

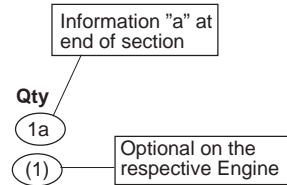
INTRODUCTION TO ROTAX 2-STROKE ENGINES

The ROTAX spare parts information contained in this catalog is developed from many sources that Leading Edge Air Foils, LLC "LEAF" believes to be reliable. These sources include ROTAX Aircraft Engines, and other manufacturers as appropriate. This information is believed to be reliable, but Leading Edge Air Foils, LLC makes no representations or warranties in regard to the validity of the information. In addition, ROTAX parts information is provided as of the date of issue by ROTAX. More current information may be available from ROTAX and ROTAX or its authorized agents should be consulted prior to using this information.

Figure 3

No.	Status	Description	Part No.
1	(N)	Constant Depression Carb Assembly	087-263
2	(s.v.)	Constant Depression Carb Assembly	087-267

Figure 2



2. INTRODUCTION

2.1 Explanation

This spare parts catalog covers the current 2-Stroke UL aircraft engines ROTAX 447 UL, 503 UL, 582 UL mod. 90, 582 UL mod. 99 and 618 UL. Besides the engine-specific parts, the most popular accessories are listed too.

2.2 Repeating Symbols

This catalog uses the following symbols to emphasize particular information. These indications are important and must be respected.

- ▲ **WARNING:** Identifies an instruction which, if not followed, may cause serious injury including the possibility of death.
 - **CAUTION:** Denotes an instruction which if not followed, may severely damage engine or other components.
 - ◆ **NOTE:** Indicates supplementary information which may be needed to fully complete or understand an instruction.
- (XXX) In illustrations this sign indicates the position of the current serial number (e.g. on crankshaft, camshaft, ect.).

2.3 Structure

Each section starts with an exploded view of the type or assembly on the left side. In case that the respective differs from the standard-model-execution then it is depicted too. The corresponding heading and the listing of the parts is on the right side and the following pages.

The numbering on the exploded view is in the sequence of assembly as good as practicable. Parts which are different on the 912 and 914 engine are always listed at the end of the section. For prevention of errors and to simplify exchange we tried best to list the part number of each component only once. But for better understanding components are frequently depicted without being listed, but referred to respective section, if considered necessary.

Generally all the fasteners on a ROTAX engine are tightened with a torque wrench. Each screw connection which has to be secured additionally (e.g. by LOCTITE 211 Violet) is marked with a drop. See Fig. 1

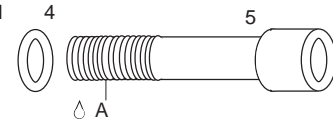
Specified securing-, sealing and adhesive agents are listed at the end of the engine section. If quantity is in brackets it indicates that the parts is not absolutely necessary but optional on the respective engine type. See Fig. 3

A smaller letter added to the number refers to information at the end of the section. See Fig. 3

No number in the Qty Column indicates that this part is not planned for respective engine.

- In the column "status" find the following statement:
N = Newly introduced part.
s.v. = Still valid, part was replaced by compatible component and can not be supplied any longer by the producer. Existing stock may be used.
NB = Part with volume with amount as required.

Figure 1



2.4 Engine Serial Number

On all inquiries or spare part orders, always indicate engine serial number, as the manufacturer makes modification to engine for further development. The engine serial number (1) is located on the air cooled ROTAX 2-stroke engines either at the fan housing (fan cooled engines) or at the ignition cover (free air cooled engines). On water cooled ROTAX 2-stroke engines the engine serial number is located at the crankcase assembly. See Fig. 3.

2.5 Engine view and denomination of the cylinders. See fig. 3.

- PTO** Power take of side.
- MAG** Magneto side.

2.6 General Information

The information and components/system description contained in this spare parts catalog are correct at the time of publication. ROTAX, however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on its products previously manufactured.

ROTAX reserves the right at any time to discontinue or change specification, designs, features, models or equipment without incurring obligation.

The illustrations in this spare parts catalog show the typical construction. They may not represent full detail or an exact shape of the parts which have the same or similar function.

