

Issue 2
September, 1962

Issued with AL 1 to A.P.4347F-P.N.
Pilot's Notes

FLIGHT REFERENCE CARDS

HUNTER F.6

NORMAL OPERATING DRILLS

COCKPIT AND PRE-START CHECKS

Before strapping in perform the ejection seat checks, check ejection gun sear and emergency oxygen bottle pins are removed, then check :—

Undercarriage and flaps emergency air pressure—2000 PSI min.

Brake emergency air pressure—750 PSI min.

Tailplane and hood circuit breakers—In.

Hood rail locking indicators—Locked—pointers in line with pins.

Booster pump and starter circuit breakers—In.

Nos. 1 and 2 inverter circuit breakers—In.

Strap in, adjust the leg restraint cords, adjust the rudder pedals and harness to give full rudder control, make the oxygen, emergency oxygen, anti-G and radio lead connections. Remove and stow both seat safety pins. Then check :—

Undercarriage selector—Down button fully in

Armament switches—Safe or OFF

Clear aircraft switch bar—UP

Battery master switch—ON

All air inlets—As required

Brake parachute switch—JETTISON—OFF

Warning light out

Port console and front panel

Inverter select switch
(Post mod. 375)

NORMAL. Magnetic indicator white. Select STANDBY. Check magnetic indicator black. Return to NORMAL.

Radar Test switch
(Pre mod. 375)

Operate. Check No. 1 inverter on, magnetic indicator black. Operate battery master switch to stop inverter.

Cockpit pressure warning test switch

Operate and check warning.

Cockpit temperature selector

As required

Cockpit temperature control

AUTO

Cockpit pressure master switch

ON

(continued)

COCKPIT AND PRE-START CHECKS—(contd.)

Flood flow control switch	AUTO
LP cock	ON
VHF	Channel selectors OFF
VHF Set selector	As required
GGS selector damper	As required
Relight switch	Test. If serviceable an irregular clicking is heard. Switch battery master OFF/ON to cancel 30 second cycle
Throttle damper	Adjust as required
HP cock/throttle	Full and free movement Set 1 inch open
Aileron and rudder trim controls	Test. Set neutral
Top temperature control	ON
Tailplane interconnection switch	OFF
Hood control switch and clutch selector	Clutch FREE. Check normal operation of hood Clutch LOCKED. Switch OPEN or SHUT as required
Tailplane standby motor control	Operation Cover fully down
Undercarriage emergency control	Ensure control not pulled out
Radar ranging	OFF
Triple pressure gauge	Indication
Hood jettison handle	Secure
Green salad switches	As required
RP selector	As required
Undercarriage position indicator and selector buttons	Three green lights. Day/night switch Bulb changeover. Warning light out. Down button fully in. Up button not twisted to emergency override
Flap emergency control	Ensure control not pulled out
Flap selector lever	Up. Flap indicated UP
Hydraulic pressure warning light	On
Power control switches	Both OFF. Magnetic indicator white
Fuel low level warning lights	Out Night covers as required
Bomb RP switch	Gated Off
Bomb fuzing switch	OFF

(continued overleaf)

COCKPIT AND PRE-START CHECKS—(contd.)

Front Instrument panel

Trim indicator	Note setting
Flight instruments	Condition. Set altimeter to zero. Synchronise Mk4F compass with E2B. Turn and slip supply NORMAL. OFF flag retracted
RPM gauge	Zero

Starting panel

Oil pressure gauge	Zero
Ignition switch	Gated ON
Generator warning lights	On. Night covers as required
Camera master switch	Off
Pressure head heater switch	Off
Engine master switch	Off

Starboard front panel and console

Fire warning light	Out
Accelerometer	Reset
GGS Switch	Off
E2B Compass	Serviceability
Cockpit altimeter	Zero
Audio warning cut-out switch	On (spring loaded on)
Camera aperture switch	As required
Fuel low pressure warning light	On (out if pressure in system)
Oxygen	Contents sufficient Pressure 200-400 PSI Main and emergency supplies connected ON/OFF valve wired on Select NORMAL Mk. 17E or 100% Mk. 17D Check for mask leaks by pressing in emergency switch in central position—return switch to central Check magnetic indicator operation SHUT
Engine anti-icing	Test as required
Emergency cockpit and compass light switch	
Cockpit lighting switches	As required
Explosion suppression warning light	Out (if on, reset switch)

(continued)

COCKPIT AND PRE-START CHECKS—(contd.)

Fuel gauges	Contents (if transfer indicators are cross-line a full indication will not be given)
Outboard drop tank indicators	Black if fuel in tanks, otherwise white
Booster pump warning light	On (out if pressure in system) Night iris as required
Booster pump switch	On
Transfer indicators	Cross-line (if pressure in system they will show in line and contents gauge will read full) AUTO (Normally guarded at AUTO)
Tank selector switches	REAR
Tank selector indicators	Down
Emergency oxygen bottle selector	As required
Navigation lights	OFF
IFF switches and controls	OFF. Channel selectors as required
DME	ON. Pressure 1800—2000 PSI. Depress button gently to test
Anti-G control	Gated
Butt test switch	Operate to test circuit
Fire warning test switch	Off
Booster pump test switch	Full and correct movement. Rotate spring feel trim fully in both directions. Check stick moves laterally in same sense.
Flying controls	Return to neutral
Parking brake	On. Check pressure at each wheel brake. If accumulator pressure is between 750 and 1500 PSI each brake needle should read accordingly

