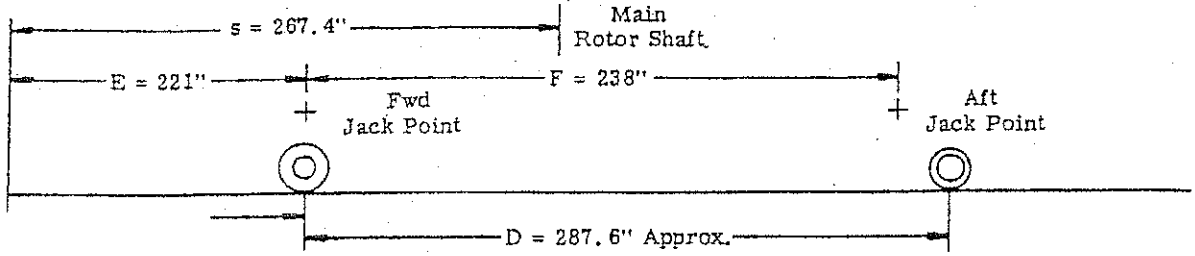
Sheet of

AIRCRAFT ACTUAL WEIGHT AND HORIZONTAL BALANCE FOR S-61N MODEL HELICOPTER

Prepared By Levi Phillips
Date 4/27/07 Reg. No. N61NH Serial No. 61474

SCALE POSITION	SCALE NO.	SCALE READING (LB)	TARE	SCALE ERROR	SYMBOL	NET WEIGHT
LEFT MAIN POINT		4532			W_L	4532
RIGHT MAIN POINT		4783			W_R	4783
POINT TAIL		2235			W_T	2235
TOTAL WEIGHT		11550			W	11550



CENTER OF GRAVITY TO FORWARD DATUM (HORIZ. DIST. - AS WEIGHED)

~~XXXXXXXXXXXXXXXXX~~ $E + \frac{W_T \times D}{W}$

Weighing on Jack Points $E + \frac{W_T \times F}{W}$ $221 + \frac{2235 \times 238}{11550} = 267.0$

CORRECTED WEIGHT AND HORIZONTAL BALANCE

ITEMS ADDED & SUBTRACTED	WEIGHT (LB)	HORIZONTAL DIST (in) C.G. TO FWD DATUM	MOMENT (lb in.)
Aircraft as Weighed	11550	267.0	3083850
Plus -			
Minus -			
TOTAL EMPTY / GROSS WEIGHT	11550	267.0	3083850
BALANCE (Corrected)	Horizontal Dist. - s = .2 in. Fwd / Aft of Main Rotor Centroid		

S 5654 (R2)

Witnessed By _____

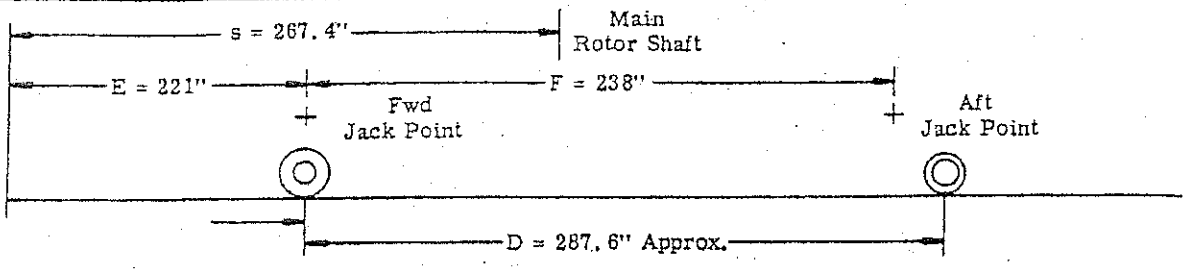
Figure 4-10

Sheet of

AIRCRAFT ACTUAL WEIGHT AND HORIZONTAL BALANCE FOR S-61N MODEL HELICOPTER

Prepared By Levi Phillips
Date 5/2/07 Reg. No. N103WF Serial No. 61766

SCALE POSITION	SCALE NO.	SCALE READING (LB)	TARE	SCALE ERROR	SYMBOL	NET WEIGHT
LEFT MAIN POINT		4507			W_L	4507
RIGHT MAIN POINT		4758			W_R	4758
POINT TAIL		2205			W_T	2205
TOTAL WEIGHT		11470			W	11470



