



## MOONEY 201 CHECK LIST

This checklist had been written by Dave Guttridge solely for the use of Zitair members. It must not be copied or distributed, without the authors permission.

10 October 2000

04-00-00



## MOONEY 201 CHECKLIST INTRODUCTION

The Mooney checklist has been re-written to tailor it to the ZITAIR operation of the aircraft, and the equipment installed.

The lay out and format has been changed slightly.

Specific actions in a check that are normally carried out from memory, like Starting the Engine, have been entered in a box.

This allows members who are familiar with the procedure to carry it out from memory and skip the boxed text. Those members who are less familiar with the procedures, should read the boxed text prior to carrying out the action.

The last 3 actions on the **BEFORE TAKE OFF CHECK** have been printed in *italics*, ideally these should not be actioned until you have been cleared to line up. This is to reduce the risk of the Pitot Head overheating and the strobes distracting other pilots during prolonged holds at the holding point.

If a check is not complete the checklist should be kept in one hand as a reminder, until such time that all actions have been completed. Only then should it be put away.

## AIDE-MEMOIRE

### POWER SETTINGS

75% = 25" PRESSURE	2500 RPM
65% = 24" PRESSURE	2400 RPM
55% = 22" PRESSURE	2200 RPM

### LOAD AND BALANCE

MAXIMUM TAKE OFF WEIGHT	2740.0 Lbs	= 1243 kgs
BASIC WEIGHT	<del>1845.5</del> Lbs	1880 (RE-WEIGHED)
USEFUL LOAD	<del>894.5</del> Lbs	860
FULL TANKS 64 US GALL (USABLE)	384.0 Lbs	
GIVING A PAYLOAD OF	<del>510.5</del> Lbs	476
PART TANKS 37.5 US GALL (USABLE)	<del>275.0</del> Lbs	240
GIVING A PAYLOAD OF	<del>669.5</del> Lbs	620
BASIC MOMENT	87339.1 Lbs/ins	

### SPEEDS

TAKE OFF 15 FLAP	63 Kts
INITIAL CLIMB 15 FLAP	71 Kts
BEST RATE OF CLIMB	88 Kts
BEST ANGLE OF CLIMB 15 FLAP	66 Kts
STALL SPEED CLEAN	63 Kts
STALL SPEED GEAR AND FLAP	55 Kts
BEST GLIDE SPEED	91 Kts
LANDING SPEED NORMAL	71 Kts
LANDING SPEED PERFORMANCE	66 Kts
ROUGH AIR PENETRATION	120 Kts
FLAP LOWERING	115 Kts
GEAR LOWERING	133 Kts
GEAR RAISING	108 Kts
MAX CONTINUOUS SPEED V.N.O.	176 Kts
MAXIMUM SPEED V.N.E.	198 Kts

### LIST OF EFFECTIVE PAGES

PAGE NO.	DATE.	PAGE NO.	DATE.
1	Jan 2000	2	Feb 1992
3	Feb 1992	4	Feb 1992
5	Jan 2000	6	Jan 2000
7	Feb 1992	8	Feb 1992
9	Jan 2000	10	Feb 1992
11	Feb 1992	11	Feb 1992
12	Feb 1992	13	Feb 1992
14	Feb 1992		



## INTERNAL PRE FLIGHT CHECK

MAGNETO SWITCH	OFF
ELECTRICAL SWITCHES	OFF
GEAR SELECTOR	DOWN
GEAR EMERG SELECTOR	STOWED
FUEL SELECTOR	
LEFT TANK	PULL GASCOLATOR RING HOLD 5 SEC
RIGHT TANK	REPEAT
FIRE EXTINGUISHER	CHECK
FIRST AID KIT	CHECK
D.V. WINDOW	OPEN
COWL FLAPS	OPEN
CIRCUIT BREAKERS	ALL IN
MASTER SWITCH	ON
PANEL LIGHTS	OFF
EXTERNAL LIGHTS	CHECK
PITOT HEAT	CHECK
STALL WARNER	CHECK
MASTER SWITCH	OFF

