movement with  
locking lever held up against  
bottom catch. Adjust pedals  
to ensure that full rudder can  
be applied

### Cockpit Left Wall

Flap lever ... UP  
Elevator trim control ... Full movement (no more than  
300° each way) synchronised  
with centre pedestal control.  
Set neutral  
Throttle ... Full and free movement,  
synchronised with centre  
pedestal control. Set  
CLOSED  
Landing gear override ... Guarded central

### Below the Instrument Panel

Instrument dimming ... As required  
Cockpit lighting ... As required  
Anti-collision lights ... OFF  
Cockpit emergency  
lighting ... Test. OFF  
Identification light ... As required  
Taxi lamp/landing lamp  
switch ... Central  
Navigation lights ... As required  
Oxygen (left and right) ... Connections. Supply wired on.  
Pressure 200 to 400 PSI. Air  
inlet switch as required.  
Flow indicator operating.  
EMERGENCY — test for  
leaks, return switch to  
central

(continued)

## T Mk 5

### Pre-starting Checks — *continued*

Top temperature control	ON
Battery switch ...	ON
Starting master switch ...	ON ► cancel SWS
Ignition switch ...	ON
Pitot head heater ...	OFF
Landing gear emergency lowering lever ...	Wired up
Flight instruments	
START/OFF switch	START, artificial horizon and altimeter OFF flags retract
Flight instruments	
NORMAL/STANDBY switch ...	NORMAL
Inverter test switch ...	Test, MI black, no OFF flags visible. Switch off, MI white, no OFF flags visible

### Instrument Panels

Radio/radar lights dimming ...	As required
Clock ...	Set
Fuel gauges ...	Check contents
UHF ...	T/R, volume, frequencies set
Standby altimeter ...	Set as required
Machmeter ...	Condition
◄ Windscreen DE-ICE ...	Press ON button for 2 seconds and release. Check light ON/OFF ►
Landing gear position indicator ...	Check three green lights and bulb changeover, DAY / NIGHT screen as required
RPM indicator ...	Condition
JPT indicator ...	Condition
Oil pressure gauge ...	Condition
Flap indicator ...	Note indication agrees with flap position
ASI ...	Condition. UC warning flag not visible
Altimeter ...	Set to zero
Artificial horizon ...	Erect
Mk 4 Compass ...	Synchronise, check with E2B. E2B light OFF
Accelerometer ...	Condition
VSI ...	Condition
Turn-and-slip indicator	OFF flag retracted
Turn-and-slip supply ...	NORMAL
Flight instrument panel	Secure

(continued)

## T Mk 5

Pre-starting Checks — *continued*Pre-starting  
Mk 5  
(contd)

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Standard warning panel	Test, night screen as required
DME aerial sensitivity ...	HIGH
DME ... ..	OFF
◀ Transponder ... ..	SB. Code zero set ▶
DME indicator ... ..	Condition
Cockpit altimeter ... ..	Condition
Fuel tank air pressure ...	Condition
Brakes pressure gauge ...	Condition
Oxygen ... ..	Contents
Fire bottle indicator ...	Not discoloured
Emergency depressurisa- tion selector ... ..	Down
Cockpit temperature sel- ector ... ..	As required
Pressurisation ... ..	UNPRESS
Windscreen demist ... ..	Push to off
Rain/ice clearance ... ..	OFF
Standby UHF ... ..	Check A
Standby UHF power ... ..	NORMAL
UHF NORMAL/ STANDBY switch ... ..	NORMAL
UHF aerial ... ..	TOP

## Centre Pedestal

Canopy seal ... ..	Off
Landing gear override ...	Guarded central
LP cock ... ..	ON and gated. FUEL caption out ▶▶
HP cock ... ..	Test relight. OPEN and gated
Throttle ... ..	CLOSED
Flap lever ... ..	UP
UHF mute switch ... ..	Unmuted
Aileron trim ... ..	Full and correct movement Set neutral
Canopy jettison/MDC handle ... ..	Fully down
Anti-collision lights ...	ON



# T Mk 5

## ENGINE STARTING

### Starting Procedure

1. Press starter button for approximately 2 seconds and release. Light-up occurs at approximately 10% RPM.
2. If JPT increases rapidly through 650°C close HP cock. Allow engine to run down completely and repeat starting procedure using a different power supply.
3. If starting cycle cuts out prematurely, wait 40 seconds. Attempt a further start using a different power supply.
4. If the starter indicator light remains on after RPM reach idling:

Post-mod 1772, shut down the engine and investigate.

Pre-mod 1772, switch off the starter master switch, then:

- a. If the light still remains on, set HP cock CLOSED, switch off battery master switch and have fault investigated.
- b. If the light goes out, the aircraft may be flown but have the fault investigated on landing.

### Checks During Starting

JPT	...	...	800°C (maximum)
RPM	...	...	Increasing to 40 to 45%
Oil pressure	...	...	Rising

### Failure to Start

If RPM stabilise at 15% (wet start):

1. Set HP cock CLOSED.
2. Ignition switch OFF. Carry out dry run. Drain collector tanks and jet pipe.
3. Repeat start using a different power supply. After three starter cycle sequences allow starter to cool for 15 minutes and have fault investigated. If using internal batteries, only two starting attempts are permissible before the batteries must be changed.

### Checks After Starting

Starter indicator light	...	Out
External supply	...	Disconnected
JPT	...	500°C (maximum)
RPM	...	40 to 45%
Oil pressure	...	8 PSI (minimum)
Fuel valves, left and right	Test, light out within 3 seconds.	If not, re-test when fuel air pressure stabilises at 1.5 to 2.5 PSI
Inverter MI	...	Black
SWP	...	All captions out
Transponder	...	TEST
Hydraulic pressure	...	Green sector
Wheelbrakes pressure	...	900 to 1000 PSI
Flaps	...	Test, leave UP
Airbrakes	...	Test, select IN



# T Mk 5 TAKE-OFF

## Checks Before Take-off

TRIM	...	...	Elevator neutral Aileron neutral
AIRBRAKES	...	...	IN, check visually
FUEL	...	...	Contents sufficient LP cock ON and gated HP cock OPEN and gated Fuel tank air pressure 1.5 to 2.5 PSI
FLAPS	...	...	TAKE-OFF

