SUPPLEMENT STC-62-005

TO THE AIRPLANE FLIGHT MANUAL DA 62

MTOM 2360 kg (5203 lb)

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FOREWORD

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0.1 RECORD OF REVISIONS

Rev. No.	Reason	Chap-ter	Page(s)	Date of Revision	Approval Note	Date of Approval	Date Inserted	Signature

0.2 LIST OF EFFECTIVE PAGES

Chapter	Page	Date
0	9-STC005-1	22-Dec-2022
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1. GENERAL

The Maximum Take-Off Mass MTOM of the DA 62 increased to 2360 kg (5203 lb). This Supplement provides necessary information for operating the airplane above 2300 kg (5071 lb).

2. OPERATING LIMITATIONS

2.2 AIRSPEED

	Airspeed		KIAS	Remarks
v_O	Operating maneuvering speed	above 2200 kg (4850 lb) to 2360 kg (5203 lb)	141 KIAS	Do not make full or abrupt control surface movement above this speed.
v_{FE}	Max.flaps extended speed	LDG	122 KIAS	Do not exceed this speed with the given flap setting.

2.3 AIRSPEED INDICATOR MARKINGS

Marking	KIAS	Significance
White arc	69 - 122 KIAS	Operating range with flaps fully extended.
Blue radial	95 KIAS	Best rate of climb speed, single engine.

2.7 MASS (WEIGHT)

Value	Mass (Weight)	
Maximum Take-Off Mass	2360 kg	5203 lb

2.8 CENTER OF GRAVITY

Most forward flight CG:

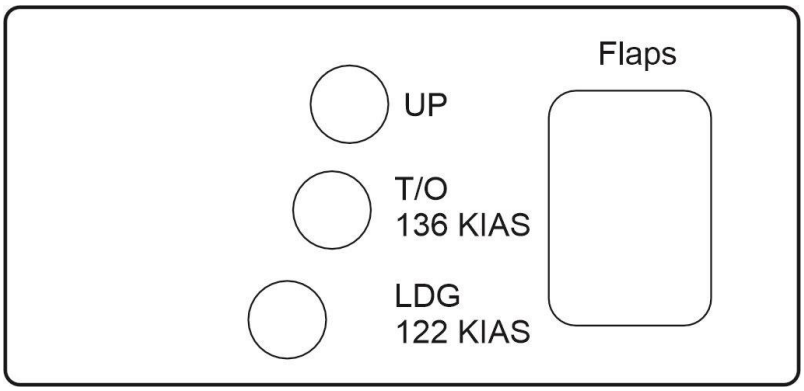
2.460 m (96.85 in) aft of datum plane at 2300 kg (5071 lb)
2.474 m (97.40 in) aft of datum plane at 2360 kg (5203 lb)

Most rearward flight CG:

2.530 m (99.61 in) aft of datum plane above 2300 kg (5071 lb)

2.15 LIMITATION PLACARDS

Next to the Flap Selector Switch:



2.16 OTHER LIMITATIONS

2.16.12 FLAP SETTING FOR TAKE-OFF

With a mass above 2300 kg (5071 lb) Take-Off with flaps in UP position is prohibited.

3. EMERGENCY PROCEDURES

3.1 INTRODUCTION

3.1.2 CERTAIN AIRSPEEDS IN EMERGENCIES

Event	
One engine inoperative speed for best rate of climb v_{YSE}	95 KIAS (above 2300 kg / 5071 lb).

3.7 ONE ENGINE INOPERATIVE PROCEDURES

3.7.5 ENGINE FAILURE DURING TAKE-OFF

b) Engine Failure After Lift Off

3. Airspeed ..... v_{YSE} = 95 KIAS (above 2300 kg / 5071 lb)

3.7.6 ENGINE FAILURES IN FLIGHT

a) Engine Failure During Initial Climb

2. Airspeed ..... v_{YSE} = 95 KIAS (above 2300 kg / 5071 lb)

b) Engine Failure During Flight

2. Airspeed ..... v_{YSE} = 95 KIAS (above 2300 kg / 5071 lb)

3.7.7 LANDING WITH ONE ENGINE INOPERATIVE

13. Final approach speed:
Above 2300 kg (5071 lb):
.....100 KIAS (v_{REF}/FLAPS UP)
.....96 KIAS (v_{REF}/FLAPS T/O)
.....91 KIAS (v_{REF}/FLAPS LDG)