## BEFORE START CHECK

PARK BRAKE	ON
BAGGAGE DOOR	SECURE
EXTERNAL CHECK	COMPLETED
CABIN DOOR	LATCHED
ELECTRIC'S	ALL OFF
SEATS AND HARNESS	SECURE
FLYING CONTROLS	CHECK
MANUAL TRIM	CHECK
FLIGHT INSTRUMENTS	CHECK
ENGINE INSTRUMENTS	CHECK
ALTERNATE STATIC	OFF
COWL FLAPS	CHECK & CLOSED
RAM AIR	CHECK & CLOSED
CABIN AIR CONTROLS	ALL OFF
MIXTURE	CHECK & LEAN
PROPELLER	CHECK & FINE
THROTTLE	CHECK & CLOSED
MASTER SWITCH	ON
FLAPS	CHECK & UP
FUEL GAUGES	CHECK
FUEL SELECTOR	LOWEST TANK
ANNUNCIATORS	CHECK & TEST
O.A.T.	NOTE

ALWAYS 'PUSH' TO  
FULLY IN, NEVER  
USE VERNIER, EXCEPT  
FOR FINE ADJUSTMENT

## ENGINE START CHECK ( COLD )

MAGNETO KEY	IN & OFF
BOOSTER PUMP	OFF
THROTTLE	1/8" OPEN
PROPELLER	FULLY FINE
MIXTURE	FULLY RICH
BOOSTER PUMP	ON. ESTABLISH
	FUEL PRESSURE
	5 SECONDS
BOOSTER PUMP	OFF
MIXTURE	FULLY LEAN
PROPELLER AREA	CLEAR
START ENGINE	

MAG / START SWITCH	START. WHEN ENGINE STARTS RELEASE TO BOTH.
MIXTURE	FULLY RICH WHEN ENGINE STARTS

STARTER WARNING	LIGHT OUT
OIL PRESSURE	IN LIMITS WITHIN
	30 SEC
THROTTLE	SET 1100 RPM

## ENGINE START CHECK ( WARM )

MAGNETO KEY	IN OFF
BOOSTER PUMP	OFF
THROTTLE	1/8" OPEN
PROPELLER	FULLY FINE
MIXTURE	FULLY LEAN
PROPELLER AREA	CLEAR
START ENGINE	

MAG / START SWITCH	START. WHEN ENGINE STARTS RELEASE TO BOTH.
MIXTURE	FULLY RICH WHEN ENGINE STARTS

STARTER WARNING	LIGHT OUT
OIL PRESSURE	IN LIMITS WITHIN
	30 SEC
THROTTLE	SET 1100 RPM

## **ENGINE START CHECK ( FLOODED ENGINE)**

<b>MAGNETO KEY</b>	<b>IN OFF</b>
<b>BOOST PUMP</b>	<b>OFF</b>
<b>THROTTLE</b>	<b>FULLY OPEN</b>
<b>PROPELLER</b>	<b>FULLY FINE</b>
<b>MIXTURE</b>	<b>FULLY LEAN</b>
<b>PROPELLER AREA</b>	<b>CLEAR</b>
<b>START ENGINE</b>	

<b>MAG / START SWITCH</b>	<b>START. WHEN ENGINE STARTS</b>
<b>THROTTLE</b>	<b>CLOSE</b>
<b>MIXTURE</b>	<b>FULLY RICH</b>

<b>STARTER WARNING</b>	<b>LIGHT OUT</b>
<b>OIL PRESSURE</b>	<b>IN LIMITS WITHIN 30 SEC</b>
<b>THROTTLE</b>	<b>SET 1100 RPM</b>



## AFTER START CHECK

RADIO MASTER SWITCH	ON
MANIFOLD PRESSURE	CHECK
FUEL PRESSURE	CHECK
VOLTS & VACUUM	LIGHTS OUT
AMMETER	POSITIVE
MAGNETOS	CHECK L / R
G.P.S.	INITIALISED
RADIOS	SELECTED
NAVIGATION	LOADED
ARTIFICIAL HORIZON	ERECT
STANDBY COMPASS	CHECK
H.S.I.	SLAVING
R.M.I.	SYNCHRONISED
ELECTRIC TRIM	ON

<p>CHECK 3 BEEPS, THEN LIGHTS GO OUT FUNCTION CHECK, NOSE UP AND DOWN</p>
---

AUTOPILOT	TEST
-----------	------

<p>CHECK LIGHTS AND 4 BEEPS AND THEN TRIM LIGHT GOES OUT. FUNCTION CHECK</p>
--

LIGHTS	AS REQUIRED
CYLINDER HEAD TEMP	CHECK
COWL FLAPS	AS REQUIRED
TAXI CLEARANCE	OBTAINED
ALTIMETERS	SET

## TAXI CHECK

BRAKES	CHECK
RUDDER	CHECK L / R
INSTRUMENTS	CHECK

## POWER CHECK

POSITION AIRCRAFT	INTO WIND
PARKING BRAKE	ON
FUEL SELECTOR	CHANGE TANKS
TEMPS AND PRESSURES	CHECK
COWL FLAPS	OPEN
THROTTLE	SET 2000 RPM 20"
MAGNETOS	CHECK

