

1.7 TYPICAL AIRPLANE WEIGHTS

Typical Empty Weight

(with agricultural equipment):	4,900 lbs	2,223 Kg
Typical Useful Load (Certificated):	3,100 lbs	1,406 Kg
Typical Useful Load (for CAM 8 Agricultural Operations):	4,700 lbs	2,132 Kg

These weights are estimated. True aircraft empty weights will vary depending on installed equipment and accessories.

1.8 CAPACITIES AND LOCATIONS

Hopper Capacity:

480 US Gallons	@ Sta. +5.5 inches
1,817 Liters	+14.0 centimeters
66.8 Cubic Feet	

Baggage Compartment Capacity:

4.8 Cubic Feet	@ Sta. +98.0 inches
0.136 Cubic Meter	+249.0 centimeters

Hopper Rinse Tank Capacity:

18.0 US Gallons	@ Sta. -28.0 inches
68.1 Liters	-71.1 centimeters

Windshield Washer Tank Capacity (firewall forward):

2.5 US Gallons	@ Sta. -19.3 inches
9.5 Liters	-49.0 centimeters

Smoker Tank Capacity:

3.0 US Gallon	@ Sta. +113.8 inches
11.4 Liters	+289.1 centimeters

2.6 CENTER OF GRAVITY LIMITS

The center of gravity limits for the AT-504 are:

(+18.0 in)(45.7 cm) to (+26.5 in)(67.3 cm) at 8,000 lbs (3,629 Kg)

(+18.0 in)(45.7 cm) to (+29.0 in)(73.7 cm) at 7,619 lbs (3,456 Kg)

(+18.0 in)(45.7 cm) to (+29.0 in)(73.7 cm) at 9,600 lbs (4,354 Kg)

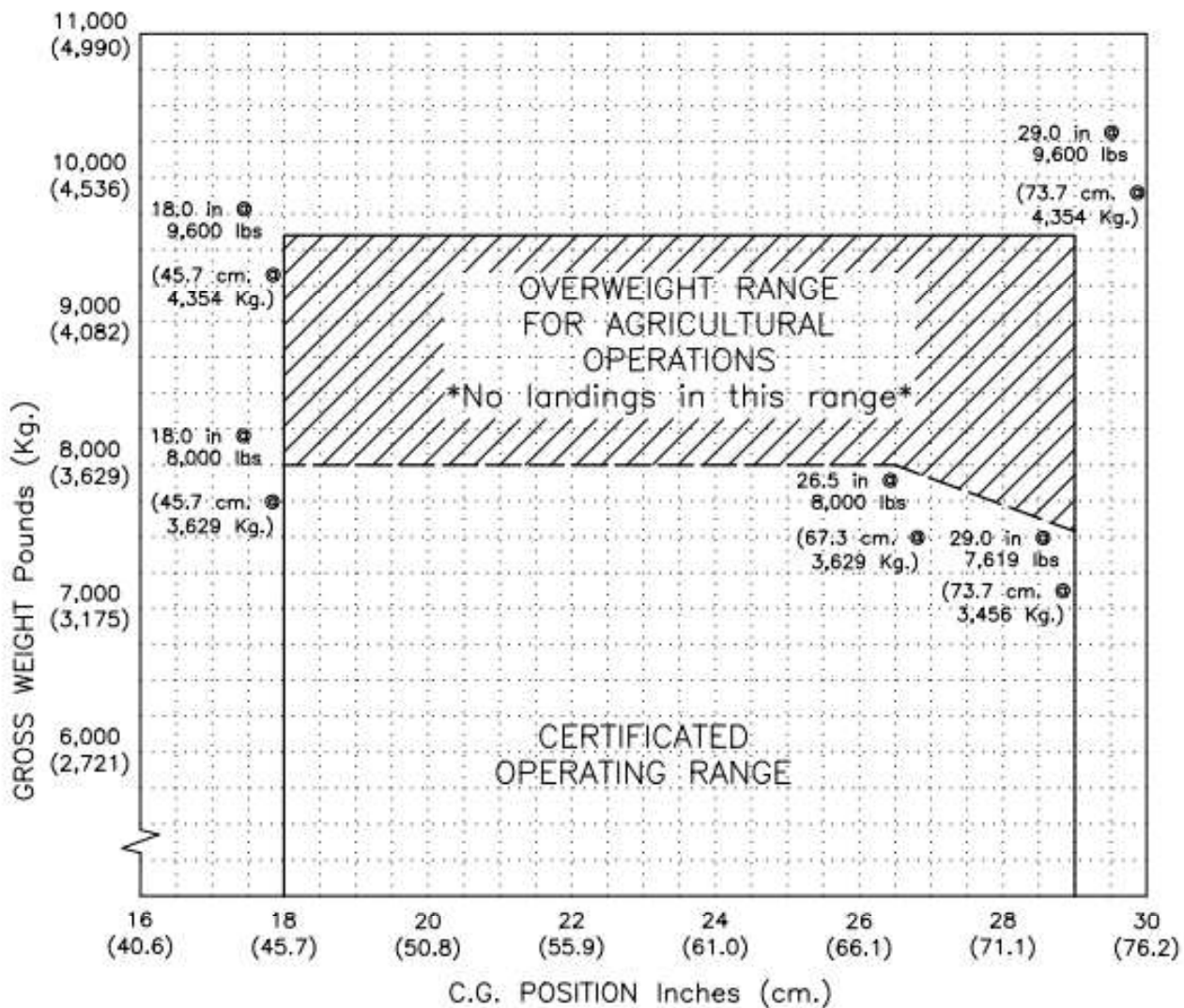
for CAM 8 Agricultural Operations (See Section 9.3)

