

CESSNA AIRCRAFT COMPANY

WICHITA, KANSAS

Weight & Balance Data

MODEL 150D

Aircraft Serial No. 15060199

F. A. A. Registration No. N4199U (STD)

Date: 11-14-63

ITEM		Weight (lbs.)	X	C. G. Arm (inches)	=	Moment (lb. ins.)
Standard Airplane (Empty, Dry & Unpainted)	Actual Computed	955.0		32.5		31037
Optional Equipment		58.0		24.7		1433
Special Installations (DMCR Approved)		---		---		---
Paint and Stripes Over-All		13.0		68.0		884
Unusable Fuel (3.5 Gal.)		21.0		40.0		840
Licensed Empty Weight = Total of Above Items		1047.0		32.7		34194

(GROSS WT.) - (LICENSED EMPTY WT.) = USEFUL LOAD Above superceded by 337 of 6/30/64

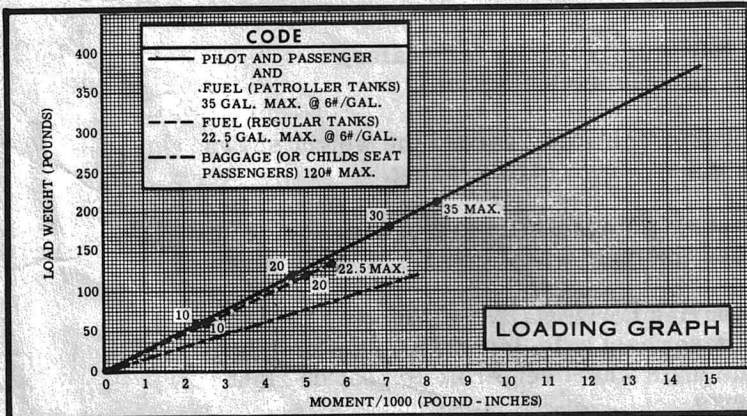
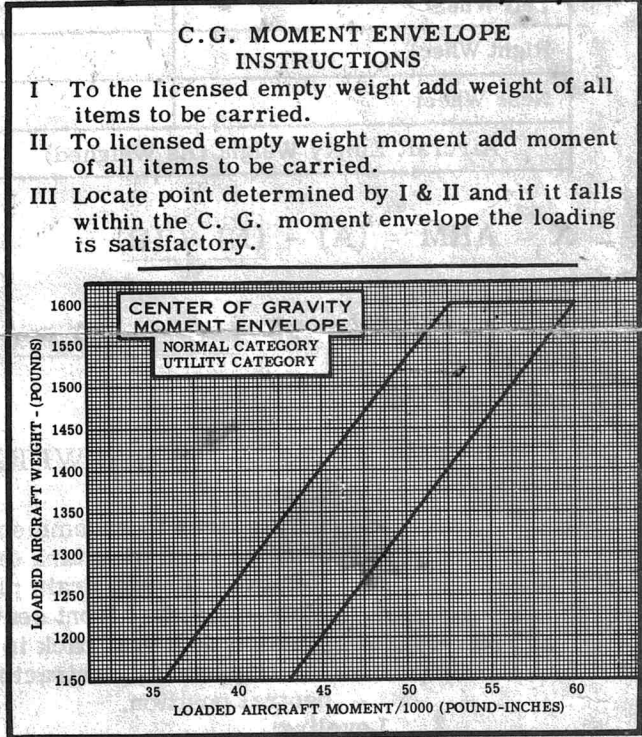
(1600 LBS) - (~~1047.0~~ LBS) = ~~553.0~~ LBS
 1078.1 521.9

