Name: _____ Date: _____

Ruschmeyer R90 - 230 RG

ICAO type: R90R

written examination for the conversion training

Documents

CoA, ARC, CoR, BAR, noise certificate, insurance papers, flight manual and aircraft status log can be found in the document compartment on the central console. For safety, pilots shall use the "aircraft status log" to document any irregularities found.

General

The approved fuel grades and colors are _____

Maximum usable fuel capacity is _____ liter

Where are the fuel drains situated? _____

Max. oil capacity is _____ quarts

Min. safe oil quantity is _____ quarts

Oil operating range is _____ quarts

What is the oil type used (all seasons)? _____

What is the nose wheel tire pressure? _____ PSI or _____ bar

What is the main wheel tire pressure? _____ PSI or _____ bar

What is the max. mass for take off and landing? _____ kg

What is the max. load in the baggage compartment? _____ kg

Limitations

What are the following airspeed limitations?

V_{NE} Never Exceed _____ KIAS

V_{NO} Max. Structural Cruising _____ KIAS

V_{LE} Max. Landing Gear Extended _____ KIAS

V_{LO} Max. Landing Gear Operating _____ KIAS

V_A Maneuvering _____ KIAS

V_{FE} Max. Flap Extended Speed _____ KIAS

Max. demonstrated crosswind component for landing _____ kts

What is the max. MAP

at 1800 RPM _____ "Hg

at 1900 RPM _____ "Hg

at 2000 RPM _____ "Hg

at 2100 RPM _____ "Hg

at 2200 .. 2400 RPM _____ "Hg

What is the max. angle of bank? _____

What is the max. permissible difference between left tank and right tank? _____ liter

Is it OK to lean the mixture with the MAP in the yellow arc? _____

Procedures

Describe the "cold starting" procedure:

_____

_____

_____

Describe the "hot starting" procedure:

_____

_____

_____

Describe the "flooded engine" procedure:

_____

_____

_____

What is the correct fuel flow during take off? _____ lit/h

What is the minimum altitude for stall demonstrations? _____ ft **AGL**

What is the min. CHT during descent? _____ °C (lower end of _____ arc)

What is the best rate of climb speed? V_Y = _____ KIAS

What is the best angle of climb speed? V_X = _____ KIAS

Describe the fuel leaning procedure

_____

_____

_____

Describe the landing speed, configuration and procedure

_____

_____

When should you "push the airplane to the ground"? _____

Describe the "go-around" procedure _____

_____

_____

How do you check for correct cowl flaps operation? _____

_____

What is the gear retraction procedure after take off from slush?

_____

_____

Performance

What is the stall speed with flaps retracted? _____ KIAS

What is the stall speed with full flaps? _____ KIAS

What is the normal approach speed? _____ KIAS

What are the ground roll (_____ m) and the take off distance (_____ m) for the following situation: field elevation 2500 ft, OAT 25°C, QNH 983 hPa, ATIS headwind component 30 kts, TOW 1350 kg?

What are the ground roll (_____ m) and TOD (_____ m) in the same situation as before, but with a wet, grass runway?

What will be the max. climb rate? _____ ft/min.

What will be the landing distance with 15 m high trees just before a runway of dry grass?

What is the fuel flow when cruising at 75% power, at FL 60, OAT according to ISA? _____ lit/h. What is the appropriate engine setting? _____ "Hg, _____ RPM. What is the corresponding TAS? _____ kts

What is the fuel flow when cruising at 45% power, at 3000 ft, QNH 1043 hPa, OAT 10°C? _____ lit/h. What is the appropriate engine setting? _____ "Hg, _____ RPM. What is the corresponding TAS? _____ kts

What is the range when starting at 1350 kg, cruising at FL 100, OAT 5°C, 2200 RPM, 19"Hg, 17 kts headwind component? _____ NM

Weight and balance

Using the latest weighing report, what are the limitations for yourself and two 80 kg passengers with 30 kg of baggage? _____ (make a M&B chart!)

Emergencies

Some emergencies require immediate actions since every second counts. They include:

- smoke and fire situations
- engine failure
- fuel-system failure
- flight into ice or severe turbulence
- unintended stall/spin

Learn the necessary immediate actions by heart.

The checklist will help to *verify* you *did* do the right thing in the (possibly literal) heat of the moment.

Other emergencies just require you to pick up the checklist and do as proscribed. Even then it will help to be more than just familiar…

Systems

Some systems that are often used will be explained during practical training. They include:

- use of fuel computer; adding fuel (full/partial)
- use of RPM indicator; logging, run-up, magnets operation
- use of GPS

Conversion checklist - FLIGHT INSTRUCTION

To be filled in by flight instructor

- Passenger's briefing
- Preflight
- Taxiing
- Starting
- Take off, climb, cruise
  - std take off
  - short field procedure
  - cruise 120 kts
  - cruise 140 kts
  - leaning procedures
- Air work
  - steep turn
  - slow flight 80 kts
  - full stall in clean configuration
  - approach to stall in the landing configuration
- Descent and traffic patterns
  - normal circuit
  - flapless circuit
  - glide-in
- Instrument procedures
- After landing
- Post flight
  - use of parking brake
  - cleaning of outer surfaces
  - wing tie down hook-up
- Emergencies
  - emergency gear extension
  - emergency landing
  - simulated engine failure after take off
  - electrical fire
  - engine fire
  - emergency descent
  - other emergencies...
- Insurance policy and conditions
- "Gebruikersovereenkomst" signed