SCHWEIZER AIRCRAFT CORP.

Supplement to the Approved
Rotorcraft Flight Manual

For

Schweizer 300C Model 269C Helicopter

66.0 GALLON AUXILIARY FUEL SYSTEM INSTALLATION
(Part Number 269A8700-9)

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REVISION TABLE

Number	Date	Description
#1	18 Dec 2006	Weight & Balance Form format and misc. change.

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SECTION I
General

This supplement must be carried in the applicable basic FAA approved 300C Model 269C Rotorcraft Flight Manual when the rotorcraft is equipped with a 66.0 gallon total capacity (64.0 gallon usable) fuel system. Except as modified by the flight manual supplement, operation in compliance with the basic approved Rotorcraft Flight Manual is mandatory.

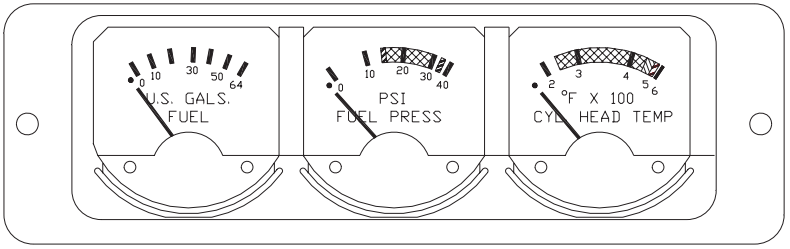
The 66.0 gallon total capacity fuel system consists of the standard 33.0 gallon total capacity tank on the right side of the cabin interconnected to a 33.0 gallon total capacity auxiliary tank mounted behind the left side of the cabin. Both tanks feed through a T-fitting and fuel shut-off valve located below the auxiliary tank. A single flex line delivers fuel from the T-fitting to the electric boost pump.

SECTION II
Limitations

2-1. FUEL SYSTEM

TABLE 2-1. FUEL CAPACITY		
SYSTEM CAPACITY	**QUANTITY**	**USABLE QUANTITY**
MAIN + AUX	66.0 U.S. Gallons	64.0 U.S. Gallons

2-2. INSTRUMENT MARKINGS



The above instrument cluster represents the “OPT” configuration available for aircraft equipped with an aux. fuel tank.

SECTION III
Emergency Procedures

Not Affected

SECTION IV
Normal Procedures

4-1 PILOT'S PREFLIGHT INSPECTION

ENGINE - LEFT SIDE ③

Aux. fuel quantity level (if installed)	CHECK
Aux. fuel tank (if installed) cap seal for proper condition	CHECK
Fuel strainer, for debris or water (located on right side of aircraft on standard configuration)	DRAIN