Starting/  
Take-off  
T Mk 5

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## INSTRUMENTS

Taxi light	...	...	ON
Pitot head heater	...	...	ON
Instruments	...	...	Functioning, OFF flags retracted
Altimeters	...	...	Sub-scale set: within limits
Inverter MI	...	...	Black
DME	...	...	Standby, channel selected
Transponder	...	...	SB, code set
OXYGEN	...	...	Contents, connections, flow
HOOD	...	...	Select CLOSE
Canopy seal	...	...	ON
Pressurisation	...	...	Select PRESS
HARNESS	...	...	Tight and locked
HYDRAULICS	...	...	Green sector
CONTROLS	...	...	Full, free and correct movement
CAPTIONS	...	...	All out
PINS	...	...	All stowed

## Checks During Take-off

Wheelbrakes	...	...	Holding at 90% RPM
RPM	...	...	100 ± 0.5%
JPT	...	...	715°C (maximum)
Oil pressure	...	...	20 PSI (minimum)

## Checks After Take-off

Wheelbrakes	...	...	On/off
Landing gear	...	...	UP, lights out
Flaps	...	...	UP above 110 knots and above 100 feet above ground level
RPM	...	...	101.5% (maximum)
JPT	...	...	735°C (maximum)

## PRE-STARTING CHECKS

Strap in		
Safety pins	... ..	All stowed
Parking brake	... ..	On
Landing gear	... ..	DOWN buttons in
Battery switch	... ..	ON (cancel SWS)
External supply	... ..	On if required
CCU	... ..	
	NORM/FAIL switch	NORM
◀ NORM/EMERG		
	switch	... .. NORM
	I/C Vol switch	... .. On
	Rotary switch	... .. UHF SBY
	Toggle switch	... .. UHF SBY
Standby UHF power		
	switch	... .. NORMAL
Flying controls	... ..	Full and free movement with locking lever held up against bottom catch. Adjust pedals to ensure that full rudder can be applied

## Cockpit Left Wall

Flap lever	... ..	UP
Elevator trim control	... ..	Full movement (no more than 300° each way) synchron- ised with centre pedestal control. Set neutral
Throttle	... ..	Full and free movement, syn- chronised with centre pedestal control. Set closed
Landing gear override	... ..	Guarded central

## Below the Instrument Panel

Instrument dimming	... ..	As required
Cockpit lighting	... ..	As required
Anti-collision lights	... ..	OFF
Cockpit emergency light-		
ing	... ..	OFF
Navigation lights	... ..	As required
Taxi lamps	... ..	OFF
Identification lights		
switch	... ..	Central

(continued)



## T Mk 5A

## Pre-Starting Checks — continued

RAD/INST DIMMER	As required
Oxygen (left and right)	Connections. Supply wired on. Pressure 200 to 400 PSI. Air inlet switch as required. Flow indicator operating. EMERGENCY — test for leaks, return switch to central
Top temp control ...	ON
Battery switch ...	ON
Starting master switch ...	ON (Cancel SWS)
Ignition switch ...	ON
Pitot head heater ...	OFF
Landing gear emergency lowering lever ...	Wired up
Flight instrument start switch ...	Switch to START; check artificial horizon, altimeter and compass OFF flags re- tract
Flight instrument switch	NORMAL
Inverter test ...	Test: MI black, no OFF flags visible. Switch OFF, MI white, no OFF flags visible

## Instrument Panels

Flap indicator ...	Indication agrees with flap position
Landing gear position indication ...	Check three green lights and bulb changeover, DAY / NIGHT screen as required
V/UHF ...	T/R, frequency set
NAV controller ...	OFF
DME controller ...	OFF
JPT indicator ...	Condition

(continued)

# T Mk 5A

## Pre-Starting Checks — continued

Fuel tank switches	...	Check contents, leave on WING and central
Turn-and-slip indicator	...	OFF flag retracted
Standby artificial horizon	...	OFF flag retracted
RPM indicator	...	Condition
Oil pressure gauge	...	Condition
CCU		
STANDBY UHF	...	Test
Rotary switch	...	COMM
UHF SBY toggle switch	...	Off
COMM toggle switch	...	On
Transponder	...	S/B. Code zero set
ASI	...	Condition, UC warning flag not visible
Artificial horizon	...	Erect, OFF flag retracted
Altimeter	...	OFF flag retracted; set as required
Flight instrument panel		Secure
VSI	...	Condition
Windscreen DE-ICE	...	Press ON button for 2 seconds and release. Check light ON/OFF
COMP/DG switch	...	COMP
CL6 compass	...	Synchronised. Check against E2B
E2B compass light switch	...	OFF
Accelerometer	...	Condition
◀ DME indicator	...	Condition ▶
Marker switches	...	ON; test marker lights; set OFF

(continued)



# T Mk 5A

## Pre-starting Checks — continued

### ATTITUDE NORMAL/

STBY switch	...	NORMAL	
ILS indicator	...	Failure flags showing	
SWS	...	Test, night screen as required	
Machmeter	...	Condition	
◀ Standby altimeter	...	Set as required	▶
Cockpit altimeter	...	Condition	
Clock	...	Set	
Oxygen	...	Contents	
◀ Brakes pressure gauge	...	Condition	▶
Fuel tank air pressure	...	Condition	
Fire bottle indicator	...	Not discoloured	
Emergency depressurisation selector	...	Down	
Cockpit temperature selector	...	As required	
Pressurisation	...	UNPRESS	
Demist	...	OFF	
Rain/ice switch	...	OFF	
UHF STANDBY			
GUARD/A CHAN-			
NEL switch	...	GUARD	
UHF aerial switch	...	TOP	

Pre-starting  
Mk 5A  
(contd)

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### Centre Pedestal

Canopy seal	...	Off	
Landing gear override switch	...	Guarded central	
LP cock	...	ON and gated. FUEL caption	
◀ LP cock	...	ON out (pre mod 1772) AL 2	▶
HP cock	...	Test relight. OPEN and gated	
Throttle	...	CLOSED	
Flap lever	...	UP	
UHF mute switch	...	Unmuted	
Aileron trim	...	Full and correct movement, set neutral	
◀ Canopy jettison/MDC handle	...	Fully down	▶
Anti-collision lights	...	ON	

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# T Mk 5A

## ENGINE STARTING

### Starting Procedure

1. Press starter button for approximately 2 seconds and release. Light-up occurs at approximately 10% RPM.
2. If JPT increases rapidly through 650°C close HP cock. Allow engine to run down completely and repeat starting procedure using a different power supply.
3. If starting cycle cuts out prematurely, wait 40 seconds. Attempt a further start using a different power supply.
4. If the starter indicator light remains on after RPM reach idling:

Post-mod 1772, shut down the engine and investigate.

