

DA 40 AFM  
DA 40 D AFM



Supplement E6  
Baggage Extension,  
Baggage Tray

**SUPPLEMENT E6  
TO THE AIRPLANE FLIGHT MANUAL  
DA 40 & DA 40 D**

**OPERATION WITH BAGGAGE EXTENSION  
AND BAGGAGE TRAY**

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Signature :

ACG Project Manager :

Stamp :

Date :

  
  
AUSTRO CONTROL GmbH  
Abteilung Flugtechnik  
Zentrale  
A-1030 Wien, Schnirchgasse 11  
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**DIAMOND AIRCRAFT INDUSTRIES GMBH  
N.A. OTTO-STR. 5  
A-2700 WIENER NEUSTADT  
AUSTRIA**

### 0.1 RECORD OF REVISIONS

Rev. No.	Reason	Chapter	Pager	Date of revision	EASA Approval No.	ACG Verification	Date inserted	Signature

**0.2 LIST OF EFFECTIVE PAGES**

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## 1. GENERAL

### 1.1 INTRODUCTION

This Supplement supplies the information necessary for the efficient operation of the airplane when the Baggage Extension, with or without the Baggage Tray, is installed. The baggage area including the Baggage Extension forms the Extended Baggage Compartment. The information contained within this Supplement is to be used in conjunction with the complete AFM.

This Supplement to the Airplane Flight Manual is a permanent part of the AFM and must remain in the AFM at all times when the Extended Baggage Compartment is installed.

The implementation of the design change advisory OÄM 40-163 is prerequisite for the use of the DA 40 / DA 40 D with the Extended Baggage Compartment. The implementation of the design change advisory OÄM 40-164 is prerequisite for the use of the DA 40 / DA 40 D with the Baggage Tray. The Baggage Tray may not be used without the Extended Baggage Compartment. Baggage cannot be carried unless the baggage net is used.

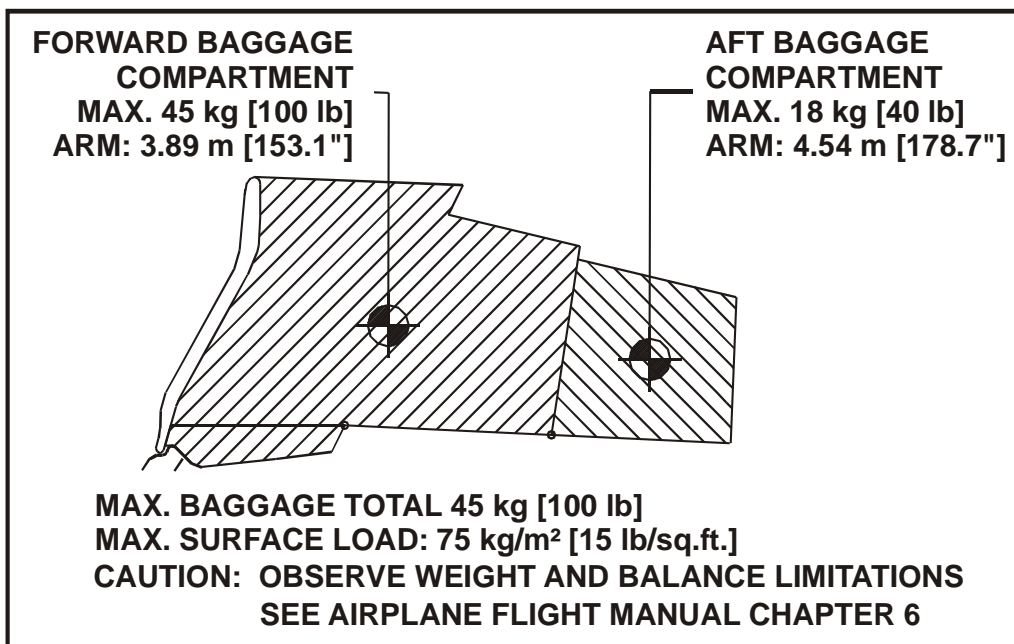
## 2. OPERATING LIMITATIONS

### 2.7 MASS (WEIGHT)

Max. load in forward baggage compartment alone	: 45 kg	100 lb
Max. load in aft baggage compartment alone	: 18 kg	40 lb
Max. load, both baggage compartments together	: 45 kg	100 lb
Max. surface load in baggage compartments	: 75 kg/m <sup>2</sup>	15 lb/sq.ft.

### 2.15 LIMITATION PLACARDS

On Baggage Extension:



### 3. EMERGENCY PROCEDURES

No change.

