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## APPENDIX ADDITIONAL PERFORMANCE DATA

This appendix, issued to supplement the information given in the Flight Manual, may be modified by specific amendments independent of those issued against the basic Flight Manual.



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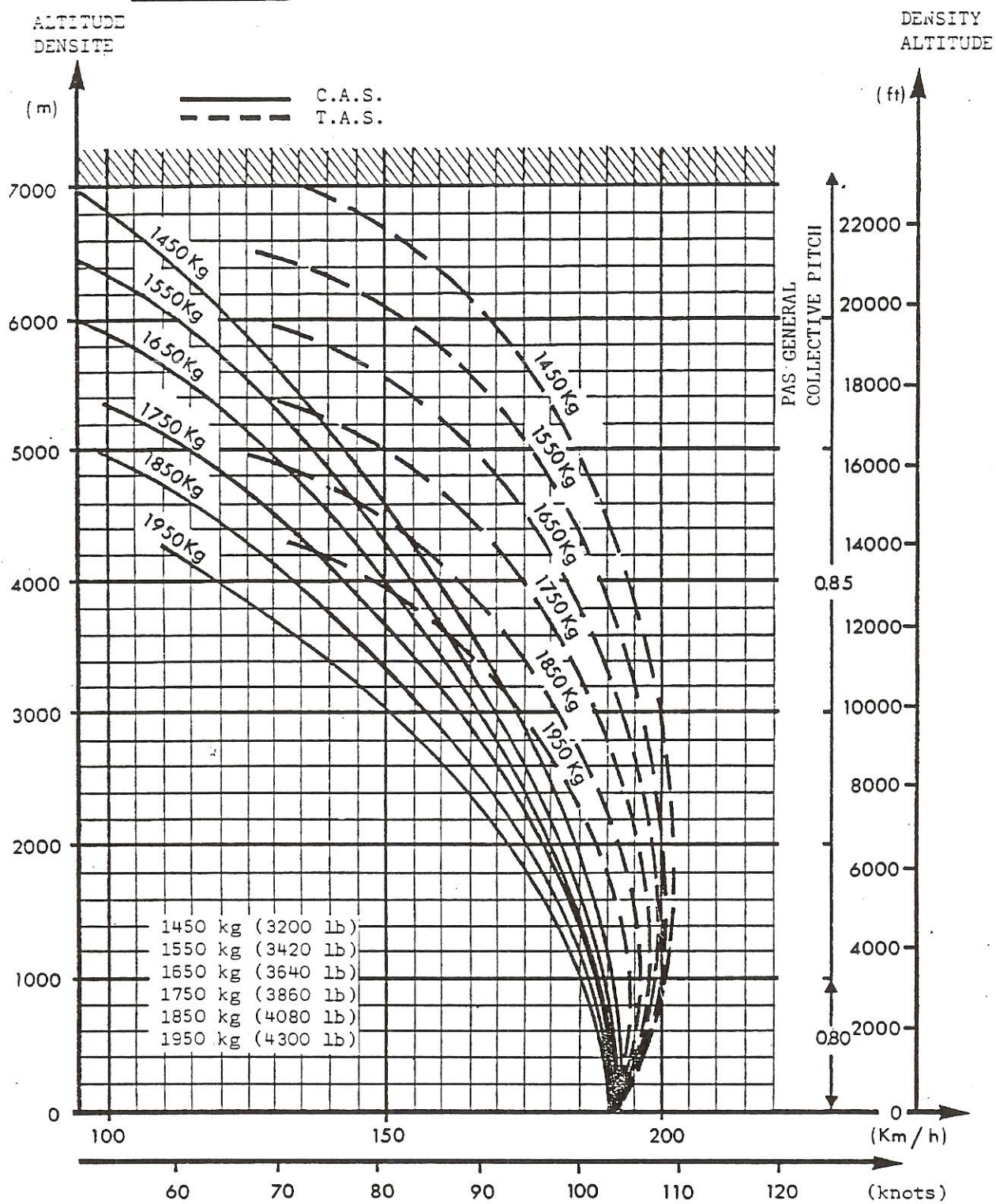
O. GENERAL

Effect of the various equipment items on the performance in level flight

EQUIPMENT INSTALLED IN THE AIRCRAFT	EFFECT ON PERFORMANCE
Emergency floatation gear	- No effect on fuel consumption and speed when the floatation gear is folded.
Barrier-type sand filters	- Fuel consumption increased by 3 % - Range decreased by 3 % - Speed in level flight decreased by 3 %
Ski-type landing gear	- No effect on speed and fuel consumption
Heating system	- Fuel consumption increased by 3 % - Range decreased by 3 % - No effect on speed.

