

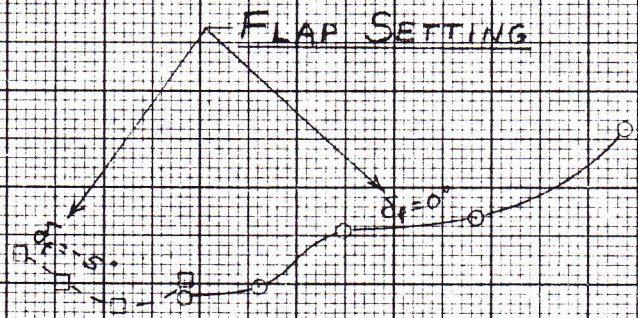
HP-13 WING SECTION PROFILE DRAG MEASUREMENTS

WAKE RAKE METHOD

SYM.	TEST DATE	TEST CHORD	FLAP SETTINGS
○	11/13/67	3.17 FT	0°
□	"	"	-5°

SECTION PROFILE DRAG COEFFICIENT ~ C_d

0.014
0.012
0.010
0.008
0.006
0.004
0.002
0



LIFT COEFFICIENT ~ C_L

GETABERY AIRSPEED INDICATOR CALIBRATION

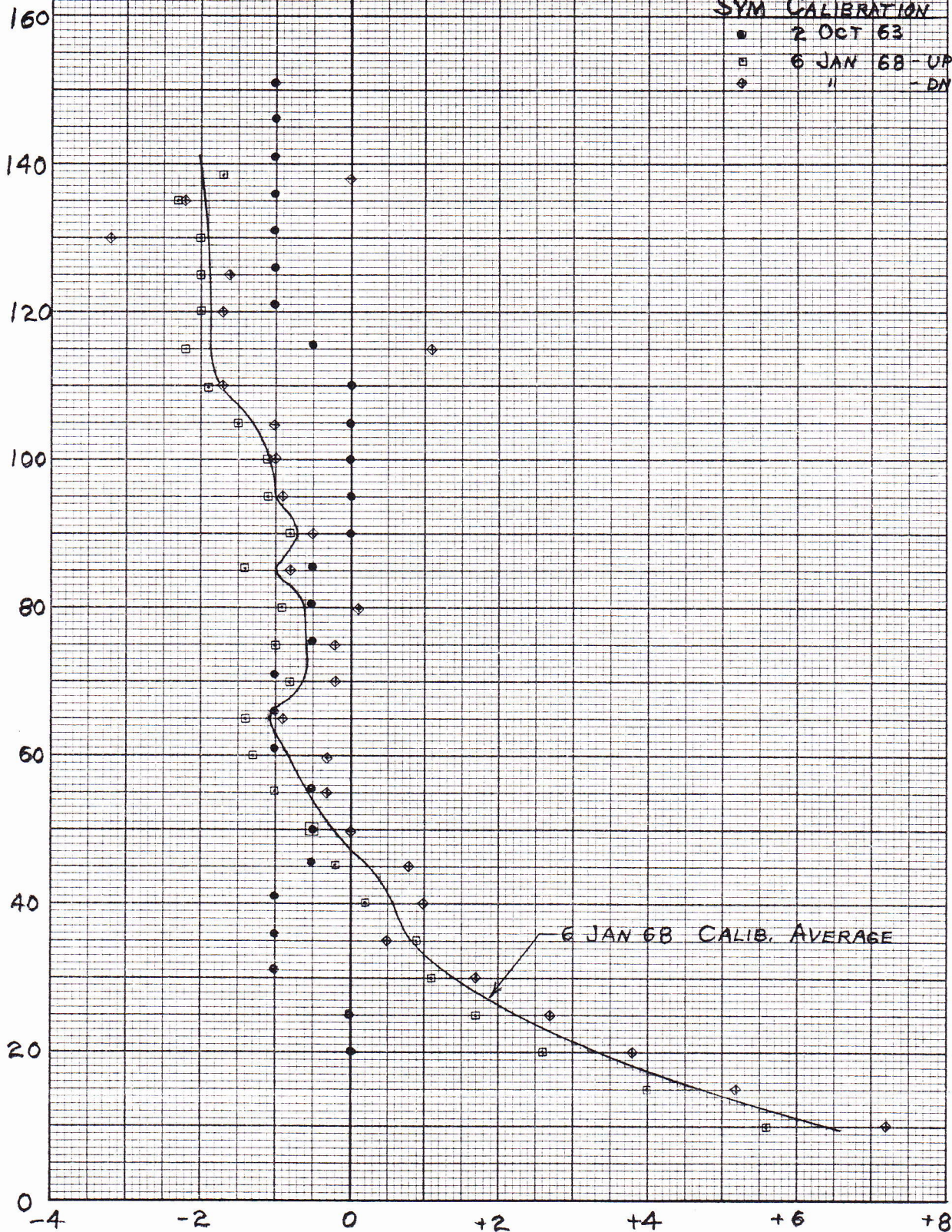
SIN

$$\text{TRUE} = V_I + \Delta V$$

SYM CALIBRATION

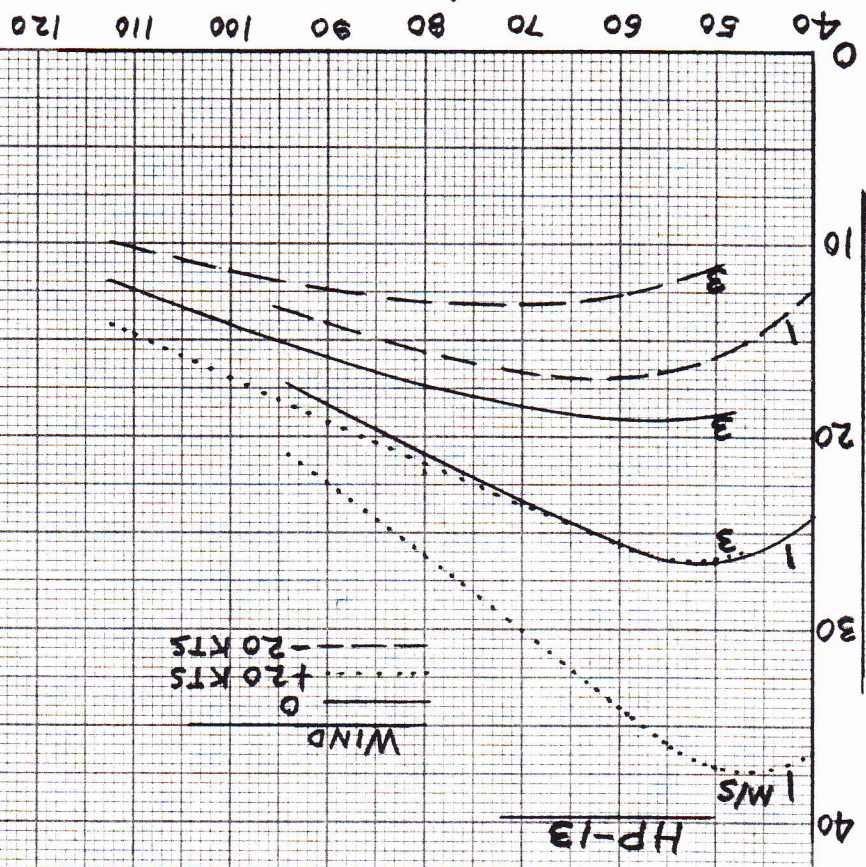
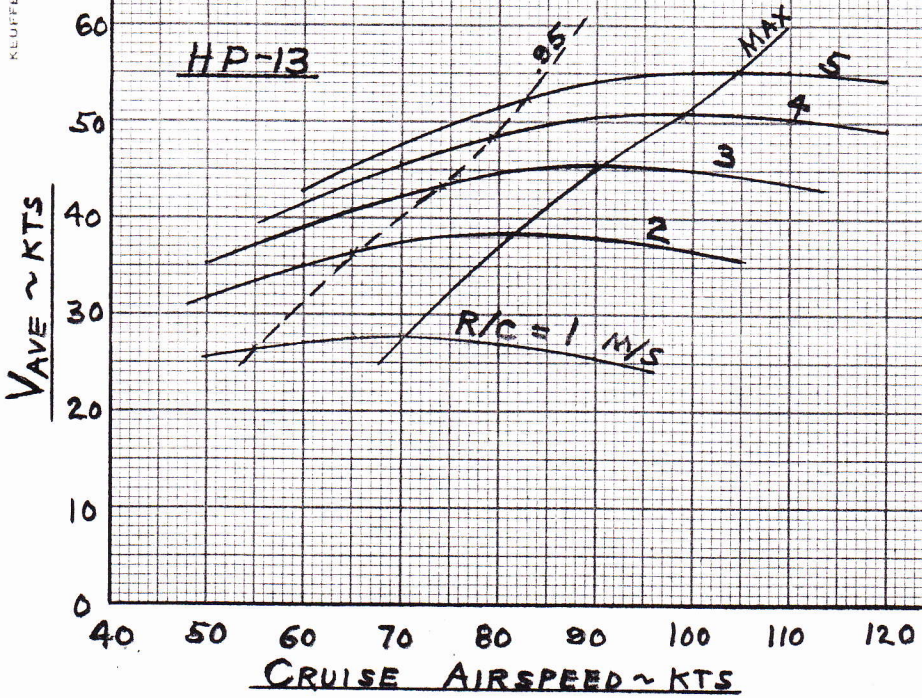
- 2 OCT 63
- 6 JAN 68 - UP
- ◇ " - DN

