flugschule birrer

Regionalflugplatz Grenchen SO

pilots checklist

Commander 114B

AC-11

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TRIP PREPARATION

1. CFPL _____ on board
2. MAPS _____ on board
3. KOSIF, NOTAM, meteo _____ checked
4. passport, pilot licence, AOPA card _____ on board
5. cash and credit cards _____ on board
6. trip equipment _____ on board
   - oxygen, lifewests
   - sick-bags
   - oil
   - aircraft documents
   - food & drinks
7. flightplan _____ filed
8. fueling _____ performed
9. GPS programming _____ completed
10. passenger ticket _____ filed

PRE FLIGHT INSPECTION

1. control lock _____ removed
2. controls _____ free and easy
3. magnetos _____ off
4. circuit breakers _____ all in
5. landing gear switch _____ down
6. emmerg. landing gear extending knob ___ up
7. alt static source _____ off
8. trims _____ t/o position
9. radio master _____ off
10. electrical equipment _____ all off
11. master/alternator switch _____ on
12. landing gear lights _____ 3 x green
13. fuel quantity _____ check l & r, note
14. master/alternator switch _____ off
15. exterior inspection _____ completed
16. weight & balance _____ checked

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BEFORE STARTING ENGINE

1. seat, seatbelts _____ adjust & secure
2. parking brake _____ set
3. radio master _____ off
4. electric equipment _____ off
5. circuit breakers _____ all in
6. cowl flaps _____ open
7. landing gear switch _____ down
8. master/alternator switch _____ on
9. passenger briefing _____ completed

ready for startup

COLD STARTING ENGINE

1. mixture _____ rich
2. propeller _____ high RPM
3. throttle _____ 1 cm open
4. alternate air _____ cold
5. fuel pump _____ on for 5 sec, then off
6. propeller area _____ clear
7. starter _____ engage
8. throttle _____ 800-1000 RPM
9. oil pressure _____ within 30 sec
10. ammeter _____ charging

HOT STARTING ENGINE

1. mixture _____ rich, fuel pump on 3 sec, then off, then mixture off
2. propeller _____ high RPM
3. throttle _____ 3 – 4 cm open
4. alternate air _____ cold
5. propeller area _____ clear
6. starter _____ engage
7. throttle _____ retard
8. mixture _____ full rich
9. throttle _____ 800-1000 RPM
10. oil pressure _____ within 30 sec
11. ammeter _____ charging

CHECK BEFORE TAXI

1.	rotating beacon	on
2.	radio master	on
3.	radios, GPS and NAV	on & set
4.	pitch trim (A/P)	on
5.	flight instruments & heading bug	set
6.	giro	set & checked
7.	altimeter	set QNH
8.	flaps	full cycle / checked
9.	ATIS	received
10.	taxi clearance	received

ready for taxi

TAXI CHECK

1.	brakes	left and right checked
2.	steering	normal
3.	gyros	turning correctly

ENGINE RUN UP

1.	parking brake	set
2.	engine instruments	checked, oil temp. green arc
3.	throttle	2000 RPM
4.	magnetos check left & right	max. drop 175 RPM / max. difference 50 RPM
5.	mixer	checked, EGT rising
6.	propeller	cycle (2)
7.	alternate air	hot and ret.
8.	suction gauge, fuel pressure	green arc
9.	ammeter	charging
10.	engine instruments	checked
11.	throttle	1000 RPM

engine run up completed

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CHECK BEFORE DEPARTURE

1. seat belts, shoulder harness _____ fastened and checked
2. fuel quantity _____ checked
3. fuel pump _____ on
4. fuel selector _____ both
5. mixture _____ rich
6. propeller _____ high RPM
7. cowl flaps _____ open
8. ignition / magnetos _____ both
9. flaps _____ 10° / 20° short / soft
10. trim tabs _____ take off position
11. rudder _____ adjust
12. doors _____ latched & locked
13. windows _____ closed
14. autopilot _____ off
15. radios _____ on & set
16. nav settings _____ completed
17. clock _____ set
18. altimeter _____ set QNH
19. giros & heading bug _____ set
20. controls _____ free and easy
21. take off briefing _____ RWY , wind, speeds
    (10° Vr = 65 KIAS, Vx = 72/80 KIAS, Vy = 91 KIAS)
    (20° Vr = 65 KIAS, Vx = 69/80 KIAS, Vy = 91 KIAS)
    routing, altitude, restrictions, malfunctions

ready for depature

LINE UP CHECK

1. approach sector _____ free
2. landing light, strobes _____ on
3. doors _____ closed
4. runway and heading _____ identified / checked
5. transponder _____ on as required
6. wind _____ visual checked
7. time _____ note

line up completed

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TAKE OFF

1. take off power _____ set / checked
2. brakes _____ released
3. speed _____ rising, when safely airborn
4. gear _____ break and up
5. flaps _____ up
6. climb power _____ 25/25 set