Pre-mod 1772, switch off the starter master switch, then: ►

a. If the light still remains on, set HP cock CLOSED, switch off battery master switch and have fault investigated.

b. If the light goes out, the aircraft may be flown but have the fault investigated on landing.

### Checks During Starting

JPT	...	...	800°C (max)
RPM	...	...	Increasing to 40 to 45%
Oil pressure	...	...	Rising

### Failure to Start

If RPM stabilise at 15% (wet start):

1. Set HP cock CLOSED.
2. Ignition switch OFF. Carry out dry run. Drain collector tanks and jet pipe.
3. Repeat start using a different power supply. After three starter cycle sequences allow starter to cool for 15 minutes and have fault investigated. If using internal batteries, only two starting attempts are permissible before the batteries must be changed.

### Checks After Starting

Starter indicator light	...	Out
External supply	...	Disconnected
JPT	...	500°C (max)
RPM	...	40 to 45%
Oil pressure	...	8 PSI (min)
◀ Transponder	...	Test
DME controller	...	On, test
NAV controller	...	As required
Fuel valves, left and right	...	Test, light out within 3 sec. If not, re-test when fuel air pressure stabilises at 1.5 to 2.5 PSI
Inverter MI	...	Black
SWP	...	All captions out
Hydraulic pressure	...	Green sector
Wheelbrake pressure	...	900 to 1000 PSI
Flaps	...	Test, leave UP
Airbrakes	...	Test, select IN



# T Mk 5A

## TAKE-OFF

### Checks Before Take-off

TRIM	...	...	...	Elevator neutral
				Aileron neutral
AIRBRAKES	...	...	...	IN, check visually
FUEL	...	...	...	Contents sufficient
				LP cock ON and gated
				HP cock OPEN and gated
				Fuel tank air pressure 1.5 to 2.5 PSI
FLAPS	...	...	...	TAKE-OFF

### INSTRUMENTS

Taxi light	...	...	...	ON
Pitot head heater	...	...	...	ON
Transponder	...	...	...	S/B, code set
NAV/DME	...	...	...	As required
Instruments	...	...	...	Functioning, OFF flags retracted
Inverter MI	...	...	...	Black
Altimeters	...	...	...	Sub-scale set: within limits
OXYGEN	...	...	...	Contents, connections, flow
HOOD	...	...	...	Select CLOSE
Canopy seal	...	...	...	ON
Pressurisation	...	...	...	Select PRESS
HARNESS	...	...	...	Tight and locked
HYDRAULICS	...	...	...	Green sector
CONTROLS	...	...	...	Full, free and correct movement
CAPTIONS	...	...	...	All out
PINS	...	...	...	All stowed

### Checks During Take-off

Wheelbrakes	...	...	...	Holding at 90% RPM
RPM	...	...	...	100 ± 0.5%
JPT	...	...	...	715°C (max)
Oil pressure	...	...	...	20 PSI (min)

### Checks After Take-off

Wheelbrakes	...	...	...	On/off
Landing gear	...	...	...	UP, lights out
Flaps	...	...	...	UP above 110 knots and above 100 ft AGL
RPM	...	...	...	101.5% (max)
JPT	...	...	...	735°C (max)

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## IN FLIGHT

### Pre-Stalling, Spinning and Aerobatic Checks

Height	...	...	Sufficient for recovery (see relevant Air Staff Instructions)
Airframe	...	...	Flaps and landing gear as required. Airbrakes test
Security	...	...	Harness tight and locked. Check for loose articles
Engine	...	...	JPT, oil pressure and fuel state within limits
Location	...	...	Clear of controlled air space and populated areas
Lookout	...	...	Clear of other aircraft and cloud, vertically and horizontally

### Pre-Joining/Descent Checks

Fuel	...	...	Contents and balance
Instruments	...	...	Functioning, erect and synchronised
Radio	...	...	Unmuted. Channel selected. Call
Altimeters	...	...	Set as required, cross-checked
Demist	...	...	As required

Take-Off/  
In Flight

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### SPINNING : ADDITIONAL CHECKS

NOT OVER 5/8 CLOUD OR SEA

WELL DEFINED HORIZON

CANOPY : CLEAR OF MIST AND ICE

FUEL BETWEEN 500 lb AND 1750 lb.

FUEL IMBALANCE LESS THAN 100 lb

# T Mk 5

## APPROACH

### Instrument Approach Settings

<i>Position</i>	<i>Configuration</i>	<i>RPM%</i>	<i>Speed kt</i>
Initial descent	A/B out	70	200
Slow rate descent	A/B out	70	140
Pattern and base leg	Gear down, flap T/O	75	Reducing to 115
Glidepath	Gear down, full flap	75	115

### Aircraft Approach Limitations (*feet true*)

<i>Runway Aids Without Glidepath Guidance</i>	<i>GCA/ PAR</i>
250	200



To obtain indicated height, add 50 feet

## LANDING

### Pre-Landing Checks

SPEED	...	...	Below 140 knots
AIRBRAKES	...	...	In
LANDING GEAR	...	...	DOWN; three green lights
FUEL	...	...	Sufficient, calculate threshold speed
FLAPS	...	...	As required
HARNESS	...	...	Tight and locked
WHEELBRAKES	...	...	Pressure in green sector. Operation, ensure pressure exhausted

### Circuit Speeds

	<i>Circuit</i>	<i>Final Turn</i>	<i>Approach</i>	<i>Threshold</i>
Powered approach	140	115	Reducing	95
Glide approach	reducing to 115	115	to threshold speed	100
Flapless approach		115		105

Increase threshold speed by 5 knots if fuel 1500 lb or more.  
Reduce threshold speed by 5 knots if fuel 500 lb or less.

