BELL 212 PT6T-3 TYPE RATING WORKBOOK

INTRODUCTION

This workbook is designed to provide a general overview of the Bell 212 with the PT6T-3 Twin-Pac engine. It should be completed over a seven-day period rather than all at once to assist with long-term retention of the material.

The workbook is broken up into seven modules:

Module 1 – Introduction to the Bell 212

Module 2 – Bell 212 Systems

Module 3 – Limitations

Module 4 – Normal Operating Procedures–

Module 5 - Emergency / Malfunction Procedures

Module 6 – Performance Data

Module 7 – Weight and Balance

Each module is based upon specific references which must be read prior to attempting the remainder of the module. Simply answering the questions without a proper review of the material will not ensure detailed understanding of the aircraft and associated systems.

Once the references have been read there are several questions relating to that material to be answered. These questions will be reviewed during ground school and any uncertainties can be clarified at that time.

Name:_____ **Date:** _____

References:	**Reviewed & Corrected to 100%**
1. Bell 212 Transition Manual 2. Bell 212 Aircraft Flight Manual	By: _____ Signature: _____ Date: _____

MODULE 1 – INTRODUCTION TO THE BELL 212

Read:

Bell 212 Transition Manual	**Section 2 - General Description** **Section 5 - Airframe**
Bell 212 Flight Manual	**General Information pages i-iv**
Bell 212 Manufacturers Data	**Section 1 - Systems Description**

Review Questions:

1. The main rotor and anti-torque rotor are_____, two bladed type with an _____ feathering axis
   a) Rigid / over slung
   b) Semi-rigid / underslung
   c) Articulated / rigid
   d) Rigid / articulated

2. Overall length of the Bell 212 rotor turning is?
   a) 45 feet
   b) 57 feet
   c) 62 feet
   d) 70 feet

3. Main rotor diameter of the Bell 212 is?
   a) 57 feet
   b) 45 feet
   c) 60 feet
   d) 48 feet

4. Define Land as soon as possible:

   _____
   _____
   _____

5. Define Land as soon as practical:

   _____
   _____
   _____

6. Define 'WARNING'

   _____
   _____

7. Define 'CAUTION'

   _____
   _____

8. The engine installed on Campbell Helicopters Bell 212 aircraft is the Pratt Whitney PT6-B and produces _____SHP but is de-rated to_____SHP. What is the purpose of de-rating the engine?
   a) 1800 1280 makes a lot of power
   b) 1800 1650 makes power at altitude
   c) 1800 1360 makes derated power at sea level
   d) 1800 1290 makes power at altitude

9. The power plant consists of two power sections which are identical?
   TRUE / FALSE

10. What is the purpose of the stabilizer bar on the main rotor head?
    a) Acts in a manner that inherent inertia and gyroscopic action and provides stability for all flight conditions
    b) The rigidity of the blade hub unit allows ground resonance
    c) Preconing allows easy to perform autorotational landings
    d) Provides smooth control response in all flight modes

11. The rigidity of the blade hub unit?
    a) Acts in a manner that inherent inertia and gyroscopic action and provides stability for all flight conditions
    b) Eliminates ground resonance
    c) Preconing allows easy to perform autorotational landings
    d) Provides smooth control response in all flight modes

12. The transmission provides accessory mounting pads for:
    a) 2 hydraulic pumps , tach gen, dual rotor brakes , if installed
    b) 1 hydraulic pump, start gen, rotor brake, if installed
    c) 2 hydraulic pumps, start gen, dual rotor brakes, if installed
    d) 2 hydraulic pumps , tach gen, rotor brakes , if installed

13. The front of each power section has an accessory gearbox mounted and provides reduction gearing for which components?
    a) Tach gen, fuel control unit, starter gen
    b) Tach gen, manual fuel control unit, starter gen
    c) Tach gen, fuel control unit, starter DC bus
    d) Tach gen, fuel governor, starter gen

14. The fuel supply consists of_____ separate fuel cells. _____ lower main fuel cells and_____ aft upper fuel cells.
    a) 6 / 3/ 3
    b) 5 / 2/ 3
    c) 5/ 3/ 2
    d) 4/ 2/ 2

15. What is the purpose of the crossfeed lines in the fuel system?
    a) Connect the two pressure systems allowing either system fuel boost pump to supply pressure to either or both engines
    b) Connect the two pressure systems allowing neither system fuel boost pump to supply pressure to either or both engines
    c) Connect the three lower main cells to allow gravity flow of fuel between the three systems
    d) Connect the two lower main cells to allow gravity flow of fuel between the two systems

