

CHAPTER 05 – TIME LIMITS AND MAINTENANCE CHECKS

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05-00 GENERAL

It is the aircraft owner's responsibility to keep the aircraft in good, airworthy condition at all times and this chapter provides information on how to do it. It covers topics such as intervals for the overhaul/replacement of components, scheduled/unscheduled maintenance for the aircraft and general maintenance hints/tips. The time intervals mentioned in this chapter are those by the manufacturer, Pipistrel d.o.o., and should be considered the minimum required to keep the airplane in good operating condition.

It should be noted, however, that the NAA in the country where the aircraft is registered may have different requirements regarding time limits and maintenance checks. Its requirements must be adhered to at all times, including any directives or bulletins it issues. The requirements found in this manual DO NOT override those of the NAA.

All of the intervals and checks outlined in this manual were established based on test data taken in moderate conditions on grass runways. If the aircraft is operated in extreme conditions, such as those with drastically high/low temperatures, sandy environments and/or air with a higher than normal salt content, the intervals may be adjusted.

CAUTION: The NAA of the country where the aircraft is registered may, if deemed necessary, choose to shorten and/or lengthen the time limit/inspection intervals in this chapter. The aircraft owner/operator is required to acquaint themselves with NAA alterations/changes before maintaining/servicing the aircraft.

NOTE: Pipistrel reserves the right to change the contents of this manual, including maintenance intervals, and all/any changes will be published in the form of a revision.

NOTE: Only qualified aircraft mechanics with the appropriate rating are permitted to carry out the maintenance procedures outlined in this maintenance manual.

NOTE: A record of all maintenance performed on the aircraft must be indicated in the aircraft log-book.

NOTE: The aircraft maintenance mandated in this chapter is to be performed according to flight time, the engine maintenance is to be performed according to the "HOBBS" value displayed on the MFD, while items with calendar time intervals shall be serviced according to the time that has elapsed since the dates found in the document "List of Limited Life-Time Items for Aircraft" (LLTI), supplied with aircraft.

05-10
TIME LIMITS**05-10 TIME LIMITS**

Certain components installed on the Pipistrel aircraft have time limits, which dictate when, at the latest, they should be overhauled or replaced. These same components can and should be replaced/overhauled prior to the interval listed if, upon inspection, it's determined that they're faulty, unserviceable, have incurred damage or are in bad condition.

CAUTION: All of the time limits outlined in Table 05-001 must be considered when performing the 100 hour/Annual inspection. Removal or overhaul of any these items must be entered into the aircraft technical log book.

CAUTION: If a components time limit is to occur before the next planned inspection, it must be included in the current inspection.

NOTE: The limits mentioned in Table 05-001 DO NOT indicate product lifetime and must not be interpreted as such.

NOTE: The aircraft owner/operator and/or the person maintaining/servicing the aircraft is required to acquaint themselves with and implement the time limits listed in the various maintenance manuals referred to in Table 05-001.

Item No.	Description	Interval		Maintenance		Notes/Reference
		HRS	YRS	OH	RPLC	
1	Landing gear - tires		5		X	See 32-41
2	Beringer brake caliper pistons	3000*	5*		X	*Whichever comes first or in case of rejected take-off, see [v2]
3	Beringer brake rubber seals	3000*	5*		X	*Whichever comes first, anytime the seals are removed/uninstalled (i.e. piston replacement) or in case of rejected take-off see [v3]
4	Standard wheel/brake assembly - brake lines				O/C	See 32-00
5	Hydraulic brake fluid	3000*	5*		X	*Whichever comes first Drain the brake system, see 12-20: 2.7. Perform inspection check 32-42: 2.4. Replenish the brake system, see 12-10: 2.5.
6	Propeller Assembly	Depending on the applicable				See applicable [10]
7	Engine Fuel Pump		5		X	See [1], see [v1]
8	Auxiliary Fuel pump	2000			X	
9	Standard muffler	1000			X	See 78-20
10	Akrapovič single and double tail pipe muffler	2000			X	See 78-20
11	Exhaust system springs and fire protection				X	On condition - all springs
12	Throttle and choke cables		5		X	See [v1]
13	Engine	2000	15	X		See [1]—Extending or exceeding the TBO by %5 or 6 months is allowed, whichever comes first
14	Coolant		5		X	[v1] Or during overhaul at the latest or when the engine is replaced, whichever comes first
15	Nose gear shock absorber	2000			X	See 32-20
16	All flexible fuel lines		5		X	See [v1]
17	Flexible oil lines		5		X	See [v1]
18	Flexible vent lines		5		X	See [v1]
19	Rubber coolant hoses		5		X	See [v1]
20	Gascolator filter		5		X	See [v1]
21	Gascolator O-ring				X	Upon reassembly, always
22	Engine mount rubber isolators		5*		X	*Replace earlier if required. See [1], see [v1]
23	Fuel filter	500	5*		X	*Whichever comes first, see [v1]
24	GRS ballistic parachute rescue system		30		X	*Rescue system needs to be removed, sent to OEM and replaced. See 95-00
25	GRS ballistic parachute rescue system		6 or 9*			*Rescue system needs to be removed and sent to OEM for repacking. See 95-00
26	Control system springs (rudder, el.trim, stabilizer main bolt)	500			X	
27	Throttle and choke control cables		5		X	
28	ELT battery	1*			X	* After one hour of real transmission or before/on the battery expiration date. See [11]
29	FI T system		6*			* Various tests, inspection and replacements. See [11]
30	Battery		*		X	* 8 yrs for EarthX and 5 yrs for Aliant battery

Table 05-001
Time Limits

05-20
SCHEDULED
MAINTENANCE**05-20 SCHEDULED MAINTENANCE**

The inspection schedule outlined in this chapter is what the manufacturer, Pipistrel d.o.o, regards as the minimum, in order to keep the aircraft in airworthy condition. The owner/operator is responsible for keeping the aircraft in airworthy condition and shall use this chapter as a guide. It is not, however, by any means the only guide that should be used. The NAA airworthiness directives in the country the aircraft is registered in MUST be adhered to. Maintenance/service personnel is chosen by the aircraft owner/operator and thus it is also his/her responsibility to ensure they are qualified.

