

SECTION 2 - OPERATING LIMITSa. Approval Criteria

The following aircraft comply with AIR 2052 Regulations as amended on 6 June 1966 in normal and utility categories, and conform to the conditions of FAR Part 23 amendment 7 and to the conditions particularly appertaining to jettison of canopies.

b. Limiting Speeds (IAS) at max. AOW

	<u>KPH</u>	<u>KTS</u>	<u>MPH</u>
VNE - Never exceed speed	308	166	191
VNO - Normal operating speed	260	140	162
VC - Design cruising speed	260	140	162
VA - Manoeuvring speed	215	116	134
VFE - Flap extended speed	170	92	106

ASI Markings KPS (KTS)

Redial Red Line	308kph (166kts, 191mph)
Yellow arc (cautionary trim air only)	260/308kph (140/166kts, 162/191mph)
Green arc (normal use)	99/260kph (53/140kts, 61/162mph)
White arc (flaps extended)	87/170kph (47/92kts, 54/106mph)

The stall warning operates 5 to 8 KTS before
the stall.

DR 400/180 R

DATE: 15.7.1974

c. Design Load Factor Limits at Max. AUW

	n = +4.4 and - 2.2 ("U")
Flaps up (clean)	n = + 3.8 and - 1.9 ("N")
Flaps Down	n = +2 ("N" and "U")

d. Max. AUW Authorised

Take off	1000 kg	(2205lbs)
Landing	1000 kg	(2205lbs)

e. CG Limits

Levelling : Upper fuselage spar

CG Reference : Leading edge of rectangular wing section.

Reference Chord : 67.4 inches

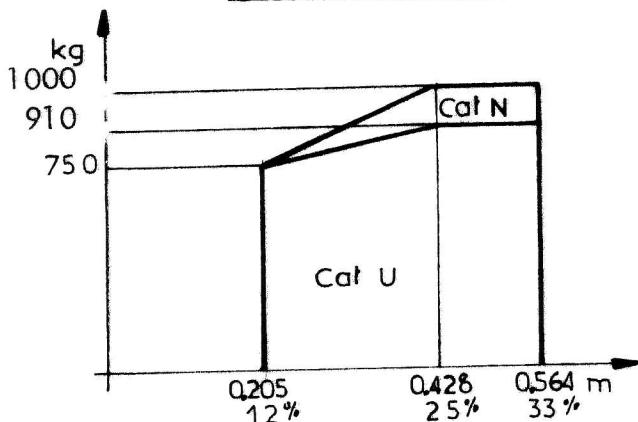
Category N CG Limits :

FORWARD LIMIT : at 750 KG (1653 LBS) 81 inches (12%)at 1000 KG (2205LBS) 169 inches
(25%)(linear variation between these
weights)AFT LIMIT : at all weights 222 inches (33%)

Before loading the aircraft, the pilot must ensure
(with the help of loading diagram) that weights and
CG are within the specified limits.

NOTE: the rear (bench) seat must be provided with one
safety belt per passenger.

WEIGHT-CG GRAPH



P. COMPULSORY WARNING PLACARDS

1.

BAGGAGE BAY
 MAX 60 KG (132 LBS)
 SEE LOADING DIAGRAM

2.

NO SMOKING

3. *

APPROVED FOR DAY
 VFR FLIGHTS
 IN NON-ICING CONDITIONS

* Not applicable to aircraft on the United Kingdom Register.

4.

SEE APPROVED FLIGHT MANUAL
 FOR TOWING INSTRUCTIONS

5

This aircraft must be used for NORMAL or UTILITY flying only in accordance with the approved Flight Manual.

On this aircraft, all indexes, markings and placards correspond to NORMAL utilisation.

For UTILITY operation refer to the approved Flight Manual.

Aerobatics, including spinning, are prohibited when used in the NORMAL category

Manoeuvring speed $V_A = 215$ KPH (116 KTS)(134MPH) maximum manoeuvring speed at which the control surfaces (elevator, rudder and ailerons) may be fully deflected.

DR 400/180R

DATE: 6.02.1975

g. ENGINE LIMITATIONS.

Max. Continuous	2700 RPM (Red Line)
Max. Cyl. Hd. Temp.	260°C
Oil: Max. Temp.	118°C (Red Line)
Normal Pressure	60 to 90 psi (Green)
Min. (Idling)	25 psi
Fuel: Min Pressure	0.5 psi

h. RPM GAUGE MARKINGS

Red arc	2150 to 2350 RPM
Green Arc	2350 to 2700 RPM
Red Line	AT 2700 RPM

For HO-27 propellor : Green arc from 2150 to 2700RPM

i. Fuel Red arc at 2700 RPM

Aviation Type Fuel	91/96 Octane (Min)
	OR 100/130
	OR 115/145
Tank Capacities Main	24.4 IG (29 USG)

j. OIL

Reservoir Capacity	8 quarts
Min. Level	4 quarts
Max. Level	8 quarts

k. MANOEUVRES

Stalling (See Page 5.1)

ACROBATICS PROHIBITED IN "N" CATEGORY
SPINNING PROHIBITED.

CATEGORY "U" OPERATING LIMITS

The following manoeuvres are authorised within the limits of Category "U" :

- Tight Turns
- Lazy Eight
- Zoom Climbing turns
- Precautionary stalls

All these manoeuvres must be carried out in the following conditions :

- Rear seats must be unoccupied
- Speeds in and out of the turns must be within the normal operating range.