

MOONEY-M20J Annual Checkout



Name:

Date:

CFI:

Airspeeds

1. Using the M20J POH, determine the following Airspeeds:

V_{SO}

V_S

V_X

V_G

V_Y

V_{FE}

V_{NO}

V_{NE}

V_{LE}

$V_{LO (ext)}$

$V_{LO (ret)}$

2. What is V_A ? Is this speed fixed or does it change? Explain.

3. Can the flaps be lowered above V_{FE} ? Explain

4. Why are there two different speeds for V_{LO} ?

Systems

1. What grades of fuel are approved for the M20J? What color(s) are associated with these grades?

2. List the total, usable, and unusable fuel quantities for the M20J. What is the minimum fuel required for takeoff, and return according to East Hill SOP?

3. How many fuel sumps/fuel drains are on the M20J? Where are they located?

4. How much does a gallon of 100LL fuel weigh?

5. List the following electrical system specifications:

Battery Voltage

Alternator Voltage

Battery Amp Hours

Alternator Amps

6. List some examples of components affected by total electrical failure.

7. Will the engine fail if the electrical system fails? Why or why not?

8. How do you extend the landing gear manually? How will you know if the landing gear is safely down and locked after manual gear extension?

9. What grade of oil is approved for the M20J?

10. List the minimum and maximum oil quantities for flight.

11. List all hydraulically operated components on the M20J.

12. Describe the proper response to an over-voltage annunciation.

13. Can we get carburetor icing in this aircraft? Explain.

14. How does the propeller governor work? What does the governor control? What will happen to the blade angle if you lose engine power?

Performance

1. Define Endurance.

2. Identify and explain the different leaning procedures described in the M20J POH.

3. Using the actual aircraft weight, determine Endurance and Fuel Flow for

N747CF	Full Fuel
65% Power	Leaned for Best Power
6500' MSL	Standard Day

4. Define:

True Altitude	Pressure Altitude	Density Altitude
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5. Explain how the following affect takeoff distance:

Headwind	Tailwind	Upslope Runway
Downslope Runway	Icy or Snowy Runway	High Temperature
Wake Turbulence	Wet Grass Runway	

Weight and Balance

1. Using the actual aircraft weight and balance, determine ramp weight, takeoff weight, aircraft CG at takeoff for

N747CF	50 Gallons Fuel
Front Passengers: 400 pounds	Rear Passenger: 200 pounds
Rear Cargo: 50 pounds	

2. Using the same scenario, determine the takeoff ground roll distance and distance to clear a 50' obstacle for

8 knots headwind	15° flaps	Dry, Paved Runway
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3. To achieve 65% power at 4,500' (standard conditions), what MP and RPM setting shall be used?

4. Using the same scenario, determine the landing weight and CG, landing ground roll distance, and distance to clear a 50' obstacle after

Two Hours Cruise at 4,500' MSL	Standard Day
Leaned for Best Economy	

Hint: remember to calculate the fuel required for climb

FARs, Club SOPs, and Local Procedures

1. Describe the FAA and East Hill requirements to maintain currency for a day-VFR flight.
2. Describe the FAA and East Hill policies regarding carriage of passengers.
3. According to East Hill SOP's, when is a night checkout required? How long are you current? Sunset is at 1830L, when is the latest you can return without a night checkout?
4. Describe all airspace around KITH up to FL600.
5. What are the basic FAA VFR weather minimums for operations within the KITH airspace?
6. What are East Hill's weather minimums for a VFR flight departing KITH? What are YOUR personal minimums?
7. Describe Special VFR (SVFR), and list the FAA requirements to obtain a SVFR clearance.
8. Does East Hill have any rules pertaining to the use of an SVFR clearance?
9. What are the frequencies for:

ITH ATIS	ELM ATIS	BGM Approach	Flight Service
ITH Ground	ELM Approach	SYR Approach	Emergency
ITH Tower	ELM Tower	ROC Approach	ITH VOR

10. T or F: Non-Member CFIs are permitted to give Flight Reviews and IPCs in East Hill Aircraft.
11. Describe East Hill's policy pertaining to grass strips and other unimproved runway surfaces.
12. T or F: When returning to KITH top fuel off to prevent moisture accumulating in the tanks.
13. Describe East Hill's reimbursement policy for fuel purchased at another location.
14. Describe East Hill aircraft dispatch and check-in procedures.
15. List the inspection items contained on an aircraft dispatch sheet.
16. Can a VFR-Day flight be conducted with an inoperative landing light?
17. Describe the FAA requirements for flying with inoperative equipment.
18. Describe LAHSO. Does a LAHSO clearance preclude a go-around?
19. Describe East Hill's checkout procedures. Does a M20J checkout at East Hill count as an automatic checkout in a C-172 or C-152?
20. T or F: Non-CFI members are prohibited from issuing aircraft keys to student pilots.
21. Define ADIZ, and identify where one can be found.

22. Describe the procedures for a flight that will cross and ADIZ.

23. What is a TFR?

24. According to East Hill SOP's, when must a VFR Flight Plan or flight following be used?

25. What is the demonstrated crosswind component of the M20J? What is your personal minimum?

Weather Information

KITH 271456Z 21005KT 10SM -RA FEW035 BKN050 BKN100 19/18 A3000 RMK AO2 SLP155 P0001
60005 T01890178 56007

KITH 271333Z 2714/2812 20005KT P6SM -SHRA SCT012 OVC025
TEMPO 2714/2718 3SM SHRA BR OVC012
FM271900 29005KT P6SM BKN050
FM280000 VRB04KT P6SM BKN120

1. Define Ceiling.
2. List the ceilings at KITH.
3. What are the winds? Is the wind direction relative to True or Magnetic North?
4. What is the issue time of the TAF?
5. Decode -SHRASN.
6. Decode the RMK section of the METAR.