

# Lancair Legacy Annual Condition Inspection Checklist

Performed by: \_\_\_\_\_

Completion Date: \_\_\_\_\_

Complete	Maintenance/Inspection Item	Comments
	<b>Pre-Inspection</b>	
	Research AD and Service bulletins	
	Inspect entire airframe for evidence of de-lamination or damage	
	Clean out glove box	
	Remove all items from baggage compartments	
	Remove the cowling	
	Remove inspection panels	
	Remove rear bulkhead	
	Remove spinner	
	Remove seat cushions & seat pans	
	<b>Wing Group</b>	
	Check landing, position & strobe lights	
	Inspect aileron hinges & lube with Tri-flow	
	Inspect aileron control rods and bell crank	
	Inspect wing attachment bolts	
	Inspect quick drains	
	Verify operation of fuel tank vents	
	Inspect fuel cap seal for wear	
	Inspect aileron trim for full motion	
	Inspect speed brakes (use a Bend-a-Light to look inside the trunk)	

	Verify speed brakes retract with loss of electrical power	
	Check & drain AOA ports (stick a wire in the port openings to verify clear)	
	Inspect pitot tube	
	Verify pitot heat is operational	
	<b>Flap Group</b>	
	Inspect flap motor & wiring	
	Inspect flap torque tube	
	Inspect flap position switch	
	Inspect flap hinges	
	Verify full operation of flaps	
	Inspect actuator tubes	
	<b>Tail Group</b>	
	Inspect rudder hinges & lube with Tri-flow	
	Inspect elevator hinges & lube with Tri-flow	
	Inspect rudder pushrod	
	Inspect elevator pushrod	
	Inspect elevator trim for full movement	
	Inspect rudder trim for full movement	
	Inspect rudder bell crank	
	Check elevator stops	
	<b>Landing Gear Group</b>	
	Inspect nose gear strut for leakage and proper inflation	
	Inspect main gear struts for leakage and proper inflation	

	Inspect brake pads for wear	
	Inspect tires for wear, cuts, flat spots & proper inflation pressure	
	Inspect landing gear doors	
	Inspect and repack wheel bearings every two years	
	Check brake fluid level	
	Inspect brake lines for abrasion or damage	
	Perform gear retraction	
	Perform emergency extension test	
	Swing gear freely and check for free and proper movement	
	Inspect wheel well hydraulic lines	
	Inspect down position micro-switches	
	Verify proper operation of airspeed pressure switch (squat switch)	
	Verify shimmy damper operation using "Lazy Susan" bearing	
	Verify nose gear centering mechanism	
	<b>Engine Group</b>	
	Inspect oil dip stick access door for proper operation	
	Inspect cowling for wear or damage	
	Remove spinner and inspect propeller hub	
	Inspect propeller for nicks & dress as required	
	Grease propeller as required by Hartzell (Aeroshell 6 grease 1 fl-oz or 6 pumps of the grease gun). Reinstall lube fittings to 50 in-lb torque (seems high)	
	Checked engine for oil leaks	
	Remove spark plugs (Keep track of the location)	

	Clean spark plugs	
	Gap spark Plugs (0.016 to 0.021" for fine wire plugs)	
	Anneal or use new gaskets (heat gasket until glowing red then quench in cold water)	
	Rotate Spark Plugs (1T to 6B, 1B to 6T, 2T to 5B, 2B to 5T, 3T to 4B, 3B to 4T)	
	Perform Compression Check note type of leakage (valve or rings)	
	Cylinder #1 =	
	Cylinder #2=	
	Cylinder #3 =	
	Cylinder #4 =	
	Cylinder #5 =	
	Cylinder #6 =	
	Check engine case bolts for tightness	
	Inspect oil cooler for leaks and box for cracking per SB034	
	Check oil cooler door for proper operation	
	Inspect engine mount for wear or corrosion	
	Remove air filter and inspect throttle butterfly	
	Inspect throttle cable for security and full movement	
	Inspect air filter element for cleanliness and damage then reinstall if OK	
	Inspect fuel hoses and distribution lines	
	Remove, inspect, clean & re-install fuel injectors to 60 in-lbs.	
	Inspect fuel control cable for security and full movement	
	Inspect fuel system drain lines	
	Inspect crankcase breather hose	

	Drain and Inspect gascolator screen & clean if required	
	Inspect exhaust system for cracks and security	
	Inspect exhaust flange gaskets for leaks	
	Inspect prop governor	
	Inspect prop control cable for security and full movement	
	Inspect baffling for cracks and clearance with cowl	
	Check EGT and CHT leads	
	Inspect engine wiring for security and abrasion	
	Inspect spark plug leads	
	Inspect P-leads	
	Check & adjust magneto timing	
	Install spark plugs & torque to 25 ft-lb	
	Check alternator wiring	
	Check regulator wiring	
	Check engine starter for security	
	Check oil pressure sender, hose & wire	
	Check oil temp sender & wire	
	Check fuel pressure sender wire	
	Check fuel flow sender wire	
	Remove cabin heat muff and inspect exhaust for cracks	
	Inspect cabin heat SCAT	
	Reinstall spinner, at proper indexing	
	<b>Cabin Group</b>	
	Check seat belts for security	
	Vacuum cabin	

	Remove battery. Clean, service and charge it	
	Check cabin heat control for full movement	
	Inspect defrost & fresh air SCAT	
	Inspect hydraulic lines, cylinders & dump valve	
	Check canopy latch mechanism for wear and proper operation	
	Verify that the canopy handle torque bolt is secure using 5/32" Allen wrench	
	Inspect canopy seal for damage and full perimeter attachment	
	Check control system for security and free movement	
	Verify aileron stop position	
	Remove and inspect emergency exit window	
	Inspect the hydraulic pump wiring and fittings	
	Inspect elevator push tubes and bell crank	
	Inspect fresh air vents and tubing	
	Inspect rudder pedals, brake cylinders, brake hoses and rudder cables	
	Operate the fuel selector to all positions	
	Inspect fuel lines inside cabin	
	Inspect autopilot roll servo, pushrods & electrical connections	
	Inspect autopilot pitch servo, pushrods & electrical connections	
	Reinstall Seat Pans	
	<b>Instruments Group</b>	
	Check pitot tube heat operation	
	Check static ports w/ 0.032 safety wire	

	Check ELT Battery for expiration date	
	Check ELT for proper operation using impact and panel mounted switches	
	Inspect pitot static system tubing	
	Cycle all breakers and switches to verify proper operation	
	Check trim selector switch for proper operation	
	Inspect BNC connections for damage and corrosion	
	Inspect antenna cables	
	Inspect oxygen system tubing	
	Inspect intercom wiring and plugs	
	Inspect wiring going to magnetometer	
	Check switch and breaker connections for tightness	
	Check instrument connectors	
	Check strobe lights & nav lights for proper operation	
	<b>Functional Check and Run-up</b>	
	Reinstall battery	
	Install all inspection panels	
	Remove jack fittings	
	Verify the gear dump valve is closed	
	Start engine verify oil pressure	
	Turn fuel selector to off and verify engine stops due to fuel starvation	
	Restart engine and let it warm up	
	Perform 1800 rpm run-up	
	Right mag drop =	
	Left mag drop =	
	Oil temperature =	
	Oil pressure =	
	Fuel pressure =	

	Fuel flow =	
	Cycle propeller	
	Shut engine down	
	Inspect engine for leaks	
	Install cowling	
	Wash the aircraft, clean canopy	
	Make appropriate entries into logbooks	
	<b>Squawk List Items To Be Addressed</b>	