STARTING THE ENGINE

Starter Master Bar

Booster pumps	UP. Check aurally that No. 2 inverter starts up. Magnetic indicator — white artificial horizon flag—black
HP Cock/Throttle	On. Warning lights out
Press starter button and release	Set 1 in. Open
When starter fires:—	
Fire warning light	Out
Engage power controls as hydraulic pressure builds up	Max. 525°C. at idling RPM
JPT	Normal at idling RPM
Oil pressure	

(continued overleaf)

FAILURE TO START

Starter fails to fire

Starter fires but engine fails to light up

Engine lights up but goes out

Check switches and press starter again. Check drain clear before 3rd attempt

HP cock OFF. Allow engine to stop rotating. Wait one minute (minimum)

Press starter button

Three attempts at one minute intervals, followed by 45 mins. delay

AFTER START CHECKS AND PRE-TAKE-OFF VITAL ACTIONS

VHF on and test. Then check:—

Tailplane and trim

Check operation of main trim, standby trim and cut-out

Check operation of the tailplane interconnection and leave OFF

Set tailplane for take-off:—

Clean aircraft—0°

38° flap/inboard stores—

1° nose up

38° flap/outboard stores—

½° nose up

Test operation and magnetic indicator

LP cock fully ON

LP warning light out

Contents

Drop tank indicators black if fuel in outboard tanks

Transfer indicators in line

Booster pumps ON. Switch OFF momentarily to test warning lights

Tank selector indicators REAR

Test operation and set for take-off:—

Clean aircraft —Up

Wing stores —38°

Artificial horizon erected—use fast erection button if necessary

Set Mk. 4F compass

Altimeter set as required

Pressure head heater ON

DME to standby

Airbrake

Fuel

Flap

Instruments

(continued)

AFTER START CHECKS AND PRE-TAKE-OFF VITAL ACTIONS

(continued)

Inverter	Magnetic indicator black
Oxygen	Contents sufficient
	Normal or 100% selected
	Check connections
Hood	Closed and locked
	Seal inflated
	Cockpit pressure ON
	(Select warm cockpit temperature if humidity is high)
Hydraulics	Elevators and ailerons engaged in power—magnetic indicators black
	Main pressure $2850^{\circ} \pm 50$ PSI
	Wheelbrake pressure 1500 PSI min. (pressure at each wheel)
	Hydraulic pressure warning light out

CHECKS BEFORE TAKE-OFF

Tailplane	Set for take off
Anti-icing	As required
Fuel	LP warning light out
	Booster pump warning lights out
Flap	Up or 38°
Instruments	Operation checked whilst taxiing
Oxygen	Indicator annunciating
Harness	Tight and locked
Hood	Closed
Hydraulics	Cockpit pressure ON
	Check PSI pressure at 4500 RPM
	operate elevators and ailerons over full range, check indicators remain black and hydraulic pressure reverts to
	$2850^{\circ} \pm 50$ PSI
Brake parachute (Post mod 785)	Warning light out
	JETTISON—OFF
	Warning light out

AT TAKE-OFF CHECKS

1. Max RPM not obtained before throttle fully open
2. Fire warning light out
3. JPT above 560°C
4. Aircraft creeps against brakes at 7000-7200 RPM
5. Rate of acceleration normal when brakes released

POST TAKE-OFF CHECKS

Brakes	On fully
Undercarriage	UP
Flaps	UP (as required)

STARTING (contd.), AFTER STARTING, TAKE-OFF CHECKS

RAPID OR FORMATION DESCENT

Speed	0.85 M/300 knots
Airbrake	Out
Flaps	23°
Power	6,500 RPM
Minimum fuel	Fuel level lights on

RANGE DESCENT

Speed	0.80M/400 knots
Airbrake	IN
Flaps	UP
Throttle	Closed

INSTRUMENT APPROACH SETTINGS

Undercarriage DOWN and airbrake IN

	RPM No wing stores	Flaps	Airspeed
Downwind	6,500	23°	170/180
Base leg	6,500	23°	170/180
Glide path	6,500	Full	150/160

AIRCRAFT APPROACH LIMITATIONS

	Height* ft. (indicated)					
G.C.A. Precision Radar	200
Search Radar and B.A.B.S.	300

*above runway level

CHECKS BEFORE LANDING

Airbrake	IN, indicator black
Tailplane interconnection	OFF
Undercarriage	DOWN, below 250 knots
Flaps	As required. Fully down on finals
Fuel	Contents. Booster pumps ON
Harness	Tight and locked
U/c indicator	Three green lights
Brakes	Pressure $2,850 \pm 50$ PSI
Speeds	Operation 1,500 PSI (at each wheel). Off Approach 160 knots Threshold. 130 knots (clean a/c 600 lb. fuel—no ammo.) 140 knots (max. weight 17,000 lb.) Check radar ranging OFF before joining circuit

CHECKS AFTER LANDING

Brake pressure	Sufficient
Brake parachute	Jettison if used
Cockpit pressurisation	OFF
VHF	Unrequired set OFF
Flaps	UP
DME	OFF
Anti-G system	OFF
Tailplane	Set to neutral

STOPPING THE ENGINE

Flying controls	Both OFF
HP cock	OFF
Booster pumps	OFF
All electrics	OFF
Battery master switch	OFF
Hood clutch	FREE
LP cock	OFF
Ejection seat	Replace both safety pins
Armament safety plug	Ensure disconnected