1 - LEVEL FLIGHT PERFORMANCE

A. CRUISING SPEED

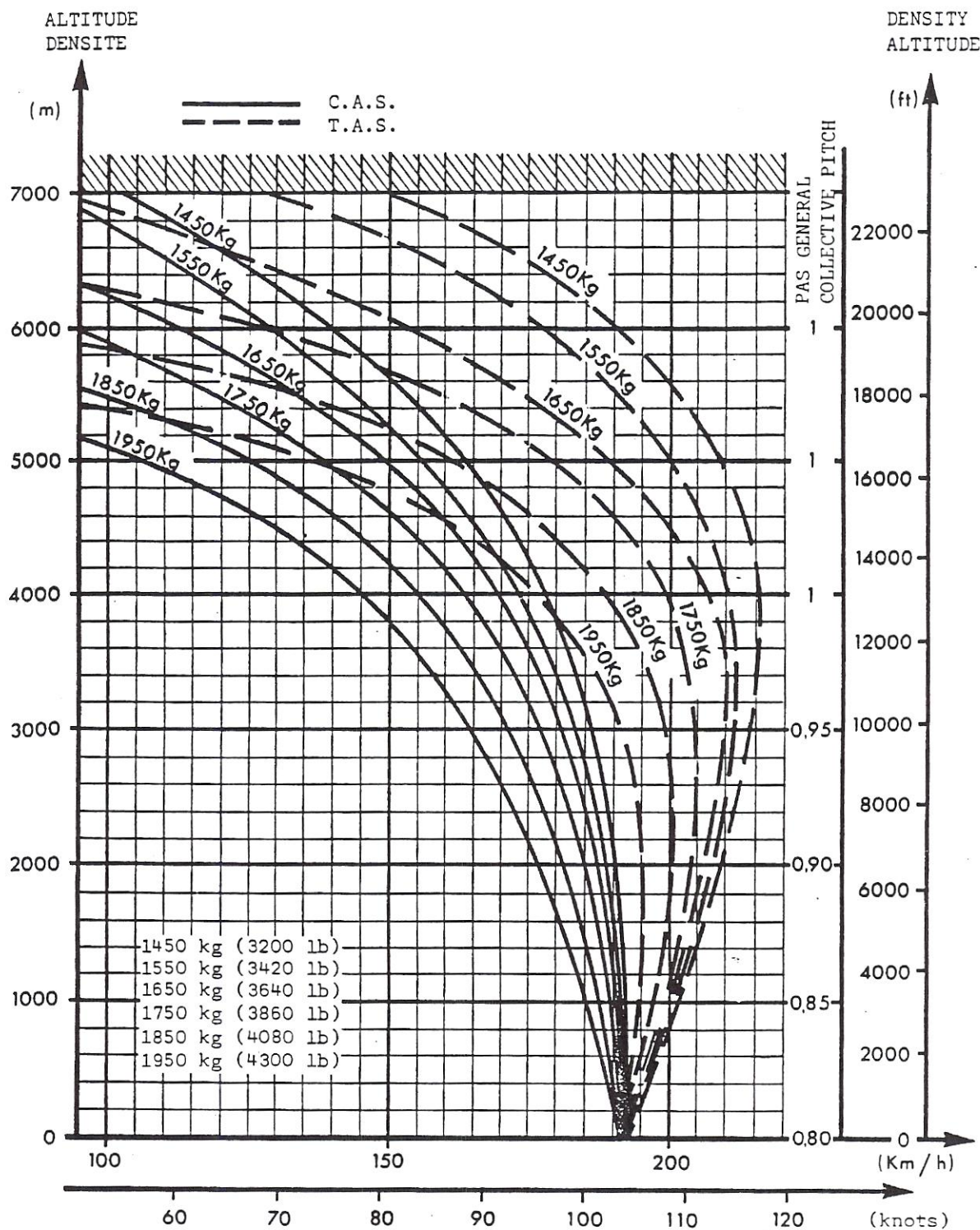


Economical Cruising Speed

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B. MAXIMUM SPEED IN LEVEL FLIGHT