INDICATED AIRSPEED ~ MPH



6 JAN 68 CALIB. AVERAGE

AIRSPEED INDICATOR CORRECTION ~ MPH



HP-13

$V_{AVE} = \frac{V}{(1 + \frac{R/C}{R/C})}$

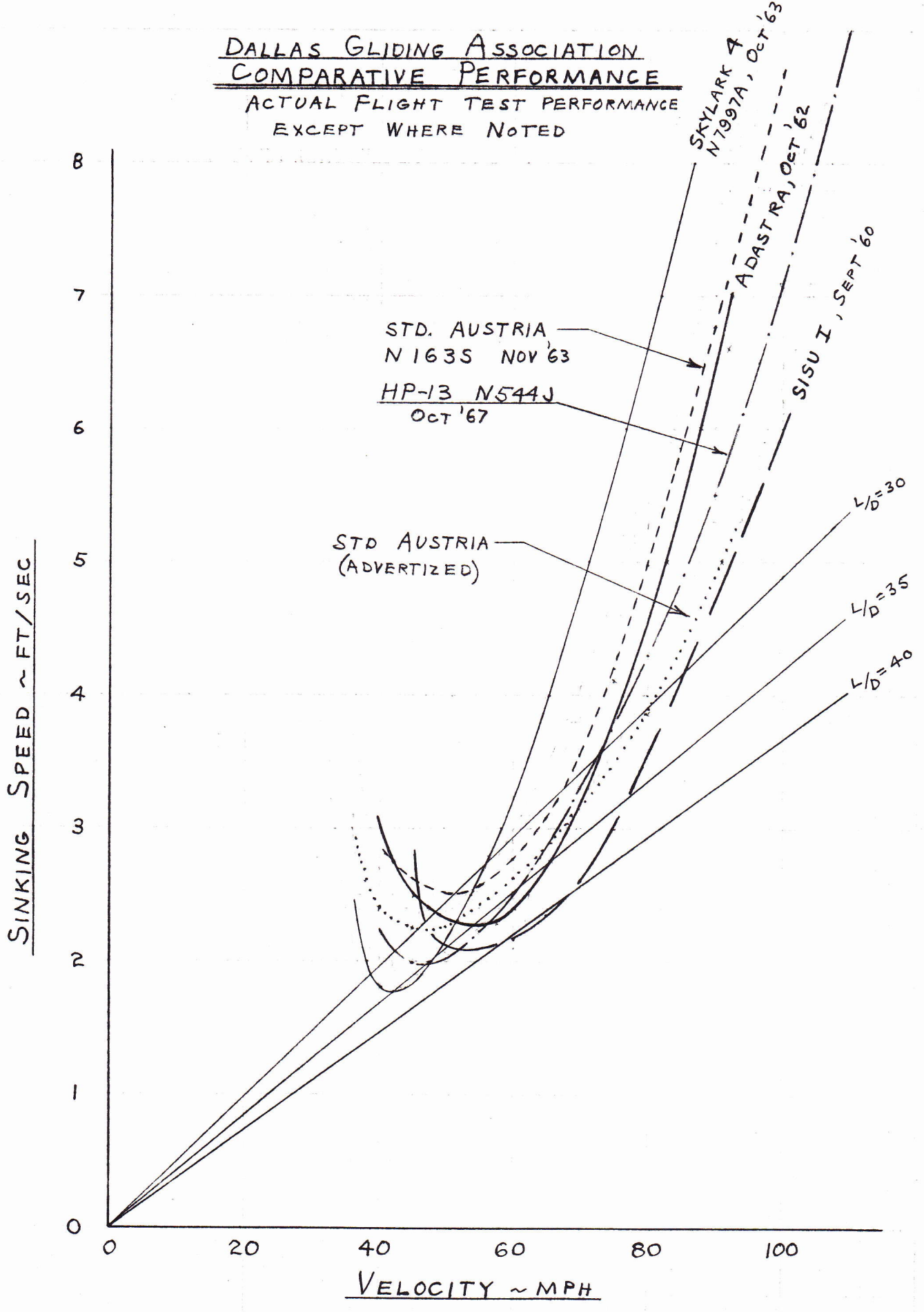
No	R/C	R/S	R/S	R/S	R/S	R/S	R/S	R/S	R/S	V _{AVE}	V _C ~ FT/SEC				L/D			
											20KT TAIL	20KT HEAD	No WIND	20KT TAIL	20KT HEAD	No WIND	20KT TAIL	20KT HEAD
1	R/C = 1 M/S = 3.28 ft/sec	2.03	3.08	.94	1.94	2.06	67.5	10.5	34	2.19	36.2	11.0						
2		2.37	3.42	1.04	2.04	24.5	84.5	11.85	50.5	24.7	34.7	14.8						
3	V _{DD} = 2(R/C + 2.0) = 10.5 ft/sec	3.22	4.27	1.30	2.30	26.1	101	13.5	67	23.6	31.6	15.7						
4		4.33	5.38	1.64	2.64	26.5	118	15.2	84	21.9	28.2	15.6						
5		5.88	6.93	2.11	3.11	25.7	135	16.9	101	19.5	24.4	14.6						
6		8.30	9.35	2.85	3.85	23.4	152	18.6	118	16.3	19.9	12.6						
7																		
8	R/C = 2 M/S = 6.56 ft/sec	2.37	4.07	.62	1.62	30.8	84.5	11.85	50.5	20.8	29.2	12.4						
9		3.22	4.92	.75	1.75	34.3	101	13.5	67	20.5	27.4	13.6						
10		4.33	6.03	.92	1.92	36.5	118	15.2	84	19.5	25.2	14.0						
11		5.88	7.58	1.16	2.16	37.0	135	16.9	101	17.8	22.3	13.3						
12		8.30	10.00	1.53	2.53	35.6	152	18.6	118	15.2	18.6	11.8						
13		11.20	12.90	1.97	2.97	33.7	169	20.3	135	13.1	15.7							
14																		
15	R/C = 3 M/S = 9.83 ft/sec	2.37	4.73	.48	1.48	33.8	84.5	11.85	50.5	17.8	25.0	10.7						
16		3.22	5.58	.57	1.57	38.2	101	13.5	67	18.1	24.2	12.0						
17	V _{DD} = 2.36 ft/sec	4.33	6.69	.68	1.68	41.6	118	15.2	84	17.6	22.7	12.6						