175 RPM DROP. 50 RPM DIFFERENCE
---------------------------------

PROPELLER	EXERCISE TWICE
OIL PRESSURE	CHECK
OIL TEMPERATURE	CHECK
FUEL PRESSURE	CHECK
CYLINDER HEAD TEMP	CHECK
VOLTS AND VACUUM	LIGHTS OUT
ALTERNATOR LOAD	CHECK
THROTTLE	SET 1500 RPM
PROPELLER	EXERCISE ONCE
THROTTLE CLOSED	CHECK IDLE
THROTTLE	SET 1100 RPM

## BEFORE TAKE OFF CHECK

TRIM	TAKE OFF RANGE
THROTTLE NUT	SET
PROPELLER	FULLY FINE
MIXTURE	FULLY RICH
MAGNETOS	ON BOTH
FUEL BOOST	ON
FUEL TANK	SELECTED
COWL FLAPS	OPEN
FLAPS	SET TAKE OFF
FLIGHT INSTRUMENTS	CHECK & SET
TEMPS AND PRESSURES	NORMAL
NAVIGATION AIDS	SET
AUTO PILOT	OFF
HARNESS & HATCHES	SECURE
FLIGHT CONTROLS	CHECKED
PITOT HEAT	ON
STROBES	ON
TRANSPONDER	SET

MODE 'C'



## **AFTER TAKE OFF CHECK**

<b>TOE BRAKES</b>	<b>APPLIED</b>	
<b>UNDERCARRIAGE</b>	<b>UP</b>	
<b>FLAPS</b>	<b>UP</b>	
<b>POWER</b>	<b>SET FOR CLIMB</b>	25/25
<b>TEMPS AND PRESSURES</b>	<b>NORMAL</b>	
<b>MIXTURE</b>	<b>AS REQUIRED</b>	1/2"
<b>COWL FLAPS</b>	<b>AS REQUIRED</b>	

## **TOP OF CLIMB CHECK**

<b>POWER</b>	<b>CHECK &amp; SET</b>
<b>MIXTURE</b>	<b>SET BEST ECON</b>
<b>CYLINDER HEAD TEMP</b>	<b>CHECK</b>
<b>COWL FLAPS</b>	<b>SET</b>

## **APPROACH CHECK**

<b>FUEL</b>	<b>CHECK &amp; SET</b>
<b>RADIOS</b>	<b>SET</b>
<b>TEMPS AND PRESSURES</b>	<b>CHECK</b>
<b>CYLINDER HEAD TEMP</b>	<b>CHECK</b>
<b>COWL FLAPS</b>	<b>AS REQUIRED</b>
<b>MIXTURE</b>	<b>AS REQUIRED</b>
<b>RAM AIR</b>	<b>CLOSED</b>
<b>FLIGHT INSTRUMENTS</b>	<b>SET</b>
<b>ALTIMETERS</b>	<b>SET</b>

## DOWN WIND CHECK

<b>BRAKES</b>	<b>OFF</b>	
<b>SPEED</b>	<b>CHECKED</b>	< 133 kts
<b>UNDERCARRIAGE</b>	<b>DOWN AND LOCKED</b>	
<b>FUEL BOOST</b>	<b>ON</b>	
<b>FUEL TANK</b>	<b>CHECK &amp; SET</b>	
<b>HARNESS</b>	<b>SECURE</b>	
<b>SPEED</b>	<b>CHECKED</b>	
<b>FLAPS</b>	<b>SET 15</b>	< 115 kts

## BASE LEG

<b>MIXTURE</b>	<b>FULLY RICH</b>
<b>PROPELLER</b>	<b>FULLY FINE</b>

## FINAL CHECK

<b>UNDERCARRIAGE</b>	<b>DOWN AND LOCKED</b>
<b>MIXTURE</b>	<b>FULLY RICH</b>
<b>PROPELLER</b>	<b>FULLY FINE</b>
<b>FLAPS</b>	<b>SET 33</b>
<b>COWL FLAPS</b>	<b>1/2 OPEN</b>
<b>BRAKES</b>	<b>FEET OFF</b>