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## T Mk 5

### Landing — continued

#### Checks After Landing

Parking brake	...	...	On, hydraulic pressure in Green sector
Flaps	...	...	UP
Taxy light	...	...	OFF
Pitot head heater	...	...	OFF
Rain/ice clearance	...	...	OFF
Windscreen demist	...	...	OFF
Pressurisation	...	...	Select UNPRESS
Canopy seal	...	...	OFF
Transponder	...	...	OFF. Set Code zero
DME	...	...	OFF
SWS	...	...	Test
Hydraulic pressure	...	...	Green sector

## SHUT-DOWN

### Shut-Down Procedure

Parking brake	...	...	On
Throttle	...	...	CLOSED
Flaps	...	...	TAKE-OFF
HP cock	...	...	CLOSED (when RPM stabilised)
LP cock	...	...	OFF
Flight instrument switch	...	start	OFF
Ignition switch	...	...	OFF
Starting master switch	...	...	OFF
All electrical services	...	...	OFF
Battery switch	...	...	OFF
Flying controls	...	...	LOCKED
Chocks	...	...	In position

Before unstrapping, have the aircraft made 'Safe for Parking'. When unstrapped, return the QRB to the locked position



# T Mk 5A

## APPROACH

### Instrument Approach Settings

Position	Configuration	RPM%	Speed kt
◀ Initial descent	A/B out	70	200 ▶
Slow rate descent	A/B out	70	140
Pattern and base leg	Gear down, flap T/O	75	Reducing to 115
Glidepath	Gear down, full flap	75	115

### Aircraft Approach Limitations (feet true)

	Runway Aids Without Glidepath Guidance	ILS	PAR
In-line localiser	250	250	200
◀ Offset localiser	270	270	— ▶

To obtain indicated height, add 50 feet

## LANDING

### Pre-Landing Checks

SPEED ...	...	Below 140 knots
AIRBRAKES ...	...	In
LANDING GEAR	...	DOWN; three green lights
FUEL ...	...	Sufficient, calculate threshold speed
FLAPS ...	...	As required
HARNESS ...	...	Tight and locked
WHEELBRAKES	...	Pressure in green sector. Operation, ensure pressure exhausted

### Circuit Speeds

	Circuit	Final Turn	Approach	Threshold
Powered approach	140	115	Reducing	95
Glide approach	reducing to 115	115	to threshold speed	100
Flapless approach		115		105

Increase threshold speed by 5 knots if fuel 1500 lb or more.  
Reduce threshold speed by 5 knots if fuel 500 lb or less.

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## T Mk 5A

### Landing — continued

#### Checks After Landing

Parking brake	...	...	On, hydraulic pressure in green sector
Flaps	...	...	UP
Taxy light	...	...	OFF
Pitot head heater	...	...	OFF
NAV/DME	...	...	OFF
Transponder	...	...	OFF. Set code zero
Marker switches	...	...	OFF
Rain/ice clearance	...	...	OFF
Windscreen demist	...	...	OFF
Pressurisation	...	...	Select UNPRESS
Canopy seal	...	...	OFF
SWS	...	...	Test
Hydraulic pressure	...	...	Green sector

## SHUT-DOWN

### Shut-Down Procedure

Parking brake	...	...	On
Throttle	...	...	CLOSED
Flaps	...	...	TAKE-OFF
HP cock	...	...	CLOSED (when RPM stabilised)
LP cock	...	...	OFF
Flight instrument start switch	...	...	OFF
Ignition switch	...	...	OFF
Starting master switch	...	...	OFF
All electrical services	...	...	OFF
Radio	...	...	OFF
CCU:			
I/C VOL switch	..	...	OFF
Toggle switches	...	...	OFF
Battery switch	...	...	OFF
Flying controls	...	...	LOCKED
Chocks	...	...	In position
Before unstrapping, have the aircraft made 'Safe for Parking'. When unstrapped, return the QRB to the locked position			

## AIRCRAFT LIMITATIONS

Note: Details in brackets apply to T Mk 5 aircraft which are fitted with tip tanks. ▶◀

### Maximum Airspeeds

Clean aircraft	— Up to 10,000 feet	...	400 knots
	— Above 10,000 feet	...	0.73M
Canopy open	...	...	140 knots
Flaps	— Between UP and T/O, at T/O	...	155 knots
	— Between T/O and full, at full	...	125 knots
Landing gear	— Lowering and locked down	...	140 knots
	— Raising	...	125 knots

### Maximum Weights

Take-off and emergency landing	8150 lb	(9000 lb)
Normal landing	8000 lb	(8000 lb)

### ◀ Aerobatics — Mk 5 Aircraft

The aircraft is cleared for aerobatics at fuel states up to 2100 lb but the tip tanks must be empty and the CG must be forward of 19.5 inches AOD. ▶

### Spinning

Inverted spinning is prohibited. Erect spins up to eight (four) turns permitted, providing fuel load 500 to 1780 lb (1300 lb) and fuel asymmetry does not exceed 100 lb (No fuel in the tip tanks.) Spinning in Mk 5 aircraft when flown solo is not permitted. ▶

### G Limits

Positive ... .. 6g  
 Negative—up to 350 knots ... minus 2.5g (minus 2.0g)  
 —350 to 400 knots ... .. minus 1.5g  
 (With tip tanks, CG between 19.5 and 20.4 inches AOD, is limited to normal accelerations between +3g and +0.5g, and to gentle manoeuvring only)  
 With luggage panniers ... .. minus 1g to +3g  
 Limit time between 0.2g and the appropriate negative g limitation:

- 30 seconds above 30,000 feet
- 25 seconds between 20,000 to 30,000 feet
- 20 seconds between 10,000 to 20,000 feet
- 18 seconds between 0 to 10,000 feet

*Fuel booster pump must be operating*

Allow 45 seconds between prolonged applications of neg g

(continued)



# Aircraft Limitations — continued

## Crosswind — T/O and Landing

Dry runway ... ..	30 knots
Wet runway ... ..	25 knots

## Rolling Manoeuvres

- Full aileron may be used between +4g and minus 1.5g  
 ◀ (+4g and 0g up to 350 knots) ▶  
 Outside these limits not more than ½ aileron is to be used

## Aircraft Arresting Gear

SPRAG	PUAG Mk 21
CHAG	BLISS BAK 9, 12
RHAG Mk 1	and 500 S

No damage will occur with trampling speeds 10 knots or below

No hazard exists at any speed

## ◀ Aircraft Arresting Barriers

The aircraft are cleared for use with RAF barriers Mk 5, 6, and 12, and 12A at 'light' setting. ▶

# ENGINE LIMITATIONS

## Viper Mk 202 Engine

Power Rating	Engine RPM %	Max JPT °C	Time limit
Max take-off	100 ± 0.5	715	20 minutes
in flight	101.5 max *	735	
Intermediate	98 max	695	30 minutes
Max cont	95 max	655	—
Ground idling	42.5 ± 2.5	500†	—

Note: Within the associated time limit, the overriding operating limitation is the one first obtained at that power rating, ie either RPM or JPT.

