



OE-KLJ Cessna 172S Skyhawk G1000

NORMAL PROCEDURES

Version 1 | Revision 2 | 30.11.2019

INTENTIONALLY LEFT BLANK

SPEEDS

Never exceed speed	V_{NE}	163	KIAS
Maximum structural cruising speed	V_{NO}	129	KIAS
Maneuvering speed 2550 pounds	V_A	105	KIAS
Maximum flaps extended speed	10° V_{FE}	110	KIAS
	20° V_{FE}	85	KIAS
	30° V_{FE}	85	KIAS
Rotating speed	V_R	55	KIAS
Take off safety speed	V_x	65	KIAS
Take off safety speed	V_y	75	KIAS
Approach speed Flaps up	$V_{ref + 10}$	75	KIAS
Approach speed Flaps 30° position	V_{ref}	65	KIAS
Stall speed clean configuration	V_S	44	KIAS
Stall speed T/O configuration	V_{S1}	36	KIAS
Stall speed LDG configuration	V_{S0}	33	KIAS
Maximum Glide	V_G	68	KIAS

MASS

Empty Mass	790,98 KG	1.743,85 LBS
Maximum Take-off Mass (MTOM)	1.156,66 KG	2.550,00 LBS
Maximum Landing Mass (MLM)	1.156,66 KG	2.550,00 LBS
Maximum in baggage compartment on & aft wheel well	77,11 KG	170,00 LBS

FUEL

Total fuel	211,98 GAL	56 GAL	336 LBS
Usable fuel both tanks	200,62 GAL	53 GAL	318 LBS

INTENTIIONALLY LEFT BLANK

FLIGHT DECK SAFETY INSPECTION

- | | | |
|--|-------------------|-----------|
| 1. SWITCHES / LEVERS | CHECKED | LP |
| <i>All electrical switches..... OFF</i> | | |
| <i>Avionics Switch 1 + 2 OFF</i> | | |
| <i>Starter..... OFF</i> | | |
| <i>Flaps lever and position AGREE</i> | | |
| 2. CIRCUIT BREAKERS | CHECKED IN | LP |
| 3. ALT/BAT SWITCH | ON | LP |
| 4. AVIONICS FAN | CHECKED | LP |
| <i>Avionics Switch 1 ON</i> | | |
| <i>FWD Avionics FAN CHECK AUDIBLE</i> | | |
| <i>Avionics Switch 1 OFF</i> | | |
| <i>Avionics Switch 2 ON</i> | | |
| <i>AFT Avionics Fan..... Check Audible</i> | | |
| <i>Avionics Switch 2 OFF</i> | | |
| 5. PFD | CHECKED | LP |
| <i>Engine indicating System..... CHECK NO RED Xs</i> | | |
| 6. FLAPS | FULL DOWN | LP |
| 7. EXTERIOR LIGHTS | CHECKED | LP |
| <i>All light switches..... ON</i> | | |
| <i>BEACON LIGHT CHECKED</i> | | |
| <i>Landing Light..... CHECKED</i> | | |
| <i>Taxi Light..... CHECKED</i> | | |
| <i>Nav Light CHECKED</i> | | |
| <i>Strobe Light CHECKED</i> | | |
| <i>All light switches..... OFF</i> | | |
| 8. ALT/BAT SWITCH | OFF | LP |
| 9. FUEL SELECTOR VALVE | BOTH | LP |
| 10. FUEL SHUTOFF VALVE | PUSHED IN | LP |
| 11. ALT STATIC | CHECKED | LP |
| 12. EMERGENCY EQUIPMENT | CHECKED | LP |
| <i>Fire Extinguisher CHECKED</i> | | |
| <i>First Aid Kit CHECKED</i> | | |
| <i>Flashlight CHECKED</i> | | |

