

The Speed System and Bridle lines will require maintenance just like any high performance equipment in racing sports - they must be checked after every 60 hours flying time and maintained in the correct trim or the kite will not perform as designed.

Bridle Lines that are worn or not to factory specification (+ or - 15mm) must be replaced.

Speed System lines that are worn must be replaced. If the Speed System lines are not worn but are not to factory specifications you must adjust back to factory spec.

CHECKING BRIDLE LINES

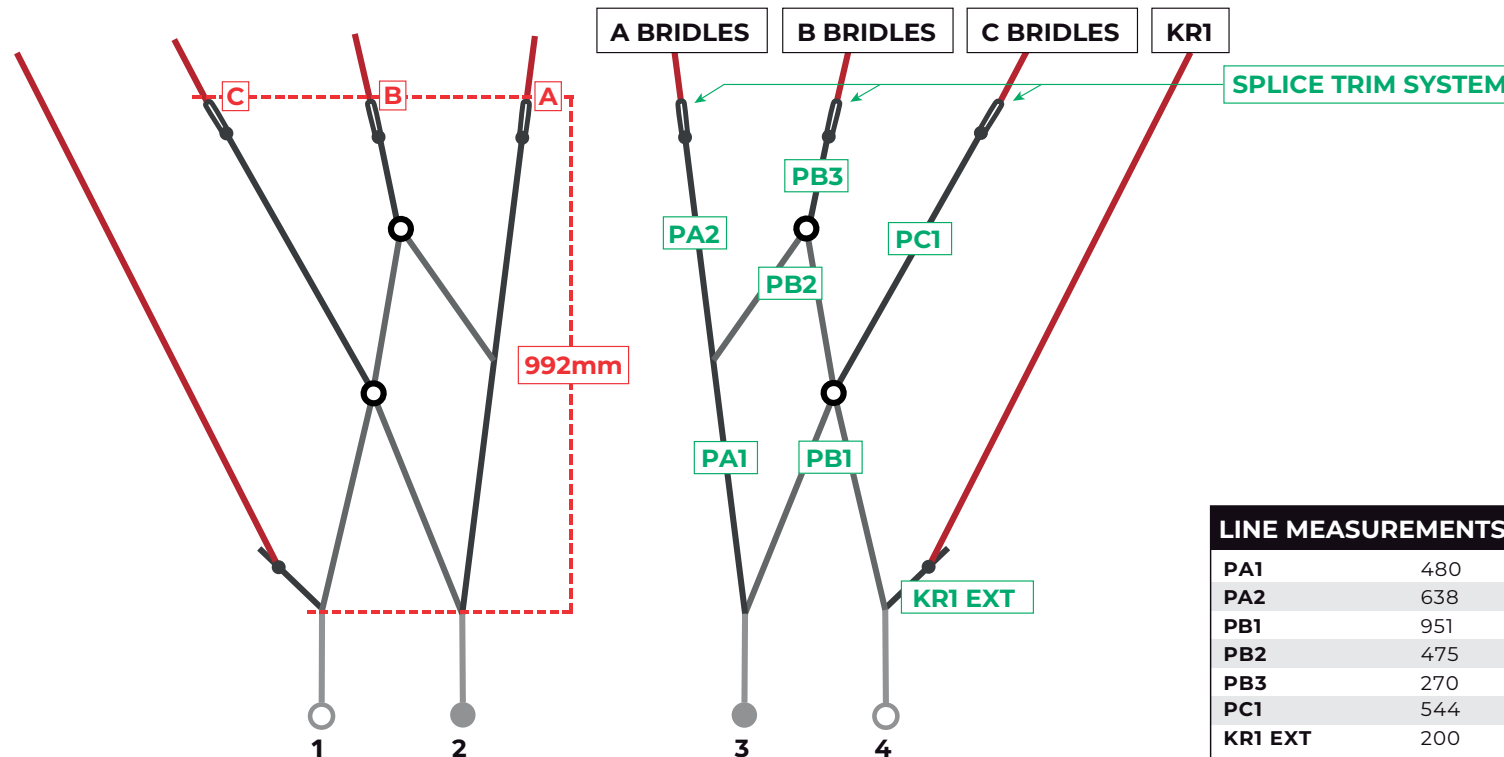
Bridle Lines that are worn or not to factory specification (+ or - 15mm) must be replaced.

