

TABLE: Joint Displacements

Joint	OutputCase	CaseType	StepType	U1	U2	U3	R1	R2	R3
Text	Text	Text	Text	m	m	m	Radians	Radians	Radians
140	Tren A1	LinDirHis	Max	0	0	2.095E-12	0.000004137	0.000027	0
140	Tren A1	LinDirHis	Min	0	0	-0.000295	-0.000002712	-6.343E-14	0
229	Tren A1	LinDirHis	Max	0	0	3.282E-12	1.963E-08	7.834E-13	0
229	Tren A1	LinDirHis	Min	0	0	-0.000268	-0.000071	-0.000027	0
230	Tren A1	LinDirHis	Max	0	0	1.545E-12	2.812E-07	2.801E-07	0
230	Tren A1	LinDirHis	Min	0	0	-0.000285	-0.000034	-0.000013	0
231	Tren A1	LinDirHis	Max	0	0	4.854E-13	7.593E-14	0.000023	0
231	Tren A1	LinDirHis	Min	0	0	-0.000227	-0.000095	-0.000011	0
232	Tren A1	LinDirHis	Max	0	0	0.00000249	8.519E-14	0.000053	0
232	Tren A1	LinDirHis	Min	0	0	-0.000383	-0.000111	-0.000004891	0
233	Tren A1	LinDirHis	Max	0	0	0.000004409	2.057E-13	0.000025	0
233	Tren A1	LinDirHis	Min	0	0	-0.000509	-0.000144	-0.000009995	0
234	Tren A1	LinDirHis	Max	0	0	0.000001315	3.199E-07	0.000053	0
234	Tren A1	LinDirHis	Min	0	0	-0.000574	-0.00019	-0.000012	0
235	Tren A1	LinDirHis	Max	0	0	0.000000931	0.000000201	0.000071	0
235	Tren A1	LinDirHis	Min	0	0	-0.000804	-0.000194	-0.000008833	0
236	Tren A1	LinDirHis	Max	0	0	0.000002481	7.934E-08	0.000055	0
236	Tren A1	LinDirHis	Min	0	0	-0.000983	-0.00022	-0.000013	0
237	Tren A1	LinDirHis	Max	0	0	0.000001341	3.098E-07	0.000081	0
237	Tren A1	LinDirHis	Min	0	0	-0.001153	-0.000246	-0.000016	0
238	Tren A1	LinDirHis	Max	0	0	8.992E-07	0.000000247	0.000084	0
238	Tren A1	LinDirHis	Min	0	0	-0.001411	-0.000244	-0.000015	0
239	Tren A1	LinDirHis	Max	0	0	0.000000217	1.905E-07	0.000075	0
239	Tren A1	LinDirHis	Min	0	0	-0.001615	-0.000261	-0.000022	0
240	Tren A1	LinDirHis	Max	0	0	0.000002015	3.695E-07	0.000092	0
240	Tren A1	LinDirHis	Min	0	0	-0.001829	-0.00027	-0.000027	0
241	Tren A1	LinDirHis	Max	0	0	0.000001932	3.485E-07	0.000091	0
241	Tren A1	LinDirHis	Min	0	0	-0.002087	-0.000264	-0.000028	0
242	Tren A1	LinDirHis	Max	0	0	0.000003003	3.072E-07	0.000089	0
242	Tren A1	LinDirHis	Min	0	0	-0.002317	-0.000269	-0.000032	0
244	Tren A1	LinDirHis	Max	0	0	0.000003872	4.017E-07	0.000098	0
244	Tren A1	LinDirHis	Min	0	0	-0.002792	-0.000253	-0.000038	0
245	Tren A1	LinDirHis	Max	0	0	0.000004868	3.747E-07	0.000099	0
245	Tren A1	LinDirHis	Min	0	0	-0.003017	-0.000246	-0.000047	0
246	Tren A1	LinDirHis	Max	0	0	0.000005243	4.248E-07	0.000098	0
246	Tren A1	LinDirHis	Min	0	0	-0.003237	-0.000232	-0.00005	0
247	Tren A1	LinDirHis	Max	0	0	0.000000597	3.984E-07	0.000095	0
247	Tren A1	LinDirHis	Min	0	0	-0.003447	-0.000214	-0.000057	0
