

System Safety Assessment - WCF Maintenance									
System: Aircraft Maintenance (In House)									
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation	Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value	
		Likelihood	Severity	Outcome					
Manuals	Manuals or maintenance instructions which are not current, on hand, or complete could cause use of improper parts and procedures	Remote	Critical	Medium	Incorporate manual updates automatically. Incorporate manual hard copy updates when they are received.				
	Maintenance instructions for added equipment unavailable which could cause the use of improper parts and procedures	Remote	Critical	Medium	Ensure maintenance instructions for additional equipment are incorporated and complete in the aircraft maintenance procedures prior to use				
Records	Record entries which are not accomplished may cause insufficient knowledge of airworthiness	Occasional	Critical	Serious	Ensure maintenance entries are made upon completion of work				
	Record entries which do not sufficiently describe discrepancy or work performed, or illegible, may cause insufficient knowledge of airworthiness	Occasional	Critical	Serious	Ensure entries are complete and legible				
	Aircraft removed from maintenance facility prior to maintenance entries being accomplished into aircraft records could indicate the work was not completed	Occasional	Critical	Serious	Ensure personnel are aware of proper aircraft release procedures from maintenance				
Field Maintenance	Insufficient equipment and tools may cause improper workmanship	Occasional	Catastrophic	High	Ensure proper equipment and tools are available prior to performing work				
	Inhospitable working environment may result in improper workmanship or contamination	Occasional	Catastrophic	High	Change working hours to adjust for more acceptable temperatures. Utilize temporary wind breaks/weather shelters. Some mitigations may not be possible.				
	Lack of technical support can cause improper maintenance procedures	Remote	Critical	Medium	Prearrange support prior to departure from home base.				
	Lack of sufficient personnel could result in injuries and damage to aircraft of equipment	Occasional	Catastrophic	High	Ensure sufficient number of personnel prior to performing work				
	Availability or insufficient parts may result in improvisation or the reuse of used parts	Remote	Catastrophic	Serious	Ensure sufficient quantity of airworthy parts prior to performing work				

System: Aircraft Maintenance (In House - cont.)						Mitigation Achieved ? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation			
		Likelihood	Severity	Outcome				
Test Equipment	Specialized test equipment which is not calibrated could cause improper adjustments (torque wrenches, scales, multimeters, etc.)	Remote	Critical	Medium	Verify calibration prior to use. Maintain a list of tools requiring calibration with expiration dates. Assign person to manage tools requiring calibration. Make notation of aircraft inspection checklist to check calibration of tools requiring calibration			
	Test equipment not available or properly used could result in improper adjustments or calibration of aircraft systems	Remote	Critical	Medium	Ensure test equipment is available and personnel are properly trained on use prior to performing work			
	Test equipment functioning improperly could result in improper adjustments, improper calibration/damage to aircraft systems, or injure personnel	Occasional	Critical	Serious	Take test equipment out of service when it fails. Keep test equipment properly maintained and calibrated. Attach "Red Tag" or "Do Not Use" tag to non-functional equipment			
Special Mission Equipment	Temporary electrical equipment not installed with engineering data or per AC 43-13 could result in damage to aircraft or personnel	Occasional	Critical	Serious	Ensure all equipment installed has proper engineering or acceptable data prior to installation			
	Special mission equipment installed/removed without weight & balance being recalculated can cause the aircraft to be out of center of gravity (CG) limits	Occasional	Critical	Serious	Ensure weight & balance is properly calculated upon completion of removal or installation of special equipment			
	Modifications to special equipment, such as equipment racks, does not have updated engineering data which could damage aircraft and personnel	Occasional	Critical	Serious	Ensure engineering data is updated prior to installation of modified special equipment			
System: Facilities (Hanger)						Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation			
		Likelihood	Severity	Outcome				
Power	Power required for the task could overload existing capacity which may cause a fire and damage to equipment	Remote	Critical	Medium	Increase power capacity of facility.			
	Frayed power cords or cords missing ground pin could cause a fire, injury to personnel, and damage to equipment	Occasional	Critical	Serious	Inspect power cords before use. Replace frayed/damaged power cords. Repair/destroy frayed/damaged power cords.			
	Power cart old/unreliable could cause damage to aircraft and/or personnel	Remote	Catastrophic	Serious	Replace old/unreliable power carts with new.			
Water	High mineral content in water can damage engines and aircraft surfaces when used for cleaning	Remote	Marginal	Medium	Install water conditioning system			
	Standing water can be a slipping hazard causing injuries to personnel	Probable	Marginal	Serious	Ensure proper drainage and remove water from floor prior to work being accomplished.			