Replacement lines can be ordered individually or as a full set from your shop/dealer.

The kite repair pack includes spare bridle line lengths that can be used to make a short-term replacement bridle line.

1. Open the kite out in a large space.
2. Inspect all bridle lines for wear/damage. Take note or label lines to be replaced.
3. Use a tape measure to measure the remaining bridles. Ask a friend to hold the end of the tape measure and bridle line in position to get an accurate measurement.
4. Pull on the line to add some tension and note each measurement.
5. Refer to the bridle line measurements sheet and rigging diagrams. Take note or label lines to be replaced.
6. Replace all bridle lines as necessary.

R1 V4 PRO-TUNE SPEED SYSTEM



R1_{v4}

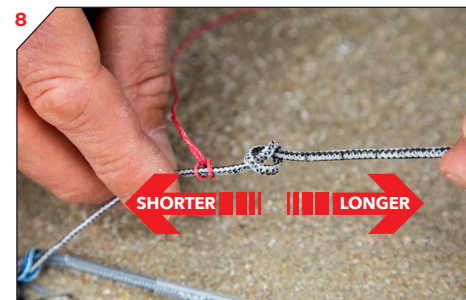
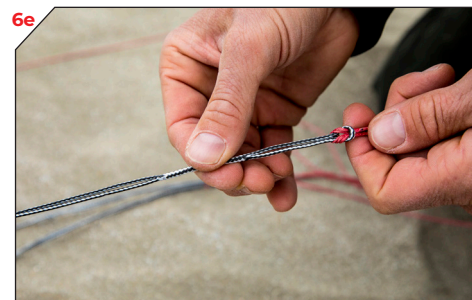
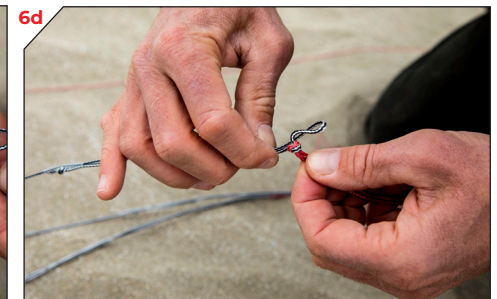
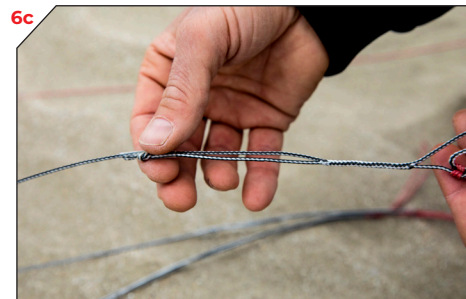
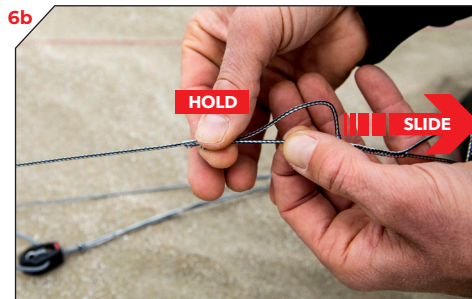
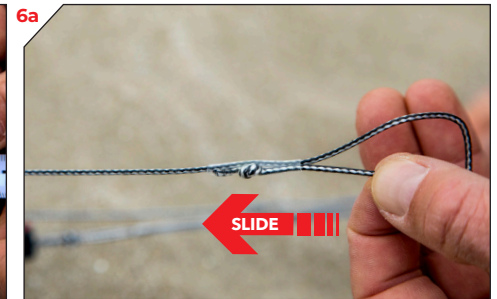
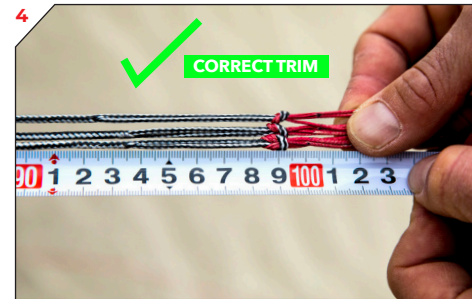
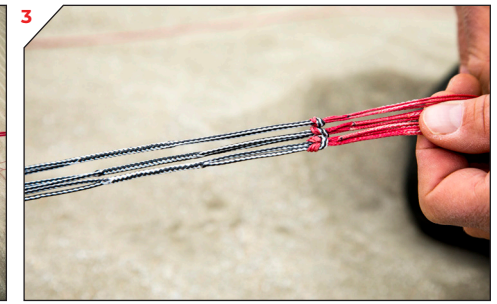
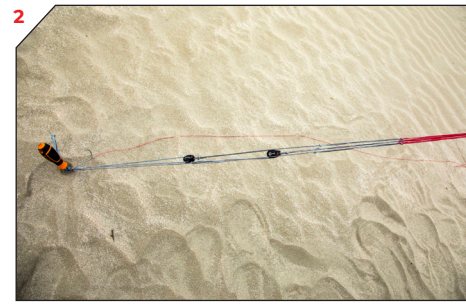
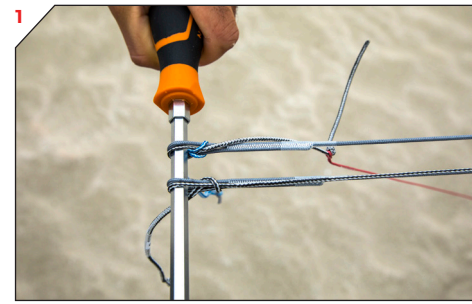
R1 V4 PRO-TUNE SPEED SYSTEM TRIMMING