3.7.8 GO-AROUND/ BALKED LANDING WITH ONE ENGINE INOPERATIVE

4. Airspeed .....maintain v_{YSE} = 95 KIAS (above 2300 kg / 5071 lb)

9. Approach speed
Above 2300 kg (5071 lb):
.....min 96 KIAS flaps T/O
.....min 91 KIAS flaps LDG

3.7.9 FLIGHT WITH ONE ENGINE INOPERATIVE

1. Airspeed .....as required / above v_{YSE} = 95 KIAS (above 2300 kg / 5071 lb)

3.8 ENGINE OUT LANDING

8. Approach speed
Above 2300 kg (5071 lb):
.....min 96 KIAS flaps T/O
.....min 91 KIAS flaps LDG

3.9 DITCHING

4. Final approach speed
Above 2300 kg (5071 lb):
.....v_{REF}= 91 KIAS

4A. NORMAL PROCEDURES

4A.2 AIRSPEEDS FOR NORMAL OPERATING PROCEDURES

NOTE

Take-Off with flaps UP is only approved for a flight mass up to 2300 kg (5071 lb). Refer to Chapter 2.16.

	FLAPS	Speed (KIAS) Above 2300 kg (5071 lb)
Airspeed for rotation (take-off run, v_R)	T/O	min. 82
Airspeed for take-off climb (best angle-of-climb speed v_x)	T/O	min. 89
Airspeed for best rate-of-climb (v_Y)	T/O	89
Airspeed for cruise-climb	UP	min. 100
Reference landing approach speed	UP	100
	T/O	min. 96
Final approach speed	LDG	min. 91
Minimum speed during go around	UP	min. 100
Safe, intentional, one-engine-inoperative speed (V_{SSE}) - A minimum speed to intentionally render the critical engine inoperative.	UP	95

4A.6 CHECKLISTS FOR NORMAL OPERATING PROCEDURES

4A.6.7 TAKE-OFF

a) Standard Procedure (Take-off with Flaps T/O)

Above 2300 kg (5071 lb):

5. Nose wheel lift-off .....v_R min. = 82 KIAS
6. Airspeed for initial climb.....min. 89 KIAS

b) Take-off with Flaps UP

NOTE

Take-Off with flaps UP is only approved for a flight mass up to 2300 kg (5071 lb). Refer to Chapter 2.16.

4A.6.8 CLIMB

Initial Climb Check

Above 2300 kg (5071 lb):

5. Airspeed, best rate of climb .....100 KIAS
   Airspeed, as required for en route
   (cruise) climb .....100 KIAS

4A.6.11 APPROACH & LANDING

NOTE

Approach & Landing with a Flight Mass above 2300 kg (5071 lb) is an abnormal operation. Refer to Chapter 4B.11. of this Supplement for appropriate airspeeds.

4A.6.12 GO AROUND

NOTE

A go-around with a Flight Mass above 2300 kg (5071 lb) is an abnormal operation. Refer to Chapter 4B.11 of this Supplement for appropriate airspeeds.

4B. ABNORMAL OPERATING PROCEDURES

4.B.3 CAUTION-ALERTS ON THE G1000

4B.3.2 L/R ECU A FAIL

(b) ECU A Caution During Flight

If the ECU A caution remains, the following ECU caution clearing procedure may be used:

2. Airspeed .....min. 95 KIAS (above 2300 kg / 5071 lb)

4B.3.3 L/R ECU B FAIL

(b) ECU B Caution During Flight

If the ECU B caution remains, the following ECU caution clearing procedure may be used:

2. Airspeed .....min. 95 KIAS (above 2300 kg / 5071 lb)

4.B.4 FAILURES IN FLAP OPERATING SYSTEM

Failure in Position Indication or Function

2. Airspeed .....keep in white sector (max. 122 KIAS)

Modified Approach Procedure Depending an available Flap Setting

(a) Only UP available:
Airspeed .....100 KIAS (above 2300 kg / 5071 lb)

(b) Only T/O available:
Airspeed .....96 KIAS (above 2300 kg / 5071 lb)

4B.11 LANDING WITH HIGH LANDING MASS

Perform landing approach and landing according to Chapter 4A, but make efforts for a smooth landing flare / soft touchdown.