CAUTION: The owner/operator must give any personnel carrying out maintenance/servicing procedures on the aircraft access to records of any past maintenance, as well as all of the aircraft's documentation.

VISUAL INSPECTION

The most common task found in the Aircraft's inspection schedule is the visual inspection. This is essentially an inspection to determine the general state of a component and typically does not require disassembly/removal of any other assemblies/equipment nearby. It is to be performed according to the following criteria and with any/all aids deemed necessary:

Metal Parts – discoloration due to heat exposure, distortion, wear/cracks due to fatigue, corrosion, weld damage, cleanliness and any other forms of damage.

Moving Components – Proper and unhindered operation, alignment, sufficient sealing, cleanliness, sufficient lubrication, travel, general condition, fastening material secured, signs of excessive wear, cracking, corrosion, deformation, and any other forms of damage.

Fuel, Air, coolant, and Oil Lines – Kinks, deterioration, chafing, poor flexibility, obstruction, bend radius, cleanliness, sufficiently secured/fastened and any other forms of damage.

Fastening Material - corrosion, wear, damage, loosening (paint marker) and safety wiring intact.

Composite Components – general condition, cleanliness, deformation, dents, warpage, cracks, scratches and any other forms of damage/wear. Composite surfaces that are bare, therefore, not painted, can also be checked for signs of delamination, fluid saturation and wear.

NOTE: If any composite component damage is found, a tap test should be performed to determine how extensive it is. Refer to 51-10 for additional guidelines on how to properly perform a visual inspection and/or tap test on composite components.

Electrical Installations - loose, corroded, or broken terminals/connectors; chafed, broken, or worn insulation; fastening material intact, heat deterioration, deformation, hardening, and any other forms of damage.

Filters and Screens - contamination, obstructions, signs of wear/damage.

Areas with Liquids - Evidence of leaks, sealant condition, signs of bacteria growth, cleanliness, corrosion, delamination, separation of bond, and structural fatigue.

OPERATIONAL INSPECTION

The second most common task found in the Aircraft's inspection schedule is the operational inspection. This is essentially an inspection to determine whether the component/part/assembly functions properly and does what it's supposed to do. Operational inspections of control surfaces must include a positive check, which is where one person holds the control surface steady, while the other moves the flight controls in both directions. This check confirms that movement of the flight controls results in movement of the control surface.

NOTE: It is expected that whenever a specific part or component is inspected, the inspection will include observation and evaluation of the component's surrounding area.

SCHEDULED MAINTENANCE PROGRAMS AND REQUIREMENTS

All airplanes of EU registry must undergo a complete "a 100 Hour Inspection Program" each 12 calendar months and additional requirements of the NAA of the country where the airplane is registered.

The 100 Hour Inspection Program is required, in addition to a complete Annual Inspection, for all airplanes of EU registry.

Inspection Program Intervals

Annual Inspection Time Intervals

The inspection interval to the next Annual Inspection may not exceed twelve calendar months. For Example: If an inspection were signed off on 14 June 2005, the next Annual Inspection would be due and must be accomplished no later than 30 June 2006. All subsequent Annual Inspections will be due in June unless the schedule is reset by performing an Annual Inspection early.

100 Hour Inspection Time Intervals

The interval between 100 Hour Inspections should never be exceeded by more than 10 hours, and then only if additional time is required to reach a place where the inspection can be satisfactorily accomplished. Additionally, the time the interval was exceeded must be included as flight hours in the next interval. For example: If a 100 Hour Inspection was due at 650 flight hours and was actually signed-off at 658 flight hours, the next 100 Hour Inspection is due at 750 flight hours, not 758 flight hours. Inspection tolerances cannot be accumulated.

05-20

SCHEDULED
MAINTENANCE

Airplane Operational and Functional Checks

Operational and Functional Checks must be performed before and after Scheduled Maintenance Inspections to detect any airplane abnormalities or malfunctions. These inspections are listed in chapter 05-30, Airplane Operational and Functional Checks. (See 05-30).

Unscheduled Maintenance Checks

Abnormal airplane operations require special maintenance checks. Definitions and inspection procedures for hard/overweight landings, exceeded speed limit, severe air turbulence, lightning strike, high drag/side loads due to ground handling, and ground gusts are listed in chapter 05-50, Unscheduled Maintenance Checks.

SCHEDULED INSPECTION REPORT

All references to “05-20” under the “ATA Ref” reference column are to be understood as reference to Visual Inspection criteria defined above under Inspection Groups and Criteria.

Overhaul and Replacement Times

The overhaul and replacements times are listed in chapter 05-10, Time Limits. These maintenance items must be incorporated into the 100 Hour or Annual Inspections as applicable.

