

SECTION 4 - NORMAL PROCEDURES

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4.1 GENERAL

This chapter describes the normal procedures for a standard operation of the aircraft Z 242L.

Other standard normal procedures which apply to the optional additional equipment are listed in Chapter 9 SUPPLEMENTS.

4.3 AIRSPEEDS FOR NORMAL OPERATIONS

	A	U	N
Unstick airspeed	57 - 65 knots (105 - 120 km/h)		
Acceleration airspeed	DO 70 knots (DO 130 km/h)		73 knots (135 km/h)
Climb airspeed	78 knots (145 km/h)		81 knots (150 km/h)
Landing approach airspeed	70 - 73 knots (130 - 135 km/h)		73 - 76 knots (135 - 140 km/h)
Touch-down airspeed	57 knots (105 km/h)		62 knots (115 km/h)

NOTE:

Airspeeds shown throughout are IAS.

4.7 AMPLIFIED NORMAL PROCEDURES

The particular instructions are given in the individual paragraphs of this Chapter.

4.9 NORMAL PROCEDURES

4.9.1 Pre-flight check

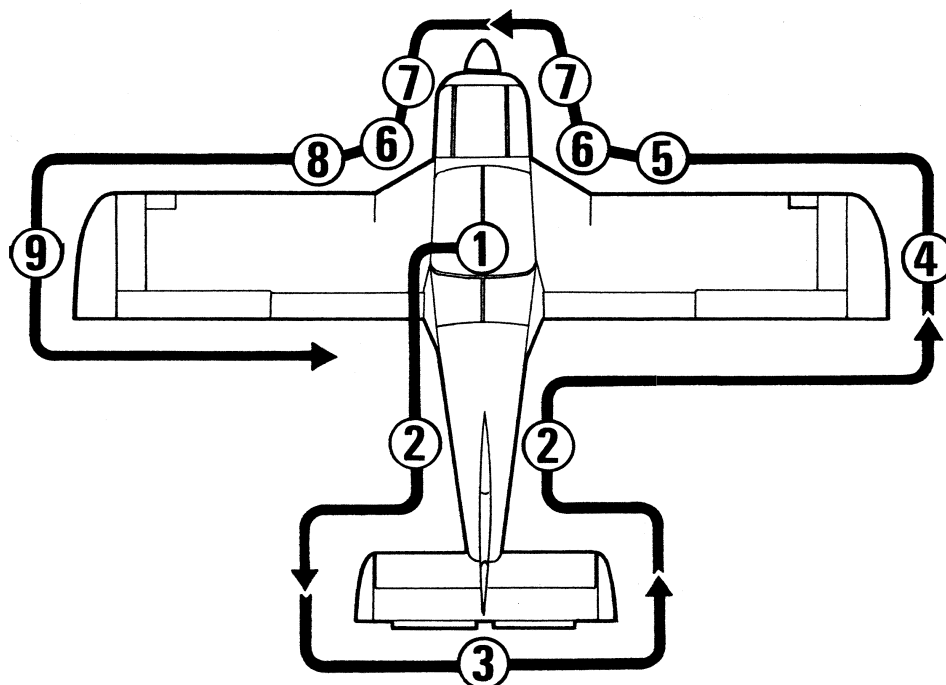


Fig. 4-1

NOTE:

- (1) Observe the sequence of preflight check according to the following scheme and checklist. Do not change their order in no case.
- (2) Defects identified during pre-flight check must be removed before flight.
- (3) The word "STATE" means **Airworthy** - see the instruction **L6 / II - CHAPTER 1.1 - DEFINITIONS**. "Status of aircraft, engine, propeller or aircraft parts which suits to their approved type design and the conditions of which are safe for the operation.
- (4) **PERFORM** a visual inspection of the surface which must be **FREE OF DAMAGE**, deformation, scratches, abrasion, corrosion, frost and other possible phenomena reducing the flight safety.

①

COCKPIT

- | | | |
|------|--|---|
| (1) | MASTER SWITCH and other circuit switches | - CHECK "OFF" |
| (2) | IGNITION switch - POSITION | - "OFF" |
| (3) | Control stick lock | - RELEASE (release latch on the control stick) |
| (4) | Control stick | - CHECK FREE MOVEMENT |
| (5) | Canopy emergency jettisoning handles | - CHECK SEALED |
| (6) | Crash-axe (use in case of emergency situation) | - CHECK FIXED AND SEALED |
| (7) | ASPS switch valve | - CHECK SEALED IN "MAIN" POSITION (if installed) |
| (8) | "COM 1", "NAV/ADF" emergency switches | - CHECK SEALED IN "OFF" POSITION (if installed) |
| (9) | Spar cap nitrogen pressure | - CHECK MIN. 150 kPa (22 p.s.i.) |
| (10) | Before solo flight:
loose items
free safety harnesses | - REMOVE OR FASTEN
- LOCK AND SHORTEN |
| (11) | Before flight manoeuvres in category „U“ and „A“) | - PERFORM PROCEDURES ACCORDING TO SECTION 4.13.1 OF AFM |
| (12) | Baggage | - POSITION AND FASTEN OF BAGGAGE |
| (13) | Canopy glass:
glass
sliding mechanism
after leaving the cockpit | - CONDITION, TRANSPARENCY, CLEANLINESS
- CHECK OF FREE MOVEMENT
- CLOSE |

②

FUSELAGE - left side / right side

- | | | |
|-----|-------------------------|--|
| (1) | Fuselage surface | - CONDITION, DAMAGE, LOOSEN RIVETS, SCREWS |
| (2) | Static pressure sources | - REMOVE PLUGS, CHECK OF CLEAN HOLES |
| (3) | Spring tail skid | - CONDITION |

③

EMPENNAGE

- | | | |
|-----|----------------------------------|---|
| (1) | Empennage surfaces | - CONDITION, DAMAGE, LOOSEN RIVETS |
| (2) | Rudder, elevator, trim tab | - CONDITION, FREE MOVEMENT PLAY IN BEARINGS, BOLTS SECURED, STATIC DISCHARGES |
| (3) | Position light, beacon, antennas | - CONDITION, MOUNTING, COVER TRANSPARENCY |

④

RIGHT WING

- | | |
|---|---|
| (1) Trailing edge | - CONDITION |
| (2) Wing flap | - CONDITION, BOLTS SECURED, LOCKING WHEN EXTENDED |
| (3) Aileron | - CONDITION, MOVEMENT, BOLTS SECURED, BALANCE WEIGHT ATTACHMENT, PLAY IN BEARING, FIXED TAB, DISCHARGER CONDITION |
| (4) Wingtip, Position light, Strobe light | - CONDITION, ATTACHMENT, LIGHT CONDUCTOR |
| (5) Auxiliary fuel tank | - CONDITION, ATTACHMENT, LEAKAGE DRAIN, FUEL DRAINING, CAP CLOSED |
| (6) Wing skin | - CONDITION, DAMAGE, LOOSEN RIVETS |
| (7) Headlights (if installed) | - CONDITION, ATTACHMENT COVER TRANSPARENCY |
| (8) Leading edge | - CONDITION, DAMAGE, DEFORMATIONS |
| (9) Main fuel tank | - VISUALLY CHECK OF BOTTOM COVER SCREWS CONDITION, FUEL DRAIN, CAP CLOSED |
| Aircraft's up to S/N 0740 incl. | - FUEL QUANTITY BY GAUGE (IF AUXILIARY TANK IS EMPTY!) |

CAUTION:

FOR FUEL DRAINING AND FUEL CHECK USE THE TRANSPARENT VESSEL.

