

CORTEZ RACING ASSOCIATION

A CALIFORNIA NONPROFIT CORPORATION SAN DIEGO, CA

SAILING INSTRUCTIONS OPENING DAY REGATTA

Sponsored by

SOUTH COAST YACHTS





A PHRF-SD Championship Series Event

Saturday, May 7, 2022

1 RULES

- 1.1 <u>Local Advisory</u>: All competitors are asked to observe USCG Navigational Rule 9, which in part reads "A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway." RRS 60.2, 63.1, and A5 are modified to add that the Race Committee (RC) may disqualify a boat infringing this instruction without a hearing. RRS 90.3 is modified to add that this disqualification shall not be excluded.
- 1.2 [DP] NAVAL and CRUISE SHIP PROTECTION ZONE: A naval protection zone exists in a radius of 500 yards (<u>CFR 165.2015</u>) around U.S. naval vessels greater than 100 feet in length, except when the large naval vessel is moored or anchored within a restricted area. All vessels within a naval vessel protection zone shall operate at the minimum speed necessary to maintain a safe course and shall proceed as directed by an official patrol, and when within such zone, no vessel is allowed within 100 yards of a large U.S. naval vessel (<u>CFR 165.2030</u>). No vessel is allowed within 100 yards of a cruise ship (<u>CFR 165.1108</u>).
- 1.3 Entry into the NAS North Island Security Zones 100 yards around Pier Bravo and vessels moored to it (CFR 165.1105) and the aircraft carrier turning basin (CFR 165.1104) is prohibited.
- 1.4 Per RRS 42.3(i), competitors may use an engine or other propulsion method to avoid situations in SI 1.1 or 1.2 provided they gain no significant advantage in the race.
- 1.5 Add new rule 41(e): (e) help to recover from the water and return on board a crew member, provided the return on board is at the approximate location of the recovery.
- 1.6 If the Race Committee boat is damaged as a result of a boat breaking a rule, that boat shall pay for the repairs.

2 CHANGES TO SAILING INSTRUCTIONS

- 2.1 Any change to the sailing instructions will be posted before 0900 on the day it will take effect, except that any change to the schedule of races will be posted by 2000 on the day before it will take effect.
- 2.2 In accordance with RRS 90.2 (c), oral changes to the Sailing Instructions may be made on the water, communicated to each boat before her warning signal. A change is in effect when the Race Committee (RC) signal boat displays Flag L over A with one sound signal. This means come within hail of the RC boat to receive the oral changes to the Sailing Instructions.

3 COMMUNICATIONS WITH COMPETITORS

- 3.1 Official notices and amendments will be available online through the <u>EVENT NOTICE BOARD</u> on this event's page on the <u>CRA</u> website.
- 3.2 On the water, the RC will monitor and communicate with competitors on VHF radio channel 68. Please contact them to notify of a boat's intent to withdraw from racing per SI 18.1.
- 3.3 In the event of an on-the-water emergency, first contact the US Coast Guard on VHF Channel 16 directly and immediately.









4 CODE OF CONDUCT

4.1 [DP] Competitors and support persons shall comply with reasonable requests from race officials.

5 SCHEDULE OF RACES

- 5.1 Two races are scheduled for all classes.
- 5.2 The scheduled time of the warning signal for the first race is **11:55am**. The warning signal for the second race will be as soon as possible after the completion of the first race.

6 ENTRIES & CHECK-IN:

- 6.1 [DP] Boats will have completed their "Check-In" when they check-in with and are acknowledged by the RC, while clearly displaying their sail number and backstay pennant.
- 6.2 Check-In will commence when the "L" flag is hoisted.
- 6.3 Visual and radio check-in (VHF 68) are acceptable until the first Warning Signal. Visual check-in <u>may</u> continue after the first warning at the sole discretion of the R/C (but not within one minute of any start).

7 CLASS STARTING ORDER

7.1 The class starting order for the first race will be as follows:

Start Order	Class	Numeral Pennant
1 st	Spin 1	1
2 nd	Spin 3	3
3 rd	Spin 4	4
4 th	Non-Spin	6
5 th	J-24	7

The starting order for the second race will vary and will be dependent on all boats in a class finishing the first race.

7.2 The RC may cancel or combine starts or start classes of boats while other classes are still finishing. It is the responsibility of a boat to start at her signaled start time. You may expect a gap of at least one minute between starting sequences.