System: Facilities (Hanger- cont.)					Suggested Mitigation	Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation						
		Likelihood	Severity	Outcome				
Tools	Tools not calibrated could cause improper adjustments (torque wrenches, scales, multimeters, etc.)	Occasional	Critical	Serious	Verify calibration prior to use. Maintain a list of tools requiring calibration with expiration dates. Assign person to manage tools requiring calibration. Make notation of aircraft inspection checklist to check calibration of tools requiring calibrati			
	Tools broken, missing pieces, and tools not properly maintained can cause injury to personnel and damage to aircraft and equipment	Occasional	Critical	Serious	Inspect tools before use. Replace damaged/broken tools. Maintain tools in good working condition.			
Ground Support Equipment (GSE)	GSE leaking may cause spill hazards resulting in injuries to personnel and aircraft in addition to damage to aircraft	Occasional	Critical	Serious	Ensure GSE is maintained. Inspect GSE before use and repair/replace as necessary.			
	GSE not being maintained or used improperly may cause personnel injury or damage to aircraft	Remote	Critical	Medium	Ensure GSE is maintained. Inspect GSE before use and repair/replace as necessary. Train personnel on GSE prior to it being used.			
Lighting	Lighting insufficient can create an unsafe working environment leading to damage to aircraft and injuring personnel	Probable	Critical	High	Ensure adequate lighting available.			
	Lighting device not properly installed or maintained can cause injury to personnel or damage equipment	Occasional	Critical	Serious	Ensure all lighting devices are maintained and safe to operate			
Towing Equipment	Aircraft towing capacity of tug exceeded may cause loss of control during towing operations damaging aircraft and possible injury to personnel	Occasional	Critical	Serious	Ensure towing vehicle is proper size for make and model of aircraft and personnel are properly trained in towing procedures.			
	Use of incorrect tow bar may cause loss of control during towing operations and could cause damage to aircraft and equipment and possible injury to personnel	Remote	Critical	Medium	Ensure proper tow bar is used and train personnel in proper towing procedures			
	Ramp conditions not considered during tow operations may cause loss of control during towing operations damaging aircraft and possible injury to personnel	Occasional	Critical	Serious	Inspect ramp for conditions (ice, water, snow and etc) prior to towing operations. Do not tow if adverse conditions are observed.			