Special Inspections

Special Inspections are highlighted in red and always denoted with a bracketed asterisk [*]. Those special inspections beginning with the word “And” indicate that the special inspection is to be performed IN ADDITION TO the regularly scheduled interval. For example, the following inspection states that in addition to changing engine oil every 50 Hours, the oil should be changed after the first 25 hours of operation as well.

Fuselage and Empennage Group	ATA Ref	50 Hr	Annual/ 100 Hr
Tail skid - Visual inspection. *Special Inspection: And after first 25 hours	05-20	[x]	[]

Note: The inspection above is an example and not part of the scheduled inspection report.

If the special inspection includes the word “Only”, this means that the it’s to be performed ONLY at the specified time interval. For example, the following inspection states that the Cabin Air Control Assembly Inspection/Check should only be performed every 500 hours or every 5 years, whichever occurs first.

Cabin Group	ATA Ref	50 Hr	Annual/ 100 Hr
Fuselage skin/shell - Perform inspection/check + major bonding lines tap test *Major Inspection: Only every 2000 FH (see 53-10: 2.1.)	53-10: 2.1. 51-10: 2.2.	[]	[x]

Note: The inspection below is an example and not part of the scheduled inspection.

Major Inspections

Major Inspections are also highlighted in red and accompanied by the word “and” or “only” (see Special Inspections). They are thorough, in-depth inspections that determine whether or not the load-bearing components have incurred any wear/damage that may affect the airworthiness of the aircraft.

Scheduled Inspection Report			
Make: PIPISTREL ALPHA Trainer	Model: ALPHA Trainer (Rotax 912 UL) ALPHA Club	Serial Number:	Registration Number:
Owner:	Date:	Place:	
Type of Inspection: [] 50 Hour [] 100 Hour	[] Annual [] 200 Hour [] 500 Hour [] 1000 Hour [] 10000 Hour	Operating Time:	Flight Hours: Landings:

Item No.	Pre-Inspection	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Wash and clean the aircraft fully (external and internal)	12-20: 2.6.	[]	[x]	[]	[]	[]	[]
2	Operational/Functional Check Perform an airplane run-up in accordance with Operational Check in 05-30. Record of all abnormalities during the inspection. After completing the Operational Check, perform a walk around to detect fluid leaks or other abnormalities.	05-30	[]	[x]	[]	[]	[]	[]
3	Review compliance status with current NAA Aviation Regulations. This includes inspection of the following: - Aircraft Log Book - Registration Certificate - Certificate of Airworthiness - Weight and Balance Record - NAA Airworthiness Directives - POH NOTE: Please refer to Pipistrel Website and Tech Pub Portal for the current status of all Pipistrel documents that apply to the the airplane.	-	[]	[x]	[]	[]	[]	[]

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SCHEDULED MAINTENANCE

Item No.	Engine Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	25 Hour Inspection On new, rebuilt, or overhauled engine, perform complete 100-Hour Engine Inspection in accordance with the manufacturer's approved Instructions for Continued Airworthiness, see [1]; *Special Inspection: Only first 25 hours,		[]	[]	[]	[]	[]	[]
2	Perform 100-Hour Engine Inspection in accordance with the manufacturer's approved Instructions for Continued Airworthiness, see [1] chapter 05-20-00 *Special inspection: and if more than 30% of AV-GAS is used.		[*]	[x]	[]	[]	[]	[]
3	Engine Cowling - Perform visual Inspection Perform operational inspection of oil filler door.	05-20	[]	[x]	[]	[]	[]	[]
4	Foam baffling/seals - Visual Inspection, replace if necessary	05-20 71-00: 2.2.	[]	[x]	[]	[]	[]	[]
5	Throttle and choke cable connections on hot side of firewall - Visual Inspection + lubrication	05-20 12-20 76-00: 2.2.1. 53-30: 2.11.	[]	[x]	[]	[]	[]	[]
6	Gascolator - Visual inspection and inspection/cleaning *Special Inspection: and after first 5 and 50 hours	05-20 28-20: 2.1.3.	[]	[x]	[]	[]	[]	[]
7	Exhaust System Visual Inspection for soot, distortion, general condition.	05-20	[]	[x]	[]	[]	[]	[]
8	Engine cooling air inlet and diffuser - Visual Inspection	05-20	[]	[]	[x]	[]	[]	[]
9	Exhaust System Perform inspection/check *100 hours for standard exhaust system, 500 hours for either of the Akrapovič systems	05-20 78-20: 2.1	[]	[]	[]	[x]	[]	[]
10	Engine mount and mounting fixture - Perform inspections/checks	71-20: 2.1.1. 71-20: 2.2.1.	[]	[x]	[]	[]	[]	[]
11	Firewall - Perform inspection/check	53-30: 2.11.	[]	[]	[]	[]	[x]	[]
12	Battery cables - Visual inspection	05-20	[]	[x]	[]	[]	[]	[]
13	Lubrication - Time interval depends on the component, please check the table for details.	12-20: 2.5.	[]	[]	[]	[]	[]	[]
14	Vibration damping isolators	71-20: 2.2.1.	[]	[]	[]	[]	[]	[]
16	Carburetor drip collector line - Inspection/check	71-70: 2.1.1.	[]	[x]	[]	[]	[]	[]
17	Oil reservoir breather line - Inspection/check	71-70: 2.2.1.	[]	[x]	[]	[]	[]	[]

Item No.	Propeller Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Spinner * See applicable propeller manual [10]		[]	[]	[]	[]	[]	[]
2	Blades * See applicable propeller manual [10]		[]	[]	[]	[]	[]	[]
3	Propeller Hub * See applicable propeller manual [10]		[]	[]	[]	[]	[]	[]

