

**SPECIMEN RACE ZERO**

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>
Name	SailNo	Type/Class	Config.	N	E	C	Place	Remarks	P	PI	$\Sigma Pi/\Sigma R$	NC	N
A		B14		880	3603	4094	2		782	-98	$\frac{-302}{4}$	-76	804
B		B14		880	3643	4140	4		791	-89			
C		LASER 4000		906	3696	4079	1		802	-104	$\frac{-226}{4}$	-57	849
D		B14		880	3746	4257	6		813	-67			
E		29ER		925	3790	4097	3		822	-103	$\frac{-254}{4}$	-64	861
F		B14		880	3833	4356	13		832	-48			
G		29ER		925	3882	4197	5		842	-83			
H		LASER 4000		906	3926	4333	9		852	-54			
I		LASER 4000		906	4002	4417	17		868	-38			
J		LASER 4000		906	4037	4456	19		876	-30			
K		29ER		925	4086	4417	16		887	-38			
L		29ER		925	4126	4461	20		895	-30			
M		RS 400		952	4159	4369	14		903	-49	$\frac{-5}{5}$	-1	951
N		ISO		926	4243	4582	23		921	-5	$\frac{35}{2}$	18	944
O		RS 400		952	4286	4502	21		930	-22			
P		RS 400		952	4352	4571	22		944	-8			
Q		LASER II		1034	4431	4285	8		962	-72	$\frac{-175}{3}$	-58	976
R		ISO		926	4452	4808	25		966	40			
S		RS 400		952	4475	4701	24		971	19			
T		LASER II		1034	4481	4334	10		972	-62			
U		LASER II		1034	4577	4426	18		993	-41			
V		LASER		1078	4612	4278	7		1001	-72	$\frac{-247}{4}$	-62	1016
W		RS 400		952	4639	4873	26		1007	55			
X		LASER		1078	4674	4336	11		1014	-64			
Y		LASER		1078	4675	4337	12		1015	-63			
Z		LASER		1078	4747	4404	15		1030	-48			
					<b>A=</b>	4389							
					<b>SCT =</b>	4608							

## SPECIMEN RACE ZERO

The method below allows a club to make a simple start on analysing races and adjusting Portsmouth Numbers.

The method will not provide ideal Numbers because it ignores 'extreme performers', Crew Skill Factor (CSF) and other factors, but generally it will give better Numbers than doing nothing or just guessing.

### Steps 1 to 5 produce the race results

- 1 Enter the boats in the order in which they finish in columns *a*, *b*, *c*, *d*, and their Elapsed Times (**E**), in seconds, in column *f*.
- 2 Enter in column *e* for each boat the Portsmouth Number (**PN**), which is to be used for calculating the race results. (This Number can be an RYA published Number, or a Club or Trial Number allocated by the race organiser in accordance with the Sailing Instructions.)
- 3 Using the formula:  $C = \frac{E \times 1000}{PN}$

Where **C** = Corrected Time  
**E** = Elapsed Time  
**PN** = Portsmouth Number

calculate a Corrected Time (**C**), in seconds, for each boat and enter in column *g*

- 4 From the **Cs**, give the position of each boat in the race in column *h* (1 to 26 in the example).

### This is the race result

Normally steps 1 to 5 would be completed by the Race Officer, with steps 6 to 19 being completed by the Handicap Officer.

### Steps 6 to 10 gives the performance of the boats

- 5 Calculate the Race Average Time (**A**) by averaging the **Cs** in column *g*.  
Calculate the Standard Corrected Time (**SCT**) by multiplying the average time by 1.05.
- 6 Using the formula  $P = \frac{E \times 1000}{SCT}$

Where **P** = Performance Number

**E** = Elapsed

Time

**SCT** = Average corrected time.

Calculate and in column *j* enter a **P** for each boat to the nearest whole number. The **P** is the Number to which the boat has performed in this race.

If steps 1 to 10 have been carried out correctly, the **Ps** in column *j* will always be in ascending order.

### Steps 7 & 8 produce data for the review of Numbers

- 7 The difference between the **P** in column *j* and the **N** in column *e* is called the Performance Indicator (**PI**) and is entered in column *k*, for all boats.
- 8 Enter in column *l*, on the first line of each class, the sum of the **Pi**'s ( $\sum Pi$ ) and the number of boats ( $\sum R$ ) of the class in this race.  $\sum Pi$  should be entered in the top left hand side of the box and  $\sum R$  in the bottom right hand side. For one-off boats or if there is only one boat of a class the  $\sum Pi$  will equal the **P** in column *j* and the  $\sum R$  will equal 1.

e.g. for the B 14,  $\sum Pi = -98 - 89 - 67 - 48 = -302$  and  $\sum R = 4$ . This is entered as  $-302/4$  in the column *l* box of boat A, the first B 14 in the race.

### Step 9 is the review of Numbers

In this specimen race it is assumed that the club undertakes a periodic review of Numbers after every race in which a class is adequately represented.

Note: When adjusting any Portsmouth Numbers, great care should be exercised. The proposed change should

only, and truly, reflect the performance of that design of boat on your club's sailing waters and not be because the class has better (or worse) sailors than the club average.

- 9 Periodic Review undertaken class by class.

The Number Change (**NC**), entered in column *m* in the first line for each class, is the sum of the **Pis** for all boats of the class in this race divided by the total number of boats in this race i.e. the  $\sum Pi$  as entered in the top left hand side of boxes in column *l* divided by the  $\sum R$  as entered in the bottom right hand side of the same box.

For the B14 this is  $-302 \div 4 = -76$ .

The (new) **N**, to be entered in column *n*, is the (old) **N** for this race in column *e*, with **NC** applied. If **NC** is positive then this should be added to the old **N**. If **NC** is negative it should be taken away from the old **N**.

For the B14 this is  $880 - 76 = 804$ .

Clubs are advised to do a number review after every race and compile all new numbers from each race. If after 4 or more races where a class has been well represented there is a definite trend a club should consider adjusting the number for all future races that class race. It is up to the club as to if they go to the full adjustment or a percentage of that adjustment to avoid the proposed numbers bouncing back and forth.