248	Tren A1	LinDirHis	Max	0	0	0.000006983	3.602E-07	0.000098	0
248	Tren A1	LinDirHis	Min	0	0	-0.003649	-0.000198	-0.000066	0
249	Tren A1	LinDirHis	Max	0	0	0.000007713	3.862E-07	0.000093	0
249	Tren A1	LinDirHis	Min	0	0	-0.003831	-0.000176	-0.00007	0
250	Tren A1	LinDirHis	Max	0	0	0.000008656	3.651E-07	0.00009	0
250	Tren A1	LinDirHis	Min	0	0	-0.003988	-0.000153	-0.000074	0
251	Tren A1	LinDirHis	Max	0	0	0.000011	3.832E-07	0.000089	0
251	Tren A1	LinDirHis	Min	0	0	-0.004124	-0.000131	-0.000079	0
252	Tren A1	LinDirHis	Max	0	0	0.000012	3.893E-07	0.000085	0

252	Tren A1	LinDirHis	Min	0	0	-0.004241	-0.000104	-0.000087	0
253	Tren A1	LinDirHis	Max	0	0	0.000013	3.336E-07	0.000078	0
253	Tren A1	LinDirHis	Min	0	0	-0.004335	-0.000078	-0.000091	0
254	Tren A1	LinDirHis	Max	0	0	0.000014	2.835E-07	0.000071	0
254	Tren A1	LinDirHis	Min	0	0	-0.004399	-0.000051	-0.000094	0
255	Tren A1	LinDirHis	Max	0	0	0.000015	2.319E-07	0.000066	0
255	Tren A1	LinDirHis	Min	0	0	-0.004435	-0.000024	-0.000099	0
256	Tren A1	LinDirHis	Max	0	0	0.000015	0.000018	0.000057	0
256	Tren A1	LinDirHis	Min	0	0	-0.004444	-0.000008907	-0.000101	0
257	Tren A1	LinDirHis	Max	0	0	0.000015	0.000045	0.000049	0
257	Tren A1	LinDirHis	Min	0	0	-0.004417	-0.000004902	-0.000101	0
258	Tren A1	LinDirHis	Max	0	0	0.000015	0.000073	0.000043	0
258	Tren A1	LinDirHis	Min	0	0	-0.004356	-0.000003001	-0.000104	0
259	Tren A1	LinDirHis	Max	0	0	0.000016	0.000102	0.000036	0
259	Tren A1	LinDirHis	Min	0	0	-0.004269	-0.000001848	-0.000108	0
260	Tren A1	LinDirHis	Max	0	0	0.000016	0.000129	0.000026	0
260	Tren A1	LinDirHis	Min	0	0	-0.00415	-0.000001353	-0.000109	0
261	Tren A1	LinDirHis	Max	0	0	0.000015	0.000154	0.000015	0
261	Tren A1	LinDirHis	Min	0	0	-0.003996	-0.000001046	-0.000107	0
262	Tren A1	LinDirHis	Max	0	0	0.000015	0.00018	0.00000685	0
262	Tren A1	LinDirHis	Min	0	0	-0.003814	-0.000001041	-0.000107	0
263	Tren A1	LinDirHis	Max	0	0	0.000013	0.000201	0.000001696	0
263	Tren A1	LinDirHis	Min	0	0	-0.003605	-0.000001054	-0.000106	0
264	Tren A1	LinDirHis	Max	0	0	0.000012	0.000221	0.00000156	0
264	Tren A1	LinDirHis	Min	0	0	-0.003368	-0.000001015	-0.000109	0
265	Tren A1	LinDirHis	Max	0	0	0.000011	0.000241	0.00000145	0
265	Tren A1	LinDirHis	Min	0	0	-0.003104	-0.000001047	-0.000108	0
266	Tren A1	LinDirHis	Max	0	0	0.000009002	0.000251	0.000001283	0
266	Tren A1	LinDirHis	Min	0	0	-0.002835	-0.000001003	-0.000104	0
267	Tren A1	LinDirHis	Max	0	0	0.000008322	0.000259	0.000001053	0
267	Tren A1	LinDirHis	Min	0	0	-0.002555	-8.883E-07	-0.000108	0