Item No.	Cabin Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Cabin windows and windshield - Visual Inspection for cracking, crazing, and general condition. Perform inspections/checks	05-20 56-00	[]	[x]	[]	[]	[]	[]
2	Magnetic Compass - Visual Inspection	05-20	[]	[x]	[]	[]	[]	[]
3	Placards and Instrument Markings - Visual Inspection for conformity, security, and condition. Replace if necessary.	05-20 11-20	[]	[x]	[]	[]	[]	[]
4	Upholstery - Visual Inspection	05-20	[]	[]	[]	[x]	[]	[]
5	Seats Visual and operational inspection	05-20	[]	[x]	[]	[]	[]	[]
6	Seats - Operational inspection: pneumatic pump/backrest bladder	05-20	[]	[]	[]	[x]	[]	[]
7	Safety harnesses Visual and operational inspection	05-20	[]	[x]	[]	[]	[]	[]
8	Instrument Panel Visual Inspection	05-20	[]	[x]	[]	[]	[]	[]
9	Avionics + Switch panel Master switch ON - Avionics switch ON. Perform visual and operational inspection	05-20	[]	[]	[x]	[]	[]	[]
10	Control stick + control stick drive - Perform inspections/checks *Major Inspection: Only every 3000 Hr (see 27-30: 2.4.2. and 27-30: 2.5.2.).	27-30: 2.4.1. 27-30: 2.5.1.	[]	[x]	[]	[]	[]	[]
11	Wiring behind the instrument and switch panel – Perform inspection/check	05-20 31-10: 2.3.3. 31-10: 2.1.1.	[]	[]	[]	[x]	[]	[]
12	Rudder Control System - Perform inspections/checks	27-20: 2.1.3. 27-20: 2.3. 27-20: 2.2.1.	[]	[x]	[]	[]	[]	[]
13	Brake actuation hand lever - Visual and operational Inspection	05-20	[]	[x]	[]	[]	[]	[]
14	Flexible Brake Hoses - Visual Inspection -	05-20	[]	[]	[x]	[]	[]	[]
15	Fuel System Perform inspection/check	28-20: 2.3.3. 28-20: 2.4.1.	[]	[]	[x]	[]	[]	[]
16	Cabin Doors - Perform inspection/check	52-10: 2.1.3.	[]	[x]	[]	[]	[]	[]

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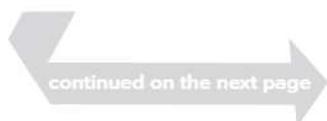
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Item No.	Cabin Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
16	Cabin Doors - Perform inspection/check	52-10: 2.1.3.	[]	[x]	[]	[]	[]	[]
17	Wing spar fastening material – Remove wings and perform visual inspection of wings spar pins/bolt	05-20 57-10: 2.1.1.	[]	[]	[x]	[]	[]	[]
19	Rudder Control System - Perform inspections/checks	27-20: 2.1.2. 27-20: 2.2.1. 27-20: 2.1.3.	[]	[]	[x]	[]	[]	[]
20	Ventilation system – Adjustable circular vents Visual and operational inspection	05-20	[]	[]	[x]	[]	[]	[]
21	GRS ballistic parachute rescue system activation handle - Perform inspection/check	95-00: 2.1.1.	[]	[]	[]	[x]	[]	[]
22	HORIS - Kanardia (if installed) – Visual inspection - see OEM Documentation	05-20	[]	[]	[]	[]	[]	[]
23	Battery installation – Visual inspection of mounting bracket, cables, terminals	05-20	[]	[x]	[]	[]	[]	[]
24	Battery installation – Perform inspection/check	24-30: 2.1.2.	[]	[]	[x]	[]	[]	[]
25	Flaperon control system - Perform inspections/checks *Major Inspection: Only every 3000 FH (see 27-50: 2.4.2.).	27-50: 2.1.1. 27-50: 2.2.1. 27-50: 2.3. 27-50: 2.4.1. 27-50: 2.5.1.	[]	[]	[x]	[]	[]	[]
26	Brake system hydraulic fluid Check and replenish if necessary	12-10: 2.5.	[]	[x]	[]	[]	[]	[]
27	Cabin floor - Perform inspection/check + tap test	53-20: 2.1.1.	[]	[]	[]	[x]	[]	[]
28	Elevator control system - Perform inspections/checks *Major Inspection: Only every 3000 FH (27-30: 2.2.2.).	27-30: 2.2.1. 27-30: 2.3.1. 27-30: 2.1.	[]	[]	[x]	[]	[]	[]
29	Fuel filter and fuel pump Perform inspection/check *Special Inspection: and after first 5 hours	28-20: 2.3.3.	[]	[x]	[]	[]	[]	[]
30	Lubrication - Time interval depends on the component, please check the table for details.	12-20: 2.5.	[]	[]	[]	[]	[]	[]
31	ELT - Visual inspection	05-20	[]	[]	[x]	[]	[]	[]
32	ELT - Special Inspection in accordance with NAA: Only every 24 months or earlier if required by NAA where the aircraft is registered. See [11]/[12] and contact NAA	-	[]	[]	[]	[]	[]	[]
33	Transponder - Special Inspection in accordance with NAA: Only every 24 months or earlier if required by NAA where the aircraft is registered. See [8] and contact NAA	-	[]	[]	[]	[]	[]	[]
34	Air-brake control system - Perform inspections/checks	27-60: 2.1.1. 27-60: 2.2.1.	[]	[]	[x]	[]	[]	[]
35	Flight compartment - Inspection/check	33-10: 2.1.1.	[]	[]	[]	[]	[]	[]
36	Pitot-static system test - *Special inspection in accordance with NAA: Only every 24 months or as required by the local NAA	34-10	[]	[]	[]	[]	[]	[]