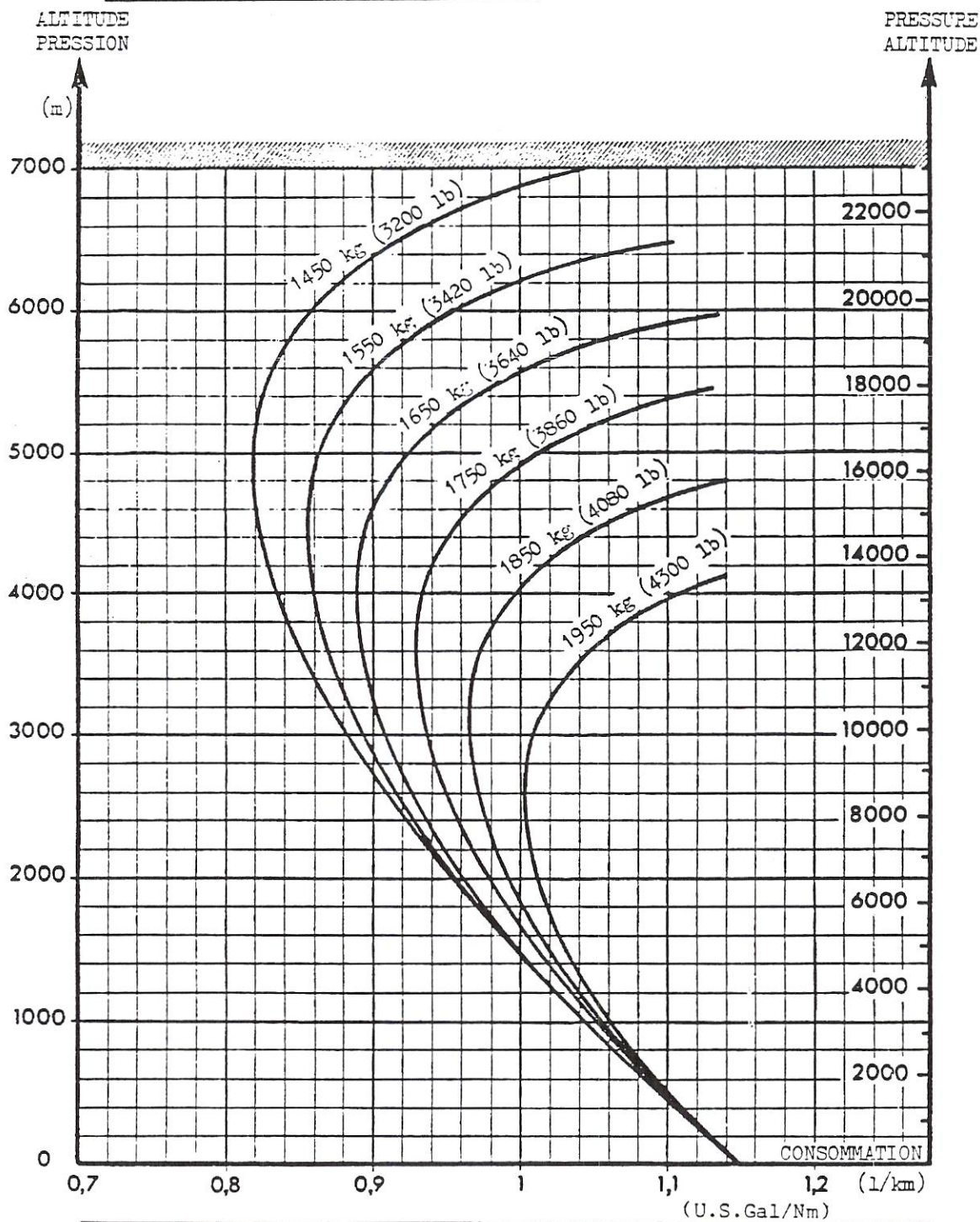


Maximum speed in level flight

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2 - FUEL CONSUMPTION

