

Fuel Quality Control Audit Checklist

Facility:		Work Area:			
Topic : Aviation Fuel Quality Control		Date:			
Regulation, Code or Standard	Description of Compliant or Acceptable Condition	Acceptable	Not Acceptable	Not Applicable	Observations/Comments
ATA 103, 2-1.2	All quality control records are available for inspection?				
ATA 103, 2-1.6	Measures in place to ensure that all only correct type of fuel is delivered via the over wing nozzle				
ATA 103, 2-1.7	Fuel defueled from an aircraft should be returned to the original aircraft and will not be co-mingled with joint use fueling systems				
ATA 103, 3	Transport truck Deliveries				
ATA 103, 3	Airport facility operator will receive a certification document from jet fuel supplier or shipping agent certifying that the product being delivered meet ASTM D1655 specifications				
ATA 103, 3	Listed on the report will be: visual appearance in white bucket, Gravity corrected to 60degrees F, Distillation, Flash Point, Freezing Point, Water Separation (MSEP), Copper Strip Corrosion, Existent Gum.				
ATA 103, 3	Documents must also include: destination, batch number, fuel grade or type; quantity being shipped				
ATA 103, 3	Truck hoses inspected for deficiencies, pending failures and cleanliness				
ATA 103, 3	Allow truck to sit for 10 minutes with tank internal valves open				
ATA 103, 3	Receiver will conduct Visual Appearance White bucket test, API Gravity, corrected to 60 degrees F, FSII % Test (pre-mixed fuel)				

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ATA 103, 3	Sump Tank(s) in which product was received a minimum of 1 hour following receipt of fuel.				
ATA 103, 2	Horizontal storage tanks must have the following equipment:				
ATA 103,2	Floating suction, inlet diffuser, gauge hatch with slotted tube, access man way (2 preferred), automated high liquid level devices, secondary containment, placard next to sump drain indicating volume of drain pipe.				
ATA 103, 2	Slope of 1 in 20 to low point sump with drain				
ATA 103, 3	Filters				
ATA 103, 3	All filter vessels must be equipped with: provisions for elimination of air, direct reading differential pressure gauges with accuracy of +/- 2 psi, manual sump drains, upstream and downstream (Millipore) connections, including probes and dust caps or plugs, Placard indicating month and year of last filter change.				
ATA 103, 3	Physically segregated systems are required where more than one grade of fuel is stored; connections for receiving and dispensing different grades of fuel must be physically incompatible.				
ATA 103, 3	An emergency fuel shutoff system is required. Emergency shutoff valves and switches must be clearly marked in accordance with the requirements of NFPA 407 and the area around them free of obstructions.				
ATA 103	Fire extinguishers with inspection tags must be positioned in accordance with applicable safety requirements				
ATA 103	Minimum of 1 125 lb Wheeled 80 BC extinguisher for fixed fuel facility with an open hose discharge capacity greater than 200 gpm				

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ATA 103	Loading hoses and couplings must meet the following standards:				
ATA 103	Grade 2, Type C, Latest edition				
ATA 103	Hoses shall be installed with 2 years fo the date of manufacture and have a maximum service life of 10 years from the DOM.				
ATA 103	Fuel unloading hoses shall be compatible with type of fuel being dispensed				
ATA 103	“NO SMOKING” signs and product identification signs must be prominently displayed.				
ATA 103	Fuel storage facilities must be properly identified and color coded in accordance with the standards of API/IP 1542 latest edition				
ATA 103	Metal underground tanks and piping must be catholically protected				
ATA 103	Refueling Truck Loading Station.				
ATA 103	A handheld dead man control device is required for all truck loading operations,				
ATA 103	All stations must be equipped with static bonding capability.				
ATA 103	Bottom-loading nozzles and couplers must be equipped with 60 mesh or finer screens. .				
ATA 103	Fire Extinguishers with inspection tags must be positioned in accordance with applicable safety requirements.				

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ATA 103	Dust covers or other protective devices must be used to prevent debris from accumulating on mating surfaces of fuel loading couplers				
ATA 103,2-5	Fuel Facility Checks				
ATA 103	Records, paper or electronic must be completed by the person performing the tasks or by the person accepting responsibility for performance of the task.				
ATA 103	Daily checks and inspections should be made at the beginning of each work day including weekends and holidays.				
ATA 103	Upon completion of the checks, results recorded in remark section and dated: S= satisfactory, C= Indicates a comment required				
ATA 103	Yard for appearance and cleanliness				
ATA 103	Evidence of recent fuel spill i.e. staining, strong fuel odor or fuel in catchment basins				
ATA 103	Security, Fire and Safety Deficiencies				
ATA 103	Fuel leaks evident				

