



**DEPARTAMENTO “SEGURIDAD OPERACIONAL”**  
**SUBDEPARTAMENTO “LICENCIAS”**  
**SECCIÓN EVALUACIONES**

**“CESSNA C-172N”**

**“CLUB AÉREO DE RANCAGUA”**

**A.- Limitaciones de Operación**

1.- Limitaciones (Velocidades)

	KTS
Va	<b>97</b>
Vne	<b>158</b>
Vno	<b>127</b>
Vfe	<b>110</b>
Vs	<b>44</b>
Vso	<b>33</b>
Vx	<b>53</b>
Vy	<b>70 - 80</b>
Vr	<b>55</b>
Vapp (Flap DN)	<b>55 - 65</b>
Vplaneo	<b>65</b>
Max Cross Wind	<b>15</b>

2.- Combustible (U.S. GAL)

Tipo a Utilizar	<b>100/130</b>
Capacidad Total	<b>43</b>
Capacidad Usable	<b>40</b>

3.- Pesos (LBS)

Máximo TAKE-OFF	<b>2.300</b>
Máximo Equipaje	<b>120</b>

4.- Motor (Potencia Máxima Continua)

Limitaciones Operativas de Motor	
Razón HP o BHP	<b>160</b>
Máximas RPM	<b>2.700</b>
RPM estáticas	
Máximas	<b>2.400</b>
Mínimas	<b>2.280</b>
Temperatura de aceite (°F)	
Máxima	<b>245</b>
Mínima	<b>100</b>
Presión de aceite (PSI)	
Máxima	<b>115</b>
Mínima	<b>25</b>

5.- Límites de maniobras (Cat. Normal)

MANIOBRA	KTS
Spin (Flaps UP)	<b>SLOW DECELERATION</b>
Escarpados	<b>95</b>
Ocho Flojo	<b>105</b>
Chandela	<b>105</b>

## **B.- Emergencies Procedures**

### **1.- ENGINE FAILURE DURING TAKEOFF RUN**

Throttle	<b><u>IDLE</u></b>
Brakes	<b><u>APPLY</u></b>
Wing Flaps	<b><u>RETRACT</u></b>
Mixture	<b><u>IDLE CUT-OFF</u></b>
Ignition Switch	<b><u>OFF</u></b>
Master Switch	<b><u>OFF</u></b>

### **2. - ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF**

Airspeed	<b><u>65 KTS (FLAPS UP)</u></b> <b><u>60 KTS (FLAPS DOWN)</u></b>
Mixture	<b><u>IDLE CUT-OFF</u></b>
Fuel Selector Valve	<b><u>OFF</u></b>
Ignition Switch	<b><u>OFF</u></b>
Wing Flaps	<b><u>AS REQUIRED</u></b>
Master Switch	<b><u>OFF</u></b>

### **3. - ENGINE FAILURE DURING FLIGHT**

Airspeed	<b><u>65 KTS</u></b>
Carburetor Heat	<b><u>ON</u></b>
Fuel Selector Valve	<b><u>BOTH</u></b>
Mixture	<b><u>RICH</u></b>
Ignition Switch	<b><u>BOTH</u></b> (or START if propeller is stopped)
Primer	<b><u>IN and LOCKED</u></b>

#### 4. - FIRE DURING START ON GROUND

Cranking	<b><u>CONTINUE</u></b> , to get a start, which would suck the flames and accumulated fuel through the carburetor and into the engine.
If engine starts:	
Power	<b><u>1700</u></b> RPM for a few minutes.
Engine	<b><u>SHUTDOWN</u></b> and inspect for damage.
If engine fails to start:	
Throttle	<b><u>FULL OPEN</u></b>
Mixture	<b><u>IDLE CUT-OFF</u></b>
Cranking	<b><u>CONTINUE</u></b>
Fire Extinguisher	<b><u>OBTAIN</u></b> (have ground attendants obtain if not installed)
Engine	<b><u>SECURE</u></b>
a. Master switch	<b><u>OFF</u></b>
b. Ignition switch	<b><u>OFF</u></b>
c. Fuel selector valve	<b><u>OFF</u></b>
Fire	<b><u>EXTINGUISH</u></b> using fire extinguisher, wool blanket or dirt.
Fire Damage	<b><u>INSPECT</u></b> repair damage or replace damaged components or wiring before conducting another flight.

## 5. - ENGINE FIRE IN FLIGHT

Mixture	<b><u>IDLE CUT-OFF</u></b>
Fuel Selector Valve	<b><u>OFF</u></b>
Master Switch	<b><u>OFF</u></b>
Cabin Heat and Air	<b><u>OFF</u></b> (except overhead vent)
Airspeed	<b><u>100 KTS</u></b> (if fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture).
Forced Landing	<b><u>EXECUTE</u></b> (as described in Emergency Landing without Engine Power).