Item No.	Landing Gear Group - Standard Brakes	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Main Landing Gear Fairings - Visual inspection	05-20	[]	[x]	[]	[]	[]	[]
2	Nose Landing Gear Fairing - Visual inspection	05-20 32-20: 2.1.1.	[]	[x]	[]	[]	[]	[]
3	Tires - Visual inspection and check/replenish tire pressure	05-20 12-10: 2.4.	[]	[x]	[]	[]	[]	[]
4	Wheels - Visual and operational inspection. Replace bearings on condition.	05-20	[]	[x]	[]	[]	[]	[]
5	Brake system - Perform inspection/check - Visual Inspection for leaks, chafing, security, and condition.	32-42: 2.1.1. 32-42: 2.2.2.	[]	[]	[x]	[]	[]	[]
6	Nose gear - Perform Inspection/Check	32-20: 2.2.1. 32-50: 2.1.1.	[]	[x]	[]	[]	[]	[]
7	Main landing gear strut - Perform inspection/check. Major Inspection after a hard landing (see 05-50: 2.2.)	32-10: 2.1.1.	[]	[x]	[]	[]	[]	[]
8	Nose gear fork - Perform Inspection/Check	32-20: 2.2.1.	[]	[]	[x]	[]	[]	[]
9	Lubrication - Time interval depends on the component, please check the table for details.	12-20: 2.5.	[]	[]	[]	[]	[]	[]

Item No.	Landing Gear Group - Beringer	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Main Landing Gear Fairings - Visual inspection	05-20 32-20: 2.1.3.	[]	[x]	[]	[]	[]	[]
2	Nose Landing Gear Fairing - Visual inspection	05-20	[]	[x]	[]	[]	[]	[]
3	Prop up one side of the aircraft.	07-10: 2.1.1.	[]	[x]	[]	[]	[]	[]
4	Tires - Visual inspection and check/replenish tire pressure	05-20 12-10: 2.4.	[]	[x]	[]	[]	[]	[]
5	Wheels - Perform inspection/check	32-41: 2.2.3	[]	[x]	[]	[]	[]	[]
6	Brake system - Perform inspection/check	32-42: 2.2.1. 32-42: 2.4.1.	[]	[x]	[]	[]	[]	[]
7	Measure brake pad thickness. If pads are less than 1 mm thick or wear indicator is invisible, remove pads, perform inspection/check and install new pads.	32-41: 2.2.1. [v] 32-42: 2.4.1. 32-41: 2.2.2.	[]	[x]	[]	[]	[]	[]
8	Measure brake discs thickness. If discs are less than 2.8 mm thick, remove discs, perform inspection/check and install new discs.	32-41: 2.2.1. [v] 32-42: 2.4.3. 32-41: 2.2.2.	[]	[x]	[]	[]	[]	[]
9	Remove the landing gear stand from under the landing gear strut. Prop up the other side of the aircraft and perform steps 5 to 8 on the other wheel/ brake system.	07-10: 2.1.1.	[]	[x]	[]	[]	[]	[]



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Item No.	Landing Gear Group - Beringer	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
10	Remove the landing gear stand from under the landing gear strut.	07-10: 2.1.1.	[]	[x]	[]	[]	[]	[]
11	Nose gear - Perform Inspection/Check	32-20: 2.2.1.	[]	[x]	[]	[]	[]	[]
12	Main landing gear strut - Perform inspection/check. Major Inspection if equipped with MLG strut access patch (see Figure 32-003): Only every 2000 hours (see 32-10: 2.1.2.) or after a hard landing (see 05-50: 2.2.)	32-10: 2.1.1.	[]	[x]	[]	[]	[]	[]
13	Nose gear Perform inspections/checks	32-50: 2.1.1. 32-20: 2.2.1.	[]	[]	[x]	[]	[]	[]
14	Lubrication - Time interval depends on the component, please check the table for details.	12-20: 2.5.	[]	[]	[]	[]	[]	[]

*If/when replacing brake pads and/or discs, also perform inspection/check of wheel and brake assembly, see 32-40: 2.1.1.

Item No.	Fuselage and Empennage Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Exterior Placards Visual Inspection for conformity, security, and condition. Replace if necessary.	05-20 11-10	[]	[x]	[]	[]	[]	[]
2	Fuselage skin/shell - Perform inspection/check + major bonding lines tap test *Major Inspection: Only every 2000 FH (see 53-10: 2.1.)	53-10: 2.1.1. 51-10: 2.2.	[]	[x]	[]	[]	[]	[]
3	GRS ballistic parachute rescue system - Perform inspection/check	05-20	[]	[x]	[]	[]	[]	[]
4	Vertical Stabilizer and Rudder Surfaces – Visual Inspection + vertical stabilizer major bonding line tap test	05-20 51-10: 2.2.	[]	[x]	[]	[]	[]	[]
5	Rudder Control System – Perform inspections/checks.	27-20: 2.1.1. **	[]	[x]	[]	[]	[]	[]
6	Rudder Control System – Perform inspections/checks	27-20: 2.1.1. 27-20: 2.4. 27-20: 2.5.1. 27-20: 2.6.1. 27-20: 2.7.1.	[]	[]	[x]	[]	[]	[]
7	Horizontal Stabilizer and Elevator Surfaces - Visual Inspection + horizontal stabilizer major bonding line tap test	05-20 51-10: 2.2.	[]	[x]	[]	[]	[]	[]
8	Horizontal Stabilizer and Elevator Surfaces - Perform inspection/check	55-20: 2.1.3.	[]	[]	[x]	[]	[]	[]
9	Vertical/horizontal stabilizer – Perform inspections/checks	55-30: 2.1.1. 55-10: 2.1.3.	[]	[x]	[]	[]	[]	[]
10	Vertical stabilizer – Perform inspections/checks + tap test	55-30: 2.1. 51-10: 2.2.	[]	[]	[]	[x]	[]	[]
11	Elevator Control System Perform inspections/checks	27-30: 2.4.1. 27-30: 2.5.1.	[]	[x]	[]	[]	[]	[]