SECTION V
Performance Data

Not affected

SECTION VI
Weight and Balance Data

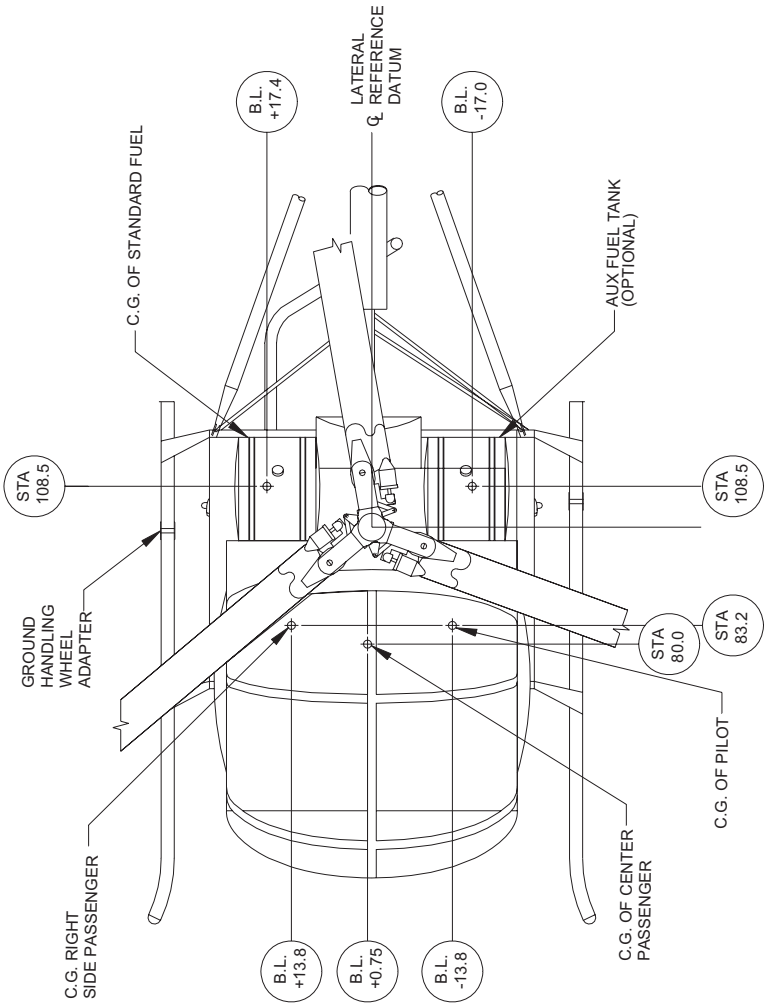


Figure 6-1. Balance Diagram

WEIGHT AND BALANCE WORKSHEET

Model 269C (300C)

HELICOPTER MODEL 269C	SERIAL NUMBER	REGISTRATION NUMBER
DATE		WEIGHED BY

WEIGHING POINT	SCALE READING (LB)	TARE (LB)	NET WEIGHT (LB)	LONGIT. ARM (IN)	LONGIT. MOMENT (IN-LBS)	LATERAL ARM (IN)	LATERAL MOMENT (IN-LBS)
LEFT MAIN	482	1.9	480	75.6	36288	-19.0	- 9120
RIGHT MAIN	500	1.9	498	75.6	37649	+19.0	+ 9462
AFT	148	2.9	145	271.4	39353	+0.6	+ 87
TOTAL (AS WEIGHED)	1130	6.7	1123	100.9	113290	+0.4	+ 429

A DISTANCE FROM STATION 100.0 TO MAIN WEIGHING POINTS IN INCHES	RIGHT HAND 24.4	LEFT HAND 24.4
B AVERAGE MOMENT ARM FOR MAIN WEIGHING POINTS (100.0-A)	100.0 - 24.4 = 75.6	
C MOMENT ARM FOR AFT WEIGHING POINT IN INCHES	271.4	

OIL ABOARD	[X] YES	[ ] NO
MAIN GEAR BOX	[X] YES	[ ] NO
TAIL GEAR BOX	[X] YES	[ ] NO
FULL FUEL ABOARD	[ ] YES	[X] NO

REQUIRED EQUIPMENT MISSING AT TIME OF WEIGHING

ITEM NUMBER	WEIGHT	LONGIT. ARM	LONGIT. MOMENT	LATERAL ARM	LATERAL MOMENT		
FLIGHT MANUAL	1	48	48	0	0		
UNUSABLE FUEL (2 GALLONS)	12	108.5	1302	+0.2	+2.4		
Note: Removable portions of ground handling wheel installations (if so equipped) are **NOT** included in aircraft empty weight							
TOTAL	13	103.8	1350	+0.2	+2.4		

OPTIONAL EQUIPMENT IN AIRCRAFT AT TIME OF WEIGHING

ITEM NUMBER	WEIGHT	LONGIT. ARM	LONGIT. MOMENT	LATERAL ARM	LATERAL MOMENT		
TOTAL							

(CONTINUED ON BACK)

Figure 6-2. Sample Weight and Balance Worksheet (sheet 1 of 2)