Through heavy loads, general wear and tear on lines combined with water, salt, sand and sun the Speed System lines may stretch or shrink. To keep a Speed System at factory trim setting use the simple Splice Trim System.

WATCH THE VIDEO AT WWW.OZONEKITES.COM

STEP-BY-STEP INSTRUCTIONS. REFER TO THE R1 V4 PRO-TUNE SPEED SYSTEM DIAGRAM AND PHOTOS

1. Align the lower ends of the Speed System. These are lines PA1 (connected to pigtails #2 or #3), PB1 (running through the lower pulley connecting to pigtails #1 and #2 or #3 and #4) and KR1 EXT (connecting to pigtails #1 or #4).
2. Ask a friend to hold the pigtails keeping the Speed System lower ends even, or use a Ground Stake (or a screw driver) through the lower ends.
3. Apply even tension through the Speed System by pulling on the A, B and C bridle line groups attached to the upper ends of PA2, PB3 and PC1 respectively.
4. The measurement points are referenced in the diagram and photos as A, B and C correlating to the A, B and C bridle line groups. The overall length of the Speed System should measure 992mm from the lower ends (bottom of lines PA1/PB1/KR1 EXT) to the upper ends (top of lines PA2/PB3/PC1)
5. If measurement points A, B and/or C are not positioned at 992mm they can be individually adjusted using the Splice Trim System located on lines PA2, PB3 and PC1.
6. To shorten: pull the knot under the heat shrink down twice the distance required to adjust. While holding it in position, loosen the splice so the loop can adjust to its new length. Loosen the bridle lines connection at the upper end of PA2/PB3/PC1 and move them to position at the top of the loop. Pull the lines tight and ensure the splice is locking.
7. To lengthen: push the knot under the heat shrink up twice the distance required to adjust. The upper end of the knot is spliced into itself. Loosen the splice and pull out line as required from the top end of the splice. Loosen the bridle lines connection at the upper end of PA2/PB3/PC1 and move them to position at the top of the loop. Pull the lines tight and ensure the splice is locking.
8. If adjusting the position of measurement C by changing the length of PC1, the position of the knot in KR1 EXT must also be adjusted by the same amount and in the same direction.
9. If A, B and/or C can not be adjusted to a length of 992mm the Speed System lines have likely shrunk or stretched drastically and/or might be damaged.
10. Make sure you check every single Speed System line to their specs and if necessary replace them. PB1 & PB2 pulley lines are likely to wear the fastest; spares are supplied in the kites repair kit.



EXAMPLE 1: If measurement point A is 20mm longer than the factory standard spec of 992mm, move the knot under the heat shrink down 40mm and adjust the A bridles connection to the loop of PA2.

EXAMPLE 2: If measurement point B is 10mm shorter than the factory standard spec of 992mm, move the knot under the heat shrink up 20mm and adjust the B bridles connection to the loop of PB3.

EXAMPLE 3: If measurement point C is 10mm shorter than the factory standard spec of 992mm, move the knot under the heat shrink up 20mm and adjust the C bridles connection to the loop of PC1. Then move the knot in KR1 EXT up by 10mm.

