C0101 Brief Items

	Introductions / Backgrounds
	Recall Numbers
	Chain of Command
	Dress & Appearance
	Syllabus Overview / Master Curriculum Guide
	Squadron Tour
	NATOPS - Blue Card and SOP's
	Training - STAN Notes
	Flight Gear Issue - Headset, Blue Brains, Clips
	Duty Office - CDO, SDO indoc, Reference pubs, Ear Plugs
	STUCON - Flight Line Driver's Badge
	Ops - Logbooks
	Aircraft Issue - ADB review, Weight and Balance, TOLD Card, Pubs Bag
	Base Ops / Wx shop
	NATOPS Blue Card
	Training Time Out Policy
	ORM Review
	CRM Discussion and Callouts, PIC
	Prof Sits
	Hand out T-44 Ops Limits / Memory Items
	Discuss Squadron STAN Notes
	Verify Squadron & TW-4 SOPs are Current
	Pubs check - verify current NATOPS, Air OPS and FTI
	Student ATJ Review
	Preparing for Brief Items / Fam 1 Expectations
	Airsickness Policy
	SNIV Policy
	Med Down Policy
	Water Bottles / Hydration
	Safety/ASAP/Standardization/Anymouse Programs
	Reading the Daily Schedule
	Technique vs. Procedure
	Local Operations
	Observer Duties
	Go/No-go criteria
	Course Rules Review
	FAA Letter of Agreement
	TAS operation (T-44C)
	VFR Pattern Review
	High Work Review
	Ditching and Forced Landing ELP
	Dog Tags
	Flight Line Access Badge
	Weather -1 / NOTAMS / TAFS / METARS
	Aircraft Preflight / Walkaround / Oxygen use / Emergency Equipment / Egress
	Relief Tube usage
	Emergency Escape Hatch Operation

POSSIBLE MANEUVER INTRODUCTION FOR ONWINGS

Event:	C4101	C4102	C4103	C4104	C4105	C4301	C4302
High Work:							
Level Speed Change	X	X				X	
Turn Pattern	X	X	X	X	X	X	X
Slow Flight	X	X	X	X	X	X	X
Approach to Stalls	X	X	X	X	X	X	X
SSE @ Altitude			X	X			
SSE W/O @ Altitude			X	X	X		
Dynamic Engine Cut			X	X	X	X	X
Power On Ditch			X	X	X	X	X
SSE Ditch				X	X	X	X
Power Off Ditch					D	X	X
Starter-Assisted Airstart						X	
Windmilling Airstart							X
Manual Gear Extension						X	
Smoke and Fire			X				
Emergency Descent			X	X	X	X	X
Pattern Work:							
Overhead	X	X	X	X	X	X	X
Appr Flap	X	X	X	X	X	X	X
Full Flap		X	X	X	X	X	X
No Flap		X	X	X	X	X	X
Wave-off	X	X	X	X	X	X	X
Abort	X	X	X	X	X	X	X
SSE				X	X	X	X
SSE Wave-off					X	X	X
SSE Full Stop						D	X
Right Hand Patterns			X				

Move introductions right or left as SMA performance dictates.

Preflight NATOPS Briefing (Updated 24 February 2012)

Communications:
1. Frequencies: "We will be using the 20 preset UHF frequencies as well as monitoring Montana base and backing ourselves up with the VHF radio."

2. Radio Procedures and Discipline: "PM will handle all comms, PF will back up and read back clearances when received."

3. Navigational Aids: "We will preset Navy and Corpus Christi VORs and Localizers and any other applicable NAVAIDs. The pilot not at the controls will tune and identify the radios as directed."

4. Identification and ADIZ Procedures: "Our identification will be (Montana 4XX / VV1G4XX) and ADIZ penetration procedures do not apply as we will be in radar contact the entire time."

5. Cell Phones Secured: "Please secure all cell phones prior to stepping into the aircraft."

Weather:
1. Local area Observation: present METAR info
2. Local area and Destination forecast: brief the dash one
3. Weather at Alternate: brief weather at Corpus Intl. or alternate if applicable

Navigational / Flight Planning:
1. Climb-out / Departure: "We will plan to depart to the (direct dictated by weather) expecting a (course rules, Arrow 4, etc.) departure."

2. Mission / Fuel Planning: "We will be flying mission(s) (C410l, 14202, etc) and we will plan to land outside of the yellow arc. We will plan the training accordingly. We (will/will not) need a fuel packet."

3. Recovery: "We are planning a (course rules, VOR, TACAN, etc.) recovery to a full stop."

Emergencies:
1. Aborts: "If anyone sees the need to abort, call out 'abort, abort, abort', the pilot as the controls will pull the power to idle, reverse and brakes as required and discuss/troubleshoot the malfunction once clear of the runway. Prior to departing the prepared surface, the IP will direct the fuel chop and the right seat pilot will pull the Condition Levers to Fuel Cutoff and then continue with the abort procedures."

2. Divert Fields: Brief what the applicable divert fields are.

3. Minimum and Emergency Fuel: "We will use 265 lbs a side as minimum fuel and 200 lbs a side as emergency fuel. If at any time we will be on deck with less than 200 lbs per side, we will declare an emergency."

4. Radio Failure: "In the event of a radio failure, we will trouble shoot for stuck mic and then trouble shoot the radios on multiple frequencies including both guard frequencies. If we are VFR we will recover via course rules. After that we have the letter of agreement for the local area as well as the AVEFAME rules if we are under IFR and cannot find and maintain VFR."

5. Downed Pilot and Aircraft Emergencies: "If we are the first on-scene, we will assume an orbit around the crash site, with the student flying while the IP starts the on scene commander checklist. We will remain on station until we reach our bingo fuel, we have our own emergency, we are relieved by a more capable SAR platform, or the situation has resolved itself."

6. System Failures: "We (are/are not) planning simulated system failures on the mission. We will treat all system failures as actual failures until told otherwise. The IP will preface any simulated failure by saying 'SIMULATED' when the student notes the problem. If we have an actual failure, the IP will clean up any simulated failures and then the crew will trouble shoot the actual emergency. Transfer of controls will be at the discretion of and directed by the IP."

7. Spin Recovery / Out of Control Flight- Brief memory items: "In the event of a spin, the pilot at the controls will execute the memory item procedures. The pilot not at controls will back up the control inputs to ensure proper execution. The memory items for this procedure are: ***BRIEF IN ACCORDANCE WITH NATOPS***

8. Windshear- Brief memory items: "In the event of windshear the pilot at the controls will execute the memory item procedures. The pilot not at the controls will back up the control inputs to ensure proper execution. The memory items for this procedure are: ***BRIEF IN ACCORDANCE WITH NATOPS***

9. Passenger Briefing: execute pax briefing if applicable

10. Forced Landing / Ditching: "In the event of forced landing / ditching the pilot not at controls will back up the pilot at the controls with verbal altitude updates. Landing/Ditching on parameters is the most important. The IP can be expected to perform any actual forced landing/ditch."

11. Emergency Egress: "In an emergency egress, the observer will use common sense as to which side of the aircraft to exit. The air stair will be the primary exit, but if common sense dictates (fire on the left, ditch, door won't open, etc.) the emergency hatch will be the secondary exit. The observer will grab the life raft and be the first out ensuring he/she inflates the raft AFTER exiting the aircraft. The second student will be the second out of the aircraft and will grab the first aid kit. The IP will be the last out of the aircraft."

Observer Duties:
"The observer will:
1. Lookout for Traffic
2. Confirm gear down and locked prior to the 90.
3. Monitor radios
4. Check flaps up on touch-and-go

5. Count landings"

Training Time Out: "Training Time Out Policy is in effect, verbal signals only, any questions?"