LIMITATIONS

1. AIRFRAME

Max. speeds, in power

Clean, or with inboard (100 or 230 gall.)	620 knots
drop tanks only	590 knots
With R.P.'s	
With drop tanks on outboard pylons :	

Height (feet)	230 gall. inboard with 100 gall. outboard	100 gall. outboard with or without 100 gall. inboard
0-10,000	0.84 M	0.88 M
10-20,000	0.86 M	0.88 M
Above 20,000	0.88 M	0.88 M

Undercarriage	.	.	.	.	.	.	250 knots
Flaps to and from 38°	:	:	:	:	:	.	300 knots/0.9 M
Beyond 38°	.	.	.	.	.	.	250 knots

Max. Speeds in Manual

Below 15,000 ft.	.	.	.	.	.	.	0.75 M
Above 15,000 ft.	.	.	.	.	.	.	0.85 M

Max. G.

+ 7G (230 gall. tanks, + 4G)
- 3 $\frac{3}{4}$ G

Max. A.U.W.

Take-off	.	.	.	.	.	.	24,100 lb.
Landing, post-mod	785	.	.	.	.	.	17,000 lb.
Landing, pre-mod	785	.	.	.	.	.	16,250 lb.

2. ENGINE

Power rating	Time limit	RPM	JPT °C.
Take-off and op. nec.	10 mins.	$8,000 \pm 50$	685
Intermediate	30 mins.	7,800	660
Max. cont.	—	7,600	630
Ground idle	—	$2,500 \pm 200$	525

AT SEA LEVEL

CLEAN

Speed	FUEL—lb.	2000	1500	1000
330K	RANGE @ S.L.	150	95	40
	Best { Ht. x 1000 ft. Speed Range	40 0.81M 270	30 0.70M 130	M
230K	Endurance (mins.) @ S.L.	35	22	10

2 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	2620	2000	1500	1000
315K	RANGE @ S.L.	210	145	95	40
	Best { Ht. x 1000 ft. Speed Range	40 0.80M 420	40 0.80M 250	30 255K 120	M
235K	Endurance (mins.) @ S.L.	47	33	21	9

2 x 100 GALL. DROP TANKS and 24 RP's.

Speed	FUEL—lb.	2620	2000	1500	1000
300K	RANGE @ S.L.	180	125	80	35
	Best { Ht. x 1000 ft. Speed Range	40 0.79M 275	40 0.79M 140	20 240K 80	M
230K	Endurance (mins.) @ S.L.	46	32	20	9

4 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	4160	2620	2000	1500	1000
310K	RANGE @ S.L.	350	200	135	90	40
	Best { Ht. x 1000 ft. Speed Range	45 0.8M 770	45 0.8M 380	40 0.77M 230	30 255K 110	M
235K	Endurance (mins.) @ S.L.	82	46	32	20	9

2 x 100 and 2 x 230 GALL. DROP TANKS

Speed	FUEL—lb.	6140	2620	2000	1500	1000
295K	RANGE @ S.L.	495	185	125	80	35
	Best { Ht. x 1000 ft. Speed Range	40 0.76M 1115	40 0.76M 360	40 0.76M 210	20 275K 100	M
225K	Endurance (mins.) @ S.L.	110	42	29	18	8

AT 10,000 ft.

CLEAN

Speed	FUEL—lb.	2000	1500	1000
295K	RANGE @ 10,000 ft.	190	120	50
	Best { Ht. x 1000 ft. Speed Range	40 0.81M 300	40 0.81M 160	M
220K	Endurance (mins.) @ 10,000 ft.	42	26	11

2 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	2620	2000	1500	1000
285K	RANGE @ 10,000 ft.	275	190	120	50
	Best { Ht. x 1000 ft. Speed Range	40 0.80M 460	40 0.80M 290	30 255K 150	M
235K	Endurance (mins.) @ 10,000 ft.	58	40	25	10

2 x 100 GALL. DROP TANKS and 24 RP's

Speed	FUEL—lb.	2620	2000	1500	1000
260K	RANGE @ 10,000 ft.	235	160	100	40
	Best { Ht. x 1000 ft. Speed Range	40 0.79M 310	40 0.79M 180	20 240K 95	M
235K	Endurance (mins.) @ 10,000 ft.	50	34	22	9

4 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	4160	2620	2000	1500	1000
275K	RANGE @ 10,000 ft.	455	260	180	115	50
	Best { Ht. x 1000 ft. Speed Range	45 0.80M 795	45 0.80M 420	40 0.77M 265	40 0.77M 135	M
230K	Endurance (mins.) @ 10,000 ft.	95	52	36	23	9

2 x 100 and 2 x 230 GALL. DROP TANKS

Speed	FUEL—lb.	6140	2620	2000	1500	1000
280K	RANGE @ 10,000 ft.	625	230	160	100	40
	Best { Ht. x 1000 ft. Speed Range	40 0.76M 1150	40 0.76M 390	40 0.76M 245	30 255K 125	M
225K	Endurance (mins.) @ 10,000 ft.	140	50	34	22	9

AT 20,000 ft.

CLEAN

Speed	FUEL—lb.	2000	1500	1000
275K	RANGE @ 20,000 ft.	250	155	60
	Best { Ht. x 1000 ft. Speed Range	40 0.81M 330	40 0.81M 190	30 0.70M 70
220K	Endurance (mins.) @ 20,000 ft.	49	31	12

2 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	2620	2000	1500	1000
270K	RANGE @ 20,000 ft.	360	245	155	60
	Best { Ht. x 1000 ft. Speed Range	40 0.8M 485	40 0.8M 320	40 0.8M 180	M
235K	Endurance (mins.) @ 20,000 ft.	67	46	28	11

2 x 100 GALL. DROP TANK and 24 RP's.