8 RACING AREA

- 8.1 The starting area is in the vicinity of the $\frac{1}{2}$ mile marker mid-Harbor Island.
- 8.2 The racing area covers the general locale known as San Diego Bay. For navigation, refer to NOAA Chart <u>#18773</u>, San Diego Bay.

9 COURSES

- 9.1 The racecourse number will be displayed onboard the RC boat no later than the first warning signal for each class. Courses may be posted and changed up to the warning signal for any class.
- 9.2 The course will be selected from the attached course sheet.

10 MARKS

- 10.1 See the course sheet for descriptions and locations of all marks. All marks listed are considered rounding marks.
- 10.2 The use of an autonomous mark will not be grounds for redress. Routine movement of autonomous marks will not be grounds for redress. This includes minor readjustments and marks returning to station after having been pushed away by a competitor. This modifies RRS 62.1(a).

11 THE START

- 11.1 The starting line is between a staff with an orange flag on the RC vessel at one end and the course side of an orange autonomous or yellow tetrahedron mark near the RC boat at the other end.
- 11.2 [DP] Boats whose warning signal has not been made shall avoid the starting area during the starting sequence for other classes. Otherwise, this may be seen as a breach of RRS 23.1.
- 11.3 A boat that does not start within 5 minutes after her starting signal will be scored Did Not Start without a hearing. This changes RRS A5.1 and A5.2.
- 11.4 As a courtesy, one minute prior to the first warning the RC will sound 4 horn blasts.



SOUTH COAST Y A C H T S San Diego • NewPort Beach







11.5 All boats are expected to keep a constant look-out for other boats. Some boats may be finishing as others are starting.

12 RECALLS

- 12.1 If any part of a boat's hull is on the course side of the starting line at her starting signal and she is identified, the RC will hail her sail number as soon as possible over a loud hailer and/or on VHF 68. It is the responsibility of each boat to start properly.
- 12.2 Failure to hail her number, failure of her to hear such a hail, or the order in which boats are hailed will not be grounds for a redress for request. This changes RRS 62.1(a).
- 12.3 A RC assist vessel may be stationed near the Pin Buoy end of the starting line and is also authorized to identify and hail premature starters.

13 THE FINISH

- 13.1 The finish line is between a staff with a blue flag on the RC vessel at one end and the shoreside ½ mile marker mid-Harbor Island at the other end.
- 13.2 All boats are expected to keep a constant look-out for other boats. Some boats may be starting as others are finishing.

14 PENALTY SYSTEM

- 14.1 RRS V1, Penalty at the Time of the Incident, shall apply.
- 14.2 RRS V2, Penalty Taken After a Race, shall apply.

15 TIME LIMIT

- 15.1 If no boat in a class has finished by 4:45 PM on the day of the race, the race will be abandoned for that class.
- Boats not finished by 5:00 PM will be recorded as DNF. This modifies RRS 35, A4 and A5. 15.2

16 HEARING REQUESTS

- 16.1 RRS 61 is modified to add this additional requirement: A boat intending to protest shall report her intentions and the boat(s) being protested to the RC boat on station upon finishing or retiring and obtain RC acknowledgment. Radio reports of protests are only accepted from boats that are retiring from the race.
- 16.2 The Protest Time Limit expires 60 minutes after the RC boat docks. The Protest Time Limit will be posted on the event Notice Board.
- 16.3 Protests may be filed electronically to Colleen Cooke, PRO, at sailorcookie@cox.net. Protests may also be filed in person to any member of the CRA Board or the CRA Race Committee at the after-race party venue.
- 16.4 The parties involved will be listed, in the order of filing, on the Protest Hearing Schedule on the event website and will be heard as soon as practicable, which may be another day. This posting constitutes the notice required by RRS 63.2, Time and Place of the Hearing.
- 16.5 An arbitration meeting may be held prior to a protest hearing according to RRS Appendix T for breaches of the rules of Part 2 or rule 31 where there is no damage or injury, if a USSA Certified Judge is available. Protests not resolved through arbitration will be referred to the Protest Committee for a hearing.

SCORING 17

- 17.1 Scoring will occur as stated in the NoR.
- 17.2 Should conditions permit the use of Buoy ratings for the PHRF classes, course numbers will be posted with a "B" designation to indicate Buoy ratings are expected, but the final decision will be determined based on actual race conditions.