BASIC WEIGHT	WEIGHT (LB)	LONGIT. ARM (IN.)	LONGIT. MOMENT (IN.-LBS)	LATERAL ARM (IN.)	LATERAL MOMENT (IN.-LBS)
WEIGHT (AS WEIGHED)	1,123	100.9	113,290	.4	429
SURPLUS WEIGHT					
MISSING EQUIPMENT WEIGHT	13	103.8	1,349	.2	2.4
TOTAL BASIC WEIGHT (DELIVERED)	1,136	100.9	114,639	.4	431

MOST FORWARD LOADING	WEIGHT (LBS)	LONGIT. ARM (IN.)	LONGIT. MOMENT (IN.-LBS)	LATERAL ARM (IN.)	LATERAL MOMENT (IN.-LBS)
BASIC WEIGHT	1,136	100.9	114,639	.4	429
PILOT	170	83.2	14,144	-13.8	-2346
USEABLE FUEL	0	108.5	0		
PASSENGER, CENTER	170	80.0	13,600	.75	128
PASSENGER. RIGHT	170	83.2	14,144	13.8	2346
TOTAL GROSS WEIGHT	1,646	95.1	156,527	.3	557
APPROVED FORWARD LIMIT 95 INCHES					

MOST AFT LOADING	WEIGHT (LB)	LONGIT. ARM (IN.)	LONGIT. MOMENT (IN.-LBS)	LATERAL ARM (IN.)	LATERAL MOMENT (IN.-LBS)
BASIC WEIGHT	1,136	100.9	114,639	.4	429
PILOT	170	83.2	14,144	-13.8	-2346
FUEL, 64.0 GAL. USEABLE	384	108.5	41,664	.2	77
TOTAL GROSS WEIGHT	1,690	100.8	170,430	-1.1	-1840
APPROVED AFT LIMIT 101 INCHES					

Figure 6-2. Sample Weight and Balance Worksheet (sheet 2 of 2)

BASIC WEIGHT AND BALANCE RECORD - LONGITUDINAL (LONG.) AND LATERAL (LAT.)
(CONTINUOUS HISTORY OF CHANGES IN STRUCTURE OR EQUIPMENT AFFECTING WEIGHT AND BALANCE)

AIRCRAFT MODEL 269C or 269D | SERIAL NUMBER | REGISTRATION NUMBER | PAGE | OF

DATE	ITEM NO. IN	ITEM NO. OUT	DESCRIPTION OF ARTICLE OR MODIFICATION	LONGITUDINAL WEIGHT + ADD - REMOVE	LONGITUDINAL ARM	LONGITUDINAL MOMENT	LATERAL ARM + RIGHT - LEFT	LATERAL MOMENT	RUNNING TOTAL - EMPTY AIRCRAFT WEIGHT	LONGITUDINAL ARM	LONGITUDINAL MOMENT	LATERAL ARM	LATERAL MOMENT
			TOTAL DELIVERED WEIGHT						1123.4	100.9	113311	+.4	+427
1/24/94		1	REMOVE 7 LBS. ITEM AT STA. 103, LBL 12	-7	103	-721	-12	+84	1116.4	100.9	112590	+.5	+511
1/27/94	2		ADD 11 LBS. ITEM AT STA. 74, RBL 6	+11	74	+814	+8	+88	1127.4	100.6	113404	+.5	+577

S-351 (REV.2/94)

Figure 6-3. Sample Weight And Balance Record

6-1. WEIGHT AND BALANCE DETERMINATION - PASSENGER CONFIGURATION

- To determine that the gross weight and longitudinal center of gravity (fore and aft) for a given flight are within limits, proceed as follows:
- Obtain the aircraft delivered weight and longitudinal moment from the Weight and Balance Record inserted in the back of this manual.
- Determine weights and longitudinal moments of useful load items (see Figure 6-5).
- Add the above items (see Example I).

