



In addition to this summary, this report includes the following forms:

Risk Discovery Logic

Risk Discovery Summary (with Questions)

Items Summary (All Items)

Functional Failure Analysis

Failure Effect Categorization (One per Effect)

Maintenance Task Selection (One per Cause)

Tasks



RISK DISCOVERY DETAILS

Date: 8/31/2015

Page 2 of 44

Risk Discovery Questions

Label	Question
Safety	Could failure affect safety on ground or in flight?
Detectability	Could failure be undetectable or not likely to be detected during normal operation?
Operational	Could failure have significant operational impact?
Economic	Could failure have significant economic impact?



RISK DISCOVERY SUMMARY

Date: 8/31/2015

Page 3 of 44

Item #	Name	Reference Number	Part Number	Description	Comments	Mark item for more detailed analysis	Overall Discovery Rating	Could failure affect safety on ground or in flight?	Could failure be undetectable or not likely to be detected during normal operation?	Could failure have significant operational impact?	Could failure have significant economic impact?
1	Aircraft					No					
1.1	FIRE PROTECTION	26	None			No					
1.1.1	Detection	26.10	None		None	No					
1.1.2	Extinguishing	26.20	None		None	No					
1.1.2.1	Engine Fire Extinguishing	26.20.21	None			Yes		Yes	Yes	Yes	Yes
1.1.1.1	Engine Fire Detection	26.10.11	None			Yes		No	No	Yes	Yes
1.1.2.1.1	Fire Extinguisher bottle assembly.	26.20.21.10	AC2620G103			No		Yes	No	Yes	Yes
1.1.1.1.1	Zone 1 Sensor.	26.10.11.10	AC2611G201			No		No	No	Yes	Yes
1.1.2.1.2	Double Check Tee	26.20.21.20	35201020			No		No	Yes	Yes	Yes
1.1.1.1.2	Zone 2 Sensor.	26.10.11.20	AC2611G202			No		No	No	Yes	Yes
1.1.2.1.3	Discharge Pipe LH	26.20.21.30	AC2620G105			No		No	Yes	Yes	Yes
1.1.2.1.4	Discharge Pipe RH	26.20.21.40	AC2620G104			No		No	Yes	Yes	Yes
1.1.2.1.5	Pipe Assembly L/H with permaswage fittings	26.20.21.50	AC2620E120			No		No	Yes	Yes	Yes
1.1.2.1.6	Pipe Assembly R/H with permaswage fittings	26.20.21.60	AC2620E122			No		No	Yes	Yes	Yes



ITEMS SUMMARY

Date: 8/31/2015

Page 4 of 44

Item #	Reference Number	Name	Part Number	Alternate Part Number	Description	Comments	Supplier	Similar To	URD	Reliability model
1		Aircraft							Inherit	
1.1	26	FIRE PROTECTION	None						Inherit	
1.1.1	26.10	Detection	None			None			Inherit	
1.1.1.1	26.10.11	Engine Fire Detection	None				VORTOS Inc	Various	Inherit	
1.1.1.1.1	26.10.11.10	Zone 1 Sensor.	AC2611G201				VORTOS Inc	Various	Inherit	
1.1.1.1.2	26.10.11.20	Zone 2 Sensor.	AC2611G202				VORTOS Inc	Various	Inherit	
1.1.2	26.20	Extinguishing	None			None			Inherit	
1.1.2.1	26.20.21	Engine Fire Extinguishing	None				RS Aerospace	Various	Inherit	
1.1.2.1.1	26.20.21.10	Fire Extinguisher bottle assembly.	AC2620G103				MSTR Scientific	Various	Inherit	
1.1.2.1.2	26.20.21.20	Double Check Tee	35201020				MSTR Scientific	Various	Inherit	
1.1.2.1.3	26.20.21.30	Discharge Pipe LH	AC2620G105				RS Aerospace	Various	Inherit	
1.1.2.1.4	26.20.21.40	Discharge Pipe RH	AC2620G104				RS Aerospace	Various	Inherit	
1.1.2.1.5	26.20.21.50	Pipe Assembly L/H with permaswage fittings	AC2620E120				RS Aerospace	New	Inherit	
1.1.2.1.6	26.20.21.60	Pipe Assembly R/H with permaswage fittings	AC2620E122				RS Aerospace	New	Inherit	