CAUTION

A hard landing with a flight mass above the maximum landing mass can cause damage to the landing gear.

NOTE

A landing with a flight mass between 2300 kg (5071 lb) and 2360 kg (5203 lb) is admissible. A “Hard Landing Check” is only required after a hard landing, regardless of the actual landing mass.

NOTE

With a Flight Mass above 2300 kg (5071 lb) the following airspeeds for Approach & Landing are applicable:

Approach speed .....min. 100 KIAS with FLAPS UP
.....min. 96 KIAS with FLAPS T/O
Final approach speed.....min. 91 KIAS with FLAPS LDG

NOTE

With a Flight Mass above 2300 kg (5071 lb) the following airspeed for Go-Around is applicable:

Go-Around speed .....min. 96 KIAS with FLAPS T/O

NOTE

Expect an increase in landing distance of at least 10 % over the 2300 kg (5071 lb) landing distance.

5. PERFORMANCE

5.3.4. STALLING SPEEDS

Stalling Speeds at Various Flight Masses

2360 kg (5203 lb)		Bank Angle							
		0°		30°		45°		60°	
Gear	Flaps	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
UP	UP	73	72	79	77	87	86	103	102
DOWN	T/O	71	69	76	74	84	82	99	98
DOWN	LDG	69	68	75	73	82	81	98	96

5.3.6. TAKE-OFF DISTANCE

Take-Off Distances (SI / Metric System)

Take-Off Distance - Normal Procedure - 2360 kg / 5203 lb								
Weight: 2360 kg / 5203 lb					Flaps: T/O			
v_R: 82 KIAS					Power: MAX			
v_{50ft}: 89 KIAS					Runway: dry, paved, level			
Distances are given in meter [m]								
Press. Alt. [ft] / [m]		Outside Air Temperature - [°C] / [°F]						
		0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	ISA
SL	Ground Roll	560	590	630	680	770	880	607
	15 m / 50 ft	870	920	980	1040	1180	1350	936
1000 305	Ground Roll	590	630	670	720	820	950	637
	15 m / 50 ft	920	970	1030	1100	1260	1450	978
2000 610	Ground Roll	630	670	710	770	890	1010	669
	15 m / 50 ft	970	1020	1080	1180	1350	1550	1022
3000 914	Ground Roll	670	710	760	830	960	1090	703
	15 m / 50 ft	1020	1080	1150	1260	1450	1660	1071
4000 1219	Ground Roll	710	750	810	900	1030	1180	738
	15 m / 50 ft	1080	1140	1220	1360	1560	1800	1122
5000 1524	Ground Roll	760	810	860	980	1120		777
	15 m / 50 ft	1150	1220	1300	1480	1690		1180
6000 1829	Ground Roll	820	870	940	1070	1230		833
	15 m / 50 ft	1240	1310	1400	1610	1850		1259
7000 2134	Ground Roll	890	950	1030	1180	1350		893
	15 m / 50 ft	1340	1420	1550	1780	2040		1343
8000 2438	Ground Roll	960	1030	1140	1310	1500		956
	15 m / 50 ft	1450	1540	1710	1960	2250		1434
9000 2743	Ground Roll	1050	1140	1270	1460	1680		1025
	15 m / 50 ft	1570	1700	1900	2180	2530		1538
10000 3048	Ground Roll	1150	1250	1410	1620			1106
	15 m / 50 ft	1730	1860	2110	2450			1652

Take-Off Distances (US / Imperial System)