A. FUEL CONSUMPTION IN CRUISING FLIGHT



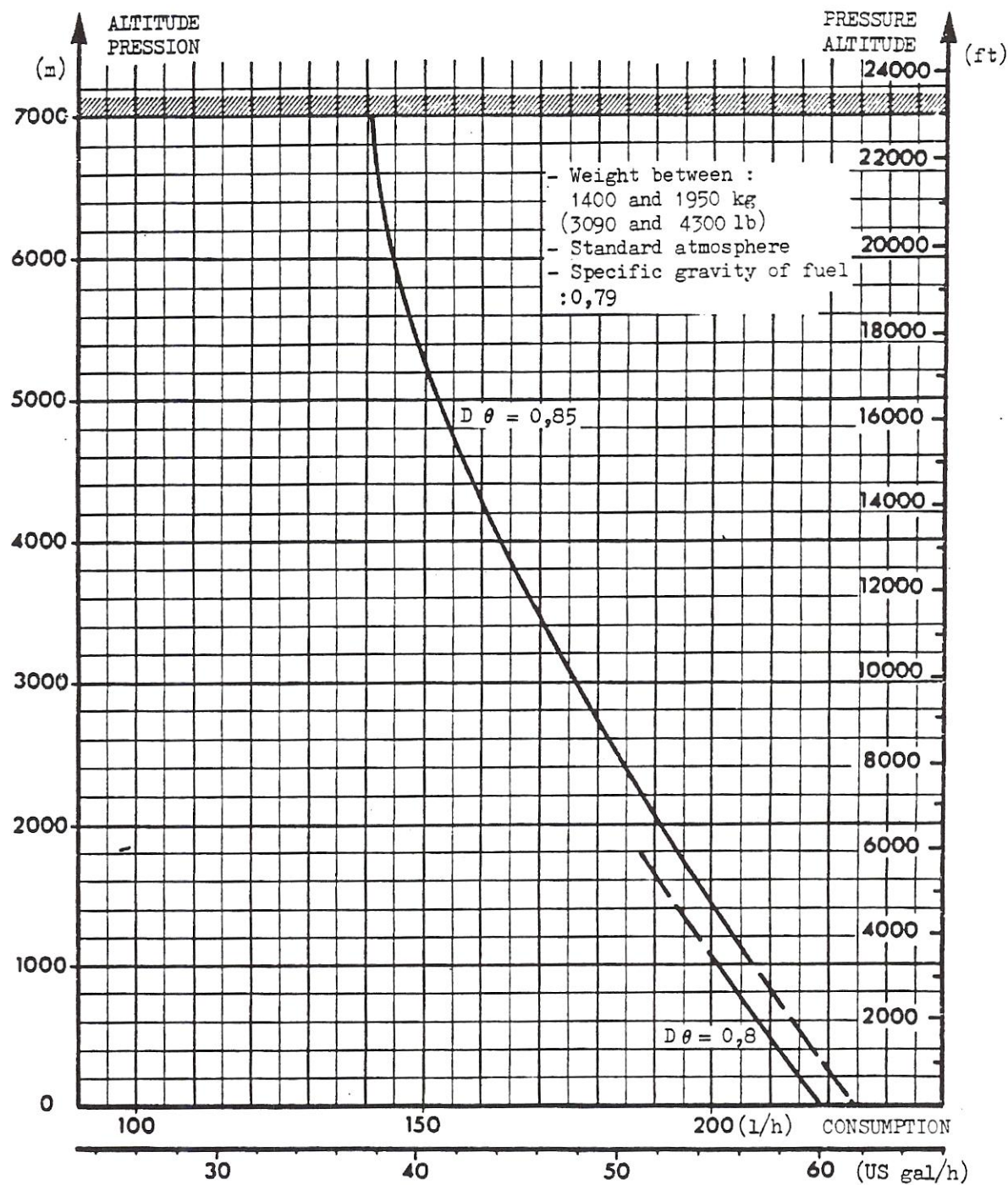
Fuel consumption in economical cruising flight

