In the weight change record of a—	An operator should record any weight changes of—
Large cabin aircraft	± 10 lb or greater
Medium cabin aircraft	± 5 lb or greater
Small cabin aircraft	± 1 lb or greater

Figure 9-3. *Incremental weight changes that should be recorded in a weight and balance change record.*

Documenting Changes to an Aircraft's Weight and Balance

The weight and balance system should include methods by which a complete, current, and continuous record of the weight and CG of each aircraft is maintained, such as a log, ledger, or other equivalent electronic means. Alterations and changes affecting the weight and/or balance of the aircraft should be recorded in this log. Changes in the weight or location of weight in or on the aircraft should be recorded whenever the weight change is at or exceeds the weights listed in *Figure 9-3*.

Determining the Loaded CG of the Airplane in Percent MAC

A loading schedule is used to document compliance with the certificated weight and balance limitations contained in the manufacturer's AFM and weight and balance manual. The basic operating weight (BOW) and the operating index are entered into a loading schedule like the one in *Figure 9-4,* and the variables for a specific flight are entered as appropriate to determine the loaded weight and CG.

Use the data in this example:

Basic operating weight ..... 105,500 lb

Basic operating index (total moment/1,000) 98,837.0

MAC ..... 180.9 in

LEMAC 860.5

Item	Weight (lb)	Moment/1,000
BOW	105,500	92,837
Passengers Fwd station	3,060	1,781
Passengers Aft station	16,150	16,602
Fwd cargo	1,500	1,020
Aft cargo	2,500	2,915
Fuel tank 1	10,500	10,451
Fuel tank 3	10,500	10,451
Fuel tank 2	28,000	25,589
	177,710	161,646

Figure 9-4. *Loading schedule.*

Figure 9-5 illustrates passenger, cargo, and fuel loading tables. Using these tables, determine the moment indexes for the passengers (PAX), cargo, and fuel.

The airplane is loaded in this way:

Passengers (nominal weight—170 pounds each)

Forward compartment..... 18

Aft compartment..... 95

Cargo

Forward hold..... 1,500 lb

Aft hold..... 2,500 lb

Fuel

Tanks 1 and 3..... 10,500 lb each

Tank 2 ..... 28,000 lb

The formula in *Figure 9-6* can be used to determine the location of the CG in inches aft of the datum.