P H R F - N B

P H R F - N B STANDARD ADJUSTMENTS GUIDELINES, SUBJECT TO THE INDIVDUAL BOAT SITUATION

1. GENOA SIZE

A. For boats with a base of 151% - 155%

LP% Lower Limit	LP% Upper Limit	Spinnaker Adjustment	Non-Spinnaker Adjustment
167.1	170	- 5	- 5
164.1	167	- 4	- 4
161.1	164	- 3	- 3
158.1	161	- 2	- 2
155.1	158	- 1	- 1
151.1	155	0	0
148.1	151	+ 1	+ 1
145.1	148	+ 2	+ 2
142.1	145	+ 3	+ 3
139.1	142	+ 4	+ 4
136.1	139	+ 5	+ 5
133.1	136	+ 6	+ 6
130.1	133	+ 7	+ 7
127.1	130	+ 8	+ 8
124.1	127	+ 9	+ 9
121.1	124	+ 10	+ 10
118.1	121	+ 11	+ 11
Less than 118%	118	+ 12	+ 12

B. For boats with a base of less than 118%

LP% Lower Limit	LP% Upper Limit	Spinnaker Adjustment	Non-Spinnaker Adjustment
167.1	170	-17	-17
164.1	167	-16	-16
161.1	164	-15	-15
158.1	161	-14	-14
155.1	158	-13	-13
151.1	155	-12	-12
148.1	151	-11	-11
145.1	148	-10	-10
142.1	145	-9	-9
139.1	142	-8	-8
136.1	139	-7	-7
133.1	136	-6	-6
130.1	133	-5	-5
127.1	130	-4	-4
124.1	127	-3	-3
121.1	124	-2	-2
118.1	121	-1	-1
Less than 118%	118	+ 0	+ 0

C. Cruising Headsail + 6
Roller Furling Hdsl + 3

2) MAINSAIL

Standard 0

Oversize Mainsail Girths: For mainsails whose girths are greater than IMS standards, or greater than one design class rules, or for a change in size for a custom boat, ratings will be adjusted as follows: (% increase is the sail area increase as a percentage of P x E/2; e.g., boat with a P of 50 ft and E of 15 ft increases his mainsail girths which adds 25 sq ft. , his % increase = 25/50 X 15/2) x 100% = 6.7% for a -2 sec/mile adjustment. The following limits apply for mainsails based on IMS:

IMS Mainsail Maximum Girths

Girth at 7/8 leach = .22 * E
Girth at 3/4 leach = .38 * E
Girth at 1/2 leach = .65 * E

% Increase	Adjustment Sec/mile
.1 % to 4%	- 1
4.1 to 8%	- 2
8.1 to 12%	- 3
12.1 to 16%	- 4
16.1 to 20%	- 5
etc.,	

E Changes: 3 sec/mile for every 15% of E P Changes: 50% of mast height adjustment

Hollow Leach +6

3) OVERSIZE SPINNAKER/SPINNAKER POLE/ASYMMETRICAL SPINNAKER

SPL	Sec/mile	SPL	Sec/Mile
up to 101%	0	121+ to 124%	- 7
101+ to 104%	- 1	124+ to 127%	- 8
104+ to 107%	- 2	127+ to 131%	- 9
107+ to 111%	- 3	131+ to 134%	-10
111+ to 114%	- 4	134+ to 137%	-11
114+ to 117%	- 5	137+ to 141%	-12
117+ to 121%	- 6	141+ to 144%	-13
etc.	etc.		

3A) ASYMMETRICAL SPINNAKERS

1. For yachts who are currently rated for a symmetrical spinnaker and will only use an asymmetrical spinnaker tacked to the bow or on a non-articulating pole on the centerline (note that SPL increases are addressed seperatley above) the formula below will be used. The use of either type of spinnaker on an articulating pole will be addressed by the committee on an individual basis.

i.e., no spinnaker pole or no symmetrical spinnaker with pole 0 to + 12

Adjustment	SA(DW)-D / Disp-L Ratio
12	< 0.1
9	0.101 - 0.160
7	0.161 - 0.225
5	0.226 - 0.275
3	0.276 - 0.300
1	0.301 - 0.374
0	> 0.375

