

PILOT'S NOTES MK.II
FOR
SPITFIRE F.IX
MERLIN 61, 63, 66 or 70 ENGINE
BY POKERACCIO



PROMULGATED BY ORDER OF THE AIR COUNCIL

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RESTRICTED
(FOR OFFICIAL USE ONLY)

ON **DCS**
SERIES

PRE-FLIGHT CHECKS

1. STOP VALVE LEVER -----CLOSED
2. UNDERCARRIAGE VALVE LEVER----RELEASED
3. EMERGENCY RELEASE LEVER-----UPRIGHT POSITION
4. EXTERNAL FUEL TANK VALVES----OFF
5. FUEL COCK HANDLE -----OFF
6. RUDDER,ELEVATOR,AILERONS-----CHECK
7. MAGNETO SWITCHES-----OFF
8. FUEL TANK BOOSTER VALVES-----OFF
9. AIR PRESSURE/PNEU SYS-----> 2 5 0 LB/IN²
10. ALTIMETER-----SET 0(ZERO)
11. FLAPS-----DOWN / CHECK / UP / CHECK
12. CANOPY CHECKS-----CLOSE / OPEN CHECKS
13. WARNING SYS-----THROTTLE FWD/LIGHTS CHECK
14. FUEL QTY-----CHECK

ENGINE STARTUP

1. PARKING BRAKE-----SET
2. FUEL COCK HANDLE-----ON
3. THROTTLE-----MOVE FWD 10 - 12 MM
4. RPM (PITCH LEVER)-----FULL FWD MAX RPM
5. DUST FILTER-----FULL FWD (FILTER IN OPS)
6. PRIMER PUMP-----ROTATE/UNLOCK AND PUMPS:

OUTSIDE AIR TEMP -°C	+30°	+20°	+10	0°	-10° ~ -20°
NUM. OF FULL MOVEMENTS	2 - 3	4	5	5 - 6	UP TO 15

7. WOBBLE PUMP-----9 TO 10 PUMPS(WARNING LIGHT FLASH/OFF)
8. MAGNETO SWITCHES-----ON
10. STARTER & BOOSTER COILS-----UNCOVER / PUSH
11. STOP VALVE LEVER -----AT FIRST SPARK - FULL FWD
12. STARTER & BOOSTER COILS-----RELEASE

NOTE:

IF MOTOR STARTUP FAILS, REPEAT THE PROCESS BEGINNING FROM ENGINE FILLING.

ENGINE WARMUP

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1. STOP VALVE LEVERFULL AFT
2. OIL PRESSURE.....6 0 · 1 2 0 FT/IN²
3. STARTER & BOOSTER COILS.....COVER
4. PRIMER PUMP.....ROTATE / LOCK
5. THROTTLE.....1 000 · 1 200 RPM
6. ENGINE WARMUP.....(O I L TEMP > 20°C/RAD TEMP > 60°C)

BASIC MODES OF OPERATION OF THE MERLIN 66 ENGINE, WITH 100 OCTANE FUEL								
BASIC DATA	MODE TAKEOFF		COMBAT		NOMINAL		CRUISING	
	I SPD.	II SPD.	I SPD.	II SPD.	I SPD.	II SPD.	I SPD.	II SPD.
HORSEPOWER	1325	-	1680*	1440	1310	1135	985	865
			1750**	1630	1410	1315	1095	1030
RPM	3000	-	3000	3000	2850	2850	2650	2650
BOOST	LB/IN ²	-	+18	+18	+12	+12	+7	+7
	MM MERCURY		1690	1690	1380	1380	1120	1120
ALTITUDE LIMITS IN M. (W/D RAM AIR FLOW)	305	-	1680	4960	2750	5800	3660	6330
TIME FOR UNINTERRUPTED OPERATION, IN MINUTES	5	-	5	5	60	60	UNLTD	UNLTD

*- DATA FOR SEA LEVEL

** - DATA ON APPROXIMATE ALTITUDES.

TAXI

CHECK:

COOLANT TEMPERATURE BETWEEN 6 0 · 1 2 0 °C

OIL TEMPERATURE BETWEEN 2 0 · 8 0 °C

PITCH LEVER IN THE POSITION CORRESPONDING TO THE TAKEOFF MODE (FWD)

EXTERNAL TANK VALVES SHUT OFF

MAIN FUEL TANK VALVES ON

UNDERCARRIAGE LEVER IN THE DOWN POSITION

PNEUMATIC SYSTEM AIR PRESSURE NO LESS THAN 2 2 0 LB/IN²

WEAPON SAFETIES ENGAGED.