CLIMB CHECK

1. gear _____ up
2. flaps _____ up
3. climb power _____ 25/25 set
4. fuel pump _____ off
5. landing light _____ off
6. cowl flaps _____ open
7. engine instruments _____ checked

climb check completed

CRUISE CHECK

1. cowl flaps _____ close
2. cruise power _____ according AFM
3. mixture lean _____ EGT / max. perf. 100 below
4. engine instruments _____ checked
5. altimeter _____ set & checked
6. fuel selector _____ both, left or right

cruise check completed

PRE DESCENT CHECK

A	ATIS	received
B	briefing for approach	done
C	circuit breakers	all in
D	directional gyros	set
E	electronics and radios	set
F	further planning	done
2.	mixture	enrich
3.	engine instruments	checked
4.	cowl flaps	closed

pre descent check completed

CHECK FOR APPROACH

A	altimeter	set QNH
F	fuel pump	on
I	landing light	on
S	fuel selector	both
	fuel quantity	checked
M	mixture	rich
A	autopilot / heading bug	off / runway axis
2.	power	adjust
3.	flaps	set for approach
4.	speed	90 – 120 KIAS
5.	seatbelts	fastened & secured

check for approach completed

APPROACH CONFIGURATION

1.	flaps	10° below 150 KIAS
2.	gear down	3 x green below 130 KIAS

FINAL CHECK

G	gas (fuel selector, pump, quantity)	checked
U	undercarryage: gear down	3 x green checked
M	mixture	full rich
P	propeller	high RPM
S	speed	80 / 75 KIAS 71 KIAS shortfield
F	flaps	35°
R	runway	identified
C	clear to land	received

final check completed

CHECK AFTER LANDING

1.	time	noted
2.	flaps	up
3.	cowl flaps	open
4.	fuel pump	off
5.	landing & strobe	off
6.	transponder	standby

check after landing completed

ENGINE SHUT DOWN

1.	electric consumers	all off
2.	avionics	all off
3.	mixture	cut off
4.	ignition	off, key removed
5.	master / alternator switch	off
6.	controls lock	installed
7.	fuel selector	right
8.	after flight briefing / logs	done

EMERGENCY GEAR DOWN

1.	3 lights check	press to test & check
2.	check for approach	done
3.	reduce speed	70 KIAS
4.	propeller	high RPM
5.	master / alternator switch	off
6.	electrical gear switch	down
7.	emergency ext. valve knob	pull out and down
	yaw airplane if necessary to help lower gear	
8.	master & alternator switch	on
9.	3 lights check	green

ELECTRICAL FIRE IN FLIGHT

1.	master & alternator	off
2.	electrical consumers	all off
3.	cabin heat and cabin air	off
	if fire out:	
4.	only master switch	on
5.	then one essential electrical device at a time	on

ENGINE FIRE IN FLIGHT

1.	mixture	full lean
2.	fuel selector	off
3.	master & alternator switch	off
4.	cabin heat and cabin air	off
5.	increase airspeed to extinguish	as needed
6.	emergency descent	max. 187 KIAS, gear down, flaps up
7.	emergency landing	

EMERGENCY LANDING AFTER POWER LOSS / NO RESTART

1.	maintain best glide	82 KIAS
2.	prop	low RPM
3.	transponder	7700
4.	declare emergency	
5.	ELT	on
6.	fuel selector	off
7.	mixture	full lean / idle cut off
8.	seatbelts / harness	fastened & secure
9.	flaps	as needed
10.	gear	down up, if very rough / soft terrain
11.	master, alternator & magnetos	off
12.	door	unlatch
13.	protect body	