268	Tren A1	LinDirHis	Max	0	0	0.000007265	0.000271	0.000001051	0
268	Tren A1	LinDirHis	Min	0	0	-0.00224	-9.515E-07	-0.000106	0
269	Tren A1	LinDirHis	Max	0	0	0.000006147	0.000263	9.033E-07	0
269	Tren A1	LinDirHis	Min	0	0	-0.001954	-9.433E-07	-0.000097	0
270	Tren A1	LinDirHis	Max	0	0	0.000005611	0.000257	7.767E-07	0
270	Tren A1	LinDirHis	Min	0	0	-0.001654	-0.000000827	-0.000104	0
271	Tren A1	LinDirHis	Max	0	0	0.000004343	0.000255	7.744E-07	0
271	Tren A1	LinDirHis	Min	0	0	-0.001333	-9.117E-07	-0.000092	0
272	Tren A1	LinDirHis	Max	0	0	0.000003815	0.000224	5.526E-07	0
272	Tren A1	LinDirHis	Min	0	0	-0.001093	-8.169E-07	-0.000073	0
273	Tren A1	LinDirHis	Max	0	0	0.000003858	0.000202	5.572E-07	0
273	Tren A1	LinDirHis	Min	0	0	-0.000821	-7.158E-07	-0.000083	0
274	Tren A1	LinDirHis	Max	0	0	0.000002137	0.00018	5.959E-07	0
274	Tren A1	LinDirHis	Min	0	0	-0.000578	-8.273E-07	-0.000049	0
275	Tren A1	LinDirHis	Max	0	0	0.000002701	0.000115	2.665E-07	0
275	Tren A1	LinDirHis	Min	0	0	-0.000481	-6.426E-07	-0.000036	0
276	Tren A1	LinDirHis	Max	0	0	0.000002574	0.000075	6.965E-07	0
276	Tren A1	LinDirHis	Min	0	0	-0.000269	-4.806E-07	-0.00006	0
277	Tren A1	LinDirHis	Max	0	0	0.00000455	0.000031	0.000002062	0

277	Tren A1	LinDirHis	Min	0	0	-0.000068	-5.511E-07	-0.00000922	0
278	Tren A1	LinDirHis	Max	0	0	0.000001232	0.000036	4.762E-07	0
278	Tren A1	LinDirHis	Min	0	0	-0.00009	-5.481E-07	-0.000052	0
279	Tren A1	LinDirHis	Max	0	0	2.461E-12	0.000002667	0.000079	0
279	Tren A1	LinDirHis	Min	0	0	-0.000159	-8.995E-13	-0.000001234	0
280	Tren A1	LinDirHis	Max	0	0	6.272E-08	4.311E-14	0.000053	0
280	Tren A1	LinDirHis	Min	0	0	-0.000313	-0.000105	-0.000004389	0
283	Tren A1	LinDirHis	Max	0	0	0.000004608	8.432E-14	0.00004	0
283	Tren A1	LinDirHis	Min	0	0	-0.000482	-0.000127	-0.000001877	0
347	Tren A1	LinDirHis	Max	0	0	0.000002969	1.115E-07	0.000026	0
347	Tren A1	LinDirHis	Min	0	0	-0.000548	-0.000175	-0.00000992	0
378	Tren A1	LinDirHis	Max	0	0	4.094E-07	3.008E-07	0.000078	0
378	Tren A1	LinDirHis	Min	0	0	-0.000694	-0.000197	-0.000006788	0
379	Tren A1	LinDirHis	Max	0	0	0.000001689	1.364E-07	0.000058	0
379	Tren A1	LinDirHis	Min	0	0	-0.000915	-0.00021	-0.00000834	0
380	Tren A1	LinDirHis	Max	0	0	0.000002118	1.506E-07	0.000061	0
380	Tren A1	LinDirHis	Min	0	0	-0.001069	-0.000242	-0.000016	0
381	Tren A1	LinDirHis	Max	0	0	9.025E-07	3.005E-07	0.000089	0
381	Tren A1	LinDirHis	Min	0	0	-0.00129	-0.000251	-0.000015	0
383	Tren A1	LinDirHis	Max	0	0	0.000001762	2.101E-07	0.000072	0
383	Tren A1	LinDirHis	Min	0	0	-0.00153	-0.000257	-0.000018	0
