
TEMA: 0645	COM-RTC - Aircraft Performance - Chap. 8	
COD_PREG: P R E G U N T A:		RPTA:
5208	At higher elevation airports the pilot should know that indicated airspeed will be unchanged, but groundspeed will be faster.	A
OPCION A:	will be unchanged, but groundspeed will be faster.	
OPCION B:	will be higher, but groundspeed will be unchanged.	
OPCION C:	should be increased to compensate for the thinner air.	
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5234	The performance tables of an aircraft for takeoff and climb are based on pressure/density altitude.	A
OPCION A:	pressure/density altitude.	
OPCION B:	cabin altitude	
OPCION C:	true altitude	
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5305	What are the standard temperature and pressure values for sea level?	A
OPCION A:	15°C and 29.92" Hg.	
OPCION B:	50°F and 1013.2" Hg.	
OPCION C:	15°C and 29.92 Mb.	
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5616	(Refer to Figure 31). If the tower-reported surface wind is 010° at 18 knots, what is the crosswind component for a Rwy 08 landing?	C
OPCION A:	7 knots.	
OPCION B:	15 knots.	
OPCION C:	17 knots.	
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5617	(Refer to Figure 31). The surface wind is 180° at 25 knots. What is the crosswind component for a Rwy 13 landing?	A
OPCION A:	19 knots.	
OPCION B:	21 knots.	
OPCION C:	23 knots.	
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5618	(Refer to Figure 31). What is the headwind component for a Rwy 13 takeoff if the surface wind is 190° at 15 knots?	A
OPCION A:	7 knots.	
OPCION B:	13 knots.	
OPCION C:	15 knots.	
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5632	When computing weight and balance, the empty weight includes the weight of the airframe, engine (s), and all items of operating equipment permanently installed. Empty weight also includes the unusable fuel, full operating fluids, and full oil.	A
OPCION A:	the unusable fuel, full operating fluids, and full oil.	
OPCION B:	all usable fuel, maximum oil, hydraulic fluid, but does not include the weight of pilot, passengers, or baggage.	
OPCION C:	all usable fuel and oil, but does not include any radio equipment or instruments that were installed by someone other than the manufacturer.	
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5633	If all index units are positive when computing weight and balance, the location of the datum would be at the centerline of the main wheels.	B
OPCION A:	centerline of the main wheels.	
OPCION B:	nose, or out in front of the airplane.	
OPCION C:	centerline of the nose or tailwheel, depending on the type of airplane.	
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5634	The CG of an aircraft can be determined by which of the following methods?	C
OPCION A:	Dividing total arms by total moments.	
OPCION B:	Multiplying total arms by total weight.	
OPCION C:	Dividing total moments by total weights.	
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5635	The CG of an aircraft may be determined by dividing total arms by total moments.	B
OPCION A:	dividing total arms by total moments.	
OPCION B:	dividing total moments by total weight.	
OPCION C:	multiplying total weight by total moments.	

5636 GIVEN: B
Weight A: 155 pounds at 45 inches aft of datum
Weight B: 165 pounds at 145 inches aft of datum
Weight C: 95 pounds at 185 inches aft of datum
Based on this information, where would the CG be located aft of datum?
OPCION A: 86.0 inches.
OPCION B: 116.80 inches.
OPCION C: 125.0 inches.

5637 GIVEN: B
Weight A: 140 pounds at 17 inches aft of datum
Weight B: 120 pounds at 110 inches aft of datum
Weight C: 85 pounds at 210 inches aft of datum
Based on this information, the CG would be located how far aft of datum?
OPCION A: 89.11 inches.
OPCION B: 96.89 inches.
OPCION C: 106.92 inches.

5638 GIVEN: A
Weight A: 135 pounds at 15 inches aft of datum
Weight B: 205 pounds at 117 inches aft of datum
Weight C: 85 pounds at 195 inches aft of datum
Based on this information, the CG would be located how far aft of datum?
OPCION A: 100.2 inches.
OPCION B: 109.0 inches.
OPCION C: 121.7 inches.