\* Increase in full throttle RPM is caused by governor creep. The amount and duration of any overspeed in excess of 101.5% must be recorded.

† Max permissible JPT during starting and relighting is 800°C. If, during starting, the JPT accelerates rapidly through 650°C, the HP cock must be closed immediately. Report the maximum temperature reached and the length of time above 800°C.

Limitations

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## Oil Pressure

Minimum at ground idling RPM ... ..	8 PSI
Minimum at max continuous RPM ... ..	20 PSI
Normal at max continuous RPM ... ..	30 PSI

## OPERATING DATA

<i>Height (ft)</i>	<i>Fuel Used (lb)</i>	<i>Distance (NM)</i>	<i>Time (minutes)</i>
SL to 5000	68	5	1.6
SL to 10,000	140	12	3.4
SL to 15,000	216	21	5.7
SL to 20,000	288	31	8.1
SL to 25,000	368	44	11.3
SL to 30,000	460	62	15.7
SL to 35,000	606	97	24.8

Climb speed 200 knots from SL until  $M=0.4$ ; 0.4 M thereafter. Full power for 20 minutes from start of take-off, then max intermediate.

## CRUISE DATA

### Best Range

Ht (1000 ft)	SL	5	10	15	20	25	30	35
IAS (kt)	210	195	185	180	170	165	160	155
TAS (kt)	210	215	215	225	235	245	260	275
Fuel lb/min	22.7	19.9	17.1	15.8	14.4	13.6	13.1	12.8
ANM/100 lb	15.6	18.2	20.9	23.9	26.9	29.7	33.0	35.9

### 95% Range

Ht (1000 ft)	SL	5	10	15	20	25	30	35
IAS (kt)	250	235	225	220	210	205	190	180
TAS (kt)	250	255	265	275	285	300	310	315
Fuel lb/min	28.3	24.5	22.1	20.3	18.7	17.9	16.6	15.5
ANM/100 lb	14.8	17.4	19.9	22.5	25.6	28.2	31.4	34.1

### Endurance

Ht (1000 ft)	SL	5	10	15	20	25	30	35
IAS (kt)	130	125	125	125	125	125	130	130
TAS (kt)	135	140	145	155	170	190	210	230
Fuel lb/min	17.5	15.8	14.1	13.2	12.4	11.9	11.9	11.9
ANM/100 lb	12.8	15.0	17.0	20.0	22.7	26.5	30.0	32.4

(continued)



## Operating Data — continued

## DIVERSION AND HOLDING DATA

HEIGHT BLOCKS (ft. × 1000)	RANGE (distance R and time T) and ENDURANCE (E) for remaining fuel (lb.) of											
	1400		1200		1000		800		600		400	
	R	T	E	R	T	E	R	T	E	R	T	E
R & E	172	49	63	140	40	51	109	31	40	78	22	29
Best R & E	298	73	79	236	58	60	170	43	46	98	28	29
Best Ht	30	—	20	30	—	10	25	—	10	10	—	M
R & E	236	66	80	194	55	66	153	43	52	111	32	37
Best R & E	329	77	84	264	63	66	198	43	52	130	34	37
Best Ht	30	—	20	30	—	M	30	—	M	20	—	M
R & E	307	80	92	254	67	75	200	53	59	146	39	43
Best R & E	354	84	92	289	69	75	225	54	59	154	39	43
Best Ht	30	—	M	30	—	M	30	—	M	25/30	—	M
R & E	378	90	98	312	74	81	246	59	64	180	44	47
										114	29	30
										48	13	14

The above table allows for 300 lb fuel in the circuit and includes distance for the descent en route (170 kt., airbrakes out). Enter table at appropriate height block; read off range (R & T) and endurance on the top line. The next line shows the maximum range and endurance at the height shown on the third line (M = maintain height).

If an instrument approach is required, enter the table one column to the right of present fuel. For absolute R & E to flame-out (100 lb allowance for possible gauge errors) enter one column to left. In strong headwinds use of 95% range speeds may be advantageous due to reduced cruise time.



## DESCENT DATA

Airbrakes out. Idling or 60% RPM whichever is greater.

<i>Altitude at start of descent (ft)</i>	<i>Time (minutes)</i>	<i>Distance (NM)</i>	<i>Fuel (lb)</i>
35,000	12.2	45	99
30,000	10.8	38	90
25,000	9.3	31	81
20,000	7.7	25	70
15,000	6.0	19	58
10,000	4.2	12	44
5000	2.3	6	26

## **Abandoning — continued**

### **Ejection Drill**

Best speed 250 knots  
Convert excess speed into height  
Stagger ejections  
Head back on rest, elbows in, leave feet on rudder pedals  
Close eyes tightly (and if possible lower helmet visor)  
Pull seat-pan firing handle  
Auto separation occurs below 10,000 feet

### **If the Seat Fails to Fire**

Ensure seat-pan firing handle correctly pulled  
Pull face-screen handle  
If seat still fails to fire, bale out manually

### **Manual Bale-Out**

Reduce speed to practicable minimum  
Airbrakes IN  
◀ Operate CANOPY MDC handle if necessary ▶  
Operate manual separation lever  
Leave seat and abandon aircraft manually  
Pull rip cord D-ring when clear

### **Failure of Drogue Gun**

Above 10,000 feet carry out the manual separation drill  
Delay pulling rip cord D-ring until at a safe height (no emergency oxygen)

### **Manual Separation**

When forward speed reduced, discard face-screen (if used)  
Operate manual separation lever  
Fall out of seat  
Pull rip cord D-ring



### **MDC Operation**

Speed below 350 knots  
Canopy closed  
Close eyes tightly (and if possible lower helmet visor)  
Squeeze CANOPY MDC operating handle and pull firmly upwards

### **Landing Gear Emergency Retraction on the Ground**

#### *After Normal Lowering*

Raise the guard and operate and hold the EMERGENCY OVERRIDE switch.  
Press the UP button.

#### *After Emergency Lowering*

Note: Only possible if some hydraulic and electrical power still available.

Return the emergency lowering lever to original setting and carry out the 'After normal lowering' drill.

### **Barrier Engagement (RAF Mk 5, 6, and 12 and 12A at 'light' setting)**

Call for barrier

Use steady braking to reduce speed to minimum

HP cock CLOSED

LP cock OFF

STARTING MASTER switch OFF

Aim for centre panel

Keep canopy closed

Duck head forward before engagement

Release brakes before rolling over bottom cable

Resume full braking after engagement

Apply parking brake when stopped

Leave aircraft, avoiding seat firing handles; if practical make aircraft 'Safe for Parking'.

