BOAT

Name **CHEETAH**
Sail Nr **USA 50473**

GPH

574.6

GENERAL

Class	**MUMM 36**
Designer	**BRUCE FARR**
Builder	**CARROLL**
Series	**09/1993**
Age	**12/1994**
Age Allowance	**0.487%**
Offset File	**MUMM36.OFF - 10/05/1994 12:39:00**
Measurement by	**Dobbs Davis - 26/04/2011**

HULL

Length Overall	**10.910m**
Maximum Beam	**3.588m**
Displacement	**3,882kg**
Draft	**2.254m**
IMS Reg. Division	**Performance**
Dynamic Allowance	**0.000%**
Fwd Accommodation	**No**
Hull Construction	**Cored**
Carbon Rudder	**No**
Crew Arm Extension	

IMSL	**9.892m**	VCGD	**-0.227m**	Sink	**17.06kg/mm**
RL	**9.806m**	VCGM	**-0.242m**	WS	**22.28m²**
LSM0	**9.613m**	Displacement/Length ratio			**4.3700**

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2017
ORC International Certificate

Rating Office

Offshore Racing Congress

Invalid for Racing
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SCORING OPTIONS

	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	**560.5**			**632.7**		
Time On Time	**1.0704**			**1.0669**		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	**647.2**	**513.3**	**455.6**	**836.9**	**634.2**	**557.9**
Time on Time	**1.0429**	**1.3151**	**1.4817**	**0.8065**	**1.0644**	**1.2100**

TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	**955.3**	**791.0**	**707.2**	**674.3**	**657.6**	**648.5**	**640.9**
52°	**624.2**	**527.7**	**493.8**	**481.2**	**473.8**	**469.0**	**463.3**
60°	**587.3**	**508.7**	**480.7**	**465.7**	**456.3**	**450.2**	**444.5**
75°	**557.2**	**495.9**	**468.0**	**444.2**	**427.6**	**418.5**	**409.6**
90°	**558.6**	**491.5**	**466.8**	**439.9**	**414.7**	**395.0**	**376.7**
110°	**560.4**	**485.2**	**449.4**	**429.1**	**410.8**	**392.9**	**363.1**
120°	**575.2**	**491.7**	**453.8**	**417.5**	**395.4**	**377.2**	**344.2**
135°	**649.2**	**524.0**	**476.7**	**442.2**	**406.5**	**370.2**	**309.8**
150°	**770.3**	**616.5**	**524.9**	**481.0**	**455.0**	**427.6**	**353.1**
Run VMG	**889.5**	**711.9**	**606.2**	**554.2**	**525.4**	**489.3**	**407.7**
Selected Courses							
Windward / Leeward	**922.4**	**751.4**	**656.7**	**614.2**	**591.5**	**568.9**	**524.3**
Circular Random	**781.0**	**635.4**	**558.4**	**513.7**	**485.0**	**464.1**	**431.6**
Ocean for PCS	**958.1**	**745.1**	**625.9**	**552.8**	**503.9**	**467.8**	**412.5**
Non Spinnaker	**846.1**	**681.7**	**592.7**	**539.9**	**506.2**	**483.0**	**451.3**

Velocity Prediction in Knots for True Wind Speeds

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	**43.0°**	**42.1°**	**39.6°**	**38.1°**	**37.3°**	**36.6°**	**36.5°**
Beat VMG	**3.77**	**4.55**	**5.09**	**5.34**	**5.47**	**5.55**	**5.62**
52°	**5.77**	**6.82**	**7.29**	**7.48**	**7.60**	**7.68**	**7.77**
60°	**6.13**	**7.08**	**7.49**	**7.73**	**7.89**	**8.00**	**8.10**
75°	**6.46**	**7.26**	**7.69**	**8.10**	**8.42**	**8.60**	**8.79**
90°	**6.44**	**7.32**	**7.71**	**8.18**	**8.68**	**9.11**	**9.56**
110°	**6.42**	**7.42**	**8.01**	**8.39**	**8.76**	**9.16**	**9.91**
120°	**6.26**	**7.32**	**7.93**	**8.62**	**9.11**	**9.54**	**10.46**
135°	**5.55**	**6.87**	**7.55**	**8.14**	**8.86**	**9.72**	**11.62**
150°	**4.67**	**5.84**	**6.86**	**7.48**	**7.91**	**8.42**	**10.20**
Run VMG	**4.05**	**5.06**	**5.94**	**6.50**	**6.85**	**7.36**	**8.83**
Gybe Angles	**143.4°**	**146.2°**	**149.3°**	**151.7°**	**148.5°**	**177.0°**	**140.6°**