Standard atmosphere

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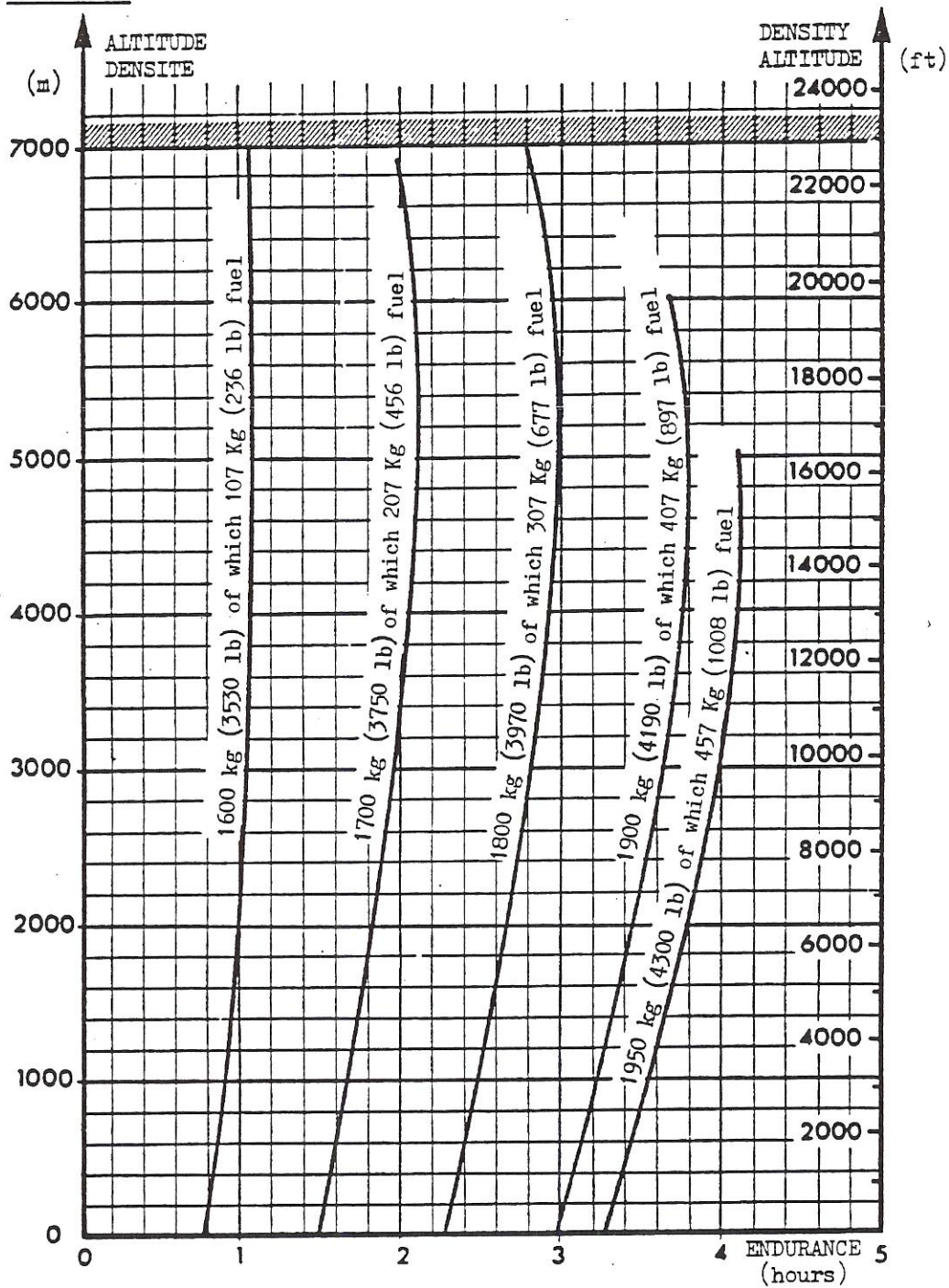
## B. HOURLY FUEL CONSUMPTION IN CRUISING FLIGHT