EXAMPLE 4: If measurement point C is 20mm longer than the factory standard spec of 992mm, move the knot under the heat shrink down 40mm and adjust the C bridles connection to the loop of PC1. Then move the knot in KR1 EXT down by 20mm.

R1_{v4}

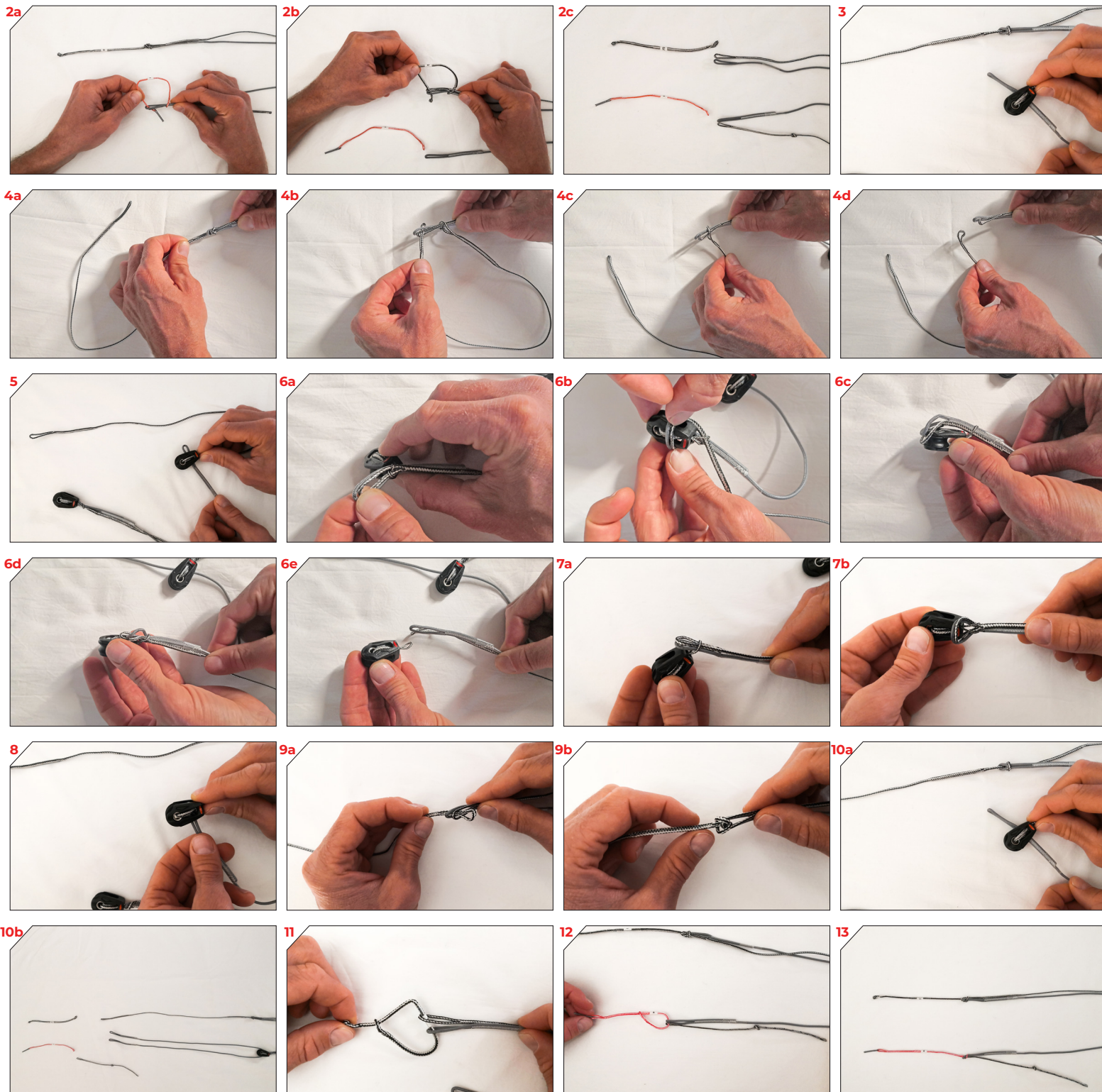
PRO-TUNE SPEED SYSTEM PULLEY LINE REPLACEMENT

The sheathed pulley lines (PB1 & PB2) will wear over time and will need to be replaced. Make sure you check them before every session. You'll find spare pulley lines in the supplied repair kit. If the Speed System lines have shrunk or stretched drastically they might be damaged. Make sure you check every single Speed System line to their specs and if necessary replace them.