ATA 103	Daily Checks				
ATA 103,2-5	General condition of the tank yard				
ATA 103	Evidence of recent fuel spill i.e. staining, strong fuel odor or fuel in catchment basins				
ATA 103	Ensure all gates and fences are in good condition				
ATA 103	In unsecured areas all tank openings, valves, sump drains, fill caps, monitoring ports, loading/unloading hoses, master electrical switches and other accessible fittings must be kept closed and locked at all times when not in use				
ATA 103	Tank sumps				
ATA 103	Drain capacity of piping. Sample sufficient size sample, perform appearance test, record findings				
ATA 103	Continue to sump until clean dry fuel obtained				
ATA 103	Filter Differential Pressure, under normal flow, check and record differential pressure across all				

	working filters.				
ATA 103	Hoses, Swivels, Nozzles and Couplers for condition, wear, damage and leakage				
ATA 103	Dust covers or other protective devices installed and available and in good repair				
ATA 103	Hoses for abrasions, cuts, soft spots, carcass separation, worn covers, blisters exposed reinforcement, cracks twists and sharp bends that give appearance of pending failure				
ATA 103	Swivel attachment screws tight				
ATA 103	Condition of nose and poppet seals/couplers for cuts, nicks and wear				
ATA 103	Any item that is defective or leaking must be repaired or replaced				
ATA 103	Static reels, condition of reels, clamps and cables				
ATA 103	Continuity checks completed and documented				

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ATA 103	Fire Extinguishers				
ATA 103	Verify that extinguishers: are located in their designated place, have unobstructed access and visibility, unbroken safety seals, no obvious physical damage, corrosion or leakage, pressure gauge in good range				
ATA 103	Monthly Checks				
ATA 103	Filtration (Millipore) & Free Water Test				
ATA 103	Perform and membrane color/particle (Millipore) simultaneously, under flow, upstream and downstream of each filter/separator and monitor vessel				
ATA 103	Perform a free water test downstream of each filter/separator and monitor vessel. Record results and attach test membrane to Form 103.8 or equal				
ATA 103	Correct filter differential pressure, under normal flow conditions, check and record observed differential pressure, flow rate and corrected differential pressure across each working filter.				
ATA 103	Bonding cable/system continuity, perform electrical continuity check on bonding cables and clamps, resistance must be 25 ohms or less, defective equipment must be replaced				
ATA 103	Nozzle screens, remove nozzles and examine screens for particles or damage, if particle are found, investigate sources of contamination which could be from inner hose lining, pipe rust, sand, low point sediment, equipment failure, seals gaskets, etc. Screens are to be cleaned if contaminated or replaced if damaged				
ATA 103	Floating suction for all jet systems, verify				

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ATA 103	Quarterly Checks				
ATA 103	Emergency Shutoff System, Operationally check the emergency shutoff system, each device must be tested annually				
ATA 103	Water defense system External Checks, check operation of water defense systems in accordance with quarterly requirements				
ATA 103	Tank high level controls, Check satisfactory operation of tank high level sensing devices and automatic fuel flow shutoff valves where installed, inoperative controls should be adjusted or repaired immediately or have alternate operating procedures in effect that will provide positive spill prevention while tank is in service				
ATA 103	Semi-Annual Checks				
ATA 103	Hose pressure checks, Loading/unloading hoses fitted with reusable couplings and being operated under system pressure must undergo the six-month pressure testing at 225 psi				
ATA 103	Annual Checks				
ATA 103	Storage tank interiors; check fuel storage tank interiors for cleanliness and condition of coating, clean as required.				

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ATA 103	Tank Vents, Where installed, check cleanliness of tank vent screens, clean repair replace as needed				
ATA 103	Tank that have pressure/vacuum vents, check satisfactory operation and condition of poppets and inlet screens				
ATA 103	Cathodic protection, where installed, confirm satisfactory operation of cathodic protection systems.				
ATA 103	Line Strainers, check for cleanliness and damage. Clean or replace as required				
ATA 103	Water defense System Inspection and Test, check operation of water defense system in accordance with annual requirements				
ATA 103	Aircraft Fueling Equipment				
ATA 103	All aircraft fueling equipment must have a Filter/Separator or Full Flow Fuel Monitor				
ATA 103	All new vessels and element combinations shall meet API/IP 1581 latest edition.				
ATA 103	Filter/Separators must be equipped with and automatic water defense system that will cause fuel to stop flowing when activated by excessive water, water defense system must include provisions for an operational test.				
ATA 103	Full flow fuel monitors must meet the requirements of IP 1583 latest edition.				