CHECK APPROACH STABLE AT CORRECT SPEED  
LANDING CLEARANCE (AS REQUIRED)  
RUNWAY CLEAR

## AFTER LANDING CHECK

RUNWAY	VACATED
FLAPS	UP
COWL FLAPS	OPEN
FUEL BOOST	OFF
STROBES	OFF
PITOT HEAT	OFF
LIGHTS	AS REQUIRED
TRANSPONDER	STANDBY

## SHUTDOWN CHECK

PARK BRAKE	SET
THROTTLE	1100 RPM
CYLINDER HEAD TEMP	REDUCING
MAGNETOS	CHECK L / R
ELECTRIC TRIM	OFF
ELECTRICAL SWITCHES	ALL OFF
RADIO MASTER SWITCH	OFF
MIXTURE	FULLY LEAN
MAGNETOS	OFF
FUEL	OFF
LIGHTS	OFF
MASTER SWITCH	OFF
COWL FLAPS	CLOSED
REFUEL	40 US G. TOTAL
DOCUMENTS	COMPLETED
AIRCRAFT	TIDY
SEAT BELTS	STOWED
OIL	WIPED OFF UNDERSIDE
CABIN LIGHTS	OFF
AIRCRAFT	CLEAN ; RUBBISH REMOVED
AIRCRAFT	SECURE

IF TO BE PUT AWAY:

BRAKES 'OFF'; PITOT COVER AND TOWBAR IN PLACE

IF TO BE LEFT OUT

BRAKES 'ON'; PITOT COVER IN PLACE ; CONTROLS SECURED

(TOWBAR LOCKED INSIDE)



## **ENGINE FIRE**

### **GROUND**

<b>FUEL</b>	<b>OFF</b>
<b>MIXTURE</b>	<b>FULLY LEAN</b>
<b>MAGNETOS</b>	<b>OFF</b>
<b>PASSENGERS</b>	<b>EVACUATE</b>
<b>RADIO CALL</b>	<b>FIRE TENDER</b>
<b>MASTER SWITCH</b>	<b>OFF</b>

### **AIR**

<b>FUEL</b>	<b>OFF</b>
<b>MIXTURE</b>	<b>FULLY LEAN</b>
<b>THROTTLE</b>	<b>CLOSED</b>
<b>CABIN VENTILATION</b>	<b>CLOSED</b>
<b>MAGNETOS</b>	<b>OFF</b>
<b>FORWARD VISION</b>	<b>SIDE SLIP</b>
<b>FORCED LANDING</b>	<b>SET UP</b>

## **ELECTRICAL FIRE**

<b>MASTER SWITCH</b>	<b>OFF</b>
<b>CABIN VENTILATION</b>	<b>OPEN</b>
<b>HEAT CONTROLS</b>	<b>CLOSED</b>
<b>CIRCUIT BREAKERS</b>	<b>CHECK</b>
<b>ELECTRICAL SWITCHES</b>	<b>OFF</b>
<b>MASTER SWITCH</b>	<b>ON</b>
<b>ESSENTIAL SWITCHES</b>	<b>ON ONE AT A TIME</b>

**LAND AT NEAREST AIRFIELD**

## **CABIN FIRE**

<b>CABIN VENTILATION</b>	<b>OPEN</b>
<b>HEAT CONTROLS</b>	<b>CLOSED</b>
<b>FIRE EXTINGUISHER</b>	<b>USE</b>
<b>D.V. WINDOW</b>	<b>OPEN</b>

**LAND AT NEAREST AIRFIELD**

## **FIRE NOT OUT**

**EMERGENCY DESCENT**  
**FORCED LANDING WITH POWER**



**ENGINE POWER LOSS DURING  
GROUND ROLL**

<b>THROTTLE</b>	<b>CLOSED</b>
<b>BRAKING</b>	<b>MAXIMUM</b>
<b>FUEL SELECTOR</b>	<b>OFF</b>
<b>MASTER SWITCH</b>	<b>OFF</b>
<b>MAGNETO SWITCH</b>	<b>OFF</b>

**ENGINE POWER LOSS AFTER TAKE OFF  
AND DURING CLIMB**

<b>FUEL SELECTOR</b>	<b>SELECT OTHER TANK</b>
<b>BOOST PUMP</b>	<b>ON</b>
<b>MIXTURE</b>	<b>FULLY RICH</b>
<b>MAGNETOS</b>	<b>CHECK ON BOTH</b>