DRAIN THE FUEL SYSTEM ALWAYS BEFORE FLYING AND AFTER ANY REFUELLING

CHECK WATER ON THE FUEL, SEDIMENTS AND THE CORRESPONDING COLOURSHADE, WHICH INDICATES THE FUEL GRADE.

DRAIN ALL FUEL DRAINING VALVES, INCLUDING THE MASTER VALVE AT THE BOTTOM OF THE FUSELAGE. REPEAT THE DRAINING IF WATER AND/OR SEDIMENTS ARE FOUND UNTIL THE FUEL SAMPLE IS PURE!

⑤

RIGHT MAIN LANDING GEAR

- | | |
|--------------------------------|--|
| (1) Tire | - CONDITION, INFLATION (190 kPa - 28 p.s.i.) |
| (2) Wheel fairing with scraper | - CONDITION, ATTACHMENT, CRACKS |
| (3) Wheel brake | - CONDITION, ATTACHMENT, BRAKE PIPE, LEAKAGE |
| (4) Leaf spring | - CONDITION, ATTACHMENT, CRACKS, MICROSWITCH CONTROL ROD |

⑥

POWER PLANT

- | | |
|---|---|
| (1) Engine cowling,
Propeller speed governor | - CONDITION, LOCKED, FREE AIR-INTAKES,
PROPELLER SPEED GOVERNOR INCL.
CONTROL SYSTEM |
| (2) Propeller | - CONDITION, CRACKS AND NOTCHES IN
BLADES, BLADES PLAY, OIL LEAKS |
| (3) Air filter | - CHECK CLEAN |
| (4) Engine oil | - QUANTITY, CAP AND LID CLOSED |
| (5) Exhaust muffler | - CONDITION, ATTACHMENT, BURN-OUT,
MUFFLER ATTACHMENT |
| (6) Oil leakage | - CHECK SPILLAGE AT HOT-AIR OUTLET
IN BOTTOM COWLING |
| (7) Bottom fuselage cover | - FUEL DRAIN OFF BY MASTER VALVE
- CONDITION, ATTACHMENT
- CHECK PITOT-STATIC LINES DRAINING
SUMPS ON CONDENSED WATER, DRAIN IN
NECESSARY |

CAUTION:

- (1) AT LOW AMBIENT AIR TEMPERATURES ON THE GROUND (BELOW 5°C) REMOVE RUBBER PLUG FROM VENTILATION PIPE OF OIL INSTALLATION AND CHECK THE PIPE CLEANNESS AND CLEARNESS (REMOVE POSSIBLE ICE).
- (2) THE SCREENS SHOULD BE INSTALLED INTO THE ENGINE COOLING AIR INLETS WHENEVER THE GROUND AIR TEMPERATURE IS FORECAST TO BE -5°C OR BELOW. TO PRECLUDE THE POSSIBILITY OF OVERHEATING THE ENGINE, THE SCREENS MUST BE REMOVED WHEN THE GROUND AIR TEMPERATURE IS 0°C OR ABOVE.

⑦

NOSE LANDING GEAR

- | | |
|---------------------------|--|
| (1) Tire | - CONDITION, INFLATION (250 kPa - 36 p.s.i.) |
| (2) Hydropneumatic damper | - CONDITION, STATIC LOAD DISPLACEMENT,
ATTACHMENT STRUTS (TROUGH HOT-AIR
OUTLET) |
| (3) Nose wheel fairing | - CONDITION, ATTACHMENT |

⑧

LEFT MAIN LANDING GEAR

- | | |
|--------------------------------|---|
| (1) Tire | - CONDITION, INFLATION (190 kPa - 28 p.s.i.) |
| (2) Wheel fairing with scraper | - CONDITION, ATTACHMENT, CRACKS |
| (3) Wheel brake | - CONDITION, ATTACHMENT, BRAKE PIPE,
LEAKAGE |
| (4) Leaf spring | - CONDITION, ATTACHMENT, CRACKS |

⑨

LEFT WING

- | | | |
|------|---|--|
| (1) | Main fuel tank | - VISUALLY CHECK OF BOTTOM COVER
SCREWS CONDITION,
FUEL DRAIN, CAP CLOSED |
| | Aircraft's up to S/N 0740 incl. | - FUEL QUANTITY BY GAUGE
(IF AUXILIARY TANK IS EMPTY!) |
| (2) | Leading edge | - CONDITION, DAMAGE, DEFORMATIONS |
| (3) | Pitot tube | - REMOVE COVER AND PLUGS
CHECK RAM-AIR HOLE CLEAN |
| (4) | Headlights | - CONDITION, ATTACHMENT
COVER TRANSPARENCY |
| (5) | Wing skin | - CONDITION, DAMAGE, LOOSEN RIVETS |
| (6) | Auxiliary tank | - CONDITION, ATTACHMENT, LEAKAGE DRAIN,
FUEL DRAINING, CAP CLOSED |
| (7) | Wing tip, Position light,
Strobe light | - CONDITION, ATTACHMENT,
LIGHT CONDUCTOR |
| (8) | Aileron | - CONDITION, MOVEMENT, BOLTS SECURED,
BALANCE WEIGHT ATTACHMENT, PLAY IN
BEARING, FIXED TAB, DISCHARGER
CONDITION |
| (9) | Wing flap | - CONDITION, BOLTS SECURED, LOCKING |
| (10) | Trailing edge | - CONDITION |

CAUTION:

BEFORE OCCUPANTS EMBARKING AT COCKPIT INNER TEMPERATURE LOWER THAN -15°C (+5°F) THE COCKPIT MUST BE PREHEATED BY HOT AIR TO COMPLY WITH TEMPERATURE LIMITATIONS OF INSTALLED APPLIANCES.

NOTE:

FOR USE OF EMERGENCY EQUIPMENT – PARACHUTE/S

Put on the parachute, adjust properly and lock the parachute harness before entering the cockpit.

