Checklist Diamond DA-20
D-ECPU

Based on Doc #DA202-VLA

Versie 1.0

1 Before engine start checklist

1	Preflight inspection	- completed
2	Circuit breakers	- checked and in
3	Rudder pedals	- adjusted
4	Seat belts	- fastened
5	Parking brake	- set
6	Canopy	- closed and locked (2x)

2 Engine start checklist

1	Master switch	- on
2	Generator light	- on
3	Fuel pressure light	- on
4	Fuel shut-off valve	- open
5	Fuel booster pump	- on (noise of pump audible)
6	Fuel pressure light	- off
7	Strobe lights	- on
8	Carburator heat	- off
9	Propeller	- high RPM
10	Outside	- clear
11	Engine cold - Throttle	- closed
	- Choke	- on
	Engine warm - Throttle	- approximately 1 cm forward
	- Choke	- off
12	Magnetos	- start (max 10 sec) than both
13	Throttle	- 1000 RPM (max 1500 till oil temp in green arc)
14	Oil Pressure	- green range within 10 sec
15	Choke	- off
16	Fuel (booster) pump	- off
17	Warning lights	- off
18	Avionics switch	- on
19	Flight instruments	- checked and set
20	Avionics	- checked and set
21	Flaps	- checked and up

3 Taxi-out checklist

1	Brakes	- checked
2	Gyro's and compass	- checked

4 Engine Run-up checklist

1	Parking brake	- set
2	Throttle	- 1000 RPM
3	Oil temperature	- in green arc
4	Outside	- clear
5	Throttle	- 1800 RPM
6	Friction	- set
7	Magnetos	- Cycle R-BOTH-L-BOTH (Max RPM drop: 150 RPM) (Max RPM diff. (L/R): 50 RPM)
8	Carburetor Heat	- checked then off
9	Propeller Speed Control Lever	- Cycle 3 times (RPM drop: 50-250 RPM)
10	Engine instruments	- checked
11	Throttle	- idle (less then 700 RPM with carburetor heat on)
12	Throttle	- 1000 RPM

5 Before take-off checklist

1	Canopy	- closed and locked (3x)
2	Seat belts	- fastened
3	Fuel pump	- on
4	Magnetos	- both
5	Carburetor heat	- off
6	Fuel Shut-off Valve	- open
7	Flaps	- t/o set
8	Propeller	- high rpm
9	Flight controls	- free and correct
10	Trim	- t/o set
11	Parking brake	- off

STANDARD SPEEDS

Vr		51 kts
Vx	Flaps in T/O	60 kts
Vy	Flaps in T/O	65 kts
Vy	Clean	70 kts
Va	Max gross	104 kts
V best glide	Flaps in T/O	70 kts
	Max x-wind	15 kts
NORMAL CIRCUIT		
	Downwind, Base, Final	80 kts / 70 kts / 60 kts
FLAPLESS CIRCUIT		
	Downwind, Base, Final	80 kts / 75 kts / 70 kts

6 Runway items checklist

1	Transponder	- alt
2	Landing light	- on

7 After Take-off checklist

1	Above 200 ft	
	Flaps	- up
	Throttle	- full (-1 inch)
	Propeller	- 2400 RPM
2	Leaving circuit	
	Fuel pump	- off
	Landing light	- off

8 Cruise checklist

1	Throttle	- cruise settings
2	Propeller	- 1900-2400 RPM

9 Downwind checklist

1	Fuel pump	- on
2	Landing light	- on
3	Magnetos	- both
4	Carburetor Heat	- on
5	Engine instruments	- checked
6	Fuel quantity	- checked
7	Brakes	- checked
8	Seat belts	- fastened

10 Final checklist

1	Propeller	- high RPM
2	Flaps	- set
3	Carburetor Heat	- off

11 After Landing checklist

1	Fuel pump	- off
2	Landing light	- off
3	Flaps	- up
4	Carburator heat	- off
5	Transponder	- standby

12 After parking checklist

1	Parking brake	- set
2	Throttle	- 1000 RPM for 1 minute and than idle
3	Avionics switch	- off
4	All electrical switches	- off, strobe light on
5	Magnetos	- off, remove key
6	Master switch	- off

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AIRSPEED DURING EMERGENCY PROCEDURES

Engine failure after take-off, flaps in T/O position		60 kts
Manoeuvring Speed		104 kts
Airspeed for best glide angle		
Wing flapsT/O position	1609 Lbs (730 Kg)	72 kts
Wing flapsT/O position	1322 Lbs (600 Kg)	66 kts
Precautionary Landing (with power, flaps landing)		57 kts
Emergency landing (engine off, flaps T/O or LDG)		57 kts
Emergency landing (engine off, flaps up)		65 kts

1 Engine Failure

DURING TAKE-OFF RUN

1 Throttle - IDLE
2 Brakes - as required

AFTER TAKE-OFF

1 Airspeed - 60 kts
2 Throttle - FULL
3 Carburetor Heat - ON
4 Choke - OFF
5 Fuel Shut-off Valve - OPEN
6 Ignition Switch - BOTH
7 Electric Fuel Pump - ON
8 Propeller Speed Control Lever - max. RPM
shortly before landing
9 Fuel Shut-off Valve - CLOSED
10 Ignition Switch - OFF
11 Master Switch (Battery) - OFF

ENGINE RUNNING ROUGHLY

1 Carburetor Heat - ON
2 Electric Fuel Pump - ON
3 Ignition Switch - cycle L - BOTH - R - BOTH
4 Throttle - at present position
5 No improvement? - reduce throttle to minimum required power, land as soon as possible.

