In accordance with IMTAR – 21, Subpart P, 21.P.10

The flying and other LIMITATIONS of are detailed herein.

Wherever applicable, values of the parameters are specified for sea level ISA conditions, unless otherwise indicated.

# Maximum all up weight

1. **Centre of gravity range**

Refer figure 1

# Flight envelope

For allowable V-n diagram, reduced flight envelope with single hydraulic system and main rotor stall limits refer figures 2 and 3. For the height velocity diagram (H-V diagram) pertaining to the cases of one engine failed and the live engine in MCR and SCR, refer figures 4 and 5.

1. **Clutch wheel engagement time** if applicable and speed

# Main rotor/tail rotor track and balance On ground In flight

* 1. Main rotor : (ips) Lateral

Vertical

* 1. Tail rotor : (ips) In plane

Out of plane

# Main rotor speed limits (% normal RPM)

* 1. Engagement speed
  2. Maximum speed
  3. Maximum transient speed
  4. Minimum speed
  5. Minimum Transient Speed
  6. Maximum Power ON Speed
  7. Minimum Power ON Speed
  8. Maximum speed for Rotor brake application

# Maximum limiting helicopter speeds (without external Stores)

* 1. Maximum level speed
     1. Forward (VH)
     2. Sideward
     3. Rearward
  2. Never exceed speed
  3. Maximum auto rotational forward speed
  4. Maximum speed with door kept open/removed

# Maximum operational altitude

* 1. Maximum altitude for take-off and landing
  2. Maximum altitude for flying
  3. Zero speed hover out of ground effect ceiling.

# Maximum normal acceleration - (without external Stores)

Instantaneous Sustained

* 1. Positive
  2. Negative

# Maximum angle of side slip at various speeds.

* 1. V min P
  2. V cruise
  3. V NE

# Maximum bank angle

1. **Turn on spot**

Maximum rate of turn Altitude/Speed

# Maximum mast moment

1. **Controls margin**
   1. VH
   2. Vne
   3. Left sideward Flight
   4. Right sideward Flight
   5. Rearward Flight
   6. Hover

d (%) d (%) d(%) d(%)

# Maximum rate of climb

1. Vertical
2. Oblique

# Landing on inclined surface

1. Slope
2. Landing direction
3. **Maximum tyre inflation pressure**

In the case of wheeled version

1. **Maximum oleo pressure**
2. **Limitations with External Stores and under slung loads**

Item Max Speed Max ‘g’ Max Bank Angle Side Slip

* 1. Armament Stores
  2. Under slung loads
     1. High density loads
     2. Low density loads

# Engine limits (ISA, S/L)

Rating Power TGT (C) Torque NG ANG

1. **Single engine performance** - (Where more than one engine is used)
   1. Maximum level speed
   2. Minimum level speed
   3. Maximum rate of climb

# Engine relight envelope

Max Altitude Speed OAT

1. **Engine manual handling**
2. **Use of AVTAG (JP-4) and JP-5 Fuel**
3. **Transmission Limits**

Rating Power Torque

**FORM - 100B**

**FLIGHT CLEARANCE CERTIFICATE FOR HELICOPTERS**

# Gun firing

* 1. Calibre :
  2. Burst length :

# Pressure error correction

1. **Minimum airspeed indicator reading**

This FCC is issued for Developmental Flight Trials only and it does not constitute any authority to fly unless accompanied by a current Certificate for safety for flight (F-1090) issued by DGAQA.

Head of Design Contractor’s Firm

CEMILAC / Regional Director (Helicopters)