**Functional Failure Analysis
Aircraft**

Date: 8/31/2015

Page 5 of 44

Function #	Function	Failure #	Functional Failure	Effect #	Effect	Cause #	Failure Mode
Aircraft							
26 - FIRE PROTECTION							
26.10 - Detection							
26.10.11 - Engine Fire Detection							
1	Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	1	Fails to provide Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	1	Loss of fire detection/overheat signal from loop A or B. Alternative loop is still available.	1	Loss of sensor pressure.
						2	Failure of responder.
						3	Engine fire detection wiring harness failure.
		2	Provides erroneous fire warning.	1	Erroneous fire warning. Nuisance occurrence leading to engine shutdown.	1	Fire detector, responder malfunction.
		2		2	Failure of engine wiring harness.		
2	To provide fire loop failure signal.	1	Fails to provide fire loop failure signal.	1	Loss of fire loop failure detection signal.	1	Responder failure.
						2	Engine wiring harness failure.
		2	Provides erroneous fire loop failure signal.	1	Nuisance failure signal.	1	Responder failure.
						2	Engine wiring harness failure.
26.10.11.10 - Zone 1 Sensor.							
26.10.11.20 - Zone 2 Sensor.							
26.20 - Extinguishing							
26.20.21 - Engine Fire Extinguishing							
1	Store extinguishing agent under pressure.	1	Fails to maintain full quantity of agent at correct pressure.	1	Insufficient agent available in the Fire Extinguisher bottle for effective discharge.	1	Leakage from Fire Extinguisher bottle assembly.
						2	Uncommanded firing.
2	Release extinguishing agent on command.	1	Fails to release agent on command from primary fire extinguisher.	1	No, or insufficient, agent available for discharge. Secondary fire extinguisher must be used	1	Cartridge failure.
						2	Failure of fire extinguishing electrical harness.
		2	Fails to release agent on command from secondary fire extinguisher.	1	Loss of fire extinguisher redundancy.	1	Cartridge failure.
						2	Failure of fire extinguishing electrical harness.
3	Distribute extinguishing agent to fire hazard area.	1	Fails to distribute agent to fire hazard area.	1	No, or insufficient agent available in fire hazard area.	1	Damaged Fire Extinguisher bottle assembly.
						2	Two Way Check Tee and associated plumbing, leakage.
						3	Misaligned, damaged or blocked distribution pipe.
4	Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.	1	Fails to indicate when Fire Extinguisher bottle low pressure exists.	1	No indication of low pressure in Fire Extinguisher bottle.	1	Pressure switch hung in 'High Pressure' position.
						2	Failure of fire extinguishing electrical harness.
		2	False indication of low pressure in Fire Extinguisher container.	1	False indication of low pressure in Fire Extinguisher bottle.	1	Pressure switch hung in 'Low Pressure' position.
						2	Failure of fire extinguishing electrical harness.
5	Provides EMI & HIRF/L protection of Fire Extinguishing System.	1	Fails to provide EMI, HIRF/L protection of Fire Extinguishing System.	1	Loss of EMI, HIRF/L protection for Fire Extinguisher system.	1	Damage or failure of electrical harness.



**Functional Failure Analysis
Aircraft**

Date: 8/31/2015

Page 6 of 44

26.20.21.10 - Fire Extinguisher bottle assembly.
26.20.21.20 - Double Check Tee
26.20.21.30 - Discharge Pipe LH
26.20.21.40 - Discharge Pipe RH
26.20.21.50 - Pipe Assembly L/H with permaswage fittings
26.20.21.60 - Pipe Assembly R/H with permaswage fittings

FAILURE EFFECT CATEGORIZATION

Name	26.10.11 - Engine Fire Detection
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.
Functional Failure	1 - Fails to provide Fire Zone 1 & 2 fire detection/overheat signal to the airframe.
Effect	1 - Loss of fire detection/overheat signal from loop A or B. Alternative loop is still available.