ORM
"Are any of the following factors affecting you today?
Work Stress (Y/N), Alcohol (Y/N), Eating Habits (Y/N), Medication (Y/N), Marital Issues (Y/N), Family Issues (Y/N), Fatigue (Y/N), Crew Rest Quality (Y/N), Currency (Y/N), MPTS Average (Y/N), Any Misc Factors (Y/N)."

Lowlevel *I* Tacform
"Are any of the following factors presenting a hazard to today's mission?"
BAM Severe (Y/N)
Route Conflicts (Y/N)
2 or 3 ship (Y/N)
TFRs (Y/N)
Checkride Route (Y/N)

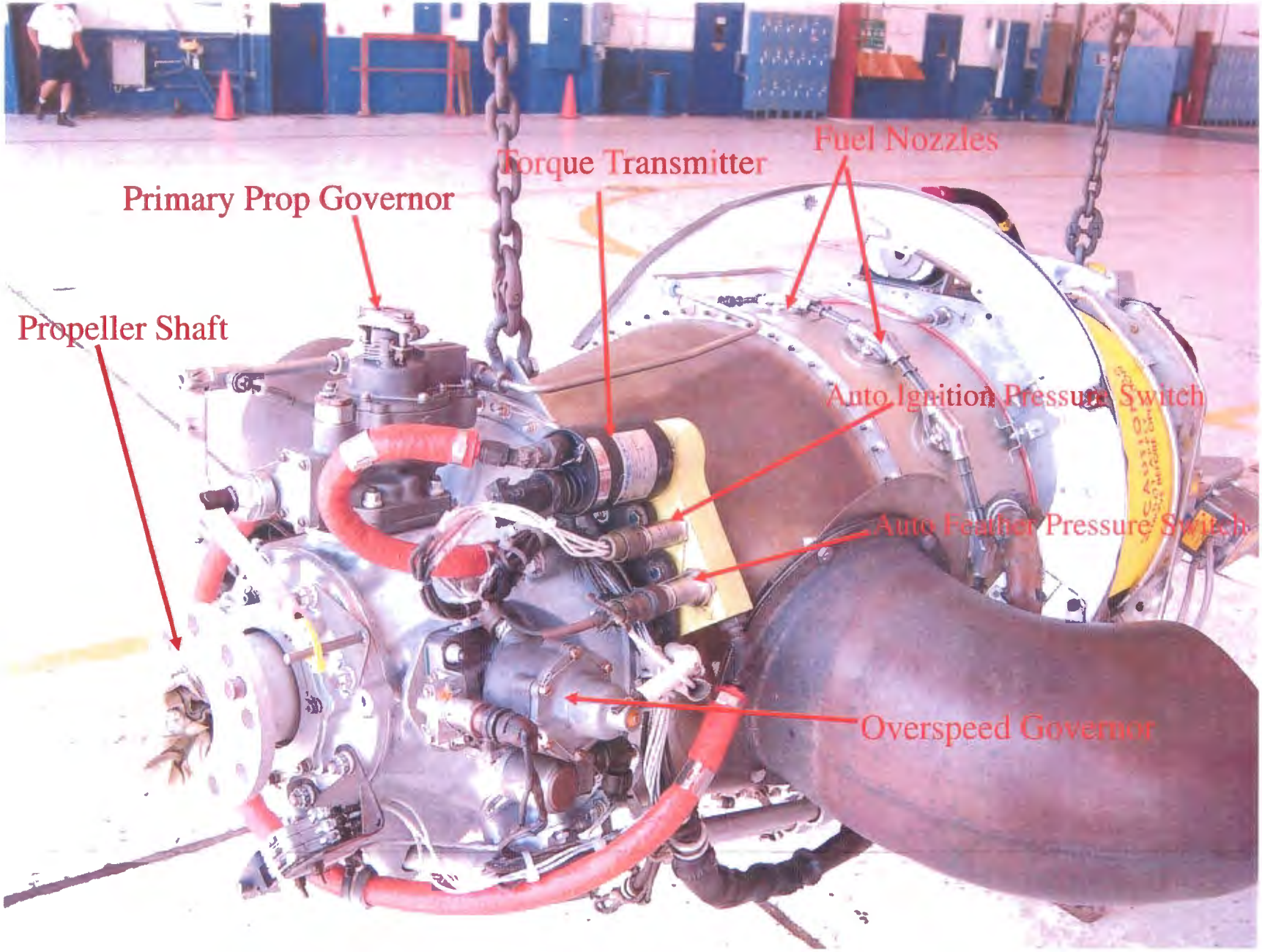
Mission *I* External Risk Assessment
"Are any of the following factors negatively impacting today's mission?"

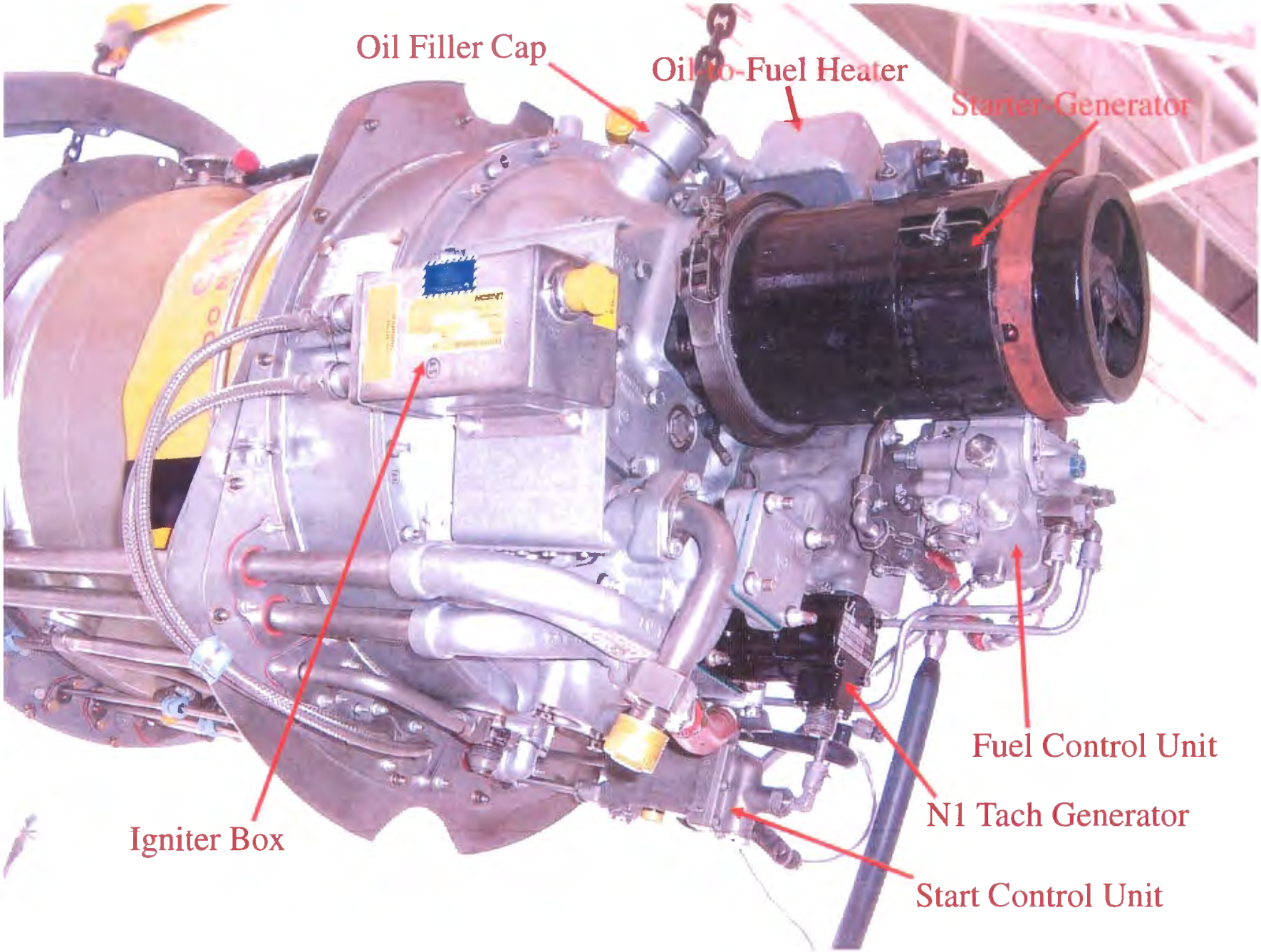
Scheduling factors:
Showtime before 0630 or after 1730 (Y/N)
Mission Duration greater than 4 hours (Y/N)
Scheduled Duty Day greater than 10 hours (Y/N)
More than 2 students on the flight (Y/N)
Passengers on Board (Y/N)
Multiple Events Scheduled (Y/N)
Night (Y/N)