16. What does the flapper valve do in each lower fuel cell?
    a) Allows fuel to flow from fuel cell side to side
    b) Restricts forward movement of the fuel within the cell
    c) Helps with the ejector pump
    d) Provides fuel to the quantity probes

17. How many fuel probes are there in the fuel system?
    a) 2 – 1 fwd 1 aft
    b) 2 – both fwd
    c) 4 - 2 upper 2 lower
    d) 4 - 2 fwd 2 aft

18. How does the flow divider work and what is its purpose?
    a) Directs metered fuel to the primary & secondary nozzles. Start- primary nozzles only, as N1 (45%N1) increases, fuel is divided to all nozzles
    b) Directs metered fuel to the primary nozzles only. Start- primary nozzles only, as N1 (35%N1) increases, fuel is divided to all nozzles
    c) Directs metered fuel to the primary & secondary nozzles. Start- primary nozzles only, as N1 (25%N1) increases, fuel is divided to all nozzles
    d) Directs metered fuel to the primary & secondary nozzles. Start- primary nozzles only, as N1 (35%N1) increases, fuel is divided to all nozzles

19. The Bell 212 has two independent hydraulic systems. What is the difference between #1 and #2 hydraulics?
    a) #1 hydraulic system controls directional servo only (cyclic) # 2 hydraulic system controls collective and tail rotor
    b) #1 hydraulic system controls directional servo only (cyclic and Tail rotor) # 2 hydraulic system controls collective and cyclic
    c) #1 hydraulic system controls directional servo only (collective and cyclic) # 2 hydraulic system controls the cyclic and tail rotor
    d) #1 hydraulic system controls directional servo only (cyclic and Tail rotor) # 2 hydraulic system controls collective and cyclic

20. The aircraft electrical system consists of a ____VDC battery and two _____ VDC starter-generators powering two main buses, ____ essential buses, and ____ non-essential bus.
    a) 28 / 30 / 1 / 2
    b) 24 / 30 / 2 / 2
    c) 24 / 28 / 2 / 2
    d) 28 / 30 / 2 / 1

21. Normally, the loss of one generator will cause the NON-ESS DC BUS to fall off line. How can you **regain** your NON-ESS DC services if necessary?
    a) Switch your ESS BUS to MANUAL
    b) Reset Gen 1 – ESS BUS to MANUAL
    c) Inverter #3 to Inverter #2 – ESS BUS to MANUAL
    d) Switch your NON –ESS BUS to MANUAL

22. The droop compensator system receives mechanical input from the collective. What is its purpose?
    a) Maintains and stabilizes pre selected Nf RPM selection by changing the position of the lever on the power turbine governors
    b) Maintains and stabilizes pre selected Nr RPM selection by changing the position of the lever on the #1 governor
    c) Maintains pre selected governed range Nr RPM selection by changing the position of the lever on the engine fuel control
    d) Stabilizes pre selected Nr RPM selection by changing the position of the lever on the power turbine fuel control

23. How is inter-turbine temperature measured and what function does the T5 Compensator serve?
    a) By 6 thermo probes (3 each engine) connected to a block, gives a standardized readout
    b) By 6 thermo probes connected in parallel to a block, gives a digital readout
    c) By 4 thermo probes connected into a block, gives a TOT readout
    d) By 8 thermo probes connected in parallel to a block, gives a standardized readout

24. What function does the oil-to-fuel heater do?
    a) It acts as a heat exchanger. Which utilizes heat from the transmission oil to maintain a fuel temp 25.1C – 34.2C within a specified range
    b) It acts as a heat exchanger. Which utilizes heat from the power section oil to maintain a fuel temp 21.1C – 32.2C within a specified range
    c) It acts as a heater. Which utilizes heat from the #1 power section oil to maintain a fuel temp 22.1C – 31.2C within a specified range
    d) It acts as a heater. Which utilizes heat from the power section oil to maintain a fuel temp 23.1C – 31.2C within a specified range

25. In the event of one engine failing in flight, the good engine will assume the load automatically. How does this occur?
    a) Clutch drive shaft of that section will assume the drive. The torque control unit will sense N2/ Nr droop and increase fuel flow to good engine
    b) Clutch drive shaft of that section will assume the drive. The torque control unit will sense Nr droop and increase fuel flow to good engine
    c) Sprague clutch of that section will assume the drive. The torque control unit will sense N2 droop and increase fuel flow to good engine
    d) Sprague clutch of that section will assume the drive. The torque converter will sense N2/ Nr droop and increase fuel flow to good engine

