**Minimum Inspection Programme task/inspection checklist/worksheet**

(MIP for ELA2 sailplanes and ELA2 powered sailplanes)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Aircraft registration:** | |  | **Aircraft total time:** | |  | **Aircraft Tach:** | |  | |
| **Station:** |  | | **Work Order:** |  | | **Date – period:** | | |  |
|  | | | | | | | | | |
| **Documentations/manuals used including revision status** | | | | | | | | | |
| **Document Type** | | | **Document reference** | | | | **Revision** | | |
|  | | |  | | | |  | | |
|  | | |  | | | |  | | |
|  | | |  | | | |  | | |
|  | | |  | | | |  | | |
|  | | |  | | | |  | | |

**Note 1: The below task list is based on AMC M.A.302(i) in Annex I to ED Decision 2015/024/R (2015/029/R).**

**Note 2:** To be performed every annual/100-h interval, for Touring Motor Glider (TMG)), whichever comes first; or every annual interval for other than TMGs.

**Note 3:** A tolerance of 1-month or 10 h, as applicable, may be applied. The next interval shall be calculated from the time the inspection takes place.

**Note 4:** Use the current manufacturer’s maintenance manual to accomplish each task/inspection.

**Note 5:** In the case of TMGs, it is acceptable to control the hours of use of the aircraft, engine and propeller as separate entities. Any maintenance check to be carried out between two consecutive 100-h/annual inspections may be performed separately on the aircraft, engine and propeller, depending on when each element reaches the corresponding hours. However, at the time of the 100- h/annual, all the elements must be covered.

**Note 6:** Proper operation of backup or secondary systems and components must be included for every instance where a check is performed for improper installation / operation

**Note 7:** State **Y** (yes) **N** (no) in defect column. All defect must be recorded on a worksheet or in the appropriate logbook(s) with rectification taken