4.9.2 After entering the cockpit

- | | | |
|------|---|---|
| (1) | Seat | - ADJUST POSITION |
| (2) | Safety harnesses | - PLUG IN LOCK, "LOCKED" POSITION, ADJUST AND FASTEN |
| (3) | Adjustable pedals of rudder control (if installed) | - CHECK POSITION ADJUSTMENT |
| (4) | Primary controls | - CHECK FREE MOVEMENT |
| (5) | Wing flaps | - CHECK FUNCTION, ARRESTMENT, VISUALLY CHECK POSITIONS |
| (6) | Trim: | |
| | a) longitudinal | - FUNCTION CHECK |
| | | - SET NEUTRAL |
| | b) directional | - FUNCTION CHECK |
| | | - SET HALF OF FULL TRAVEL RIGHT |
| (7) | Parking brake | - RELEASE |
| (8) | Brake toe pedals | - PUSH, CHECK FUNCTION |
| (9) | MASTER SWITCH | - "ON" |
| (10) | Emergency electric power source (if installed) | - CHECK SIGNAL LIGHT |
| (11) | Circuit switches:
"BATTERY", "GENERATOR",
"ENGINE INSTR.",
"FLIGHT INSTR." | |
| | | - "ON" |
| (12) | V-A meter | - CHECK VOLTAGE 25 V MIN. |
| (13) | Engine instruments | - CHECK INITIAL VALUES |
| (14) | Annunciator panel | - "STALL. WARN. FAILURE OR INACTIVE",
"GENERATOR", "OIL PRESS. LOSS"
MUST BE ON |
| (15) | "PITOT HEATING" switch | - "ON" |
| (16) | Annunciator panel | - "PITOT HEATING" MUST BE ON |
| (17) | "PITOT HEATING" switch | - "OFF" |
| (18) | "STATIC HEATING" switch | - "ON" |
| (19) | Annunciator panel | - "STATIC HEATING" MUST BE ON |
| (20) | "STATIC HEATING" switch | - "OFF" |
| (21) | "SIGNALLING CHECK"
pushbutton depressed | - ALL ANNUNCIATOR LIGHTS MUST BE ON,
THE STALL WARNING HORN MUST SOUND |
| (22) | "FLIGHT INSTR." switch | - "OFF" |
| (23) | Occupants / passenger | - SAFETY HARNESS FASTENED, PASSENGER
FAMILIARISED WITH EMERGENCY
EQUIPMENT |
| (24) | Canopy | - CLOSED, LOCKED |

CAUTION:

DO NOT EXCEED THE PERIOD OF PITOT-STATIC HEATING GROUND – CHECK BY MORE THAN ABOUT 30 SECONDS.

4.9.3 Engine starting

WARNING:

DO NOT CRANK PROPELLER TO THE HOT ENGINE BY HAND. THE SERIOUS INJURY MAY OCCUR!

CAUTION:

CIRCUITS SWITCHES "COM/NAV 1", "COM/NAV 2", "FLIGHT INSTRUMENTS" AND "LIGHTING" MUST BE "OFF" BEFORE "EXTERNAL ELECTRIC POWER SOURCE" SELECTION AND ENGINE STARTING. OTHERWISE TRANSIENT VOLTAGE PEAKS MAY DAMAGE AVIONICS AND OTHER ELECTRONIC INSTRUMENTS.

- | | | |
|------|---|---|
| (1) | Circuit Switches "COM/NAV 1, COM/NAV 2", "FLIGHT INSTR." and „LIGHTING“ | - "OFF" |
| (2) | Ignition switch - POSITION | - "OFF" |
| (3) | Crank engine (cold engine only) | - BY HAND (4x), IN THE DIRECTION OF ROTATION |
| (4) | External power source | - PLUG IN |
| (5) | MASTER SWITCH | - "ON" |
| (6) | Circuit switches: "BATTERY", "GENERATOR", "ENGINE INSTR." | - "ON" |
| (7) | Switch "EXT. POW. SOURCE" | - "ON" |
| (8) | Switch "BEACON" | - "ON" (AS NECESSARY) |
| (9) | Fuel: | |
| | (a) quantity | - CHECK |
| | (b) fuel valve selector | - "L+R" POSITION |
| (10) | Propeller control | - PUSH "MAX" |
| (11) | Mixture control | - PUSH "RICH" |
| (12) | Switch "FUEL PUMP" | - "ON" - SHORTLY (3-5s) (UNTIL AT OPERATING VALUE IN FUEL PRESSURE INDICATOR) |
| (13) | Mixture control | - PULL "LEAN" |
| (14) | Space around propeller | - CHECK FREE |
| (15) | Wheel brakes (or chocks) | - APPLY |
| (16) | Ignition switch - POSITION | - "START" |
| | after starting release - POSITION | - "BOTH" |
| (17) | Mixture control | - PUSH "RICH" |

- | | | |
|------|---|--|
| (18) | Throttle control | - 1000 R.P.M. |
| (19) | Switch "EXT. POW. SOURCE" | - "OFF" |
| (20) | Circuit switch "FLIGHT INSTR." | - "ON" |
| (21) | Oil pressure | - MIN. 172 kPa (25 p.s.i.) WITHIN 30 s |
| (22) | External power source | - PULL OUT |
| (23) | Circuit switches "COM/NAV 1
and COM/NAV2" and other
needed switches | - "ON" |

CAUTION:

SHUT-OFF THE ENGINE UNLESS THE OIL PRESSURE REACHES 172 kPa (25 p.s.i.),
WITHIN 30 sec. AFTER STARTING AND CORRECT THE TROUBLE.

NOTES:

- (1) The application of the external power source is recommended for engine starting.
- (2) Delete steps No. (4),(7),(19) and (22) at starting the engine on aircraft battery.
- (3) At low ambient air temperatures below -12 °C (+10 °F) preheat the engine (including oil in the engine oil sump) with hot air.
- (4) At handy crank engine by propeller suck-in fuel mixture to the cylinders.
- (5) At hot engine starting (after flight) delete step No. (12).
- (6) Try to restrict starting intervals to 10-12 second with five minute pauses between each attempt to start up the engine.
- (7) After the external source was plugged in and the circuit switch "EXT. POW. SOURCE" turned ON, the amber light "EXT. POW. SOURCE".on the annunciator must be ON.

CAUTION:

WHEN CONNECTING EXTERNAL POWER SOURCE, which does not have a valid certificate,
NO APPLIANCE MAY BE SWITCHED ON, EXCEPT THE STARTER AND THE ENGINE
INSTRUMENTS.

4.9.4 Warm-up

- | | | |
|-----|-------------------|---|
| (1) | Propeller control | - PUSH "MAX" (minimum blade angle setting) |
| (2) | Mixture control | - PUSH "RICH" |
| (3) | Throttle control | - 1200 to 1600 R.P.M. (increase speed as warm-up continues) |
| (4) | Oil pressure | - MIN. 414 kPa (60 p.s.i.)
- MAX. 621 kPa (90 p.s.i.) |

NOTES:

- (1) The engine is sufficiently warmed-up after it runs regularly, without backfiring or skipping and reduction in oil-pressure. Recommended oil temperature is min. 60°C (140°F).
- (2) During warm-up check:
 - (a) Smooth engine run and fuel pressure remaining within 96 - 310 kPa (14 - 45 p.s.i.) range at all OPEN position of the fuel selector valve. Turn the valve to L+R after check is accomplished.
 - (b) The correct function of the generator and recharging of the battery:
After increasing the engine speed above 900 R.P.M. the yellow "GENERATOR" light must turn OFF (may turn OFF at idling speed), V-A meter must indicate the voltage 27,5 V, positive recharging current or 0.
 - (c) Check all installed appliances as appropriate (COM/NAV, Annunciator lights, Gyro instruments, Lighting etc.).

CAUTION:

- (1) AVOID PROLONGED IDLING BELOW 1000 R.P.M.
- (2) AVOID EXCEEDING 2200 R.P.M. DURING WARM-UP PERIOD. (THE PROPELLER DAMAGE MAY OCCUR)
- (3) IT IS RECOMMENDED TO WARM UP ENGINE LONGER TIME DURING LOW OUTSIDE TEMPERATURES TO ALLOW SUFFICIENT OIL WARM.