26. How does the engine maintain equal torque output from each power section?
    a) Torque control unit mounted on power section receives torque meter pressure from each power section and controls the governor reset air limits both total torque output and maintains equal torque output of both power sections
    b) Torque control unit mounted on reduction gearbox receives torque meter pressure from each power section and controls the governor reset air limits both total torque output and maintains equal torque output of both power sections
    c) Torque adapter mounted on reduction geardrive receives torque meter pressure from each power section and controls the governor reset air limits both total torque output and maintains equal torque output of both power sections

MODULE 2 – BELL 212 SYSTEMS

Read:

Bell 212 Transition Manual	**Section 3 - Instrumentation** **Section 6 - Systems** **Section 7 - Avionics** **Section 8 - Utility Systems**
Bell 212 Manufacturers Data	**Section 1 - Systems Description**

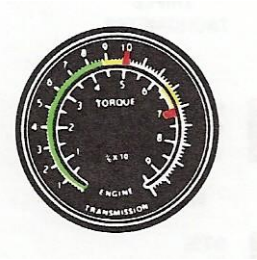
Review Questions:

2.1 When will the BATTERY light on the caution panel illuminate?
    a) Battery relay open or gen switches in same position
    b) Battery temp reached 80 C
    c) Battery relay open or both battery switches in same position
    d) Battery door open or APU start

2.2 A light and audio tone is activated whenever the main rotor RPM falls below 93% NR

TRUE / FALSE

2.3 When the #1 needle on the triple torquemeter reads 20% and #2 needle reads 40%, what value will the XMSN needle indicate?



_____

2.4 Each fuel sump must be drained separately. There is no drain interconnection.

TRUE / FALSE

2.5 Normal fuel capacity is _____U.S. gallons or _____lbs. at 15^{O}C.

a) 220.0 / 1420
b) 212.8 / 1416
c) 218.6 / 1405
d) 216.8 / 1409

2.6 The PT6T-3 engine package has_____visible sight gauges.

a) 1
b) 2
c) 3
d) 4

2.7 What is the primary purpose of the particle separator door?

a) Completes the firewall
b) Ejects small particles up to 5 microns
c) Bypass in the event of icing
d) Allows 25% more airflow past for engine cooling

2.8 Do the following to drain the fuel filters:

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

2.9 The flight-idle solenoids have a delay cycle of about _____ seconds.

a) 3
b) 5
c) 7
d) 10

2.10 Excessive pressure on the throttle twist grip will prevent the idle stop solenoid from retracting.

TRUE / FALSE

2.11 Normal flight idle RPM is_____% N1 speed.

a) 63% +/- 1%
b) 58% +/- 2%
c) 60% +/- 2%
d) 61% +/- 1%

2.12 Throttle interaction is normal with the 212. During start the throttle friction must be used to keep this interaction from causing the other throttle to move.

TRUE / FALSE

2.13 The N2 is maintained at a pre-selected value whenever the collective is increased or decreased because of_____

a) Droop compensator maintains the pre selected Nf RPM by changing N2 power turbine governor control
b) Nr governor maintains the pre selected Nf RPM by changing N1 power turbine governor control
c) Droop compensator maintains the pre selected NR RPM by changing power turbine fuel control
d) Collective pitch bellcrank maintains the pre selected Nr RPM by changing N2 power turbine governor control

2.14 Fuel is distributed around the gas generator case by the fuel flow divider. The flow divider is comprised of_____fuel nozzles made up of_____primary nozzles and_____secondary nozzles.

a) 14 / 7 / 7
b) 10 / 5 / 5
c) 12 / 6 / 6
d) 16 / 8 / 8

2.15 Fuel flows to the primary fuel nozzles initially during the start sequence. When will flow commence at the secondary nozzles?

a) 25% N1
b) 30% N1
c) 35% N1
d) 38% N1

2.16 The 3 ignition components of each power section consists of:

a) Exciter box
b) Starter gen
c) 2 ignition leads
d) 2 spark igniters
e) Power relay switch

2.17 The automatic fuel control unit (AFCU) controls the speed of the _____

a) Nf power turbine
b) Gas generator
c) Torque transducer
d) Torque switch

2.18 The manual fuel control unit (MFCU) is mounted on the accessory gearbox along with the fuel pump and AFCU. In automatic and manual modes the MFCU is designed to:

Automatic:

_____

_____

Manual:

_____

_____

2.19 The torque limiter will cause the torque control system to restrict fuel flow keeping transmission torque at or below maximum dual and OEI values.