**(Annual / 100 hour inspection)**

|  |  |  |  |
| --- | --- | --- | --- |
| **System / component / area** | **Task & Inspection detail** | **defect**  **Y**es / **N**o | **Accomplished (initial)** |
| **GENERAL** | | | |
| General - all tasks | The aircraft must be clean prior to inspection. Inspect for security, damage, wear, integrity, whether drain/vent holes are clear, for signs of overheating, leaks, chafing, cleanliness and condition, as appropriate to the particular task. Whilst checking composite structures, check for signs of impact or pressure damage that may indicate underlying damage. |  |  |
| Lubrication/servicing | Lubricate and replenish fluids in accordance with the manufacturer’s requirements. |  |  |
| Markings | Check that side and underwing registration markings are correct. If applicable, check that an exemption for alternate display is approved, if identification plate for NAA-registered aircraft is present, and if other identification markings on fuselage are in accordance with local (national) rules. |  |  |
| Weighing | Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required by the relevant Regulation for air operations. |  |  |
| **AIRFRAME** | | | |
| Fuselage paint/gel coat | Inspect external surface and fairings, gel coat, fabric covering or metal skin, and paintwork. |  |  |
| Fuselage structure | Check frames, formers, tubular structure, skin, and attachments. Inspect for signs of corrosion on tubular framework. |  |  |
| Nose fairing | Inspect for evidence of impact with ground or objects. |  |  |
| Release hook(s) | Inspect nose and centre of gravity, release hooks and controls. Check operational life. Carry out operational test. If more than one release hook or control is fitted, check operation of all release hooks from all positions. |  |  |
| Pitot/ventilator | Check alignment of probe, check operation of ventilator. |  |  |
| Pitot-static system | Inspect pitot probes, static ports, and all tubing (as accessible) for security, damage, cleanliness, and condition. Drain any water from condensate drains. |  |  |
| Bonding/vents drains | Check all bonding leads and straps. Check that all vents and drains are clear from debris. |  |  |
| **CABIN AND COCKPIT** | | | |
| Cleanliness/loose articles | Check under cockpit floor/seat pan and in rear fuselage for debris and foreign items. |  |  |
| Canopy, locks and jettison | Inspect canopy, canopy frame and transparencies for cracks, unacceptable distortion, and discolouration. Check operation of all locks and catches. Carry out an operational test of the canopy jettison system from all positions. |  |  |
| Seat/cockpit floor | Inspect seat(s). Check that all loose cushions are correctly installed and, as appropriate, that energy-absorbing foam cushions are fitted correctly. Ensure that all seat adjusters fit and lock correctly. |  |  |
| Harness(es) | Inspect all harnesses for condition, and wear of all fastenings, webbing, and fittings. Check operation of release and adjustments. |  |  |
| Rudder pedal assemblies | Inspect rudder pedal assemblies and adjusters. Inspect cables for wear and damage. |  |  |
| Instrument panel assemblies | Inspect instrument panel and all instruments/equipment. Check if instrument readings are consistent with ambient conditions. Check marking of all switches, circuit breakers, and fuses. Check operation of all installed equipment, as possible in accordance with the manufacturer’s instructions.  Check markings of instruments in accordance with the aircraft flight manual  (AFM). |  |  |
| Oxygen system | Inspect oxygen system. Check bottle hydrostatic-test date expiry in ccordance with the manufacturer’s recommendations.  Ensure that oxygen installation is recorded on weight and centre-of-gravity  schedule.  CAUTION: OBSERVE ALL SAFETY PRECAUTIONS. |  |  |
| Colour-coding of controls | Ensure that controls are colour-coded in accordance with the AFM and in good condition. |  |  |
| Placards | Check that the placards are correct and legible, and accurately reflect the status of the aircraft in accordance with the AFM. |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **LANDING GEAR** | | | |
| Front skid/nose wheel and mounts | Inspect for evidence of hard/heavy landings. Check skid wear. Inspect wheel, tyre, and wheel box. Check tyre pressure. |  |  |
| Main wheel and brake assembly | Check for integrity of hydraulic seals and leaks in pipework. Check life of hydraulic hoses and components, if specified by the manufacturer. Remove brake drums, check brake lining wear. Check disk/drum wear. Refit drum. Check brake adjustment.  CAUTION: BRAKE DUST MAY CONTAIN ASBESTOS. Check operation of brake. Check level of brake fluid and replenish, if necessary. Check tyre pressure.  CAUTION: CHECK TYPE OF BRAKE FLUID USED AND OBSERVE SAFETY PRECAUTIONS. |  |  |
| Undercarriage suspension | Check springs, bungees, shock absorbers, and attachments. Check for signs of damage.  Service strut, if applicable. |  |  |