CENTER OF GRAVITY TO FORWARD DATUM (HORIZ. DIST. - AS WEIGHED)

~~Weighing on Wheels~~ $E + \frac{W_T \times D}{W}$

Weighing on Jack Points $E + \frac{W_T \times F}{W}$ $221 + \frac{2205 \times 238}{11470} = 266.75$

CORRECTED WEIGHT AND HORIZONTAL BALANCE

ITEMS ADDED & SUBTRACTED	WEIGHT (LB)	HORIZONTAL DIST (in) C.G. TO FWD DATUM	MOMENT (lb in.)
Aircraft as Weighed	11470	266.75	3059622
Plus -			
Minus -			
TOTAL EMPTY / GROSS WEIGHT	11470	266.75	3059622
BALANCE (Corrected)	Horizontal Dist. - s = in. Fwd / Aft of Main Rotor Centroid		

S 5654 (R2)

Witnessed By _____

Figure 4-10

Part 2, Section IV
Loading Information
Chart B

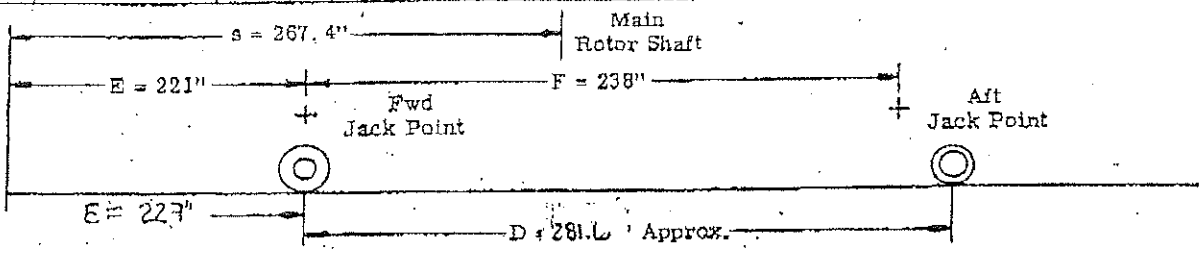
SIKORSKY AIRCRAFT
S-61N FLIGHT MANUAL

Sheet of

AIRCRAFT ACTUAL WEIGHT AND HORIZONTAL BALANCE FOR S-61N MODEL HELICOPTER

Prepared By Lest. Pitzulos
Date 3/15/07 Reg. No. N612RM Serial No. 61744

SCALE POSITION	SCALE NO,	SCALE READING (LB)	TARE	SCALE ERROR	SYMBOL	NET WEIGHT
LEFT MAIN POINT		4545			W_L	4545
RIGHT MAIN POINT		4605			W_R	4605
POINT TAIL		2165			W_T	2165
TOTAL WEIGHT		11315.0			W	11315.0



CENTER OF GRAVITY TO FORWARD DATUM (HORIZ. DIST. - AS WEIGHED)

Weighing on Wheels $E + \frac{W_T \times D}{W} =$

Weighing on Jack Points $E + \frac{W_T \times F}{W}$

CORRECTED WEIGHT AND HORIZONTAL BALANCE

ITEMS ADDED & SUBTRACTED	WEIGHT (LB)	HORIZONTAL DIST (in) C.G. TO FWD DATUM	MOMENT (lb in.)
Aircraft as Weighed	11315	280.88	3178169.0
Plus -			
Minus -			
TOTAL EMPTY / GROSS WEIGHT	11315	280.88	3178169.0
BALANCE (Corrected)	Horizontal Dist. = s = ... in. Fwd / Aft of Main Rotor Centroid		

S 5654 (R2)

Witnessed By [redacted]

Figure 4-10

September 9, 1963
Reissued December 17, 1971

Rev. _____

Date: October 30, 1987

Chart B

SIKORSKY AIRCRAFT
S-61N FLIGHT MANUAL
For Aircraft Incorporating
Short Fuselage Configuration