Take-Off Distance - Normal Procedure - 2360 kg / 5203 lb								
Weight: 2360 kg / 5203 lb						Flaps: T/O		
v_R: 82 KIAS						Power: MAX		
v_{50ft}: 89 KIAS						Runway: dry, paved, level		
Distances are given in feet [ft]								
Press. Alt. [ft] / [m]		Outside Air Temperature - [°C] / [°F]						
		0 / 30	10 / 50	20 / 70	30 / 90	40 / 110	50 / 130	ISA
SL	Ground Roll	1850	1950	2100	2250	2500	2900	1992
	15 m / 50 ft	2850	3000	3200	3450	3850	4450	3071
1000 305	Ground Roll	1950	2100	2200	2350	2700	3100	2090
	15 m / 50 ft	3000	3200	3400	3650	4150	4750	3208
2000 610	Ground Roll	2100	2200	2350	2550	2900	3350	2194
	15 m / 50 ft	3200	3350	3550	3900	4450	5100	3352
3000 914	Ground Roll	2200	2350	2500	2750	3150	3600	2304
	15 m / 50 ft	3350	3550	3750	4150	4750	5450	3512
4000 1219	Ground Roll	2350	2500	2650	2950	3400	3900	2422
	15 m / 50 ft	3550	3750	4000	4500	5150	5900	3680
5000 1524	Ground Roll	2500	2650	2850	3200	3700		2548
	15 m / 50 ft	3800	4000	4300	4850	5550		3870
6000 1829	Ground Roll	2700	2900	3100	3550	4050		2731
	15 m / 50 ft	4100	4300	4600	5300	6050		4129
7000 2134	Ground Roll	2950	3100	3400	3900	4450		2927
	15 m / 50 ft	4400	4650	5100	5850	6700		4405
8000 2438	Ground Roll	3150	3400	3750	4300	4900		3136
	15 m / 50 ft	4750	5100	5650	6450	7400		4705
9000 2743	Ground Roll	3450	3750	4150	4800	5500		3362
	15 m / 50 ft	5150	5600	6250	7150	8300		5045
10000 3048	Ground Roll	3800	4100	4650	5350			3627
	15 m / 50 ft	5700	6100	6950	8050			5420

5.3.7 CLIMB PERFORMANCE – TAKE-OFF CLIMB

NOTE

Rate of climb at MTOM (2360 kg / 5203 lb) with a power setting of 100% at MSL and ISA conditions:

- 946 ft/min (4.8 m/s) with flaps T/O.

Take-Off Climb - Flaps T/O

Flaps: T/O — **Power: 95%**

v_Y: 89 KIAS — **Gear: retracted**

Weight [kg] / [lb]	Press. Alt. [ft]	Press. Alt. [m]	Rate of Climb - [ft/min]								
			Outside Air Temperature - [°C] / [°F]								
			-20 -4	-10 14	0 32	10 50	20 68	30 86	40 104	50 122	ISA
2360 / 5203	SL		920	910	910	900	890	880	840	740	893
	2000	610	900	890	880	870	860	850	790	700	871
	4000	1219	870	860	850	840	840	810	730	640	847
	6000	1829	850	840	830	820	800	750	670		823
	8000	2438	820	810	790	780	760	690	600		793
	10000	3048	780	770	750	740	690	600			762
	12000	3658	750	730	710	680	590	480			729
	14000	4267	670	650	610	550	430	330			655
	16000	4877	570	540	500	410	310				561
	18000	5486	450	430	390	290	190				455
	20000	6096	350	330	270	160					362

5.3.8 CLIMB PERFORMANCE – CRUISE CLIMB

Cruise Climb

Flaps: UP — **Power: 95%**

v_{CLIMB}: 100 KIAS — **Gear: retracted**

Weight [kg] / [lb]	Press. Alt. [ft]	Press. Alt. [m]	Rate of Climb - [ft/min]								
			Outside Air Temperature - [°C] / [°F]								
			-20 -4	-10 14	0 32	10 50	20 68	30 86	40 104	50 122	ISA
2360 / 5302	SL		1010	1000	1000	990	980	970	920	820	985
	2000	610	990	980	970	960	950	950	880	780	963
	4000	1219	960	950	950	940	930	900	820	720	940
	6000	1829	940	930	920	910	900	850	760		917
	8000	2438	910	900	890	880	860	780	680		891
	10000	3048	880	870	850	840	790	690			861
	12000	3658	850	830	810	780	680	570			830
	14000	4267	770	750	710	640	520	400			754
	16000	4877	660	640	600	500	390				655
	18000	5486	540	520	480	370	270				545
	20000	6096	440	420	350	240					449

