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REASON

FA-200 REVISION OF PERIODIC INSPECTION ITEMS AND ESTABLISHMENT OF 1000 HOUR INSPECTION ITEMS

The intent of this field service news is to inform newly established periodic inspection requirements for all FA-200 airplanes. Based on the past four years operational and maintenance experience, we reviewed the existing periodic inspection items specified in the FA-200 service manuals. As a result of evaluation, we revised items of periodic inspections (50, 100, and 500 hours) and also established 1000 hour inspection requirements.

The attached lists of this service news (Periodic Inspection Chart, Daily and Calendar Inspection Chart and 3000 Hour Special Inspection Chart) shall replace FA-200 Service Manual Inspection Chart (Table 3-5, 1/4 to 3/4).

Engine Drive Fuel Pump Outlet Tee was established in Life limit Parts and Set Hours under the approval of Japan Civil Aviation Bureau on April 5, 1983, which shall be added to FA-200 Service Manual.

9000 Hour Special Inspection Chart is newly established. (Revision F)
This new chart shall be added after the previously issued periodic inspection charts and 3000 Hour Special Inspection Chart.

New periodic inspection items associated with the type certificate changes of FA-200-160 and FA-200-180 are added. (Revision G)
These shall replace the previously issued periodic inspection charts and 3000 Hour Special Inspection Chart.

Periodic inspection items and lifetime parts treatment associated with the type certificate changes of FA-200-160 and FA-200-180 (a to c below) are added. (Revision H)
These shall replace the previously issued Daily and Calendar Inspection Chart and Lifetime Parts and Treatment.

a. Addition of inspection hole to wing main spar forward web and development of drain in main spar lower flange (20-14-A1 and 22-10-A1 approved by Japan Civil Aviation Bureau on January 23, 2006)
b. Change of engine life limit (AEIO-360-B1B) (22-10-A2 approved by Japan Civil Aviation Bureau on March 7, 2006)
c. Addition of new battery (RG-35A) (20-14-A2 and 22-10-A3 approved by Japan Civil Aviation Bureau on April 3, 2006)

(Revision I is unused.)

The lifetime of Master Cylinder “O” ring is newly established in accordance with Aircraft Serious Incident Investigation Report (AI2014-1) published by Japan Transport Safety Board. (Revision J)

Reference notes were added, corrections were made and clearer descriptions were used. (Revision K)

The lifetime and treatment of Emergency Signal were newly established in accordance with the amended type certificate (20-17-A001 and 22-14-A001 approved by Japan Civil Aviation Bureau) associated with addition of alternative Emergency Signal. (Revision L)

The lifetime and treatment of Vacuum Pump were newly established in accordance with the amended type certificate (20-17-A002 and 22-14-A002 approved by Japan Civil Aviation Bureau) associated with addition of alternative Vacuum Pump. (Revision M)

Clarification of applicable parts for the lifetime and treatment of Vacuum Pump. (Revision N)

(Revision O is unused.)

Added alternative bolts and clarified applicable bolts to the 3000 HOUR SPECIAL INSPECTION CHART. (Revision P)

(Revision Q is unused.)

Reflection of revisions to regulations and clarification of instructions to the "LIFETIME PARTS AND TREATMENT". (Revision R)

(Revision S is unused.)

Added Note 2 to the 3000 HOUR SPECIAL INSPECTION CHART regarding the application of the SUBSTITUTION PARTS LIST (FA200-203), and moved the Notes column. (Revision T)

PERIODIC INSPECTION CHART – ENGINE

DATE:
SIGNATURE:
TYPE OF INSPECTION:

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Engine	1	Clean fuel strainer.	○	○	○	○
	2	Check fuel strainer.	○	○	○	○
	3	Check and clean engine aux. pump strainer (FA-200-160).		○	○	○
	4	Check and clean injector (or carburetor) fuel filter. (Drain fuel strainer if necessary)	○	○	○	○
	5	Check and clean oil cooler.			○	○
	6	Conduct pressure proof test on oil cooler.				○
	7	Check cylinder rocker box for leak.	○	○	○	○
	8	Check starter and alternator for security.	○	○	○	○
	9	Check alternator belt tension.		○	○	○
	10	Clean and check air intake filter for damage.	○	○	○	○
	11	Check and clean oil strainer (2 places).	○	○	○	○
	12	Check intake duct for damage.	○	○	○	○
	13	Check engine mount for damage and security.		○	○	○
	14	Check engine mount attaching bolts for proper torque.				○
	15	Check engine shock mount for deterioration and security.		○	○	○
	16	Check engine shock mount attaching bolts for proper torque.				○
	17	Check accessories for security.		○	○	○
	18	Check cylinder for damage.	○	○	○	○
	19	Check cowling and baffles for damage and security.	○	○	○	○
	20	Check wiring for damage and security.		○	○	○
	21	Check and clean spark plugs. Adjust gap (as necessary).	○	○	○	○
	22	Check spark plug elbows and high tension harness for damage.	○	○	○	○
	23	Adjust magneto point and ignition timing.		○	○	○
	24	Remove and clean magnetos. Lubricate as necessary.			○	○
	25	Check piping, particularly oil cooler tubes, for damage, leak and security.	○	○	○	○
	26	Check exhaust pipe and muffler for damage, gas leak and security.	○	○	○	○
	27	Check cabin heater duct for damage and heater valve for proper operation.		○	○	○
	28	Check engine control system for security. Accomplish functional check and adjustment.	○	○	○	○
	29	Check and clean vacuum relief valve.		○	○	○
	30	Check air intake valve for damage, play and proper operation.		○	○	○

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Engine	31	Change engine oil.	○	○	○	○
	32	Check oil separator and valves for leak, damage and security. (For AEIO-360-B1B engine)	○	○	○	○
	33	Check and clean oil separator and valves. (For AEIO-360-B1B engine)			○	○
	34	Dye check exhaust tubes and heat exchanger assy (except for cover).				○

PERIODIC INSPECTION CHART – PROPELLER

DATE:
SIGNATURE:
TYPE OF INSPECTION:

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Propeller	1	Check hub for cracks (FA-200-180).	○	○	○	○
	2	Check blades for damage.	○	○	○	○
	3	Check spinner and bulkhead for general condition.	○	○	○	○
	4	Check propeller for security.	○	○	○	○
	5	Check propeller attaching bolts for proper torque.				○

PERIODIC INSPECTION CHART – CABIN

DATE:
SIGNATURE:
TYPE OF INSPECTION:

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Cabin	1	Check control wheel assy for damage and proper operation.				○
	1A	Check control wheel assy lock pin hole for anomaly using 10x magnification.		○	○	○
	2	Check pedal mechanism components for damage, wear, corrosion, play and security.				○
	3	Check rudder trim mechanism components for damage and check spring for proper operation.				○
	4	Check aileron, rudder, elevator, elevator tab and flap control systems for damage and security.				○
	5	Check aileron, rudder, elevator, elevator tab and flap control systems for free movement.				○
	6	Check cabin heater, primer, throttle and mixture for proper operation.	○	○	○	○
	7	Check sprockets, chains, turnbuckles, pulleys and cables of flight control system.		○	○	○
	8	Check master cylinder for leak and proper oil level.	○	○	○	○
	9	(Deleted)				
	10	Check parking brake and brake cable for proper operation.	○	○	○	○
	11	Replace and check vacuum system filter for proper operation and adjustment.			○	○
	12	Check windshield glass for damage and slide canopy for proper movement.	○	○	○	○
	13	Check cabin interior for damage.	○	○	○	○
	14	Check sliding seats and seat belts for general condition and proper operation and locking mechanism for anomaly.	○	○	○	○
	15	Check landing, navigation, cabin and instrument lights.	○	○	○	○
	16	Check fuel selector valve or fuel shut-off valve for proper operation.	○	○	○	○
	16-1	Check fuel selector valve for clearance. (#101 and after and aircraft equipped with FAS-032)		○	○	○
	17	Check presence of magnetic compass correction card.	○	○	○	○
	18	Check radio for security and proper operation.		○	○	○
	19	Check portable fire extinguisher.		○	○	○
	20	Check fuel piping, sump tank and valves for damage and security.		○	○	○
	21	Check gyro horizon and directional gyro filters.				○
	22	Servicing.	○	○	○	○