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ATA 103	Full flow fuel monitors must be equipped with a pressure limiting device that will prevent excessive differential pressure from damaging elements in the event of a complete blockage				
ATA 103	Fuel Flow Monitors will not be used with fuels containing FSII				
ATA 103	All filtration vessels must include: air elimination provisions, Direct reading differential pressure gauge with and accuracy of +/- 2 PSI, Manual sump drains, valves with handles spring loaded to the closed position are recommended, upstream and downstream membrane sampling connections, including probes and dust covers, Pressure relief valves or other device that will prevent over-pressurization due to thermal expansion of fuel.				
ATA 103	Pressure Controls				
ATA 103	All aircraft fueling equipment must have separate and independent primary and secondary pressure control devices.				
ATA 103	Primary pressure control is intended to protect the aircraft under conditions of constant flow and also from pressure surge caused during aircraft valve closure. Secondary pressure control is intended to protect the aircraft in the event of primary pressure control failure.				
ATA 103	Primary pressure control devices must limit fueling pressure, at the nozzle, to 40 psig or less under conditions of constant flow; secondary pressure control devices must limit fueling pressure, at the fuel nozzle, to 50 psig or less under conditions of constant flow.				

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ATA 103	Deadman Control System				
ATA 103	All fueling equipment must have a hand held deadman control device. The deadman control system must completely stop fuel flow with 5 percent of the fuel flow rate at the time of release.				
ATA 103	Emergency Fuel Shutoff System				
ATA 103	Refueling trucks must be equipped with and emergency fuel shutoff control accessible from each side of the truck. Units equipped with a lift or platform must have an emergency fuel shutoff control accessible from the lift or platform, in addition to one accessible from the ground. The emergency fuel shutoff system should also be close to the tank outlet valve. Each emergency fuel shutoff control must completely stop fuel flow with a maximum of 5 percent overrun.				
ATA 103	Fire Extinguishers				
ATA 103	Refueling trucks must be equipped with a minimum of two 20BC rated fire extinguishers, securely mounted on opposite sides of the truck and readily available. Seals must be intact. Current inspection, testing and recharging records must be attached				
ATA 103	Safety Interlock System				
ATA 103	All mobile fueling equipment must have a safety interlock system which will prevent the equipment from being moved when: the couplers and/or nozzles are not in their stowed position; the pumping system is activated on tank trucks.				
ATA 103	The interlock system may stop the engine on motorized equipment, but should also apply the vehicle brakes. Refueling trucks with bottom loading provision shall incorporate a brake interlock system that will prevent the vehicle from being moved until the bottom loading coupler has been disconnected from the vehicle.				

	Interlock systems shall be equipped with an override device which shall be sealed in the normal position with a breakaway seal. Placards must identify normal and override positions.				
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ATA 103	Aircraft Fueling Hoses				
ATA 103	Hoses shall be installed within 2 years of DOM and have a maximum service life of 10 years from DOM				
ATA 103	Dust covers or other protective devices must be used				
ATA 103	Strainers and Swivels, aircraft fueling hoses must have a 100 mesh fuel screen.				
ATA 103	Aircraft Fuel Pressure Gauges				
ATA 103	A pressure gauge is required for monitoring aircraft fueling pressures. Gauges should be located where they will be visible to the equipment operator during aircraft fueling. Gauges will have a minimum diameter of 4 inches and must have an accuracy of +/- 2% full scale				
ATA 103					

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ATA 103	Additional Requirements for Trucks				
ATA 103	Cargo tanks must be constructed of stainless steel, aluminum or internally light color epoxy coated carbon steel				
ATA 103	Dome covers must be provided with a forward mounted hinge and latches which will automatically close the cover to close and latch with forward motion of the vehicle. Water-tight, fuel resistant seals and gaskets				
ATA 103	Each tank compartment must be equipped with a water drain located at the lowest point, valve handles must be spring loaded to the closed position				
ATA 103	Tank outlets should be equipped with shutoff valves located inside the tank shell.				
ATA 103	Trucks with bottom loading capability must be equipped with a high level shutoff system. Provisions for ensuring the satisfactory operation of the system shall be included.				

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ATA 103	Overwing Nozzle Spouts				
ATA 103	The prevent misfueling, overwing jet nozzles shall utilize a large wide diameter spout while avgas nozzles shall utilize a smaller diameter spout. Jet fuel nozzles spouts shall adopt an elongated or elliptical shape.				
ATA 103	Daily Checks of Refueler Trucks				
ATA 103	General condition, safety defects, trucks with leaks taken out of service				
ATA 103	Filter sumps				
ATA 103	Filter vessel under pressure, at least one gallon per sump, maximum flow, fuel appearance test, record findings. Truck removed from service if unable to obtain clean, dry sample after three samples.				
ATA 103		Filter Differential Pressure			
ATA 103		Under normal flow, check and record DP			
ATA 103	Filter differential pressure must be periodically monitored during fueling operation. Remove unit from service if a sudden drop in pressure is noted during use or if DP exceeds 15 psi				
ATA 103	Deadman Controls				
ATA 103	Perform a functionality check, remove from service is fails				
ATA 103	Safety Interlocks				
ATA 103	Verify proper operation				