5.3.9 ONE ENGINE INOPERATIVE CLIMB PERFORMANCE

One Engine Inoperative Climb

Flaps: UP — **Power: 95%**

v_{YSE}: 95 KIAS — **Gear: retracted**

Weight [kg] / [lb]	Press. Alt. [ft]	Press. Alt. [m]	Rate of Climb - [ft/min]								
			Outside Air Temperature - [°C] / [°F]								
			-20 -4	**-10** 14	**0** 32	**10** 50	**20** 68	**30** 86	**40** 104	**50** 122	**ISA**
2360 / 5203	**SL**		125	110	100	90	80	70	50	15	83
	2000	610	100	90	75	65	55	40	20	-10	65
	4000	1219	80	65	55	40	25	15	-10	-40	43
	6000	1829	55	40	25	10	0	-20	-40		21
	8000	2438	25	10	-5	-15	-30	-55	-85		-2
	10000	3048	-5	-20	-35	-50	-75	-105			-26
	12000	3658	-35	-50	-70	-95	-130	-170			-53
	14000	4267	-90	-110	-135	-175	-215	-255			-104
	16000	4877	-155	-180	-210	-250	-290				-164
	18000	5486	-230	-255	-285	-320	-360				-230
	20000	6096	-300	-325	-355	-395					-291

5.3.10 TIME, FUEL AND DISTANCE TO CLIMB

Time, Fuel and Distance to Climb

Flaps: UP — Power: 95%
v_{climb}: 100 KIAS — Gear: retracted

Weight [kg] / [lb]	Press. Alt. [ft]	Press. Alt. [m]	OAT [°C]	OAT [°F]	TAS [kt]	RoC [ft/min]	RoC [m/s]	Time [min]	Fuel [US gal]	Dist-ance [NM]
2360 / 5203	SL		15	59	99	985	5.0	0	0.0	0
	2000	600	11	52	100	970	4.9	3	0.7	3
	4000	1219	7	45	101	960	4.8	5	1.4	7
	6000	1829	3	38	103	950	4.8	7	2.1	10
	8000	2438	-1	30	105	935	4.7	9	2.8	14
	10000	3048	-5	23	106	925	4.7	11	3.5	19
	12000	3658	-9	16	108	910	4.6	14	4.3	23
	14000	4267	-13	9	110	895	4.5	16	5.1	28
	16000	4877	-17	2	112	870	4.4	19	5.9	34
	18000	5486	-21	-5	113	840	4.2	22	6.8	40
	20000	6096	-25	-12	115	805	4.1	25	7.7	47

5.3.11 CRUISE PERFORMANCE

Reduce cruise performance by the following values (ΔTAS):

At Sea Level and at 2360 kg (5203 lb), a cruise performance degradation of approximately 1 knot is to be expected compared to the 2300 kg (5701 lb) cruise performance. Add 1 knot for degradation for each 5000 ft altitude.

Example: at 20,000 ft expect 5 knots of cruise performance degradation due to operation with 2360 kg (5203 lb).

5.3.13 GO-AROUND CLIMB PERFORMANCE

NOTE

The angles of climb at MSL and ISA condition are:

1.9 ° for Maximum Take-Off Mass (2360 kg / 5203 lb).

4.3 ° for 1999 kg / 4407 lb.

.

NOTE

A go-around with a Flight Mass above 2300 kg (5071 lb) is an abnormal operation.

Go-Around Climb Performance										
Flaps: LDG								Power: MAX		
v_{REF}: 94 KIAS								Gear: extended		
Weight [kg] / [lb]	Press. Alt. [ft]	Press. Alt. [m]	Rate of Climb - [ft/min]							
			Outside Air Temperature - [°C] / [°F]							
			-20 -4	-10 14	0 32	10 50	20 68	30 86	40 104	50 122	ISA
2360 / 5203	SL		360	345	330	315	285	245	205	140	307
	2000	610	335	315	300	280	255	215	160	105	278
	4000	1219	300	280	260	245	215	170	115	50	250
	6000	1829	265	245	225	205	175	120	60		219
	8000	2438	225	205	185	155	105	50	-10		187
	10000	3048	185	160	120	75	25	-45			142