[WATCH THE VIDEO AT WWW.OZONEKITES.COM](http://WWW.OZONEKITES.COM)

STEP-BY-STEP INSTRUCTIONS. REFER TO THE R1 V4 PRO-TUNE SPEED SYSTEM DIAGRAM AND PHOTOS

1. Disconnect the flying lines and lay the Speed System out in an open area.
2. Disconnect the front (#2 or #3) and back (#1 or #4) pigtails.
3. Remove PB1 from the lower pulley.
4. Disconnect PA1 from PA2 and PB2.
5. Remove PB2 from the upper pulley.
6. Disconnect PB2 and PC1 from the pulley - loosen the loop-to-loop connection and feed the pulley through the end loops of PB2 and PC1.
7. Take the replacement PB2 and PC1 and re-connect with the pulley. The pulley goes through the end loops of PB2 and PC1 i.e. reverse the previous steps.
8. Feed the replacement PB2 line through the upper pulley.
9. Connect replacement PB2 and PA1.
10. Take the PB1 replacement line and feed it through the lower pulley.
11. Connect PB1 and PA1 to the front line pigtail (#2 or #3).
12. Connect the other end of PB1 and KR1 EXT to the back pigtail (#1 or #4).
13. Repeat the same process for the other speed system side. Always check your speed system and replace lines when excessive wear shows.





BRIDLE LINE LENGTHS

ALL MEASUREMENTS IN MM

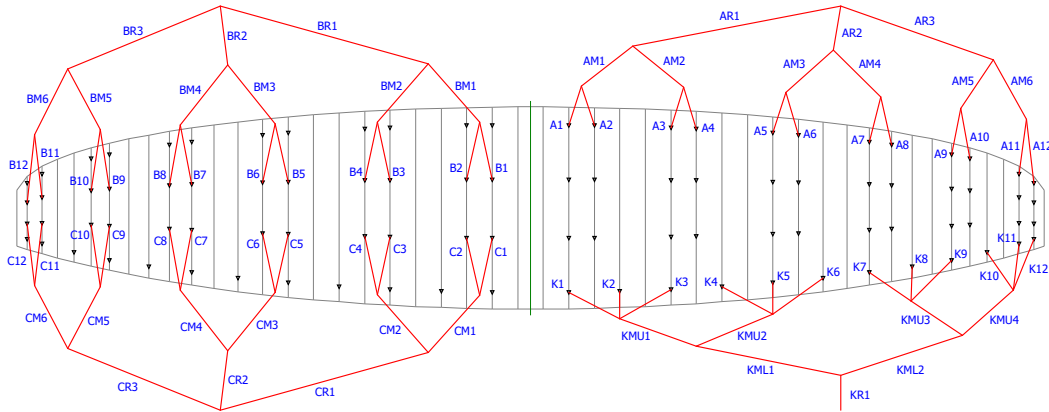
LINE	7m	9m	10m	11m	13m	15m	17m	18m	19m	21m
A1	294	271	1028	1078	1175	1181	1249	1293	1329	1395
A2	231	204	840	882	965	963	1020	1058	1090	1146
A3	241	247	900	946	1038	1071	1136	1179	1216	1283
A4	216	198	805	849	935	985	1049	1090	1125	1190
A5	281	239	889	938	1033	964	1032	1069	1106	1164
A6	208	211	680	721	799	748	805	836	868	916
A7	217	279	667	711	792	546	593	618	646	685
A8	189	203	580	620	694	500	544	567	593	631
A9	195	221	222	241	285	129	162	172	187	214
A10	140	187	190	207	248	110	138	148	161	185
A11	155	238	-	-	-	-	-	-	-	-
A12	150	178	-	-	-	-	-	-	-	-
A13	-	212	-	-	-	-	-	-	-	-
A14	-	191	-	-	-	-	-	-	-	-
AM1	1250	1900	1355	1420	1540	1690	1790	1850	1895	1990
AM2	1100	1680	1145	1200	1300	1350	1430	1480	1515	1590
AM3	1100	1520	1070	1120	1215	1000	1065	1100	1125	1185
AM4	920	1050	910	950	1030	1000	1065	1100	1125	1185
AM5	850	850	-	-	-	-	-	-	-	-
AM6	700	1300	-	-	-	-	-	-	-	-
AM7	-	1100	-	-	-	-	-	-	-	-
AR1	2800	2800	2820	2950	3200	3380	3600	3700	3790	3980
AR2	2550	3000	2580	2700	2930	3380	3590	3700	3790	3985
AR3	2400	2270	3580	3750	4070	4440	4710	4860	4980	5230
B1	260	234	988	1036	1129	1133	1198	1241	1275	1339
B2	198	168	801	841	920	917	970	1007	1037	1091
B3	210	212	862	907	996	1028	1091	1132	1168	1232
B4	185	163	772	814	897	946	1007	1047	1081	1144
B5	254	206	858	906	998	933	998	1034	1070	1127
B6	182	179	655	695	771	722	778	808	839	885
B7	196	251	648	690	769	528	573	598	625	663
B8	168	176	566	606	679	484	527	551	576	613
B9	182	199	217	236	280	127	159	170	184	211
B10	127	166	181	199	239	96	125	134	148	173
B11	149	224	-	-	-	-	-	-	-	-
B12	137	165	-	-	-	-	-	-	-	-
B13	-	206	-	-	-	-	-	-	-	-
B14	-	179	-	-	-	-	-	-	-	-
BM1	1250	1900	1355	1420	1540	1690	1790	1850	1895	1990
BM2	1100	1680	1145	1200	1300	1350	1430	1480	1515	1590
BM3	1100	1520	1070	1120	1215	1000	1065	1100	1125	1185
BM4	920	1050	910	950	1030	1000	1065	1100	1125	1185
BM5	850	850	-	-	-	-	-	-	-	-
BM6	700	1300	-	-	-	-	-	-	-	-
BM7	-	1100	-	-	-	-	-	-	-	-
BR1	2800	2800	2820	2950	3200	3380	3600	3700	3790	3980
BR2	2550	3000	2580	2700	2930	3380	3590	3700	3790	3985
BR3	2400	2270	3580	3750	4070	4440	4710	4860	4980	5230