RADIO SYSTEMS TURNED ON AND TUNED INTO THE ASSIGNED FREQUENCIES.

BEFORE TAKE OFF

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CHECK:

- I. ELEVATOR TRIM - 1 / 2 NOSE DOWN / RUDDER TRIM 7 - 8 MM RIGHT
- II MAIN FUEL VALVES IN THE-----ON POSITION
- III EXTERNAL FUEL TANK VALVES-----SHUT OFF
- IV FUEL BOOST VALVE-----OFF POSITION
- V PITCH LEVER (RPM)-----FULLY FORWARD
- VI FLAPS LEVER-----UP (RETRACTED)

T - TRIMMING-----ELEV 1/2 DIVISION NOSE DOWN

P - PROPELLER-----FULLY FWD

F - FUEL-----CHK QTY LOWER MAIN

DROP TANK COCK - OFF

PRESSURING COCK - OFF

ELECTRIC BOOSTER PUMP - OFF

F - FLAPS-----UP

S - SUPERCHARGER---OVER-RIDE SWITCH - AUTO RED LT OFF

TAKE OFF

- 1. THROTTLE-----8 - 12 LB/IN²
- 2. LIFT OFF-----90 - 95 MPH IAS
- 3. UNDERCARRIAGE----->140 MPH - UP
- 4. DUST FILTER-----FULL AFT (FILTER OUT OPS)

CLIMB OUT

- 1. THROTTLE-----MAX RATE 12 LB/IN² - 2850 RPM
- IF NEEDED **MAX 5 MIN** 18 LB/IN² - 3000 RPM
- NORMAL RATE 7 LB/IN² - 2650 RPM

ALTITUDE		SPEED
FROM (FT)	TO (FT)	MPH
0	12000	185
12000	15000	180
15000	20000	170
20000	25000	160
25000	30000	150
30000	33000	140
33000	37000	130
37000	40000	120
40000	-	110

COOLANT OIL TEMP **MAX 125**
OIL TEMP **MAX 90**

USE MAIN TANKS FOR:
STARTUP, WARMUP, TAKEOFF

EXTERNAL TANKS ONLY:
ALTITUDES > 2000FT (600M)

LEVEL FLIGHT

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1. CIRCLING FLT5.....=>150 MPH NO EXT TANKS
=>175 MPH WITH EXT TANKS
2. ALL FLT5 (EXCEPTION OF AEROBATICS AND AIR COMBAT TRAINING) MUST BE PERF UNDER THE ECONOMIC REGIMES.
3. ENG IN **COMBAT MODE IS PERMITTED < 5 MIN**, ADDITIONALLY, THE OIL AND COOLING FLUID TEMP MUST NOT BE ALLOWED TO EXCEED LIMITS.

DISTANCE AND DURATION OF FLIGHT UNDER DIFFERENT MODES (WITHOUT EXTERNAL TANKS) $G_{\Pi}=3392 \text{ KG}$, $V_{\text{top}}=392 \text{ L}$.

FLIGHT MODE	ALTITUDE	IAS	RPM	FUEL CONSUMPTION		UNTIL TANKS ARE EMPTIED	
	ft	mph		L/km	L/hr	DISTANCE OF HORIZONTAL FLIGHT, KM	DURATION OF HORIZONTAL FLIGHT, H:MIN
	m	kph					
DISTANCE, MAXIMUM SPEED	21600	256	2570	0.52	295	595	1:03
	6600	410					
DISTANCE, RELATIVE MAXIMUM SPEED	16400	245	2360	0.475	237	685	1:22
	5000	394					
MAXIMUM DISTANCE	3280	187	1800	0.395	125	880	2:46
	1000	300					

FLYING

1. AEROBATICS AND STALLS ONLY WITH NO EXT TANKS.
2. BEFORE PERF AEROBATIC MAN TRIM ACFT AT IAS OF 200MPH
3. ENTERING COMBAT, LOOPS, IMMELMANS AND HAMMERHEADS MAY BE PERFORMED AT
MAXIMUM POWER (12 LB/IN², 2850 RPM)
IN SPECIAL CASES, COMBAT MODE **< 5 MIN**. (18 LB/IN², 2850 RPM)