Certificate

Number **US6204**
ORC Ref **USA00001006**
Issued On **14/06/2017**
VPP Ver. **2017 1.00**
Valid until **28/02/2018**

Crew Weight

Declared	**651kg**
Default*	**651kg**
Non Manual Pwr	**No**

Special Scoring

	ToD	ToT
Non Spin GPH	**610.8**	**0.9823**
Non Spin OSN	**596.4**	**1.0060**

Sails Limitations

Headsails	Spinnakers
6	**4**

Class Division Length

CDL = **9.850**

Storm Sails Areas

Heavy Weather Jib	**24.26**
Storm Jib (JL=8.71)	**8.98**
Storm Trysail	**12.20**

Owner

BOAT

Name	**CHEETAH**	Sail Nr	**USA 50473**
File	**US6204**	Data in	**meters/kilograms**

RIG

Forestay Tension	**Aft**	Spreaders	**2**
Inner Stay	**None Fitted**	Runners	**2**
Carbon Mast	**Yes**	Jumper Struts	**None**
Taper Hollows	**No**	Jib Furler	**No**
Fiber Rigging	**No**	Main Furler	**No**
Lenticular Rigging	**No**	Without Backstay	**No**
Articulated Bowsprit	**No**		

P	**13.864**	E	**5.029**	MDT1	**0.122**	MW	**0.165**
IG	**13.331**	J	**3.800**	MDL1	**0.168**	GO	**0.186**
ISP	**15.726**	SFJ	**0.185**	MDT2	**0.111**	BD	**0.150**
BAS	**1.967**	SPL	**0.000**	MDL2	**0.130**	MWT	**117.00**
FSP	**0.064**	TPS	**5.773**	TL	**1.400**	MCG	**4.835**

MIZZEN RIG AND SAILS

N/A

COMMENTS

Retrofit carbon spar & bowsprit

INCLINING TEST AND FREEBOARDS

Inclining Test	**Current Inclining**				
Flotation date	**27/04/2017**			SG	**1.0080**
FFM	**1.153**	FF	**1.158**	SFFP	**0.414**
FAM	**0.914**	FA	**0.919**	SAFP	**10.334**
W1	**59.5**	PD1	**516.2**	WD	**12.640**
W2	**59.5**	PD2	**515.1**	GSA	**1.0**
W3	**59.5**	PD3	**516.6**	RSA	**1.0**
W4	**59.5**	PD4	**519.9**	PLM	**9000.0**

LCF from stem on CL / on sheer	**6.098 / 6.331**
Maximum beam station from stem	**6.703**
RM Measured	**114.6kg·m**
RM Default	**106.9kg·m**
Limit of positive stability / Stab.Index	**124.6° / 120.0**
Freeboard at mast at 3.985	**1.011**

PROPELLER

Installation	**Strut**			PRD	**0.438**
Type	**Folding 2 blades**			PBW	**0.118**
Twin Screw	**No**			PIPA	**0.0034**
ST1	**0.042**	ST3	**0.182**	ST5	**0.286**
ST2	**0.182**	ST4	**0.110**	EDL	**0.840**

MOVEABLE BALLAST

N/A

CENTERBOARD

N/A

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SAILS (Maximum Areas)

Mainsail	**MHB**	**MUW**	**MTW**	**MHW**	**MQW**	**Area**	**Area (r)**	**Formula**
	0.180	1.03	1.85	3.23	4.22	41.29	42.15	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)

Symmetric
Not Available

Asymmetric	**SLU**	**SLE**	**SL**	**SHW**	**SFL**			
	17.31	15.77	16.54	9.87	10.12	136.73		AS · (SFL + 4·SHW) / 6

HEADSAILS

Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)

HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.08	0.73	1.40	2.80	4.25	5.83	13.29	37.97			11/05/2017	Unknow	

MEASUREMENT INVENTORY

Measurer **Dobbs Davis**
Date **27/04/2017**
Comment

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*

Id	*Item*	*Maker*	*Model*
1	Engine	Yanmar	30 HP

Id	*Item*	*Weight*	*Description*

MEASUREMENT INVENTORY

Id	*Item*	*Tank Use*	*Tank Type*	*Capcty*	*Dist.*	*VCG*	*Condtn*	*Description*
3.7	Tank	Waste	PVC	25.0	3.70	0.20	~~0.0~~	Holding tank
2	Tank	Water	bladder	110.0	6.30	-0.20	~~0.0~~	
1	Tank	Fuel	PVC	45.0	6.80	-0.10	~~15.0~~	Diesel fuel tank

