NorCal Flight Center

MANEUVERS & OPERATIONS

A REVIEW OF THE FOLLOWING MANEUVERS & OPERATIONS ARE REQUIRED FOR AN AIRCRAFT CHECKOUT. AN INSTRUCTOR'S DECISION TO MODIFY THE LIST WILL BE BASED ON THE PILOT'S ATTITUDE, PREPAREDNESS, EXPERIENCE, CURRENCY, AND PERFORMANCE.

- PREFLIGHT PREPARATION

  - ☐ CERTIFICATES & DOCUMENTS
  - ☐ PERFORMANCE & LIMITATIONS
  - ☐ AIRCRAFT SYSTEMS

- GROUND OPERATIONS

  - ☐ VISUAL INSPECTION
  - ☐ COCKPIT MANAGEMENT
  - ☐ STARTING ENGINE
  - ☐ TAXIING
  - ☐ PRETAKEOFF CHECK

- TAKEOFFS & LANDINGS

  - ☐ NORMAL TAKEOFF & CLIMB
  - ☐ NORMAL APPROACH & LANDING
  - ☐ SHORT & SOFT FIELD APPROACH & LANDING GO-AROUND
  - ☐

- SLOW FLIGHT AND STALLS

  - ☐ FULL STALLS - POWER OFF
  - ☐ IMMINENT STALLS - POWER ON
  - ☐ SLOW FLIGHT

- NIGHT FLIGHT OPERATIONS

  - ☐ TAKE OFF & LANDING
  - ☐ VFR NAVIGATION

- EMERGENCY OPERATIONS

  - ☐ EMERGENCY APPROACH & LANDING
  - ☐ SYSTEM & EQUIPMENT MALFUNCTIONS

- FLIGHT BY REFERENCE TO INSTRUMENTS (FOR IFR RATED)

  - ☐ TURNS / CLIMBS / DESCENTS
  - ☐ UNUSUAL FLIGHT ATTITUDE RECOVERIES
  - ☐ RADIO AIDS & RADAR SERVICES
  - ☐ INSTRUMENT APPROACHES
  - ☐ HOLDING PATTERNS

ALTHOUGH NCFC HAS AIRCRAFT CHECKOUT WRITTEN EXAMS TO AID THE PILOT AND CFI IN REVIEWING ALL ASPECTS OF THE AIRCRAFT OPERATION, THE PILOT IS EXPECTED, BY REGULATION, TO BE FAMILIAR WITH ALL SECTIONS OF THE PILOT'S OPERATING HANDBOOK FOR THIS AIRCRAFT. HERE ARE SOME ADDITIONAL THINGS TO CONSIDER WHEN PERFORMING THE AIRCRAFT CHECKOUT.

PILOT MUST BE ABLE TO EXPLAIN,

- ☐ FUEL/ELECTRICAL/PROP/GEAR SYSTEMS OPERATION, AND AUTOPILOT, IF ABOARD
- ☐ EMERGENCY GEAR EXTENSION PROCEDURE WITHOUT REFERENCE TO CHECKLIST
- ☐ WHAT TO DO IF ONE GEAR DOWN LIGHT IS OUT
- ☐ WHAT TO DO IF SUDDEN LOSS OF OIL PRESSURE
- ☐ WHAT TO DO IF ALTERNATOR LIGHT COMES ON DURING FLIGHT (DAY/NIGHT- IFR/VFR)
- ☐ PROCEDURES FOR BOOST PUMP OPERATION. SWITCH POSITION FOR TAKEOFF (WHY?)
- ☐ LOCATION OF CRITICAL CIRCUIT BREAKERS (I.E.: TRIM/AUTOPILOT/LANDING GEAR)
- ☐ ENGINE START PROCEDURE (WHY)
- ☐ WHAT POWER SETTING WILL GIVE MAX ENDURANCE (MAX RANGE)
- ☐ USE OF THE PREFLIGHT AND BEFORE START, TAKEOFF, AND LANDING CHECKLISTS.
- ☐ THE "LIGHTS, CAMERA, ACTION" MENTAL CHECKLIST
- ☐ THE "SAFE ALTITUDE" DEPARTURE CONCEPT.