LANDING

PREPARATION AND PERFORMANCE INFO (MPH IAS)

1. WEAPON TRIGGERS.....SAFE
 - PITCH LEVER (RPM).....FULLY FORWARD
 - 2° SUPERCHARGER SPEED.....OFF (RED LT OFF)
 - AIR SYSTEM / BRAKE SYSTEM.....220 LB/IN² / 800 LB/IN²
2. CANOPY.....OPEN
3. LND GEAR.....150 - 160 (ON THIRD TURN)
4. GLIDE SPEED.....FLAPS / GEAR UP 100 - 120
FLAPS / GEAR DOWN 100 - 110
5. DEPLOY FLAPS.....<160

LANDING

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U - UNDERCARRIAGE-----DOWN

P - PROPELLER-----FULLY FWD

S - SUPERCHARGER-----RED LT OFF

F - FUEL-----MAIN FUEL VALVE - ON
ELECTRIC BOOSTER PUMP - OFF

F - FLAPS-----DOWN

1. LANDING WITH DEPLOYED FLAPS, FLARE AT 6-7 METERS;
WHEN FLAPS ARE RETRACTED, AT 5-6 METERS.
COMPLETE TOUCHDOWN AT 0.25M - 0.5M.
2. FOR TOUCHDOWN ON ALL THREE POINTS, DO NOT COMPLETELY PULL BACK ON THE STICK.
3. AFTER TOUCHDOWN, PERIODICALLY DEPRESS THE BRAKE TRIGGER. AVOID BRAKING SHARPLY
WHEN THE AIRCRAFT MAY POTENTIALLY NOSE OVER - BEGIN BRAKING ONLY WHEN THE STICK
FULLY PULLED BACK.
4. AFTER YOUR GROUND SPEED IS UNDER CONTROL, RETRACT THE FLAPS.
5. OBSERVE THE RUNWAY AND PROCEED TO TAXIING.

AFTER TAXIING

1. COOL THE ENGINE BY LETTING IT RUN FOR 2-3 MINUTES AT 800 - 1000 RPM.
2. STOP THE MOTOR BY PULLING THE SHUTDOWN LEVER FROM ITS FRONTMOST POSITION ALL THE
WAY BACK TO THE SLOT, THEN SMOOTHLY PUSH THE THROTTLE FORWARD.
3. AFTER MOTOR SHUTDOWN, SHUTOFF IGNITION AND CLOSE THE FUEL VALVE.
4. SHUTOFF ALL ELECTRICAL SYSTEMS.

AIMING

RANGE SCALE						
IN HUNDREDS OF YARDS	1	2	3	4	5	6
YARDS	100	200	300	400	500	600
METERS	91,4	182,8	274,2	365,6	457	548,4

BASE SCALE							
FEET	40	50	60	70	80	90	100
METERS	12,2	15,2	18,3	21,3	24,4	27,4	30,5

GUNSIGHT - SPECIFICATIONS

1. RETICLE RING DIAMETER / RADIUS - ANGULAR VALUES:
 - IN DEGREES-----6°44' / 3°22'
 - IN THOUSANDTHS-----118 / 59

ENGINE POWER**PHASE OF FLIGHT - PROPELLER - BOOST****MAX TAKE-OFF - 3 0 0 0 - +12**
TO 1 0 0 0 FT**COMBAT - 3 0 0 0 - +18**
MAX 5 MIN**MAX CLIMBING - 2 8 4 0 - +9**
1 HOUR LIMIT**MAX RICH - 2 6 5 0 - +7**
CONTINUOUS**MAX WEAK - 2 6 5 0 - +4**
CONTINUOUS**O I L PRESS 4 5 MIN 6 0 / 8 0 NORM****O I L TEMP 1 5 MIN 9 0 MAX****COOLANT TEMP 6 0 MIN 1 2 5 MAX****WARNING****FLAPS MUST NOT BE
DOWN OR LOWERED
AT SPEED ABOVE
1 6 0 M P H****NOTE.****MOTOR OPERATION IN COMBAT MODE IS
PERMITTED FOR PERIODS NO LONGER
THAN 5 MINUTES.****ADDITIONALLY, THE OIL AND COOLING
FLUID TEMPERATURES MUST NOT BE
ALLOWED TO EXCEED LIMITS.**