No landings in this range

The datum (0.0) is the wing leading edge.

Straight line variation between points.

The pilot is responsible for ensuring that weight and CG stay within these limits throughout the flight.



4.6 FERRY FUEL SYSTEM

The ferry fuel system utilizes the hopper as a fuel tank and is not an FAA Certificated fuel system. However, it may be installed in accordance with drawing 50280 providing a logbook entry is made for both the installation and the removal.

If the optional ferry fuel system is installed, hopper fuel may be used by turning the fuel selector handle 90° counterclockwise to point towards the left. All take-offs and landings are to be made on main tank fuel. A safe altitude should be attained before switching and it is advisable to operate the fuel boost pump for a few seconds prior to switching to hopper fuel. Turn boost pump OFF before switching to hopper fuel.

When switching back to wing fuel turn boost pump ON after valve handle is rotated clockwise to point straight forward for wing fuel. Leave pump ON for a few seconds and monitor fuel pressure until it is clear the fuel flow is established.

Be sure to use the hopper fuel first. Keep in mind that if you run the wing tanks dry and then switch to hopper fuel, the fuel boost pump is not in the circuit between the hopper fuel and the engine. Therefore, if you run the wing tanks dry, resulting in an airlock in the system, there is no way to clear the airlock and restart the engine.

4.7 FLIGHT OVER WATER

Generally, over-water flights are made with the ferry fuel system installed so that hopper fuel is available. The procedures of Section 4.6 for using hopper fuel should be followed.

Use hopper fuel first. Switch to main tank fuel while there is still fuel in the hopper and operate the fuel boost pump until fuel pressure is assured.

All over-water flights should be at an altitude that will provide ample time to receive a response to a Mayday call, or to restart the engine if there is a fuel interruption.

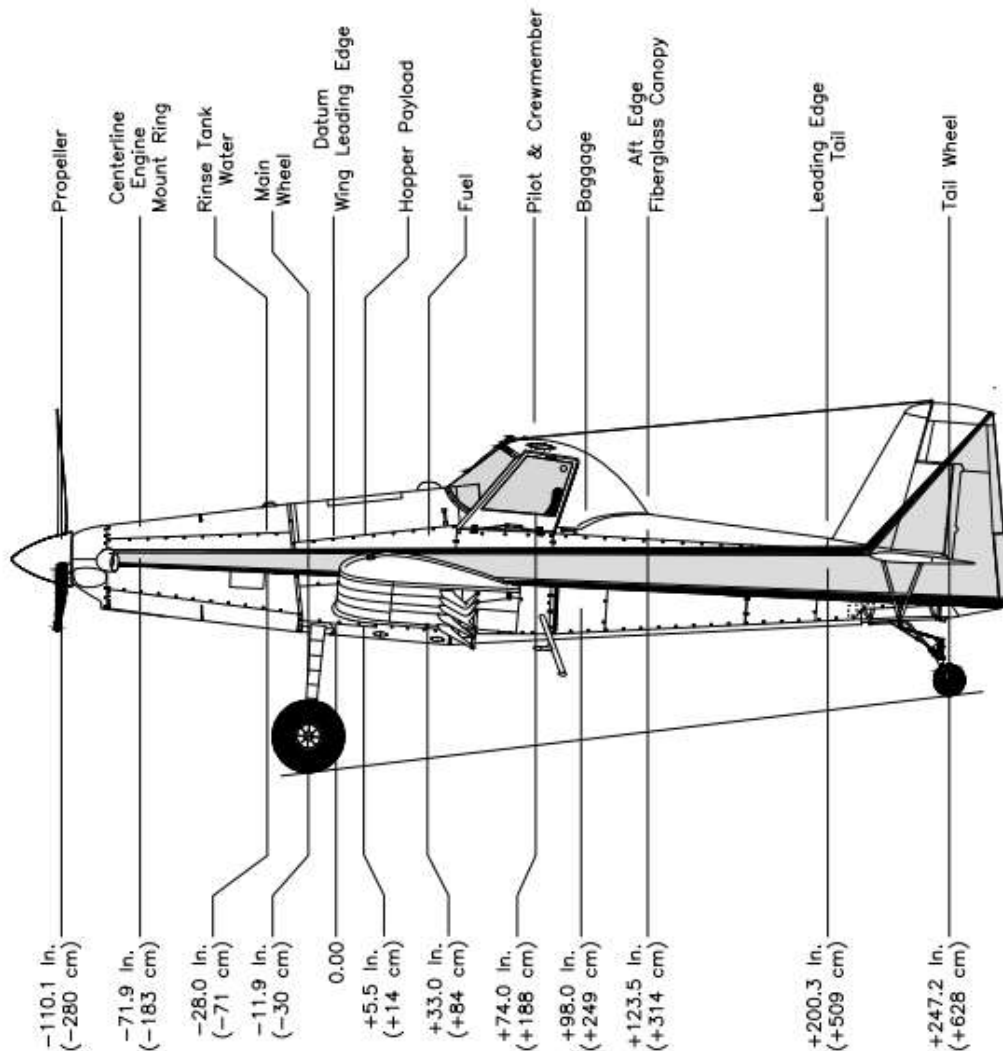
6.2 AIRCRAFT WEIGHING PROCEDURE (CONTINUED)