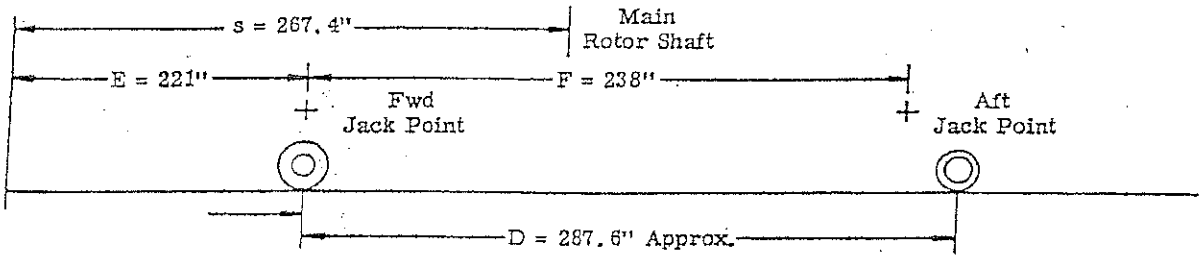
Part 2, Section IV
Loading Information

AIRCRAFT ACTUAL WEIGHT AND HORIZONTAL BALANCE FOR S-61N MODEL HELICOPTER

Prepared By David Wolf
Date 5-24-06

Reg. No. N116AZ Serial No. 61242

SCALE POSITION	SCALE NO.	SCALE READING (LB)	TARE	SCALE ERROR	SYMBOL	NET WEIGHT
LEFT MAIN POINT		4343			W_L	4343
RIGHT MAIN POINT		4181			W_R	4181
POINT TAIL		2772			W_T	2772
TOTAL WEIGHT		11296			W	11296



CENTER OF GRAVITY TO FORWARD DATUM (HORIZ. DIST. - AS WEIGHED)

Weighing on Wheels $E + \frac{W_T \times D}{W}$

Weighing on Jack Points $E + \frac{W_T \times F}{W}$ $221 + \frac{2772 \times 238}{11296} = 279.4$

CORRECTED WEIGHT AND HORIZONTAL BALANCE

ITEMS ADDED & SUBTRACTED	WEIGHT (LB)	HORIZONTAL DIST (in) C.G. TO FWD DATUM	MOMENT (lb in.)
Aircraft as Weighed	11296	279.4	3156102.4
Plus -			
Minus -			
TOTAL ~~EMPTY~~ ~~GROSS~~ WEIGHT	11296	279.4	3156102.4
BALANCE (Corrected)	Horizontal Dist. - s = 12. in. ~~Fwd~~ ~~Aft~~ of Main Rotor Centroid		

Witnessed By [redacted]
Chief Inspector
Carson Helicopters, Inc.
CRS NBER647G

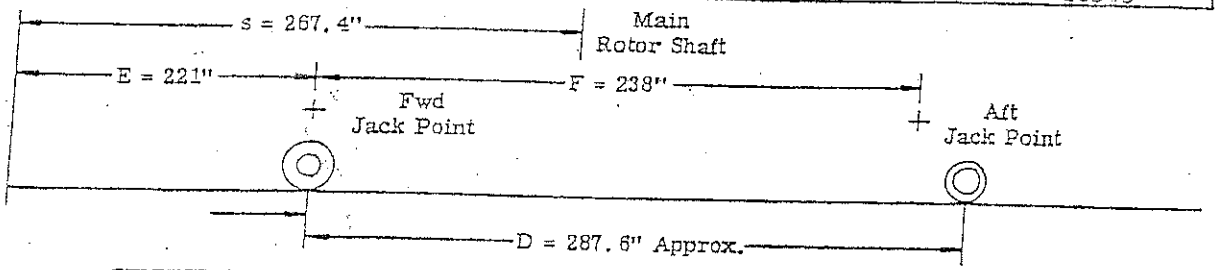
Figure 4-6

AIRCRAFT ACTUAL WEIGHT AND HORIZONTAL BALANCE FOR S-61N MODEL HELICOPTER

Prepared By DAVID WOLF
Date 2-20-07

Reg. No. N4503E Serial No. 61220

SCALE POSITION	SCALE NO.	SCALE READING (LB)	TARE	SCALE ERROR	SYMBOL	NET WEIGHT
LEFT MAIN POINT		4362			W_L	4362
RIGHT MAIN POINT		4407			W_R	4407
POINT TAIL		2774			W_T	2774
TOTAL WEIGHT		11543			W	11543



CENTER OF GRAVITY TO FORWARD DATUM (HORIZ. DIST. - AS WEIGHED)