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ATA 103	Nozzle Fueling Pressure				
ATA 103	Check and record nozzle delivery fueling pressure, pressure monitored during fueling operation. Must not exceed 40 psig at contestant flow. Remove from service if psig exceed 50				
ATA 103	Hoses, Nozzles & Swivels				
ATA 103	Check condition of fuel hoses, swivels, carcass separation, worn covers, blisters, exposed reinforcement, cracks, twists and sharp bends that give the appearance of pending failure. Check tightness and safety wiring of all swivel and collar attachment screws and hose couplings. Check condition of nose and poppet seals on nozzles for cuts, nicks and wear.				
ATA 103	Fire Extinguishers				
ATA 103	Located in their designated place, tagged, inspections current, unbroken seals, no obvious damage, pressure gauge in operable range				

		Date:			
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ATA 103	Monthly Checks				
ATA 103	Perform membrane color/particle (Millipore) simultaneously, under flow, upstream and downstream of each filter/separator. Perform free water test downstream of each filter/separator and monitor vessel.				
ATA 103	Determine if corrected filter differential pressure using the appropriate manufacturer curve charts or programs				
ATA 103	Corrected Filter Differential Pressure				
ATA 103	Under normal flow conditions, check and record observed differential pressure, flow rate and corrected differential pressure across each working filter.				
ATA 103	Static System Continuity Test				
ATA 103	Perform electrical continuity check of static bonding system; resistance must be 25 ohms or less.				

ATA 103	Nozzle Screens				
ATA 103	Examine each nozzle screen for particles or other solid contaminants, if particles are found, investigate possible sources of contamination, clean as necessary, verify screens are 100 mesh, damaged screens must be replaced				
ATA 103	Fuel Hoses				
ATA 103	Lay hoses out full length with system at full operating pressure and check hoses for abrasions, cuts, soft spots, carcass separation, worn covers, blisters, exposed reinforcement, cracks, twists and sharp bends that give the appearance of pending failure. Check couplings at both ends for cracks and signs of slippage or leakage				
ATA 103	Signs, Labels & Placards				
ATA 103	Product code, FLAMMABLE on each side and rear, NO SMOKING on at least two sides, NO SMOKING posted prominently in cab, EMERGENCY FUEL SUPPLY adjacent to each emergency shut off control, method of Emergency Fuel Shut Off operation, Fire Extinguisher location signs, Nozzle fueling pressure, Filter DP, Filter and Tank Drain valves, Date of last filter element change. Meter seals and calibration is intact and current				

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ATA 103	Quarterly Checks				
ATA 103	Vehicle inspected thoroughly for excessive wear and pending failure				
ATA 103	Pressure controls, operator must have written test procedures specific to the vehicle pressure control system and test facilities at each location, check all primary and secondary pressure control equipment, record pressure settings				
ATA 103	Water Defense System Check				
ATA 103	Check operation of water defense system				
ATA 103	Internal Valve Check				
ATA 103	Test to ensure that the internal valve functions properly utilizing the “pre-check” test				

ATA 103	Semi-Annual Checks				
ATA 103	Hose pressure check, refueling hoses fitted with reusable couplings and being operated under system pressure must undergo the six-month pressure testing at 225 PSI				
ATA 103	Annual Checks				
ATA 103	Replace filter/separator filter elements				
ATA 103	Teflon and synthetic separator elements may be reused, provided they are cleaned and tested				
ATA 103	Full Flow monitor elements are to be replaced annually				
ATA 103	A visual inspection of all vessel interiors, verify interior is clean, free of water, sediment, evidence of microbial growth or other contamination. Verify all elements are undamaged and secure				
ATA 103	Fueling pressure and DP Gauges, verify the accuracy of gauges used to monitor fuel delivery to aircraft is within +/- 2% of full scale. Verify proper operation of differential gauge(s) in accordance with manufacturer's recommendation.				
ATA 103	Meter Calibration, check accuracy of all aircraft fueling equipment meters.				
ATA 103	Water Defense System Inspection and Test, check operation of water defense system				
ATA 103	Procedures and Tests				
ATA 103	Appearance Tests: Refer to ATA 103, 3-1				
ATA 103	Membrane Color Filtration Test: refer to ATA 103 3-2				
ATA 103	Free Water Test: refer to ATA 103 3-3				
ATA 103	Fuel Density Test (API GRAVITY): refer to ATA 103 3-4				
ATA 103	Water Separation Test (MSEP): refer to ATA 103 3-5				
ATA 103	Fuel Odor: refer to ATA 103 3-6				
ATA 103	Visual Detection of Microorganisms: refer to ATA 103 3-7				
ATA 103	Filter Vessel Differential Pressure: refer to				

	ATA 103 3-9				
ATA 103	Bonding Cable Continuity Check: refer to ATA 103 3-10				
ATA 103					