4.9.5 Taxiing

CAUTION:

- (1) TAXIING IS PERMITTED ONLY WITH FLAPS RETRACTED.
- (2) OBSERVE THE TAXI GROUND CONDITION, OBSTACLES, WIND AND AIRFIELD TRAFFIC FOR TAXI SPEED LIMITATION.
- (3) IN CASE OF ENGINE SPEED IS LOWER THAN 900 R.P.M., ELECTRICAL SYSTEMS ARE BATTERY POWERED.
IN THAT CASE:
 - (a) COM/NAV equipment except one VHF COM transceiver - "OFF"
 - (b) „LANDING LIGHT“ switch - "OFF"
 - (c) „PITOT HEATING“ switch - "OFF"

THE COCKPIT LIGHT AND THE MAP LAMP CAN BE SWITCH ON FOR NECESSARY TIME ONLY.

- | | | |
|-----|---------------|-------------------------------------|
| (1) | Parking brake | - RELEASE |
| (2) | Brake pedals | - DEPRESS 2 x, CHECK BEFORE TAXIING |

NOTE:

During taxiing take control of aeroplane by the rudder control, on the small diameter cornering by the wheel brakes.

4.9.6 Engine check

- | | | | |
|-----|--------------------------|---|---------------------------|
| (1) | Brakes | - APPLY | |
| (2) | Control stick | - PULL | |
| (3) | Propeller control | - PUSH "MAX" | |
| (4) | Mixture control | - PUSH "RICH" | |
| (5) | Propeller function test: | | |
| | Throttle control | - SET 2200 R.P.M. | |
| | Propeller control | - PULL SET 1800 R.P.M. | |
| | | - PUSH MAX. ENGINE SPEED, 3 x REPEAT | |
| | | - CHECK 2200 R.P.M. | |
| | Propeller control | - SET 2100 R.P.M. | |
| | Throttle control | - MANIFOLD PRESSURE INCREASE ABOUT 3 in.Hg (10 kPa) | |
| | Check engine speed | - 2100 R.P.M. | |
| (6) | Magnetos check: | | |
| | Propeller control | - PUSH "MAX" | |
| | Throttle control | - SET 2200 R.P.M. | |
| | Ignition switch | - SWITCH "L" | - speed drop check |
| | | - RETURN "BOTH" | - until R.P.M. stabilised |
| | | - SWITCH "R" | - speed drop check |
| | | - RETURN "BOTH" | |

The permissible engine speed drop for single magneto operation about max. 175 R.P.M.
The engine speed difference between "L" and "R" single magneto operation about max. 50 R.P.M.

- (7) Check engine instruments:

Throttle control	MAX.	MIN.
Propeller control	PUSH "MAX" R.P.M.	PULL "MIN" R.P.M.
Engine speed	2700 ⁺⁰ ₋₁₀₀ R.P.M.	MIN. 600 R.P.M.
Manifold pressure	98 kPa (29 in.Hg)	-
Oil pressure	414–621 kPa (60-90 p.s.i.)	MIN.172 kPa (25 p.s.i.)
Fuel pressure	96-310 kPa (14-45 p.s.i.)	MIN. 96 kPa (14 p.s.i.)

WARNING:

- (1) PERFORM THE GROUND CHECK WITH HEADWIND IF PRACTICABLE, ENSURE ENOUGH SPACE BEHIND THE AIRPLANE.
- (2) AVOID GROUND CHECK ON GROUND CONTAINING LOOSEN STONES, GRAVEL OR ANY LOOSE MATERIAL. THIS MAY CAUSE DAMAGE TO THE PROPELLER BLADES.
- (3) GROUND CHECK MUST NOT BE PERFORMED ON PLACES AND IN VICINITY OF PLACES WHERE THE ENGINE COMPARTMENT IS THREATENED WITH SUCKING FOREIGN SUBJECT.
- (4) LIMIT THE ENGINE RUN ON SINGLE MAGNETO TO THE SHORTEST NECESSARY PERIOD.
- (5) OBSERVE THE TEMPERATURES AND PRESSURES TO STAY IN PERMISSIBLE RANGE.

4.9.7 Before take-off

- | | | |
|------|--|--|
| (1) | Brakes | - APPLY |
| (2) | Throttle control | - 1200 R.P.M. |
| (3) | Primary control | - CHECK FREE MOVEMENT |
| (4) | Trim:
- longitudinal
- directional | - "NEUTRAL" POSITION
- 1/2 BETWEEN NEUTRAL AND MAX. RIGHT |
| (5) | Wing flaps | - TAKE-OFF |
| (6) | Fuel:
(a) quantity
(b) fuel selector valve | - CHECK
- "L+R" OR THE TANK CONTAINS MORE THAN 20 LITRES (5,3 U.S.gal.) OF FUEL |
| (7) | Circuit switches:
(a) "BATTERY", "GENERATOR",
"ENGINE INSTR.",
"FLIGHT INSTR.",
(b) other circuit switches
as necessary | - "ON"
- "ON" |
| (8) | "FUEL PUMP" switch | - "ON" |
| (9) | Nitrogen in spar cap pressure | - CHECK MIN. 150 kPa (22 p.s.i.) |
| (10) | Engine cooling flap
(if installed) | - OPEN AS NECESSARY |
| (11) | Propeller control | - PUSH "MAX" |
| (12) | Mixture control | - PUSH MAX. RICH |
| (13) | MASTER SWITCH | - CHECK "ON" |
| (14) | Ignition switch | - CHECK "BOTH" POSITION |
| (15) | Engine instruments | - CHECK (admissible values) |
| (16) | Altimeter, gyro instruments
and NAV instruments | - ADJUST |
| (17) | Safety harnesses | - CHECK FASTENED, "LOCKED" |
| (18) | Canopy | - CLOSED, LOCKED |
| (19) | Battery charge | - CHECK MAX. RECHARGING CURRENT < 5 A |
| (20) | "PITOT HEATING",
"STATIC HEATING" | - "ON" JUST PRIOR TAKE-OFF (TO IMC
CONDITION FLIGHT) |

CAUTION:

AVOID COMMENCE IFR OR NIGHT FLIGHT WHENEVER THE BATTERY RECHARGING CURRENT AT 2000 R.P.M. ENGINE SPEED EXCEEDS 5A (BATTERY IS DISCHARGED).

NOTES:

- (1) To shorten the BEFORE TAKE-OFF procedure and avoid possible delays at take-off it is strongly recommended to check the battery capacity according to step (19) during engine ground check and taxiing. Only short recheck before take-off is then necessary.
- (2) If the battery capacity is found to be too-low by this check (the recharging current is higher than 5 Amps.), prolong the ground run at 2000 R.P.M. to recharge the battery until the current limitation is complied with. Observe carefully other engine limitations!