Hourly fuel consumption in level flight at economical cruising pitch

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## 3 - ENDURANCE



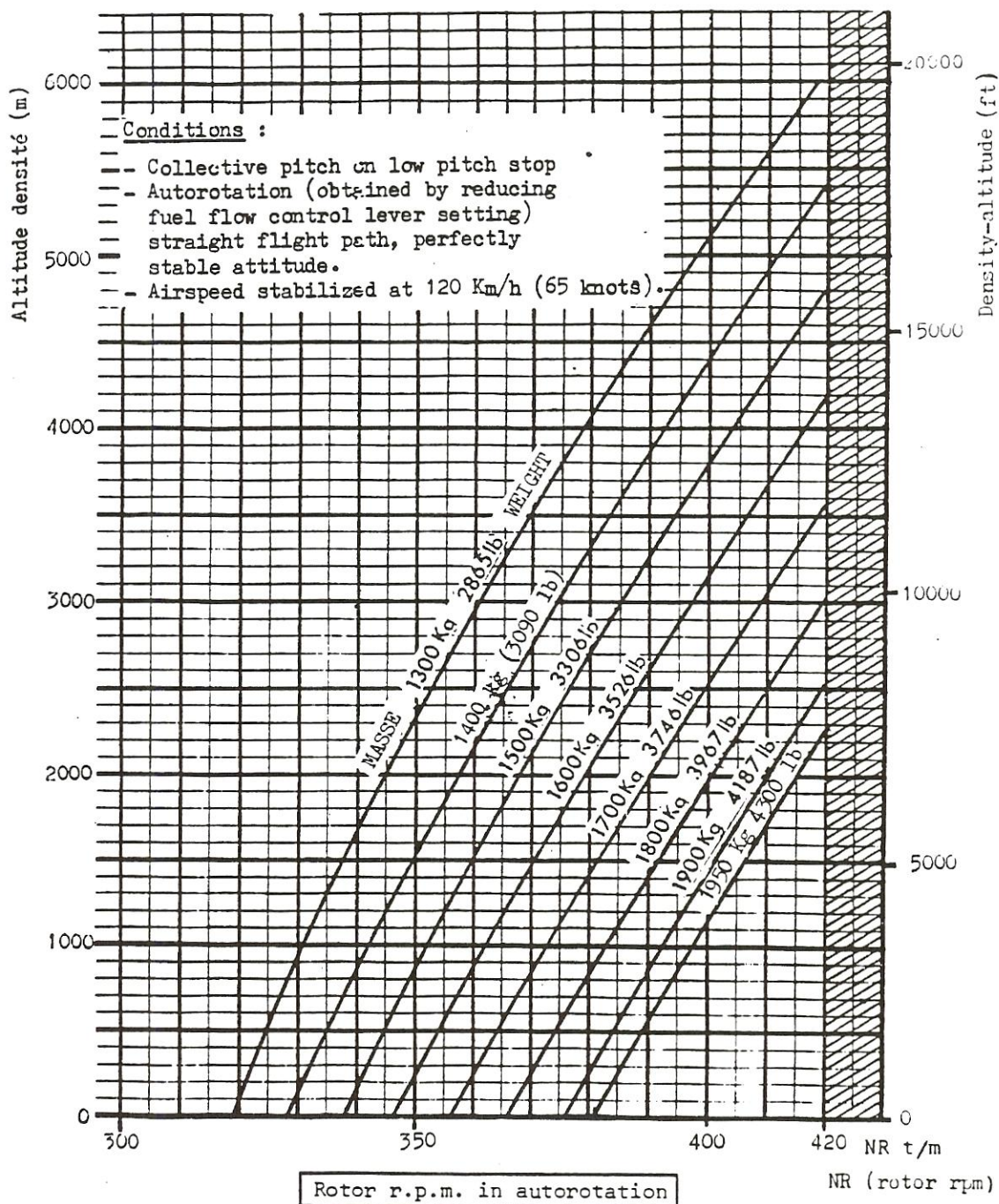
Empty weight : 1043 Kg ( 2300 lb)  
 Usefuel load : 450 Kg ( 1000 lb)  
 C.A.S. : 95 to 100 Km/h ( 50 to 55 Knots)

Endurance

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## 4 - AUTOROTATION



**NOTE :** For temperatures below  $-10^{\circ}\text{C}$ , reduce speed by 5 r.p.m.  $2^{\circ}\text{C}$  decrement

Ex. : 1500 kg, Hd = 3000 m (9500 ft.), O.A.T.  $-10^{\circ}\text{C}$  = 385 r.p.m.  
1500 kg, Hd = 3000 m (9500 ft.), O.A.T.  $-14^{\circ}\text{C}$  = 375 r.p.m.