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes</p> <p>No</p>		1	Yes Functional Failure will be evident to operating crew through instrument/warning panel indications.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>Yes</p> <p>No</p>		2	No No direct adverse effect on operating safety. Crew will switch to alternate loop.
<p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p>Yes</p> <p>No</p>		3	Question 3 - Not Applicable
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>Yes</p> <p>No</p>		4	No Aircraft can continue safe flight, and may be dispatched with one loop per engine in non-operational status.
<p>- 5 - Evident Safety</p> <p>- 6 - Evident Operational</p> <p>- 7 - Evident Economic</p> <p>- 8 - Hidden Safety</p> <p>- 9 - Hidden Economic</p>		Category	- 7 - Evident Economic
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.10.11 - Engine Fire Detection
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.
Functional Failure	2 - Provides erroneous fire warning.
Effect	1 - Erroneous fire warning. Nuisance occurrence leading to engine shutdown.

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes</p> <p>No</p>		1	Yes Functional Failure will be evident to operating crew through instrument/warning panel indications.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p>		2	No No direct adverse effect on operating safety. Engine will be shutdown.
<p>Yes</p> <p>No</p> <p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>Yes</p> <p>No</p>		3	Question 3 - Not Applicable
<p>Yes</p> <p>- 6 - Evident Operational</p> <p>No</p> <p>- 5 - Evident Safety</p> <p>- 7 - Evident Economic</p> <p>- 8 - Hidden Safety</p> <p>- 9 - Hidden Economic</p>		4	Yes Aircraft may have altitude or range restrictions, or may be required to divert to an alternate destination.
		Category	- 6 - Evident Operational
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.10.11 - Engine Fire Detection
Function	2 - To provide fire loop failure signal.
Functional Failure	1 - Fails to provide fire loop failure signal.
Effect	1 - Loss of fire loop failure detection signal.

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes</p> <p>No</p>		1	Yes Functional Failure will be evident to operating crew through pre-flight ground test
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>Yes</p> <p>No</p>		2	No No direct adverse effect on operating safety. Crew will switch to alternate loop.
<p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p>Yes</p> <p>No</p>		3	Question 3 - Not Applicable
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>Yes</p> <p>No</p>		4	No Aircraft can continue safe flight, and may be dispatched with one loop per engine in non-operational status.
<p>- 5 - Evident Safety</p> <p>- 6 - Evident Operational</p> <p>- 7 - Evident Economic</p> <p>- 8 - Hidden Safety</p> <p>- 9 - Hidden Economic</p>		Category	- 7 - Evident Economic
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.10.11 - Engine Fire Detection
Function	2 - To provide fire loop failure signal.
Functional Failure	2 - Provides erroneous fire loop failure signal.
Effect	1 - Nuisance failure signal.

Failure Effect Categorization		Answers and Explanations		
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes</p> <p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>No</p> <p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p>Yes</p> <p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>No</p> <p>- 5 - Evident Safety</p> <p>- 6 - Evident Operational</p> <p>- 7 - Evident Economic</p> <p>- 8 - Hidden Safety</p> <p>- 9 - Hidden Economic</p>		1	Yes	Functional Failure will be evident to operating crew through pre-flight ground test
		2	No	No direct adverse effect on operating safety. Crew will switch to alternate loop.
		3		Question 3 - Not Applicable
		4	No	Aircraft can continue safe flight, and may be dispatched with one loop per engine in non-operational status.
		Category	- 7 - Evident Economic	
		Remarks		

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	1 - Store extinguishing agent under pressure.
Functional Failure	1 - Fails to maintain full quantity of agent at correct pressure.
Effect	1 - Insufficient agent available in the Fire Extinguisher bottle for effective discharge.