4.9.8 Take-off

- | | |
|-------------------------|--|
| (1) Throttle control | - PUSH SMOOTHLY FULL |
| (2) Brakes | - RELEASE (IF IS APPLIED) |
| (3) Control stick: | - NEUTRAL
- PULL TO LIFT THE NOSE AT 51 - 57 knots
(95 - 105 km/h) |
| (4) Unstick | - AT 57 - 65 knots (105 - 120 km/h) |
| (5) Acceleration | - UP TO 70 knots (130 km/h) IN CATEGORY A, U
- 73 knots (135 km/h) IN CATEGORY N |
| (6) Climbing | - SHMOOTLY STABILISE:
AT 78 knots (145 km/h) IN CATEGORY A, U
AT 81 knots (150 km/h) IN CATEGORY N |
| (7) Brakes | - APPLY |
| (8) Wing flaps | - RETRACT AT SAFE ALTITUDE |
| (9) Trim | - AS NECESSARY |
| (10) "FUEL PUMP" switch | - "OFF" |
| (11) Fuel pressure | - CHECK |

CAUTION:

- (1) AVOID BRAKING THE WHEELS AFTER TAKE-OFF FROM THE SLUSH OR SNOW-COVERED AIRFIELD AT TEMPERATURES CLOSE TO OR BELOW FREEZING POINT. THE SNOW/SLUSH PARTIALLY MELTED ON HOT BRAKES BODIES MAY FREEZE AGAIN DURING THE REST OF FLIGHT AND BLOCK THE WHEELS FOR LANDING.
- (2) LEAN THE MIXTURE APPROPRIATELY FOR TAKE-OFF FROM THE AIRFIELD WITH THE PRESSURE ALTITUDE ABOVE 4920 ft (1500 m) FOR REACH OF MAX. ENGINE POWER.
- (3) ONLY AFTER OBTAIN OIL OPERATION TEMPERATURE PERFORM THE TAKE-OFF.

NOTE:

To achieve the take-off performance shown in Section 5, apply brakes at opening the full throttle and them only after max. engine speed/power is reached.

4.9.9 Climb

- | | | |
|-----|--------------------|--|
| (1) | Propeller control | - PUSH "MAX" (2700 R.P.M.) |
| (2) | Throttle control | - PUSH "FULL" |
| (3) | Engine instruments | - CHECK |
| (4) | Mixture control | - PUSH "RICH" OR AS NECESSARY |
| (5) | Trim | - AS NECESSARY |
| (6) | Airspeed | - MAINTAIN THE AIRSPEED V_y ACCORDING TO SECTION 5.37 F2) |

CAUTION:

ENRICH THE MIXTURE OR INCREASE THE AIRSPEED, SO THAT TEMPERATURES WAS IN SPECIFIED RANGE OR TEMPORARILY INTERRUPT THE CLIMBING WHENEVER THE "CHT" OR OIL TEMPERATURE REACH THE LIMITS.

NOTE:

Lean the mixture when climbing above 4920 ft (1500 m) ISA.

4.9.10 Cruising

- | | | |
|-----|--|------------------------|
| (1) | Engine power setting
(at sea level) | - SEE FOLLOWING TABLE: |
|-----|--|------------------------|

Power setting		Max. continuous MC	Cruising PC (75% MC)	Economy EC (65% MC)
Engine speed (R.P.M.)		2700	2450	2350
Manifold pressure	in.Hg	Max.	24,3	22,9
	kPa	Max.	82	78
Altitude nominal ISA	ft ISA	-	5000	7000
	m ISA	-	1500	2150

- | | | |
|-----|----------------------|------------------------------------|
| (2) | Engine instruments | - CHECK |
| (3) | Mixture control: | |
| | - above 75% MC power | - PUSH MAX. "RICH" |
| | - below 75% MC power | - LEAN ACCORDING TO SECTION 4.13.2 |
| (4) | Trim | - AS NECESSARY |
| (5) | Fuel valve | - "L+R" (BOTH TANKS) |

NOTE:

Select "L" or "R" as necessary, if the difference of fuel quantity between L.H. and R.H. auxiliary tank exceeds 15 litres (4 U.S.gal.). A difference between fuel levels in tanks can arise, for example during longer sideslip flight.

CAUTION:

THE DIFFERENCE MORE THAN 15 LITRES (4 U.S.gal.) AFFECT THE FLIGHT CHARACTERISTIC.

4.9.11 Descent

- | | | |
|-----|-------------------|----------------|
| (1) | Mixture control | - AS NECESSARY |
| (2) | Throttle control | - AS NECESSARY |
| (3) | Propeller control | - AS NECESSARY |
| (4) | Trim | - AS NECESSARY |

CAUTION:

MAINTAIN THE MINIMUM "CHT" ON 93 °C (200 °F) DURING DESCENT. INCREASE THE POWER AND "CHT" WHENEVER IT DROPS BELOW 93 °C (200 °F).

4.9.12 Landing approach

- | | | |
|------|-------------------------|--|
| (1) | Airspeed | - 70-73 knots (130-135 km/h) IN CATEGORY A,U
- 73-76 knots (135-140 km/h) IN CATEGORY N |
| (2) | Mixture control | - PUSH MAX. "RICH" |
| (3) | Throttle control | - AS NECESSARY |
| (4) | Wing flaps | - "TAKE-OFF" POSITION |
| (5) | Trim | - AS NECESSARY |
| (6) | Fuel | |
| | (a) quantity | - CHECK |
| | (b) fuel valve selector | - "L+R" OR AS NECESSARY |
| (7) | "FUEL PUMP" switch | - "ON" |
| (9) | Propeller control | - PUSH "MAX" |
| (10) | Safety harnesses | - CHECK TIGHTENED |

4.9.13 Landing

- | | | |
|-----|---|--|
| (1) | Airspeed | - 70-73 knots (130-135 km/h) IN CATEGORY A, U
- 73-76 knots (135-140 km/h) IN CATEGORY N |
| (2) | Flaps | - "TAKE-OFF" OR "LANDING" POSITION
(according to wind speed and pilot's decision) |
| (3) | Trim | - AS NECESSARY |
| (4) | Flare-out: | |
| | (a) start | at about 23 ft (7 m) above the ground |
| | (b) finish | at less 3 ft (1 m) above the ground |
| (5) | Touch-down | - PULL GENTLY TO DECREASE SPEED
- TOUCH ON THE MAIN LANDING GEAR AT:
- 57 knots (105 km/h) IN CATEGORY A, U
- 62 knots (115 km/h) IN CATEGORY N |
| (6) | Delay nose wheel touchdown until the speed drops to 51 - 57 knots (95 - 105 km/h). | |
| (7) | Brakes | - APPLY IF NECESSARY BELOW 55 knots
(100 km/h) |

4.9.14 Balked landing

- | | | |
|-----|--|---|
| (1) | Propeller control | - PUSH "MAX" |
| (2) | Throttle control | - PUSH "MAX" |
| (3) | Climb-accelerate to min. IAS | - 70-73 knots (130-135 km/h) IN CATEGORY A, U
- 73-76 knots (135-140 km/h) IN CATEGORY N |
| (4) | Wing flaps | - "TAKE-OFF" POSITION |
| (5) | Airspeed | - 78 knots (145 km/h) IN CATEGORY A, U
- 81 knots (150 km/h) IN CATEGORY N |
| (6) | Wing flaps at safe altitude and airspeed | - "RETRACTED" POSITION |