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# APPENDIX

## GUIDANCE FOR CARGO SLING OPERATIONS

This appendix, issued to supplement the information given in the Flight Manual, may be modified by specific amendment independent of those issued against the basic Flight Manual.

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ISSUE : 1  
AMENDMENT :  
DATE CODE : 02-79

GUIDANCE FOR CARGO SLING OPERATIONS1. PERSONNEL TRAINING

Cargo sling operations may only be conducted by pilots who already have considerable experience with their aircraft.

No pilot may make solo cargo-carrying flights without first having accomplished such operations in the company of an instructor.

Mechanics on ground duty must be fully informed by the pilot before each new operation, in particular as regards :

- their position on the ground considering the proposed flight path ;
- the direction in which to move away ;
- the hook-up operation ;
- hand signals to be used or radio instructions ;
- protective equipment : helmets, gloves, glasses (if applicable) ;
- the number of round trips between replenishments ;
- the manner of retrieving slings and nets.

2. IMPERATIVE PRE-OPERATIONAL CHECKS-A. HELICOPTER CONDITION

In addition to the usual examination of the helicopter, the release unit must be carefully examined and the mechanism checked for correct release operation.

B. CONDITION OF SLING EQUIPMENT

The nets, strops and slings must be examined thoroughly. Any worn or frayed components are to be discarded.

The cables, strops and shackles must be capable of carrying three times the maximum anticipated load.

C. PREPARATION OF LOADS

Make sure that all participants are well aware of the weight of the loads.

Ensure that the method of suspension is understood.

D. CONDITION OF LOADING AND UNLOADING AREAS

Remove or tie down all that might be displaced by the rotor downwash.

E. TOTAL WEIGHT OF HELICOPTER WITH LOAD

Define maximum acceptable load compatible with terrain configuration and atmospheric conditions. Unless the platforms are in clear surroundings and fairly large, consider as maximum weight that which can be held in hover O.G.E. in calm air over the higher of the two platforms (take-off or landing).



### 3. AIRBORNE LOADS

Heavy loads, such as bags of cement or drums of kerosene, which are carried in a net, present no particular problem.

Special precautions must be taken in the case of bulky loads, which have a tendency to oscillate and even to "float" during transport on the sling. Permeability to air can have a stabilizing effect on a bulky load : for example, a teleferic car should be carried with both its doors open.

Never carry an airfoil alone : there is a great risk of the airfoil flying up into the tail rotor.

If several cables are used to sling the load, they must be long enough to form an angle of less than  $45^{\circ}$  between cables at the point of suspension under the helicopter ; experience shows that oscillation of the load is thus less likely to occur.

On the other hand, if the load is slung on a single sling cable, it is preferable that a fairly short cable be used as there is then less risk of the load swinging, and it is easier to judge the height of the load during approach.

For the retrieval of crashed helicopters it is generally possible to use a lifting ring on the rotor shaft.

Airplanes are carried using straps passing under the fuselage or under the wings. The cables must be attached in such a way that the airplane is in a slightly nose-down attitude when the helicopter is in the hover.

### 4. FLIGHT PRECAUTIONS

After hooking on the load the ground mechanic is to check the position of the sling cables then move away. The pilot must then make sure that the mechanic has moved clear and then confirm by signs that he may lift off the load.

Power must be applied slowly enough to allow the helicopter to centre itself above the load.

A vertical take-off must be made, avoiding dragging the load along the ground or striking any obstacle.

Carefully avoid flying over houses, vehicles and persons.

If the load starts to swing, reduce speed.

Approach must be made head into the wind with gradual reduction in airspeed, and transition into hover high enough above the ground to eliminate the risk of dragging the load.

Set the load down, then reduce collective pitch sufficiently to slacken the cables before opening the release unit hook ; this also allows the pilot to ensure that the load is deposited. If the cables are long enough, move sideways a little before opening the hook, to prevent the ring and tackle from falling onto the freight..

Even after the mechanic has signalled that the load is released, move away as if it were not ; this is an advisable precaution against possible misinterpretation of signals.

Never fly away with an empty net or an unballasted sling.