.FLIGHT DECK SAFETY INSPECTION COMPLETED

OUTSIDE SAFETY INSPECTION

.ACCORDING POH / OM

CREW AT STATIONS CHECK

1. DOORS / WINDOWS..... CLOSED / LATCHED..... BP
2. SEATS / SEATBELTS..... ADJUSTED / LOCKED BP
3. FLIGHT CONTROLS CHECKED BP
 - Ailerons..... MOVEMENT / DEFLECTION*
 - Elevator MOVEMENT / DEFLECTION*
 - Rudder MOVEMENT / DEFLECTION*
4. STBY BATT TEST / ARM.....LP

STBY BATT Switch TEST: Hold for 20 seconds, verify that green TEST lamp does not go off then ARM: Verify that PFD comes on
5. ENGINE INDICATING SYSTEM / PFD CHECK..... BP
 - BUS E Volts verify 24 volts minimum*
 - BUS M Volts..... verify lower than 1,5 volts*
 - BATT S amps..... verify discharge (negative)*
 - STBY BATT annunciator verify ON*
6. ALT / BAT SWITCH..... ONLP
7. ATIS / CLEARANCE..... RECEIVED.....LP

Note: Intercom only usable on L/H Seat
8. ALTIMETERS / BARO..... SET..... BP

.CREW AT STATIONS CHECK COMPLETE

ENGINE START

1. BEACON ON LP
2. PROP AREA..... CLEAR BP
3. THROTTLE OPEN 1 CM LP
4. MIXTURE FULL RICH LP
5. FUEL PUMP ON (FOR 3 SEC) LP
6. MIXTURE IDLE CUTOFF LP
7. STARTER..... ENGAGE..... LP
8. MIXTURE ADVANCE FULL RICH..... LP
9. INDICATIONS..... CHECK..... BP
 - Oil pressure..... check green sector*
 - VOLTS / BUS M and BUS E..... check 28 volts*
 - LOW VOLTS annunciator verify OFF*
 - AMPS / BATT M and BATT S..... check charge / positive*

.ENGINE START COMPLETE

AFTER ENGINE START

1. NAV LIGHTS..... ON LP
2. FLAPS/ TRIM..... T/O LP
3. AVIONIC BUS 1 + 2 ON LP
 - MFD..... ON*
 - Data Base void..... check and confirm*
 - GAL REM..... SET*
 - MFD..... Restore All Default*
 - GPS..... set for departure*
 - GPS2 availability CHECK AUX page.*
4. AHRS / PFD..... CHECKED BP
 - VAC indicator / Backup Horizon check*
5. COM..... SET BP
6. NAV SET BP
7. TRANSPONDER..... SET..... LP
8. BRIEFING..... CONDUCT BP

.AFTER ENGINE START COMPLETE

TAXI

1. TAXI LIGHTS ON LP
2. PARKING BRAKES RELEASED LP
3. BRAKES CHECKED BP
4. FLIGHT INSTRUMENTS CHECKED BP

.TAXI CHECK COMPLETED

BEFORE TAKEOFF

1. RUN UP PERFORMED LP
Power..... advance to 1800 RPM
Magnetos Check..... max 175 RPM max diff 50
VAC indicator..... check
Engine indicators..... check
Annunciators..... check NONE illuminated
Power..... reduce to 800 - 1000 RPM
2. CABIN POWER..... OFF LP
3. PITOT HEAT AS REQUIRED..... LP

.BEFORE TAKEOFF COMPLETED

LINE UP

1. STROBE LIGHTS ON LP
2. LANDING LIGHTS..... ON / CLEARANCE LP
3. COMPASS..... CHECKED BP
4. RUNWAY IDENTIFIED BP

.LINEUP COMPLETED

CLIMB

1. FLAPS UP LP
2. CLIMB POWER SET LP
3. ENGINE INSTRUMENT CHECKED LP
4. TAXI LIGHT OFF LP
5. ALTIMETER..... SET STANDARD* LP

**For VFR set standard above 5000 FT, for IFR set standard at altitudes above published transition altitude.*

.CLIMB CHECK COMPLETED

CRUISE

1. POWER..... AS REQUIRED..... LP
2. MIXTURE LEAN LP

Lean at altitudes above 5000 FT to 50 °F rich of peak EGT.