388	Tren A1	LinDirHis	Max	0	0	0.000002437	2.764E-07	0.000082	0
388	Tren A1	LinDirHis	Min	0	0	-0.001726	-0.000273	-0.000022	0
389	Tren A1	LinDirHis	Max	0	0	0.000002023	3.605E-07	0.000095	0
389	Tren A1	LinDirHis	Min	0	0	-0.001972	-0.000271	-0.000023	0
390	Tren A1	LinDirHis	Max	0	0	0.000002737	2.889E-07	0.00009	0
390	Tren A1	LinDirHis	Min	0	0	-0.002218	-0.000271	-0.000026	0
391	Tren A1	LinDirHis	Max	0	0	0.000003441	3.827E-07	0.000095	0
391	Tren A1	LinDirHis	Min	0	0	-0.002444	-0.000274	-0.000031	0
392	Tren A1	LinDirHis	Max	0	0	0.000003612	4.415E-07	0.000097	0
392	Tren A1	LinDirHis	Min	0	0	-0.002687	-0.000262	-0.000035	0
393	Tren A1	LinDirHis	Max	0	0	0.000004312	3.785E-07	0.000097	0
393	Tren A1	LinDirHis	Min	0	0	-0.002919	-0.000255	-0.000041	0
394	Tren A1	LinDirHis	Max	0	0	0.000004946	4.559E-07	0.000097	0
394	Tren A1	LinDirHis	Min	0	0	-0.00314	-0.000247	-0.000046	0
448	Tren A1	LinDirHis	Max	0	0	0.000005221	4.719E-07	0.000096	0
448	Tren A1	LinDirHis	Min	0	0	-0.003355	-0.000228	-0.000049	0
449	Tren A1	LinDirHis	Max	0	0	0.000005891	4.089E-07	0.000097	0
449	Tren A1	LinDirHis	Min	0	0	-0.003559	-0.000212	-0.000057	0
450	Tren A1	LinDirHis	Max	0	0	0.000007083	4.226E-07	0.000095	0
450	Tren A1	LinDirHis	Min	0	0	-0.003751	-0.00019	-0.000066	0
451	Tren A1	LinDirHis	Max	0	0	0.000008391	0.000000422	0.000091	0
451	Tren A1	LinDirHis	Min	0	0	-0.003922	-0.000166	-0.00007	0
452	Tren A1	LinDirHis	Max	0	0	0.00001	0.000000388	0.000088	0
452	Tren A1	LinDirHis	Min	0	0	-0.00407	-0.000144	-0.000075	0
455	Tren A1	LinDirHis	Max	0	0	0.000012	0.000000387	0.000084	0
455	Tren A1	LinDirHis	Min	0	0	-0.004201	-0.000119	-0.000081	0
516	Tren A1	LinDirHis	Max	0	0	0.000012	3.599E-07	0.000078	0
516	Tren A1	LinDirHis	Min	0	0	-0.004309	-0.000092	-0.000085	0
517	Tren A1	LinDirHis	Max	0	0	0.000013	3.023E-07	0.000072	0

517	Tren A1	LinDirHis	Min	0	0	-0.004385	-0.000065	-0.000087	0
518	Tren A1	LinDirHis	Max	0	0	0.000014	0.000000257	0.000067	0
518	Tren A1	LinDirHis	Min	0	0	-0.004431	-0.000038	-0.000091	0
519	Tren A1	LinDirHis	Max	0	0	0.000015	0.000005332	0.000062	0
519	Tren A1	LinDirHis	Min	0	0	-0.004451	-0.000014	-0.000097	0
527	Tren A1	LinDirHis	Max	0	0	0.000016	0.000032	0.000054	0
527	Tren A1	LinDirHis	Min	0	0	-0.004442	-0.000006005	-0.0001	0
528	Tren A1	LinDirHis	Max	0	0	0.000016	0.000006	0.000043	0
528	Tren A1	LinDirHis	Min	0	0	-0.004399	-0.000003986	-0.000101	0
529	Tren A1	LinDirHis	Max	0	0	0.000016	0.000089	0.000037	0
529	Tren A1	LinDirHis	Min	0	0	-0.00433	-0.000002389	-0.000103	0
531	Tren A1	LinDirHis	Max	0	0	0.000016	0.000117	0.000027	0