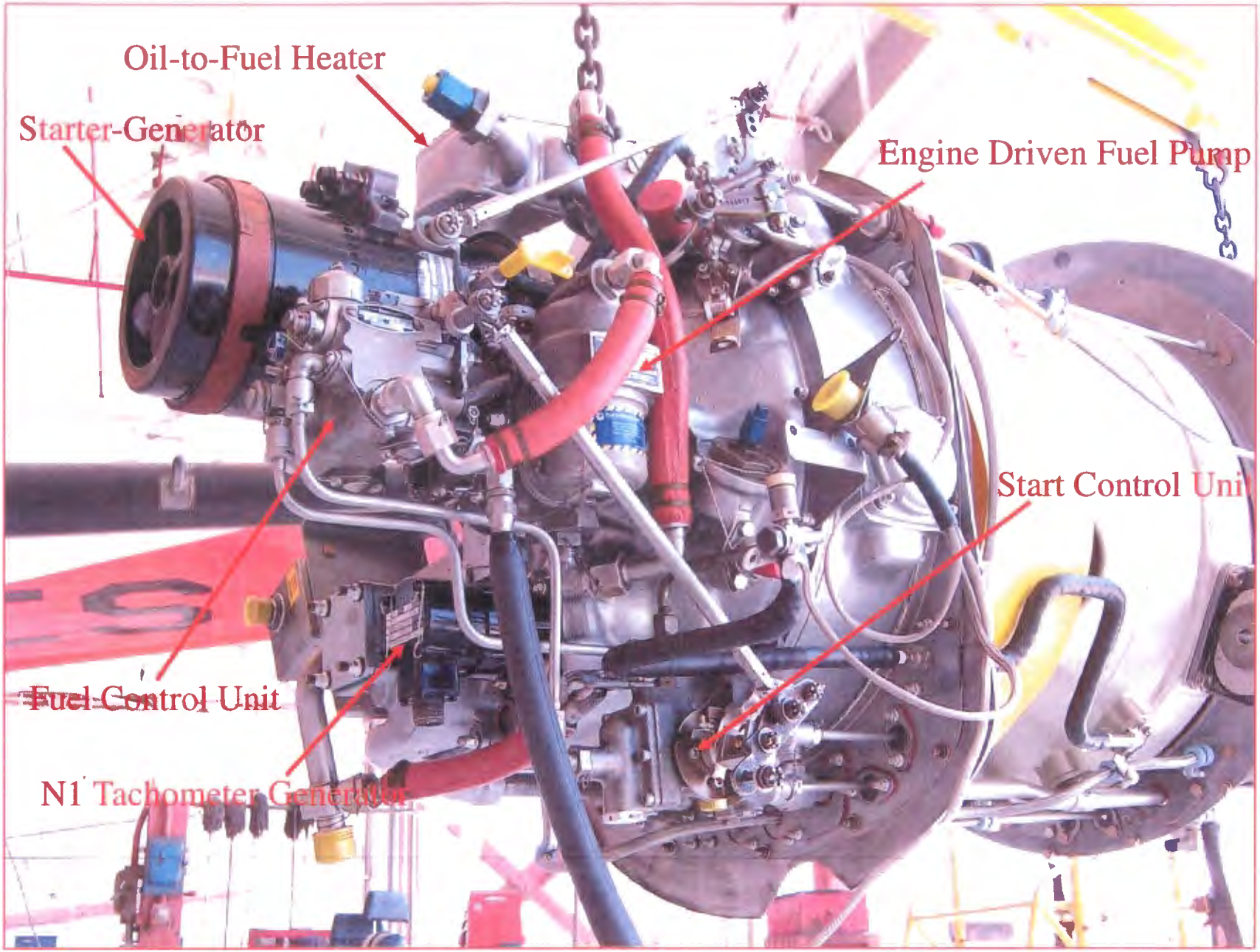
Mission Factors:
C410l-C4202 / I46XX *I* F41XX/F43XX (Y/N)
Extra Training Event (Y/N)
Checkride *I* PC *I* FPC (Y/N)
IP/IP Event (Y/N)
IUT Event (Y/N)
Airspace Saturation (Y/N)

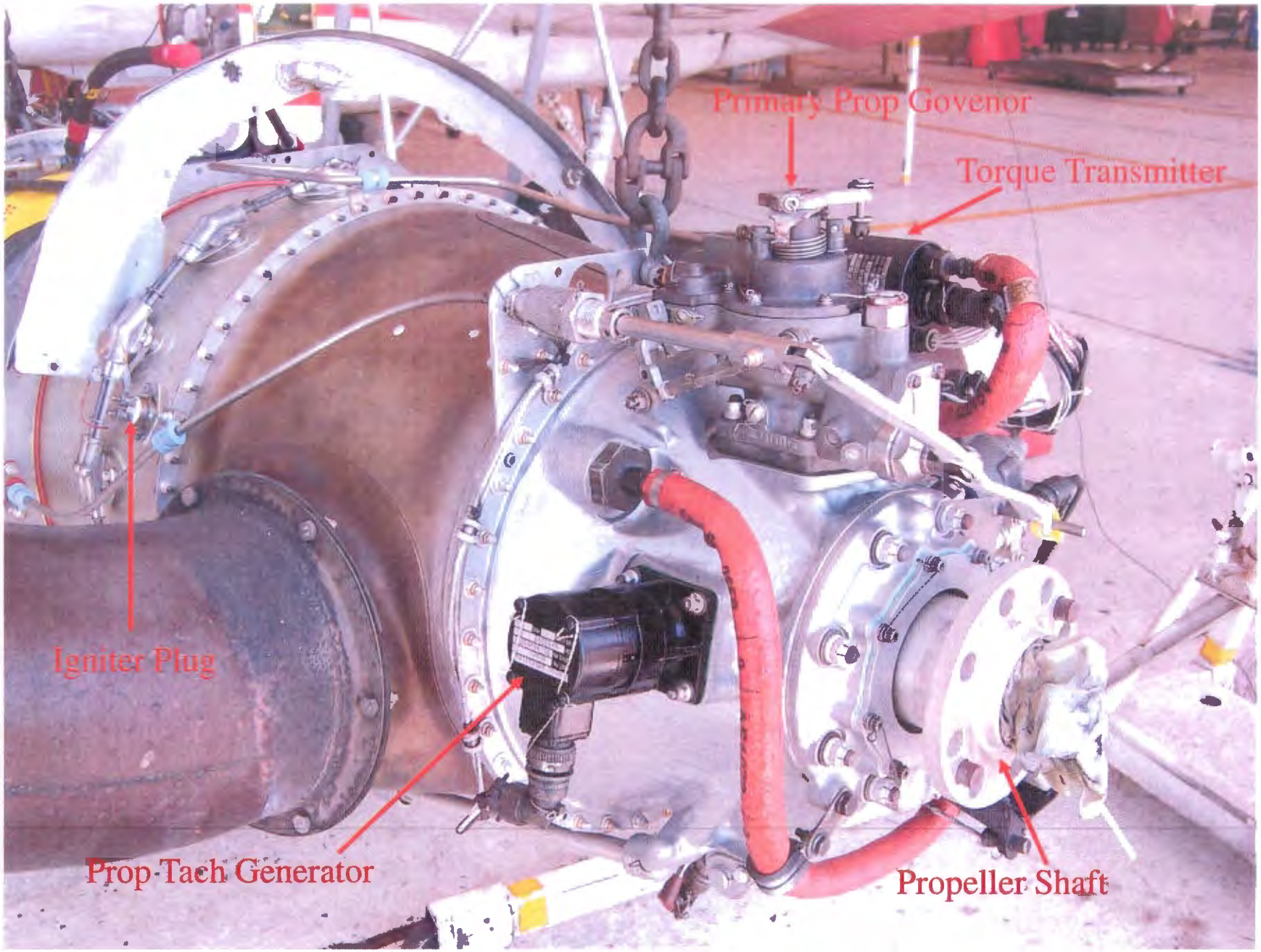
Weather Factors:
WX at or near Mins (Y/N)
Icing *I* Turbulence / Thunderstorms (Y/N)
Crosswind greater than 10 kts (Y/N)
Wind Gusts greater than 20 kts (Y/N)
Temp below 32°F or Heat Index greater than 98°F (Y/N)