System: Maintenance Contracting (contracting WCF Fleet maintenance)							Mitigation Achieved ? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Facilities	Contractor does not have the correct tools/equipment (i.e. hand tools, GSE, test equipment) for the task which could result in damage to the aircraft and improper maintenance procedures.	Probable	Critical	High	Ensure contract specifies what is required to properly perform maintenance per model aircraft. Conduct site visit on contractor to ensure they have correct and properly maintained tools, GSE, and test equipment.				
	Contractor does not have hanger and/or hanger door to accommodate aircraft being contracted	Occasional	Critical	Serious	Ensure hanger is of proper size for contracted aircraft. Conduct site visit to ensure hanger meets requirements.				
Technical Data (Manuals, ADs, SBs, etc)	No technical data available/out of date/incomplete to properly maintain aircraft which could result in the aircraft's improper maintenance	Probable	Critical	High	Ensure contractor has proper/current technical data for contracted aircraft				
Oversight	Contractor facilities are located at a distant site which causes oversight to be limited due to travel/time constraints	Probable	Critical	High	Issue contracts to only those facilities which are within a reasonable distance (where possible) from oversight personnel's home base.				
	Oversight personnel not available due to time/other duties which may result in improper/incomplete maintenance	Probable	Critical	High	Adjust staffing and budget to meet demands to provide proper oversight of contractors				
System: Safety							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Personnel Protective Equipment	Inadequate hearing protection can cause permeate hearing loss	Occasional	Marginal	Medium	Provide hearing protection (ear plugs and/or ear muffs)				
Medical Equipment	Annual audio testing not being accomplished can result in undetected hearing loss	Frequent	Critical	High	Provide annual audiogram testing				
	Insufficient medical supplies (first aid kit, eye wash station) on hand may result in injuries not being treated in a timely manner	Occasional	Critical	Serious	Provide adequate medical supplies and inspect monthly for serviceability and inventory				
SAFECOM	Not using the Safecom System reduces awareness of problems in the field	Probable	Critical	High	Identify a standardized procedure for all maintenance personnel to use the Safecom System				
	Safecom System does not provide information needed for awareness	Probable	Critical	High	Revise Safecom System to meet the needs of maintenance				

System: Safety (cont.)							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Policy & Doctrine	The lack of a standardized procedures in using the Safecom System can result in invalid maintenance trending data	Probable	Marginal	Serious	Create standardized Safecom trending procedures. Create a centralized collection point to develop and analyze trend data				
	FSH 5709.16, CH 40 is not kept current so procedures are not standard	Occasional	Marginal	Medium	Assign a person or committee to update and maintain manuals as required				
Communications	The lack of a central bulletin board to relay maintenance issues between regions	Probable	Marginal	Serious	Create a central bulletin board accessible to all FS maintenance personnel. (Intranet based)				
Risk Management	Job Hazard Analysis (JHA) use is not standardized	Frequent	Marginal	Serious	Create standardized JHAs and conduct annual refresher training				
	Non-standard operational risk management (ORM) process is not available	Probable	Marginal	Serious	Develop a standard ORM procedure				
	Material Safety Data Sheets (MSDS) binders are not current which exposed personnel to unknown hazards	Probable	Critical	High	Maintain current MSDS binder along with implementing recommended safety measures. Ensure personnel are properly trained in use of chemicals per MSDS.				
System: Personnel (Government)							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Human Factors	Fatigue	Frequent	Catastrophic	High	Adhere to establish work-rest policy/guidelines and promote additional off-time. Request additional staffing and/or detailers during high fire activity				
	Acceptance of risk as normal	Occasional	Critical	Serious	Emphasize importance of "situational awareness" as a means to recognize risk. Provide human factors and risk management training.				
	Task saturation	Frequent	Critical	High	Prioritize assigned tasks. Request additional staffing, detailers, and/or contractors as needed.				
	Conflicting personalities	Occasional	Marginal	Medium	Bring issues to supervision. Discuss conflict with nemesis. Attend CRM training. Give honest feedback. Keep a positive attitude. Take immediate action.				
	Sense of urgency/pressure/mission driven	Frequent	Critical	High	Special emphasis with personnel in regard to safety vs. urgency and re-enforce this throughout entire operational period				

System: Personnel (Government - cont.)							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Policy/ Procedures	Policy deviation causing differences in maintenance procedures which could lead to non-standard maintenance practices	Remote	Critical	Medium	Emphasize the importance of understanding policy and be familiar with consequences of policy deviation				
	Differing standards between regions causing confusing and differences in maintenance procedures	Occasional	Marginal	Medium	Stress standardization between regions to adhere to established policies and procedures. Place all maintenance personnel under a single manager.				
	Policies subject to differing interpretations creating an unclear direction to accomplish the work	Frequent	Marginal	Serious	Create policies which are clear. Have a single person to interpret policy once a question arises which would be disseminated among all involved.				
Utilization	Insufficient personnel to accomplish maintenance in a timely manner which could cause improper maintenance, damage to aircraft and/or injuries to personnel	Occasional	Critical	Serious	Increase staffing to a level where safe maintenance practices occur.				
Training	Aircraft Specific Technical training insufficient or lack of may cause improper maintenance procedures resulting in damage to the aircraft	Occasional	Critical	Serious	Provide aircraft specific training				
	Lack of regulatory training can result in inconsistent application of policy (CFRs, FS regulations, COR, etc)	Occasional	Critical	Serious	Provide regulatory training annually or as mandated				
	Lack of equipment / facilities training (GSE and test equipment) may cause injury to personnel and equipment	Occasional	Critical	Serious	Provide equipment/facilities training annually				