Weighing on Wheels $E + \frac{W_T \times D}{W}$

Weighing on Jack Points $E + \frac{W_T \times F}{W}$ $221 + \frac{2774 \times 238}{11543} = 278.2$

CORRECTED WEIGHT AND HORIZONTAL BALANCE

ITEMS ADDED & SUBTRACTED	WEIGHT (LB)	HORIZONTAL DIST (in) C.G. TO FWD DATUM	MOMENT (lb in.)
Aircraft as Weighed	11543	3211262.6	278.2
Plus -			
Minus -			
TOTAL ~~EMPTY~~ WEIGHT	11543	3211262.6	278.2
BALANCE 278.2 (Corrected) Horizontal Dist. - s = 10.8 in. ~~Fwd~~ Aft of Main Rotor Centroid			

Witnessed By [redacted]
Chief Inspector
Carson Helicopters, Inc.

Figure 4-6

FORM B – AIRCRAFT WEIGHING RECORD

FOR USE WITH T.O. 1-1B-40, NAVAIR 01-1B-40, AND TM-55-1500-342-23

Form Approved OMB No. 0704-0188

DATE WEIGHED (YYMMDD)	MODEL/DESIGN	SERIAL NUMBER
March 23, 2006	S-61A	61-272

PLACE WEIGHED	WEIGHT AND BALANCE TECHNICIAN (Last, first, M.I.)	DUTY PHONE NUMBER
Perkasie, Pa.	David Wolf	

REACTION (Wheels, jackpoints, etc.)	SCALE READING	CORRECTIONS	NET WEIGHT	ARM	MOMENT
LEFT MAIN	4093		4093		
RIGHT MAIN	4248		4248		
SUB-TOTAL (Both main)			8341	E 221	1843361
NOSE OR TAIL	2505		2502	F 459	1079109
TOTAL (as weighed) Not to be posted on Chart C			10846	269.5	2922470

MEASUREMENTS

B= _____ the distance from the jig point, to the center line of the main reactions. Obtain by measurement.

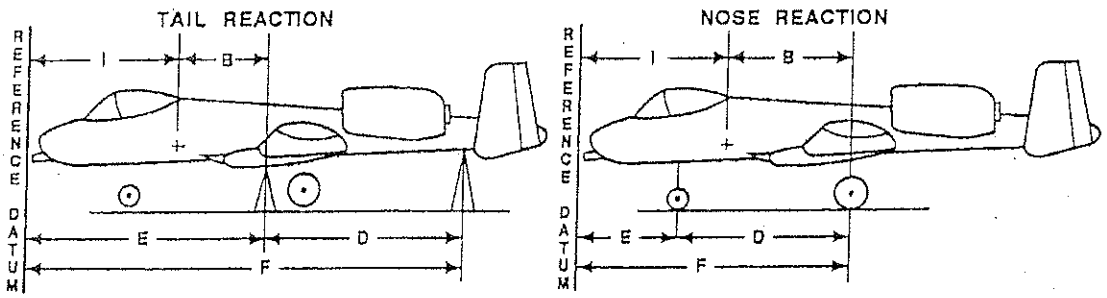
I = _____ the distance from the reference datum to the jig point of the aircraft, from which a plumb bob can be dropped to the ground. Obtain from the aircraft diagram in Chart E.

E= 221 [1] the distance from the reference datum to the center line of the main reactions.
E = I + B
E = I - B (if the jig point is aft of the center line of the main reactions.)

D= _____ the distance between the main and nose or tail reaction. Obtain by measurement.

F= 459 [1] the distance from the reference datum to the center line of the nose or tail reaction.
F = E – D (for nose reaction)
F = E + D (for tail reaction)

CORRECTIONS	LEFT MAIN	RIGHT MAIN	NOSE or TAIL
CALB CORR			
SCALE CORR			
TEMP [2]			
EQUIP			
OTHER			
TOTAL			



DIAGRAMS FOR MEASURING VARIOUS TYPES OF REACTIONS TO DETERMINE ARM OF SUPPORT POINTS.
See Aircraft Chart E's for specific weighing instructions

[1] *Check dimensions E and F against approximate dimensions listed in Chart E.*
[2] *Enter temperature at time of weighing.*

DD Form 365-2, MAR 88 Previous editions are obsolete S/N 0102-LF-003-0300 400 088