Aircraft Factors:
Partially mission capable (Y/N)
Late issue (Y/N)
Outstanding MAF's (Y/N)


Fuel Nozzles
Torque Transmitter
Primary Prop Governor
Propeller Shaft
Auto Ignition Pressure Switch
Auto Feather Pressure Switch
Overspeed Governor

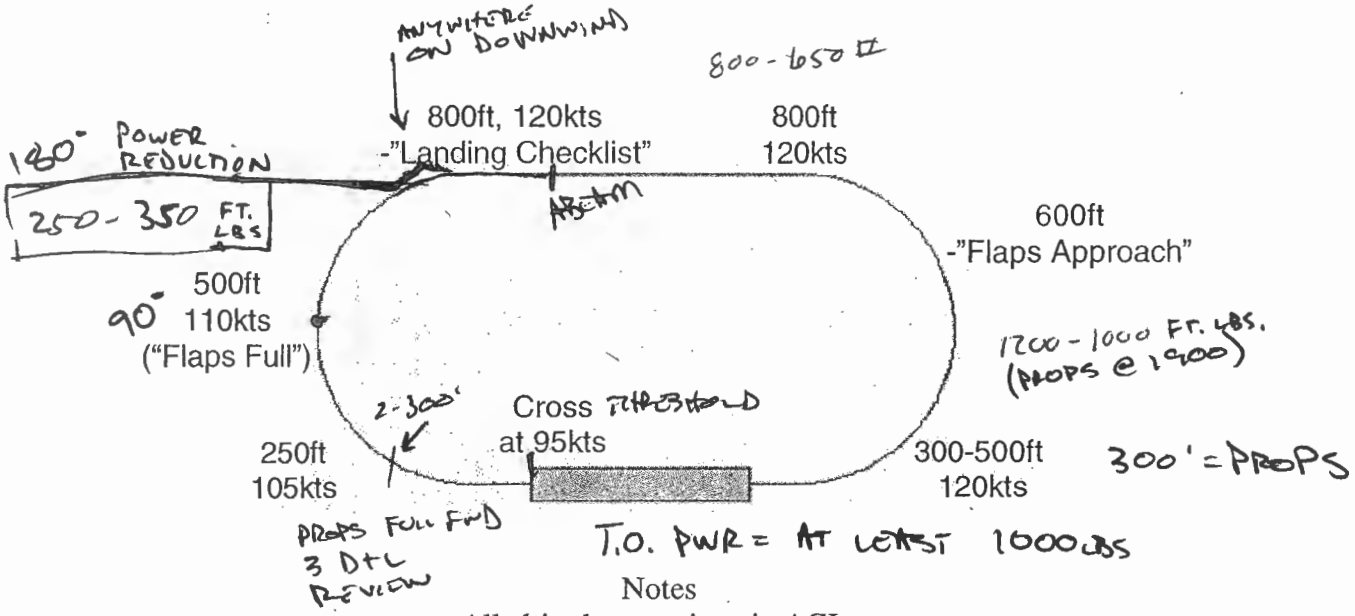

Oil Filler Cap
Oil-to-Fuel Heater
Starter-Generator
Igniter Box
Fuel Control Unit
N1 Tach Generator
Start Control Unit


Oil-to-Fuel Heater
Starter-Generator
Engine Driven Fuel Pump
Start Control Unit
Fuel Control Unit
N1 Tachometer Generator


Primary Prop Govenor
Torque Transmitter
Igniter Plug
Prop Tach Generator
Propeller Shaft

"THE HORN" @ CABANISS

T-44 Normal Landing Pattern (Approach and Full Flap)

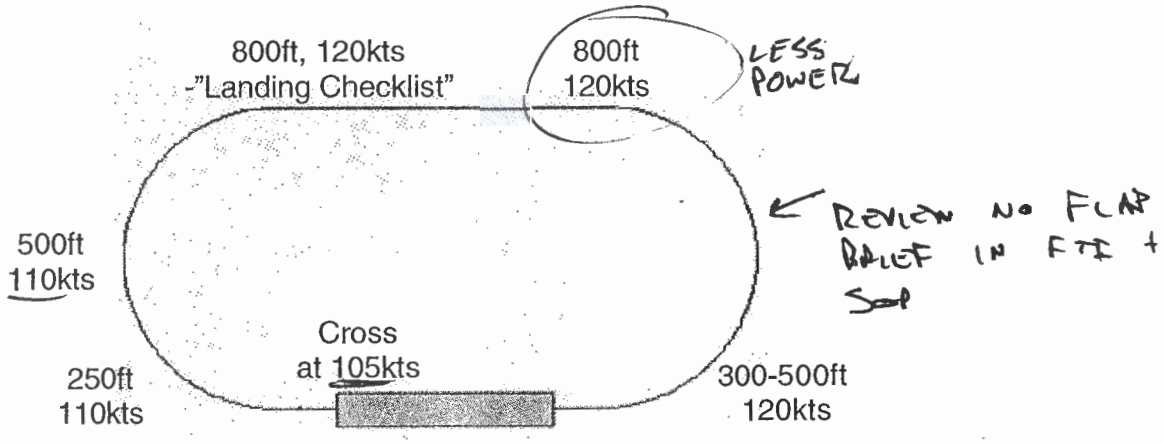


Notes

All altitudes are given in AGL.

It is assumed that the landing is already down during the entire pattern.

T-44 No Flap Landing Pattern

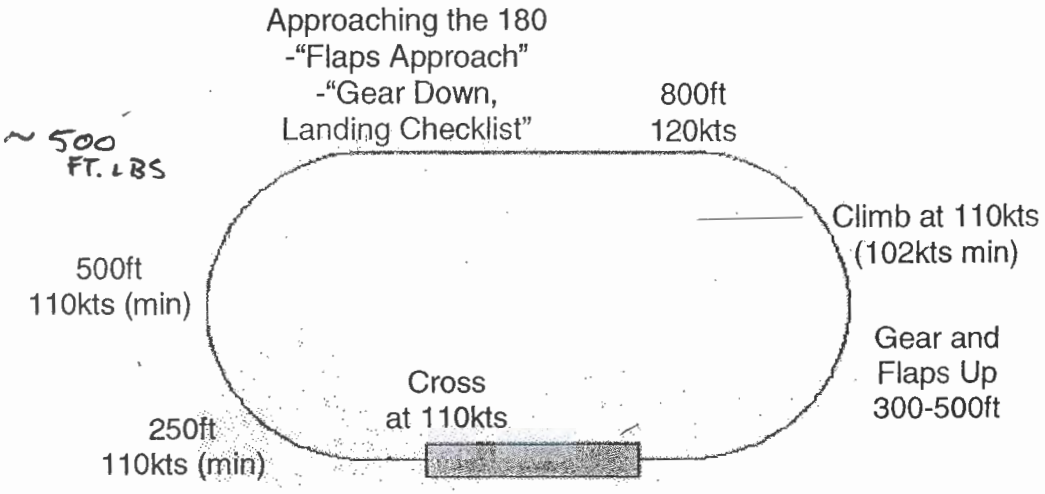


Notes

All altitudes are given in AGL.

