

NIFE CHECKLIST STUDY GUIDE

“Hollywood Script”



1. Introduction. The purpose of this guide is to introduce students to the use of NIFE checklists and also serve as a Standard Operating Procedure (SOP) for the verbiage used in challenges and responses, thereby improving CRM between crewmembers.
2. Checklists are safety tools; they provide mechanisms to ensure the aircraft is set up for flight, or to correct deficiencies before they cause a mishap. Extra guidance and explanations are included in the ACTION column of this guide.
3. At NIFE, checklists shall be initiated and read by the student, and shall be conducted in a challenge-action-response format. In general, the student will state the challenge, perform or verify the action and give the reply.
4. Execution. Initiate a checklist by announcing the title before working through each step sequentially. Each step of a checklist shall be executed by first stating the CHALLENGE, then performing the ACTION, and then stating the REPLY– actions are not to be verbalized. Upon completion of a checklist, state “[Checklist title] complete.” If a checklist needs to be paused or interrupted, state “holding the checklist at [item].” When ready to resume the checklist, state “continuing checklist.”
5. When an ACTION involves a "check" of the position or setting of a movable control or switch, the student is expected to TOUCH that item to aid in verification of its position or setting, and if necessary, change its setting or position to make it consistent with the prescribed reply.
6. Whenever a checklist item requires manipulation of a flight control, that action shall ONLY be performed by the person at the controls. The definition of “flight controls” includes the yoke and rudder, as well as the flaps, throttle, and brakes.
7. Responses such as “SET” imply that the item has been setup appropriately for the event’s conduct. Items are never to be reported "as required." Report the actual switch position.
8. Students are expected to bring the following items to each flight event:
 - a. Kneeboard (with notepad for writing down ATIS/clearance, and pen/pencil.) Your writing instrument shall be secured (tied to kneeboard, etc. Do not purchase or use ID card reels to tether your writing utensil to your kneeboard.)
 - b. NIFE INFLIGHT GUIDE (kneeboard cards)
 - c. Filled out TOLD card for your specific event
 - d. Flight Training Instruction manual
 - e. Master Curriculum Guide
9. Preflight Walk-Around. Pre-flight checklist does not need the verbal challenge response. Students will execute with the instructor following behind for proper checks. Fuel checks, removal of pitot tube cover, and oil level check must be completed prior to walk-around

inspection for timeliness of needing to service the oil or fuel. Fuel samples – use sampler cup and drain small quantity of fuel from each fuel tank sump quick drain valve to check for water/sediment. Three total sumps - one for each wing and one under the nose. If there is not a sump under the nose, use the Nose Fuel Strainer. Engine oil – do not operate with less than six quarts or 5.5 when the engine is hot. Always check the prop clear visually and verbally when required. Visually check the entire airplane while conducting the walk-around for general condition and security (damage, cuts, dents, or missing fasteners). Check freedom of movement and security for all control surfaces. Nosewheel strut should have a minimum of three inches. If leaving the airplane any time after the pre-flight has been conducted, ensure the control wheel lock is in, doors closed, tie downs used if windy, chocks are installed, and sunscreen are installed.

<u>"BEFORE STARTING ENGINE CHECKLIST"</u>		
CHALLENGE	ACTION	REPLY
1. "PREFLIGHT INSP"	Ensure fuel and oil was checked and a thorough walk-around was accomplished prior to starting checklist.	"COMPLETED"
2. "CIRCUIT BREAKERS"	Visually look at every circuit breaker to verify that none are popped.	"CHECKED IN"
3. "BRAKES"	Gently pump and apply positive pressure to both brakes while looking outside verifying no leaks.	"CHECKED"
4. "SEATS, BELTS/ HARNESES"	Adjust seats in order to properly use full rudders and ensure seats are locked in place. Then connect belts and harnesses ensuring a snug fit.	" ADJUSTED & SECURED"
"BEFORE STARTING ENGINE CHECKLIST COMPLETE"		

