

**SUPPLEMENT 13**  
**TO THE AIRPLANE FLIGHT MANUAL**  
**FOR THE POWERED SAILPLANE**  
**HK 36 TTC**  
**OPERATION WITH**  
**117 LITER FUEL TANK**

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This powered sailplane must be operated in compliance with the information and limitations contained herein.

Prior to operating the powered sailplane, the pilot must take notice of all the information contained in this Airplane Flight Manual.

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## 0.1 RECORD OF REVISIONS

Rev No.	Sec.	Pages	Date of Revision	Approval	Date of Approval	Date Inserted	Signature

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 1

## 0.2 LIST OF EFFECTIVE PAGES

Section	Pages	Date
0	9 - 13 - 0	18 Feb 2003
	9 - 13 - 1	18 Feb 2003
	9 - 13 - 2	18 Feb 2003
	9 - 13 - 3	18 Feb 2003
1	9 - 13 - 4	18 Feb 2003
2	ACG-appr. 9 - 13 - 4	18 Feb 2003
	ACG-appr. 9 - 13 - 5	18 Feb 2003
3, 4	ACG-appr. 9 - 13 - 5	18 Feb 2003
5	ACG-appr. 9 - 13 - 6	18 Feb 2003
6	9 - 13 - 7	18 Feb 2003
	9 - 13 - 8	18 Feb 2003
7, 8	9 - 13 - 9	18 Feb 2003

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 2

### 0.3 TABLE OF CONTENTS

	<u>Page</u>
1. GENERAL .....	9-13-4
2. LIMITATIONS .....	9-13-4
3. EMERGENCY PROCEDURES .....	9-13-5
4. NORMAL PROCEDURES .....	9-13-5
5. PERFORMANCE .....	9-13-6
6. MASS (WEIGHT) AND BALANCE / EQUIPMENT LIST .....	9-13-7
7. POWERED SAILPLANE AND SYSTEMS DESCRIPTION .....	9-13-9
8. POWERED SAILPLANE HANDLING, CARE AND MAINTENANCE ....	9-13-9

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 3

## **1. GENERAL**

### **1.1 INTRODUCTION**

Pages 9-13-0 through 9-13-8 constitute Supplement No. 13 to the Airplane Flight Manual for the powered sailplane HK 36 TTC and are valid only for the operation of the powered sailplane with the 117 liter fuel tank installed.

### **1.5 DESCRIPTIVE DATA**

The 117 liter fuel tank is installed behind the seats, under the baggage compartment, instead of the standard tank (55 liters) or long range tank (79 liters).

## **2. LIMITATIONS**

### **2.7 MASS (WEIGHT)**

Maximum mass in baggage compartment : 12 kg (26 lbs.)  
only with baggage net

### **2.12 FUEL**

#### Fuel capacity

117 l tank : 117 liters 30.9 US gal

#### Usable fuel

117 l tank : 115 liters 30.4 US gal

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 4

## 2.15 PLACARDS

Next to the fuel filler opening:

117 l (30.9 US gal)	<b>AVGAS 100 LL, Auto Super min. 95 RON leaded or unleaded usable: 115 l (30.4 US gal)</b>
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On the fuel quantity indicator:

<b>usable 115 l (30.4 US gal)</b>
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In the baggage compartment:

<b>Baggage, max. 12 kg (26 lb), only with baggage harness</b>
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## 3. EMERGENCY PROCEDURES

No change.

## 4. NORMAL PROCEDURES

No change.

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 5

## 5. PERFORMANCE

### 5.3 ADDITIONAL INFORMATION

#### 5.3.7 FUEL CONSUMPTION, CRUISING SPEED, MAXIMUM FLIGHT DURATION

Power	Manif. press.	Engine speed	Fuel consumption		True cruising speed, $v_{TAS}$ , at altitudes of 1000 m, 2000 m, 3000 m (3300 ft, 6600 ft, 9800 ft)			Endurance with 117 l tank
			[l/h]	[US gal/h]	[km/h] [kts / mph]			
[% MCP]	[inHg]	[RPM]						[h:min]
115	38.4 or 39.9	2385	33	8.7	-	-	-	-
100	34.0 or 35.4	2265	27	7.1	217 117/135	222 117/138	227 123/141	4:16
90	32	2200	24	6.3	210 113/131	215 116/134	219 115/136	4:48
75	30	2100	20	5.3	197 106/122	201 109/125	205 111/127	5:45
60	28	2000	17	4.5	184 99/114	187 101/116	190 103/115	6:46
45	26	1900	14	3.7	168 91/104	170 92/106	173 93/108	8:13

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 6

## **6. MASS (WEIGHT) AND BALANCE / EQUIPMENT LIST**

### **6.7 USEFUL LOADS**

#### **6.7.4 FUEL LOAD**

##### Lever arm of the fuel tank

The following lever arm is assumed for all CG computations:

117 liter tank : 824 mm (32.44 in) aft of datum plane

### **6.8 MASS / C.G. ENVELOPES**

#### **NOTE**

The flight CG position of the HK 36 TTC with 117 liter fuel tank cannot be determined using a diagram. It must therefore be determined by calculation.

The table on the following page is a supplement to the Mass and Balance Form. It enables the pilot to verify whether a loading configuration is permissible as regards maximum useful load, minimum useful load on the seats, and CG position.

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 7



Calculation of Loading Configuration	HK 36 TTC (example)		Your HK 36 TTC	
	Mass [kg]	Moment [kgmm]	Mass [kg]	Moment [kgmm]
1. empty mass (taken from Mass and Balance Form)	590	215940		
2. occupants lever arm: 143 mm	140	20020		
3. baggage lever arm: 824 mm	2	1648		
4. total mass & total moment with empty fuel tank (add lines 1 through 3)	732	237608		
5. 28 liters of usable fuel (mass density: 0.75 kg/l) lever arm: 824 mm	21	17304		
6. total mass & total moment with fuel tanks filled (add lines 4 and 5)	753	254912		
<p>7. Verify that the loading with empty tank is admissible. Go to line 4, divide moment by mass. In the example: CG position = <math>237608 \text{ kgmm} / 732 \text{ kg} = 325 \text{ mm}</math>. The CG must lie within the limits given in Section 2.7 of the main part of the AFM.</p>				
<p>8. Verify that the loading with fuel in the tank is admissible. Go to line 6, divide moment by mass. In the example: CG position = <math>254912 \text{ kgmm} / 753 \text{ kg} = 339 \text{ mm}</math>. The CG must lie within the limits given in Section 2.7 of the main part of the AFM. The mass must not exceed the maximum flight mass given in Section 2.6 of the main part of the AFM.</p>				

### NOTE

Divide weights in pounds (lbs) by 2.2046 to obtain kilograms (kg). Multiply lever arms in inches (in) by 25.4 to obtain millimeters (mm).

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 8

## **7. POWERED SAILPLANE AND SYSTEMS DESCRIPTION**

### **7.10 FUEL SYSTEM**

#### **7.10.1 GENERAL**

The aluminum tank is located behind the backrest, beneath the baggage compartment. It holds 115 liters (30.4 US gal) of usable fuel.

## **8. POWERED SAILPLANE HANDLING, CARE AND MAINTENANCE**

No change.

Doc. No.	Issue	Rev. No.	Date	Source	Page No.
3.01.20-E	18 Feb 2003				9 - 13 - 9