System: Personnel (Contractor)					Suggested Mitigation	Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation						
		Likelihood	Severity	Outcome				
Human Factors	Fatigue	Frequent	Catastrophic	High	Adhere to established work-rest policy/guidelines and promote additional off-time. Request additional staffing.			
	Acceptance of risk as normal	Occasional	Critical	Serious	Emphasize importance of "situational awareness" as a means to recognize risk. Provide human factors and risk management training.			
	Task saturation	Frequent	Critical	High	Prioritize assigned tasks. Request additional staffing or subcontract work.			
	Conflicting personalities	Occasional	Marginal	Medium	Bring issues to supervision/management. Discuss conflict with nemesis. Attend CRM training. Give honest feedback. Keep a positive attitude. Take immediate action.			
	Sense of urgency/pressure/mission driven	Frequent	Critical	High	Have discussion with contractor and personnel in regard to safety vs. urgency and re-enforce this throughout entire contract operational period			
Policy/contract Procedures and FAA regulations	Policy/contract specification deviation could lead to non-standard maintenance practices	Remote	Critical	Medium	Emphasize the importance of understanding policy/contract requirements and FAA regulations. Be familiar with consequences of deviations			
	Policies/contract specifications and regulations subject to differing interpretations creating an unclear direction to accomplish the work	Frequent	Marginal	Serious	Create policies/contract specifications and regulations which are clear. Have a single person to interpret policy once a question arises which would be disseminated among all involved.			
Utilization	Insufficient personnel to accomplish maintenance in a timely manner which could cause improper maintenance, damage to aircraft and/or injuries to personnel	Occasional	Critical	Serious	Increase staffing to a level where safe maintenance practices occur.			
Training	Aircraft Specific Technical training insufficient or lack of may cause improper maintenance procedures resulting in damage to the aircraft and/or possible injury to personnel	Occasional	Critical	Serious	Provide aircraft specific training			
	Lack of regulatory training can result in inconsistent application of policy (CFRs, FS regulations)	Occasional	Critical	Serious	Provide regulatory training annually			
	Lack of equipment / facilities training (GSE and test equipment) may cause injury to personnel and equipment	Occasional	Critical	Serious	Provide equipment/facilities training annually			

Draft System Safety Assessment - Dry Lease Contracts Maintenance										
System: Contracts										
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation	Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value		
		Likelihood	Severity	Outcome						
Maintenance Specifications	Experienced maintenance personnel are not being used to evaluate and write the specification in the solicitation. Which can result in improperly altered or un-airworthy aircraft being awarded. This can result in damage to equipment and injury to personnel	Occasional	Probable	High	Ensure experienced maintenance personnel review and help write the maintenance specifications of all contracts.					
	Specifications not written to hold vendors accountable to comply with federal aviation regulations and the manufactures maintenance recommendations. Which can cause damage to equipment and injury to personnel.	Frequent	Critical	High	Ensure language in contract provides a means to hold the vendor accountable for not complying with Federal Aviation Regulations and Manufactures Recommendations					
	Specifications are not adequate to ensure proper over site for airworthiness. This can result in injury to personnel.	Occasional	Critical	Serious	Ensure contract maintenance specifications are adequate to ensure oversight for quality control by maintenance inspectors.					
Proposal Evaluation	Proposal package technical information not always correct or complete which could result in awarding un-airworthy aircraft. This can result in injury to personnel and damage to equipment.	Frequent	Critical	High	Ensue experienced maintenance personnel are on evaluation team to look for and chatch inproper information.					
	Aircraft specific experienced personnel not always used to evaluate proposals which can result in un-airworthy aircraft	Probable	Critical	High	Ensure maintenance personnel with specific aircraft experience are on evaluation team.					
System: Initial & Recurrent Inspection										
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation	Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value		
		Likelihood	Severity	Outcome						
Time Available	Hurried time frame to do inspections causes insufficient inspections and items missed. Missed items can cause improper maintenance procedures causing damage to equipment and injury to personnel.	Occasional	Marginal	Medium	Ensure there is enough time to do the inspection properly and with in the inspectors schedule.					