Speed	FUEL—lb.	2620	2000	1500	1000
240K	RANGE @ 20,000 ft.	280	190	115	40
	Best { Ht. x 1000 ft. Speed Range	40 0.79M 345	40 0.79M 215	M	M
240K	Endurance (mins.) @ 20,000 ft.	58	40	25	10

4 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	4160	2620	2000	1500	1000
255K	RANGE @ 20,000 ft.	575	330	225	145	60
	Best { Ht. x 1000 ft. Speed Range	45 0.8M 825	45 0.8M 450	45 0.8M 290	40 0.77M 165	M
220K	Endurance (mins.) @ 20,000 ft.	110	62	43	27	10

2 x 100 and 2 x 230 GALL. DROP TANKS

Speed	FUEL—lb.	6140	2620	2000	1500	1000
275K	RANGE @ 20,000 ft.	865	320	220	140	55
	Best { Ht. x 1000 ft. Speed Range	40 0.76M 1180	40 0.76M 425	40 0.76M 275	40 0.76M 155	M
230K	Endurance (mins.) @ 20,000 ft.	155	55	38	23	9

RECOVERY DATA 10,000 ft./20,000 ft.

AT 30,000 ft.

CLEAN

Speed	FUEL—lb.	2000	1500	1000
0·7M	RANGE @ 30,000 ft.	315	195	75
	Best { Ht. x 1000 ft. Speed Range	40 0·81M 355	40 0·81M 210	M
225K	Endurance (mins.) @ 30,000 ft.	50	31	12

2 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	2620	2000	1500	1000
255K	RANGE @ 30,000 ft.	445	305	190	70
	Best { Ht. x 1000 ft. Speed Range	40 0·8M 520	40 0·8M 345	40 0·8M 205	M
235K	Endurance (mins.) @ 30,000 ft.	68	46	28	11

2 x 100 GALL. DROP TANKS AND 24 RP's

Speed	FUEL—lb.	2620	2000	1500	1000
250K	RANGE @ 30,000 ft.	330	220	135	70
	Best { Ht. x 1000 ft. Speed Range	40 0·79M 375	40 0·79M 245	M	M
250K	Endurance (mins.) @ 30,000 ft.	60	40	25	9

4 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	4160	2620	2000	1500	1000
255K	RANGE @ 30,000 ft.	700	400	275	175	70
	Best { Ht. x 1000 ft. Speed Range	45 0·8M 850	45 0·8M 475	45 0·8M 315	40 0·77M 190	M
220K	Endurance (mins.) @ 30,000 ft.	110	64	43	27	10

2 x 100 and 2 x 230 GALL. DROP TANKS

Speed	FUEL—lb.	6140	2620	2000	1500	1000
255K	RANGE @ 30,000 ft.	1060	390	260	170	65
	Best { Ht. x 1000 ft. Speed Range	40 0·76M 1205	40 0·76M 450	40 0·76M 295	40 0·76M 180	M
230K	Endurance (mins.) @ 30,000 ft.	170	60	40	25	9

AT 40,000 ft.

CLEAN

Speed	FUEL—lb.	2000	1500	1000
0.81M	RANGE @ 40,000 ft.	370	225	80
	Best { Ht. x 1000 ft. Speed Range}	M	M	M
0.77M	Endurance (mins.) @ 40,000 ft.	50	31	12

2 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	2620	2000	1500	1000
0.8M	RANGE @ 40,000 ft.	535	365	225	80
	Best { Ht. x 1000 ft. Speed Range}	M	M	M	M
0.79M	Endurance (mins.) @ 40,000 ft.	67	46	28	11

2 x 100 GALL. DROP TANKS and 24 RP's

Speed	FUEL—lb.	2620	2000	1500	1000
0.79M	RANGE @ 40,000 ft.	395	265	155	50
	Best { Ht. x 1000 ft. Speed Range}	M	M	M	M
0.80M	Endurance (mins.) @ 40,000 ft.	61	41	25	9

4 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	4160	2620	2000	1500	1000
0.77M	RANGE @ 40,000 ft.	850	485	335	205	80
	Best { Ht. x 1000 ft. Speed Range}	45 0.8M 870	45 0.8M 495	M	M	M
0.75M	Endurance (mins.) @ 40,000 ft.	110	62	43	27	10

2 x 100 and 2 x 230 GALL. DROP TANKS

Speed	FUEL—lb	6140	2620	2000	1500	1000
0.76M	RANGE @ 40,000 ft.	1220	480	320	200	75
	Best { Ht. x 1000 ft. Speed Range}	M	M	M	M	M
0.74M	Endurance (mins.) @ 40,000 ft.	175	61	41	25	9

(Data for 45,000/50,000 ft. overleaf)

RECOVERY DATA 30,000 ft./40,000 ft./45-50,000 ft.

AT 45/50,000 ft.