Table 1-1 - Before Starting Engine Checklist

“STARTING ENGINE CHECKLIST”		
CHALLENGE	ACTION	REPLY
1. “IGNITION KEY”	Take the key off the fuel selector and insert into the ignition.	“INSERTED”
2. "AVIONICS"	Check switch in OFF .	“OFF”
NOTE:	The avionics power switch must be OFF during engine starts to prevent possible damage to avionics	
3. “CARB HEAT”	Check carb heat knob is pushed in for OFF .	“OFF”
4. “BEACON”	Turn the beacon switch to the ON position. If a beacon is not installed, turn the strobe light switch to the ON position.	“ON”
5. “MIXTURE”	Check the mixture knob is pushed in for RICH .	“FULL RICH”
6. "THROTTLE"	Push the throttle knob in about 1/8 of an inch.	“SLIGHT”
7. “PRIMER”	Prime the engine using one stroke on warmer days or up to six strokes on colder days. If the engine is warm from a previous flight, you should not need to use prime. Afterwards, ensure primer is in and locked.	“AS REQ IN LOCKED”
8. “BRAKES”	Apply pressure to brakes and hold them until ready to taxi.	“HOLD”
9. "PROP"	Check prop area clear visually and shout ‘prop clear’ outside the aircraft to alert personnel around you that the engine will be starting momentarily.	“CLEAR”
10. “MASTER”	Move the master switch to the ON position	“ON”

11. "IGNITION"	Turn the ignition to the START position while keeping your hand on the throttle and release the key when the engine begins to run.	"START"
12. "THROTTLE"	As the engine begins to start, adjust the throttle knob until reaching 1000 RPM.	"1000 RPM"
13. "OIL PRESSURE"	Visually check oil pressure during engine start.	"CHECKED"
CAUTION:	If the oil gauge does not begin to show pressure within 30s in the summertime or up to a minute in very cold weather, stop the engine and investigate.	
14. "AMMETER"	Check the ammeter gauge for positive amps.	"POSITIVE"
15. "AVIONICS"	Move the avionics switch to the ON position.	"ON"
After avionics switch is on, conduct an ICS check.		
<i>Student: "ICS check," IP: "Loud and clear, how me?" Student: "I have you the same."</i>		
16. "NAV / STROBE LIGHTS"	Move the navigation lights and the strobe light (if not already) to the ON position.	"ON"
"STARTING ENGINE CHECKLIST COMPLETE"		

Table 1-2 – Starting Engine Checklist

“BEFORE TAXI CHECKLIST”		
CHALLENGE	ACTION	REPLY
1. “FLIGHT CONTROLS”	Move each of the flight controls to the full deflected position while checking outside to verify free and correct.	“CHECKED”
2. "TRIM"	Check trim is set for takeoff	“SET”
3. "MIXTURE"	Pull the mixture knob out to lean the mixture, usually about 1 inch. Lean more on hot days.	“LEAN”
4. “FLAPS”	Select flaps up. Check the gauge and visually verify flaps are UP .	“UP”
5. “HEAT/AIR VENT/DEFROST”	Use as required depending on current conditions.	“AS REQ”
6. "RADIOS"	At KPNS: Tune up and record ATIS and tune up Clearance 123.72 to give clearance request, if not already completed inside. If completed inside, ATIS should still be tuned up to verify current. At KJKA: Tune up and record ATIS on 134.525. Tune up Ground 121.7. Adjust radio volume as necessary. Set the next desired frequencies according to comm plan.	“CHECKED & SET”
7. "FLIGHT INSTRUMENTS"	Start top left (airspeed indicator) and work right. <u>Airspeed indicator</u> is at zero knots. <u>Attitude indicator</u> is erect and stable. Check current <u>altimeter</u> setting dialed in and altimeter shows within 75’ of airfield elevation. <u>Turn coordinator</u> shows wings level, ball in bracket and full of fluid. <u>Heading indicator</u> matches compass. <u>VSI</u> +/- 100 ft <u>Compass</u> general condition. Check fuel and oil temp/pressure gauges.	“CHECKED & SET”
“BEFORE TAXI CHECKLIST COMPLETE”		

