

SUPPLEMENT NO. 001 TO THE AIRPLANE FLIGHT MANUAL FOR THE AIRPLANE DV 20 with Rotax 912 S

NFVR - OPERATION

Doc. No.	:	4.01.20-E
Date of Issue	:	30 Jan 2013
Design Change Advisory	:	OÄM 20-267/b

This Supplement is approved by EASA under EASA Project No. 10043602.

This Airplane must be operated in compliance with the information and limitations contained herein.

Prior to operating the airplane, the pilot must take notice of all the information contained in this Supplement to the Airplane Flight Manual.

DIAMOND AIRCRAFT INDUSTRIES GMBH N.A. OTTO-STR. 5 A-2700 WIENER NEUSTADT AUSTRIA



0.1 RECORD OF REVISIONS

Revision Number	Section	Pages	Date of Revision	Remarks of Approval	Date of Approval	Date Inserted	Initials / Signature
1	All	All except Cover Page	15 Jan 2014	Revision 1 of the Supplement O01 for Doc. No. 4.01.20-E is approved by EASA under EASA Approval No. 10049477. [int. ref. OÄM 20- 267/c]			

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	Page 9-001-2



0.2 LIST OF EFFECTIVE PAGES

Section	Pages	Date
0	9 - O01 - 1	30 Jan 2013
	9 - 001 - 2	15 Jan 2014
	9 - 001 - 3	15 Jan 2014
	9 - 001 - 4	15 Jan 2014
1	9 - O01 - 5	15 Jan 2014
2	EASA-appr. 9 - O01 - 6	15 Jan 2014
	EASA-appr. 9 - O01 - 7	15 Jan 2014
	EASA-appr. 9 - O01 - 8	15 Jan 2014
	EASA-appr. 9 - O01 - 9	15 Jan 2014
3	EASA-appr. 9 - O01 - 10	15 Jan 2014
4	EASA-appr. 9 - O01 - 11	15 Jan 2014
	EASA-appr. 9 - O01 - 12	15 Jan 2014
	EASA-appr. 9 - O01 - 13	15 Jan 2014
	EASA-appr. 9 - O01 - 14	15 Jan 2014
	EASA-appr. 9 - O01 - 15	15 Jan 2014
	EASA-appr. 9 - O01 - 16	15 Jan 2014
	EASA-appr. 9 - O01 - 17	15 Jan 2014
	EASA-appr. 9 - O01 - 18	15 Jan 2014
5	EASA-appr. 9 - O01 - 19	15 Jan 2014
6	9 - 001 - 20	15 Jan 2014
7	9 - 001 - 21	15 Jan 2014
8	9 - 001 - 22	15 Jan 2014



0.3 TABLE OF CONTENTS

	0.1 0.2 0.3	RECORD OF REVISIONS 9 - 001 - 2 LIST OF EFFECTIVE PAGES 9 - 001 - 3 TABLE OF CONTENTS 9 - 001 - 4
1.	GENERA	L
	1.1	INTRODUCTION
2.	LIMITATI	ONS
	2.13	KINDS OF OPERATION
	2.15	LIMITATIONS PLACARDS
3.	EMERGE	
	3.3	EMERGENCY PROCEDURES - CHECKLISTS 9 - 001 -10
4.	NORMAL	- PROCEDURES
	4.4	NORMAL OPERATION CHECKLIST
		4.4.1 PREFLIGHT INSPECTION
		4.4.6 BEFORE TAKE-OFF
		4.4.11 LANDING APPROACH
		4.4.13 AFTER LANDING
5.	PERFOR	MANCE
6.	MASS (W	/EIGHT) AND BALANCE / EQUIPMENT LIST
7.	AIRPLAN	E AND SYSTEMS DESCRIPTION
	7.12	PITOT AND STATIC PRESSURE SYSTEMS
8.	AIRPLAN	IE HANDLING, CARE AND MAINTENANCE

SECTION 1 GENERAL

1.1 INTRODUCTION

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This Supplement O01 to the Airplane Flight Manual for the DV 20 Airplane is valid for the operation of the Airplane under NFVR conditions.

The information contained in this Supplement to the DV 20 AFM supersedes and supplements the information in the DV 20 AFM only as far as included in this Supplement. For all operating limitations, procedures and performance specifications not included in this Supplement, the DV 20 AFM remains valid.



SECTION 2 OPERATING LIMITATIONS

2.13 KINDS OF OPERATION

Approved are :

- * flights according to Visual Flight Rules (VFR)
- * flights according to Night Visual Flight Rules (NVFR)

Flights into known or forecast icing conditions are prohibited.

Flights into known thunderstorms are prohibited.