| Undercarriage retract system and doors | Check retraction mechanism and controls, warning system if fitted, gas truts, doors and linkages/springs, over-centre/locking device. Perform retraction test. |  |  |
| Tail skid/wheel | Inspect for evidence of hard/heavy landings. Check skid wear. Inspect wheel, tyre, and wheel box. Check bond of bonded skids. Check tyre pressure. |  |  |
| Wheel brake control circuit | Inspect wheel brake control rods/cables. If combined with air brake, ensure correct rigging relationship. Check parking-brake operation, if fitted. |  |  |
| **WING AND CENTRE SECTION** | | | |
| Centre section | Inspect wing centre section including fairings for security, damage, and condition. |  |  |
| Wing attachments | Inspect the structural attachments of the wing. Check for damage, wear, and security. Check for rigging damage. Check condition of wing attachment pins and wing main bolts. |  |  |
| Winglet/wing extensions | Inspect the structural attachments of winglet and wing attachments. Check for damage, wear, and security. |  |  |
| Aileron control circuit/stops | Inspect aileron control rods/cables. Check that control stops are secure and make contact. Inspect connecting control devices for security, damage, free play and secure mounting. |  |  |
| Aileron control circuit/stops | Inspect aileron control rods/cables. Check that control stops are secure and make contact. Inspect connecting control devices for security, damage, free play and secure mounting. |  |  |
| Air brake control circuit | Inspect air brake control rods/cables. Check friction/locking device (if fitted). Inspect connecting control devices for security, damage, free play and secure mounting. Inspect air brake locking for proper adjustment and positive locking. |  |  |
| Wing struts/wires | Inspect struts for damage and internal corrosion. Re-inhibit struts internally every 3 years or in accordance with the manufacturer’s instructions. |  |  |
| Wings including underside registration markings | Check mainplane structure externally and internally, as far as possible. Check gel coat, fabric covering, or metal skin. |  |  |
| Ailerons and controls | Inspect aileron and flaperon assemblies, hinges, control connections, springs/bungees, tapes, and seals. Ensure that seals do not impair the full range of movement. |  |  |
| Air brakes/spoilers | Inspect air brake/spoiler panel(s) operating rods, closure springs, and friction devices, as fitted. |  |  |
| Flaps | Check flap system and control. Inspect connecting control devices. |  |  |
| Control deflections and free play, and record them on worksheets | Check and record range of movements and cable tensions, if specified, and check free play. |  |  |
| **EMPENNAGE** | | | |
| Tailplane and elevator | With tailplane de-rigged, check tailplane and attachments, self-connecting and manual control connections. Check gel coat, fabric covering, or metal skin. |  |  |
| Rudder | Check rudder assembly, hinges, attachments, balance weights. |  |  |
| Rudder control circuit/stops | Inspect rudder control rods/cables. Check that control stops are secure and make contact. Pay particular attention to wear and security of liners and cables in ‘S’ tubes. |  |  |
| Elevator control circuit/stops | Inspect elevator control rods/cables. Check that control stops are secure and make contact. Inspect self-connecting control devices. |  |  |
| Trimmer control circuit | Inspect trimmer control rods/cables. Check friction/locking device. Inspect trim indication for proper adjustment and function. |  |  |
| Control deflections and free play, and record them on worksheets | Check and record range of movements and cable tensions, if specified, and check free play. |  |  |
| **AVIONICS AND ELECTRICS** | | | |
| Electrical installation/fuses | Check all electrical wiring for condition. Check for signs of overheating and poor connections. Check fuses/trips for condition and correct rating. |  |  |
| Battery security and corrosion | Check battery mounting for security and operation of clamp. Check for evidence of electrolyte spillage and corrosion. Check that battery has correct main fuse fitted.  It is recommended to carry out battery capacity test on gliders equipped with radio, used for cross-country, controlled airspace, or competition flying. |  |  |
| Radio installations and placards | Check radio installation, microphones, speakers and intercom, if fitted. Check that a call sign placard is installed. Carry out ground function test. Record radio type fitted. |  |  |
| Air speed indicator | Carry out a pitot static leak check and functional check of the airspeed indicator. In case of indications of malfunctions, carry out an airspeed indicator calibration check. |  |  |
| Altimeter datum | Check barometric subscale by altimeter QNH reading. |  |  |
| Pitot-static system | Perform pitot static leak check, inspect hoses for condition, operational check. |  |  |
| Transponder | Perform operational check. |  |  |
| **MISCELLANEOUS** | | | |