PERIODIC INSPECTION CHART – LANDING GEARS

DATE:
SIGNATURE:
TYPE OF INSPECTION:

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Landing gear	1	Remove wheels, check bearings and change grease.		○	○	○
	2	Check brake linings and disc for wear.		○	○	○
	3	Check wheels for cracks and bolts for damage.	○	○	○	○
	4	Check tires for wear and deformation.	○	○	○	○
	5	Check brake piping for general condition.	○	○	○	○
	6	Check nose gear steering mechanism for proper operation, adjusted condition and steering range.	○	○	○	○
	7	Check and adjust oleo and tire pressures.	○	○	○	○
	8	Check shimmy damper for oil level, leak and security.	○	○	○	○
	9	Check landing gear for security.			○	○
	10	Check main gear components for damage and corrosion.		○	○	○
	11	Check landing strut attaching bolts for proper torque. (Nose and main landing gears)				○
	12	Check landing gear torque knee and oleo for general condition and play.		○	○	○
	13	Check oleo for oil level.		○	○	○
	14	Check grounding wire for general condition and security.		○	○	○
	15	Check components of brake and parking brake system for damage, security and leak.		○	○	○
	16	Service brake system with oil and bleed air in brake system.				○
	17	Lubrication.	○	○	○	○

PERIODIC INSPECTION CHART – MAIN WING

DATE:
SIGNATURE:
TYPE OF INSPECTION:

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Main wing	1	Check main wing for security.				○
	2	Check main wing attaching bolts for damage and proper torque. (20 places) Refer to service manual, Fig 7-9 *1, Positions A-1, A-2, A-9, A-10, B-1, B-2, B-9, B-10, C-1 and C-2.				○
	3	Visually inspect all main wing attaching bolts.		○	○	○
	4	Check front and rear auxiliary spar attaching rivets for general condition and bolt holes for wear. (Main wing and fuselage)				○
	5	Check main wing rear auxiliary spar attaching bolts for proper torque.				○
	6	Check (nose, main and tail) root ribs for distortion.				○
	7	Check wing surface and wing tips for damage and walking area for general condition.	○	○	○	○
	8	Check ailerons, attachment fittings, cables, pulleys and bell cranks for damage and proper operation.		○	○	○
	9	Check aileron hinges for damage. (This inspection requires removal of aileron.)				○
	10	Check flaps and attachment fittings for damage and proper operation.	○	○	○	○
	11	Check flap hinges for damage. (This inspection requires removal of flap.)				○
	12	Check ribs and stringer flange for joint condition.				○
	13	Check fuel tank for security and piping for leak.		○	○	○
	14	Check fuel tank filler port and marking for general condition.	○	○	○	○
	15	Check bonding wires of flap and aileron for general condition.		○	○	○
	16	Check fuel quantity transmitter for proper operation.	○	○	○	○
	17	Check ailerons for damage, distortion, wear, corrosion and loose rivets. (This inspection requires removal of aileron.)				○
	18	Check flaps for damage, distortion, wear, corrosion and loose rivets. (This inspection requires removal of flap.)				○
	19	Check electric wires, plugs and terminals for damage, corrosion and deterioration.				○
	20	Check navigation light for security, damage and contamination.		○	○	○
	21	Check landing light for security, damage and contamination.		○	○	○
	22	Check stall waning limit switch for security and damage.		○	○	○