5.3.14 APPROVED NOISE DATA

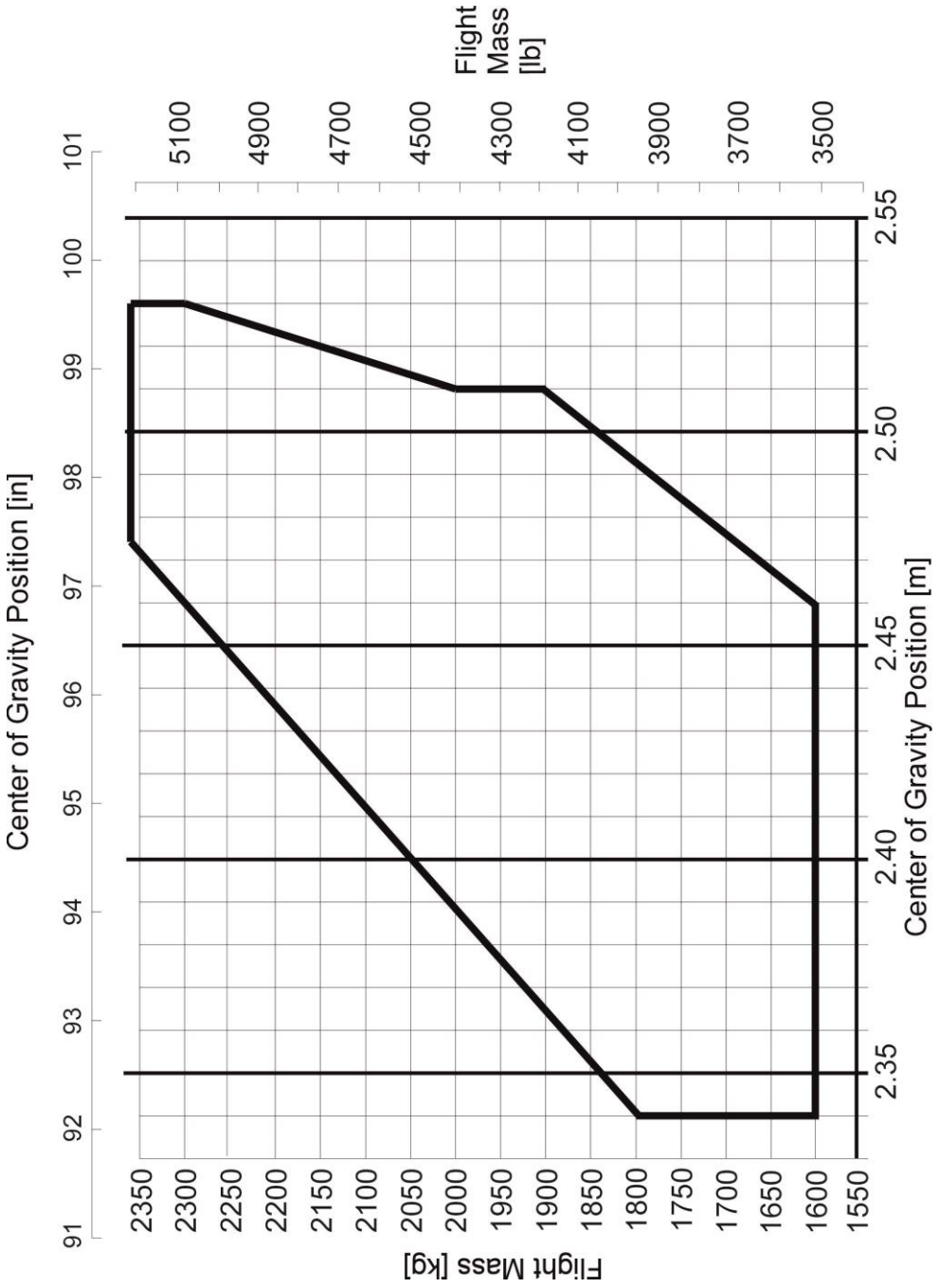
ICAO Annex 16, Vol. 1, Chapter 10:

2360 kg (5203 lb).....78.7 dB

6. MASS AND BALANCE

6.4 FLIGHT MASS AND CENTER OF GRAVITY

6.4.4 PERMISSIBLE CENTER OF GRAVITY RANGE



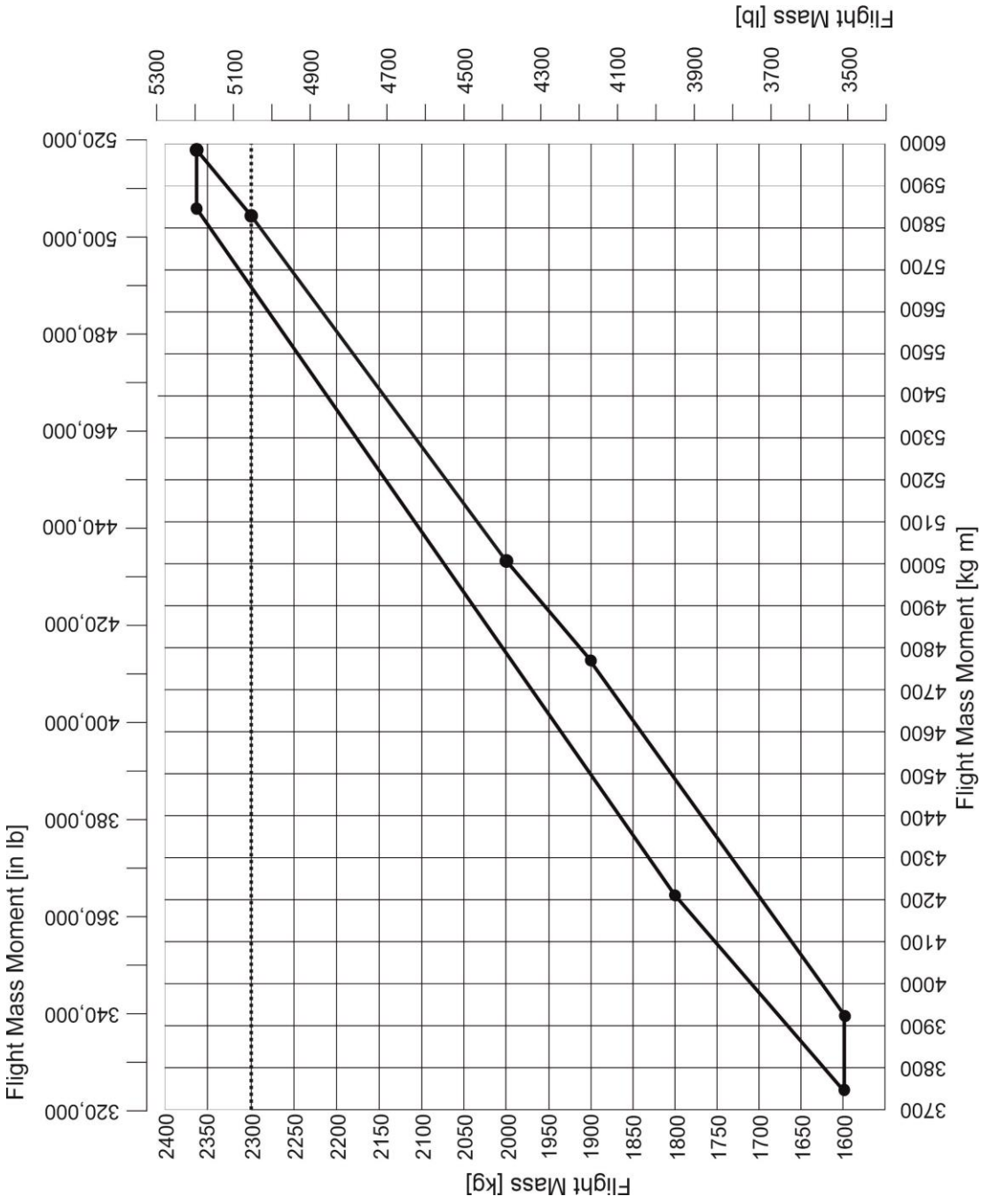
Most forward flight CG:

2.460 m (96.85 in) aft of datum plane at 2300 kg (5071 lb)
2.474 m (97.40 in) aft of datum plane at 2360 kg (5203 lb)

Most rearward flight CG:

2.530 m (99.61 in) aft of datum plane above 2300 kg (5071 lb)

6.4.5 PERMISSIBLE MOMENT RANGE



7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS

The Maximum Take-Off Mass of the DA 62 is increased to 2360 kg (5203 lb). The Maximum Zero Fuel Mass and Maximum Landing Mass are not changed.

8. AIRPLANE HANDLING, CARE AND MAINTENANCE

No change.