531	Tren A1	LinDirHis	Min	0	0	-0.00423	-0.00000167	-0.000104	0
532	Tren A1	LinDirHis	Max	0	0	0.000015	0.000143	0.000017	0
532	Tren A1	LinDirHis	Min	0	0	-0.004092	-0.000001248	-0.000103	0
533	Tren A1	LinDirHis	Max	0	0	0.000014	0.000169	0.000011	0
533	Tren A1	LinDirHis	Min	0	0	-0.00392	-0.00000116	-0.000103	0
539	Tren A1	LinDirHis	Max	0	0	0.000014	0.000195	0.000002521	0
539	Tren A1	LinDirHis	Min	0	0	-0.003721	-0.000001148	-0.000104	0
540	Tren A1	LinDirHis	Max	0	0	0.000013	0.000215	0.000001499	0
540	Tren A1	LinDirHis	Min	0	0	-0.003498	-0.000001032	-0.000101	0
541	Tren A1	LinDirHis	Max	0	0	0.000012	0.000237	0.000001462	0
541	Tren A1	LinDirHis	Min	0	0	-0.003247	-0.000001059	-0.000106	0
542	Tren A1	LinDirHis	Max	0	0	0.00001	0.000253	0.000001416	0
542	Tren A1	LinDirHis	Min	0	0	-0.002982	-0.000001072	-0.000107	0
543	Tren A1	LinDirHis	Max	0	0	0.000008798	0.000259	0.000001209	0
543	Tren A1	LinDirHis	Min	0	0	-0.002713	-9.121E-07	-0.000106	0
544	Tren A1	LinDirHis	Max	0	0	0.000007653	0.00027	0.00000106	0
544	Tren A1	LinDirHis	Min	0	0	-0.002411	-9.297E-07	-0.000111	0
545	Tren A1	LinDirHis	Max	0	0	0.000006173	0.000273	9.531E-07	0
545	Tren A1	LinDirHis	Min	0	0	-0.002103	-0.000001038	-0.000098	0
546	Tren A1	LinDirHis	Max	0	0	0.000006045	0.000262	7.464E-07	0
546	Tren A1	LinDirHis	Min	0	0	-0.00182	-9.217E-07	-0.000096	0
547	Tren A1	LinDirHis	Max	0	0	0.000005516	0.000262	8.085E-07	0
547	Tren A1	LinDirHis	Min	0	0	-0.001499	-9.284E-07	-0.0001	0
548	Tren A1	LinDirHis	Max	0	0	0.00000397	0.000246	7.186E-07	0
548	Tren A1	LinDirHis	Min	0	0	-0.001218	-9.868E-07	-0.000072	0
549	Tren A1	LinDirHis	Max	0	0	0.000003954	0.000215	4.961E-07	0
549	Tren A1	LinDirHis	Min	0	0	-0.000978	-0.000000801	-0.000079	0
550	Tren A1	LinDirHis	Max	0	0	0.000003092	0.000199	6.869E-07	0
550	Tren A1	LinDirHis	Min	0	0	-0.000698	-7.431E-07	-0.000074	0
551	Tren A1	LinDirHis	Max	0	0	0.000001771	0.000154	4.108E-07	0
551	Tren A1	LinDirHis	Min	0	0	-0.000543	-0.000000754	-0.000026	0
552	Tren A1	LinDirHis	Max	0	0	0.000003544	0.000094	3.643E-07	0
552	Tren A1	LinDirHis	Min	0	0	-0.000404	-5.066E-07	-0.000061	0
553	Tren A1	LinDirHis	Max	0	0	0.00000122	0.000054	6.873E-07	0
553	Tren A1	LinDirHis	Min	0	0	-0.000195	-5.806E-07	-0.000043	0
556	Tren A1	LinDirHis	Max	0	0	1.565E-12	0.00000441	0.000086	0
556	Tren A1	LinDirHis	Min	0	0	-0.000181	-5.858E-13	-0.000001376	0
557	Tren A1	LinDirHis	Max	0	0	0.000003177	4.101E-07	0.000098	0

Apéndice E				Flecha Dinámica Tren A1						V= 230 km/h
557	Tren A1	LinDirHis	Min	0	0	-0.00255	-0.000263	-0.000034	0	