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Main wing	23	Check pitot tube for security, damage and obstruction.		○	○	○
	24	Check brake piping for general condition.	○	○	○	○
	25	Check flight control system components for damage and security and stopper for security.				○
	26	Check landing light support – structure for damage and cracks.				○
	27	Check and adjust tension of flight control system cables.				○
	28	Check and adjust travel angle of control surfaces.				○
	29	Check fuel system for leak.				○
	30	Check pitot system for leak.				○
	31	Lubrication.	○	○	○	○
*1: In Manuals No. FA200-102, FA200-103 and FA200-105, the number of this figure is Figure 7-8.						

PERIODIC INSPECTION CHART – FUSELAGE AND TAIL

DATE:

SIGNATURE:

TYPE OF INSPECTION:

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Fuselage and Tail	1	Check tail wing surfaces and fuselage skins for damage.		○	○	○
	2	Check front and rear windshields latch receptacle for damage and rubber seal for deterioration and disbonding.		○	○	○
	3	Check rudder hinges and horn fittings for damage and proper operation.		○	○	○
	4	Check elevator tab hinges and horn fittings for damage and proper operation.		○	○	○
	5	Check trim mechanism for proper operation.		○	○	○
	6	Check cables, turnbuckles, fair leads and pulleys of ailerons, elevator, rudder and trim for damage and proper operation.		○	○	○
	7	Check rudder cable (particularly adjacent to No.1 pulley) for wire break. (This inspection requires loosening of cable.)				○
	8	Check bulkheads and stringers for damage.		○	○	○
	9	Check antenna mount and wiring for general condition.		○	○	○
	10	Check bonding wires of elevator and rudder for general condition.		○	○	○
	11	Drain water from static pressure system.	○	○	○	○
	12	Drain water from pitot piping.	○	○	○	○
	13	Check horizontal stabilizer and elevator hinges for cracks and distortion. (This inspection requires removal of elevator.)				○
	14	Check horizontal stabilizer attaching bolts for proper torque.				○
	15	Check vertical stabilizer rudder hinges for damage. (This inspection requires removal of rudder)				○
	16	Check vertical stabilizer attaching bolts for proper torque.				○
	17	Check both elevator assys for cracks, distortion, wear, corrosion, play and loosed rivets, and elevator horn and hinge for damage, wear and corrosion. (This inspection requires removal of elevator.)				○
	18	Check rudder for proper structure and play, anti-collision light and static discharger for security and damage, and trim tab for damage. (This inspection requires removal of rudder)				○
	19	Check elevator tab and control mechanism components for security, damage and play.				○
	20	Check flight control cables, pulleys, rods and guides for damage and security.				○

PERIODIC INSPECTION CHART						
Section and No.		Requirements	Inspection Interval (hr)			
			50	100	500	1000
Fuselage and Tail	21	Check stops of elevator and rudder for security, damage and wear.				○
	22	Check electric and radio wiring, plugs, terminals, switches and relays for damage, corrosion, deterioration and security.				○
	23	Check heater and defroster system components for general condition and, particularly, duct for break.		○	○	○
	24	Check piping of static system (including instrument), fitting and static air intake for damage and contamination.				○
	25	Check and adjust cable tension of control systems.				○
	26	Check and adjust travel angle of control surfaces.				○
	27	Check static pressure system for leak.				○
	28	Measure weight and balance (as necessary).				○
	29	Lubrication.	○	○	○	○

DAILY AND CALENDAR INSPECTION CHART

DATE:
SIGNATURE:
TYPE OF INSPECTION:

No.	Requirements	Inspection Interval				
		Daily	30 days	60 days	1 year	5 year
	Daily Inspection					
1	Check spare fuses and spare lamps.	○				
	Calendar Inspection					
1	Check the surface of the electrolyte, specific gravity, leakage and installation of the battery. (For P/N 200-383600-001 and 200-383602-001)		○			
1A	Check the capacity, leakage and installation of the battery. (For P/N RG-35A)				○*1	
2	Check first aid kit.			○		
3	Check emergency signal light and flash light.			○		
4	Compass adjustment.				○	
5	Check fixed pitch propeller for proper torque.				○	
6	Check main wings main spar upper and lower flanges for corrosion. (Refer to SB No.200-015)					○

*1: This must be accomplished within 1 year or 200 hours of use, whichever occurs first.
The starting date for 1 year should be the day when it is equipped.

3000 HOUR SPECIAL INSPECTION CHART

DATE:
SIGNATURE:
TYPE OF INSPECTION:

No.	Requirements *2			Inspection Interval (hr)
				3000
	Magnetic Particle Inspection			
1	Main Wing Attaching Bolts.			○
	Refer to service manual Fig 7-9 *1			
	Position A-1	NAS1304-12	2 EA	
		or NAS6604-12		
	A-2	NAS1305-12	2 EA	
		or NAS6605-12		
	A-9, B-9	NAS1305-13	4 EA	
		or NAS6605-13		
	A-10, B-10	NAS1304-13	4 EA	
		or NAS6604-13		
	C-1, C-2	NAS1306-48D	4 EA	
		or NAS6606D48		
		or NAS1306-48		
		or NAS6606-48		
	B-1	NAS1304-11	2 EA	
		or NAS6604-11		
	B-2	NAS1305-11	2 EA	
		or NAS6605-11		
2	Main Wing Rear Auxiliary Spar Attaching Bolts.			○
	Refer to service manual Fig 7-9 *1			
	Detail C	NAS1306-15D	2 EA	
		or NAS6606D15		
3	Landing Gear Assy Attaching Bolts			○
		NAS1309-52D	2 EA	
		or NAS6609D52		
		NAS1309-50D	2 EA	
		or NAS6609D50		
4	Elevator Attaching Bolts			○
		NAS1304-17D	3 EA	
		or NAS6604D17		
		AN4-10A	4 EA	
5	Rudder Attaching Bolts			○
		NAS1304-16D	1 EA	
		or NAS6604D16		
		NAS1304-17D	1 EA	
		or NAS6604D17		

No.	Requirements *2			Inspection Interval (hr)
				3000
	Magnetic Particle Inspection			
6	Aileron Attaching Bolts			○
		NAS1304-12D or NAS6604D12	2 EA	
		NAS1304-18H or NAS6604H18	2 EA	
7	Flap Attaching Bolts			○
		NAS1304-9D or NAS6604D9	4 EA	
8	Nose Landing Gear Assy Attaching Bolts			○
		AN8-37	1 EA	
		200-822041-003	1 EA	
9	Engine Mount Attaching Bolts.			○
	[9 point support]	NAS1305-25D or NAS6605D25	7 EA	
		NAS1305-28D or NAS6605D28	2 EA	
	[6 point support (S/N ~243)]	NAS1305-25D or NAS6605D25	2 EA	
		NAS1305-25 or NAS6605-25 or NAS1305-25D or NAS6605D25	2 EA	
		NAS1305-28 or NAS6605-28 or NAS1305-28D or NAS6605D28	2 EA	
	(6 point support (S/N 244~)]	NAS1305-25D or NAS6605D25	2 EA	
		NAS1305-25 or NAS6605-25 or NAS1305-25D or NAS6605D25	4 EA	
10	Engine Attaching Bolts and Nuts			○
		NAS1307-50D or NAS6607D50 or AN7-35	4 EA	
		AN310-7	4 EA	

*1: In Manuals No. FA200-102, FA200-103 and FA200-105, the number of this figure is Figure 7-8.
*2: The standard parts may be replaced in accordance with Manual No. FA200-203. Caution should be exercised when inspecting or replacing.