### 4A. NORMAL OPERATING PROCEDURES

No change.

### 4B. ABNORMAL OPERATING PROCEDURES

No change.

### 5. PERFORMANCE

No change.

## 6. MASS AND BALANCE

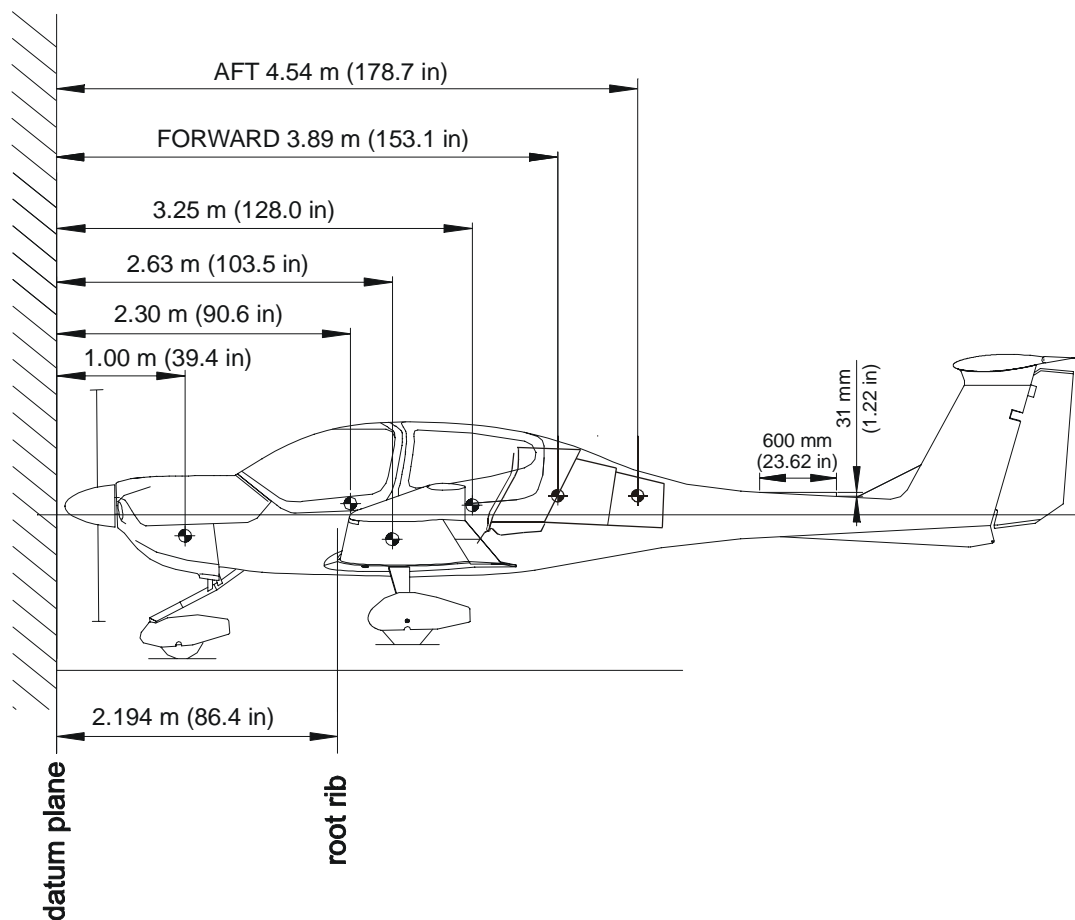
### 6.1 INTRODUCTION

The Extended Baggage Compartment allows a baggage mass of 45 kg (100 lb) to be carried when the baggage net is installed. The permissible mass and balance envelope is not changed.