It is assumed that the landing gear is already down during the entire pattern.

T-44 SSE Landing Pattern

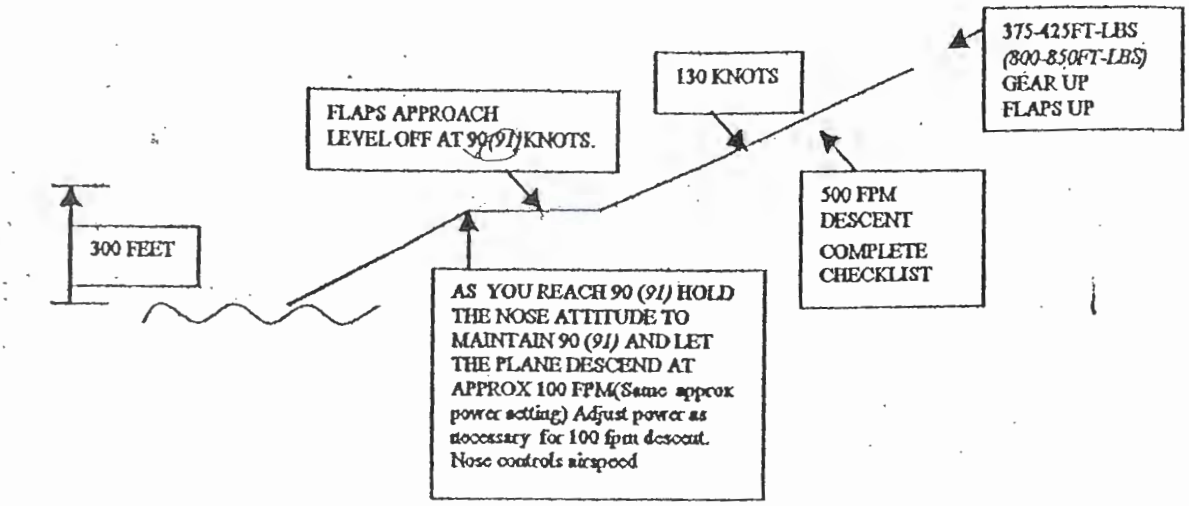


Notes

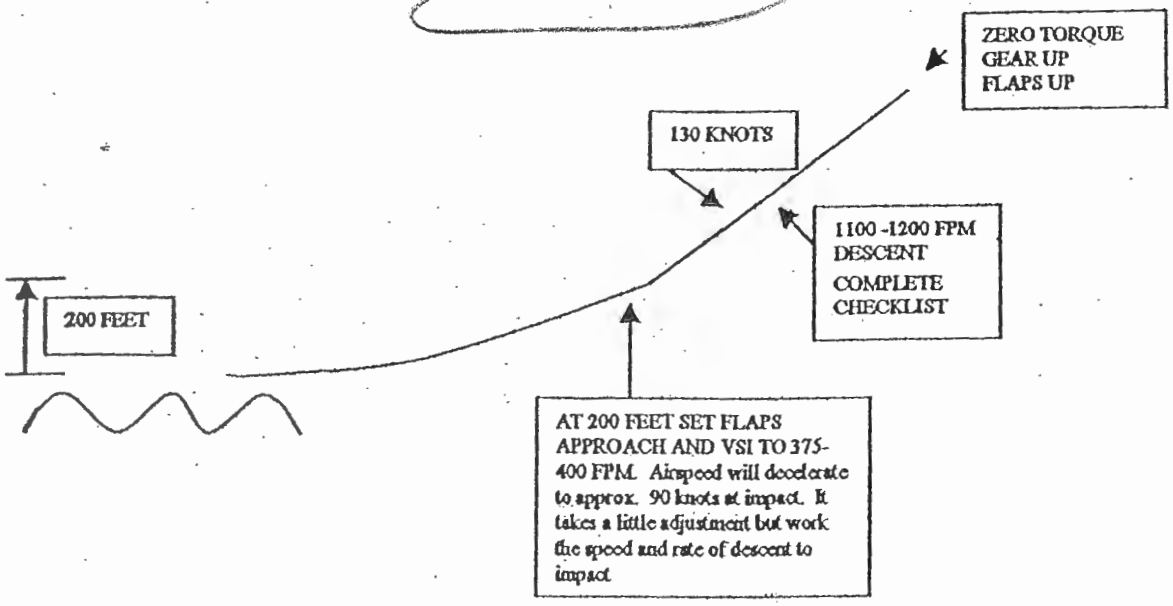
All altitudes are given in AGL.

Ditching Technique

POWER ON DUAL ENGINE
(POWER ON SSE)



POWER OFF



T-44 Emergency Phrases

Getting through emergency procedures requires fluency in the speech portion, which directs the appropriate actions. Something typed in *italics* indicates something that is *happening*, or that you should be *doing*. The phrases in quotes are to be spoken… say all of it, and say it accurately.

** NOTE: The following procedures are for engine flame-outs and fires. If it's a fuel leak or jammed power lever, start with condition lever. Prop malfunctions are different, and are detailed at the end of this document. **

Dynamic Engine Cut or Case 1

After rotate, when the engine fails……
PF: "Power max allowable, Gear up, Airspeed 102/110."

PF: "This will be an emergency engine shutdown of the left/right engine."

PF: "Left/Right power lever idle, concur?"
PM: "Concur."

PF: "Left/Right prop feather, concur?"
PM: "Concur/Simulate."

PF: "Left/Right condition lever fuel cut off, concur?"
PM: "Concur/Simulate."

While pulling props to 1900, resetting max power, and adjusting rudder
PF: "Is it fire or fuel related?"

If YES:
PF: "Left/Right firewall valve close, concur?"
PM: "Concur/Simulate."

PF: "Left fire extinguisher discharge, concur?"
PM: "Concur/Simulate."
or
LS: "Discharge the right fire extinguisher."
RS: "Right fire extinguisher discharge, concur?"
LS: "Concur."
or
PF: "Fire extinguisher not required. Concur?"
PM: "Concur."

LS: "Close the left/right bleed air valve."
RS: "Left/Right bleed air valve close, concur?"
LS: "Concur."

PF: "Did the fire go out?"
PM: "Yes."

PF: "Declare an emergency; this will be a full-stop landing. Continue/Hold the checklist." (*as time permits*). *Continue climb at 102/110 KIAS.*

If NO:
PF: "Declare an emergency; this will be a full-stop landing. Continue/Hold the checklist." (*as time permits*). *Continue climb at 102/110 KIAS.*

Case 2

Roll out of turn, Set Max Power on Operating Engine, Apply proper rudder

[Recommend the PF verbalizes "Power Up, Rudder Up, Gear Up" in coordination with making the proper inputs, but is not required.]

PF: "Gear up, flaps up."

Roll back into turn

PF: "This will be an emergency engine shutdown of the left/right engine."

PF: "Left/Right power lever idle, concur?"
PM: "Concur."

PF: "Left/Right prop feather, concur?"
PM: "Concur/Simulate."

PF: "Left/Right condition lever fuel cut off, concur?"
PM: "Concur/Simulate."

If YES:

PF: "Left/Right firewall valve close, concur?"
PM: "Concur/Simulate."