CLEAN

Speed	FUEL—lb.	2000	1500	1000
0.84M	RANGE @ 50,000 ft.	385	235	80
	Best { Ht. x 1000 ft. Speed Range}	M	M	M
0.77M	Endurance (mins.) @ 50,000 ft.	50	31	12

2 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	2620	2000	1500	1000
0.85M	RANGE @ 50,000 ft.	555	380	235	80
	Best { Ht. x 1000 ft. Speed Range}	M	M	M	M
0.79M	Endurance (mins.) @ 50,000 ft.	67	46	28	11

4 x 100 GALL. DROP TANKS

Speed	FUEL—lb.	4160	2620	2000	1500	1000
0.8M	RANGE @ 45,000 ft.	885	510	350	215	80
	Best { Ht. x 1000 ft. Speed Range}	M	M	M	M	M
0.75M	Endurance (mins.) @ 45,000 ft.	110	62	43	27	10

Issue 2
September, 1962

Issued with AL 1 to A.P.4347F—P.N.
Pilot's Notes

FLIGHT REFERENCE CARDS

HUNTER F.6

EMERGENCY DRILLS

RESTRICTED

ENGINE FIRE

Action in the event of fire warning

Close throttle immediately.

If light does not go out within 5 seconds :—

HP cock OFF

LP cock OFF

Booster pumps OFF

Airspeed Reduce to a minimum

Press extinguisher button

If fire goes out, the light will go out

Do not attempt to relight

Carry out forced landing

If fire persists—abandon

N.B. If light goes out within 5 seconds of throttling back, a hot gas leak is indicated. Fly at reduced power, if light comes on again, throttle back frequently and check light goes out.

HOOD AND DROP TANK JETTISONING

I. HOOD JETTISONING

Hood closed.

Lower the sun visor and head ; lower the seat.

Speed in excess of 140 knots.

Pull canopy jettison handle firmly and sharply.

2. DROP TANK JETTISONING

Straight and level flight with flap and undercarriage up.

No yaw or side-slip.

Speed between : 200 and 450 knots 100 gall. drop tanks.
200 and 550 knots 230 gall. drop tanks.

BARRIER ENGAGEMENT

Call for barrier.

Steady braking to reduce speed to minimum. Aim for centre panel.

Stream brake parachute.

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.

Close LP cock, switch off battery, seat ' safe for parking'.

With drop tanks containing fuel :—

Jettison with brakes off and before streaming the brake parachute if more than 1,000 ft. from barrier. If less than 1,000 ft. from barrier retain tanks and enter at 50-60 knots.

HYDRAULIC FAILURE

Indications	Loss of pressure followed by warning light on and audio warning
Immediate actions	Speed within manual limitations. Release aileron trim lock—trim indicator zero
Subsequent actions	Jettison drop tanks if fuel state permits. Leave controls in power. Switch off power when manual reversion occurs or at a safe height before joining circuit Lower u/c and flaps on emergency system. Do not exercise brakes downwind. Make one continuous application of the brakes without maxaretting. Do not taxi.

ELECTRICAL FAILURE

Indications	Generator warning lights on.
Immediate actions	Non-essential electrics off. If booster pumps are switched OFF, reduce to 7,200 RPM and descend as in Booster pump failure drill. Tailplane interconnection OFF, trim 0°.
Subsequent actions	* Leave controls in power—indicators show white when batteries exhausted. Before entering cloud select TURN and SLIP SUPPLY to EMERGENCY. Lower u/c and flaps on emergency system. If battery power still available in circuit, set tailplane to $\frac{1}{2}$ ° nose-up.
* If hydraulic serviceability is doubtful, select power OFF before the batteries are exhausted.	

ELECTRICAL AND HYDRAULIC FAILURE

Indications	Fall of hydraulic pressure followed by light on and audio warning. Generator warning lights on.
Immediate actions	Speed within manual limitations. Tailplane interconnection OFF, trim 0° Non-essential electrics off. Booster pumps OFF (reduce RPM to 7,200, descend as in Booster pump failure drill). Aileron trim lock released, trim indicator zero. Power controls to manual.
Subsequent actions	Jettison drop tanks if fuel state permits. Before entering cloud select TURN and SLIP SUPPLY to EMERGENCY. If battery power still available in circuit set tailplane $\frac{1}{2}$ ° nose up. Lower u/c and flap on emergency system. Do not exercise brakes downwind. Make one continuous application without maxaretting. Do not taxi.

INVERTER FAILURES

No. 1 INVERTER FAILURE

Indications	Magnetic indicator white
Action	Set INVERTER SELECT switch to STANDBY and return to NORMAL. Pre mod 375 operate radar test switch.

DOUBLE INVERTER FAILURE

Indications	Magnetic indicator white. Subsequently : Artificial horizon flag white. Mk.4F compass ceases to annunciate. Oil temp. gauge not registering.
Immediate action	Automatic change-over may not have occurred. Switch on radar ranging to actuate No. 2 Inverter. The following AC services will be lost:— Artificial horizon Mk.4F Compass Top temperature control Oil pressure gauge Fuel tank explosion protection system.

NOTE: If change-over torque switch u/s (magnetic indicator black but AC instruments u/s) select INVERTER SELECT to STANDBY.

FUEL SYSTEM FAILURES

1. BOOSTER PUMP FAILURE

Indication	Warning light on and associated contents gauge reading high by comparison. LP warning light on if both pumps failed.
Immediate actions	Check booster pump circuit breaker(s). *Reduce to 7,200 RPM and descend below: 15,000 ft. (230 gall. tanks) 20,000 ft. (100 gall. tanks) 25,000 ft. (clean) Switch both pumps OFF and accept gravity feed.

(continued)

BOOSTER PUMP FAILURE (contd.)