### 6.4 FLIGHT MASS AND CENTER OF GRAVITY

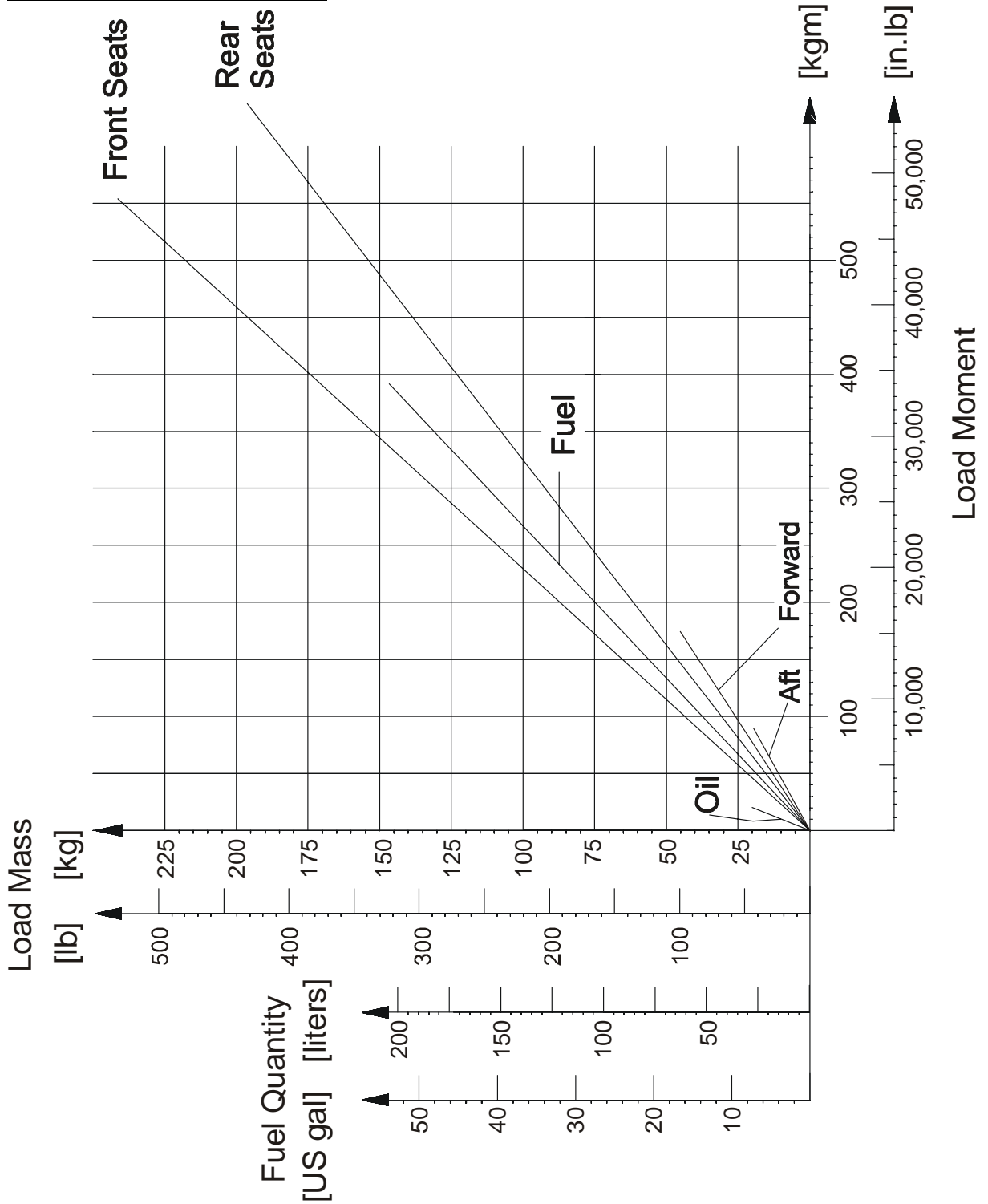
#### 6.4.1 MOMENT ARMS

- Baggage : see diagram





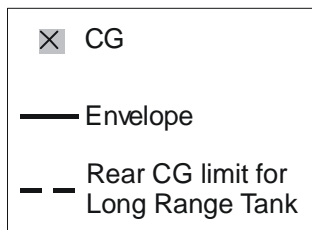