SAMPLE LOADING PROBLEM

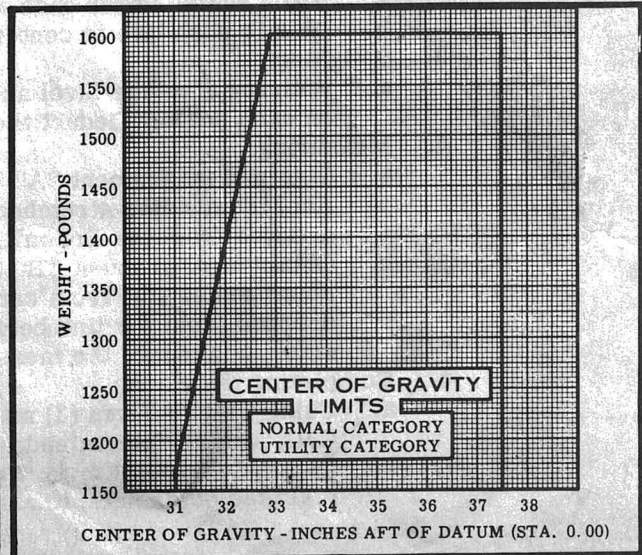
	Weight (lbs)	C. G. Arm (inches)	Moment (lb-ins/1000)
Licensed Empty Wt.	1078.1 1047.0	33.19	35.8 34.2
Oil (6 Qts.)	11	-12.0	-0.1
Pilot & Passenger	340	39.0	13.3
Fuel (Patroller Tanks)	202.0	39.5	8.0
Fuel (Standard Tanks)	---	42.0	---
Baggage (or Passenger on Child's Seat)	---	65.0	---

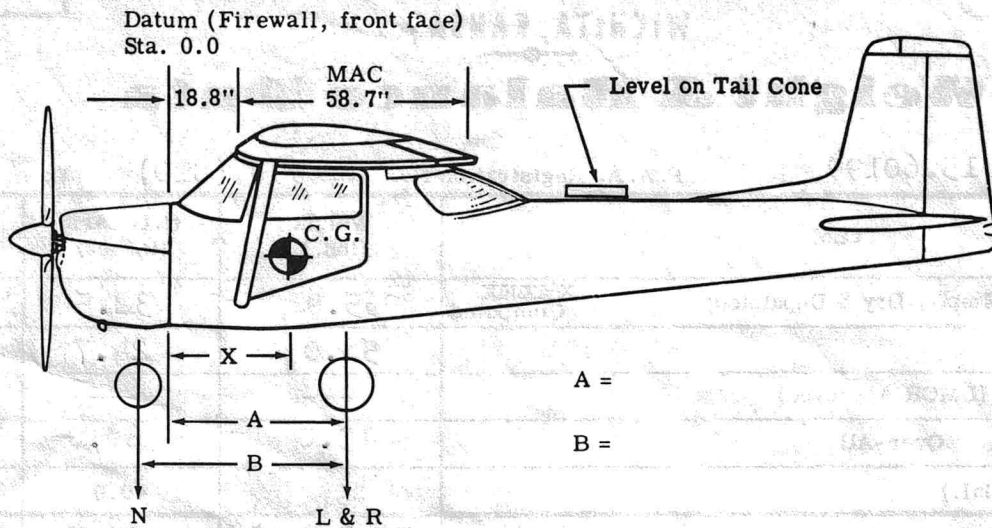
Total Loaded Airplane = 1600 55.4

Locate this point (1600, 55.4) on the C. G. Moment Envelope. Since the point falls within the envelope the loading meets all balance requirements.



IT IS THE RESPONSIBILITY OF THE PILOT AND AIRPLANE OWNER TO INSURE THAT THE AIRPLANE IS LOADED PROPERLY. THE EMPTY WEIGHT C. G. & USEFUL LOAD ARE FOR THE AIRPLANE AS DELIVERED FROM THE FACTORY. REFER TO FORM FAA-337 WHEN ALTERATIONS HAVE BEEN MADE.