3. LANDING LIGHT..... OFF LP

.CRUISE CHECK COMPLETED

DESCENT

1. TAXI LIGHTS ON LP
2. POWER..... AS REQUIRED..... LP
3. MIXTURE ENRICH GRADUALLY LP
4. FUEL SELECTOR..... CHECKED LP
5. ATIS..... RECEIVED BP
6. NAV..... SET..... LP
7. APPROACH BRIEFING CONDUCTED BP

.DESCENT CHECK COMPLETED

APPROACH

1. ALTIMETERS CHECKED QNH BP
2. CABIN PWR OFF LP

.APPROACH CHECK COMPLETED

FINAL

1. MIXTURE FULL RICH LP
2. FLAPS CHECKED BP
3. LANDING LIGHTS ON / CLEARANCE LP

.FINAL CHECK COMPLETED

AFTER LANDING

1. LANDING LIGHTS OFF LP
2. STROBE LIGHTS OFF LP
3. FLAPS UP LP
4. TRANSPONDER CHECK GND LP
5. PITOT HEAT OFF LP

.AFTER LANDING CHECK COMPLETED

SHUTDOWN

1. PARKING BRAKE ON LP
2. THROTTLE IDLE LP
3. AVIONICS SWITCH (1 / 2) OFF LP
4. ELECTRICAL EQUIPMENT OFF LP
5. MIXTURE CONTROL IDLE CUTOFF LP
6. IGNITION SWITCH OFF LP
7. BEACON LIGHT OFF LP
8. MASTER SWITCH (ALT AND BAT) OFF LP
9. STBY BATT SWITCH OFF LP
10. FUEL SELECTOR VALVE LEFT OR RIGHT LP

.SHUTDOWN CHECK COMPLETED

TAKEOFF / DEPARTURE BRIEFING

The PF briefs the Departure

- a) *Name of the SID*
- b) *Departure route (text)*
- c) *Initial climb restrictions (minimum and maximum altitudes, MSA, gradients, ...)*
- d) *Radio and NAV setting*
- e) *Extras (WX, Hazards, Anti-Ice,...)*
- f) *Additionally it has to **include a briefing for malfunctions**, e. g.:*

In case of an engine failure, fire or any serious malfunction before ... kts (V_1) You or I call stop, you apply full brakes, I check for abnormalities, especially the engine instruments. After V_1 I continue, minimum speed is V_2 to V_{2+15} I climb to acceleration altitude/1.500 ft AGL/x.xxx ft and follow the contingency procedure which is .../the SID (minimum gradient to be checked!). In case of uncontrolled fire I continue left/right for an immediate landing on runway yy, you check/set the approach speeds. I fly, my mayday call and further communication, you perform the checklist work on my order. Worksplitt Procedure. FORDEC.

Before the briefing the PF shall complete the radio and NAV setup as far as possible and check the setting together with the PNF [PM] at the end of the briefing.

- a) *Radio and NAV setting (Standard)*
- b) *NAV 1 + 2 active VOR freq. used in the SID*
- c) *NAV 1 + 2 pre select VOR freq. acc. to engine failure procedure*
- d) *DME hold frequency APT DME or the DME used in the SID*
- e) *ADF 1 active enroute NDB frequency*
- f) *ADF 1 pre select LOM freq. of the landing runway*
- g) *Course pointer Initial course in the SID*
- h) *HDG BUG Departure rwy heading / first track*
- i) *ALT pre select Initial climb restriction: SID or ATC CLR*
- j) *RMI pointers (RMI) as required*

INTENTIONALLY LEFT BLANK

APPROACH BRIEFING

As soon as the landing runway is known, preferably during low workload period of cruise, an approach briefing shall be given by the pilot who will perform the actual landing.

Note: Do not brief expected / probable visual approaches during this phase of flight.

Before commencing the briefing the correct issue of the approach plate shall be compared.