Table 1-3 – Before Taxi Checklist

“TAXI CHECKLIST”		
CHALLENGE	ACTION	REPLY
1. “TRANSPONDER”	Ensure the proper code is entered (VFR or clearance squawk code), and the transponder is set to altitude.	“SQK CODE/ALT”
2. “BRAKES”	After establishing forward movement, apply both brakes to ensure proper function. Pass controls over to the instructor in order to check their brakes.	“CHECKED”
3. “HEADING & TURN COORDINATORS”	Once clear of personnel or objects and still in the ramp area (if able), apply L or R rudder and check proper needle and ball deflection. i.e. While applying left rudder, state “Left needle Right ball” and vice versa for other rudder.	“CHECKED”
“TAXI CHECKLIST COMPLETE”		
<p>After brakes have been checked and the taxi checklist is complete, but before exiting the ramp area and number one to taxi, call Pensacola Ground for taxi directions to the run-up or make the appropriate taxi call on CTAF. A more in-depth discussion, regarding communication, can be found in the FTI in appendix B and C. Below is an example sequence at KPNS / KJKA. While practicing and/or chair flying, make sure to keep using different call signs.</p> <p>Student: <i>“Pensacola Ground, BOLO 502, at Inisfree, taxi to run-up, information Bravo.” / “Gulf Shores Ground, BOLO 502, at Sky Warrior, taxi to run-up, information Bravo for North West departure.”</i></p> <p>Controller: <i>“BOLO 502, Pensacola Ground, taxi to runup via Delta.” / “BOLO 502, Gulf Shores Ground, taxi to east run-up via Echo Alpha.” (RWY 27 utilizes east run-up. Run-up areas per ground instruction)</i></p> <p>Student: <i>“Taxi to runup via Delta, BOLO 502.” / “Taxi to east run-up via Echo Alpha, BOLO 502.”</i></p>		

Table 1-4 – Taxi Checklist

“RUN-UP CHECKLIST”		
<u>CHALLENGE</u>	<u>ACTION</u>	<u>REPLY</u>
1. "BRAKES"	Ensure nosewheel is aligned with aircraft orientation, then apply pressure to the brakes and hold.	"HOLD"
2. "FUEL SELECTOR"	Check the selector in BOTH .	"BOTH"
3. "MIXTURE"	Check knob is pushed in for RICH .	"FULL RICH"
4. "THROTTLE"	Push in throttle to set 1700 RPM.	"1700 RPM"
5. "MAGS"	After throttle is set to 1700 RPM, move the magneto switch first to the R position and note RPM. Next move the switch back to BOTH to clear the other set of plugs. Then move switch to the L position, note RPM and return the switch back to BOTH. RPM drop should not exceed 125 RPM drop on either side or show greater than 50 RPM difference between magnetos.	"CHECKED"
6. "CARB HEAT"	Pull the carb heat knob out for ON and note a RPM drop of 50-100 RPM.	"CHECKED ON"
7. "VOLTMETER/ AMMETER"	Check for proper voltage and ammeter is positive.	"CHECKED"
8. "SUCTION GAUGE"	Check the suction gauge to ensure it reads in the green arc.	"CHECKED"
9. "OIL TEMP/PRESS"	Check that the oil temperature and pressure gauges are in the proper range.	"CHECKED"
10. "THROTTLE"	Retard the throttle and check that the RPM stays above 600 and the engine doesn't quit.	"IDLE"
11. "CARB HEAT"	Push in for OFF and note an RPM rise.	"CHECKED OFF"