18		5.88	8.24	.84	1.84	43.5	135	16.9	101	16.4	20.5	12.3						
19		8.30	10.66	1.09	2.09	43.1	152	18.6	118	14.3	17.4	11.1						
20		11.20	13.56	1.38	2.38	42.0	169	20.3	135	12.5	15.0	10.4						
21		14.30	16.66	1.70	2.70	40.7	186	22.0	152									
22																		
23	R/C = 4 M/S = 13.13 ft/sec	3.22	6.22	.47	1.47	40.8	101	13.5	67	16.2	21.7	10.8						
24		4.33	7.33	.56	1.56	44.8	118	15.2	84	16.1	20.7	11.4						
25	V _{DD} = 3.00 ft/sec	5.88	8.88	.67	1.67	47.9	135	16.9	101	15.2	19.1	11.4						
26		8.30	11.30	.86	1.86	48.4	152	18.6	118	13.5	16.5	10.4						
27		11.20	14.20	1.08	2.08	48.1	169	20.3	135	11.9	14.3	9.5						
28		14.30	17.30	1.32	2.32	47.4	186	22.0	152	11.2	12.7	9.1						
29							203	23.7	169									
30																		
31	R/C = 5 M/S = 16.40 ft/sec	3.20	6.85	.42	1.42	42.2	101	13.5	67	14.7	19.7	9.8						
32		4.33	7.98	.49	1.49	47.0	118	15.2	84	14.8	19.0	10.5						
33	V _{DD} = 3.65 ft/sec	5.88	9.53	.58	1.58	50.6	135	16.9	101	14.2	17.7	10.6						
34		8.30	11.95	.73	1.73	52.0	152	18.6	118	12.7	15.6	9.9						
35		11.20	14.85	.90	1.90	52.6	169	20.3	135	11.4	13.7	9.1						
36		14.30	17.95	1.09	2.09	52.6	186	22.0	152	10.4	12.3	8.5						
37							203	23.7	169									
38																		
39																		
40																		
41																		

OPERATING UNIT:

PREPARED BY:

DATE:

DALLAS GLIDING ASSOCIATION
COMPARATIVE PERFORMANCE
 ACTUAL FLIGHT TEST PERFORMANCE
 EXCEPT WHERE NOTED



8 Oct 63