

12



INTERNATIONAL TWELVE METRE CLASS

Yacht's Name Legacy KZ 5

National letters and Sail Number KZ 5 Club _____

Designer Farr/Davidson/Holland

Builder McMullin and Wing Building Year 1986

Owner USMMA Sailing Foundation

Owner's Address PO Box 1199, Spring Hill, TN 37174 USA

Lloyds R class certificate (Number or Date) _____

RATING CERTIFICATE

This yacht has been measured by measurer(s) appointed by the International Twelve Metre Association and has been found to rate not more than 12.000 metres.

This certificate is dated: June 21, 2019

Measurer A Williams Signature Ander

Valid until June 21, 2021

Supersedes September 13, 2016


Is this an **Appendix E** Certificate? Y / N No

Was **Appendix F** used for Measurement? Y / N No

Hull Scanned Yes

Signature [Signature]
ITMA Technical Director

Stamp of Authority of the International Twelve Metre Association



RATING CALCULATION

OVERALL LENGTH

Overhang Forward to FGS
 Overhang Aft to AGS
 Total Overhang (Subtract)

1.880
2.030
3.910

19.152

MEASURED LENGTH (L_{BG})

Girth at Bow
 Twice vertical Height at Bow (Subtract)
 Girth Difference at FGS
 Add 1.5 x Girth Difference at FGS (min 0.540 m)
 Girth at Stern
 Twice vertical Height at Stern (Subtract)
 Girth Difference at AGS
 Add 1/3 Girth Difference at AGS (min 0.400 m)
 Add any penalty (Beam or Displacement)
 Sum of Length and Girth Corrections

1.580
1.200
0.380
0.570
3.383
1.868
1.515
0.505
0.000

15.242

Age/Design Correction Factor (ADCF)(see page 3)

1.0000

16.317

LENGTH (L)

Skin IM to d1 Port
 Chain IM to d1 Port
 d Port
 Skin IM to d1 Starboard
 Chain IM to d1 Starboard
 d Starboard
 Add d

2.172
2.167
0.005
2.168
2.166
0.002
0.007

16.317

Add GIRTH 2 d

0.014

Mean Freeboard Bow
 Mean Freeboard Midship
 Mean Freeboard Stern
 Sum of Freeboards

Datum Sta.	Actual Sta.	Rating FB
	1.400	1.400
	1.151	1.151
	1.114	1.114
		3.665

Subtract FREEBOARD, F

1.210

Add SAIL AREAS (Square root)

13.308

TOTAL OF MEASUREMENTS

28.429

PENALTY (Draft or Tumblehome)

0.003

RATING

11.999

Date and Place of Measurement

21-Jun-19

Measurer's Name(s)

A Williams

Signature



Yacht's name : Legacy KZ 5		Date	21-Jun-19
Range Measurement (Yes or No)	no	Date:	April 2017

PENALTIES

Overhang Forward to MWL	2.701	
Overhang Aft to MWL	2.702	
Subtract from overall length	5.403	
Difference of immersion from salt to fresh water	Meas. Density	1.025
WATERLINE LENGTH (LWL)		13.749
Minimum Displacement for Zero Penalty [m3]	24.384	
Minimum Weight for Zero Penalty [ton] (Water of sg 1.025)	24.994	
WEIGHT [tonne] Actual weight		25.002
Equivalent LWL (for Displ. < min.)	13.751	
Difference	0.000	
DISPLACEMENT PENALTY (add to L)		0.000
Displacement Determination Method	Scanned	
DRAFT (actual)	2.701	
Max. Draft for Zero Penalty	2.700	
Difference (if positive)	-0.001	
DRAFT PENALTY (add to Rating)		0.003
BEAM (Min)	3.605	
Max Beam at 1/3 of Midship Freeboard	0.000	
Difference (if positive)	0.000	
BEAM PENALTY (add to L)		0.000
Tumblehome Max. (2 x 2% of Extr. Beam)	0.000	
Extreme Beam	3.974	
Beam at deck	3.974	
Difference (if positive)	0.000	
TUMBLEHOME PENALTY (add to Rating)		0.000

Date and Place of Measurement	21-Jun-19	
Measurer's Name(s)	A Williams	Signature

Design/Age Correction Factor Calculation		
Age Date	1986	
ADCF (Table E-2)	1.0000	
Hull Alteration Scope and Date		
Appendage Change Scope and Date		
Change/Alteration Correction ADCF		
Accommodation Deficiency Ballast		

Yacht's name : Legacy KZ 5

Date

21-Jun-19

SAIL PLAN

Max Height of Sail Plan =	<input type="text" value="25.000"/>	J=	<input type="text" value="7.920"/>	I =	<input type="text" value="18.750"/>
Boom above Mast Datum =	<input type="text" value="1.518"/>	P=	<input type="text" value="23.482"/>	E=	<input type="text" value="9.640"/>
Rated Mainsail Area	<input type="text" value="113.183"/>	Spi boom=	<input type="text" value="8.020"/>	√S=	<input type="text" value="13.308"/>
J used for Rating			<input type="text" value="8.020"/>		
Rated Foretriangle Area	<input type="text" value="63.909"/>	Propeller allowance			<input type="text" value="1.000"/>
TOTAL RATED SAIL AREA (S)	<input type="text" value="177.093"/>	Corrected sail area			<input type="text" value="177.093"/>

SAIL LIMITS

Mainsail max girth:	1/2 height (68% of E)	<input type="text" value="6.555"/>	3/4 height (41% of E)	<input type="text" value="3.952"/>
Genoa:	max. foot length (J + 4.8m)	<input type="text" value="12.720"/>		
Spinnaker:	1/2 foot max breadth (125% J)	<input type="text" value="10.025"/>	max. luff length=	<input type="text" value="18.815"/>

Spar Measurement

MAST (material)	<input type="text" value="Aluminium"/>	Mast Weight	<input type="text" value="457"/>	CG pos.	<input type="text" value="9.590"/>
	Deck	Half-Height	Jib-Halyard	Head	
Mast dimensions [mm]	<input type="text" value="352 x 248"/>	<input type="text" value="351 x 247"/>	<input type="text" value="282 x 205"/>	<input type="text" value="169 x 125"/>	
Sections area [cm ²]	<input type="text" value="685"/>	<input type="text" value="681"/>	<input type="text" value="454"/>	<input type="text" value="166"/>	
Mast CG Correction (if applicable) Wt & CG	<input type="text" value=""/>	@	<input type="text" value=""/>	Mk ⁴	<input type="text" value=""/>

Engine/Propeller Installation

Engine and propeller weight	<input type="text" value="none"/>	Propeller diameter =	<input type="text" value="none"/>
Minimum boat speed with engine	<input type="text" value="none"/>	Propeller position =	<input type="text" value="none"/>
Propeller Type (folding feathering fixed pitch etc.), no of blades	<input type="text" value=""/>		<input type="text" value=""/>
Propeller Skew	<input type="text" value=""/>		<input type="text" value=""/>

Flotation

Internal Ballast	Amount	Location aft of bow
44 lead blocks	278.6	10.95
76 lead blocks	481	11.3
Lead pigs	451	11.5
20 lead blocks	372	13.2
31 lead blocks	304.5	12.7
3 Batteries	60	
3		

Measurer's Notes

1	New keel 2004
2	1983-2001 Freeboard limit used
3	
4	
5	
6	
7	
8	

Date and Place of Measurement

21-Jun-19

Measurer's Name(s)

A Williams

Signature