EXAMPLE I

Items	Weight (lb)	Longitudinal Moment (in.-lb.)
Delivered Weight	1,136	114,639
Pilot - Left-Hand Passenger - Right-Hand Passenger - Center	170 170 170	14,144 14,144 13,600
1. Sub-Total Gross Weight Fuel - Full (64 usable)	1,646 384	156,527 41,664
2. Gross Weight	2,030	198,191

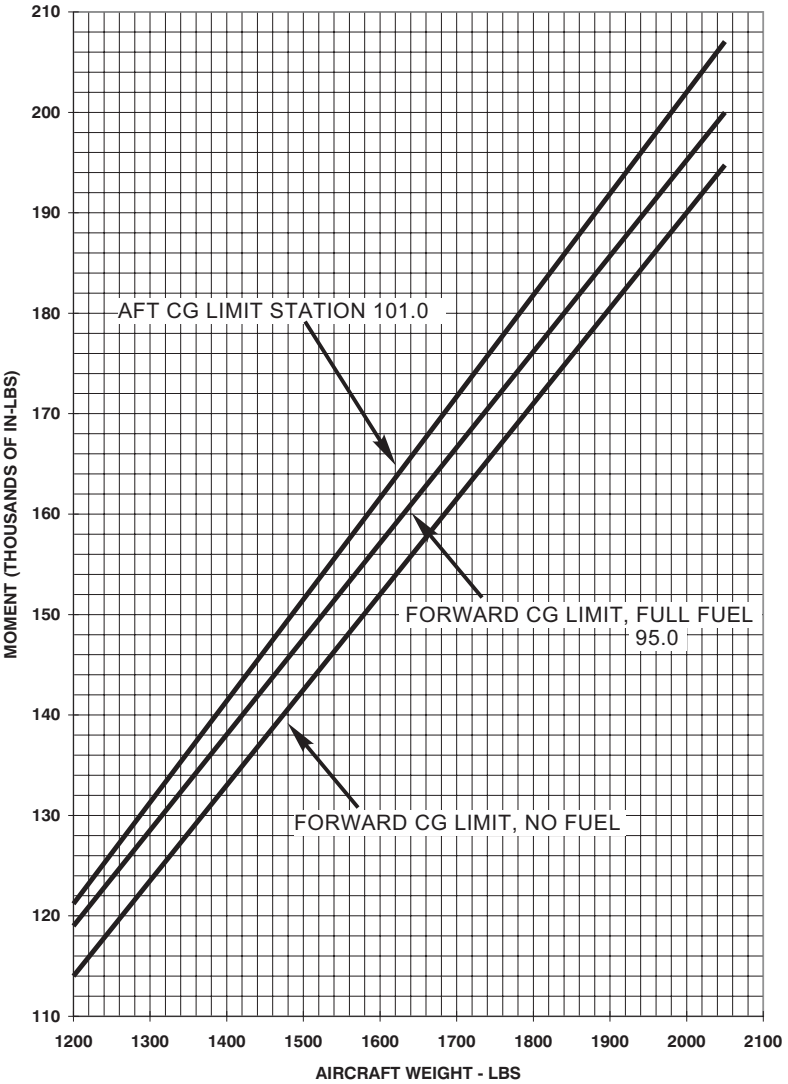
- Calculation of Longitudinal CG
- CG (Zero Fuel Weight):

$$\frac{\text{Moment at Zero Fuel Weight}}{\text{Zero Fuel Weight}} = \frac{156{,}527}{1{,}646} = 95.1 \text{ in.}$$

- CG (Gross Weight):

$$\frac{\text{Moment at Gross Weight}}{\text{Gross Weight}} = \frac{198{,}191}{2{,}030} = 97.6 \text{ in.}$$

Note: The CG's fall within the limits specified in Figure 6-3A; therefore, the loading meets the longitudinal CG requirements, for full fuel as well as zero fuel.



NOTE: This chart applies to the longitudinal center of gravity limits noted. CG limit changes or restrictions resulting from special kit installations require that CGs be determined by dividing total moment by total weight for both zero and full fuel conditions.