18 SAFETY REGULATIONS

- 18.1 [DP] A boat that retires from a race shall notify the race committee at the first reasonable opportunity. Informing the RC can be accomplished by either (a) sailing (motoring) past the RC vessel OR (b) radioing the RC vessel (VHF 68). Failure to do this may result in entry rejection for other CRA races. If the RC vessel does not answer, leave the information with another race participant to avoid punitive action, or keep trying.
- 18.2 Not withstanding any safety requirements, the ultimate safety of a boat and her crew is the sole and inescapable responsibility of the owner or charterer. He/she must do his/her best to ensure that the boat is fully sound,



SOUTH COAST -YACHTS-SAN DIEGO · NEWPORT BEACH







-YACHTS-

thoroughly seaworthy and manned by an experienced crew who are physically fit to face bad weather. He/she must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He/she must ensure that all safety equipment is properly maintained and stowed, and that crewmembers know where it is stowed and how it is used.

18.3 In the event of an on-the-water emergency, first contact the US Coast Guard on VHF Channel 16 directly and immediately.

19 AWARDS

19.1 Race results will be announced at the after race party at Fiddler's Green Restaurant, 2760 Shelter Island Dr, (619) 222-2216, and published on the CRA web site (www.cortezracing.com). Meet ASAP after the race for refreshments and re-hashing of the day.

20 DISCLAIMER OF LIABILITY

Sailing is an activity that has an inherent risk of damage and injury. Competitors in this event participate entirely at their own risk. See RRS 3, Decision to Race. The race organizers (CRA, race committee, protest committee, host club, sponsors, or any other organization or official) will not be responsible for damage to any boat or other property or the injury to any competitor, including death, sustained as a result of participation in this event. As a condition of their participation in this regatta, competitors release all claims they may have against CRA and its officers, directors, members, committees and employees for damage to property, personal injury or death sustained in conjunction with or prior to, during or after the regatta. Competitors shall be responsible for damage or injury caused by their breach of The Racing Rules of Sailing or applicable governmental rules for the avoidance of collision.

CRA Race Committee Chair Colleen Cooke (619)852-5010 <u>sailorcookie@cox.net</u>









Cortez Racing Association

2022 OPENING DAY REGATTA COURSE TABLE

All races start at **"A".** Marks are to be rounded to port unless they are followed by **"s"**. Marks followed by "s" are to be rounded to starboard. Distances are calculated from current charts and are subject to change due to occasional buoy repositioning by the US Coast Guard.

Windward/Leeward Courses Downwind Finish: Windward/Leeward Courses Upwind Finish:

