

### LATERAL CG POSITION

It is usually not necessary to determine the lateral CG position as most optional equipment is located near the helicopter centerline. However, if an unusual installation or loading occurs which could affect the lateral CG, its position should be checked against the CG envelope contained in Section 2. The lateral CG position can be calculated by multiplying the weights of all items, not symmetrical about the centerline, times their arm from the centerline. Then considering all items on the right as positive and those on the left as negative, sum the moments and divide the total by the weight of the loaded helicopter. This will give you the lateral position which, together with the CG position aft of the datum, can be compared with the allowable CG envelope in Section 2.

When weighing the helicopter, the center distance between the skids must be accurately measured while the ship is resting on the scales. The lateral CG position equals:  $(R \text{ scale reading} - L \text{ scale reading}) \times \frac{1}{2} \text{ Distance between skids} \div (R \text{ scale reading} + L \text{ scale reading})$ .

The following CG locations may be used when determining the helicopter CG position.

| Item                             | Long CG | Lat CG |
|----------------------------------|---------|--------|
| Pilot & Baggage under R seat     | *79.0   | + 10.7 |
| Passenger & Baggage under L seat | *79.0   | - 9.3  |
| Main Fuel                        | 108.6   | - 11.0 |
| Aux Fuel (optional)              | 103.8   | + 11.2 |

\*See note on Page 6-7