Failure Effect Categorization	Answers and Explanations		
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> 1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties? </div> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> Yes No </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> 2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety? </div> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> Yes No </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> 4 - Does the Functional Failure have a direct adverse effect on operating capability? </div> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> Yes No </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%; text-align: center;"> - 5 - Evident Safety </div> <div style="background-color: green; color: white; padding: 5px; width: 45%; text-align: center;"> - 6 - Evident Operational </div> <div style="border: 1px solid black; padding: 5px; width: 45%; text-align: center;"> - 7 - Evident Economic </div> </div> </div> <div style="width: 45%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> 3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety? </div> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> Yes No </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%; text-align: center;"> - 8 - Hidden Safety </div> <div style="border: 1px solid black; padding: 5px; width: 45%; text-align: center;"> - 9 - Hidden Economic </div> </div> </div> </div>	1	Yes	Functional Failure will be evident to operating crew through instrument/warning panel indications.
	2	No	No direct adverse effect on operating safety. Secondary Firex is available as a reserve.
	3		
	4	Yes	Unscheduled maintenance will be required
	Category - 6 - Evident Operational		
	Remarks		

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	2 - Release extinguishing agent on command.
Functional Failure	1 - Fails to release agent on command from primary fire extinguisher.
Effect	1 - No, or insufficient, agent available for discharge. Secondary fire extinguisher must be used

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		1	No Hidden Functional Failure will not be evident to operating crew.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>		2	Question 2 - Not Applicable
<p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		3	No Hidden Functional Failure of primary firex in combination with engine fire will not have an adverse effect on operating safety. Additional failure of secondary firex is required to effect safety.
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>		4	Question 4 Not Applicable
<p>5 - Evident Safety</p> <p>6 - Evident Operational</p> <p>7 - Evident Economic</p> <p>8 - Hidden Safety</p> <p>9 - Hidden Economic</p>		Category	- 9 - Hidden Economic
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	2 - Release extinguishing agent on command.
Functional Failure	2 - Fails to release agent on command from secondary fire extinguisher.
Effect	1 - Loss of fire extinguisher redundancy.

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		1	No Hidden Functional Failure will not be evident to operating crew.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		2	
<p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		3	Yes Hidden Functional Failure in combination with an engine fire may have an adverse effect on operating safety.
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		4	
<p>5 - Evident Safety</p> <p>6 - Evident Operational</p> <p>7 - Evident Economic</p> <p>8 - Hidden Safety</p> <p>9 - Hidden Economic</p>		Category	- 8 - Hidden Safety
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	3 - Distribute extinguishing agent to fire hazard area.
Functional Failure	1 - Fails to distribute agent to fire hazard area.
Effect	1 - No, or insufficient agent available in fire hazard area.

Failure Effect Categorization		Answers and Explanations		
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		1	No	Hidden Functional Failure will not be evident to operating crew.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		2		Question 2 - Not Applicable
<p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		3	Yes	Hidden Functional Failure in combination with an engine fire may have an adverse effect on operating safety.
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		4		Question 4 - Not Applicable
<p>- 5 - Evident Safety</p> <p>- 6 - Evident Operational</p> <p>- 7 - Evident Economic</p> <p>- 8 - Hidden Safety</p> <p>- 9 - Hidden Economic</p>		<p>Category - 8 - Hidden Safety</p> <p>Remarks</p>		

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	4 - Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.
Functional Failure	1 - Fails to indicate when Fire Extinguisher bottle low pressure exists.
Effect	1 - No indication of low pressure in Fire Extinguisher bottle.

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		1	No No, failure will not be evident to operating crew.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>		2	Question 2 - Not Applicable
<p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		3	No Hidden Functional Failure of primary firex in combination with engine fire will not have an adverse effect on operating safety. Additional failure of secondary firex is required to effect safety.
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>		4	Question 4 Not Applicable
<p>- 5 - Evident Safety</p> <p>- 6 - Evident Operational</p> <p>- 7 - Evident Economic</p> <p>- 8 - Hidden Safety</p> <p>- 9 - Hidden Economic</p>		Category	- 9 - Hidden Economic
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	4 - Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.
Functional Failure	2 - False indication of low pressure in Fire Extinguisher container.
Effect	1 - False indication of low pressure in Fire Extinguisher bottle.