### **Ditching**

Do not ditch the aircraft, eject

## **ABANDONING**

### **Ejection Limitations**

90 knots/ground level if in straight and level flight

*If aircraft is descending, minimum safe height is approximately one-tenth of the rate of descent.*

◀ Note: As the first occupant ejects the aircraft may pitch nose-down. ▶

(continued)



## HAZARDOUS LANDINGS

### Forced Landing

#### Positioning

Glide at 130 knots (1.5 miles/1000 ft)

Plan for 2500 ft on dead side, abeam touchdown point (High Key). If possible, land on an airfield; if not, consider ►◄ operating MDC (canopy closed) immediately after touchdown. Do not ►◄ operate MDC if barrier engagement is likely. Check:

HP cock	...	...	CLOSED
LP cock	...	...	OFF
STARTING MASTER			
switch	...	...	OFF
Non-essential	electrics		Off
Radio	...	...	Emergency call
Transponder	...	...	Mode A, code 7700
FIRAD checks	...	...	As appropriate
PSP lowering line	...	...	Disconnected
Emergency oxygen tube	...	...	Disconnected
Leg restraint cords	...	...	Disconnected

#### Circuit

Attain 1500 ft downwind opposite touchdown point (Low Key).

#### Pre-landing checks:

Airbrakes	...	...	IN
Landing gear	...	...	Down on emergency. Three green lights
Fuel	...	...	Cocks off, STARTING MASTER switch OFF. Calculate threshold speed
Flaps	...	...	As required
Harness	...	...	Tight and locked
Wheelbrakes	...	...	Check pressures

Airbrakes may be used to reduce excess speed at round-out.

#### After Landing

Leave aircraft, avoiding seat firing handles; if practical make aircraft 'Safe for Parking' and apply parking brake.

(continued)

## Landing Gear Malfunctions — *continued*

### Landing With Gear in Abnormal Positions

If the **Failure to Lower** drills prove unsuccessful, no further control over the landing gear is possible. Carry out the following additional pre-landing checks:

Leg restraint cords	...	Disconnect
PSP lanyard	...	Disconnect
Emergency oxygen tube	Disconnect	
Canopy	...	Leave shut (MDC may be manually operated after touchdown if rapid exit is essential)

Make a normal approach and use the following techniques:

#### *One Main Leg Unlocked:*

Land close to side of runway corresponding to locked down leg. At touchdown:

HP cock	...	CLOSED
LP cock	...	OFF
STARTING MASTER		
switch	...	OFF

After touchdown, hold wings level by use of aileron. When wing drops, counteract the resulting swing with brake

#### *Nose Leg Unlocked*

At touchdown:

HP cock	...	CLOSED
LP cock	...	OFF
STARTING MASTER		
switch	...	OFF

Lower nose onto runway before longitudinal control is lost. Use brake to keep straight.

Note: Do not engage barrier if MDC has been operated or with canopy open.

### Wheels-Up Landing

Land on a foam carpet if possible. Make a normal approach and fly the aircraft onto the runway at the normal speed.

At touchdown:

HP cock	...	CLOSED
LP cock	...	OFF
STARTING MASTER		
switch	...	OFF
Fire extinguisher	...	Operate

## HYDRAULIC FAILURE

### Indication

SWS operates, HYD caption on

### Actions

Cancel SWS

Check brakes pressure gauge

Retract airbrakes if extended: do not use again

Lower flap fully when convenient, but before lowering the landing gear

If no flap, increase normal threshold speed by 10 knots

Lower the landing gear on the emergency system.

During the landing run use brakes in one continuous application.

## LANDING GEAR MALFUNCTIONS

### Failure to Lower—Electrical and/or Mechanical Failure

#### Indications

Landing gear indicators out or red

#### Action

Operate indicator light changeover switch

Check hydraulic pressure in green sector. HYD caption out.

Re-cycle the landing gear

Apply positive and negative g

Yaw the aircraft

#### Considerations

If hydraulic pressure is insufficient or the above actions are not successful, select DOWN on the normal landing gear system then lower the landing gear using the emergency system. ▶

### Self Cycling

#### Action

Select the landing gear down and operate the emergency lowering lever.

*continued*



## T Mk 5A

### COMMUNICATIONS FAILURE

#### **Complete Loss of Sound (no side tone)**

##### *Action*

Check helmet mic-tel connection

On CCU select:

NORM/FAIL switch to FAIL

NORM/EMERG switch to EMERG

Rotary switch to COMM

COMM toggle switch up, all other toggle switches down

Confirm intercom available

If no intercom select:

STANDBY UHF POWER switch to NORMAL

CCU rotary switch to UHF SBY

UHF SBY toggle switch up, all other toggle switches down

Confirm intercom available

If no intercom select:

STANDBY UHF POWER switch to EMERG

#### **Loss of Transmit or Reception Facility**

##### *Action*

Check mute switch and transmit buttons

Select CCU to emergency as above

Try alternative aerial

Dial frequency manually

Change frequency

Select TR+G

Dial 243 MHz

Select CCU rotary switch to UHF SBY, COMM toggle switch down, UHF SBY toggle switch up.

If standby radio fails, set UHF POWER switch to EMERG

If complete UHF failure occurs, set the transponder to Mode A and code selectors to 7600

If standby radio selected, ie main radio inoperative, select CCU NORM/FAIL switch to NORM and NORM/EMERG switch to NORM in order to regain full CCU facilities

## T Mk 5

### UHF FAILURE

#### Complete Loss of Sound (no side tone)

##### Action

Check mic-tel connections

Select UHF NORMAL/STANDBY switch to STANDBY (20 sec warm-up period)

Check electrics

#### Loss of Transmit or Receive Facility

##### Action

Check mute switch and buttons

Select other aerial

Try alternative transmit switch

Dial frequency manually

Change frequency

Select 243 MHz and T/R + G together

Switch off

Select UHF NORMAL/STANDBY switch to STANDBY (20 sec warm-up period)

If power to standby set fails, select STANDBY UHF NORMAL/EMERG switch to EMERG

If complete UHF failure occurs set the transponder to Mode A and the code selectors to 7600.

### SPEECHLESS PROCEDURE

• YES

•• NO

••• SAY AGAIN

•••• HOMING

—••— FURTHER EMERGENCY

———— CARRIED OUT  
FIELD IN SIGHT

## Oxygen Failures — *continued*

### Difficulty in Breathing Out

Lift mask off face

Press TEST MASK button to clear inhalation valve  
If unsuccessful, breathe in through mask and exhale with  
mask away from face.