**IF ENGINE DOES NOT RESTART CARRY OUT  
FORCED LANDING WITHOUT POWER**

**ROUGH ENGINE OR  
LOSS OF POWER IN FLIGHT**

<b>LOW FUEL QUANTITY</b>	<b>FUEL SELECTOR TO FULLEST TANK</b>
<b>LOW FUEL PRESSURE</b>	<b>BOOST PUMP ON</b>
<b>IF NO IMPROVEMENT</b>	<b>BOOST PUMP OFF</b>
<b>MIXTURE</b>	<b>FULLY RICH</b>
<b>MAGNETOS</b>	<b>LEFT AND RIGHT</b>
<b>IF NO IMPROVEMENT</b>	<b>BACK TO BOTH</b>

**IF NO IMPROVEMENT LAND AT NEAREST  
SUITABLE AIRFIELD**



## **AIR START PROCEDURE**

**PROPELLER  
FUEL SELECTOR  
MIXTURE  
THROTTLE  
MAGNETOS  
MIXTURE**

**POWER  
MIXTURE**

**FULLY FINE  
FULLEST TANK  
FULLY LEAN  
1/4" OPEN  
BOTH ON  
SLOWLY FULLY  
RICH  
RE-ESTABLISH  
AS REQUIRED**

**IF ENGINE FAILS TO START CARRY OUT  
FORCED LANDING WITHOUT POWER**



## **LANDING GEAR WILL NOT EXTEND**

**SPEED**

**REDUCE TO**

**130 Kts**

**LDG GEAR ACTUATOR C.B.**

**PULL**

**GEAR SELECTOR**

**DOWN**

**EMERGENCY LOWERING**

**HANDLE**

**RELEASE**

**PULL T HANDLE SLOWLY**

**1 to 2"**

**THEN PULL T HANDLE AND ALLOW TO RETURN TO ORIGINAL POSITION, CONTINUE UNTIL GEAR LOCKED LIGHT COMES ON.**

**IF ELECTRICAL MALFUNCTION CHECK VISUAL GEAR INDICATOR.**

**BEFORE OPERATING ELECTRICALLY, RE STOW EMERGENCY RELEASE, RESET GEAR ACTUATOR C.B.**

## **FAILURE OF THE LANDING GEAR TO RETRACT AFTER TAKE OFF**

**1. IF THE SAFETY SWITCH FAILS TO ACTUATE, AS EVIDENCED BY ILLUMINATION OF THE "GEAR SAFETY BYPASS" SWITCH, BOTH GEAR ANNUNCIATOR LIGHTS AND THE ACTIVATION OF THE GEAR WARNING HORN. DEPRESS "GEAR SAFETY BYPASS" SWITCH AND HOLD UNTIL GEAR IS FULLY RETRACTED. THIS IS EVIDENCED BY BOTH THE "GEAR UNSAFE AND GEAR DOWN" ANNUNCIATOR LIGHTS NOT BEING ILLUMINATED.**

**2. PULL GEAR CONT C.B. TO SHUT OFF GEAR HORN.**

**3. TO EXTEND GEAR, RESET THE "GEAR CONT" C.B. AND THEN PLACE THE GEAR CONTROL SWITCH IN THE "DOWN POSITION.**



## POWER SETTING TABLE

RPM AND MANIFOLD PRESSURE										
PRESS ALT	STD TEMP C	110 HP = 55 % POWER			130 HP = 65 % POWER			150 HP = 75% POWER		
		2200 RPM	2400 RPM	2600 RPM	2200 RPM	2400 RPM	2600 RPM	2200 RPM	2400 RPM	2600 RPM
SEA LVL	15	22.5"	21.0"	19.0"	26.0"	24.0"	22.0"	N / A	27.0"	24.5"
2,000	11	22.5"	20.4"	18.8"	25.5"	23.6"	21.6"	N / A	26.8"	24.4"
4,000	07	22.0"	20.2"	18.7"	F.T	23.3"	21.5"	N / A	26.5"	24.4"
6,000	03	21.8"	19.8"	18.5"	N / A	22.8"	21.3"	N / A	F.T	24.1"
8,000	-1	21.8"	19.5"	18.5"	N / A	22.8"	21.2"	N / A	N / A	F.T
10,000	-5	F.T	19.5"	18.3"	N / A	F.T	21.1"	N / A	N / A	N / A
12,000	-9	N / A	19.5"	18.2"	N / A	N / A	F.T	N / A	N / A	N / A

N / A = POWER SETTING NOT AVAILABLE AT THAT RPM

F.T = FULL THROTTLE