DESCRIPTION	NET WEIGHT	ARM	MOMENT	[1] INDEX OR MOM/
TOTAL *(As weighed)* *(From front side)*	10846	269.5	2922470	
OIL ON AIRPLANE				
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT *(From Column I below)*	–		–	
TOTAL OF BASIC WEIGHT ITEMS NOT IN AIRCRAFT WHEN WEIGHED *(From Column II below)*	+		+	
BASIC AIRCRAFT *(Post to Chart C)*	10846	269.5	2922470	

COLUMN I				COLUMN II			
ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT	BASIC WEIGHT ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT
TOTAL				TOTAL			

REACTIONS USED

TYPE SCALE Revere
SERIAL NUMBER 5356A
CALIBRATION DATE *(YYMMDD)* Feb 2005
CALIBRATED ACCURACY +/- 0.1%

REMARKS

weighed at Carson Helicopters, Inc. FAA CRS NBER647G

[redacted]
David Wolf
Chief Inspector

[1] *Enter constant need.*

DD Form 365-2, Reverse, MAR 88

FORM 8 – AIRCRAFT WEIGHING RECORD

FOR USE WITH T.O. 1-1B-40, NAVAIR 01-1B-40, AND TM-55-1500-342-23

Form Approved OMB No. 0704-0188

DATE WEIGHED (YYMMDD)	MODEL/DESIGN	SERIAL NUMBER
7-18-06	S-61A	61186

PLACE WEIGHED	WEIGHT AND BALANCE TECHNICIAN (Last, first, M.I.)	DUTY PHONE NUMBER
Perkasie, Pa	M. Marcus	

REACTION (Wheels, jackpoints, etc.)	SCALE READING	CORRECTIONS	NET WEIGHT	ARM	MOMENT
LEFT MAIN	4185		4185		
RIGHT MAIN	4233		4233		
SUB-TOTAL (Both main)			8418	E 221	1860378.0
NOSE OR TAIL	2407		2407	F 459	1104813.0
TOTAL (as weighed) Not to be posted on Chart C			10825	273.9	2965191.0

MEASUREMENTS

B= _____ the distance from the jig point, to the center line of the main reactions. Obtain by measurement.

I = _____ the distance from the reference datum to the jig point of the aircraft, from which a plumb bob can be dropped to the ground. Obtain from the aircraft diagram in Chart E.

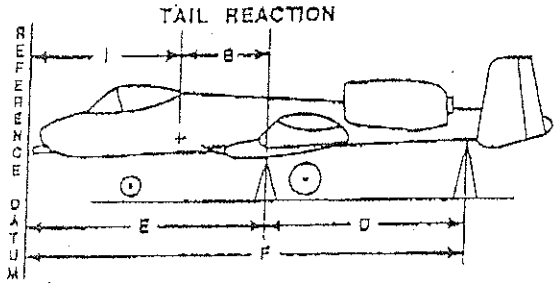
E= 221 [1] the distance from the reference datum to the center line of the main reactions.
E = I + B
E = I - B (if the jig point is aft of the center line of the main reactions.)

D= 459 the distance between the main and nose or tail reaction. Obtain by measurement.

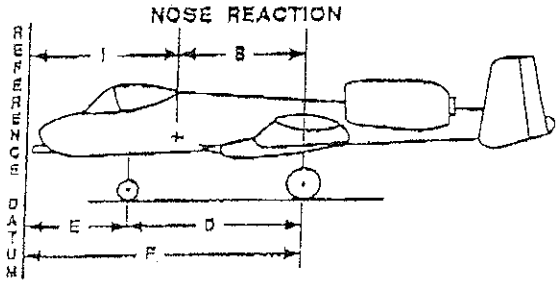
F= _____ [1] the distance from the reference datum to the center line of the nose or tail reaction.
F = E – D (for nose reaction)
F = E + D (for tail reaction)

CORRECTIONS	LEFT MAIN	RIGHT MAIN	NOSE or TAIL
CALB CORR			
SCALE CORR			
TEMP [2]			
EQUIP			
OTHER			
TOTAL			

TAIL REACTION



NOSE REACTION



DIAGRAMS FOR MEASURING VARIOUS TYPES OF REACTIONS TO DETERMINE ARM OF SUPPORT POINTS.
See Aircraft Chart E's for specific weighing instructions

[1] Check dimensions E and F against approximate dimensions listed in Chart E.
[2] Enter temperature at time of weighing.