When the aircraft is slightly past level flight attitude, place a table or cart or other flat surface under the tailwheel. Place the scale on this flat surface and use a sturdy spacer to raise the scale to the level of the tailwheel. Gently lower the tailwheel onto the scale. Recheck that the aircraft is in level flight attitude and shim the tailwheel up or down as necessary.

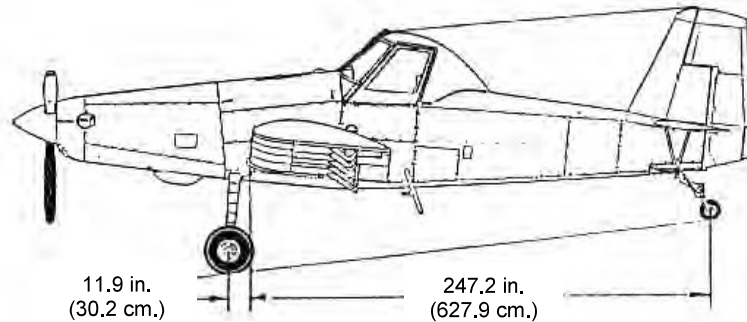
Record the weight on each scale. Carefully reverse the process and lower the aircraft from the scales. Weigh any cribbing or chocks used on top of each scale and subtract these weights from the corresponding scale reading.

6.3 REFERENCE ARM LOCATIONS

The figure below shows the arm location of selected items and reference points. These locations are measured from the Wing Leading Edge (Datum) with positive distances (+) aft of the leading edge and negative distances (-) forward of the leading edge. The locations shown may be used to calculate or estimate the location of other items that are not shown. The locations must be determined with the aircraft in level flight attitude.



WEIGHT AND BALANCE WORKSHEET



SERIAL NO. _____ Date Weighed _____
LEVELING MEANS: Top of L/H Main Gear Leg 5° Tail Down
DATUM: Wing Leading Edge

WEIGHTS

Left Main Wheel _____
Right Main Wheel _____
Tail Wheel _____

INCLUDED IN EMPTY WEIGHT

Oil - 9.2 quarts (8.7 Liters)
Unusable Fuel - 6 Gallons (22.7 Liters)
Installed Equipment
(See Equipment List)

Empty Weight & C.G. @

Sample Loadings:	FORWARD C.G.			AFT C.G.		
	Weight	Station	Moment	Weight	Station	Moment
Main Wheels						
Tail Wheel						
Pilot						
Crew**						
Baggage						
Fuel*						
Rinse Tank Water						
Hopper Payload						
Forward C.G.	=		=	Limit is 18.0" at 8,000 lbs (45.7 cm at 3629 Kg)		
Aft C.G.	=		=	Limit is 26.5" at 8,000 lbs (67.3 cm at 3629 Kg) Limit is 29.0" at 7,619 lbs (73.7 cm at 3456 Kg)		

NOTES:

*For Standard 170 Gal. (164 Usable) Fuel: →
Full Fuel 1105 lbs @ 33.0 in
*For Optional 216 Gal. (210 Usable) Fuel: →
Full Fuel 1415 lbs @ 33.0 in
*For Optional 234 Gal. (228 Usable) Fuel: →
Full Fuel 1537 lbs @ 33.0 in

*For Standard 643 Liters (621 Usable) Fuel:
Full Fuel 501 Kg @ 83.8 cm
*For Optional 818 Liters (795 Usable) Fuel:
Full Fuel 642 Kg @ 83.8 cm
*For Optional 886 Liters (863 Usable) Fuel:
Full Fuel 697 Kg @ 83.8 cm

**When crew is carried rinse tank must be filled with water.

Unusable Fuel = 40.0 lbs. @ 33.0 in. (18.1 Kg @ 84 cm) for all Fuel Tanks

Water = 8.33 lbs./gal (1.0 Kg/L)

Jet A = 6.74 lbs./gal (0.81 Kg/L)