LOSS OF OIL PRESSURE

1 Oil temperature - CHECK
2 If oil pressure drops below Green Arc but Oil temperature is normal. - Land at nearest airfield

If oil pressure drops below Green Arc and Oil temperature is rising - reduce power to minimum required power. Land as soon as possible. Be prepared for engine failure and emergency landing.

LOSS OF FUEL PRESSURE

1 Electric Fuel Pump - ON, and land on nearest suitable airport
2 If Fuel Oressure Warning Light does not extinguish - Land at nearest suitable airport. Be prepared for engine failure and emergency landing.

RESTARTING THE ENGINE WITH PROPELLER WINDMILLING

1 Airspeed - 70 kts
2 Wing Flaps - T/O position
3 Propeller Speed Control Lever - max. RPM
4 Fuel Shut-off Valve - OPEN
5 Ignition Switch - BOTH
6 Electric Fuel Pump - ON
7 Throttle - 3/4 Inch (2 cm) forward
if the engine does not start within 10 seconds: Cold Start
8 Throttle - IDLE
9 Choke - ON (pulled)
10 Ignition Switch - START

RESTARTING THE ENGINE WITH PROPELLER AT FULL STOP

1 Electrically Powered Equipment - OFF
2 Master Switch (battery) - ON
3 Propeller Speed Control Lever - max. RPM
4 Fuel Shut-off Valve - OPEN
5 Electric Fuel Pump - ON
6 Throttle Cold St - IDLE
Warm Start - 3/4 in (2 cm) forward
7 Choke Cold St - ON (pulled)
Warm Start - OFF
8 Ignition Switch - START
After succesful re-start
9 Oil Pressure - CHECK
10 Choke - OFF
11 Electrically Powered Equipment - ON if required
12 Oil Temperature - CHECK

2 Emergency Landing

EMERGENCY LANDING APPROACH WITH ENGINE OFF

1 Airspeed (Flaps in T/O or LDG - 57 kts
(Flaps UP) - 65 kts
2 Fuel Shut-off Valve - CLOSED
3 Ignition Switch - OFF
4 Safety Belts - secured
5 Radio - Transmit, giving location & intentions
6 Master Switch - OFF

PRECAUTIONARY LANDING WITH ENGINE POWER AVAILABLE

1 Search for a suitable place to land. Special attention must be given to wind direction and obstacles in the approach path
2 Safety Belts - secured
3 Initiate Descent
4 Throttle - as required
5 Trim - as required
6 Wing Flaps - as required
7 Overfly selected landing area to confirm suitability and the approach route is free of obstacles
8 Climb up to 1000 ft AGL
9 Low pass over to observe any possible obstacles
10 Climb up to 1000 ft AGL
11 Radio - Transmit, giving location & intentions
12 Final Approach
Throttle - as required
Propeller Speed Control Lever - max. RPM
Carburetor Heat - ON
Electric Fuel Pump - ON
Wing Flaps - LDG
Airspeed - 57 kts
13 Touch-down is to be made with minimum airspeed, nose wheel should be kept above ground as long as possible
14 After Touch-down
Brake - as required
Fuel Shut-off Valve - CLOSED
Ignition Switch - OFF
Master Switch - OFF

3 Fire

ENGINE FIRE DURING ENGINE START-UP ON THE GROUND

1 Fuel Shut-off Valve - CLOSED
2 Throttle - FULL
3 Master Switch (battery) - OFF
4 Ignition Switch - OFF
5 Evacuate Airplane Immediately

ENGINE FIRE DURING FLIGHT

1 Fuel Shut-off Valve - CLOSED
2 Airspeed - 70 kts
3 Flaps - T/O
4 Throttle - FULL
5 Electric Fuel Pump - OFF
6 Cabin Heat - CLOSED
7 Perform emergency landing with engine off according to chapter 2

ELECTRICAL FIRE INCLUDING SMOKE DURING FLIGHT

1 Master Switch (battery) - OFF
2 Cabin Air - OPEN
3 Fire Extinguisher - use only if smoke development continues
in case the fire is extinguished and electric power is required for continuation of the flight
4 Avionics Master Switch - OFF
5 Electrically Powered Equipment - OFF
6 Master Switch (battery) - ON
7 Avionics Master Switch - ON
8 Radio - ON
9 Land as soon as possible

ELECTRICAL FIRE INCLUDING SMOKE ON THE GROUND

1 Master Switch (battery) - OFF
If engine is running
2 Throttle - IDLE
3 Fuel Shut-off Valve - CLOSED
4 Ignition Switch - OFF
5 Canopy - OPEN
6 Fire Extinguisher - deploy as required

CABIN FIRE DURING FLIGHT

1 Master Switch (battery) - OFF
2 Cabin Air - OPEN
3 Cabin Heat - CLOSED
4 Fire Extinguisher - deploy as required
5 Land as soon as possible

4 Icing

1 Leave Icing area
2 Continue to move control surfaces to maintain their moveability
3 Carburetor Heat - ON
4 Increase RPM to avoid icing of propeller blades (observe max RPM)
5 Cabin Heat - OPEN

5 Recovery from unintentional spin

1 Throttle - IDLE
2 Rudder - Fully applied opposite to direction of spin
3 Control Stick - ease forward
4 Rudder - Neutral after rotation has stopped
5 Wing flaps - UP
6 Elevator - pull cautiously

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