Subsequent actions	Avoid negative G. Do not exceed 7,200 RPM. With less than 600 lb./side, keep RPM above 6,000 until booster pump switched ON for landing. Land whilst both sides contain fuel. Switch ON serviceable pump for landing (if fuel state permits). WARNING: The engine will not run with one side empty unless booster pump on side containing fuel is switched on.
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- * These heights may be increased by 10,000 ft. if max. range is essential.

2. TRANSFER PRESSURE FAILURE

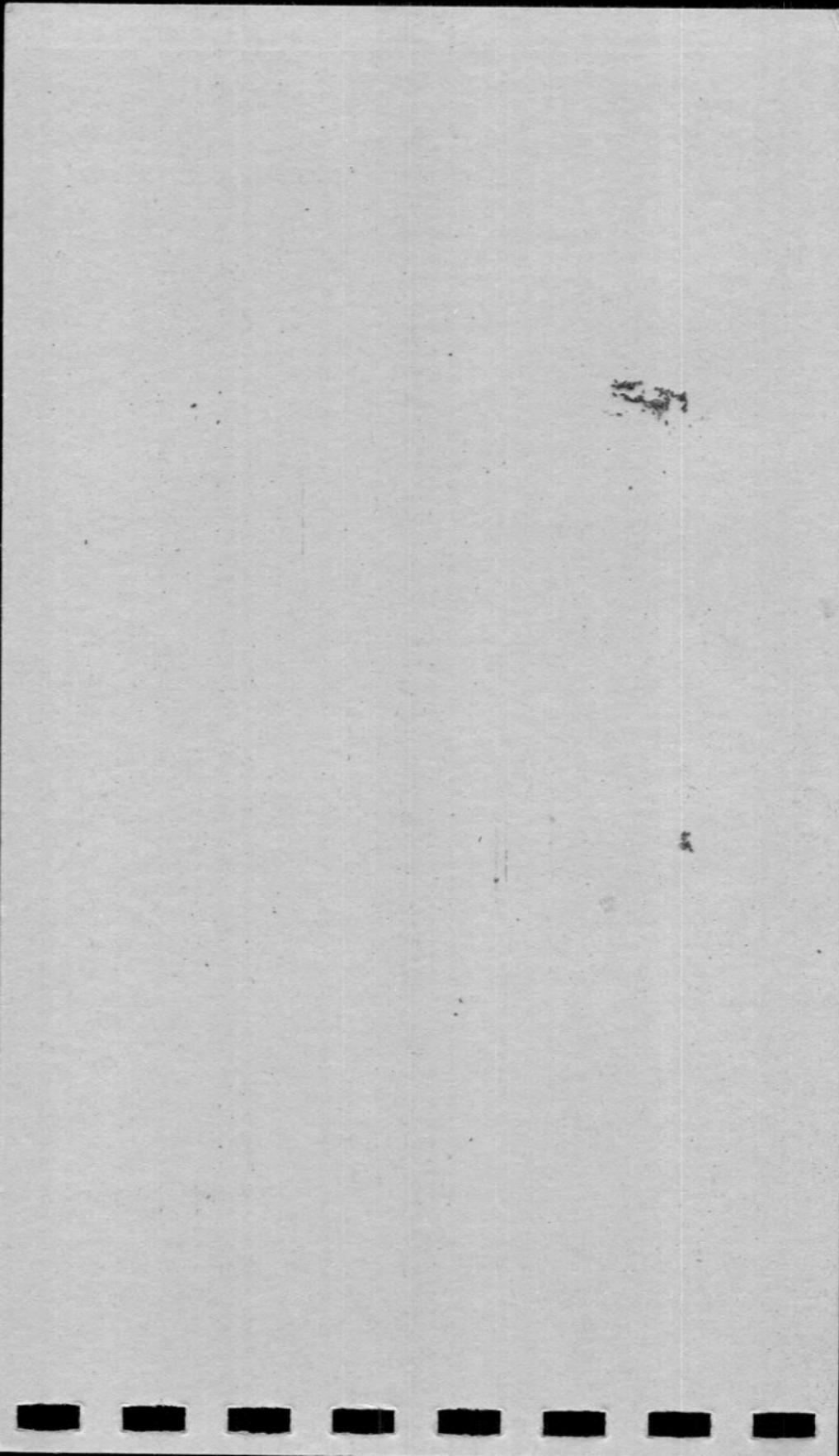
Indication	Indicator(s) show crossline. Gauges show front tank contents only.
Action	Rely on front tank contents only. Balance contents by switching OFF pump on low fuel side. Switch pump ON again when contents level. Avoid steep dives Avoid excessive attitudes at low fuel states.

3. FUEL TRANSFER CHANGEOVER FAILURE

Indication	Magnetic indicator REAR when fuel less than 1,300 lb. or Changeover indicator amber and associated transfer indicator crossline. (Post mod 864, gauges show available contents only after 160 lb. used).
Action	Set tank selector from AUTO to WING. If indicator remains at REAR, rely on front tank contents only and verify when fuel low level lights on at 650 lb. per side. Switch off booster pump on failed side as necessary to balance levels.

4. FUEL GAUGE FAILURE

Action	Check that neither booster pump nor transfer failure has occurred. Leave both pumps ON and return to base.
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ENGINE FAILURE AND RELIGHTING

1. MECHANICAL

Do not attempt to relight.