12. “THROTTLE”	Check full throttle to verify 2250 – 2450 RPM.	“FULL”
13. “THROTTLE”	Set the throttle knob back to 1000 RPM.	“1000 RPM”
14. “THROTTLE FRICTION LOCK”	Adjust the friction lock around the throttle assembly as desired for a snug fit.	“ADJUSTED”
15. “MIXTURE”	Pull the mixture knob out about one inch to LEAN .	“LEAN”
16. “TAKEOFF BRIEF”	<i>“Rotate at __ (Vr), climb out at __ (Vy), departing to the (east, west, etc. state where you intend to go). Any malfunction prior to rotate, we’ll abort the takeoff. Any malfunction after rotate, we’ll climb to 1000 feet, enter the pattern and troubleshoot. If we have an engine failure after rotate with runway remaining – set it back down. If engine failure below 800’ AGL – select landing site within 30° of the nose. If engine failure above 800’ AGL – enter low key for nearest suitable runway.”</i>	“COMPLETE”
“RUN-UP CHECKLIST COMPLETE”		
<p>When runup complete, contact ground for further taxi. See below:</p> <p>Student: <i>“Pensacola Ground / Gulf Shores Ground, BOLO 502, complete with run-up, taxi to runway XX”</i></p> <p>Controller: <i>“BOLO 502, runway 27 taxi via Alpha.”</i></p> <p><i>Or “BOLO 502, runway eight at Alpha intersection departure, taxi runway eight via Delta Alpha, cross (or hold short) runway 35 at Delta.”</i></p> <p><i>Or “BOLO 502, runway 17 at Bravo intersection departure, taxi runway 17 via Delta Charlie Bravo, cross (or hold short) runway 26 at Charlie.”</i></p> <p><i>Or “BOLO 502, runway 26 at Delta Two intersection departure, taxi runway 26 via Delta Delta Two.”</i></p> <p><i>Or “BOLO 502, runway 35 at Delta intersections departure, taxi runway 35 via Delta.”</i></p> <p>Student, repeat taxi clearance call verbatim: e.g. <i>“runway eight at Alpha intersection departure, taxi runway 8 via Delta Alpha, cross runway 35 at Delta.”</i></p> <p>Approaching the hold short of the active runway, switch from the ground frequency to tower and execute the LINEUP checklist.</p>		

Table 1-5 – Run-Up Checklist

“LINEUP CHECKLIST”		
CHALLENGE	ACTION	REPLY
1. "FLAPS"	Check flaps are in the up position.	"UP"
2. "MIXTURE"	Check mixture knob is pushed in for FULL RICH .	"FULL RICH"
3. "CARB HEAT"	Check carb heat knob is pushed in for OFF .	"OFF"
4. "TRANSPONDER"	Ensure the transponder is squawking proper code and altitude.	"CHECKED"
5. "DOORS"	Ensure both doors are closed and latched.	"LATCHED"
6. "EXT LIGHTS"	Move taxi light and landing light switch to ON .	"ON"
“LINEUP CHECKLIST COMPLETE”		
<p>When number one holding short and ready for departure, make an appropriate tower or CTAF call for departure. Departure vs Takeoff. Avoid using the term “takeoff” except when repeating a takeoff clearance or announcing aborting takeoff. Use the term “departure,” when making requests or during taxi.</p> <p>Student: “Pensacola Tower / Gulf Shores Tower, BOLO 502 holding short runway XX, ready for departure.” Controller: “BOLO 502, Pensacola Tower / Gulf Shores Tower, runway XX cleared for takeoff, on departure maintain runway heading.” Student: “Cleared for takeoff, runway heading, BOLO 502.”</p> <p>Visually clear the runway environment before taxiing onto an active runway. Verify the heading indicator is aligned with runway heading and proper centerline alignment. Place your heels to the deck, set throttle to 2000 RPM, and check that the oil temp, pressure, ammeter, and suction are within the green range.</p> <p>NOTE:</p> <p>Do not delay on the runway, this is not a detailed instrument check as in the Before Taxi Checklist. If an instrument is not in the green or does not look right, abort the takeoff and taxi off the runway to troubleshoot.</p>		

Set full-throttle. Check IAS gauge for increasing airspeed. ICS communication during the takeoff roll are as follows: **“Heels to the deck, 2000, Instruments in the green, full throttle, Airspeed alive, 55 knots Rotate.”**

There is more discussion about follow-on radio calls in the FTI appendix B regarding tower to approach controllers. This is especially relevant since Pensacola airport is within a Class Charlie airspace. If taking off at a non-towered field, refer to appendix C for standard communications.