NAVAIR 01-1B-50

DESCRIPTION	NET WEIGHT	ARM	MOMENT	[1] INDEX OR MOM/
TOTAL *(As weighed)* *(From front side)*	10825	273.9	2965191.0	
OIL ON AIRPLANE				
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT *(From Column I below)*	−		−	
TOTAL OF BASIC WEIGHT ITEMS NOT IN AIRCRAFT WHEN WEIGHED *(From Column II below)*	+		+	
BASIC AIRCRAFT *(Post to Chart C)*	10825	273.9	2965191.0	

COLUMN I				COLUMN II			
ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT	BASIC WEIGHT ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT
TOTAL				TOTAL			

REACTIONS USED

TYPE SCALE Revere
SERIAL NUMBER 5356A
CALIBRATION DATE *(YYMMDD)* 5-06
CALIBRATED ACCURACY +/- 0.1%

REMARKS

Weighed at Carson Helicopters, Inc. CRS NBER647G

[redacted]
David Wolf
Chief Inspector

[1] *Enter constant need.*

DD Form 365-2, Reverse, MAR 88

FORM B – AIRCRAFT WEIGHING RECORD

FOR USE WITH T.O. 1-1B-40, NAVAIR 01-1B-40, AND TM-55-1500-342-23

Form Approved OMB No. 0704-0188

DATE WEIGHED (YYMMDD)	MODEL/DESIGN	SERIAL NUMBER
10-23-06	S-61A	61-147

PLACE WEIGHED	WEIGHT AND BALANCE TECHNICIAN (Last, first, M.I.)	DUTY PHONE NUMBER
Carson Helicopters	N/A	N/A

REACTION (Wheels, jackpoints, etc.)	SCALE READING	CORRECTIONS	NET WEIGHT	ARM	MOMENT
LEFT MAIN	4555		4555		
RIGHT MAIN	4520		4520		
SUB-TOTAL (Both main)			9075	E 227	2060025
NOSE OR TAIL	1825		1825	F 508.6	928195
TOTAL (as weighed) Not to be posted on Chart C			10900	274.14	2988220

MEASUREMENTS

B= _____ the distance from the jig point, to the center line of the main reactions. Obtain by measurement.

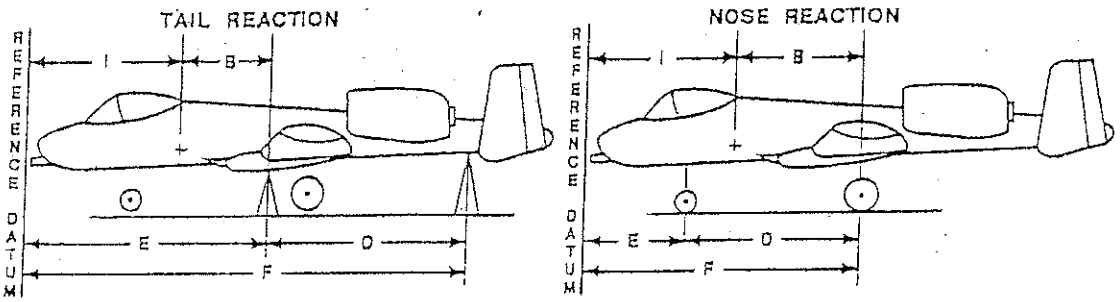
I = _____ the distance from the reference datum to the jig point of the aircraft, from which a plumb bob can be dropped to the ground. Obtain from the aircraft diagram in Chart E.

E= 227 [1] the distance from the reference datum to the center line of the main reactions.
E = I + B
E = I - B (if the jig point is aft of the center line of the main reactions.)

D= _____ the distance between the main and nose or tail reaction. Obtain by measurement.