9000 HOUR SPECIAL INSPECTION CHART

DATE:
SIGNATURE:
TYPE OF INSPECTION:

Section and No.	Requirements	Inspection Interval (hr)
		9000
	Dimension Inspection	
1	Main Wing Forward Auxiliary Spar Bolt Holes (Except for TB No. 200-018 applied aircraft) Refer to service manual Fig 7-9 *1, Detail B (Reference) Dimension per drawing: Φ 9.505 to 9.530 mm △1	○
2	Main Wing Rear Auxiliary Spar Bolt Holes (Except for TB No. 200-018 applied aircraft) Refer to service manual Fig 7-9 *1, Detail C (Reference) Dimension per drawing: Φ 9.505 to 9.530 mm △2	○
3	Main Wing Main Spar Web Wing-Fuselage Connecting Bolt Holes Refer to service manual Fig 7-9 *1, Detail A (C-1, C-2) (Reference) Dimension per drawing: Φ 9.525 to 9.627 mm △3	○
	Wear Inspection (Dimension)	
1	Flap Torque Tube (Bearing contact face) Refer to service manual Fig 8-5 Wear Limit: 0.5 mm	○
	△1 to △3 : Wear exceeding 150% of the tolerance is not allowable.	
*1: In Manuals No. FA200-102, FA200-103 and FA200-105, the number of this figure is Figure 7-8.		

LIFE LIMIT PARTS AND SET HOURS

Life Limit Parts	Life Limit	Type Applied	Remarks
Engine Drive Fuel Pump Outlet Tee AN783-6 or 203-929110-3	3000 hours	-180 (Except for –180AO)	Related to FA-200 SB200-004

LIFETIME PARTS AND TREATMENT

Lifetime Parts	Lifetime		Treatment	Remarks
Engine	Follow the manufacturer's instructions		Overhaul	Refer to the latest version of LYCOMING SI No.1009
Alternator	Follow the manufacturer's instructions	*1	Overhaul	
Starter	Follow the manufacturer's instructions		Overhaul	
Magneto	Follow the manufacturer's instructions		Overhaul	
Engine Drive Fuel Pump	Follow the manufacturer's instructions		Overhaul	
Injector	Follow the manufacturer's instructions		Overhaul	
Carburetor	Follow the manufacturer's instructions		Overhaul	
Governor	Follow the manufacturer's instructions		Overhaul	-180 only (Except for –180AO)
Constant speed Propeller	Follow the manufacturer's instructions		Overhaul	Refer to the latest version of McCAULEY SB No.137
Fixed Pitch Propeller	Follow the manufacturer's instructions		Overhaul	Refer to the latest version of McCAULEY INFORMATION MANUAL No.MPC26
Auxiliary Fuel Pump	1000 hours		Overhaul	-180 only (Except for –180AO)
Vacuum Pump (RAP215CC only)	6 years*2		Overhaul	
Vacuum System Filter	500 hours		Disposal	
Fullflow Oil Filter	50 hours		Disposal	
Master Cylinder “O” ring	1000 hours or 5 years*3		Disposal	
Emergency Signal	3 years		Disposal	

*1: Follow the latest version of LYCOMING SB No.240 and the manufacturer's instructions.
*2: Compliance with the manufacturer's instructions, followings are required.
1) Inspection of vane wearing at 500 flight hours after the pump installation, and re-inspected after 100 hours time in service or annually (which ever occurs first). Depending on the amount of wear in the vane, overhaul may be required before the service lifetime.
2) Replacement of internal parts within 6 years from the vacuum pump manufacturing date.
*3: This must be accomplished within the limits shown, whichever occurs first. The starting date for 5 years should be the day when it is equipped.

FUNCTIONAL INSPECTION REQUIRED PARTS AND TREATMENT

Parts	Inspection Interval	Remarks
Altimeter	24 months	
Tachometer	24 months or 1000 hours	Whichever occurs first