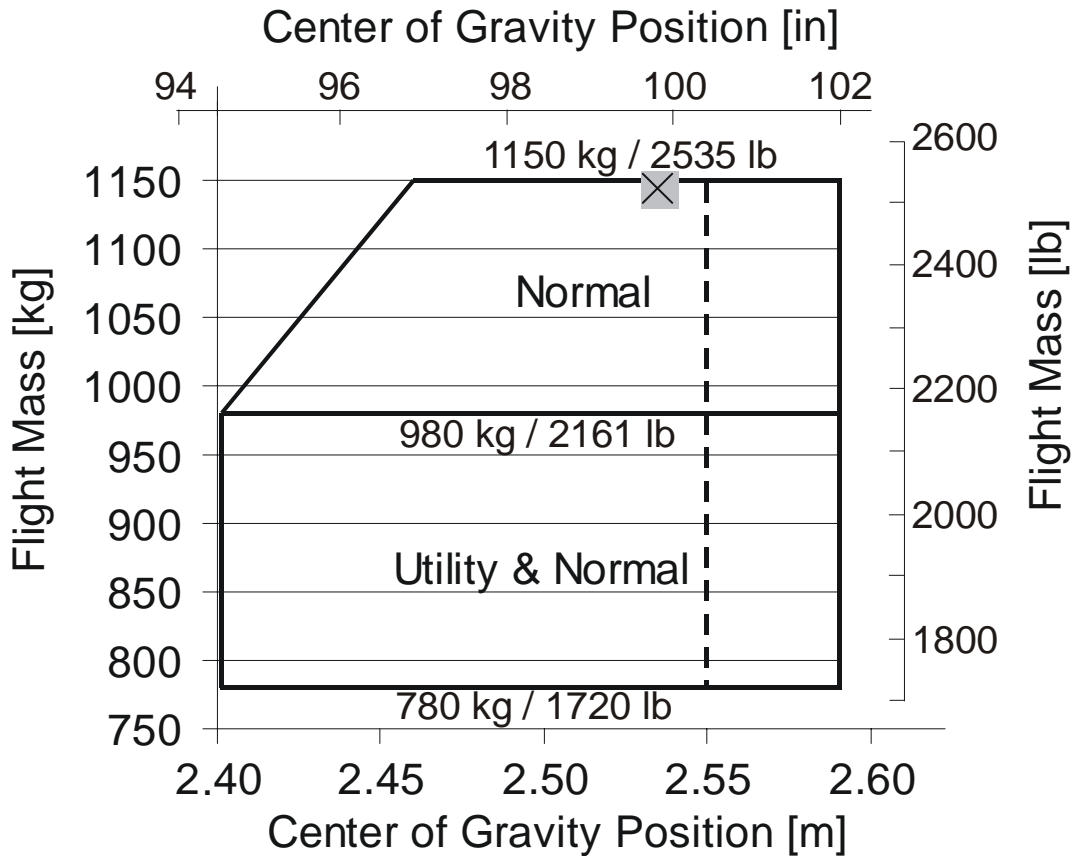
6.4.2 LOADING DIAGRAM



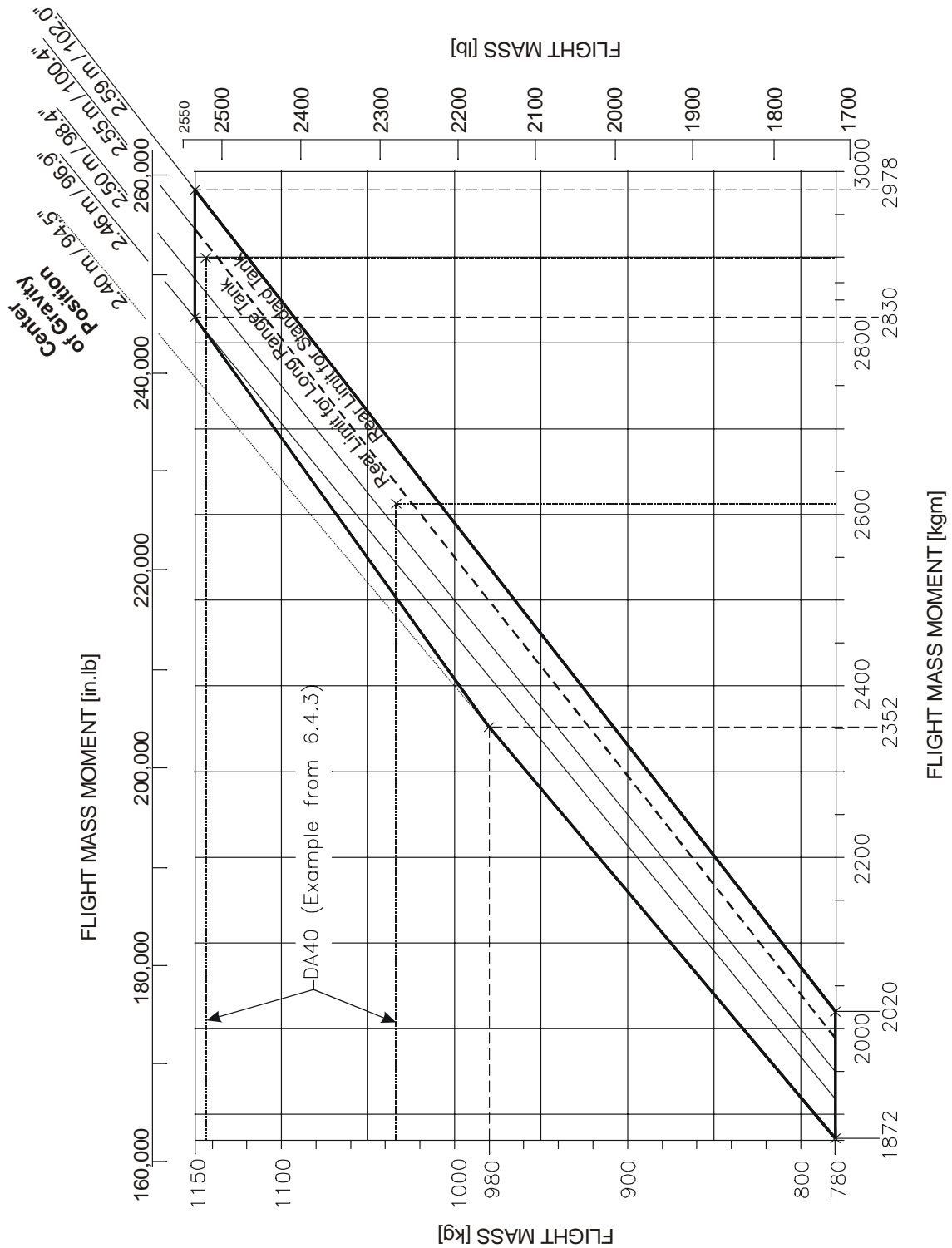
### 6.4.3 CALCULATION OF LOADING CONDITION

