

ENGINE
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SECTION 8
HANDLING, SERVICE
& MAINTENANCE

ANNUAL INSPECTION CHECKLIST

Aircraft BUSHBY MUSTANG II Registration # N 727RH
Engine Make & Model LYCOMING IO-320-BIA Serial # L-1545-55A
Propeller Make & Model HARTZELL Serial # 1408 HC-E2YL-2BS BLADES: F7663-4 S/N: B847662 B 85182
Magnetos Make & Model SLICK
Left Part # 4373 Serial # 94070048
Right Part # 4373 Serial # 94070050
Carburetor Make & Model N/A
Part # — Serial # —
Starter Make & Model SKY-TECH
Part # 149-12LS Serial # F2L-400109
Alt/Gen Make & Model AIRTECH Amp. Rating 45A
Part # 02 Serial # —
Fuel Injector Make & Model BENDIX RSA-5ADI
Part # 5415 Serial # SERVO : 2524145-11
MANVALVE: 2524158-2
Other Part Name: VACUUM PUMP Make & Model AIRBORNE
Part # 211CC Serial # 05-23182
Other Part Name: _____ Make & Model _____
Part # _____ Serial # _____
Other Part Name: _____ Make & Model _____
Part # _____ Serial # _____

A. PREPARATION

- _____ 1. Check parts and components for compliance with any applicable Airworthiness Directives.
- _____ 2. Remove or open all necessary inspection plates, access doors, fairings, and cowlings.
- _____ 3. Check for registration certificate, radio station license, weight and balance data, equipment list, operating limitations, and all required placards.
- _____ 4. Thoroughly clean airplane and engine.

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B. WINGS AND CENTER SECTION GROUP

- _____ 1. Check surfaces and tips for deterioration (fabric), distortion, damage, and loose rivets.
- _____ 2. Check aileron hinges, attachments, and proper travel.
- _____ 3. Check aileron cables, pulleys, and bell cranks for damage and proper operation. *Aileron bell tube guides.*
- _____ 4. Check flaps and attachments for damage and operation.
- _____ 5. Check spars and ribs for corrosion or dry rot.
- _____ 6. Lubricate as required.
- _____ 7. Check wing attachment bolts and brackets.
- _____ 8. Check fuel tanks and lines for leaks and water.
- _____ 9. Check that tanks are marked for minimum octane rating.
- _____ 10. Reinstall inspection plates and fairings.

C. FUSELAGE AND EMPENNAGE GROUP

- _____ 1. Check fabric and skin for deterioration, distortion, loose rivets, corrosion, or other evidence of failure.
- _____ 2. Check battery, if applicable.
- _____ 3. Check ELT for battery replacement date: _____.
- _____ 4. Check electronic installations.
- _____ 5. Check antenna mounts and electric wiring.
- _____ 6. Check bulkheads and stringers (or their equivalent) for corrosion or other evidence of failure.
- _____ 7. Check fuel lines, valves, and gauges for security, leaks, damage, and proper operation.
- _____ 8. Check hydraulic lines, cylinders, and valves for security or leaks; add fluid to reservoir as required.
- _____ 9. Check vertical fin and rudder surfaces for damage.
- _____ 10. Check rudder hinges, horn, and attachments for damage and proper operation/travel.
- _____ 11. Check stabilizer and elevator surfaces for damage.
- _____ 12. Check elevator hinges, horn, and attachments for damage and proper operation/travel.
- _____ 13. Check rudder and elevator push-rods, cables, guides, turnbuckles, and pulleys for damage and safety.
- _____ 14. Check rudder and elevator trim mechanism.
- _____ 15. Lubricate as required.
- _____ 16. Reinstall inspection plates, fairings, and panels.

D. PROPELLER ASSEMBLY

- _____ 1. Inspect spinner, mounting brackets, and back plate.
- _____ 2. Inspect blades for nicks and cracks.
- _____ 3. Check for grease and oil leaks.
- _____ 4. Lubricate propeller per service manual.
- _____ 5. Check hub parts for cracks and corrosion.
- _____ 6. Check propeller mounting bolts for torque and safety.
- _____ 7. Rotate blades and inspect complete propeller and spinner assembly for security, chaffing, cracks, wear, and correct installation.

