

Builder
Lancair

LANCAIR 320/360 MK-II CHECKLIST

TAIL

1. Top of elevator, check for #8 screws. The 12 screws going into the elevator horn should be #10 screws. _____

2. Elevator push-pull tube that hooks to the elevator horn, check rod end for enough thread in the rod end. Then feel check nut for tightness. _____

3. End of the push-pull tube, double check to make sure the rivets are in the tube and that they are properly installed. _____

4. Rudder, the long bolt on the bottom should be safety wired. Make sure there is a washer on the top end that is bigger than the brass bushing. _____

5. Rudder, double check the throw on the rudder, both left and right. _____

LEFT WING

1. With the inspection plate off the bottom of the wing just below the aileron bellcrank, the areas of inspection are as follows:
- a. Long arm of the bellcrank, with the aileron in neutral, the long arm of the bellcrank should be pointed straight forward. _____

- b. Left-right push-pull tube, watch for binding on the outer tube and check the rod end for rocking motion. _____

- c. Two rod ends and the check nuts, examine for proper thread in the rod ends and for rocking motion. Make sure the area washers are installed. _____

- d. Push-pull tube that goes to the aileron, watch for any scraping on the rear spar as it goes to the aileron. _____

- e. Attachment to the aileron through the two brackets, make sure the bolts are in and tight. Check the through bolt from the rod end to the bracket. The bolt should be in and the nut tight. _____

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2. Counterweights, while you are underneath the aileron, see if the counterweights are on and secured properly. _____

3. Bottom of the aileron, make sure the curl isn't hitting the bottom wing skin. _____

LEFT WHEEL WELL AREA

1. Aileron idler, inspect this first. Check the bolt on the bottom of the idler and make sure the nut is on and tight. There should be a couple of threads showing. _____

2. Top push-pull tubes and rod ends, make sure the area washer is installed. Check for the rocking motion. The check nuts need to be hand checked for tightness. _____

3. GM-4 and GM-5 brackets, all the bolts are in and tight. _____

4. GM-1, end play should be at a minimum, front to rear no more than 50/1000ths. _____

5. Flap bellcranks in the wheel well area, for those airplanes using the flap bellcranks in the wheel well area, inspect the two rod ends and check for the rocking motion. Make sure the area washers are used for all rod ends. The check nuts must be tight. _____

6. Push-pull rod going to the flap, this should be the new 3/8" rod. Make sure the connection to the flap bracket is tight and secure. _____

7. Overcenter link, the bottom of the overcenter link should have the new rod end in place. The check nut must be tight with marking paint on it and grease the pivot point. _____

8. Overcenter brace, the top of the overcenter brace should have the 3/8" washer on the outside of the drag brace. The nut must be secured. _____

9. Cylinder attach, check for proper bolts and tightness. The cylinder should be straight for alignment purposes. Make sure it does not hit the overcenter link when the gear is down. _____

10. Fuel Pick-up from BL-50 rib, make sure it has good routing and that there are no leaks around the thread. _____

Router
Lancaster

- 11. Idlers, with ailerons in neutral, both idlers should point straight up. _____

- 12. All the glass work in the wheel well area, make sure it is in the right areas and that the quality is good. _____

RIGHT WING

- 1. With the inspection plate off the bottom of the wing just below the aileron bellcrank, the areas of inspection are as follows:
 - a. Long arm of the bellcrank, with the aileron in neutral, the long arm of the bellcrank should be pointed straight forward. _____

 - b. Left-right push-pull tube, watch for binding on the outer tube and check the rod end for rocking motion. _____

 - c. Two rod ends and the check nuts, examine for proper thread in the rod ends and for rocking motion. Make sure the area washers are installed. _____

 - d. Push-pull tube that goes to the aileron, watch for any scraping on the rear spar as it goes to the aileron. _____

 - e. Attachment to the aileron through the two brackets, make sure the bolts are in and tight. Check the through bolt from the rod end to the bracket. The bolt should be in and the nut tight. _____

- 2. Counterweights, while you are underneath the aileron, see if the counterweights are on and secured properly. _____

- 3. Bottom of the aileron, make sure the curl isn't hitting the bottom wing skin. _____

RIGHT WHEEL WELL AREA

- 1. Aileron idler, inspect this first. Check the bolt on the bottom of the idler and make sure the nut is on and tight. There should be a couple of threads showing. _____

Butter
Lansair

2. Top push-pull tubes and rod ends, make sure the area washer is installed. Check for the rocking motion. The check nuts need to be hand checked for tightness. _____

3. GM-4 and GM-5 brackets, all the bolts are in and tight. _____

4. GM-1, end play should be at a minimum, front to rear no more than 50/1000ths. _____

5. Flap bellcranks in the wheel well area, for those airplanes using the flap bellcranks in the wheel well area, inspect the two rod ends and check for the rocking motion. Make sure the area washers are used for all rod ends. The check nuts must be tight. _____

6. Push-pull rod going to the flap, this should be the new 3/8" rod. Make sure the connection to the flap bracket is tight and secure. _____

7. Overcenter link, the bottom of the overcenter link should have the new rod end in place. The check nut must be tight with marking paint on it and grease the pivot point. _____

8. Overcenter brace, the top of the overcenter brace should have the 3/8" washer on the outside of the drag brace. The nut must be secured. _____

9. Cylinder attach, check for proper bolts and tightness. The cylinder should be straight for alignment purposes. Make sure it does not hit the overcenter link when the gear is down. _____

10. Fuel Pick-up from BL-50 rib, make sure it has good routing and that there are no leaks around the thread. _____

11. Idlers, with ailerons in neutral, both idlers should point straight up. _____

12. All the glass work in the wheel well area, make sure it is in the right areas and that the quality is good. _____

NOSE GEAR AND NOSE WHEEL WELL AREA

- 1. Nose gear cylinder, check for proper travel. The stops must be set on the top and bottom so that no pressure will be exerted to the top of the nose tunnel. If the stops are not set right, the top of the cylinder could bust the glass out of the top of the wheel well area. _____

- 2. Door cylinder, plumb in the top as well as the bottom. Put a tee in the top of the nose gear cylinder. From the top tee, it should run down to the top of the nose gear door cylinder.