4.9.15 After landing

- | | | |
|-----|--|---------------|
| (1) | Wing flaps | - "RETRACTED" |
| (2) | "FLIGHT INSTR.", "FUEL PUMP",
"PITOT HEATING",
"STATIC HEATING" switches | - "OFF" |

4.9.16 Engine stopping

- | | | |
|-----|--|--|
| (1) | "COM/NAV 1, 2",
"FLIGHT INSTR.",
„LIGHTING“ switches | - "OFF" |
| (2) | Throttle control | - IDLING (ENGINE COOLING) |
| (3) | Mixture control | - PULL "MAX. LEAN" (UNTIL ENGINE STOPPING) |
| (4) | Ignition switch - POSITION | - "OFF" (AFTER ENGINE STOPPING) |
| (5) | Circuit switches | - "OFF" |
| (6) | MASTER SWITCH | - "OFF" |

CAUTION:

THE "COM/NAV 1", "COM/NAV 2", "FLIGHT INSTR." AND „LIGHTING“ MUST BE "OFF" BEFORE ENGINE STOPPING. DAMAGE TO ELECTRONIC PARTS OF AVIONICS AND INSTRUMENTS BY TRANSIENT VOLTAGE PEAKS MIGHT OCCUR.

4.9.17 Aircraft abandon

- | | | |
|-----|---|---|
| (1) | Ignition switch - POSITION | - CHECK "OFF" |
| (2) | MASTER SWITCH
Other circuit switches | - CHECK "OFF" |
| (3) | Fuel selector valve | - "L.H." OR "R.H." BETWEEN FLIGHTS OR SHORT PARKING
- "OFF" BEFORE LONG PARKING PERIOD |
| (4) | Parking brake | - APPLY (AS NECESSARY) |
| (5) | Control stick lock | - ENGAGE |
| (6) | Cockpit canopy and cockpit light | - COCKPIT LIGHTING "OFF"
- CLOSE, LOCK IF NECESSARY |

NOTES:

- (1) Control stick lock:
Engage the control stick by locking latch.
- (2) Do not leave the fuel selector valve in position "L+R" not even during short parking; in this case use either "L" or "R" position.
At full auxiliary tanks and relatively low lateral bank of the airplane at ground, the fuel will overflow to lower tank and spill out from air-venting system when the selector is in "L+R" position.

4.9.18 Night flights

Following procedures complete the ones contained in previous paragraphs.

4.9.18.1 After entering the cockpit

After "MASTER SWITCH" and "BATTERY", "GENERATOR", "ENGINE INSTR.", and "FLIGHT INSTR." Circuit switches continue:

- | | | |
|-----|--|--|
| (1) | "LIGHTING" switch | - "ON"
- CHECK INSTRUMENT AND CONTROLS LIGHTING |
| (2) | Dimmers | - CHECK AND ADJUST REQUIRED INTENSITY |
| (3) | "BEACON" switch | - "ON", CHECK FUNCTION |
| (4) | Auxiliary map light | - CHECK FUNCTION, ADJUST |
| (5) | "POSITION LIGHTS" switch | - "ON", CHECK FUNCTION
- "OFF" AS NECESSARY |
| (6) | "TAXI LIGHT" switch | - "ON", CHECK FUNCTION
- "OFF" |
| (7) | "LANDING LIGHT" switch | - "ON", CHECK FUNCTION
- "OFF" |
| (8) | "STROBE LIGHTS" switch
(if installed) | - "ON", CHECK FUNCTION
- "OFF" AS NECESSARY |

NOTE:

Use map light (if installed) for cockpit lighting during this check. The map light is turned "ON" by the switch located directly on the light body.

The "MASTER SWITCH" need not be "ON" for activation of the map light.

4.9.18.2 Before taxiing

- | | | |
|-----|--------------------------|--------------|
| (1) | "POSITION LIGHTS" switch | - "ON" |
| (2) | "TAXI LIGHT" switch | - "ON" |
| (3) | "BEACON" switch | - "ON" CHECK |

4.9.18.3 Before take-off

- | | | |
|-----|------------------------|----------------------------|
| (1) | "STROBE LIGHTS" switch | - "ON (if installed) |
| (2) | "LANDING LIGHT" switch | - "ON" JUST PRIOR TAKE-OFF |

4.9.18.4 After Take-off

- | | | |
|-----|--|---------|
| (1) | "LANDING LIGHT", "TAXI LIGHT" switches | - "OFF" |
|-----|--|---------|

4.9.18.5 Landing

- (1) "LANDING LIGHT", "TAXI LIGHT" switches - "ON"

4.9.18.6 After landing

- (1) "LANDING LIGHT" switch - "OFF"
- (2) "STROBE LIGHT" switch - "OFF" (if installed)

NOTE:

When taxiing in vicinity of another airplane or when flying in clouds - STROBE LIGHTS switch "OFF"

4.11 ENVIRONMENTAL SYSTEMS

Information necessary for the safe operation of heating and ventilation systems are listed in the individual procedures in Section 4.9.

A detailed technical description of the heating and ventilation systems is described in the Chapter 7 of this manual (Section 7.43).

4.13 OTHER NORMAL PROCEDURES

4.13.1 Flight manoeuvres in category "A" and "U"

The flight manoeuvres, described in Section 2, paragraph 2.17.1, may be carried out with Z 242 L airplane in category "A" or "U" configuration.

Individual approved manoeuvres may be carried out in arbitrary order and combinations with single pilot or two occupants-crew and respecting all operational limitations stated in Section 2, see subsect. **2.13.1, 2.15.1, 2.19, 2.25, 2.25.3, 2.29. 2.3, 2.37.1.**

4.13.1.1 Preflight check

- | | | |
|-----|---------------------------------------|-----------------------------------|
| (1) | Battery | - PROPER FASTENING |
| (2) | Baggage | - REMOVE FROM BAGGAGE COMPARTMENT |
| (3) | Loosen items | - REMOVE FROM COCKPIT |
| (3) | Single flight (unoccupied right seat) | |
| | a) cushion or parachute | |
| | from the unoccupied seat | - REMOVE |
| | b) safety harnesses | |
| | from the unoccupied seat | - LOCK, TIGHTEN |
| (5) | Weight and balance | - CHECK BY SECTION 6 |
| (6) | Auxiliary tanks | - EMPTY |

CAUTION:

ACROBATIC MANEUVRES IN CATEGORY “A” AND “U” WITH FUEL IN AUXILIARY TANKS ARE **PROHIBITED!**

4.13.1.2 Check prior commencing manoeuvres in category “A” a “U”

- | | | |
|------|-----------------------------|--------------------------------------|
| (1) | Primary controls | - CHECK FUNCTION AND FREE MOVEMENT |
| (2) | Trims | - NEUTRAL |
| (3) | Fuel valve selector | - “L”, “P”, or “L+P” AS NECESSARY |
| (4) | Mixture control | - PUSH MAX. “RICH” |
| (5) | Propeller control | - PUSH “MAX” |
| (6) | Wing flaps | - “RETRACTED” POSITION |
| (7) | Canopy | - CLOSED, LOCKED |
| (8) | Seats | - ADJUSTED CHECK (PROPERLY ARRESTED) |
| (9) | Instruments: | |
| | (a) engine instruments | - CHECK, RELEVANT VALUES |
| | (b) spar pressure indicator | - MIN. 150 pa (22 p.s.i) |
| | (c) accelerometer | - RESET “0” |
| (10) | Safety harnesses | - CHECK TIGHTENED |
| | | - CHECK “LOCKED” |
| (11) | Safe altitude | - CHECK VISUALLY AND BY ALTIMETER |
| (12) | Operation airspace | - CHECK FREE |