continued on the next page

Item No.	Fuselage and Empennage Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
12	Elevator Control System Perform inspections/checks *Major Inspection: Only every 2000 FH (see 27-30: 2.6.2.)	27-30: 2.6.1.	[]	[]	[x]	[]	[]	[]
13	Fuselage Vent/Drain Holes Visual Inspection for obstructions or blockage.	APPENDIX 99-D	[]	[x]	[]	[]	[]	[]
14	Antennas - Visual inspection	05-20	[]	[x]	[]	[]	[]	[]
15	Baggage compartment - Visual Inspection of composite around safety harness attachment points	05-20	[]	[]	[]	[x]	[]	[]
16	Control Surface and Stabilizer Vent/Drain Holes - Visual Inspection for obstructions or blockage.	APPENDIX 99-D	[]	[]	[x]	[]	[]	[]
17	Lubrication - Time interval depends on the component, please check the table for details.	12-20: 2.5.	[]	[]	[]	[]	[]	[]

**perform without removing the rudder (2.11.3) for the 100-hour check, just move rudder to one side and inspect/check. Perform with rudder removed every 200 hours.

Item No.	Wing Group	ATA Ref	50 Hr	Annual/ 100 Hr	200 Hr	500 Hr	1000 Hr	10000 Hr
1	Wing surface - Visual Inspection for general condition, deterioration, delamination, distortion, cracks, paint condition, and other evidence of failure. *Major Inspection: Only every 2000 FH (see 57-10: 2.1.3.).	05-20	[]	[x]	[]	[]	[]	[]
2	Wing Leading Edge Visual Inspection for foreign matter and debris + leading edge bonding line tap test	05-20 51-10: 2.2.	[]	[x]	[]	[]	[]	[]
3	Flaperon Surfaces - Visual Inspection	05-20	[]	[x]	[]	[]	[]	[]
4	Flaperon system free play- Perform inspection/check	27-50: 2.1.3. 27-50: 2.1.4.	[]	[]	[x]	[]	[]	[]
5	Flaperon surfaces- Perform inspection/check	57-50: 2.1.2.	[]	[]	[x]	[]	[]	[]
6	Pitot tube - Visual inspection	05-20	[]	[x]	[]	[]	[]	[]
7	Wing Vent/Drain Holes - Visual Inspection for obstructions or blockage.	APPENDIX 99-D	[]	[x]	[]	[]	[]	[]
8	Air brakes - (if installed) Perform inspections/checks	57-70: 2.1.	[x]	[]	[]	[]	[]	[]
9	Lubrication - Time interval depends on the component, please check the table for details.	12-20: 2.5.	[]	[]	[]	[]	[]	[]
10	NAV/STROBE lights - Inspection/check	33-40: 2.1. 33-40: 2.2.1.	[]	[x]	[]	[]	[]	[]

05-30**AIRPLANE OPERATIONAL
AND FUNCTIONAL CHECK****05-30 AIRPLANE OPERATIONAL AND FUNCTIONAL CHECK**

The following check must be performed before and after the Scheduled Maintenance Inspection to detect any airplane abnormalities or malfunctions. A portion of the check is accomplished with the engine running and warmed up. Please refer to the aircraft POH [4] for additional details about operating procedures and equipment.

WARNING: In order to perform the following check, the engine must be operating. Do not stand or let anyone else stand close to the arc of the airplane's propeller while conducting this check.

CAUTION: During all engine operations outlined in this check, exercise caution to avoid harm or damage to personnel and equipment due to propeller blast and rotating propeller blades.

CAUTION: Excessive engine temperatures must be avoided since run-up temperatures must closely parallel in-flight temperatures.

Item No.	Operational Inspection Report	Check	Notes
1	Flight Controls Check for full range of travel and excessive friction. Visual Inspection for obstructions.		
2	Engine Controls Check full range of motion without any obstruction or excessive friction to travel.		
3	MASTER switch + AVIONICS switch When switches are toggled ON the following should occur (see aircraft specific POH for a more detailed description of the equipment installed): — EMS/HORIS turn on and run with no indication of any errors (See POH). — Other electrically powered flight instruments turn on (See POH). — Radio and transponder turn on.		
4	Engine — Start engine (see POH). — Check that starter spins propeller without slipping or dragging. — Set engine speed to 2500 RPM and wait till oil temperature reaches green arc (50°C). — Check that the oil pressure is in the green arc within 30 seconds. — Check that the fuel pressure is in the green arc. — Check voltage. — Set engine to 4000 RPM and carry out magneto check as per latest version of Rotax 912 series MM. — Throttle full forward for 5 seconds. Engine RPM should indicate between 5300 and 5600. NOTE: The RPM should not exceed 5800 at anytime during operation. — Check that brakes hold aircraft stationary at full power with no slipping. — Set engine to idle. Engine should cease when ignition key set to magneto OFF position. — Shut down (see POH).		