- 3. Sequence valve, check for right in and out on the plumbing. The nose gear door will be sequenced backwards if it is not plumbed correctly. _____

- 4. Screw and check nut in the sequence valve, make sure these are tight and aligned properly.

- 5. Gas spring, top bracket, cotter key should be through the bolt and the alignment straight.

- 6. Bottom of gas spring, should be straight. The nut should not be too tight as to prevent rotation. _____

- 7. Overcenter links, should be greased at the bottom and the center with a wheel bearing grease. _____

- 8. Nose well, all the holes in the nose well should be plugged with fiberglass or silicon in case of fire. _____

- 9. Micro switch, the wires running to the micro switch should be staked off (or silicon should be applied) to prevent the wires from getting tangles or pulled. _____

- 10. GM-27, make sure the alignment is straight. _____

- 11. Nose gear strut, this should be near the top for proper height. _____

Rubber
Leakair

ENGINE COMPARTMENT

- 1. Baffling, the baffling has to be tight. Any holes in the baffling will cause the engine to run hot. _____

- 2. Baffling, silicone should be used for all areas where the aluminum butts up next to the engine. _____

- 3. Baffling, the rubber on the outside for sealing of the baffling should be long enough so as not to blow in the wrong direction when the plane is at cruise. _____

- 4. Spark plugs, feel the spark plugs with your hands to make sure they are tight. _____

- 5. Fuel lines, all the fuel lines must have fire sleeves over them to prevent vapor including the hard lines. _____

- 6. In-line fuel filter, this must be installed to prevent engine out. The gascolator is not enough filter for the airplane. Rock the airplane and check once again for debris in the sumps. _____

- 7. Fuel system, check for leaks. Power up and make sure there are no leaks. _____

- 8. Nose gear, while you are looking at the engine, check the nose gear and make sure it is straight. _____

- 9. Exhaust system, make sure all bolts and nuts are in place and tight. _____

- 10. Engine mount bolts, make sure the bolts are at proper torque and that the right amount of washers are installed. _____

- 11. Prop bolts, make sure torque is set and that the safety wire is installed. _____

- 12. Electrical wiring, all electrical should be tied up and clear of hot exhaust. _____

□ □

13. Mixture control and throttle control, these must be rigged correctly for proper travel.

□ □

14. Prop governor cable, the bracket must be attached to the governor or else the cable will flex at a different rate. _____

INSIDE THE FUSELAGE

□ □

1. Elevator idler, behind the baggage bulkhead the elevator idler is a constant problem with builders. With the stick all the way forward (13 degrees) down, the bob weight should just clear the push-pull tube by one quarter of an inch. _____

□ □

2. Hydraulic pump, if the pump is in the rear, check the fluid and all the wiring. The new pump is wired differently than the old. Be sure to check it out. _____

□ □

3. Flap motor, check the flap motor behind the back seat and all related push-pull tubes for proper length, bolts and washers. _____

□ □

4. Battery, check behind the back seat for proper battery installation. _____

□ □

5. Push-pull tube that attaches to the stick cross-over tube, at the seat front, check very closely the two little tabs that have the 3/16" bolt through them to connect the elevator push-pull tube. _____

□ □

6. All connections that attach to the stick cross-over, check all rod ends and feel all check nuts for security. _____

□ □

7. Rod ends, all controls with rod ends must have area washers installed. The aileron rod ends usually need spacers so they can rock far enough without loosening the check nuts.

□ □

8. Fuel lines, the fuel lines coming from the pump must have proper attachments. The plastic fuel line should not be frayed or hard plastic. _____

□ □

9. Aileron push-pull tube going through the close-out rib, make sure there is no scraping on the rib. _____

- 10. Hydraulic line and fittings, check to make sure there are no leaks. Make sure there is proper alignment on the door close-out cylinders. _____
- 11. Rudder pedals, make sure these are set so when you push on them the brakes won't go on. _____
- 12. Castle nuts, make sure all the cotter keys are in. _____
- 13. Instrument panel, make sure all wires behind the instrument panel are tied off to prevent a short. _____
- 14. Stop nuts, remember all stop nuts only go on rod ends, not on moveable parts with no bearings. Washers should be installed only on the nut end, not on the bolt end. _____

LANCAIR 320/360 MK-II INFORMATION FORM

OWNER _____ **PHONE #** _____

ADDRESS _____

N# _____ **SERIAL #** _____ **AIRCRAFT TYPE** _____

DATE _____ **TACH TIME** _____ **HOURS TOTAL TIME** _____

EMPTY WEIGHT _____ **PAINT? Yes/No** _____ **INTERIOR? Yes/No** _____

ENGINE TYPE _____ **PROPELLER** _____

Is the airplane signed off the by the FAA? _____

Have the taxi tests been completed? _____

Has the inspection been completed by the builder prior to the company's inspection and test flight? _____

Has the checklist been returned to the company? _____