A =
B =

Scale Position	Scale Reading	Tare	Symbol	Net Weight
Left Wheel			L	
Right Wheel			R	
Nose Wheel			N	
Aircraft Empty Weight (As Weighed)			W	

$$X = \text{ARM} = (A) - \frac{(N) \times (B)}{W}$$

$$X = (\quad) - \frac{(\quad) \times (\quad)}{(\quad)} = (\quad) \text{ IN.}$$

WEIGHING PROCEDURE

1. Preparation:
 - a. Inflate tires to recommended operating pressures.
 - b. Remove each wing tank drain plug to remove all fuel.
 - c. Remove oil sump drain plug to drain all oil.
 - d. When individual front seats are installed place seat in most forward position with seat back in most nearly vertical position.
 - e. Put flaps in fully retracted position. Place all control surfaces in neutral position.
2. Leveling:
 - a. Place scales under each wheel (500# min. capacity for scales).
 - b. Deflate nose tire to center bubble on level (see diagram).
3. Weighing:
 - a. With the airplane level and the brakes released, record the weight shown on each scale. Deduct the tare, if any, from each reading.
4. Measuring:
 - a. Obtain measurement "A" by measuring horizontally (along airplane center line) from a line stretched between the main wheel centers to a plumb bob dropped from the firewall.
 - b. Obtain measurement "B" by measuring horizontally and parallel to the airplane center line from center of nosewheel axle, left side, to a plumb bob dropped from the line between the main wheel centers. Repeat on right side and average the measurements.
5. Completing the Form:
 - a. Using weights from (3) and measurements from (4) the airplane weight and C. G. can be determined.
 - b. Obtain Licensed Empty Weight by adding weight and moment of unusable fuel (see other side) to airplane empty weight and moment.

CESSNA MODEL 150D EQUIPMENT LIST


AIRCRAFT SERIAL NO. 15060199 FAA REGISTRATION NO. N4199U (STD) DATE 11-14-63

1. Items checked (X) are installed when aircraft leaves factory.
2. Items with suffix (R) are required items of equipment for FAA certification.
3. Items with suffix (S) are standard equipment items.
4. Items with suffix (O) are optional equipment items replacing required or standard items.
5. Items without suffix are optional equipment.
6. Unless otherwise indicated, true values (not net change values) for weight and arm are shown.
7. Negative arms are distances forward of datum (Sta. 0.0 firewall, front face).
8. Positive arms are distances aft of datum.
9. A separate FAA approval must be obtained if the following items are not installed per applicable Cessna drawings or accessory kit instructions.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>WT. LBS.</u>	<u>ARM INCHES</u>
01-R X	Engine, Continental O-200-A (includes mechanically engaging starter)	210.5	-17.5
02-R X	Propeller, Fixed Pitch (McCauley 1A100/MCM 6950) (0450515)	20.0	-32.0
03-S X	Spinner Propeller (0450501)	Negl.	-34.0
03-O O	Spinner Propeller (0450026)	1.5	-34.0
04-R O	Generator, 20-Amp 12-Volt	10.0	- 7.5
04-O X	Generator, 35-Amp 12-Volt (0500037)	16.0	- 7.5
05-R O	Regulator, Generator 20-Amp 12-Volt (0413205)	1.5	- 1.0
05-O X	Regulator, Generator 35-Amp 12-Volt (0413205)	1.5	- 1.0
06-R X	Battery 12-Volt 24-Amp Hr. (0511319)	22.5	- 4.5
07-R X	Filter, Carburetor Air (Air-Maze 121614)	1.0	-24.5
08-R X	Heating System, Cabin & Carburetor Air	9.5	-21.0
09-R X	Wheel, Brake & Tire Assy (two) 5.00 x 5 4-ply rating (Main)	22.5	47.5
09-O O	Wheel, Brake & Tire Assy (two) 6.00 x 6 4-ply rating (Main)	28.0	47.5
10-R X	Wheel & Tire Assy (one) 5.00 x 5 4-ply rating (Nose)	9.0	-11.0
11-R X	Indicator, Stall Warning Audible (S-1407-3)	0.5	16.5
11-O O	Indicator, Stall Warning Audible (heated stall sensor with heated pitot) (0422353)	1.5	18.5
12-R O	Altimeter (S-1314N1)	1.0	17.0
12-O X	Altimeter, Sensitive (S-1313N1)	1.5	17.0
13-R O	Seat, Adjustable Back, Pilot & Co-Pilot (0400118)	19.0	43.5
13-O X	Seat, Adjustable with Reclining Back, Pilot (0400316)	11.0	44.5
14-O X	Seat, Adjustable with Reclining Back, Co-Pilot (0400316)	11.0	44.5
15-R X	Straps, Baggage Tie-Down (0411845)	0.5	61.0
16-R X	Belt, Safety, Pilot (S-1060-201)	1.0	39.0
17-S X	Belt, Safety, Co-Pilot (S-1060-201)	1.0	39.0
18-R X	Compass (0713068)	0.5	16.0
19-S O	Paint Scheme, Standard Stripes (0400031)	2.5	84.0
19-O X	Paint Scheme, Over-All (0400031)	13.0	68.0
100 O	Ammeter (S-1319-1)	0.5	18.0
101 X	Clock, Electrical (S-1317N1)	0.5	19.0
102 X	Controls, Dual (Wheel, Pedals & Toe Brakes) (0400317)	4.0	11.0
03 O	Corrosion Proofing, Internal	3.5	68.0