PILOT'S NAME: _____ DATE: _____

MAKE AND MODEL: _____

ENGINE (1) Mfg. and Type: _____ Horsepower: _____

(2) Normal Start Procedure: _____

_____

(3) Hot Start Procedure: _____

_____

(4) If airplane has a Constant Speed Propeller, what does it do when the engine loses oil pressure?

_____

ENGINE POWER SETTINGS: (5) Runup: _____ Takeoff: _____

Max Continuous: _____ Climb: _____

Cruise, 75% Power, 2000 Feet, Standard Temp: _____

Cruise, 75% Power, 7000 Feet, Standard Temp: _____

OIL: (6) Grade: _____ Max. Quantity: _____ Min. Quantity _____

FUEL:(7) Grade: _____ Color: _____ Number of Fuel Tanks: _____

Total Fuel Quantity: _____ Usable Fuel Quantity: _____

Usable Fuel Quantity if Tanks have Tabs: _____

(8) Fuel drain location: _____

(9) Tank Vent location: _____

(10) Describe the fuel system: _____

_____

_____

WEIGHTS: (11) Maximum gross takeoff: _____ lbs. Maximum gross landing: _____ lbs.

Empty: _____ lbs. Useful Load: _____ lbs CG Range: _____ in.

AIRSPEEDS: (12) Vx _____ kts. Vy _____ kts. Cruise Climb _____ kts. VA _____ kts.

Vno _____ kts. Vne _____ kts. VS1: _____ kts. VSO _____ kts.

Best Glide _____ kts. Vfe _____ kts.

(13) Final Approach: Flaps Up _____ kts. Flaps Full Down _____ kts. Short Field _____ kts.

If Airplane Has Retractable Gear: Vloe ____ kts. Vlor _____ kts. Vle _____ kts.

If Multingine Airplane: Vxse _____ kts. Vyse _____ kts. Vmc _____ kts.

ALTITUDES: (14) Service Ceiling: _____ ft. If Multi Engine, Single-Engine Service Ceiling: _____ ft.

ELECTRICAL SYSTEM: (21) Describe the system: _____

_____

_____

(22) Describe the indications of a malfunctioning alternator and the reactivation procedure:

_____

_____

(23) Battery location: _____

CARBURETOR ICING: (24) Describe all indications: _____

STATIC AIR SYSTEM: (25) Normal static port location: _____

(26) Alternate static source location: _____

(27) Altimeter error when using alternate static source: _____

HYDRAULIC SYSTEM: (28) Describe the system: _____

_____

(29) Reservoir location: _____

EMERGENCY LOCATOR TRANSMITTER: (30) Control panel location: _____

_____

DEPARTURE AIRPORT PERFORMANCE:

Airplane is at maximum gross weight at an airport elevation of 1000 feet MSL. There is no wind and the temperature is 10 degrees above standard Celsius.

(31) Compute the following information: Ground Roll: _____

Total to clear 50 Ft. Obstacle: _____

Rate of Climb: _____

Accelerate-Stop Distance (Multiengine): _____

CLIMB AND ENROUTE:

You plan to cruise at 7500 feet MSL using 75% power. The Temperature at altitude is 10 degrees above standard Celsius, and you are departing from the airport used in the last problem.

(32) Compute the following climb information: Time to altitude: _____

Fuel to altitude: _____

Miles to altitude: _____

(33) Compute the following cruise information : Power setting: _____

KTAS: _____

GPH: _____

ARRIVAL AIRPORT PERFORMANCE:

You are 200 pounds below the maximum landing weight. Airport elevation is 3000 feet MSL, temperature is 10 degrees above standard Celsius, a 10 knot headwind prevails, and you plan on using full flaps.

(34) Compute the following landing information: Ground Roll: _____

Total to clear 50 ft. Obstacle: _____

WEIGHT AND BALANCE INFORMATION:

All seats are full. The pilot weighs 200 lbs., the copilot is 150 lbs., and each remaining passenger is 120 lbs. You have 100 lbs. of baggage.

(35) Compute the following information: Allowable Fuel Load: _____

Are you within the C.G. envelope? _____

CG location: _____

EXAM REVIEWED BY: _____

STUDENT SIGNATURE: _____

INSTRUCTORS: Make a copy of this exam and give the original to the pilot and attach the copy to the pilot's customer file.