PF: "Left fire extinguisher discharge, concur?"
PM: "Concur/Simulate."
or
LS: "Discharge the right fire extinguisher."
RS: "Right fire extinguisher discharge, concur?"
LS: "Concur."
or
PF: "Fire extinguisher not required. Concur?"
PM: "Concur."

LS: "Close the left/right bleed air valve."
RS: "Left/Right bleed air valve close, concur?"
LS: "Concur."

PF: "Did the fire go out?"
PM: "Yes."

PF: "Declare an emergency; this will be a full-stop landing. Continue/Hold the checklist." (*as time permits*).

If NO:

PF: "Declare an emergency; this will be a full-stop landing. Continue/Hold the checklist." (*as time permits*).

Approaching mid-field downwind

PF: "Airspeed checks, flaps approach."
PM: "Airspeed checks, flaps approach."

PF: "Airspeed checks, gear down, landing checklist."
PM: "Airspeed checks, gear down, landing checklist."

Case 3

Set Max Power on Operating Engine, Apply proper rudder, Clean Up (if necessary)
[Recommend the PF verbalizes "Power Up, Rudder Up, Gear Up" in coordination with making the proper inputs, but is not required.]

PF: "Gear up, flaps up." (*If unable to maintain altitude and airspeed, or in accordance with FTI*)

PF: "This will be an emergency engine shutdown of the left/right engine."

Everything else is the same. If you can get to the 180 at 800 feet and 120 KIAS with the gear down and flaps at approach, you don't have to raise them. From midfield downwind it generally works, but usually requires that you immediately go to max power on the operable engine. Chances are, you won't be able to hold parameters in the case of a deep downwind power loss (i.e. you were extended upwind). In which case, it's a safer bet to just clean up to avoid dropping below 120KIAS, but should be dictated by your ability to hold 800' and 120KIAS.

Approaching mid-field downwind
PF: "Airspeed checks, flaps approach."
PM: "Airspeed checks, flaps approach."

PF: "Airspeed checks, gear down, landing checklist."
PM: "Airspeed checks, gear down, landing checklist."

Case 4

Increase power as required (about 600-800 ft-lbs), Apply proper rudder, Do not clean up
[Recommend the PF verbalizes "Power Up, Rudder Up, Not going to clean up" in coordination with making the proper inputs, but is not required.]

PF: "This will be an emergency engine shutdown of the left/right engine."

The FTI requires that you only complete the first three steps of the shutdown. If you go to firewall valve, fire extinguisher, and bleed air valve, you risk getting off pattern profile. If you have good control of the A/C, and feel comfortable completing steps 4-6 go ahead, but DO NOT complete steps 4-6 at the expense of airwork and normal procedures (i.e. Props - Full Forward). If you elect to only complete the first three steps of the EES, and then have to waveoff, do not forget to complete the remaining steps after the waveoff.

Case 5

Increase power as required to maintain at least 110KIAS, Apply proper rudder, Do not clean up
[Recommend the PF verbalizes "Power Up, Rudder Up, Not going to clean up" in coordination with making the proper inputs, but is not required.]

PF: "Declare an emergency, we'll handle the EP on the deck."

The FTI does not require you to complete any of the steps of the shutdown. If you waveoff, do not forget the shutdown after the waveoff. Do not attempt to complete any steps of the shutdown at the expense of airwork and normal procedures. (i.e. Props - Full Forward).

Prop Malfunctions

Prop malfunctions are usually simulated by the IP pushing a prop lever forward to 2200, but may be announced verbally, or presented otherwise. *NATOPS strongly discourages that you not land with an over speeding propeller. In the contact phase it will be expected that you comply with this advice, meaning wave off if necessary, and then feather the prop.*

PF: "What is it reading and can I adjust it?"

The prop is reading anything over 2200 RPM, and cannot be adjusted. An OVERSPEED condition:

You are about to lose thrust on an operable engine. Anticipate this by increasing power on the good engine, applying rudder as necessary, and cleaning-up based on normal Case 1-5 guidelines.

PF: Left/Right power lever idle concur?
PM: Concur.

PF: Left/Right prop lever feather concur?
PM: Concur/Simulate.

PF: "Did the prop feather?"

If YES:
PF: "Declare an emergency; this will be a full-stop landing. Continue/Hold the checklist." (*as time permits*).

If NO:
PF: "Alternate feathering checklist."

When complete
PF: "Declare an emergency; this will be a full-stop landing. Continue/Hold the checklist." (*as time permits*).

The prop is reading 1900 or 2200 RPM, and cannot be adjusted. Prop Linkage Malfunction:

If 1900:

Match the prop levers.
PF: "This will be a full-stop landing. We will not use reverse"

If 2200:

Match the prop levers.
PF: "This will be a full-stop landing."

VT-31

On-Wing

Homework Guide

FAM-0 BRIEF OVERVIEW

1. Introduction

2. Flight Schedule:

- How to read VT-3 1 flight schedule.

- Schedule usually hits the streets by 1700 daily; weekend schedule through Monday comes out by 1700 Friday.

- Once students are completed with ground school they should appear on flight schedule in some capacity.

- The flight schedule is a direct order of the Commanding Officer, do not blow it off.

- Students should call the VT-31 CDO after 1700 to inquire about problems with their schedule for the next day (X3350)

3. Advanced Curriculum Outline:

- The first eight events of syllabus, FAM 0 through FAM 7 (C0101 – C4202), will be completed with the same instructor, your onwing.

- Overview of required knowledge prior to flight. What is meant by terms:
    - Brief
    - introduction
    - Practice
    - Demonstrate
    - Review

- Prior to FAM 1 know your preflight! Students should have already practiced the preflight by now. If not, you are behind the power curve. Practice preflight of A/C are available through maintenance control. You must be in flight suit or uniform to do the practice preflights.

- Be ready in the student lounge prior to your brief. Good gouge is to come in to squadron 30 minutes prior to brief to get an update on weather and NOTAMS and be waiting for your instructor.

- Crew rest policy is in Master Curriculum Guide. Do not break it.

3. Preflight Actions:

- Computing takeoff and landing data. Required prior to each flight. If A/C available prior to brief complete the takeoff and landing data card and review the ADB (aircraft discrepancy book).

- Sample takeoff and landing data card; review gross weight limits and why we must compute these performance numbers.

4. Squadron Tour:

- Students should be shown squadron to include:
    -Training - Pick up gouge and SOPs.
    -MJC - Show them where preflight A/C is posted, ADBs are placed, and weight and balance book and performance charts.
    -Operations - Logbooks, required to be accurately totaled and signed by pilot each month.
    -Duty Office - Onwing list, weather vision, instructor mail boxes, and CDO and SDO duty desks.
    -Schedules - Snivel log.
    -Admin - PAO.
    -Student Lounge - This is your space, keep it clean and organized.
    -Student Control - Training jackets and signout policies, required to have FAM0 jacket review-with flight leader.
    -First Lieutenant - Head set and flight equipment checkout.

5. Conclusion:

-Study hard and have fun, working together will make your flights here much easier. If you are having problems or questions ask your onwing, flight leader or any instructor, we are here to help you. GOOD LUCK!

FAM 1

FLIGHT PROCEDURES

1. What is the definition of max allowable power?
2. What is the definition of max continuous power?
3. What is the definition of cruise climb power?
4. What is the definition of cruise power?
5. What are the procedures for engine shutdown on deck?
6. What is the minimum altitude for a seat change?
7. What is the minimum altitude for approach to stalls?
8. What indications warrant a stall recovery?
9. What are the procedures for a stall recovery?
10. What is different about recovery from an approach turn stall than other types?
11. What are the procedures for start malfunctions?
12. What conditions warrant a waveoff in the landing pattern?
13. What are the procedures for a waveoff?
14. At what altitude is the Shamrock/Sunrise recovery to Cabaniss flown?