Table 1-6 – Lineup Checklist

CLIMB CHECKLIST		
<u>CHALLENGE</u>	<u>ACTION</u>	<u>REPLY</u>
1. "AIRSPEED"	Check and fly best rate of climb airspeed Vy (73 KIAS). If obstacles are near, fly best angle of climb Vx (62 KIAS) until clear, then transition to Vy.	"73 KIAS"
2. "THROTTLE"	Check throttle in full position (pushed in).	"FULL"
3. "MIXTURE"	At lower altitudes, check mixture knob is pushed in for FULL RICH . You may need to lean the mixture for best power at higher altitudes. In this case, lean as necessary for maximum RPMs.	"FULL RICH"
4. "INSTRUMENTS"	Check for gauges in the green and proper heading to compass alignment.	"CHECKED"
5. "TAXI/LANDING LIGHT"	Move the taxi light and landing light switch to the OFF position.	"OFF"
"CLIMB CHECKLIST COMPLETE"		

Table 1-7 – Climb Up Checklist

“CRUISE/POST MANEUVER CHECKLIST”		
CHALLENGE	ACTION	REPLY
1. "THROTTLE"	Check cruise setting of 2100-2300 RPM to establish 90 KIAS.	"__RPM"
2. “CARB HEAT”	After a descent-cruise transition. Ensure carb heat is pushed in for OFF .	“OFF”
3. "MIXTURE"	Lean the mixture knob as needed for smooth engine operation. Lean until RPMs deteriorate, then add a twist or two in order to slightly enrichen the mixture.	"SET"
4. “INSTRUMENTS”	Check for gauges in the green and proper heading to compass alignment.	“CHECKED”
5. “LANDING LIGHT”	Ensure or move the landing light switch to the OFF position.	“OFF”
“CRUISE CHECKLIST COMPLETE”		
The PRE MANEUVER checklist should be executed before all or each high work maneuver(s) at the discretion of the Instructor.		

Table 1-8 – Cruise Checklist

“PRE MANEUVER CHECKLIST”		
<u>CHALLENGE</u>	<u>ACTION</u>	REPLY
1. “FUEL SELECTOR”	Check the selector is in BOTH .	“BOTH”
2. “MIXTURE”	Check mixture knob is pushed in for FULL RICH .	“FULL RICH”
3. “LANDING LIGHT”	Move the landing light switch to ON .	“ON”
“PRE MANEUVER CHECKLIST COMPLETE”		

Table 1-9 – Pre-Maneuver Checklist

DESCENT CHECKLIST		
CHALLENGE	ACTION	REPLY
1. "INSTRUMENTS"	Check for gauges in the green and proper heading to compass alignment.	"CHECKED"
2. "MIXTURE"	Richen as necessary to ensure smooth engine operation.	"ADJUSTED"
3. "FUEL SELECTOR"	Check the selector is in BOTH .	"BOTH"
4. "CARB HEAT"	Use as required to prevent carb icing from forming.	"AS REQUIRED"
5. "THROTTLE"	Adjust as necessary to set desired airspeed during descent.	"AS REQUIRED"
"DESCENT CHECKLIST COMPLETE"		

Table 1-10 – Descent Checklist

BEFORE LANDING CHECKLIST		
<u>CHALLENGE</u>	<u>ACTION</u>	REPLY
1. "SEAT BELTS & HARNESSES"	Check for snug fit and still secured.	"SECURED"
2. "FUEL SELECTOR "	Check the selector in BOTH .	"BOTH"
3. "MIXTURE"	Check the mixture knob pushed in for RICH .	"FULL RICH"
4. "LANDING/TAXI LIGHTS"	Move the taxi and landing light switches to ON .	"ON"
5. "CARB HEAT"	Pull the carb heat knob out for ON .	"ON"
6. "FLAPS"	Select 20 degrees once below 85 KIAS.	"FLAPS 20"
"BEFORE LANDING CHECKLIST COMPLETE"		
<p>Before landing checklist should be executed as soon as possible once established in the Landing pattern. Save steps five and six until the abeam position. The after abeam position procedures shall be executed per the FTI. Once rolling out on final, as a safety check, verify the Before Landing checklist has been executed and that you are cleared to land (either cleared by tower or that you have visually cleared the runway and can proceed at a non-towered airfield. On short final state, "Before Landing Checklist complete, Cleared to land."</p>		