Figure 6-3A. Loading Chart - Longitudinal

6-2. PERMISSIBLE LATERAL LOADINGS - PASSENGER CONFIGURATION

- For the safe operation of this helicopter, it must be flown within the established lateral as well as longitudinal center of gravity limits.

  Note: Lateral center of gravity must be controlled.

- All combinations of passenger loadings are permissible if gross weight, longitudinal, and lateral center of gravity considerations permit.

- To determine that the gross weight and lateral center of gravity (left and right) are within limits for a given flight, proceed as follows:

- - Obtain the aircraft delivered weight and moment from the Weight and Balance Record inserted in this section (Fig. 6-3).
- - Determine weight and lateral moment of useful load items (see Figure 6-4).
- - Add the above items (see Example II).

EXAMPLE II

Items	Weight (lb)	Lateral Moment (in.-lb.)
Delivered Weight	1,136	+429
Pilot - Left-Hand Passenger - Right-Hand Passenger - Center	170 170 170	-2,346 +2,346 +128
1. Sub-Total Gross Weight Fuel - Full (64 usable)	1,646 384	+557 +77
2. Gross Weight	2,030	634

- CG (Zero Fuel Weight):

$$\frac{\text{Moment at Zero Fuel Weight}}{\text{Zero Fuel Weight}} = \frac{+557}{1{,}646} = +0.3 \text{ in.}$$

- CG (Gross Weight):

$$\frac{\text{Moment at Gross Weight}}{\text{Gross Weight}} = \frac{+634}{2{,}030} = +0.3 \text{ in.}$$

Note: The determined lateral CGs of +0.3 inch and +0.3 inch for longitudinal CGs of 95.1 inch and 97.6 inch respectively, fall within the established CG limits.

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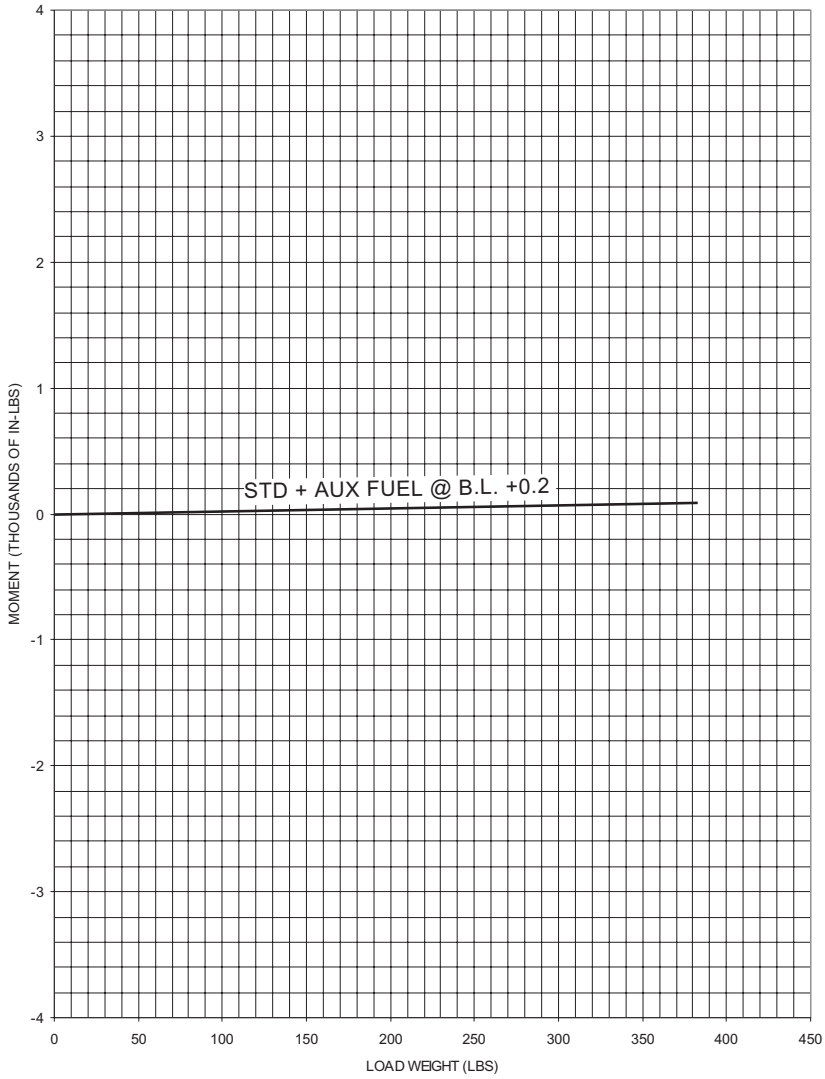