ITT

1. Normal (green arc) operating range is _____
2. Max ITT for start is _____ time limited to _____.
3. The right engine is limited to _____ degrees, during the start procedure for the left engine.
4. Always report the amount and duration of start ITT exceeding _____.
5. Always report the amount and duration of operating ITT exceeding _____.
6. Max ITT at low idle is _____.
7. Max ITT in reverse is _____.
8. Max ITT for acceleration is _____.
9. Max ITT for cruise climb is _____.
10. Max ITT for cruise is _____.

TORQUE

1. Normal (green arc) operating range is _____.
2. Max at 2200 RPM is _____.
3. Max at 1900 RPM is _____.
4. Max acceleration is _____.

PROP RPM (N_2)

1. Normal (green arc) operating range is _____.
2. During takeoff, RPM should read _____.
3. Max RPM for acceleration is _____.
4. Max RPM in reverse is _____ limited by the _____ governor.
5. The overspeed governor limits RPM to _____.
6. The fuel topping governor limits RPM to _____.

N_1 LIMITS

1. Normal (green arc) operating range is _____.
2. Low idle range is _____.
3. High idle range is _____.
4. Max N_1 for acceleration is _____.
5. Max N_1 in reverse is _____.
6. During the manual feather check N_1 can decrease by _____.

OIL PRESSURE AND TEMPERATURE

1. Normal (green arc) operating range for oil pressure is _____.
2. Normal (green arc) operating range for oil temperature is _____.
3. Min oil temperature for engine start is _____.
4. Min oil pressure on the ground is _____ and in the air is _____.
5. Normal oil pressure must be obtained any time the engines are at _____% N_1.

ELECTRICAL SYSTEM

1. What functions does the battery provide?
2. The battery is rated at _____ Volts and _____ Amp-hours.
3. Min voltage for a battery start is _____.
4. Min voltage for an APU start is _____.
5. Min voltage for an APU charge is _____.
6. What items are powered only by the hot battery bus?
7. What items are dual powered?

BRAKE EMERGENCIES

1. What are the procedures for a brake fire?
2. What are the procedures for hot brakes?
3. What are the procedures for loss of brakes?

FAM 2

FLIGHT PROCEDURES

1. What are the procedures for engine fire on deck?
2. Describe MFD operation. (T-44C only)
3. Discuss porpoised landings and how to recover.

AIRFRAMES

1. Main tires should be inflated between ___ and ___ psi. The nose tire should be inflated between ___ and ___ psi.
2. For soft field takeoffs, NATOPS recommended tire pressure is ___ psi.
3. Winds above ___ kts can cause structural damage to the aircraft.
4. Max aft CG at all gross weights is _____.
5. Max airspeed in the T-44 is _____. Up to what altitude?
6. Max takeoff weight is _____.
7. Max ramp weight is _____.
8. Max landing weight is _____.
9. Navy approved service ceiling is _____.
10. List the prohibited maneuvers in the T-44.
11. What are the g limits for the T-44 clean?
12. What are the g limits for the T-44 with the flaps down?
13. What are the landing limitations for the T-44?
14. What is the max crosswind component for the T-44?
15. Identify the following airspeeds:

V_X-	V_{NE} or V_{MO}-
V_Y-	V_A-
V_{XSE}-	V_{LE}-
V_{YSE}-	$V_{FE\ 35\%}$-
V_{SSE}-	$V_{FE\ 100\%}$-

16. What is the definition of V_{MC}?

FUEL SYSTEM

1. Total fuel system capacity is _____ with _____ usable fuel.
2. What permits the use of all fuel from all tanks to either engine?
3. How is fuel transferred from the wing tanks to the center section tank?
4. How is fuel transferred to the nacelle tank?
5. Explain the operation of the nacelle float switches.
6. Explain the operation of the transfer pump in the override position.
7. With a failed transfer pump, how does fuel get to the nacelle tank?
8. How many fuel drains are there on the aircraft?
9. What type of fuel gauging system is utilized in the T-44?
10. What is the only difference between the left and the right fuel system?
11. What is the minimum amount of fuel required in the nacelle tank to obtain a good test of the transfer pump?
12. How much pressure does it take to activate the FUEL PRESSURE light?
13. How much pressure does it take to activate the NO FUEL TRANSFER light?

14. How much pressure does the engine driven fuel pump supply to the engine?
15. What are the indications of a boost pump failure?
16. What is the TBO of an engine driven fuel pump operating on suction lift?
17. What is the TBO of an engine running on AVGAS?
18. Why is the crossfeed valve not left open with both boost pumps operating?
19. If the crossfeed valve looses electrical power, will it remain open?
20. Why is the firewall valve not used to secure an engine?
21. Max fuel split in total is ____ lbs and in nacelle is ____ lbs.
22. Explain the purpose of the siphon break and its location.
23. What is the purpose of fuel vents?
24. With a failure of either fuel bus, will the boost pump still work for that respective side? How?
25. If the transfer pump CB were to pop, what indications would you get?
26. What is the minimum distance the fuel truck can come to the airplane while refueling it? How about the refueling point?
27. Explain how fuel travels from the outboard tank to the engine in detail. List all components it travels through.

FUEL SYSTEM EMERGENCIES

1. What are the procedures for a NO FUEL TRANSFER light?
2. What are the procedures for a CROSSFEED light?
3. What are the procedures for an engine driven fuel pump failure?
4. What are the procedures for a fuel leak?
5. What are the procedures for fuel siphoning?
6. What is the difference between a fuel leak and fuel siphoning?
7. What are the procedures for single engine crossfeed?
8. What are the indications of a failed boost pump and what are the emergency procedures?

FAM 3

FLIGHT PROCEDURES

1. What are the lost communications procedures (VFR) per the local procedures? How about per the Flight Information Handbook?
2. What is the primary method of communicating with tower in a lost comm. Situation?
3. What can we do to let tower know that we are experiencing communication problems?
4. What are three types of flap malfunctions and their indications?
5. What is the difference between no flap landings and a normal landing?
6. What are the airspeeds on final and crossing the threshold for No Flap landings?

ENVIRONMENTAL SYSTEM

1. What is the primary purpose of the environmental system?
2. What switch(s) controls the safety valve in flight?
3. What switch(s) controls the outflow valve in flight?
4. What controls excessive pressure bump and when?
5. What is the max PSID for the outflow valve?
6. What is the max PSID for the safety valve?
7. What actually controls the PSID in safety valve operation?
8. Describe the electric heater lockout system.
9. How is maximum cooling of the T-44 accomplished? How is maximum heating of the T-44 accomplished?
10. Will the electric heater work with the cabin temp mode switch off?
11. With the vent blower in auto, at what speed is the fan operating?
12. With a total loss of electrical power will the T-44 still maintain pressurization?
13. What pressurization systems work in conjunction with the right squat switch?
14. When is supplemental oxygen required?
15. What is the oxygen system capacity? (cubic feet and psi)
16. At what altitude is the diluter demand regulator supplying 100% oxygen in the normal position?
17. What position is the oxygen mask stored in?
18. What is the minimum oxygen requirement for local flights?
19. What is the minimum oxygen requirement for cross country flights?

ENVIRONMENTAL SYSTEM EMERGENCIES

1. What are the procedures for an altitude warning light?
2. What are the procedures for a loss of cabin pressurization?
3. What are the procedures for rapid decompression?
4. What are the procedures for smoke and fume elimination?
5. What are the procedures for smoke and fire of an unknown origin?
6. Why would you not want to immediately descend if a fuselage fire is encountered?
7. What are the procedures for an emergency descent?

8. Before depressurizing an aircraft for any reason, what considerations must be given to crew or passengers?
9. One large source of smoke and fumes that may enter the cockpit from the engine is the _____.
10. What actions should you take in the event of a CABIN DOOR OPEN light?
11. What should you do for a crack on the inner panel of the windshield?
12. What should you do for a crack on the outer panel of the windshield?
13. What should you do for a crack on a cabin window?