CALCULATION OF LOADING CONDITION	DA 40 (Example)		Your DA 40	
	Mass [kg]	Moment [kgm]	Mass [kg]	Moment [kgm]
	[lb]	[in.lb]	[lb]	[in.lb]
1. Empty mass (from Mass and Balance Report)	781.1 1722	1898.1 164,750		
2. Oil not added Lever arm: 1.00 m (39.4 in)	-1.7 -3.7	-1.7 -146		
3. Front seats Lever arm: 2.30 m (90.6 in)	150 331	345 29,989		
4. Rear seats Lever arm: 3.25 m (128.0 in)	70 154	227.5 19,712		
5. Forward baggage compt. Lever arm: 3.89 m (153.1 in)	25 55	97.2 8,421		
6. Aft baggage compartment Lever arm: 4.54 m (178.7 in)	10 22	45.4 3,931		
7. Total mass & total moment with empty fuel tanks (Total of 1.-6.)	1034.4 2280.3	2611.5 226,657		
8. On-board usable fuel (0.72 kg/liter) (6.01 lb/US gal) Lever arm: 2.63 m (103.5 in)	109.4 241	287.7 24,944		
9. Total mass & total moment with full fuel tanks (Total 7. plus 8.)	1143.8 2521.3	2899.2 251,600		
<p>10. The total moments from rows 7 and 9 (2611.5 and 2899.2 kgm) (226,657 and 251,600 in.lb) must be divided by the related total mass (1034.4 and 1143.8 kg respectively) (2280.3 and 2521.3 lb) and then located in Diagram 6.4.4 'PERMISSIBLE CENTER OF GRAVITY RANGE'.</p> <p>As in our example CG positions (2.525 m and 2.535 m respectively) (99.4 and 99.8 in) and masses fall into the permitted area, this loading condition is allowable.</p>				

**6.4.4 PERMISSIBLE CENTER OF GRAVITY RANGE**



**6.4.5 PERMISSIBLE MOMENT RANGE**



## 6.5 EQUIPMENT LIST AND EQUIPMENT INVENTORY

Additional equipment required for the operation with the extended baggage compartment:

- \* 1 extended baggage extension installed in accordance with OÄM 40-163
- \* 1 baggage net

Additional optional equipment:

- \* 1 baggage tray and lid installed in accordance with OÄM 40-164

## **7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS**

### **7.7 BAGGAGE COMPARTMENT**

The extended baggage compartment consists of the standard baggage compartment behind the rear seats and the Baggage Extension mounted in the rear bulkhead.

The Baggage Extension has a door that may be hinged up to keep items from sliding aft or hinged down to carry long items. The Baggage Extension also has a removable panel in the bottom to allow access for inspection of the rear fuselage area.

The Baggage Tray may be installed in the bottom of the standard baggage compartment. The lid of the Baggage Tray and the bottom of the Baggage Extension form a flat loading surface. The lid has mounting provisions for the tow bar. The space under the lid may be used to carry small items such as the gust lock and the fuel quantity measuring device.

Without the baggage net, no baggage may be loaded.

## **8. AIRPLANE HANDLING, CARE AND MAINTENANCE**

No change.