05-50 UNSCHEDULED MAINTENANCE

1. Description

The following describes those maintenance checks and inspections on the aircraft which are dictated by special or unusual conditions which are not related to the time limits specified in 05-10, Scheduled Maintenance Checks.

These includes inspections and checks for wing strike, hard/overweight landing, exceeded speed limit, severe air turbulence, lightning strike, high drag/side loads, ground gusts, operation in harsh environmental conditions, and operation on unimproved runway surfaces.

2. Maintenance practices

05-50: 2.1. Wing strike

05-50: 2.1.1. Fuselage

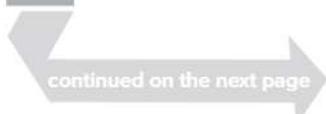
Step	Action	Required parts, materials and tools	Reference
1	Aft Floor Structure – Area around and under the wing attach points and overhead seat areas, inspect for delamination, cracking, whitening, and any other evidence of structural damage.		

05-50: 2.2. Hard landing

NOTE: A hard landing is any landing made at what is believed to be an excessive sink rate. An overweight landing is defined as landing the airplane at any gross weight which exceeds the maximum landing weight as specified in the Pilot’s Operating Handbook. If the hard/overweight landing is combined with high drag/side loads, additional checks are required.

05-50: 2.2.1. Fuselage

Step	Action	Required parts, materials and tools	Reference
1	Aft Floor Structure – Inspect for delamination, cracking, whitening, and any other evidence of structural damage.		
2	Main landing gear strut - Inspect for security of attachment, permanent deformation, delamination, and cracking or splintering of strut.		32-10: 2.1.2.
3	Main gear attachments and supporting structure - Inspect for security loose or failed fasteners, permanent deformation, tire damage, and any other evidence of structural damage.		



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Step	Action	Required parts, materials and tools	Reference
4	Nose gear and attaching structure - Inspect for security, loose or failed fasteners, permanent deformation of strut or axle, strut weld cracks, puck delamination and cracks, puck pan weld cracks, engine mount weld cracks, tire damage, and any other evidence of structural damage.		
5	Wings surface - Inspect for skin cracks, loose or failed fasteners, and any evidence of structural damage.		
6	Trailing edge - Inspect for any deformation effecting normal flaperon operation.		

05-50: 2.3. Exceeded speed limit

An exceeded speed limit inspection must be performed anytime the airplane has exceeded one or both of the following:

- exceeding placard speed limits of flaps.
- exceeding design speeds.

05-50: 2.3.1. Fuselage

Step	Action	Required parts, materials and tools	Reference
1	Landing gear - Main gear axle and fittings - Inspect for cracks, security, and evidence of structural damage. Tires - Inspect tires for flat spots, excessive wear, and tire slippage on the wheel rim.		
2	Fuselage - Windshield and windows - Inspect for buckling, dents, loose or failed fasteners, and any evidence of structural damage.		
3	Cowling - Inspect for buckling, cracks, loose or failed fasteners, and indications of structural damage.		
4	Stabilizers - Inspect skins, hinges and attachments, movable surfaces, mass balance weights, and attaching structure for cracks, dents, buckling, loose or failed fasteners, and evidence of structural damage.		
5	Wings - Flaps - Inspect for skin buckling, cracks, loose or failed fasteners, attachments and structural damage.		

05-50: 2.3.2. Severe turbulence and/or maneuvers

Atmospheric conditions producing violent buffeting of airplane. Severe maneuvers can be defined as any maneuvers exceeding the Pilot's Operating Handbook and the airplane's flight limits.

Step	Action	Required parts, materials and tools	Reference
1	Horizontal stabilizer, hinge fittings, and fittings - Inspect for security, loose or failed fasteners, and any evidence of structural damage.		
2	Vertical stabilizer - Inspect for evidence of structural damage, and damage to hinges and fittings.		
3	Elevator and rudder balance weight supporting structure - Inspect for security, loose or failed fasteners, and evidence of structural damage.		
4	Wing to body fittings and supporting structure - Inspect for security, loose or failed fasteners, and evidence of structural damage.		
5	Wing trailing Edge - Inspect for and deformation affecting normal operation of flap and aileron.		

05-50: 2.4. Lightning strike

If flown through a region of the atmosphere where electrical discharge is occurring, the airplane may become part of the discharge path. During a lightning strike, the current enters the airplane at one point and exits another, usually at opposite extremities. It is in these entrance and exit points where damage is most likely to occur. Burning and/or eroding of small surface areas of the skin and structure may be detected during inspection. In most cases, the damage is obvious. In some cases, however, hidden damage may result. In the case of lightning strike, this inspection must be accomplished before returning it to service.

05-50: 2.4.1. Communications

Step	Action	Required parts, materials and tools	Reference
1	Antennas - Inspect all antennas for evidence of burning or eroding. If damage is noted, contact PIPISTREL for disposition. Any component connected to the antenna may need to be returned to manufacturer for servicing.		

05-50: 2.4.2. Navigation

Step	Action	Required parts, materials and tools	Reference
1	Compass should be considered serviceable if the corrected heading is within plus or minus 10 degrees of heading indicated by the remote compass system. If remote compass is not within tolerance, remove, repair, or replace.		