LINE	7m	9m	10m	11m	13m	15m	17m	18m	19m	21m
C1	316	294	1051	1102	1201	1211	1281	1326	1363	1432
C2	253	227	864	907	992	994	1052	1092	1124	1183
C3	263	271	924	971	1066	1102	1170	1214	1252	1321
C4	237	221	828	873	962	1014	1080	1122	1158	1225
C5	303	262	912	962	1059	995	1065	1103	1141	1201
C6	230	234	704	746	827	779	838	870	903	953
C7	239	303	690	735	819	573	621	648	676	717
C8	208	227	596	637	714	513	558	583	610	648
C9	215	244	239	259	305	148	182	193	209	237
C10	157	209	196	215	257	110	141	151	165	191
C11	167	261	-	-	-	-	-	-	-	-
C12	148	200	-	-	-	-	-	-	-	-
C13	-	226	-	-	-	-	-	-	-	-
C14	-	191	-	-	-	-	-	-	-	-
CM1	1250	1900	1355	1420	1540	1690	1790	1850	1895	1990
CM2	1100	1680	1145	1200	1300	1350	1430	1480	1515	1590
CM3	1100	1520	1070	1120	1215	1000	1065	1100	1125	1185
CM4	920	1050	910	950	1030	1000	1065	1100	1125	1185
CM5	850	850	-	-	-	-	-	-	-	-
CM6	700	1300	-	-	-	-	-	-	-	-
CM7	-	1100	-	-	-	-	-	-	-	-
CR1	2800	2800	2820	2950	3200	3380	3600	3700	3790	3980
CR2	2550	3000	2580	2700	2930	3380	3590	3700	3790	3985
CR3	2400	2270	3580	3750	4070	4440	4710	4860	4980	5230
K1	1024	992	1321	1239	1438	1440	1655	1505	1573	1565
K2	813	792	1118	1020	1204	1189	1400	1229	1296	1267
K3	664	651	962	860	1028	1004	1206	1031	1098	1059
K4	733	718	1104	920	1192	1251	1246	1154	1220	1175
K5	590	569	961	758	1031	1081	1059	959	1021	961
K6	571	531	895	710	965	1011	989	904	960	910
K7	592	708	981	963	1140	1062	1074	1115	1175	1110
K8	443	533	823	793	961	876	875	912	967	887
K9	404	465	740	709	866	796	798	831	881	813
K10	325	471	726	720	825	713	834	929	881	900
K11	275	373	651	643	748	637	755	853	799	814
K12	295	411	649	648	753	648	756	853	802	822
K13	-	146	248	219	280	503	447	503	432	460
K14	-	163	256	232	295	437	373	433	351	384
K15	-	-	-	-	-	402	333	341	308	240
K16	-	-	-	-	-	403	337	341	312	242
KML1	1200	1110	1200	1300	1400	1500	1500	1700	1700	1800
KML2	900	920	900	1000	1100	1200	1250	1300	1400	1400
KML3	-	-	-	-	-	1645	1900	1800	2100	2000
KMU1	900	1110	1050	1200	1195	1330	1410	1500	1600	1700
KMU2	700	920	765	1000	870	910	1200	1200	1300	1400
KMU3	800	1000	850	900	850	1000	1200	1200	1200	1400
KMU4	800	900	780	800	800	1000	1065	1000	1100	1200
KMU5	-	1110	1150	1200	1250	550	580	700	615	800
KMU6	-	-	-	-	-	550	580	750	615	900
KR1	2470	2790	2850	2970	3150	3370	3455	3570	3550	3770