CAUTION:

- (1) IF IS INSTALLED GIC WITH "SLAVE MODE/FREE MODE" SWITCH, SELECT BEFORE TO COMMENCE MANEUVERS IN CATEGORY "A" AND "U" SETTING "FREE MODE".
- (2) DO NOT TURN OFF GYROINSTRUMENTS BEFORE ACROBATICS, IF THEY AREN'T EQUIPPED WITH "PERMANENT ARRESTMENT".
- (3) AFTER EXECUTION OF MANEUVRRES IN CATEGORY "A" AND "U" HAS FINISHED, CHECK GYRO INSTRUMENTS FOR A CORRECT FUNCTION. IF ATTITUDE GYRO IS NOT EQUIPPED WITH THE "QUICK ERECT" FUNCTION, DO NOT ENTER INTO IMC CONDITIONS FOR AT LEAST 10 MINUTES AFTER FINISHING THESE MANEUVRRES.
- (4) SELECT A SAFE ALTITUDE TO COMMENCE MANEUVERS IN CATEGORY "A" AND "U" TO ENSURE THAT RECOVERY IS FINISHED AT MINIMUM ACCEPTABLE ALTITUDE, DEPENDING ON PILOT'S EXPERIENCE AND APPLICABLE OPERATIONAL REGULATIONS REQUIREMENTS.

4.13.1.3 Practice of spins and stalls

A. Normal spin entry

- | | |
|----------------------|--|
| (1) Wing flaps | - "RETRACTED" POSITION |
| (2) Mixture control | - PUSH MAX. "RICH" |
| (3) Throttle control | - PULL IDLING |
| (5) Elevator | - DECLINE SPEED SLOWLY AT
- 65 knots (120km/h) |
| (6) Rudder | - FULL DEFLECTION WITH REQUIRED TO THE
DIRECTION OF ROTATION
- MAINTAIN FULL DEFLECTION |
| (7) Elevator | - AFTER REACTION OF AIRCRAFT ON (6), PULL
THE CONTROL STICK IMMEDIATELY,
AILERONS IN NEUTRAL POSITION. |

B. Normal spin recovery

- | | |
|---|--|
| (1) Rudder | - FULL DEFLECTION AGAINST TO THE
DIRECTION OF ROTATION |
| (2) Elevator | - IMMEDIATELY AFTER FULL
COUNTERACTION OF RUDDER PUSH
SMOOTHLY CONTROL STICK MINIMALLY TO
HALF OF THE TRAVEL BETWEEN NEUTRAL
AND FULL FORWARD WITHIN 1 - 2 SEC.,
AILERONS IN NEUTRAL POSITION |
| (3) Ailerons | - DURING (2) MAINTAIN IN NEUTRAL POSITION |
| (4) After rotation has stopped:
(a) Rudder
(b) Elevator | - NEUTRAL POSITION
- PULL STEADILY CONTROL STICK TO
RECOVER AIRCRAFT FROM DIVING |
| (5) Throttle | - AS NECESSARY |

WARNING:

- (1) DURING SPIN ENTERING AND SPINNING KEEP CONTROL STICK IN FULL PULL POSITION.
- (2) THERE IS A RISK OF ENGINE CUT-OFF AT SPINNING WITH LEAN MIXTURE.
- (3) DURING ELEVATOR PUSHING AT SPIN RECOVERY THE CONTROL FORCE PEAK MAY REACH THE UPPER LIMIT 250N IF THE ACTION IS MORE "DYNAMIC" THAN RECOMMENDED. IF ELEVATOR PUSHING IS TOO SLOW, MORE ADDITIONAL TURNS MAY BE EXPECTED.
- (4) UNLESS THE DESCRIBED RECOVERY PROCEDURE IS FOLLOWED MORE ADDITIONAL TURNS AND INCREASED ALTITUDE LOSS MAY BE EXPECTED.
- (5) IF THE PROCEDURE SPECIFIED FOR SPIN RECOVERY IS NOT COMPLIED WITH, THE RECOVERY MAY BE RATHER DELAYED. IN THIS CASE RETURN THE ELEVATOR AND RUDDER CONTROL TO THE POSITION CORRESPONDING TO THE SPIN ENTRY AND REPEAT SPIN RECOVERY.

NOTES:

- (1) At correct recovery procedure one or less additional turn after one spin turn and less than one and half additional turn after more spin turns are considered as normal.
- (2) During spinning the autorotative motion is characterised by a progressive increase of angular velocity up to 180° per second in the 3rd turn, when the spinning is stabilised.
- (3) During spin recovery after two and more turns, it is recommended to use both hands to push the control stick.
- (4) Altitude loss following a spin recovery:

1 turn before recovery approx.	1150 ft (350 m) - category A, U
3 turn before recovery approx.	1650 ft (550 m) - category A, U
6 turn before recovery approx.	2300 ft (700 m) - category A, U

C. Inverted spin recovery

- (1) Mixture control - PUSH MAX. "RICH"
- (2) Throttle control - PULL IDLING
- (3) Rudder - FULL DEFLECTION AGAINST TO THE DIRECTION OF ROTATION
- (4) Elevator - PULL THE CONTROL STICK SIMULTANEOUSLY OR IMMEDIATELY AFTER APPLYING THE RUDDER
- (5) After rotation has stopped:
 - (a) Rudder - NEUTRAL POSITION
 - (b) Elevator - PULL STEADILY CONTROL STICK TO RECOVER AIRCRAFT FROM DIVING

D. Unintentional spin recovery

- | | | |
|-----|---|--|
| (1) | Mixture | - PUSH "MAX. RICH" |
| (2) | Throttle | - PULL IDLING |
| (3) | Wing flaps | - "RETRACT" POSITION (if extended) |
| (4) | DEFINE POSITION AND DIRECTION OF ROTATION | |
| (5) | Rudder | - FULL DEFLECTION AGAINST TO THE DIRECTION OF ROTATION |
| (6) | Elevator: | |
| | a) At normal spin | - PUSH |
| | b) At inverted spin | - PULL |
| (7) | After rotation has stopped | - RECOVER THE AIRCRAFT FROM DIVING |
| (8) | Throttle | - AS NECESSARY |

NOTE:

Increased engine power (up to full throttle) does not inappropriately affect recovery from stalls and spins in any case.

E. Errors in spins recovery

Typical errors in Spin Recovery are:

- (1) Use the ailerons during entry, at spin and spin recovery.
- (2) Inadequate or slow the use of the rudder and/or elevator during spin recovery.
- (3) Reversed order of rudder and elevator application (first elevator and then rudder). In this case autorotation does not stop.