	uwa		wai							VIIIGW	aiu/			ui 303	opwi		1311.			
#				MAF	RS		1	1	Dist.	#	MARKS									
1	Х	21	Х	Finish					3.2	28	X	21	Finish					2		
2	Х	21	Х	21	Х	Finish			5.2	29	X	21	х	21	Finish			4		
3	Х	21	Х	21	Х	21	Х	Finish	7.2	30	X	21	Х	21	X	21	Finish	6		
4	Х	FM19	Х	Finish					3.6	31	X	FM19	Finish					2.4		
5	Х	FM19	Х	FM19	Х	Finish			6.0	32	X	FM19	Х	FM19	Finish			4.8		
6	Х	FM19	Х	FM19	Х	FM19	Х	Finish	8.4	33	Х	FM19	Х	FM19	Х	FM19	Finish	7.2		
7	Х	Z	Х	Finish					4.6				Finish							
8	X	Z	X	Z	х	Finish			8.0	34	X	Z	Finish		Elected.			3.4		
9	X	Z	X	Z	X	Z	Х	Finish	11.4	35	Х	Z	Х	Z	Finish			6.8		
9	^		^	2	^	2	^		11.4	36	X	Z	Х	Z	X	Z	Finish	10.2		
10	19	FM19	19	Finish					5.0	37	19	21	Finish					2.7		
11	19	FM19	19	FM19	19	Finish			8.0	38	19	21	19	21	Finish			5.3		
12	19	FM19	19	FM19	19	FM19	19	Finish	11.0	39	19	21	19	21	19	21	Finish	7.9		
13	19	21	19	Finish					4.6	40	19	FM19	Finish					3.1		
14	19	21	19	21	19	Finish			7.2	41	19	FM19	19	FM19	Finish			6.1		
15	19	21	19	21	19	21	19	Finish	9.8	42	19	FM19	19	FM19	19	FM19	Finish	9.1		
16	19	Z	19	Finish					6	43	19	Z	Finish					4.1		
17	19	Z	19	Z	19	Finish			10	44	19	Z	19	Z	Finish			8.1		
18	19	Z	19	Z	19	Z	19	Finish	14	45	19	Z	19	Z	19	Z	Finish	12.1		
19	G1	21	G1	Finish					4.2	- 10			Fisiala					0.5		
20	G1	21	G1	21	G1	Finish				46	G1	21	Finish		F isish			2.5		
	G1	21	G1	21	G1		G1	Finish	6.6	47	G1	21	G1	21	Finish			4.9		
21	GI	21	GI	21	GI	21	GI	FILISH	9.0	48	G1	21	G1	21	G1	21	Finish	7.3		
22	G1	FM19	G1	Finish					4.6	49	G1	FM19	Finish					2.9		
23	G1	FM19	G1	FM19	G1	Finish			7.4	50	G1	FM19	G1	FM19	Finish			5.7		
24	G1	FM19	G1	FM19	G1	FM19	G1	Finish	10.2	51	G1	FM19	G1	FM19	G1	FM19	Finish	8.5		
25	G1	Z	G1	Finish					5.8	52	G1	Z	Finish					4		
26	G1	Z	G1	Z	G1	Finish			9.8	53	G1	Z	G1	Z	Finish			8		
27	G1	Z	G1	Z	G1	Z	G1	Finish	13.8	54	G1	Z	G1	Z	G1	Z	Finish	10		

Navigation Mark Descriptions:

"A" CRA YELLOW Inflatable, or ORANGE autonomous mark, South of the middle of Harbor Island

"X" CRA YELLOW Inflatable with a black band, South of the west end of Harbor Island

"Z" CRA YELLOW Inflatable, Southeast of the Embarcadero, near Star of India

FM19 Cement Fleet Mooring Buoy, SSW of the east end of Harbor Island

G1 The green entrance marker buoy for America's Cup Harbor as shown on NOAA chart 18773.

Navigation Buoys - (refer to NOAA Chart 18773):

5	SD 5, green channel buoy	16A	SD 16A, red channel buoy	23	SD 23, green channel buoy				
9	SD 9, green channel buoy	17	SD 17, green channel buoy	24	SD 24, red channel buoy				
10	SD 10, red channel buoy	18	SD 18, red channel buoy	26	SD 26, red channel buoy				
11	SD 11, green channel buoy	19	SD 19, green channel buoy	26A	SD 26A, red channel buoy				
12	SD 12, red channel buoy	20	SD 20, red channel buoy	28	SD 28, red channel buoy				
14	SD 14, red channel buoy	21	SD 21, green channel buoy	30	SD 30, red channel buoy				
15	SD 15, green channel buoy	22	SD 22, red channel buoy						
16	SD 16, red channel buoy	22A	SD 22A, red channel buoy	Rando	Random Leg Courses on the next pages				



SOUTH COAST Y A C H T S SAN DIEGO · NEWPORT BEACH



SOUTH COAST Y A C H T S -San Diego • NewPort Beach



Random Leg Courses:

Course #	anac		Marks Handicap Course Marks Distance #										 Handicap Distance			
101	Х	21					2.0	168	20	24	Z				5.8	Diotarioo
102	X	20	21				2.2	169	20	FM19	20	23	Z		6.9	
103	X	FM19	- 1				2.4	170	20	26	Z	20	-		0.0	8.6
104	X	20	FM19				2.6	171	20	26A	Z					9.3
105	X	19	21	FM19			3.2		20	20/1	-					0.0
106	X	Z					3.4	172	Х	18	Z					4.3
107	X	FM19	20	21			3.8	173	X	14	Z					6.9
108	X	22					3.9	174	X	16A	Z	Х	Z			9.0
109	X	21	Х	21			4.0	175	X	9	Z		_			9.4
110	Х	20	22	FM19			4.2	176	Х	9	22	Z				10.3
111	Х	22	Z				4.4	177	Х	11	Z	Х	Z			11.8
112	Х	20	FM19	Х	21		4.6	178	Х	11	FM19	Х	Z			10.9
113	Х	FM19	Х	FM19			4.8	179	Х	5	Z 22					11.9
114	Х	23					5.1	180	Х	5	22	Z				12.9
115	Х	23	FM19				5.3	181	Х	9	Z	Х	Z			12.8
116	Х	23	Z				5.5	182	Х	18	22					4.8
117	Х	24					5.8	183	Х	18	24					6.7
118	Х	Z	Х	FM19			5.8	184	Х	16A	22	Х	Z			9.4
119	X	24	FM19				5.9	185	Х	18	26					9.5
120	X	24	Z		_		6.3	186	X	16A	24	X	Z	+		 11.2
121	X	20	Z	X	Z	FN (10)	7.1	187	X	16A	26	Х	Z			14.0
122	X	FM19	Х	Z	Х	FM19	8.2	188	Х	16A	28	Х	Z			15.3
123	X	26	N/	-			8.6	400		00	40	0.1				0.4
124	X	Z	X	Z			8.6	189	X	22	18	21				6.4
125	X	26	FM19				8.7	190	X	22	X	Z	7			7.3
126	X	26	Z	EN440	V	7	9.1	191	X	22	Z	X	Z			7.8
127	X	Z	X	FM19	X	Z	9.3	192	X	22	X	22	Z			8.2
128	Х	Ζ.	Х	Z	Х	L	10.3	193 194	X	24 24	18	21 Z				8.2
129	19	21					2.7	194	X	24	X Z	X	Z			9.1 9.6
129	19	FM19					3.1	195	X	24	X	22	Z			9.0
130	19	Z					4.1	190	X	24	18	22	L			11.0
131	19	21	Х	21			4.1	197	X	20	X	24	Z			10.8
132	19	22	Z	21			5.1	198	X	24	X	Z4 Z				11.9
133	19	21	19	21			5.2	200	X	20	X	Z				13.2
135	19	FM19	X	FM19			5.5	200	~	20	~	2				13.2
135	19	FM19	19	FM19			6.1	201	Х	21	Х					3.2
130	19	23	Z				6.2	201	X	FM19	X					3.6
138	19	24	Z				6.9	203	X	Z	X					4.7
139	19	Z	19	FM19			7.1	204	19	FM19	19					5.0
140	19	Z	X	Z			7.6	205	19	Z	19					6.1
141	19	Z	19	Z			8.2	206	X	17	X	16				6.7
142	19	26	Z	_			9.7	207	X	19	Z	16A				7.4
			_				• • •	208	X	15	X	16				7.9
143	18	FM19					3.2	209	X	18	Z	17				8.1
144	18	Z					4.1	210	X	18	24	Z	Х			8.4
145	18	22	Z				5.1	211	Х	20	Ζ	21	23	FM19	18	8.9
146	18	21	18	21			5.1	212	Х	17	Z	17				9.9
147	15	FM19					5.8	213	Х	15	Z	17				 10.7
148	18	23	Z				6.2	214	Х	15	Z	19	15	1		11.6
149	18	FM19	18	FM19			6.3									
150	17	22	Z				6.6	215	X	21	18					3.9
151	18	24	Z	51110			6.9	216	X	22	X			+		 5.1
152	17	FM19	19	FM19	-		7.6	217	X	23	X	40				6.3
153	15	22	Z				7.7	218	19	22	X	19				6.7
154	17	23	Z	-			7.7	219	19	23	19					7.6
155	18	Z	18	Z			8.1	220	19	24	19	104				8.3
156	17	24	Z	EM40			8.4	221	X 10	24	X	16A		+		 9.1
157	17	FM19	17	FM19			9.1	222	19	26	Х					10.5
158	18	26	Z	Z			9.7 9.7	202	20	21	18					3.4
159	17	Z 26	19	۷.		1		223		21				+		
160	17 17	26 Z	Z 17	Z			11.2 11.2	224	20	Z FM19	20	18				3.8
161 162	20		1/	2				225	18		X	18				5.3
	20	21 FM19					1.5	226	16A 17	FM19 EM10	X	19		+		 6.4
163 164	20	Z					2.0 3.0	227 228	17	FM19 21	X 17	10				6.9 7.6
164	20	FM19	20	FM19			3.8	220	17	Z	17					8.6
165	20	22	Z	1 101 1 3		-	4.0	229	17	Z	15					9.2
167	20	22	Z				5.1	230	15	Z	17					10.3
10/	20	20	L _				J.1	201	15	2	17					10.0





Continued...