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MAINTENANCE****05-50: 2.4.3. Fuselage**

Step	Action	Required parts, materials and tools	Reference
1	Skin - Inspect surface of fuselage skin for evidence of damage.		

05-50: 2.4.4. Stabilizers

Step	Action	Required parts, materials and tools	Reference
1	Inspect surfaces of stabilizers for evidence of damage.		

05-50: 2.4.5. Wings

Step	Action	Required parts, materials and tools	Reference
1	Skin - Inspect for evidence of burning and eroding.		
2	Wing tips - Inspect for evidence of burning and pitting.		
3	Flight surfaces and hinging mechanisms - Inspect for burning and pitting.		

05-50: 2.4.6. Landing gear/wheels

Step	Action	Required parts, materials and tools	Reference
1	Landing gear attach fittings and axles - Inspect for evidence of pitting and damage.		
2	Wheels - Inspect for evidence of pitting and damage.		
3	Wheel pants and fairings - Inspect fasteners for pitting and damage.		
4	Brake lines - Inspect for evidence of pitting, damage, or hydraulic fluid leaks.		

05-50: 2.4.7. Propeller

Step	Action	Required parts, materials and tools	Reference
1	Propeller - Inspect surfaces for evidence of damage. If damage is noted, remove from service and have inspected at an authorized repair station.		[2]

05-50: 2.4.8. Power plant

Step	Action	Required parts, materials and tools	Reference
1	Engine - See the manufacturer's approved Instructions For Continued Airworthiness.		

05-50: 2.4.9. Control system

Step	Action	Required parts, materials and tools	Reference
1	Check all bearings and joints for unhindered movement		

05-50: 2.5. High drag/side loads due to ground handling

A high drag/side load condition is defined as situations when the airplane skids or overruns from a prepared surface onto an unprepared surface. This condition can also be met due to landings short of prepared surfaces, landings which cause the blowing of tires, or skidding conditions where the safety of the airplane was in question. This covers takeoffs, landings, or unusual taxi conditions.

05-50: 2.5.1. Landing gear

Step	Action	Required parts, materials and tools	Reference
1	Main gear (fairings if included) - Inspect for loose or failed fasteners, buckling, security, cracks, and evidence of structural damage.		
2	Nose gear (fairings if included) - Inspect for loose or failed fasteners, cracks, security, buckling, and evidence of structural damage.		

05-50: 2.5.2. Wings

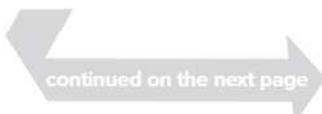
Step	Action	Required parts, materials and tools	Reference
1	Wing to fuselage fittings and attaching structure - Inspect for security, loose or failed fasteners, and evidence of structural failure.		

05-50: 2.6. Ground gusts

Ground gusts are defined as conditions where a parked or taxiing airplane is exposed to side, aft quartering, or aft wind gusts exceeding 40 knots. Such conditions can cause control system damage due to rapid oscillation and/or slamming of the control surfaces against system stops.

05-50: 2.6.1. Rudder

Step	Action	Required parts, materials and tools	Reference
1	Hinges - Inspect for loose or failed fasteners, deformation, cracks, evidence of structural damage, and for any other evidence of damage or premature wear.		
2	Attaching structure - Inspect for loose or failed fasteners, delaminating, cracks, evidence of structural damage, punctures, scratches, and for any other evidence of damage or premature wear.		
3	Skin - Inspect for buckling, dents, misalignment, punctures, scratches, and for any other evidence of damage or premature wear.		



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Step	Action	Required parts, materials and tools	Reference
4	Attaching hardware - Inspect for loose or failed fasteners, deformation, cracks, security of mass balance weights, balance weight supporting structure and for any other evidence of damage or premature wear.		
5	Bellcrank - Inspect for failed fasteners, cracks and deformation.		

05-50: 2.6.2. Elevator

Step	Action	Required parts, materials and tools	Reference
1	Hinges - Inspect for loose or failed fasteners, deformation, cracks, evidence of structural damage, and for any other evidence of damage or premature wear.		
2	Attaching structure - Inspect for loose or failed fasteners, delaminating, cracks, evidence of structural damage, punctures, scratches, and for any other evidence of damage or premature wear.		
3	Skin - Inspect for buckling, dents, misalignment, punctures, scratches, and for any other evidence of damage or premature wear.		
4	Bellcrank - Inspect for failed fasteners, cracks and deformation.		

05-50: 2.6.3. Flaperons

Step	Action	Required parts, materials and tools	Reference
1	Hinges - Inspect for loose or failed fasteners, deformation, cracks, evidence of structural damage, and for any other evidence of damage or premature wear.		
2	Attaching structure - Inspect for loose or failed fasteners, delaminating, cracks, evidence of structural damage, punctures, scratches, and for any other evidence of damage or premature wear.		
3	Skin - Inspect for buckling, dents, misalignment, punctures, scratches, and for any other evidence of damage or premature wear.		

05-50: 2.7. Operation on unimproved runway surfaces

Operation on unimproved runway surfaces will cause additional wear and may require additional maintenance or inspection.

05-50: 2.8. Operation in humid areas

In humid areas, special care should be taken to keep engine, accessories, and airframe clean to prevent oxidation. Fuel and oil should be checked frequently and drained of condensation to prevent corrosion. Visually inspect flight control surfaces, nose landing gear and control systems for corrosion in accordance with best aviation maintenance practice.