5639 GIVEN: C
Weight A: 175 pounds at 135 inches aft of datum
Weight B: 135 pounds at 115 inches aft of datum
Weight C: 75 pounds at 85 inches aft of datum
The CG for the combined weights would be located how far aft of datum?
OPCION A: 91.76 inches.
OPCION B: 111.67 inches.
OPCION C: 118.24 inches.

5644 (Refer to Figure 37) C
GIVEN: WEIGHT MOMENT
Gyroplane basic weight (oil included) 1,315150.1
Pilot weight 140 ?
Passenger weight 150 ?
27 gal fuel 162 ?
The CG is located
OPCION A: outside the CG envelope; the maximum gross weight is exceeded.
OPCION B: outside the CG envelope; the maximum gross weight and the gross-weight moment are exceeded.
OPCION C: within the CG envelope; neither maximum gross weight nor gross-weight moment is exceeded.

5645 (Refer to Figure 37) B
GIVEN: WEIGHT MOMENT
Gyroplane basic weight (oil included) 1,315154.0
Pilot weight 145?
Passenger weight 153?
27 gal fuel 162 ?
The CG is located
OPCION A: outside the CG envelope; the maximum gross weight is exceeded.
OPCION B: outside the CG envelope; but the maximum gross weight is not exceeded.
OPCION C: within the CG envelope; neither maximum gross weight nor gross-weight moment is exceeded.

5677 (Refer to Figure 39) A

GIVEN:	WEIGHT	ARM (IN)	MOMENT (IN-LBS)
Empty weight.....	1,700.....	+ 6.0	+10,200
Pilot weight	200	-31.0	?
Oil (8 qt all usable)	?	+ 1.0	?
Fuel (50 gal. all usable)	?	+ 2.0	?
Baggage	30	-31.0	?
TOTALS	?	?	?

If the datum is located at station 0, the CG is located approximately

- OPCION A:** 1.64 inches aft of datum.
- OPCION B:** 1.64 inches forward of datum
- OPCION C:** 1.66 inches forward of datum.

5678 (Refer to Figure 40.) A

GIVEN:	
Basic weight (oil is included)	830 lb
Basic weight moment (1,000/in-lb)	104.8
Pilot weight	175 lb
Passenger weight	160 lb
Fuel	19.2 gal

The CG is located

- OPCION A:** well aft of the aft CG limit.
- OPCION B:** within the CG envelope.
- OPCION C:** forward of the forward CG limit

5679 GIVEN: C

	LNG.	LNG.	LAT.	LAT.
	WT	ARM.	MOM.	ARM.
	WT	ARM.	MOM.	MOM.
Empty weight	1700	116.1	?	+ 0.2
Fuel (75 gal at 6.8 ppg)	?	110.0	?	---
Oil	12	179.0	?	---
Pilot (right seat)	175	65.0	?	+12.5
Passenger (left seat)	195	104.0	?	-13.3
TOTALS	?	?	?	?

- OPCION A:** 109.35" and -.04"
- OPCION B:** 110.43" and +.02"
- OPCION C:** 110.83" and -.02"

5680 A helicopter is loaded in such a manner that the CG is located aft of the aft allowable CG limit. Which is true about this situation? C

- OPCION A:** In case of an autorotation, sufficient aft cyclic control may not be available to flare properly.
- OPCION B:** This condition would become more hazardous as fuel is consumed, if the main fuel tank is located aft of the rotor mast.
- OPCION C:** If the helicopter should pitchup due to gusty winds during high-speed flight, there may not be sufficient forward cyclic control available to lower the nose.

