



Service documents



04-2018

SERVICE MANUAL

The latest version of service manual is available at:
www.dudek.eu/en/service-and-inspections/

TECHNICAL INSPECTIONS

Full Inspection is recommended every 24 months or every 150 hours whatever comes first, if not advised otherwise by the inspecting person due to paraglider's condition.

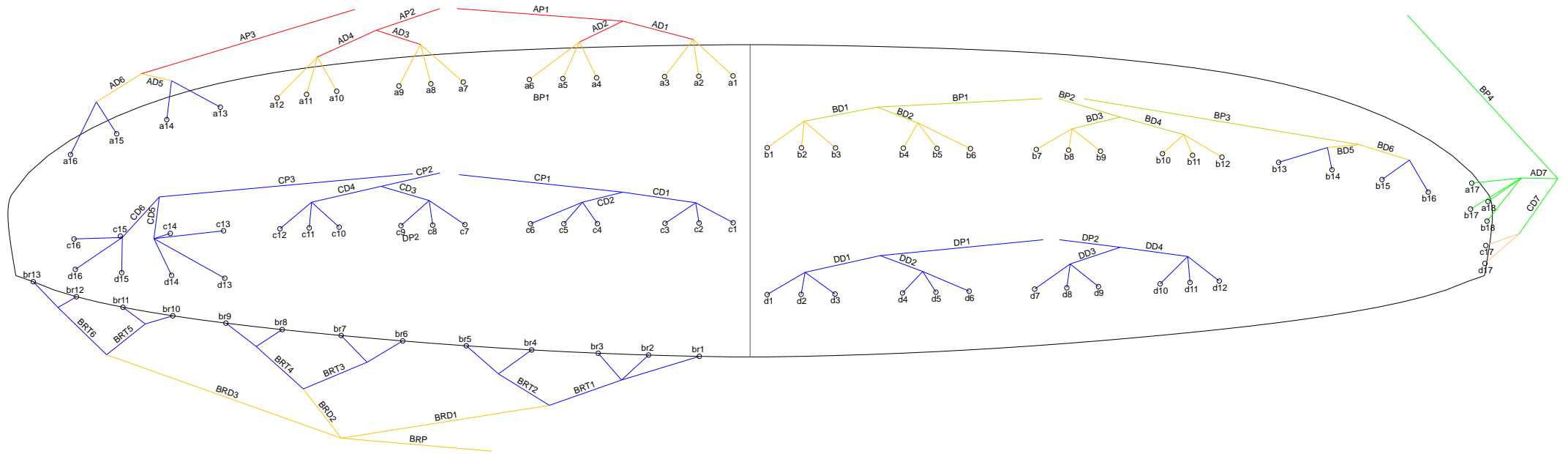
In case of paragliders used commercially (e.g. in schools or tandem flying) a Full Inspection is recommended every 12 months after first 24 months from purchase date or every 100 hours airtime (whatever comes first).

A paraglider can be officially inspected only by the manufacturer or a dealer (authorised to do so).

TECHNICAL DATA

Orca 4	41
Certification	EN B
	LTF B
Approval - ULM identification	-
Number of cells	53
Surface area (flat) [m ²]	41,00
Surface area (projected) [m ²]	34,83
Span (flat) [m]	14,88
Span (projected) [m]	11,77
Aspect Ratio (flat)	5,40
Aspect Ratio (projected)	3,97
Sink rate [m/s]	min = 1,1 + - 0,1m/s
Speed [km/h]	trim = 38; max = 50 + - 2km/h
Max. cord [cm]	342,50
Min. cord [cm]	84,20
Distance pilot to wing [m]	8,93
Total line length [m]	429,17
Total take-off weight - EN [kg]	120-220
Total take-off weight - PPG [kg]	120-220
Maximum symmetric control travel at maximum weight in flight [cm]	65
Weight [kg]	7,27
Lines	Technora: 1,2 & 1,3 & 1,5 & 1,8 & 2 & 2,3; A-8000U-050
Fabric	Porcher 42 g/m ²
	Porcher 38 g/m ²
	Porcher 32 g/m ²
	Porcher Hard 38 g/m ²
	Porcher Hard 32 g/m ²
	SR Scrim, SR Laminate 180 g/m ²
Risers	PASAMON - Bydgoszcz, Poland

Lining scheme



Length of the lines

Orca 4 – 41

Tabele / The tables / Tables / Tabelle:

Długości i rodzaj poszczególnych linek

The individual lengths and type of line

La longueur et le type de chaque ligne

Die einzelnen Leinlängen und Art.

	a	b	c	d	br
1	1324	1318	1325	1338	1415
2	1219	1213	1220	1233	1111
3	1187	1182	1189	1203	909
4	1227	1221	1229	1243	1000
5	1218	1212	1220	1233	954
6	1281	1275	1283	1297	1024
7	1238	1229	1239	1257	828
8	1155	1148	1157	1172	839
9	1139	1135	1143	1156	883
10	1100	1084	1094	1120	768
11	1086	1073	1083	1105	655
12	1133	1122	1132	1151	653
13	923	900	1031	1098	681
14	760	749	872	925	
15	870	812	841	887	
16	800	754	758	795	
17	739	661	279	366	
18	607	590			

Sumaryczna długość linek (z ta mami)

The total lengths (with risers)

Longueur des suspentes (avec élévateurs)

Gesamtlänge der Leinen (mit Tragegurten)

	a	b	c	d	br
1	8925	8823	8864	8988	9737
2	8822	8719	8758	8884	9438
3	8790	8686	8730	8854	9230
4	8765	8657	8700	8827	9044
5	8755	8647	8691	8816	8999
6	8818	8712	8760	8882	8785
7	8794	8678	8721	8824	8648
8	8711	8598	8637	8739	8588
9	8696	8583	8628	8724	8638
10	8655	8553	8596	8685	8502
11	8641	8544	8586	8671	8391
12	8691	8592	8631	8716	8363
13	8570	8478	8538	8605	8336
14	8407	8327	8381	8434	
15	8283	8204	8253	8299	
16	8215	8147	8170	8208	
17	7956	7881	7863	7950	
18	7826	7811			

	AD	BD	CD	DD	BRT
1	2015	2006	2019	2039	1600
2	1948	1939	1950	1972	1320
3	1844	1822	1839	1879	1293
4	1847	1842	1856	1875	1222
5	1548	1488	1393		970
6	1315	1303	1298		951
7	392		754		

Technora A 8000U-050:

XXXX

Technora 7343-090:

XXXX

Technora 7343-140:

XXXX

Technora 7343-190:

XXXX

Technora 7343-280:

XXXX

Technora 7343-340:

XXXX

Technora 7343-420:

XXXX

	AP	BP	CP	DP	BRD
1	5188	5115	5142	5242	3410
2	5314	5245	5269	5318	3159
3	5694	5697	5736		3389
4		6436			

BRP 3315

Total suspension lines length, measured from the lower surface of the canopy to the inside edge of the maillon (tolerancy +/- 10 mm)

Orca 4 risers



Other informations:

- number of risers: 4 (with A riser split into A and A')
- trimmers: Yes

Risers

Trimmers Closed

Slowest speed, minimum sink



- A - 425
- A' - 425
- B - 415
- C - 407
- D - 400

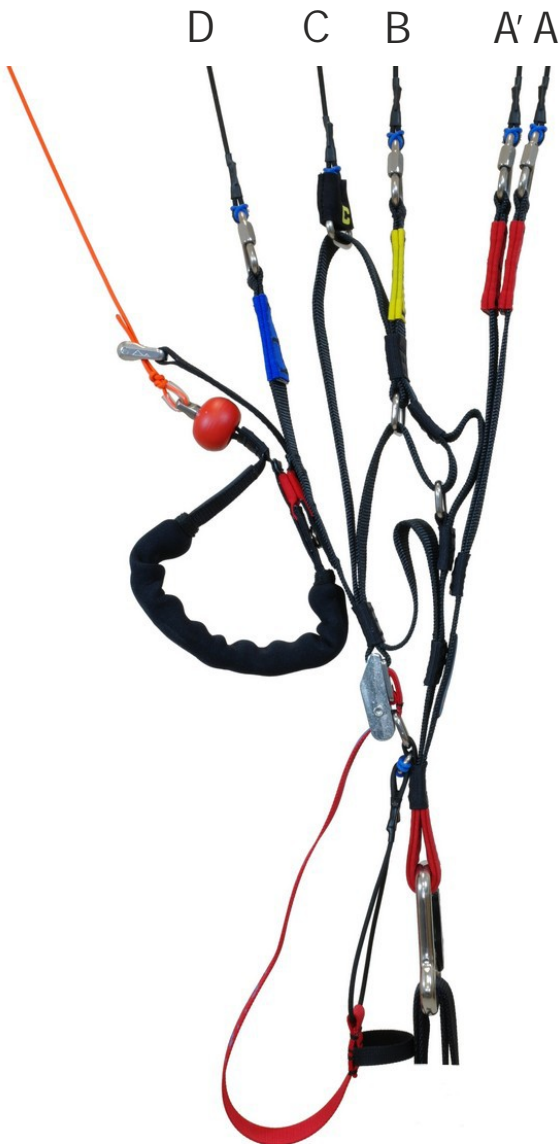
Trimmers fully released

Maximum speed and increased sink



- A - 425
- A' - 425
- B - 460
- C - 497
- D - 535

* lengths of the risers incl. maillons, length tolerance +/- 5mm



Components

List of components and materials for Orca 4

Name of product	Dimension	Supplier	Location of use											
			Others	Top surface front	Top surface	Bottom surface front	Bottom surface	Ribs suspended	Ribs unsuspended	Diagonals	Vector – stripes			
CANOPY														
Porcher 70032 1580 E3W	32gr	NCV industries			x		x							
Porcher 70032 1580 E4D	32gr	NCV industries							x	x	x		x	
Porcher 09017 1580 E25	38gr	NCV industries		x										
Porcher 09017 1580 E44	42gr	NCV industries		x										
Porcher 09017 1580 E29	40gr	NCV industries							x					
Porcher 09017 1520 001	80gr	NCV industries												
Porcher 02420 1450 X15	180gr	NCV industries												
Porcher 06382 1450 X15	15mm/180gr	NCV industries												
Nylon Fibre 2,0mm	fi 2,0mm	Zarys												
Nylon Fibre 2,4mm	fi 2,4mm	Zarys												
Webbing 57 501/9,5	9,5mm	GUTH & WOLF												
Webbing 57 501/12,5	12,5mm	GUTH & WOLF												
D-ring St.St 8x6x2mm welded	8/6/2mm	B2-Engineering												
Machine thread Durafix size 60	60	Durak												
Dyneema Top Line 16175	0,8mm/87 daN	Cousin												
LINES														
Technora A-7343-090	1,2mm/90 daN	Edelrid												
Technora A-7343-140	1,3mm/140 daN	Edelrid												
Technora A-7343-190	1,5mm/190 daN	Edelrid												
Technora A-7343-280	1,8mm/280 daN	Edelrid												
Technora A-7343-340	2,1mm/340 daN	Edelrid												
Technora A-7343-420	2,3mm/420 daN	Edelrid												
Technora A-8000/U-050	0,5mm/50 daN	Edelrid												
Machine thread Durafix size 60	60	Durak												
RISERS & METAL PARTS														
Webbing TE331/25	25mm	Pasamon												
Webbing TS548/25	25mm	Pasamon												
Webbing TS548/10	10mm	Pasamon												
Rubber O-rings 16x2Si850,B/VMQ 50	16x2mm	ABS Serwis												
Neodymium magnet 16x16x4[N38]	16x16x4mm	Anfeng Magnet Mfg.												
Naps	15mm	KAPPA												
Rolls - AustriAlpin	fi 9mm	AustriAlpin												
Delta Inox MRDI04.0	fi 4,0mm	Pequet												
Brake swivel	29x9mm	NINGBO												
Rectangle inox - welded	25/4mm	Sow-Yacht												
Rectangle inox - welded	13/7/3mm	B2-Engineering												
Buckle Inox 36x25	36/25mm	SowYacht												
Buckle regulator 25mm	25mm	NINGBO												
Machine thread Durafix size 40	40	Durak												
Machine thread Durafix size 20	20	Durak												

Reinforcements

Reinforcements

Edging on intake

Reinforcements on ribs

Reinforcements on ribs

On trailing edge

Suspension points

On trailing edge

Canopy sewing

On trailing edge

Others	Main	Brake
x		x
x		x
x	x	
x	x	
	x	x
	x	
x		

Lines sewing

Riser main

Trimer tape

Suspension for accelerator pulley & Suspension for brake pulley

For lines protection

Brake handle magnet

Brake handle naps

Brake pulley

Maillon

Suspension brake handles

Riser construction

Brake handle construction

Trimer tape connector

Buckle trimer

Riser sewing

Riser sewing