Descend below 10,000 ft cockpit altitude

### Continuous white MI

Check mask fit

Check tube for leaks

Check contents

If not cured, carry out Emergency Oxygen Drill

### Continuous black MI

Pressure over/under 200 to 400 PSI

Contents in red sector

SWS operates, OXY caption on

Carry out  
Emergency  
Oxygen Drill

## AIR CONDITIONING AND PRESSURISATION

### Under-pressurisation or Canopy Failure

#### Indications

Above 26,000 ft cockpit altitude, SWS operates, CPR  
caption on

#### Actions

Cancel SWS

Select 100% oxygen

Descend immediately below 35,000 ft cockpit altitude to  
prevent hypoxia and then to below 25,000 ft cockpit  
altitude to reduce risk of decompression sickness. Check  
for air flow from open punkah louvres.

No air flow indicates failure of air conditioning system,  
therefore, no cockpit temperature or windscreen de-  
misting facilities.

### Over-pressurisation

#### Indications

Cockpit altitude less than  $\frac{1}{2}$  actual altitude + 2000 ft

#### Actions

Select UNPRESS

Proceed as for Under-pressurisation or Canopy Failure

### Temperature Control Failure

If cockpit conditions become uncomfortable, select  
pressurisation off.

Proceed as for Under-pressurisation or Canopy Failure

If ventilation is required, select EMERG DEPRESS

Electrical  
(contd.)/  
Oxygen/  
Air cond.



## **Electrical Failures — continued**

### *Action*

Check flight instruments START/OFF switch at START  
Operate flight instruments switch to STANDBY; if  
standby inverter does not start, return switch to  
NORMAL and attempt to re-start normal inverter by  
operating inverter test switch.

If inverters remain off-line, return test switch to OFF.

### *Considerations*

The following services will be lost:

Mk 22 altimeter	Top temperature control
Artificial horizon	Altimeters vibrators
Gyro compass	Cabin temperature control system
◀ Fire detection	Instrument panel lighting (Mk 5 only) ▶

## **Suspect Inverter**

### *Indications*

Degradation of aircraft flight instruments performance.  
Inverter MI alternating black/white.

### *Action*

Operate FLIGHT INSTRUMENT-NORMAL/STANDBY switch to STANDBY.

If practicable descend below cloud.

## ◀ **Lighting Failure (Mk 5A only)** ▶

(a) Lighting inverter failure

### *Action*

Select EMERG LTS switch to MAIN BATT.

(b) Power failure (main battery failure)

### *Action*

Select EMERG LTS switch to EMERG BATT position  
by pulling switch out and down.

## **OXYGEN FAILURES**

### **Emergency Oxygen Drill**

Operate emergency oxygen bottle

Disconnect main supply

Descend below 10,000 feet cockpit altitude

Note: Breathing out will be difficult.

### **Hypoxia**

If hypoxia suspected, carry out Emergency Oxygen Drill

### **Difficulty in Breathing In**

Check connections, tube for kinks

If not cured, carry out Emergency Oxygen Drill

*continued*

## ELECTRICAL FAILURES

### Generator Failure

#### Indications

SWS operates, GEN caption on  
Inverter MI white

#### Actions

Cancel SWS

Non-essential electrics off

STANDBY UHF

POWER switch ... NORMAL  
Mk 5 UHF selector ... STANDBY  
— or —

Mk 5A (rotary switch ...	UHF SBY selected
CCU } toggle switches	UHF SBY selected

Main UHF ... OFF when standby set  
warmed up

Keep UHF transmissions to a minimum

Land as soon as practicable

Before the main batteries fail, set:

Mk 5 T & S SUPPLY STANDBY

Fuel/  
Electrical

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Mk 5A ATT IND
STANDBY/NORMAL
switch ... STANDBY

STANDBY UHF

POWER ... EMERG

Oxygen ... 100%

If the emergency battery is in use, lower the landing gear  
on the emergency system

### Normal Inverter Failure

#### Indication

Inverter MI white (No GEN warning on SWP)

#### Actions

Check altimeter and artificial horizon OFF flags retracted.  
Operate flight instruments switch to STANDBY and  
back to NORMAL.

If MI remains white, no further action is possible

If practicable, descend below cloud.

### Double Inverter Failure

#### Indications

Inverter MI white

Altimeter and artificial horizon OFF flags showing

(continued)

## FUEL SYSTEM FAILURES

### Fuel Tank Pressurisation Failure

#### *Indication*

Fuel tank air pressure less than 1.5 PSI in level flight.

#### *Action*

Avoid negative g. Land as soon as practicable.

#### *Considerations*

1. Maximum RPM possible without fluctuation decreases as fuel is used and altitude is reduced.
2. Below 5000 feet, with zero fuel tank pressure and 250 lb fuel, maximum RPM obtainable is approx 90%.
3. Fuel gauge may overread.
4. Fuel in tip tanks will not transfer. ►◄

### Excessive Fuel Tank Air Pressure

#### *Indication*

Fuel tank air pressure above 2.5 PSI.

#### *Action*

Reduce speed and RPM  
Descend and land as soon as practicable  
Avoid increased g loadings

### Booster Pump Failure

#### *Indications*

SWS operates, FUEL caption on

#### *Action*

Cancel SWS

Post-mod 1772, check starter master switch ON

◄ If warning remains on select starter master switch OFF. ►

Avoid negative g and land as soon as possible

#### *Considerations*

1. Maximum RPM may not be available above 12,000 feet.
2. Above 12,000 feet at high throttle settings and in high ambient temperatures, RPM may fluctuate and a flame-out is possible.
3. Above 30,000 feet an immediate flame-out is possible.
4. A successful relight above 10,000 feet (AVTUR) or 6000 feet (AVTAG) is unlikely.



## FLAME-OUT

### Immediate Actions (Immediate relight)

Throttle ... .. CLOSED

Press relight button for a maximum of 10 seconds. If after 10 seconds no relight has occurred, set:

HP cock ... .. CLOSED

Non-essential electrics ... Off

Transponder and RT ... As required

Glide at 130 knots (1.5 NM/1000 feet)

### Cold Relight (Maximum recommended height 15,000 feet)

Note 1: If the booster pump has failed, a successful relight is unlikely above 10,000 feet (Avtur): 6000 feet (Avtag).