System: Initial & Recurrent Inspection					Suggested Mitigation	Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation						
		Likelihood	Severity	Outcome				
Facility	Facilities and equipment available are not always adequate to perform a proper inspection where the aircraft is located. This could result in an inadequate inspection. This may cause injury to personnel and damage to aircraft.	Occasional	Marginal	Medium	Ensure the facilities are adequate and proper equipment is available or have the aircraft moved to a proper facility.			
	Aircraft are not always inspected at the vendors facility, so their capabilities are overlooked or not evaluated at all. This could lead to improper maintenance procedures and damage to equipment and injury to personnel.	Frequent	Critical	Serious	Have all pre-use inspections performed at the vendors base facility			
	Some vendors have no in-house maintenance capabilities so the maintenance is performed by a sub-contracted facility which allows no oversight by the gov. inspector for quality or technical capability on specific aircraft. This could lead to improper maintenance which could result in damage to equipment and injury to personnel.	Frequent	Critical	High	Require vendors to have in house maintenance facilities and support or use only Manufactures Service Centers			
	Current and proper maintenance manuals for specific make, model and s/n aircraft are not always available at inspection site. This can cause improper maintenance procedures which could cause damage to equipment and injury to personnel.	Frequent	Critical	Serious	Ensure proper manuals are available during inspections			
Records	Copies of the current aircraft maintenance records are not always available with the aircraft which could lead to improper maintenance procedures and items missed on inspection.	Remote	Marginal	Medium	Ensure copies of current maintenance records are available for the inspections			

System: Continuous Maintenance							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Airworthiness Oversight	Contract specifications do not always provide for adequate maintenance oversight during operation under contract	Occasional	Critical	Serious	Ensure Maintenance specifications in contract provide for adequate oversight for quality control during operation period of contract.				
	Vendors are not being held accountable for not complying with the federal aviation regulations, and manufactures recommendations	Frequent	Critical	High					
	Personnel are not always available to provide adequate quality assurance oversight during contract period of operation	Probable	Critical	High	Provide sufficient number of personnel to provide oversight for quality control during operation period of contract.				
Return to Contract Availability	Maintenance inspectors only do a return to contract availability only when they are asked and not after the aircraft has had unscheduled maintenance performed	Occasional	Critical	Serious	Provide in contract maintenance specifications for the maintenance inspector to do a return to contract availability after unscheduled maintenance.				
System Safety Assessment - Contract Oversight, Aircraft Maintenance									
System: Writing Contract Specifications							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Program	Personnel not familiar with aviation maintenance and/or program requirements can cause improper aircraft equipment and maintenance requirements	Occasional	Critical	Serious	Ensure experienced maintenance personnel are involved when writing contract specifications				
Aircraft	FAA approved maintenance programs not being required in contract specifications	Remote	Marginal	Medium	Ensure experienced maintenance personnel are involved when writing contract specifications				
	No specifications for Maintenance records to be maintained in accordance with FAA requirements	Remote	Marginal	Medium	Ensure experienced maintenance personnel are involved when writing contract specifications				
Maintenance Personnel	Specifications for qualified/experienced maintenance personnel are not in all contracts	Frequent	Critical	High	Ensure specifications for qualified and experienced mechanics are written in contracts				
	No duty limitations for maintenance personnel in most contracts which can cause fatigue leading to mistakes being made and causing damage to equipment and injury to personnel.	Probable	Critical	High	Ensure specifications for duty limitations are written in all contracts				