F. Stall prevention

- | | | |
|-----|------------------|---|
| (1) | Warning | - AUDIO VARNING HORN IS "ON" min.
5 knots (9 km/h) ABOVE STALL SPEED |
| (2) | Control stick | - PUSH AS REQUIRED (TO INCREASE SPEED) |
| (3) | Ailerons, Rudder | - CONTROL BANK AND YAW AS NECESSARY
The procedure is the same for both wing level and turning flight stalls. |

G. Stall maneuvers

- | | | |
|-----|------------------|---|
| (1) | Mixture control | - PUSH "RICH" |
| (2) | Throttle control | - PULL IDLE |
| (3) | Airspeed | - 81 knots (150 km/h)
- DECREASE BY GENTLE STICK PULLING BY
1 knots (2 km/h) UNTIL STALL OCCURS |

NOTE:

Depending upon the loading conditions the stall may be indicated by the uncontrolled downward pitching of the airplane nose, or by a minimum airspeed condition when reaching the elevator stop.

- | | | |
|-----|---------------------|--|
| (4) | Elevator | - PUSH TO REGAIN CONTROLLABILITY |
| (5) | Ailerons and rudder | - CORRECT BANK AND YAW DURING RECOVERY |
| (6) | Throttle control | - AS NECESSARY |

NOTES:

- (1) The stall maneuver procedure is similar for wing-level and turning stalls.
- (2) The stall-warning horn is activated 5 -10 knots (9 -18 km/h) above the stall speed.

H. Tail slide - entry and recovery

- | | | |
|-----|---|------------------------------------|
| (1) | Mixture | - PUSH "RICH" |
| (2) | Airspeed | - MIN. 119 knots (220 km/h) |
| (3) | BRING THE AIRCRAFT INTO VERTICAL CLIMBING | |
| (4) | Control stick has climb stopped: | |
| | a) Tail slide forward | - FULLY PULL |
| | b) Tail slide backward | - FULLY PUSH |

WARNING:

HOLD THE CONTROL STICK (AILERONS) AND PEDAL CONTROL (RUDDER) FIRMLY IN NEUTRAL POSITION.

- | | | |
|-----|--|-----------------|
| (5) | After the aircraft nose part is titled under the horizon | - TAKE THE DIVE |
|-----|--|-----------------|

4.13.2 Throttle and mixture control setting

4.13.2.1 Throttle control

All throttle control movements should be gentle and continuous.

4.13.2.2 Mixture control

- (1) During engine ground check, take-off, climb, maneuvering and cruising above the 75% of MC power the mixture control must be set on PUSH "MAX.RICH".
Except for take-off and following climb from airfields with pressure elevations above 4920 ft (1500 m). In this case the mixture could be adequately leaned so that the engine runs smoothly without skipping. The engine speed, temperature, pressure limitations must be observed.
Lean the mixture at cruising power setting only at and below 75% MC.
- (2) At OAT above the ISA value pressure altitude is higher than corresponding airfield elevation. In case this pressure altitude is above 4920 ft (1500 m) the mixture should be leaned to reach the best available engine power for safety take-off.
- (3) Before increasing engine power by change of throttle the mixture control must be set "RICH" first.
- (4) Lean the mixture at cruising power setting only at and below - 75% MC:
 - a) Without EGT indicator
 1. Slowly pull the mixture control from the "MAX. RICH" to "LEAN" position backwards until a drop in engine power observed. (It need not be accompanied by engine roughness).
 2. Push the mixture control forward until the maximum power is regained and engine runs smoothly. Check the engine temperatures frequently.
 - b) With EGT indicator
 1. Slowly pull the mixture control from the "MAX. RICH" position until the EGT reaches the maximum value and starts to drop again. (The white "asterisk" should indicate the maximum EGT at cruising below 75 % MC).
 2. To reach the max. power (speed) push the mixture control slowly forward until the EGT again drops by about 100°F (50°C) below the indicated maximum.
To reach the maximum economy (endurance) "B.E." leave the mixture control in position corresponding to the maximum EGT or to 50°F (25°C) below this maximum value adjusted by pulling the control in LEAN direction. Check frequently the CHT and oil temperature.
 - c) Using fuel consumption gauge

Move slowly with mixture control handle from rich to lean position, till:

 1. To achieve the max. power (range) with 75% take-off power (150HP/110kW, 2450 R.P.M.) and manifold pressure 24.3 in.Hg at altitude 5400 ft (1650 m) ISA the pointer of the consumption gauge is set to the upper mark, i.e. 46.5 l/h; to achieve the maximum economy (endurance) the pointer of the consumption gauge is set to the centre mark, i.e. 39 l/h.
 2. To achieve the max. power (range) with 65% take-off power (130 HP/95.7 kW, 2350 R.P.M. and manifold pressure 22.9 in.Hg at altitude 1640 ft (500 m) ISA or 21.4 in.Hg at altitude 7900 ft (2400 m) ISA the pointer of the consumption gauge is set to the centre mark, i.e. 39 l/h. To achieve the maximum economy (endurance), the pointer of the consumption gauge is set to the lower mark i.e. 33 l/h. Check cylinder head and oil temperatures.

The difference in fuel consumption between these mixture settings may be up to 10%.

NOTES:

Pressure altitude, accordant with 4920 ft (1500 m), depending on OAT, see diagram in section 5 of this AFM.

To achieve the take-off performance shown in Section 5, apply brakes at opening the full throttle and then only after max. engine speed/power is reached.

4.13.2.3 Directions for operating the parking brake

BRAKING

- | | | |
|-----|---------------------------------|--|
| (1) | Toe L.H. (pilots) brake pedals | - TREAD SIMULTANEOUSLY DOWN FULLY |
| (2) | Parking brake control | - PULL TO SET |
| (3) | Toe L.H. (pilot's) brake pedals | - TREAD SIMULTANEOUSLY DOWN FULLY
CHECK: TREAD DOWN |

BRAKE RELEASE

- | | | |
|-----|--------------------------|---|
| (1) | Parking brake control | - TURN OFF BY ROTATING THROUGH 90°
- PUSH |
| (2) | Toe L.H. (pilot's) brake | - TREAD SIMULTANEOUSLY DOWN FULLY
TWICE,
- pedals RELEASE |

WARNING:

- 1) DO NOT TOE THE BRAKE PEDALS ON THE RIGHT PILOT SEAT SIDE WHEN THE PARKING BRAKE IS ENGAGED. THE ARRESTING MECHANISM OF THE PARKING BRAKE COULD BE DAMAGED.
- 2) UTILISE PARKING BRAKE ONLY FOR SHORT-TIME PARKING PERIOD. IT IS RECOMMENDED TO SECURE THE AIRPLANE FOR LONGER PARKING, WITHOUT PARKING BRAKE ENGAGED. THERE IS RISK OF PARKING BRAKE BLOCKING BY FREEZING AT "OAT" CLOSE TO THE FREEZING POINT.

4.15 NOISE CHARACTERISTICS

The aircraft satisfies without decrease in power specifications with FAR PART 36 an ICAO Annex 16 Catch 10 of noiseworthiness.

Z 242 L aircraft average noise level:

- a) 79,36 dB(a) in accordance FAR PART 36 as amended through Amdt. 23-20 incl.
- b) 80,56 dB(a) in accordance ICAO Annex 16 Catch 10.