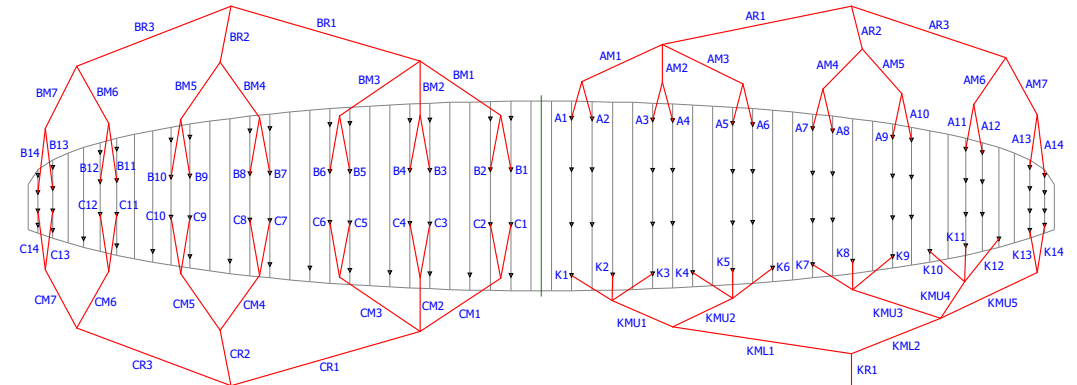
R1_{v4}

RIGGING DIAGRAMS

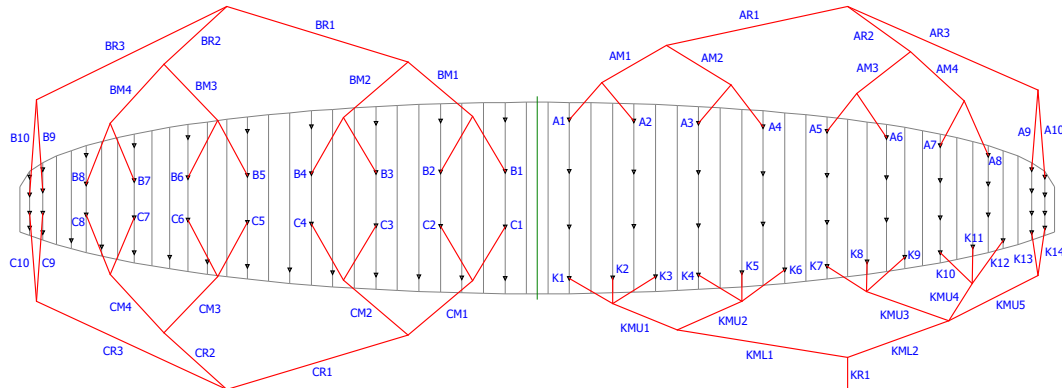
R1 V4 - 7M RIGGING DIAGRAM



R1 V4 - 9M RIGGING DIAGRAM



R1 V4 - 10M/11M/13M RIGGING DIAGRAM



R1 V4 - 15M/17M/18M /19M/21M RIGGING DIAGRAM