Note 2: Mechanical noise from the windmilling engine is noticeable. At high airspeeds, intake banging may occur; the intensity of the banging decreases with reduced airspeed and height but it may still be present at 120 knots.

#### Check:

Battery switch ... .. ON

#### STARTING MASTER

switch ... .. ON

Ignition switch ... .. ON

Rain/ice clearance ... OFF

Pressurisation ... .. Select UNPRESS

LP cock ... .. ON (FUEL caption out)

HP cock ... .. CLOSED

Throttle ... .. CLOSED

Set speed 120 to 170 knots.

Press the relight button and at the same time open the HP cock. Keep the button pressed for up to 30 seconds or until RPM reach 40%. If flame-out was caused by icing, make careful throttle movements and maintain 70% RPM for at least 5 minutes.

### Failure to Relight

If, after 30 seconds no relight has occurred, release the relight button and close the HP cock. If possible, allow one minute to elapse before attempting a further relight. There may be fumes in the cockpit.

Eng Fail  
(contd)/  
Eng Icing/  
Flame-Out

## ENGINE FAILURE AFTER TAKE-OFF

### Below 160 Knots or 600 feet AGL

Land within 180° arc ahead or, if conditions within limits, eject.

*If aircraft descending, minimum safe height for ejection is approximately one-tenth rate of descent.*

### Above 160 Knots or 600 feet AGL

Make level turn 40° to 50° bank (into crosswind) towards airfield. Check:

HP cock ... .. CLOSED

LP cock ... .. OFF

#### STARTING MASTER

switch ... .. OFF

Radio ... .. Emergency call

Glide at 130 knots. Lower landing gear on emergency system and use flaps as required.

Do not ►◄ operate MDC if barrier engagement likely. Leave aircraft, avoiding seat firing handles: if practical make aircraft 'Safe for Parking' and apply parking brake.

## ENGINE ICING

### Indications

Any, or all of the following indications may occur:

Loss of power

Increase in JPT

Reduction in max obtainable RPM

Engine surge

Flame-out

### Actions

If it is not possible to leave the icing conditions, all throttle movements must be made carefully and a maximum of 85% RPM used.

If the engine surges, and height permits, throttle back and descend at maximum rate to below freezing level. Set 70% RPM for 5 minutes, then increase RPM carefully. An abnormally rapid rise in JPT indicates incomplete de-icing; set 70% RPM for a further period.

If flame-out occurs, do not normally attempt to relight until clear of icing conditions. After relight, de-ice the engine as above. Avoid rapid throttle movements.



### ENGINE FIRE ON THE GROUND

Throttle ... .. Closed  
HP cock ... .. CLOSED  
LP cock ... .. OFF

#### STARTING MASTER

switch ... .. OFF  
Extinguisher ... .. Operate

Release parking brake and vacate aircraft quickly. When fire is extinguished, and if possible replace seat and canopy pins.

Fire/  
Fumes/  
Eng  
Failure

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### FIRE IN THE COCKPIT

Carry out Noxious Fumes in Cockpit drill below.  
If fire/smoke has occurred shortly after an electrical switch has been moved, reselect the particular switch to its former position.

*If fire/smoke persists:* All non-essential electrics off.

If visible signs of fire, use cockpit fire extinguisher.

### NOXIOUS FUMES IN COCKPIT

Select 100% oxygen  
Regulator toggle to EMERGENCY  
Select EMERG DEPRESS  
Pressurisation OFF  
Descend below 25,000 feet cockpit altitude  
Check for signs of fire  
If required:



With canopy closed, operate MDC below 350 knots: do not engage barrier if MDC has been operated or with canopy open.

### ENGINE MECHANICAL FAILURE

Throttle ... .. CLOSED  
HP cock ... .. CLOSED  
LP cock ... .. OFF

#### STARTING MASTER

switch ... .. OFF  
Non-essential electrics ... Off

Carry out a forced landing or eject

Do not attempt to relight

Engine Failure After Take-Off — overleaf



## ENGINE FIRE

### Indications

SWS and audio operates  
FIRE caption on

### Immediate Actions

Throttle	...	...	CLOSED (if impracticable, eject)
SWS	...	...	Cancel
Speed	...	...	Reduce to practicable minimum

Check for confirmatory signs of fire

### Subsequent Actions

1. *If the FWL goes out within 5 seconds and there are no other signs of fire (hot gas leak):*

Land as soon as possible at suitable airfield, using minimum power. If warning recurs, throttle back at frequent intervals to check that warning goes out.

2. *If there are definite signs of fire:*

HP cock ... .. CLOSED

LP cock ... .. OFF

### STARTING MASTER

switch ... .. OFF

Extinguisher ... .. Operate (below 200 kt for best results)

Noxious fumes drill	}	As situation dictates
Radio call and Transponder to EMERG		

If fire goes out ... .. FWL out within 30 seconds

If warning remains on ... Eject

3. *If the FWL stays on but there are no other signs of fire:*

On the evidence available, a decision must be made whether to treat the warning as real or spurious.

#### Decision

#### Action

<b>Real</b>	...	...	Complete fire drill (see 2 above)
-------------	-----	-----	-----------------------------------

<b>Spurious</b>	...	...	Land as soon as possible at suitable airfield using minimum power. Be prepared to resume fire drill or eject if further signs of fire
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Note 1: Do not test FWL when airborne.

Note 2: The attention-getter will be re-activated if the warnings are still on when inverter changeover occurs.

Note 3: Operation of the fire extinguisher causes a muffled bang and possibly a pungent smell.

Note 4: Do not re-start engine.

◀ Note 5: Post-mod 1772, booster pump is controlled by STARTING MASTER switch.

# **JET PROVOST T Mk 5 & 5A**

## **EMERGENCIES**

**ENGINE FIRE  
NOXIOUS FUMES  
ENGINE MECHANICAL FAILURE  
ENGINE FAILURE AFTER TAKE-OFF**

**ENGINE ICING  
FLAME-OUT**

**FUEL SYSTEM FAILURES  
ELECTRICAL FAILURES**

**ELECTRICAL FAILURES (*contd*)  
OXYGEN FAILURES  
AIR CONDITIONING & PRESSURISATION**

**T Mk 5 — UHF FAILURE  
T Mk 5A — COMMUNICATIONS FAILURE**

**HYDRAULIC FAILURE  
LANDING GEAR MALFUNCTIONS**

**HAZARDOUS LANDINGS  
ABANDONING**