Figure 6-4. Weight and Moment Chart - Lateral

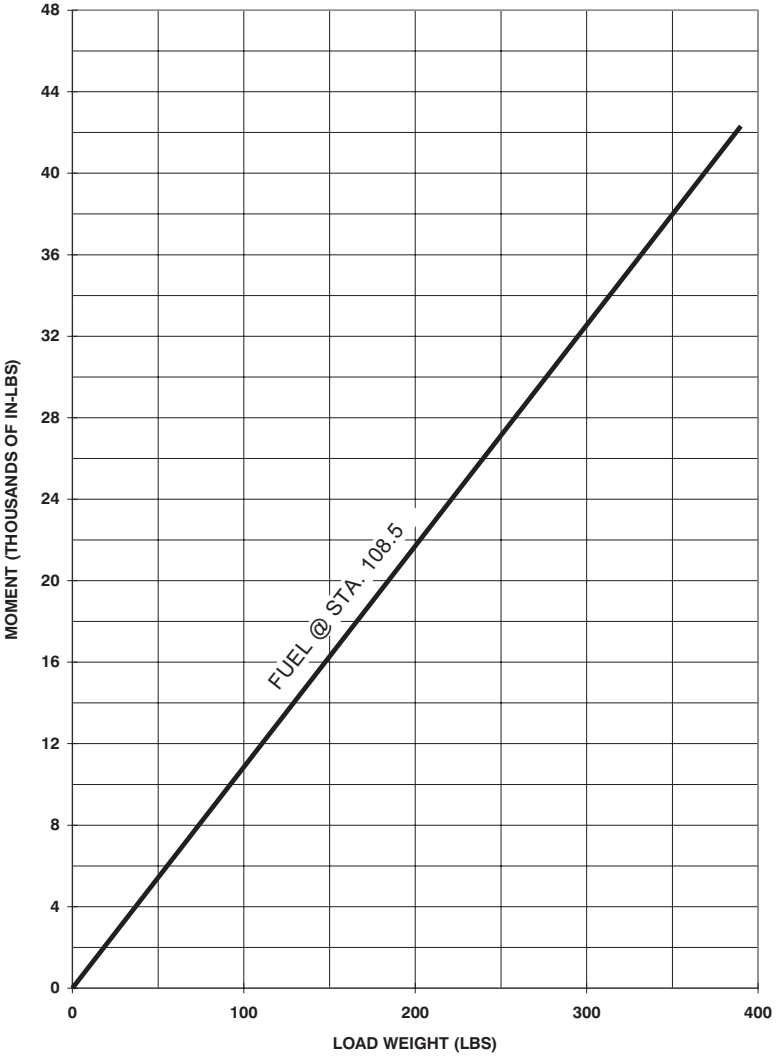

Figure 6-5. Weight and Moment Chart - Longitudinal

SECTION VII
Aircraft Handling, Servicing and Maintenance

7-1. FUEL SYSTEM

TABLE 7-1. FUEL CAPACITY		
SYSTEM CAPACITY	**QUANTITY**	**USABLE QUANTITY**
MAIN + AUX	66.0 U.S. Gallons	64.0 U.S. Gallons

SECTION VIII
Additional Operations and Performance Data
Not Affected

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