HP cock	OFF
LP cock	OFF
Booster pumps	OFF
Speed	Reduce speed and glide at 210 knots.
All non-essential electrics	OFF
Tailplane interconnection	OFF. Trim 0°
Aileron trim lock	Release, check trim at zero.
Select TURN and SLIP SUPPLY to EMERGENCY before entering cloud.	
Controls	May be left in Power, manual reversion must be expected.
Jettison drop tanks and wing stores.	
Carry out forced landing or abandon.	

2. FLAME-OUT

Attempt immediate relight while RPM are decreasing by setting the relight switch ON with throttle at its set position.

If RPM do not rise within 10 seconds:—

HP cock	OFF
Throttle	Closed
LP cock	Leave ON
Non-essential services	Off
Booster pumps	OFF if above 35,000 ft.

3. RELIGHTING

Height	35,000 ft. max.
Speed	0.8M max.
Non-essential electrics	Off
Throttle	Closed
LP cock	ON
Battery master switch	ON
Starter master switch	ON
Ignition switch	ON
Booster pumps	ON

Set relight switch for 2 secs., then set HP cock ON. When RPM rise to idling, increase power carefully. If no relight occurs within 30 secs. set HP cock and booster pumps OFF. Allow 30 secs. if possible before next attempt.

4. FAILURE TO RELIGHT

H.P. cock	OFF
LP cock	OFF
Booster pumps	OFF
Non-essential electrics	OFF
Tailplane interconnection	OFF, trim 0°.
Aileron trim lock	Release, check trim at zero.
Select TURN and SLIP SUPPLY switch to EMERGENCY before entering cloud.	
Before battery is exhausted, jettison drop tanks and wing stores.	
Carry out forced landing or abandon.	

U/C, FLAP AND BRAKE EMERGENCIES

1. U/C EMERGENCY OPERATION

Electrics and hydraulics
serviceable

Try several selections. Apply
sideslip and positive and nega-
tive G.

Emergency down

Select with flap up and down.
Bump locked units on runway.
Use emergency selector.

Emergency up (on the ground
only)

Press central knob and pull the
handle (operates independently
of normal selector).

Rotate clockwise and press the
normal UP selector button.
(Inoperative if u/c has been
lowered on the emergency
system).

2. FLAP EMERGENCY OPERATION

Down

Press central knob and pull the
handle (fully down only). Oper-
ates independently of the normal
selector.

3. WHEEL BRAKE EMERGENCY OPERATION

In the air

Do not operate on downwind
checks. (Min. pressure 750
PSI.)

After touchdown

HP cock OFF.
Stream brake parachute.
Make one continuous applica-
tion without maxaretting.
Do not taxi.

COCKPIT PRESSURE AND OXYGEN FAILURES

1. COCKPIT PRESSURE FAILURE

Indication

Warning light on. Confirmed by cabin altimeter.

Action

Mask toggle down. Immediate descent to 30,000 ft. cabin altitude or below.

2. NOXIOUS FUMES

Action

Check 100% oxygen selected. Deflect EMERGENCY switch. Descend below 30,000 ft. cabin altitude and de-pressurise the cockpit.

3. OXYGEN FAILURE

Indication of blinker failure

Blinker remains black.

Action

Check regulator pressure normal (250—400 psi) and fluctuating with breathing. Check connections and contents. Select EMERGENCY—if oxygen received under pressure, blinker is defective.

Indication of regulator failure

No flow, difficulty in breathing, blinker remains black or intermittent.

Action

Set 100% OXYGEN. Check connections, contents, pressure. If breathing difficult, select E.O. and disconnect main supply. Descend to 10,000 ft. cabin alt. or below.

TRIM FAILURES.

RUNAWAY TAILPLANE TRIM

Lift cover of standby trim fully.

Use standby trimmer.

NOTE: If nose down runaway, jack stalling may reduce recovery action: throttle back and extend airbrake if above 0.86IMN.

AILERON TRIM RUNAWAY IN MANUAL:

Re-select power control immediately.

FORCED LANDING

Best gliding speed	210 knots (2 n.m./1,000 ft. covered).
Airbrakes	IN
HP and LP cocks	OFF
Booster pumps	OFF
Tailplane	0°. Interconnection OFF.
All non-essential electrics	Off
Aileron trim	Safety lock off.
Power controls	Select Manual: (1) If auto-reversion occurs (2) Before electrics fail (3) Before joining circuit

Plan a manual approach. Overhead at 7,000 ft., downwind at 4,000 ft. 180-210 knots, u/c down. Crosswind 180-200 knots. When certain of reaching touch-down point select full flap. Maintain 170 knots on approach.

Commence round-out 500 ft. AGL—complete at 150 knots. Anticipate heavy stick force.

LANDING WITH U/C IN ABNORMAL POSITIONS

Retain empty 100 gall. drop tanks, land on a foam carpet if possible. Both main wheels only locked down:—

Use up fuel to move CG aft.

Land on a runway if possible.

Set HP cock OFF on touchdown.

Check harnesses tight and locked.

Powered approach, normal speed. HP cock off at touch down and maintain a moderate nose-up attitude.

Trim full nose-up. When speed below 100 knots, high nose-up attitude without touching tail-cone.

Lower nose on to runway at 80—90 knots. Use brakes gently to keep straight.

Nosewheel and one mainwheel locked down:—

Make normal approach and landing.

After touch-down hold wings level as long as possible by use of ailerons.

Counteract the swing by opposite brake.

NOTE: Choose a runway which has a clear area of about 400 yards in width at the side of the landing path in the direction of the anticipated swing.