Table 1-11 – Before Landing Checklist

AFTER LANDING CHECKLIST		
CHALLENGE	ACTION	REPLY
1. "THROTTLE"	Move the throttle knob to set 1000 RPM	"1000 RPM"
2. "FLAPS"	Move the flaps to the UP position	"UP"
3. "MIXTURE"	Pull the mixture knob to lean for taxi, approximately one inch.	"LEAN"
4. "CARB HEAT"	Push the carb heat knob in for OFF.	"OFF"
5. "STOBES/LANDING / TAXI LIGHT"	Move the strobe light switch and landing/taxi light switches to OFF.	"OFF"
6. "PITOT HEAT"	Ensure the pitot heat switch is in the OFF position.	"OFF"
"AFTER LANDING CHECKLIST COMPLETE"		
<p>During the landing roll, expect tower to tell you to turn at a specific intersection to exit the runway and to switch to ground frequency. If they haven't and you're at a safe taxi speed (exit speed to turn off the runway) expect to take the next taxiway and report to tower, you're clear of the runway at your specific taxiway. Then expect a switch to ground, after which you can request taxi to parking.</p> <p>Tower: <i>"BOLO 502, right off on Delta, switch ground, 121.9." / "BOLO 502, left off Alpha three, switch ground, 121.7."</i></p> <p>Student: <i>"Right on Delta, 121.9, BOLO 502." / "Left on Alpha three, 121.7, BOLO 502."</i></p> <p>After clear of the active runway, switch to ground frequency or make necessary CTAF call "Clear of runway XX." Execute the AFTER LANDING CHECKLIST, then make the necessary taxi calls for Ground or on CTAF.</p> <p>Student: <i>"Pensacola Ground, BOLO 502, Off 35 on Delta, request taxi back to Inisfree." / "Gulf Shores Ground, BOLO 502 Off 27 on Alpha three, request taxi back to SkyWarrior."</i></p> <p>Ground: <i>"BOLO 502, Pensacola Ground, taxi to Inisfree via Delta." / "BOLO 502, Gulf Shores Ground, taxi to parking via Alpha Echo."</i></p> <p>Student: <i>"Inisfree via Delta, BOLO 502." / "Parking via Alpha Echo, BOLO 502."</i></p>		

Table 1-12 – After Landing Checklist

SECURING CHECKLIST		
CHALLENGE	ACTION	REPLY
1. "ELT"	Ensure the ELT is silent by selecting 121.5 in the active comm radio.	"CHECKED"
2. "TRANSPONDER"	Turn the transponder to standby mode.	"STAND BY"
3. "AVIONICS"	Turn OFF the avionics switch	"OFF"
4. "THROTTLE"	Pull out the throttle knob to IDLE .	"IDLE"
5. "MAGS"	Check for grounding by rotating the key to off, then back to BOTH	"CHECKED BOTH "
6. "THROTTLE"	Hold brakes and set throttle to 1300 RPM for 30 seconds then set throttle to idle.	"1300 RPM 30 SEC THEN IDLE"
7. "MIXTURE"	Pull out mixture knob to IDLE CUTOFF	"IDLE CUTOFF"
8. "MAGS"	Move the mag switch to OFF .	"OFF"
9. "MASTER"	Move the master switch to OFF .	"OFF"
10. "AIRCRAFT KEYS"	Remove the keys from the ignition and place on the fuel selector.	"FUEL SELECTOR"
11. "INT/EXT LIGHTS"	Move the interior and exterior light switches to OFF .	"OFF"
12. "CONTROLS LOCK"	Insert control lock in yoke pushrod with flag on the left.	"INSTALLED"
13. "COVERS/TIE DOWNS"	Install covers and tie downs as necessary if last flight of the day.	"INSTALLED"
14. "CHOCKS"		"INSTALLED"
15. "SUNSCREENS"	Install all sunscreens	"INSTALLED"
16. "HOBBS/TACH"	Record the flight time.	"RECORDED"
17. "CABIN/BAGGAGE DOOR"	Verify closed.	"CLOSED"
"SECURING CHECKLIST COMPLETE"		

Table 1-13 – Securing Checklist