Minimum operational equipment (serviceable)

The following table lists the minimum serviceable equipment required by JAR-VLA, CRI A-09. Additional minimum equipment for the intended operation may be required by national operating rules and also depends on the route to be flown and the actual weather conditions.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-6
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	for daytime VFR flights	in addition for night VFR flights		
Flight and	* airspeed indicator	* vertical speed indicator (VSI)		
naviga-	* altimeter	* attitude gyro (artificial horizon)		
instru-	* magnetic compass	* turn & bank indicator		
ments		* directional gyro		
		* chronometer with indication of hours, minutes, and seconds		
		* VHF radio (COM)		
		* VOR receiver		
		* transponder (XPDR),		
		* 2 headsets		
engine	* fuel quantity indicator	* ammeter		
instru- ments	* oil pressure indicator	* voltmeter		
	 * oil temperature indicator 			
	 * manifold pressure indicator 			
	 cylinder head temperature indicator 			
	* tachometer			
	* fuel pressure warning light			
	 Low-Voltage caution light 			
	* generator warning light			
	* control light for coolant			
	quantity			

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	for daytime VFR flights	in addition for night VFR flights	
lighting		* position lights	
		* strobe lights (anti collision lights)	
		* landing light	
		* instrument lighting	
		* flood light	
		* flashlight	
other		for flights in conditions where the airplane	
opera-		cannot be maintained in a desired flight	
tional		path without reference to one or more	
minimum		additional instruments:	
equip-		* Pitot heating system, to prevent	
ment		malfunction of the airspeed indicating	
		system due to condensation or icing.	



2.15. LIMITATION PLACARDS

The following limitation placards must be installed:

(a) At the instrument panel:

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Maneuvering speed : V_A = 104 kts

This airplane is classified as a very light airplane approved for day and night VFR, in non-icing conditions. All aerobatic maneuvers including intentional spinning are prohibited. See Flight Manual for other limitations.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-9
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SECTION 3

EMERGENCY PROCEDURES

3.3 EMERGENCY PROCEDURES - CHECKLISTS

3.3.4. Icing

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(a) UNINTENTIONAL FLIGHT INTO ICING AREA

1.	Leave icing area (through change of altitude or change of flight	
	direction to reach area with higher outside air temperature).	
2.	Continue to move control surfaces to maintain their movability.	
3.	Carburetor Heat	ON
4.	PITOT Heat (if installed)	ON
5.	Increase RPM to avoid icing of propeller blades (observe maximum	
	RPM)	
6.	Cabin Heat	OPEN

CAUTION

In case of icing on the leading edge of the wing, the stall speed may increase.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-10
				-

SECTION 4

NORMAL OPERATING PROCEDURES

4.4. NORMAL OPERATION CHECKLIST

4.4.1. PREFLIGHT INSPECTION

I. In-Cabin Check

- (a) Airplane Documents
- (b) Check List
- (c) Parking Brake
- (d) Ignition Key
- (e) Canopy
- (f) Circuit Breakers
- (g) Master Switch (Battery)
- (h) Control Light for Coolant Quantity

check present set removed clean, undamaged pressed in ON illuminates for about 3 seconds and terminates illumination if the quantity of coolant in the dispatcher vessel is

NOTE

sufficient

In case the control light for coolant quantity does not terminate illumination, coolant in the dispatcher vessel (on top of the engine) has to be replenished. The upper cowling has to be removed to gain access to the dispatcher vessel.

WARNING

When closing the dispatcher vessel push down the pressure cap firmly in order to allow it to be held by its safety catch. Verify dispatcher vessel is securely closed!

(i)	Fuel Quantity	sufficient
(j)	Position Lights, Strobe Lights, Landing Light	check
(k)	Pitot Heat (if installed)	check
(I)	Master Switch (Battery)	OFF
(m)	Throttle	IDLE
(n)	Propeller Speed Control Lever	max RPM
(o)	Carburetor Heat	OFF
(p)	Foreign Object Inspection	done
(q)	Emergency Locator Transmitter (ELT)	AUTO
(r)	Main Bolts (see page 7-2)	secured
(s)	Baggage	stowed, baggage harness attached

II. WALK AROUND CHECK AND VISUAL INSPECTION

Visual Inspection is defined as check for defects, cracks, delaminations, excessive play, insecure or improper mounting; inspection of general condition. verification of freedom of movement of control surfaces.

1.	Left M	ain Landing Gear	
	a)	Landing Gear Strut	visual inspection
	b)	Wheel Fairing	visual inspection
	c)	Tire Pressure (2.3 bar / 33 psi)	check
	d)	Tire, Wheel, Brake	visual inspection
	e)	Skid Marks	visual inspection
2	L oft M	ling	
۷.			
	a)	Entire Wing	visual inspection
	b)	Stall Warning	check (suck on opening)
	c)	Pitot-Static Probe	clean, hole open
	d)	Wing Tip, Balancing Mass	visual inspection
	e)	Position Light, Strobe Light (ACL)	visual inspection
	f)	Mooring Harness on Wing Tip	release
	g)	Aileron	visual inspection
	h)	Wing Flap	visual inspection

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-12

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DV 20 AIRPLANE FLIGHT MANUAL

3. Fuselage

4.

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6.