ABANDONING

Minimum speeds and heights (in level or climbing flight): 90 knots/ground level.

Reduce speed to 250 knots if possible.

Withdraw feet, head back on rest, elbows in.

Pull main or alternative firing handle.

Auto separation below 10,000 feet.

If auto separation fails, operate override D-ring.

Pull override D-ring.

Disconnect main oxygen tube and anti-G hose.

Disconnect seat restraining straps.

Operate harness quick release.

Lift flap over the ripcord D-ring and grasp handle.

Push clear of seat and pull ripcord D-ring.

MANUAL BALE-OUT

Pull firing handle again. If unsuccessful, pull alternative handle.
If this fails:—

Pull manual override D-ring.

Disconnect leg restraint garters.

Jettison canopy.

Disconnect main oxygen from the seat and anti-G hose from suit.

Invert aircraft, operate safety harness release and fall clear.

Check somersaulting, grasp and pull rip-cord D-ring.

DITCHING

Abandon rather than ditch unless calm sea and air and good visibility.

If ditching is inevitable:—

Jettison the hood.

Disconnect leg-restraint garters.

Select 100% OXYGEN and deflect emergency toggle.

Check PSP lowering line—security and attached to LSW.

Disconnect emergency oxygen tube assembly from mask tube.

Disconnect anti-G hose from suit.

Tighten safety harnesses.

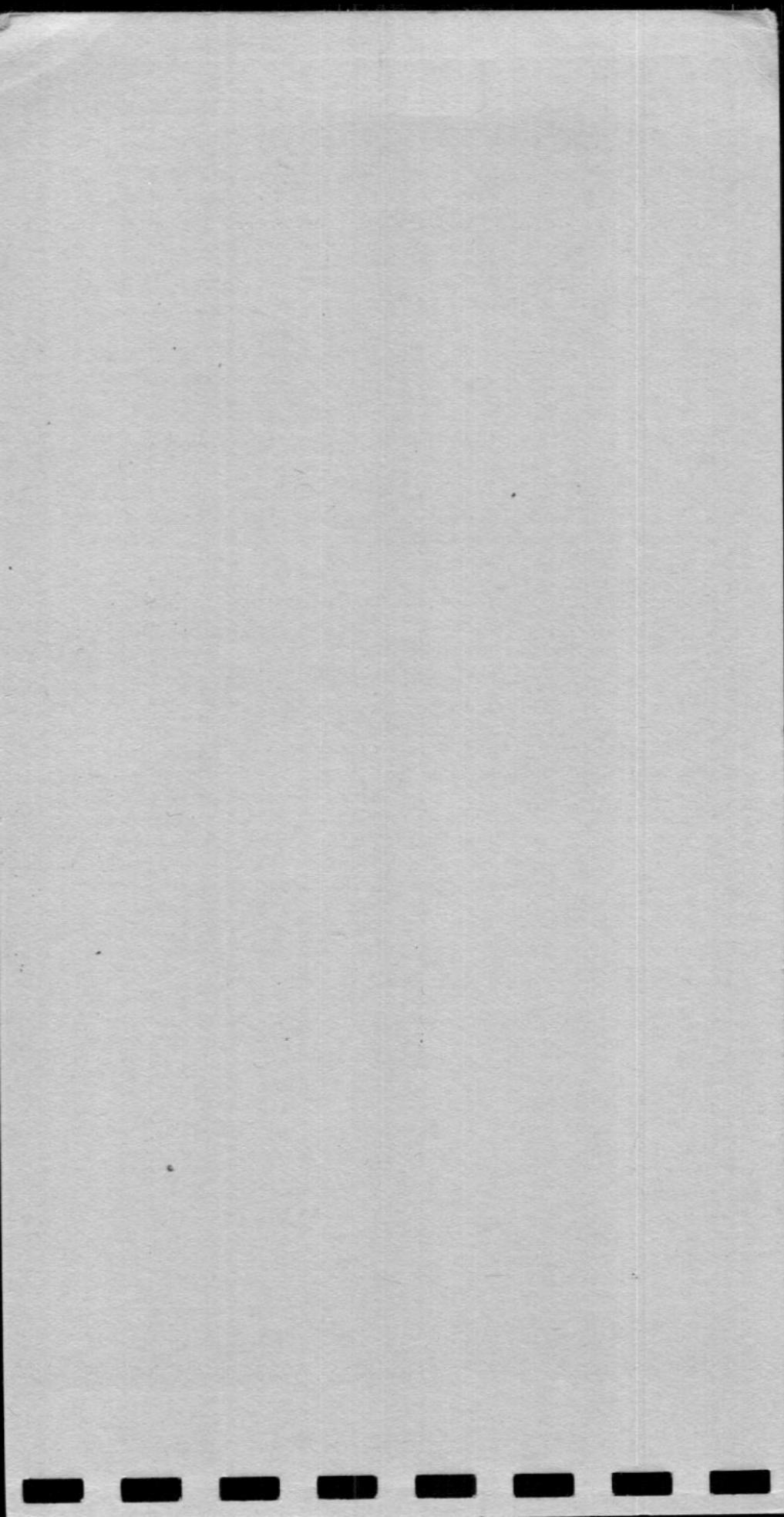
Ditch along swell, or if swell is not steep, into wind.

A brakes must be retracted.

When stopped, free straps and leave aircraft as quickly as possible.

Inflate LSW when clear.

Inflate and board dinghy.



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