TRUE / FALSE

MODULE 3 - LIMITATIONS

Read:

Bell 212 Transition Manual	**Section 4 - Operating Limitations**
Bell 212 Flight Manual	**Section 1 - Limitations**
Bell 212 Manufacturers Data	**Nil**

Review Questions:

3.1 What are the maximum placarded limits on the following instruments?

a) N1 _____%

b) N2 _____%

c) NR _____%

d) ITT _____°C

e) OEI Q _____%

f) XMSN Q_____%

g) Fuel Press_____PSI

h) Hyd Press_____PSI

i) Hyd Temp_____ ^{o}C

3.2 What are the following 10 second transient limits?

N2_____% N1_____%

3.3 Do not operate heater above _____ C OAT

a) 15
b) 18
c) 20
d) 21
e) 25

3.4 To attain published single engine maximum performance, generator loads should not exceed_____amps each during twin engine operation.

a) 150
b) 75
c) 80
d) 100

3.5 When a generator-assisted start is carried out, momentary loading above _____ amps can be expected.

a) 150
b) 250
c) 300
d) 350

3.6 Choose what centre console CAUTION PANEL segments are red:

a) GOV MANUAL
b) XMSN OIL PRESS
c) XMSN OIL TEMP
d) FUEL FILTER
e) BATTERY TEMP
f) ROTOR BK
g) GEN OVHT
h) C BOX TEMP
i) C BOX OIL PRESS

3.7 The maximum sea level ambient temperature for approved operation is _____ ^{o}C and decreases with altitude at the standard lapse rate of 2 C / 1000 ft. The minimum ambient temperature for approved operation is _____^{o}C for any altitude.

a) +45 / -50
b) +52 / -54
c) +50 / -50
d) +55 / -45

3.8 VNE decreases _____kts /_____ft of altitude above _____ ft density altitude.

a) 3 / 3000 / 5000
b) 5 / 1000 / 3000
c) 3 / 3000 / 5000
d) 3 / 1000 / 3000

3.9 The minimum and maximum (red line) of the #1 hydraulic pressure is _____ psi.

a) 600 – 1100
b) 500 – 1000
c) 600 - 1000
d) 500 - 1100

3.10 V^{ne} with doors open /removed is_____kts.

a) 110
b) 80
c) 90
d) 85

MODULE 4 - OPERATING PROCEDURES

Read:

Bell 212 Transition Manual	**Section 4 - Operating Limitations**
Bell 212 Flight Manual	**Section 2 - Normal Procedures**
Bell 212 Manufacturers Data	**Nil**

Review Questions:

4.1 With the crossfeed in NORMAL during flight and one fuel boost pump fails, what should the failed pump pressure be observed to do?

a) Drop in pressure until crossfeed solenoid opens – pressure normal
b) Momentary drop in pressure until flow switch opens – pressure normal
c) Drop in pressure until crossfeed differential valve opens – pressure normal
d) Momentary drop in pressure until crossfeed valve opens – pressure normal

4.2 The normal start sequence is: engage the starter; check that_____is indicating; Introduce fuel at or above _____% N1;

a) NR / 15%
b) Oil pressure / 12%
c) Fuel pressure / 13%
d) Oil pressure / 15%

4.3 Monitor ITT – Max ITT _____ ^{o}C not to exceed _____ ^{o}C for___seconds;

a) 1190 C / 820C 2 seconds
b) 1090 C / 810C 4 seconds
c) 1190 C / 815C 4 seconds
d) 1090 C / 810C 2 seconds

4.4 Disengage starter at _____%N1; and confirm flight idle rpm to be _____%

a) 55% / 61% +/- 1
b) 50% / 60% +/- 1
c) 55% / 61% +/- 2
d) 50% / 60% +/- 2

4.5 Failure to get a generator to come on line following a start could be caused by:

a) Starter engaged
b) ESS BUS offline
c) Inverter #1 offline
d) NAV AC switch in BUS #2 position

4.6 Under what 2 circumstances would you switch the Fuel INTCON to OPEN?

a) Low fuel light
b) Engine malfunction/shutdown or fuel malfunction
c) Fuel contamination
d) Fuel boost pump failure

4.7 The FUEL LOW light should illuminate at approximately_____lbs of fuel remaining in either side.

a) 100
b) 120
c) 140
d) 180

4.8 Your aircraft requires a power assurance check to be carried out. The pressure altitude is 2000 ft and OAT is 15 C. Describe the procedure for engine #1:

a) Max N1_____%

b) Max ITT_____^{o}C

c) Heater_____;

d) Eng #1 N2_____%;

e) Eng #1 Q_____%;

f) Stabilize for_____minutes; and

g) Note engine #1 N1 and ITT.