| Removable ballast | Check removable ballast mountings and securing devices (including fin ballast, if (applicable) for condition. Check that ballast weights are painted with conspicuous colour. Check that provision for the ballast is made on the loading placard. |  |  |
| Drag chute and controls | Inspect chute, packing and release mechanism. Check packing intervals. |  |  |
| Water ballast system | Check water ballast system, wing and tail tanks, as fitted. Check filling points, level indicators, vents, dump and frost drains for operation and leakage. If loose bladders are used, check for leakage and expiry date, as applicable. |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **POWERPLANT (when applicable)**  NOTE: In the case of sailplanes with electrical or jet engines, follow the maintenance instructions and recommendations of the DAH. | | | |
| Engine pylons and mountings | Inspect engine and pylon installation. Check engine compartment and fire sealing. |  |  |
| Gas strut | Check gas strut. |  |  |
| Pylon/engine stops | Check limit stops on retractable pylons. Check restraint cables. |  |  |
| Electric actuator | Inspect electric actuator, motor, spindle drive, and mountings. |  |  |
| Electrical wiring | Inspect all electrical wiring. Pay special attention to wiring that is subject to bending during extension and retraction of engine/pylon. |  |  |
| Limit switches | Check operation of all limit switches and strike plates. Make sure that they are not damaged by impact. |  |  |
| Fuel tank(s) | Check fuel tank mountings and tank integrity. Check fuel quantity indication system, if fitted. |  |  |
| Fuel pipes and vents | Check all fuel pipes, especially those subject to bending during extension and retraction of engine/pylon. Check that vents are clear. Make sure that overboard drains do not drain into engine compartment. Check self-sealing. |  |  |
| Fuel cock or shut -off valve | Check operation of fuel cock or shut-off valve and indications. |  |  |
| Fuel pumps and filters | Clean or replace filters, as recommended by manufacturer. Check operation of fuel pumps for engine supply or tank replenishment. Check fuel pump controls and indications. |  |  |
| Decompression valve | Inspect decompression valve and operating control. |  |  |
| Ignition | Inspect ignition system including spark plugs, distributor and cables for condition and damage. Inspect low-tension and high-tension wiring, connectors, spark plug caps. Check magneto-to-engine timing. |  |  |
| Propeller | Inspect propeller, hub, folding mechanism, brake, pitch change mechanism, stow sensors. Inspect propeller control for function and condition. |  |  |
| Doors | Check engine compartment doors, operating cables, rods, and cams. |  |  |
| Safety springs | Check all safety and counterbalance springs. |  |  |
| Extension and retraction | Check that extension and retraction operation times are within the limits specified by the manufacturer. Check light indications and interlocks for correct operation. |  |  |
| Exhaust | Inspect exhaust system, silencer, shock mounts, and links. |  |  |
| Engine installation | Inspect engine and all accessories. Carry out compression test and record results (for piston engines). Compression test results: No 1 (left/front); and No 2 (right/rear). |  |  |
| Lubrication | Change engine oil and filter. Replenish oil and additive tanks. |  |  |
| Engine instruments | Inspect all engine instruments and controls. Check control unit, mounts, bonding and connections. Carry out internal self-test, if fitted. |  |  |
| Engine battery | If separate from airframe battery, inspect battery and mountings. If main fuse is fitted, check rating and condition. |  |  |
| Engine battery capacity test | Carry out capacity test. Refer to appropriate manual or guidance. |  |  |
| Placards | Check that all placards are in accordance with the AFM and legible. |  |  |
| Oil and fuel leaks | With the engine fully serviced, check the fuel and oil system for leaks. |  |  |

|  |  |  |
| --- | --- | --- |
| **After completion of all maintenance** | **Task & Inspection detail** | **Accomplished (initial)** |
| Risk of multiple errors (ML.A.402(b)(7): | Risk of multiple errors during maintenance and the risk of errors being repeated in identical maintenance tasks has been ensured |  |
| Critical maintenance task (ML.A.402(b)(8): | Error-capturing method was implemented after the performance of any critical maintenance task |  |
| Carry out general verification to ensure: | - the aircraft is clear of all tools, equipment and any other extraneous parts and material |  |
| - that all access panels removed have been refitted |  |
| Aircraft certificate of release to service | At the completion of all maintenance and verification above, when satisfied that all maintenance required has been properly carried out, issue aircraft release to service in the appropriate logbook(s) in accordance with Part-M Subpart H (M.A.801) |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date completed:** |  | |  | |
| **Part-66 Licence number:** | |  |  | |
| **Certifying staff Name:** | |  | |  |
| **Certifying staff signature:** | |  | |  |