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E. ENGINE AND NACELLE GROUP

- _____ 1. Inspect for visual evidence of excessive oil, fuel, or hydraulic leaks, and the source of such leaks.
- _____ 2. Drain oil; check for metal particles on drain plug.
- _____ 3. Clean oil screen, change oil filter, check for metal particles or foreign matter.
- _____ 4. Check and record compression:

#1_____ #2_____ #3_____ #4_____ #5_____ #6_____
- _____ 5. Clean, gap, rotate, and replace spark plugs as required.
- _____ 6. Check ignition harness wires for brakes and chaffing.
- _____ 7. Check magnetos for oil leaks.
- _____ 8. Check, set magneto timing.
- _____ 9. Drain carburetor bowl and clean finger screen.
- _____ 10. Check throttle shaft for looseness.
- _____ 11. Check throttle arm bolt for wear.
- _____ 12. Check mixture arm bolt for wear.
- _____ 13. Check throttle cable for full travel and freeness.
- _____ 14. Check mixture cable for full travel and freeness.
- _____ 15. Check carb heat (alternate air) box for condition.
- _____ 16. Check carb heat cable for wear and proper operation.
- _____ 17. Check and replace air filter as required.
- _____ 18. Inspect all air inlet hoses and replace as required.
- _____ 19. Drain and clean fuel strainer.
- _____ 20. Inspect all fuel lines for proper routing and chaffing.
- _____ 21. Check vacuum pump and lines.
- _____ 22. Check baffling for cracks and proper fit.
- _____ 23. Check intake tube hoses and gaskets for leaks, and clamps for tightness.
- _____ 24. Check rocker box and oil return lines for leaks, chaffing, and clamps for tightness.
- _____ 25. Check exhaust stacks for blown gaskets, missing nuts.
- _____ 26. Check exhaust heat muff for holes and cracks.
- _____ 27. Check alt/gen. for broken wires or brackets, worn attaching bolts, and drive belt wear and tension.
- _____ 28. Check all electric wires for routing and chaffing.
- _____ 29. Check starter for loose wires, oil leaks, broken brackets, worn attaching bolts.
- _____ 30. Check oil cooler seals and brackets, and oil lines.
- _____ 31. Check crank flange seal for leaks.
- _____ 32. Check engine mounts for looseness and rubber condition, cracks in mount tubing, and security to firewall.
- _____ 33. Check all oil lines for proper routing and chaffing.
- _____ 34. Replace oil as required.
- _____ 35. Clean fuel injector inlet line screen and nozzles.
- _____ 36. Check cowling for cracks or chaffing and replace.

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F. LANDING GEAR GROUP

- ___ 1. Check ole struts air and fluid.
- ___ 2. Check nose gear (tail wheel) steering control, travel.
- ___ 3. Check wheel alignment.
- ___ 4. Remove wheels; clean, check, and repack bearings. ^{Main} (250 hrs.) ^{Tail} (100 hrs.)
- ___ 5. Check wheels for cracks, corrosion, and broken bolts.
- ___ 6. Check brake linings and discs.
- ___ 7. Check tires for cuts, uneven or excessive wear, slippage, and proper inflation.
- ___ 8. Check shimmy dampener for proper operation.
- ___ 9. Check gear fork, axle for damage.
- ___ 10. Check gear torque links for cracks and looseness.
- ___ 11. Check all hydraulic lines, electrical leads, and attaching parts for security, routing, chaffing, deterioration, and wear.
- ___ 12. Test retraction and emergency extension systems.
- ___ 13. Lubricate as required.

G. CABIN GROUP

- ___ 1. Check windows and doors (hinges and fasteners) for signs of deterioration, cracks, and breakage.
- ___ 2. Check generally for uncleanness and loose equipment that might foul controls.
- ___ 3. Check seats, seat belts, security brackets, and bolts.
- ___ 4. Check trim control, cables, and proper operation.
- ___ 5. Check parking brake operation.
- ___ 6. Check rudder pedals, attachments, and brake cylinders.
- ___ 7. Check control wheel/stick, attachments, pulleys, cables, and proper operation.
- ___ 8. Check flap control for proper operation.
- ___ 9. Check landing, navigation, cabin, and instrument lights.
- ___ 10. Check instruments for mounting, markings, lines, wires, and (where practicable) proper operation.
- ___ 11. Replace gyro air filter.
- ___ 12. Replace vacuum regulator filter.
- ___ 13. Check fuel selector valve for proper marking and operation.
- ___ 14. Check engine controls for proper installation and operation.
- ___ 15. Check radios and electronic equipment for proper installation and operation.
- ___ 16. Check radio wiring, conduits, bonding, and shielding for proper installation, routing, mounting, and obvious defects or chaffing.

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H. ENGINE RUN-UP

- _____ 1. Check oil pressure.
- _____ 2. Check oil temperature.
- _____ 3. Check fuel pressure.
- _____ 4. Check cylinder head temperature.
- _____ 5. Check brakes and parking brake.
- _____ 6. Check magneto RPM drop. Left drop: _____ RPM
Right drop: _____ RPM
- _____ 7. Cycle propeller through range.
- _____ 8. Check all engine controls.
- _____ 9. Check power output (idle and static RPM).
- _____ 10. Check magneto ground.
- _____ 11. Check engine for oil leaks.

SPECIAL NOTATIONS:

Work performed by: _____ Date: _____