	Clein	viewel in an extian
a)	Skin	visual inspection
b)	Tank Vent	check
c)	Tank drain	drain water
d)	Fuel Quantity	check with fuel pipette
Empe	ennage	
a)	Fins and control surfaces	visual inspection
b)	Mooring Harness on Tail Fin	release
c)	Trim Tab	visual inspection
Right	Wing	
a)	Entire Wing	visual inspection
b)	Wing Flap	visual inspection
c)	Aileron	visual inspection
d)	Mooring Harness on Wing Tip	release
e)	Wing Tip, Balancing Mass	visual inspection
f)	Position Light, Strobe Light (ACL)	visual inspection
Right	Main Landing Gear	

a)	Landing Gear Strut	visual inspection
b)	Wheel Fairing	visual inspection
c)	Tire Pressure (2.3 bar / 33 psi)	check
d)	Tire, Wheel, Brake	visual inspection
e)	Skid Marks	visual inspection

7. Nose

WARNING

Carry out pre-flight checks on the cold or luke warm engine only! Otherwise there are **Risks of burnings and scalds!**

WARNING

Befor cranking propeller by hand: Turn **Ignition OFF** and anchor the aircraft. Have cockpit occupied by a competent person.

NOTE

Prior to the oil check turn propeller by hand several times to pump oil from the engine into the oil tank; the process is completed if air is being pumped into the oil tank – a hissing noise can be heard from the open oil tank.

a) - Oil

check level by using dip-stick

NOTE

Consumption of oil and coolant is very low under normal operating conditions. Therefore topping up is necessary and senseful only if the quantities are below the minimum markings of oil dip-stick or coolant equalizing reservoir.

- Level of coolant in equalizing reservoir Level must be between dip-stick markings, refill coolant if needed



- b) Cowling
- c) Air Intakes (six)
- d) Landing Light
- e) Propeller Ground Clearance minimum:
- f) Spinner
- g) Nose Gear
- h) Tire and Wheel
- i) Wheel Fairing
- j) Tire Pressure (1.8 bar / 26 psi)

visual inspection free visual inspection visual inspection approx. 25 cm (10 in). visual inspection visual inspection visual inspection visual inspection check

DV 20 AIRPLANE FLIGHT MANUAL

4.4.6. BEFORE TAKE-OFF

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1.	Parking Brake	set
2.	Safety Harnesses	fastened
3.	Canopy	closed and locked
4.	Fuel Shut-off Valve	check, OPEN
5.	Powerplant Instruments	within green range
6.	Fuel Quantity Indicator	check
7.	Wing Flaps	T/O
8.	Trim	NEUTRAL
9.	Controls	free
10.	Throttle	1700 RPM
11.	Propeller Speed Control Lever	Pull completely 3 times
		RPM drop: 100-200 RPM
12.	Ignition Switch	L-BOTH-R-BOTH
		Max RPM drop on one
		magneto: 150 RPM
		Max difference (L/R):
		50 RPM
13.	Carburetor Heat	OFF - ON
		RPM drop: 30 RPM;
		OFF
14.	Throttle	FULL for 5 sec., check
		RPM: 2300 ± 80 RPM
		back to IDLE;
15.	Pitot Heat (if installed)	ON, if required
16.	Position Light, Landing Light	ON, if required
17.	Parking Brake	release

M Diamond	DV 20	Supplement No. 001
AIRCRAFT	AIRPLANE FLIGHT MANUAL	NVFR - Operation

4.4.11. LANDING APPROACH

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1.	Airspeed	max. 81 kts / 93 mph / 150 km/h
2.	Wing Flaps	T/O
3.	Trim	as required
4.	Landing Light	as required
5.	Throttle	as required
6.	Prop Speed Control Lever	maximum RPM
7.	Carburetor Heat	ON
8.	Electric Fuel Pump	ON
9.	Wing Flaps	LDG
10.	Approach Speed	60 kts / 68 mph / 110 km/h

NOTE

Under conditions such as strong headwind, danger of wind-shear or turbulence, a higher approach speed should be selected.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-17



4.4.13. AFTER LANDING

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1.	Throttle	IDLE
2.	Wing Flaps	UP
3.	Carburetor Heat	OFF
4.	Landing Light	as required
5.	Pitot Heat (if installed)	OFF

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-18



SECTION 5 PERFORMANCE

No change.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	EASA approved	Page 9-001-19
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SECTION 6

MASS (WEIGHT) AND BALANCE / EQUIPMENT LIST

No change.

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Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	Page 9-001-20

SECTION 7 AIRPLANE AND SYSTEMS DESCRIPTION

7.12. PITOT AND STATIC PRESSURE SYSTEMS

The total head pressure is measured on the leading edge of a calibrated probe below the left wing. The static pressure is measured by the same probe using two holes in the lower edge and rear edge of the probe. For protection against dirt and humidity, filters are installed in the line. These filters are accessible beneath the left seat. Optionally, the Pitot probe is electrically heated.

The error of the static pressure system is small enough to be neglected for the measuring of the altitude. For the error of the airspeed indicating system refer to Chapter 5.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	Page 9-001-21



SECTION 8

AIRPLANE HANDLING, CARE AND MAINTENANCE

No change.

Doc. No. 4.01.20-E	Rev. 1	15 Jan 2014	Page 9-001-22