Random Leg Courses Continued:

			,		1 1										1	<u>г г</u>	
232	16A						3.2	279	FM19	Х	Z						4.6
233	17						3.6	280	Z	Х	Z						5.6
234	Х	16					4.0	281	Z	19	Z	_					6.3
235	15						4.7	282	Z	Х	18	Z					6.5
236	12						6.1	283	Z	Х	16A	Z					7.4
237	10						7.2	284	Z	Х	Z	Х	FM19				8.0
238	11	14	9				8.9	285	Z	Х	14	Z	_				8.9
239	5						9.8	286	Z	19	Z	19	Z				10.3
240	10	17	10				11.0	287	Z	17	Z	Х	Z		_		11.3
241	5	9	5				12.3	288	Z	Х	Z	Х	Z	Х	Z		12.5
242	5	11	5				13.4	289	Z	19	Z	19	Z	19	Z		14.4
243	FM19	Х					2.4	290	21	Х	21						2.7
244	FM19	19					3.1	291	21	19	21						3.3
245	Z	Х					3.4	292	22	Х	21						4.6
246	Z	19					4.1	293	22	19	21						5.3
247	Z	Х	FM19	Х			5.8	294	23	Х	21						5.8
248	Z	Х	Z	Х			6.9	295	24	Х	21						6.5
249	Z	19	Z	19			8.2	296	24	19	21						7.1
250	Z	Х	FM19	19	FM19	19	9.5	297	24	22	23	Х	21				7.7
251	Z	X	Z	Х	Z	Х	10.3	298	24	22	24	Х	21				8.4
252	Z	19	Z	19	Z	19	12.3	299	26	Х	21						9.3
								300	26A	Х	21						10.0
253	21	X					2.0	301	26A	19	21						10.6
254	21	19					2.7	302	28	19	21						11.2
255	22	Х					3.9			_							
256	22	19					4.6	303	22	Z							3.2
257	23	X					5.1	304	22	Z	X	21					5.2
258	24	Х					5.8	305	22	FM19	19	21					5.4
259	24	19					6.5	306	21	FM19	Х	21	FM19	Х	21	FM19	6.1
260	24	22	23	Х			6.9	307	FM19	19	21	19	21				6.3
261	24	22	24	Х			7.6	308	22	FM19	X	21	Х	21			6.8
262	26	Х					8.6	309	22	X	22	Z					7.0
263	26A	X					9.3	310	24	Z	Х	21	_				7.0
264	26A	19					9.9	311	22	Z	X	22	Z				7.5
265	28	19					10.6	312	22	X	22	21s	Z				8.0
000	04	00	EN440	00			2.4	313	26	Z	X	21	04				9.8
266	21	20	FM19	20			3.4	314	24	X	Z	X	21			<u>├</u>	10.0
267	21	20	FM19	19			4.5	315	26	Х	Z	Х	21				12.8
268	FM19	19	21	19			5.6	240	EM40	00	~						2.2
269	22	X	FM19	X			6.3	316	FM19s	22	Z						3.3
270	22 23	<u>X</u>	Z Z	<u>X</u>			7.3	317	FM19s	24	7	004	00		-		4.7
271	23	X		X X			8.5	318	22s	22A	Z	22A 22A	22 22				5.7
272	24	X 10	Z	Ă V			9.2	319	FM19s	22A	Z	ZZA	22				5.9
273	24	19	Z	X			9.8	320	FM19s	26	7	22.4	7	004	20		7.5
274	26	X	FM19	X			11.0	321	22s	22A	Ζ	22A	Z	22A	22		7.8
275	26	<u>X</u>	Z	X			12.0	322	FM19s	26A						<u>├</u>	8.1
276	26A	Х	Z	Х			12.7	323	FM19s	28	00	00					8.8
077	EM40	V	EM40				2.5	324	FM19s	24	22	26					9.3
277	FM19	X 10	FM19				3.5 4.1	325	FM19s	28	22 22	24 26					10.6
278	FM19	19	FM19				4.1	326	FM19s	26	22	20			1		12.1

END