- **ATTENTION:** Our exploded views are not technical drawings and are fashioned in various scales. We have tried our best to depict true to the original, but any deduction of dimensions and other information is not permissible.

2.7 Revisions

This spare parts catalog will be revised once a year or as required.

- ◆ **NOTE:** Date of issue or number of revision is printed on cover and bottom/end of each page.

Initial issue 01/200

Typical Installation Weights for Engines and Drives

TYPICAL INSTALLATION AND WEIGHTS FOR ROTAX ENGINES AND DRIVES																	
Eng.	Power	Eng. w/Carbs	Exh. Sys.	Air Filters	Dual Rad. Set	No Drive-No E/S		B Drive-No E/S		B Drive-with E/S		C Drive-No E/S		C Drive-with E/S		E Drive	
		Weight					Weight	Weight to Power Ratio	Weight	Weight to Power Ratio	Weight	Weight to Power Ratio	Weight	Weight to Power Ratio	Weight	Weight to Power Ratio	
447	29.5 kw	27.8 kg	4.9 kg	0.2 kg	-	32.9 kg	1.12	37.4 kg	1.27	42.3 kg	1.43	40.9 kg	1.39	45.8 kg	1.55	44.1 kg	1.50
	39.6 hp	61.3 lb	10.8 lb	0.4 lb	-	72.5 lb	1.83	82.4 lb	2.08	93.2 lb	2.35	90.1 lb	2.28	100.9 lb	2.55	97.2 lb	2.45
503	34.0 kw	32.3 kg	5.1 kg	0.2 kg	-	37.6 kg	1.11	42.1 kg	1.24	47.0 kg	1.38	45.6 kg	1.34	50.5 kg	1.49	48.8 kg	1.44
	45.6 hp	71.2 lb	11.2 lb	0.4 lb	-	82.9 lb	1.82	92.8 lb	2.04	103.6 lb	2.27	100.5 lb	2.19	111.3 lb	2.44	107.6 lb	2.36
503 DC	37.0 kw	33.2 kg	5.1 kg	0.5 kg	-	38.8 kg	1.05	43.3 kg	1.17	48.2 kg	1.3	46.8 kg	1.27	51.7 kg	1.40	50.0 kg	1.35
	49.6 hp	73.2 lb	11.2 lb	1.1 lb	-	85.5 lb	1.72	95.4 lb	1.92	106.2 lb	2.14	103.1 lb	2.08	113.9 lb	2.30	110.2 lb	2.22
582	48.0 kw	29.2 kg	5.1 kg	0.3 kg	2.7 kg	37.3 kg	0.77	41.8 kg	0.87	46.7 kg	0.97	45.3 kg	0.94	50.2 kg	1.05	48.5 kg	1.01
	64.4 hp	64.4 lb	11.2 lb	0.7 lb	5.95 lb	82.2 lb	1.28	92.1 lb	1.43	102.9 lb	1.60	99.8 lb	1.55	110.6 lb	1.72	106.9 lb	1.66
618	55.0 kw	34.7 kg	6.9 kg	-	2.7 kg	44.3 kg	0.81	-	-	-	-	52.3 kg	0.95	57.2 kg	1.04	55.5 kg	1.01
	73.8 hp	76.5 lb	15.2 lb	-	6.0 lb	97.6 lb	1.32	-	-	-	-	115.3 lb	1.56	126.1 lb	1.71	122.3 lb	1.66

TYPICAL POWER TORQUE & FUEL CONSUMPTION FOR ROTAX 2-STROKE ENGINES

Engine	Max. RPM	Max. Power		Max. Torque		Fuel Consumption			
		KW	HP	NM	Ft. Lb.	g/KW Hour	Liters/Hour	U.S. Gal/Hour	Imp. Gal. Hour
447 UL	6800	29.5	40	44	32.5	510	20.9	5.5	4.6
503 UL Single Carb	6800	34.0	46	51	37.6	510	24.1	6.4	5.3
503 UL Dual Carb	6800	37.0	50	55	40.6	500	25.7	6.8	5.7
582 UL	6800	48.0	65	75	55.3	410	27.3	7.2	6.0
618 UL	7000	55.0	74	80	59.0	400	30.6	8.1	6.7



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