System: Vendor Proposals							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Evaluating	There is not always an aviation maintenance person on the evaluating team resulting in vendors with unapproved maintenance programs and unqualified maintenance personnel being awarded contracts	Occasional	Negligible	Low	Ensure Maintenance personnel are included on evaluation teams				
	Evaluating team not paying close attention to what the proposals are stating, which results in the FS receiving poor or substandard equipment and personnel	Occasional	Negligible	Low	Ensure Qualified Maintenance personnel are included on evaluation teams and are and aware of all the solicitation requirements				
System: Inspection of Aircraft after Award for Contract Compliance							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Aircraft	Aircraft records not maintained in accordance with FAA requirements which can cause improper maintenance procedures due to lack of proper documentation	Remote	Marginal	Medium	Inspector verify records are maintained in accordance with FAA CFR's				
Personnel	Adequate number of trained and experienced maintenance personnel can cause fatigue and injuries to personnel	Remote	Critical	Medium	Inspector verify the training and experience of the maintenance personnel that will be working on the aircraft offered under the contract				
Human Factors	Inadequate number of inspectors to complete work load in time frame required resulting in inadequate inspections	Probable	Critical	High	Provide adequate number of inspectors to accomplish the work load in a timely fashion				
	Fatigue resulting in lack of detail on inspections	Occasional	Critical	Serious	Provide adequate number of inspectors to accomplish the work load in a timely fashion				
	Urgency of mission results in missed items on inspection	Remote	Critical	Medium	Provide sufficient amount of time to accomplish the inspection properly				
	When vendors uses contract maintenance the quality of work is usually a lower standard than when performed in house on owned aircraft	Probable	Critical	High	Ensure more and better oversight of contracted maintenance				

System: Evaluating Vendors Maintenance Facility							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Facilities	Facilities not adequate in size to house aircraft during maintenance can cause inadequate maintenance to be performed	Remote	Marginal	Medium	Inspector verify facility is adequate in size for aircraft offered under the contract				
	Sufficient tools and special equipment to properly maintain aircraft can cause improper maintenance procedures	Remote	Marginal	Medium	Inspector verify vendors specialized tools are available to maintain the aircraft offered under the contract				
	Improper and not current manuals for aircraft offered under contract can cause improper maintenance procedures	Probable	Catastrophic	High	Inspector verifies the vendor has correct and current manuals for the aircraft offered under the contract				
	Sufficient lighting and equipment (heater, janitorial and etc) to maintain a proper work environment can cause inadequate inspections	Remote	Marginal	Medium	Inspector verify condition of work area				
	The vendors sometimes uses special tools that are equivalent to and not what the manufacturer call out in the manual	Remote	Marginal	Medium	Ensure when equivalent tools are used, they meet the minimum performance standard				
System: Evaluating Vendor Maintenance Program							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Instructions for Continued airworthiness	Not incorporating instructions into inspection program causes items on aircraft to not be inspected properly	Occasional	Critical	Serious	Inspector verifies that the ICA's for installed items have been incorporated into the inspection program				
Tracking of time compliance items	Tracking programs not kept up to date causes time items to be over flown (overhaul times, retirement times and etc) and possible failure of component	Probable	Critical	High	Inspector verifies the latest revision date on the tracking sheet with maintenance record entries				
Manuals	No or partial manuals for specific make, model and serial Number May cause improper maintenance procedures causing damage to equipment and injury to personnel	Remote	Critical	Medium	inspector verify complete set of manuals for specific aircraft offered				
	Out of date manuals may cause improper maintenance procedures causing damage to equipment and injury to personnel	Probable	Catastrophic	High	Inspector verify the latest revisions are installed in manuals for the specific aircraft offered				
Approved Parts	Unapproved parts may cause damage to equipment and/or injury to personnel	Remote	Critical	Medium	Inspector check maintenance records and aircraft for any suspected unapproved parts				
	Improper tracking of time life parts can cause the retirement time to be over-flown and possible failure of part causing damage to aircraft and/or injury to personnel	Remote	Critical	Medium	Inspector verify the tracking records in aircraft maintenance records for tracking of timed components				