other cases according to AFM

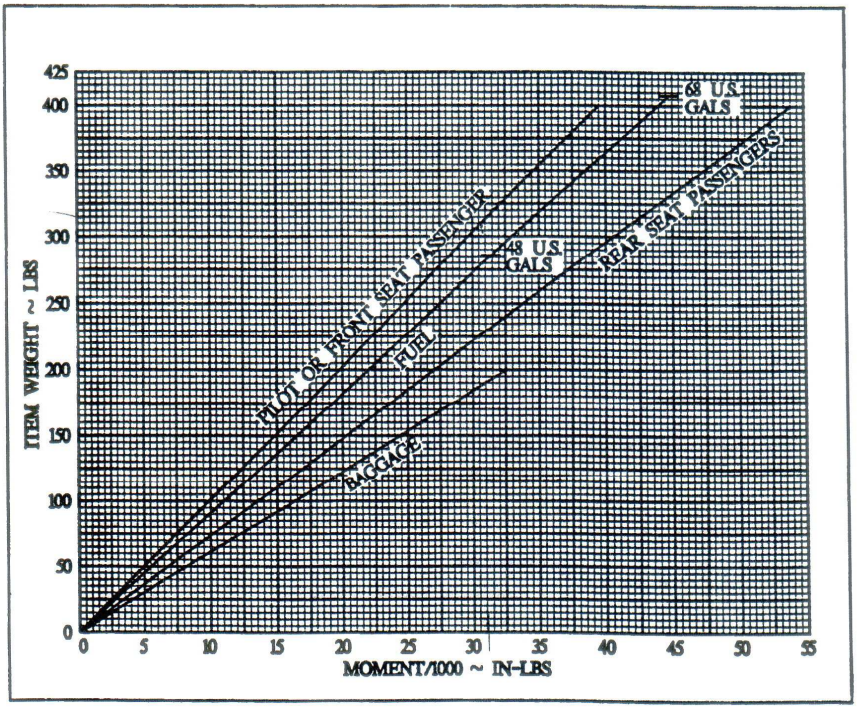
AIRSPEEDS

takeoff	normal 10°	Vr = 65 KIAS Vx = 72 KIAS (10°), 80 KIAS clean Vy = 91 KIAS clean	
	soft & short 20°	Vr = 65 KIAS Vx = 69 KIAS (20°), 80 KIAS clean Vy = 91 KIAS clean	
cruise	Vne =		187 KIAS
	Vfe = (0 - 20° flaps) (20 - 25° flaps) (25 – 35° flaps)		150 KIAS 120 KIAS 111 KIAS
	Vlo (gear operation) Vle (gear extracted)		129 KIAS 187 KIAS
	Vno (max. structural cruise)		148 KIAS
	Va (manuevering speed) 3250 lbs 2658 lbs 2023 lbs		 118 KIAS 109 KIAS 95 KIAS
landing	normal	Flaps 35° final speed 80/75 KIAS Max. demonstr. crossw. 19 KIAS	
	Shortfield	Flaps 35° final speed 80/71 KIAS	
other	Best glide, clean = 82 – 75 KIAS, gliding number approx. 1:10		

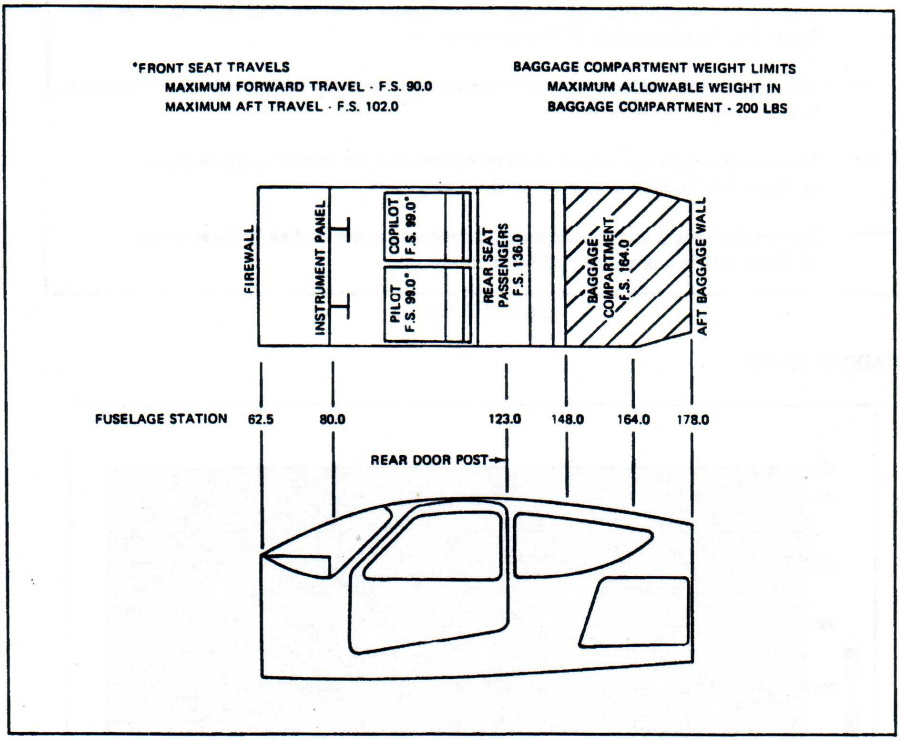
IMPORTANT INFORMATIONS

fuel_____70 USG, 68 USG usable
fillerneck_____24 USG each side, total 48 USG
empty weight____2231 lbs / 1012 kg
MTOW_____3250 lbs / 1474 kg
oil _____minimum 6 quarts / maximum 8 quarts
airpressure_____frontwheel 50 psi
mainwheels 38 psi

LOADING GRAPH



CABIN STATION DIAGRAM



APPROVED FLIGHT ENVELOPE