F= 508.6 [1] the distance from the reference datum to the center line of the nose or tail reaction.
F = E – D (for nose reaction)
F = E + D (for tail reaction)

CORRECTIONS	LEFT MAIN	RIGHT MAIN	NOSE or TAIL
CALB CORR			
SCALE CORR			
TEMP [2]			
EQUIP			
OTHER			
TOTAL			



DIAGRAMS FOR MEASURING VARIOUS TYPES OF REACTIONS TO DETERMINE ARM OF SUPPORT POINTS.
See Aircraft Chart E's for specific weighing instructions

[1] *Check dimensions E and F against approximate dimensions listed in Chart E.*
[2] *Enter temperature at time of weighing.*

61-147 ②

DESCRIPTION	NET WEIGHT	ARM	MOMENT	[1] INDEX OR MOM/
TOTAL *(As weighed)* *(From front side)*	10,900	274	2988220	
OIL ON AIRPLANE				
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT *(From Column I below)*	–		–	
TOTAL OF BASIC WEIGHT ITEMS NOT IN AIRCRAFT WHEN WEIGHED *(From Column II below)*	+		+	
BASIC AIRCRAFT *(Post to Chart C)*	10,900	274	2988220	

COLUMN I				COLUMN II			
ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT	BASIC WEIGHT ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT
TOTAL				TOTAL			

REACTIONS USED

TYPE SCALE Jaws/Rollon scales
SERIAL NUMBER S/N 4238
CALIBRATION DATE *(YYMMDD)* 7-3-06
CALIBRATED ACCURACY +/- .25%

REMARKS

Weighed AT Carson Helicopters Inc, Grants Pass OR.

[redacted]

[1] *Enter constant need.*

DD Form 365-2, Reverse, MAR 88

Rev. _____

Date: October 30, 1987

Chart E

SIKORSKY AIRCRAFT
S-61N FLIGHT MANUAL
For Aircraft Incorporating
Short Fuselage Configuration

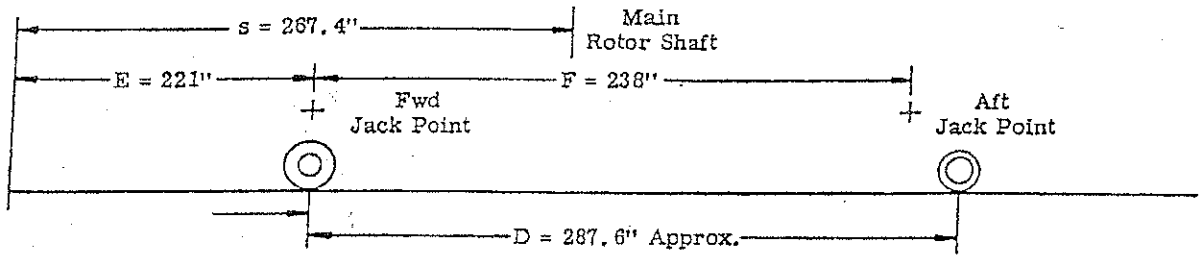
Part 2, Section IV
Loading Information

AIRCRAFT ACTUAL WEIGHT AND HORIZONTAL BALANCE FOR S-61N MODEL HELICOPTER

Prepared By David Wolf
Date 2-17-06

Reg. No. N7011M Serial No. 61-216

SCALE POSITION	SCALE NO.	SCALE READING (LB)	TARE	SCALE ERROR	SYMBOL	NET WEIGHT
LEFT MAIN POINT		4307			W_L	4307
RIGHT MAIN POINT		4515			W_R	4515
POINT TAIL		2809			W_T	2809
TOTAL WEIGHT		11631			W	11631



CENTER OF GRAVITY TO FORWARD DATUM (HORIZ. DIST. - AS WEIGHED)

~~Weighing on Wheels~~ $E + \frac{W_T \times D}{W}$

Weighing on Jack Points $E + \frac{W_T \times F}{W}$ $221 + \frac{2809 \times 238}{11631} = 278.5$

CORRECTED WEIGHT AND HORIZONTAL BALANCE

ITEMS ADDED & SUBTRACTED	WEIGHT (LB)	HORIZONTAL DIST (in) C.G. TO FWD DATUM	MOMENT (lb in.)
Aircraft as Weighed	11631	3239233.5	278.5
Plus -			
Minus -			
TOTAL ~~GROSS~~ EMPTY WEIGHT	11631	3239233.5	278.5
BALANCE 278.5 (Corrected) Horizontal Dist. - s = 11.5 in. ~~FWD~~ Aft of Main Rotor Centroid			

Witnessed By [redacted]
Chief Inspector
Carson Helicopters, Inc

Figure 4-6