FAM 4

FLIGHT PROCEDURES

1. What are the procedures for an engine failure during takeoff?
2. What is the purpose of the Dynamic Engine Cut maneuver?
3. What are the Dynamic Engine Cut procedures?
4. What is the purpose of the V_{MC} demo?
5. What are the procedures for ditching-power on?
6. What are three areas of concern for forced landings?
7. What are the procedures and weather requirements for Simulated Single Engine (SSE) at altitude?

ENGINE SYSTEM

1. Each engine is rated at _____ SHP.
2. Total compression for each engine is equivalent to _____.
3. There are ___ igniter plugs per engine which are located at the _____ o'clock and the _____ o'clock positions.
4. Approximately _____% of intake air is actually used for cooling.
5. The reduction gear box provides a reduction ration of ___ to ___
6. Which systems operate off the N_1 turbine?
7. Which systems operate off the N_2 turbine or power section?
8. How do we send inputs to the fuel control unit?
9. How do we send inputs to the start control unit?
10. What is the purpose of the compressor progressive bleed valve?
11. When is the compressor progressive bleed valve in transit?
12. What is the purpose of the fuel drain collector system and when is it functioning?
13. What functions occur when selecting Ign and Engine Start with the starter switch?
14. Where is torque measured?
15. With a failed torque meter transmitter, are autoignition and autofeather still available?
16. How is autofeathering accomplished?
17. What functions doe the oil system provide?
18. What is the capacity of the oil system?
19. How much oil is measurable in the tank?
20. What is the capacity of the oil tank?
21. How many oil scavenge pumps per engine?
22. How is oil temperature maintained?
23. Explain the operation of the oil to fuel heat exchanger.
24. What types of oil are approved for the T-44?
25. What are the procedures for a cold oil check?
26. What is the purpose of the chip detector and where is it located?
27. What are the fire bottles normally pressurized to?
28. What is the minimum N_1 required on the deck for generator loads that exceed .5? How about .75? How about .9?

ENGINE SYSTEM EMERGENCIES

1. How do you confirm an engine fire?
2. What is the best course of action when faced with a wing fire?
3. In some cases, wing fires have been known to destroy wing spar integrity in as little as ___ seconds.
4. What are the procedures for a jammed power lever?
5. Oil pressure below _____ psi or oil temperature above _____ degrees Celsius require either engine shutdown or a reduced power setting on the engine until landing.
6. What are the procedures for a chip light?

What are the procedures for a chip light that flickers and then goes out?

FAM 5

FLIGHT PROCEDURES

8. What are the procedures for engine failure after takeoff?
9. What resources are available to the PIC during engine out operations?
10. What is different about the pattern when SSE?
11. What are the procedures for a SSE touch-and-go?
12. What are the procedures for a single engine waveoff?
13. What are the procedures for SSE ditching?

ELECTRICAL SYSTEM

1. What are the sources of D.C. power for the T-44?
2. What are the sources of A.C. power for the T-44?
3. What is the function of the generator control unit?
4. If a generator fails to reset, yet registers normal volts while in the reset position, what is the problem?
5. Where in the aircraft are the inverters located?
6. What functions do the current limiters provide?
7. What can you do to get around a faulty master avionics switch?
8. What are the limitations on the generators?
9. What are the limitations on the inverters?
10. For an APU start, the APU must be able to provide a continuous charge of ____ amps and at least ____ amps for ____ seconds.
11. A failed _____ will cause a failure of its respective AC bus without illumination of an inverter light. (switch over will be impossible)
12. What is lost with the illumination of the INST INV OUT light?
13. What items are still available with a complete electrical failure?
14. What equipment is still available with a dual inverter failure?
15. What are the procedures for an excessive load indication?

ELECTRICAL SYSTEM EMERGENCIES

1. What are the procedures for an inverter failure?
2. What are the procedures for a generator failure?
3. What are the notes, warnings and cautions associated with generator failure?

FAM 6

FLIGHT PROCEDURES

1. What is V_{MCA}/V_{MCG}? And under what conditions is this true?
2. Why is the firewall shutoff valve not used to secure an engine except in an emergency?
3. When would you elect to do a windmilling airstart over a starter assisted airstart?
4. What are the procedures for a starter assisted airstart?
5. What is different about a SSE full stop than a normal full stop?

LANDING GEAR SYSTEM

1. Nose wheel steering actuates the nose gear _____ degrees right, _____ degrees left and up to _____ degrees with brakes.
2. What is the one function that the up and down limit switches have in common?
3. What does the up limit switch activate?
4. What does the down limit switch activate?
5. What is the function that all three up locks have in common?
6. What does the right up lock activate?
7. What does the left up lock activate?
8. What does the nose gear up lock activate?
9. What systems work in conjunction with the right squat switch?
10. What systems work in conjunction with the left squat switch?
11. What are the three functions of the three down locks?
12. What causes the red light in the gear handle to illuminate?
13. When will the warning horn silence button work?
14. Which green down lock indicator would illuminate first during manual gear extension?
15. What is the retraction and extension time of the landing gear?
16. When will you get the PROP REVERSE NOT READY light?
17. Is it possible to have all safe indications on the gear system and still have an unsafe gear?
18. What holds the gear down and locked?
19. What holds the gear up?
20. How can you tell the difference between an electrical and a mechanical malfunction on an unsafe gear?

LANDING GEAR EMERGENCIES

1. What are the procedures for landing gear manual extension?
2. What are some considerations when manually pumping the gear down?
3. What should you do when faced with any gear malfunction?

FAM 7

FLIGHT PROCEDURES

1. What are the procedures for power off ditching?
2. What factors could affect a windmilling airstart?
3. Under what conditions would an airstart not be attempted? (MOVEOFF)
4. What are the windmilling airstart procedures?

PROPELLER SYSTEM

1. What are the characteristics of the propeller in the T-44?
2. How is propeller feathering accomplished?
3. Feather position is equivalent to _____ degrees blade angle.
4. Zero thrust is equivalent to _____ degrees blade angle.
5. Max reverse is equivalent to _____ degrees blade angle.
6. Blade angle at the forward range of reverse is _____.
7. Max N_1 while taxiing in the BETA range with the condition levers in low idle is _____.
8. How can you determine if the prop is resting on the low pitch stop?
9. How is the low pitch stop determined?
10. The normal operating range for the primary governor is _____.
11. Should a prop RPM exceed 2200 RPM by more than _____% the _____ cuts in to prevent RPM from further overspeed. The last resort is the _____ which reduces fuel to the engine at prop speeds above _____ RPM.
12. How does the fuel topping governor work?
13. Which governor allows the maximum RPM in the reverse range?
14. What does the prop governor test switch do?
15. At what limit will gearbox and or prop damage occur?
16. What does the PROP REVERSE NOT READY light mean?
17. What is the purpose of the autofeather system and how does it feather the associated prop?
18. What are the parameters for autofeather?
19. What is the purpose of the autofeather test switch?
20. Will the test position work in flight?
21. Which engine is designated as the master in relation to the synchrophaser system?
22. What two functions does the synchrophaser provide and how?
23. Which function has priority?
24. What is the RPM limited to with respect to the synchrophaser control box?
25. What causes a PROP SYNC ON light?
26. Where is the prop sync control box located?
27. Which engine may not fully feather with the prop sync switch on and why?
28. What is the recentering process and how long does it take?
29. What moves the prop toward a lower pitch, higher RPM?
30. What does power lever movement in the beta range control?
31. What does power lever movement in the reverse range control?
32. What will cause a prop to feather in flight?

PROPELLER SYSTEM EMERGENCIES

1. What are the procedures for a failed prop (feathered)?
2. What are the procedures for a prop linkage failure?
3. Is there any way to feather a prop without shutting down the engine that has experienced a linkage failure?
4. What precaution must be safeguarded against during an actual autofeather sequence?
5. What are the procedures for an overspeeding prop?