Engine #1 N1 is 93% and the ITT is 740 ^{O}C. Is this engine within limits?

YES / NO

4.8 Activating a FIRE PULL handle results in:

a) _____

b) _____

c) _____

d) _____

4.9 The reserve fire bottle can be used ONLY if a 'T' handle is pulled.

TRUE / FALSE

MODULE 5 - EMERGENCY AND MALFUNCTION PROCEDURES

Read:

Bell 212 Transition Manual	**Nil**
Bell 212 Flight Manual	**Section 3 – Emergency / Malfunction Procedures**
Bell 212 Manufacturers Data	**Nil**

Review Questions:

5.1 During OEI flight, 70% torque can be maintained for_____.

a) 2 ½ minutes
b) 5 minutes
c) 25 minutes
d) 30 minutes

5.2 If either power-section fails to light-off within_____seconds after introduction of fuel:

a) _____

b) _____

c) _____

d) _____

e) _____

After N1 has decreased to zero, allow_____seconds for fuel to drain from engine. Conduct a DRY MOTORING RUN before attempting another start.

a) 45 seconds
b) 15 seconds
c) 25 seconds
d) 30 seconds

5.3 V^{ne} with an external load is_____kts up to 10,000 ft density altitude.

a) 70 kts
b) 75 kts
c) 100 kts
d) 80 kts

5.4 #1 engine is running and a start is made on the other engine. What would you suspect being faulty if #2 engine N2 RPM indicated higher than the Nr and the corresponding torque was near zero (both N1 speeds indicate normally)?

a) Sprague clutch failed to engage
b) Bad Nr and torque gauge
c) BUSS #2 switch – OFF
d) Turn gen #2 –ON then things will return to normal

What corrective action should be carried out?

a) _____

b) _____

5.5 Following a single engine failure, the collective is lowered to control the Nr and the Nr increased to maximum beep. To secure the failed engine before a decision has been made to restart, do the following:

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

5.6 If the MAIN fire bottle is used and the fire lights do not extinguish in _____ seconds, activate _____.

5.7 After engine failure, if a restart is to be attempted, it is recommended to start in the **AUTOMATIC / MANUAL** fuel mode.

5.8 With one engine in AUTO and one in MANUAL, maintain the torque on the MANUAL engine _____% below the engine in AUTOMATIC and monitor _____rpm to avoid overspeeding.

a) 4% - Rotor rpm
b) 2% - Rotor rpm
c) 4% - XMSN Torque
d) 2% - XMSN Torque

5.9 On the annunciator panel you identify that the ENG 1 FUEL LOW light is illuminated. What does this indicate?

a) Fuel valve closed closed. Open Interconnect valve
b) Fuel remaining is approximately 140 lbs
c) Fuel remaining is approximately 240 lbs
d) Open fuel crossfeed to override close

5.10 In cruise flight, pulling 75% torque, you have a governor failure to the high side. Describe the indications
High engine RPM High NR

Torque split
High N1 and ITT

5.11 Describe the corrective action if the #1 PART SEP OFF light is illuminated.

a) Check RPM WARN and PART SEP#1 circuit breakers in. Position PART SEP#1 switch to OVRD ON
b) Position PART SEP#1 switch to OVRD ON

5.12 The ENG OUT light illuminates whenever _____

a) 51% +/- 2
b) 52% +/- 2
c) 53% +/- 2
d) 55% +/- 1

5.13 When flying the Bell 212 with a fixed pitch tailrotor pedal problem **in forward flight**, the position of the nose of the aircraft can be manipulated through alternative control inputs:

a) a reduction in throttle will _____
b) raising the collective will _____
c) slowing forward speed will _____
d) decreasing N2 will _____

MODULE 6 - PERFORMANCE DATA

Read:

Bell 212 Transition Manual	**Section 11 - Performance Data**
Bell 212 Flight Manual	**Section 4 - Performance**
Bell 212 Manufacturers Data	**Nil**

Review Questions:

6.1 Operating in the twin-engine mode in the green area of the single-engine H-V diagram means a safe landing can be made in the event of an engine failure if there is a:

a) Smooth level surface
b) Landing zone ahead
c) Light enough internal payload

6.2 When hovering, the Bell 212 has a critical relative wind azimuth from _____ degrees to_____degrees. This is caused by _____

a) 40 – 135 quadrant may cause LTE
b) 35 – 140 quadrant may cause LTE
c) 35 – 140 quadrant may cause Vortex ring state
d) 40 – 135 quadrant may cause Vortex ring state

6.3 Hovering IGE is considered to be at_____ft skid height.

a) 2 ft
b) 4 ft
c) 5 ft
d) 6 ft

6.4 You are at 5000 ft PA with an OAT of +25ºC. What is the density altitude?_____feet.

a) 7100
b) 7400
c) 6800
d) 7900

6.5 Taking off from CYBW, PA is 4000' and OAT is +25ºC. What is your maximum AUW? _____lbs.

a) 11200 lbs
b) 10300 lbs
c) 10800 lbs
d) 11000 lbs

6.6 You have been tasked to lift some personnel from a confined area surrounded by 200 foot trees on a nearby mountain. OAT is +25ºC and PA is 6500 ft. What is your maximum AUW? _____ lbs.

a) 9300
b) 9600
c) 10100
d) 10300

6.7 Your AUW is 10200 lbs, PA is 2200 feet, and OAT is +22ºC. What is your twin-engine takeoff climbout speed?_____KIAS. Assuming takeoff power, initial rate of climb is _____Ft/Min.

a) 36 kts 1880
b) 39kts 1900
c) 40 kts 1820
d) 35 kts 1800

6.8 When taking off, and abiding by the published single-engine height-velocity chart and Weight-Altitude-Temperature chart, the appropriate torque setting is determined by:

a) _____

b) _____

_____

_____

6.9 You have successfully picked up your crews and are flying at your calculated maximum AUW. Shortly after takeoff at normal cruise speed and at 7000 feet you lose Eng #1. A further climb is necessary to clear an upcoming ridgeline. At what speed should you be flying and what rate of climb can you anticipate?

a) Airspeed___kts; and

b) OEI Rate of Climb_____FPM.

MODULE 7 - WEIGHT AND BALANCE

Read:

Bell 212 Transition Manual	**Section 10 - Weight and Balance**
Bell 212 Flight Manual	**Section 5 - Weight and Balance**
Bell 212 Manufacturers Data	**Nil**

Review Questions:

7.1 Allowable deck loading for cargo in the aft cabin is_____lbs per square foot with a loading limit of_____lbs.

7.2 Deck-mounted cargo tie-down rings have an airframe structural capacity of

a) _____ lbs vertically; and

b) _____ lbs horizontally.

7.3 The helicopter empty CG is adjusted to require a minimum of_____lbs at the pilot's station.

7.4 Station 0 (datum) is located_____inches aft of the most forward point of the cabin nose.

7.5 With full fuel onboard, the aircraft centre of gravity will progressively move forward as fuel is burned off. At what fuel quantity would you experience the most forward centre of gravity?

_____ lbs.

Why should this be a consideration in your flight planning?

7.5 Compute the following weight and balance:

	Weight	Station	Moment
Empty weight	6130	144.0	
Pilot	200		
Co-pilot	200		
4 Pax (4-man seat)	800		
5 Pax (5-man seat)	1000		
2 Pax (right 2-man seat)	400		
Fuel	1400		

What is the longitudinal CG? _____

Is the CG within limits? **YES / NO**

7.6 Compute the following weight and balance:

	Weight	Station	Moment
Empty weight	6600	144.0	
Pilot	170		
Co-pilot	180		
4 Skiers (4-man seat)	800		
5 Skiers (5-man seat)	1000		
2 Skiers (2-man seat, left)	400		
Ski basket	300	119.5	
Fuel	1100		

Where is the CG?_____inches._

Is the CG within limits? **YES / NO**

7.7 Compute the **lateral** CG (Ski basket lateral station at 67.5 inches).

	Weight	Station	Moment
Empty weight	6600	.42	
Pilot	170		
Co-pilot	180		
4 Skiers (4-man seat)	800		
5 Skiers (5-man seat)	1000		
2 Skiers (2-man seat, left)	400		
Ski basket	300	67.5	
Fuel	1100		

Where is the **lateral** CG?_____inches. Is the CG within limits?

YES / NO