Federal Aviation Administration, DOT

§ 25.471

(b) To provide for unsymmetrical loading when outboard fins extend above and below the horizontal surface, the critical vertical surface loading (load per unit area) determined under § 25.391 must also be applied as follows:

(1) 100 percent to the area of the vertical surfaces above (or below) the horizontal surface.

(2) 80 percent to the area below (or above) the horizontal surface.

§ 25.471 General.

(a) Loads and equilibrium. For limit ground loads—

(1) Limit ground loads obtained under this subpart are considered to be external forces applied to the airplane structure; and

(2) In each specified ground load condition, the external loads must be placed in equilibrium with the linear and angular inertia loads in a rational or conservative manner.

(b) Critical centers of gravity. The critical centers of gravity within the range for which certification is requested must be selected so that the maximum design loads are obtained in each landing gear element. Fore and aft, vertical, and lateral airplane centers of gravity must be considered. Lateral displacements of the c.g. from the airplane centerline which would result in main gear loads not greater than 103 percent of the critical design load for

<table>
<thead>
<tr>
<th>Surface</th>
<th>K</th>
<th>Position of controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>(f)</td>
<td>do</td>
<td>0.75 (f) Rudder at full throw</td>
</tr>
</tbody>
</table>

1 A positive value of K indicates a moment tending to depress the surface, while a negative value of K indicates a moment tending to raise the surface.