5681 A helicopter is loaded in such a manner that the CG is located forward of the allowable CG limit. Which is true about this situation? B

- OPCION A:** This condition would become less hazardous as fuel is consumed if the main fuel tank is located aft of the rotor mast.
- OPCION B:** In case of engine failure and the resulting autorotation, sufficient cyclic control may not be available to flare properly to land.
- OPCION C:** Should the aircraft pitchup during cruise flight due to gusty winds, there may not be enough forward cyclic control available to lower the nose.

5682 With respect to using the weight information given in a typical aircraft owner's manual for computing gross weight, it is important toknow that if items have been installed in the aircraft in addition to the original equipment, the A

- OPCION A:** allowable useful load is decreased.
OPCION B: allowable useful load remains unchanged.
OPCION C: maximum allowable gross weight is increased.
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5683 (Refer to Figure 41) A
GIVEN:
Helicopter gross weight 1,225 lb
Ambient temperature 77°F
Determine the in-ground effect hover ceiling.

- OPCION A:** 6,750 feet.
OPCION B: 7,250 feet.
OPCION C: 8,000 feet.
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5684 (Refer to Figure 41) B
GIVEN:
Helicopter gross weight 1,175 lb
Ambient temperature 95°F
Determine the in-ground effect hover ceiling.

- OPCION A:** 5,000 feet.
OPCION B: 5,250 feet.
OPCION C: 6,250 feet.
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5685 (Refer to Figure 41) B
GIVEN:
Helicopter gross weight 1,275 lb
Ambient temperature 9°F
Determine the in-ground effect hover ceiling.

- OPCION A:** 6,600 feet.
OPCION B: 7,900 feet.
OPCION C: 8,750 feet
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5687 (Refere to Figure 42) B
Departure is planned from a heliport that has a reported pressure altitude of 4,100 feet. What rate of climb could be expected in this helicopter if the ambient temperature is 90°F?

- OPCION A:** 210 ft/min.
OPCION B: 250 ft/min.
OPCION C: 390 ft/min.
-

5688 (Refer to Figure 42) A
Departure is planned for a flight from a heliport with a pressure altitude of 3,800 feet. What rate of climb could be expected in this helicopter during departure if the ambient temperature is 70°F?

- OPCION A:** 330 ft/min.
OPCION B: 360 ft/min.
OPCION C: 400 ft/min.
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5689 (Refer to Figure 43) B
GIVEN:
Ambient temperature 60°F
Pressure altitude 2,000 ft
What is the rate of climb?

- OPCION A:** 480 ft/min.
OPCION B: 515 ft/min.
OPCION C: 540 ft/min.
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5690 (Refer to Figure 43) B
GIVEN:
Ambient temperature 80°F
Pressure altitude 2,500 ft
What is the rate of climb?
OPCION A: 350 ft/min.
OPCION B: 395 ft/min.
OPCION C: 420 ft/min.

5691 (Refer to Figure 44) C
GIVEN:
Ambient temperature 40°F
Pressure altitude 1,000 ft
What is the rate of climb?
OPCION A: 810 ft/min.
OPCION B: 830 ft/min.
OPCION C: 860 ft/min.

5692 (Refer to Figure 44) A
GIVEN:
Ambient temperature 60°F
Pressure altitude 2,500 ft
What is the rate of climb?
OPCION A: 705 ft/min.
OPCION B: 630 ft/min.
OPCION C: 755 ft/min.

5693 (Refer to Figures 45 and 46) A
GIVEN:
Pressure altitude 4,000 ft
Ambient temperature 80°F
To clear a 50-foot obstacle, a jump takeoff would require
OPCION A: more distance than a running takeoff.
OPCION B: less distance than a running takeoff.
OPCION C: the same distance as a running takeoff.

5694 (Refer to Figures 45 and 46) C
GIVEN:
Pressure altitude 4,000 ft
Ambient temperature 80°F
The takeoff distance to clear a 50-foot obstacle is
OPCION A: 1,225 feet for a jump takeoff.
OPCION B: 1,440 feet for a running takeoff.
OPCION C: less for a running takeoff than for a jump takeoff.