- a) Type of approach*
- b) Routing to final track incl. restrictions (speed, altitude)*
- c) Frequency of final NAV aid and final track*
- d) Final configuration*
- e) Final descent/GP intercept point*
- f) OM or FDP altitude (final descent point)*
- g) DA/DH or MDA*
- h) Missed Approach Point (non precision) and Missed Approach Procedure (consider EO SID in engine out condition)*
- i) RWY – Length/lighting/condition (as applicable)*
- j) MSA (all MSA sectors, expected to be crossed) plus relevant MORAs*
- k) NAV setting, the term “Standard” may be used for the homebase or simple ILS RWYs*

NAV-Equipment setting (Standard) => Final NAV Setup

- a) NAV 1+2 active freq ILS/VOR of landing runway*
- b) NAV 1+2 pre-select freq VOR for MAP, ILS for parallel RWY, ...*
- c) DME hold freq Airport DME or ILS-DME*
- d) ADF 1 active freq LOM of landing runway*
- e) ADF 1 pre-select forward NDB when needed/MAP NDB*
- f) Course pointer Final track*
- g) HDG-BUG Landing runway heading*
- h) RMI Pointer (ND/RMI) ADF 1/optional*
- i) Altitude cursor DA or MDA*
- j) Radio altitude cursor minimum, or 150 ft on ILS / 300 ft on non-precision as reminder*

CRUISE PERFORMANCE

PRESS ALT FT	RPM	20°C BELOW ISA			ISA			20°C ABOVE ISA		
		% MCP	KTAS	GPH	% MCP	KTAS	GPH	% MCP	KTAS	GPH
2000	2550	83	117	11.1	77	118	10.5	72	117	9.9
	2500	78	115	10.6	73	115	9.9	68	115	9.4
	2400	69	111	9.6	64	110	9.0	60	109	8.5
	2300	61	105	8.6	57	104	8.1	53	102	7.7
	2200	53	99	7.7	50	97	7.3	47	95	6.9
	2100	47	92	6.9	44	90	6.6	42	89	6.3
4000	2600	83	120	11.1	77	120	10.4	72	119	9.8
	2550	79	118	10.6	73	117	9.9	68	117	9.4
	2500	74	115	10.1	69	115	9.5	64	114	8.9
	2400	65	110	9.1	61	109	8.5	57	107	8.1
	2300	58	104	8.2	54	102	7.7	51	101	7.3
	2200	51	98	7.4	48	96	7.0	45	94	6.7
	2100	45	91	6.6	42	89	6.4	40	87	6.1
6000	2650	83	122	11.1	77	122	10.4	72	121	9.8
	2600	78	120	10.6	73	119	9.9	68	118	9.4
	2500	70	115	9.6	65	114	9.0	60	112	8.5
	2400	62	109	8.6	57	108	8.2	54	106	7.7
	2300	54	103	7.8	51	101	7.4	48	99	7.0
	2200	48	96	7.1	45	94	6.7	43	92	6.4
8000	2700	83	125	11.1	77	124	10.4	71	123	9.7
	2650	78	122	10.5	72	122	9.9	67	120	9.3
	2600	74	120	10.0	68	119	9.4	64	117	8.9
	2500	65	114	9.1	61	112	8.6	57	111	8.1
	2400	58	108	8.2	54	106	7.8	51	104	7.4
	2300	52	101	7.5	48	99	7.1	46	97	6.8
	2200	46	94	6.8	43	92	6.5	41	90	6.2
10,000	2700	78	124	10.5	72	123	9.8	67	122	9.3
	2650	73	122	10.0	68	120	9.4	63	119	8.9
	2600	69	119	9.5	64	117	9.0	60	115	8.5
	2500	62	113	8.7	57	111	8.2	54	109	7.8
	2400	55	106	7.9	51	104	7.5	49	102	7.1
	2300	49	100	7.2	46	97	6.8	44	95	6.5
12,000	2650	69	121	9.5	64	119	8.9	60	117	8.5
	2600	65	118	9.1	61	116	8.5	57	114	8.1
	2500	58	111	8.3	54	109	7.8	51	107	7.4
	2400	52	105	7.5	49	102	7.1	46	100	6.8
	2300	47	98	6.9	44	95	6.6	41	92	6.3