CESSNA MODEL 150D EQUIPMENT LIST

ITEM NO.	DESCRIPTION	WT. LBS.	ARM INCHES
104	X Doors, Patroller Cabin (Net Change) (0411914)	2.0	37.0
105	O Fairings, Wheel (set of three) (0441184, 0442150)	12.5	29.5
106	O Filter, Oil (full flow) (0450517)	4.5	-6.0
107	O Fire Extinguisher, Hand Type (0800111)	5.5	9.5
108	X Gage, Outside Air Temp. (S-1322-1)	Negl.	21.0
109	X Gyros, Horizon & Directional (includes engine-driven vacuum system) (0400315)	15.5	1.0
110	O Gyros, Pictorial, Horizon & Directional (includes engine-driven vacuum system) (0400304)	15.0	1.0
111	O Harness, Shoulder (set of two) (0411936)	1.5	40.0
112	O Hook, Glider Tow (installed) (0500228)	0.5	200.0
113	X Indicator, Rate of Climb (S-1304N1)	1.0	17.0
114	X Indicator, Turn and Bank (S-1302N1)	2.0	16.5
115	X Light, Landing (Dual Beam) (0400314)	2.5	24.5
116	X Light, Rotating Beacon (0700120)	2.0	190.5
117	O Lights, Courtesy (set of two) (0521101)	Negl.	54.0
118	X Lighter, Cigarette (0513052)	Negl.	18.0
119	O Seat, Childs (includes safety belts) (0400036)	8.5	64.0
120	O Stainless Steel Cables (Net Change) (0400027)	Negl.	-
121	X Sun Visors (0500040)	1.0	27.0
122	O Tow Bar, Aircraft (Stowed) (0400016)	2.0	65.0
123	X Wings, Patroller - 38 Gal. Fuel Cap. (Net Change) (0426008)	5.0	41.0
124	O Winterization Kit, Engine (0450509)	0.5	-30.0
200	X Microphone	0.5	18.5
201	X Speaker, Cabin	0.5	30.5
202	X Communication Antenna and Cable	0.5	48.0
203	X Navigation Antenna and Cable	1.5	144.0
204	O Marker Beacon Antenna and Cable	0.5	65.0
205	O Cessna Nav-Com 300 (514A) 100 Channel	10.5	13.0
206	O Cessna Nav-Com 300 (514A) 360 Channel (0470400)	10.5	13.0
207	X King KX-150	9.0	13.5
208	O King KY-95	8.0	9.0
209	O King KY-95E	8.0	9.0
210	O Narco Mark IV Superhomer	7.5	12.0
211	O Narco Mark XII with VOA-4	13.5	35.5
212	O Narco Mark XII with VOA-6	12.5	37.0

APPROVED 
 O. T. Wells, DMCR 3-1

Issued: 11 July 1963