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*
2	Battery	25.0	7.00	-0.10	West 12V AGM house
1	Battery	25.0	6.60	-0.10	West 12V AGM engine

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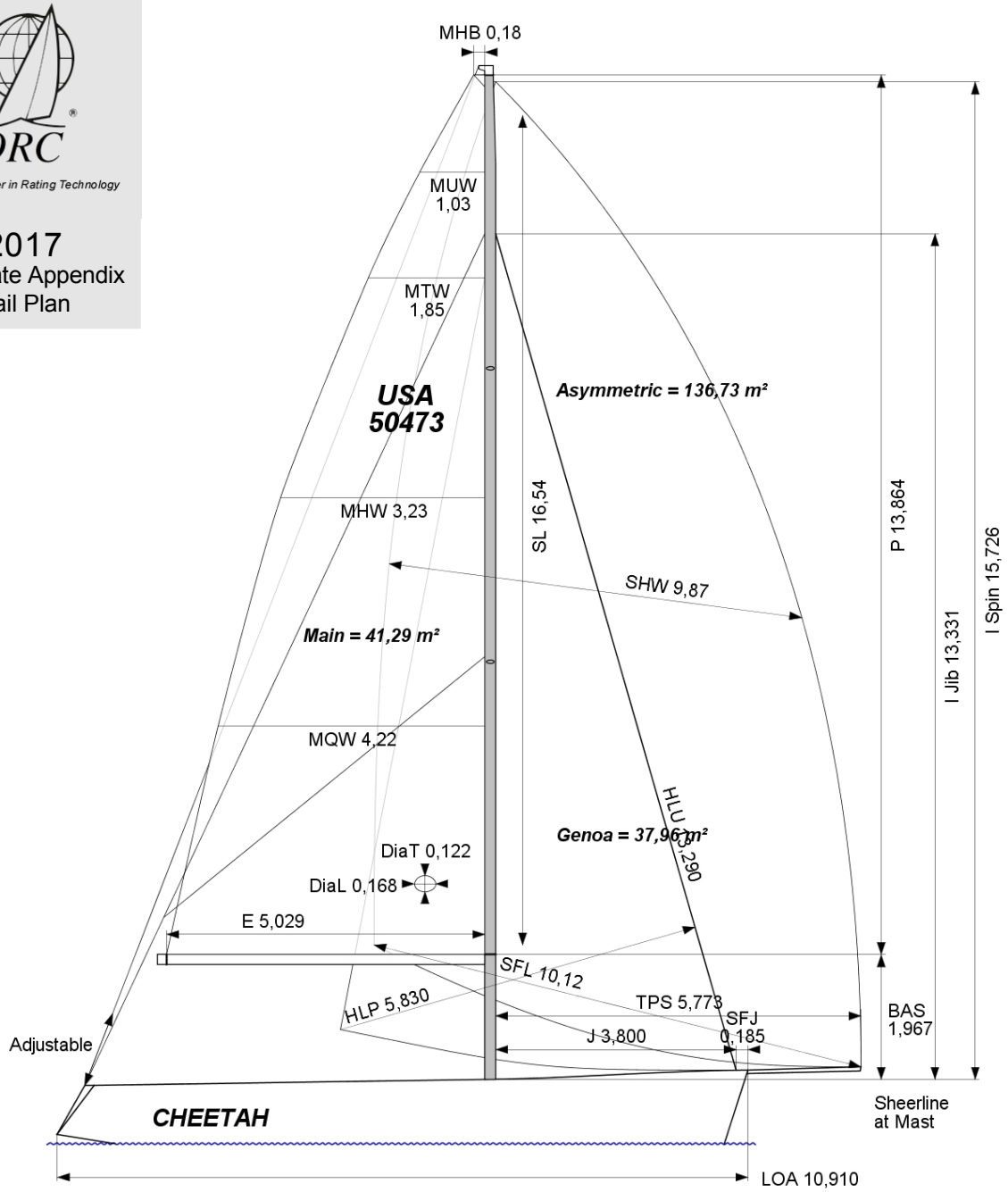
2017
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.180	1.03	1.85	3.23	4.22	41.29	Pickel	11/05/2017	NORTH	Unknown	

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.08	0.73	1.40	2.80	4.25	5.83	13.29	153%	37.97			Pickel	11/05/2017	NORTH	Unknow	

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment

ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	17.31	15.77	16.54	9.87	10.12	136.73	asym	Pickel	11/05/2017	North	Unknown	