System: Evaluating Mechanic Qualifications							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Experience/ Training on make and model	Mechanic with lack of experience on make and model could result in improper maintenance procedures and/or damage to aircraft and/or personnel injury	Occasional	Catastrophic	High	Ensure maintenance personnel have the experience and training on the make and model of aircraft offered under the contract.				
System: Personnel (Vendor)							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Experience	Mechanic has little experience on make and model aircraft can cause improper maintenance procedures	Occasional	Catastrophic	High	Inspector verify experience level of maintenance personnel on make and model of aircraft provided under contract				
Training	Lack of technical training on make and model aircraft offered under the contract can cause improper maintenance procedures leading to damage to equipment and/or injury to personnel	Occasional	Catastrophic	High	Inspector verify technical training of maintenance personnel on make and model of aircraft provided under contract				
Human Factors	Fatigue and stress can cause errors resulting in damage to equipment and/or injury to personnel	Probable	Critical	High	Ensure contract duty limitations are not exceeded				
	Mission urgency may cause neglect of policy and/or regulations which can cause injury to personnel	Occasional	Marginal	Medium	Ensure sufficient time is provided for proper maintenance procedures				
	Distractions may cause things to be overlooked or procedures forgotten during maintenance	Occasional	Critical	Serious	Ensure as few distractions as possible during maintenance functions				
	Not enough personnel to do maintenance functions properly could cause mechanic to improvise and may cause damage to equipment and/or injury to personnel	Remote	Critical	Medium	Ensure sufficient personnel are provided to accomplish maintenance procedures properly				

System: Personnel (Government)							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Utilization	Too many duties and not enough personnel to do a proper job	Frequent	Critical	High	Provide sufficient personnel to accomplish work load				
Policy	Not following set policies can cause injury to personnel	Occasional	Catastrophic	High	Ensure policies are followed				
Training	Lack of technical training for specific aircraft may result in lack of thorough inspection of critical areas	Occasional	Marginal	Medium	Provide technical training to inspectors on specific make and model aircraft				
	Lack of knowledge of current regulations, manufacturer requirements may allow improper maintenance procedures resulting in damage to equipment and/or injury to personnel	Occasional	Critical	Serious	Provide training and/or refresher training for inspectors and inspectors should verify requirements as they come due.				
	Lack of knowledge of current aviation contracts of how to read and interpret language and specifications may allow improper maintenance procedures resulting in damage to aircraft and/or injuries to personnel.	Occasional	Critical	Serious	Provide training and/or refresher training for inspectors on reading and interpreting aviation contracts				
Human Factors	Fatigue due to long hours and urgency of getting job accomplished can cause injury to personnel and damage to equipment	Probable	Catastrophic	High	Provided sufficient time to accomplish tasks required in a timely manner				
	High workload for maintenance inspectors may compromise their ability to do a thorough inspection resulting in possible improper maintenance procedures and injuries to personnel and/or damage to equipment	Probable	Critical	High	Provide sufficient personnel and time to accomplish proper inspections				
System: Avionics							Mitigation Achieved? Yes or No	Additional Local Mitigation	Post Mitigation Value
Sub-systems	Hazards	Pre Mitigation			Suggested Mitigation				
		Likelihood	Severity	Outcome					
Human factors	Fatigue due to long hours and urgency of getting job accomplished can cause injury to personnel and damage to equipment	Probable	Negligible	Medium	Provided sufficient time to accomplish tasks required in a timely manner				
	High workload for avionics inspectors may compromise their ability to do a thorough inspection resulting in possible improper maintenance procedures and injuries to personnel and/or damage to equipment	Probable	Negligible	Medium	Provide sufficient personnel and time to accomplish proper inspections				