2. Oversize poles or bow sprits - see #3 above Variable

3. Asymetric Spinnkers < 75% SMG/Foot

a. Reaching Headsails

i. These sails are defined as either spinnakers that do not conform to 6eii3 or headsails not conforming to 6bii.

ii. Sails in this class shall be subject to Table E:

Table E

SMG/SFL Ratio	Sec/Mile Adjustment
70 to 74.99%	-5
65 to 69.99%	-6
60 to 64.99%	-7
55 to 59.99%	-8
50 to 54.99%	-10
44 to 49.99%	-12
40 to 43.99%	-15

3B) ISP ADJUSTMENT

Spinnaker halyard height (ISP) greater than I -3 per 8% increase

4) MAST HEIGHT (Based on I)

Up to 101% of standard	0	107+-109% of standard	- 12
101+-103% of standard	- 3	109+-111% of standard	- 15
103+-105% of standard	- 6	111+& >% of standard	- 18
105+-107% of standard	- 9		

"I only" adjustments: 50% of mast height

5) PROPULSION

Position	No. of Blades	Type	Sec/Mile
Aperature	3	Solid	+ 6
Aperature	2 or 3	Feathering/Folding	- 3
Exposed to flow	2 or 3	Feathering/Folding	0
Exposed to flow	2	Solid	+ 6
Exposed to flow	3	Solid	+ 12
Sail Drive	2 or 3	Solid/Folding	Var
None/Insufficient	---	---	- 3
Outboard	2 or 3	Solid	0

6) MISCELLANEOUS

Other adjustment to base ratings may be made for modifications to hull or rig:

No Adjustment	0	Keel	Var
Other combinations	Var	Water Ballast	Var

Non Spinnaker Adjustment

** Compute Main SA/Genoa SA by $\frac{P \times E}{I \times J}$

** Adjust Spinnaker Rating by following to obtain Non Spinnaker Rating

Main/Genoa	Adjustment Sec/Mile
.50 + - .60	24
.60 + - .70	23
.70 + - .80	22
.80 + - .90	21
.90 + - 1.0	20
1.0 + - 1.1	19
1.1 + - 1.2	18
1.2 + - 1.3	17
1.3 + - 1.4	16
1.4 + - 1.5	15
1.5 + - 1.6	14
1.6 + - 1.7	13
1.7 + - 1.8	12

1.8 + - 1.9	11
1.9 + - 2.0	10
2.0 + - 2.2	9
2.2 + - 2.4	8
2.4 + - 2.6	7
2.6 + - 3.0	6
3.0 + - 3.4	5
3.4 + - 4.0	4
4.0 + - 5.0	3
5.0 + - 6.0	2
6.0 + - 7.0	1
> 7.0	0

NON-STANDARD ADJUSTMENT GUIDELINES

GUIDELINES, SUBJECT TO THE INDIVDUAL BOAT SITUATION

MISCELLANEOUS

1. LWL CHANGES FOR SIMILAR BOATS:

PHRF = .80 (PHRF +550) (- 1) LWL = LWL for Boat 1
or appoximately as follows: LWL = LWL for Boat 2

Boat size (LWL):	20	22	25	27	29	31	33	36	42	(ft)
/ ft :	14	12	11	10	9	8	7	6	5	sec/mi for each ft of LWL

For example: If a new boat is similar to a J-40 (LWL of 35'), but has a LWL of 36', we would give it a rating 6 sec/mile faster than the J-40.

2. DISPLACEMENT CHANGES:

5 sec/mile for every 1000 lbs, or approximately 10% of displacement ie., 800 lbs increase for 8000 lbs of displacement = +5 sec/mile.

3. KEEL/DRAFT CHANGES:

Shallow Draft	6-12 sec/mile	Centerboard	6-9 sec/mile
Iron vs Lead	3 sec/mile	Daggerboards	0 sec/mile

Adjust +3 sec/mile for every .5 ft of draft delta
For example - a boat which has a draft of one foot less than normal would receive a delta of +6 sec/mile.

4. WATER BALLAST:

-1 sec/mile for every 1% of displacement of water ballast i.e., 800 lbs of water ballast for a J-35 (10,000 lbs of displacement) = - 8 sec/mile.