Failure Effect Categorization		Answers and Explanations	
<p>1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?</p> <p>Yes</p> <p>No</p>		1	Yes Functional Failure will be evident to operating crew through instrument/warning panel indications.
<p>2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety?</p> <p>3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety?</p> <p>No</p> <p>Yes</p>		2	No No direct adverse effect on operating safety, redundancy in system, second bottle available.
<p>4 - Does the Functional Failure have a direct adverse effect on operating capability?</p> <p>Yes</p> <p>No</p>		3	Question 3 - Not Applicable
<p>Yes</p> <p>No</p> <p>5 - Evident Safety</p> <p>- 6 - Evident Operational</p> <p>7 - Evident Economic</p> <p>8 - Hidden Safety</p> <p>9 - Hidden Economic</p>		4	Yes Unscheduled maintenance will be required
		Category	- 6 - Evident Operational
		Remarks	

FAILURE EFFECT CATEGORIZATION

Name	26.20.21 - Engine Fire Extinguishing
Function	5 - Provides EMI & HIRF/L protection of Fire Extinguishing System.
Functional Failure	1 - Fails to provide EMI, HIRF/L protection of Fire Extinguishing System.
Effect	1 - Loss of EMI, HIRF/L protection for Fire Extinguisher system.

Failure Effect Categorization	Answers and Explanations		
<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> 1 - Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties? </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Yes No </div>	1	No	Hidden Functional Failure will not be evident to operating crew.
<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 90%;"> 2 - Does the Functional Failure or secondary damage resulting from the Functional Failure have a direct adverse effect on operating safety? </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Yes No </div> </div> <div style="width: 45%;"> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 90%;"> 3 - Does the combination of a Hidden Functional Failure and one additional failure of a system related or backup function have an adverse effect on operating safety? </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Yes No </div> </div> </div>	2		Question 2 - Not Applicable
<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 90%;"> 4 - Does the Functional Failure have a direct adverse effect on operating capability? </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Yes No </div> </div> </div>	3	No	Hidden Functional Failure in combination with EMI occurrence will not have an adverse effect on safety.
<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 20%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Yes</div> <div style="border: 1px solid black; padding: 5px;">- 5 - Evident Safety</div> </div> <div style="width: 20%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Yes</div> <div style="border: 1px solid black; padding: 5px;">- 6 - Evident Operational</div> </div> <div style="width: 20%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">No</div> <div style="border: 1px solid black; padding: 5px;">- 7 - Evident Economic</div> </div> <div style="width: 20%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Yes</div> <div style="border: 1px solid black; padding: 5px;">- 8 - Hidden Safety</div> </div> <div style="width: 20%; text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #006400; color: white;">No</div> <div style="border: 1px solid black; padding: 5px; background-color: #006400; color: white;">- 9 - Hidden Economic</div> </div> </div>	4		Question 4 - Not Applicable
Category		- 9 - Hidden Economic	
Remarks			



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 18 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Functional Failure	1 - Fails to provide Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Effect	1 - Loss of fire detection/overheat signal from loop A or B. Alternative loop is still available.	
Failure Mode	1 - Loss of sensor pressure.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	Detailed Inspection of Engine Fire Detection Loops.	Assigned	RS	2000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 19 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Functional Failure	1 - Fails to provide Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Effect	1 - Loss of fire detection/overheat signal from loop A or B. Alternative loop is still available.	
Failure Mode	2 - Failure of responder.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable. System built in test is contin
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
---	------------------	--------	------	-------------------	------	---------------



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 20 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Functional Failure	1 - Fails to provide Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Effect	1 - Loss of fire detection/overheat signal from loop A or B. Alternative loop is still available.	
Failure Mode	3 - Engine fire detection wiring harness failure.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Wiring Harness Assembly.	Assigned	RS	4000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 21 of 44

Name	26.10.11 - Engine Fire Detection	FEC -6- Evident Operational
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Functional Failure	2 - Provides erroneous fire warning.	
Effect	1 - Erroneous fire warning. Nuisance occurrence leading to engine shutdown.	
Failure Mode	1 - Fire detector, responder malfunction.	

Question	Yes	No	Explanation
6A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
6B: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
6C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6E: Is there any task or combination of tasks that will be applicable and effective?		X	

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
---	------------------	--------	------	-------------------	------	---------------



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 22 of 44

Name	26.10.11 - Engine Fire Detection	FEC -6- Evident Operational
Function	1 - Provides Fire Zone 1 & 2 fire detection/overheat signal to the airframe.	
Functional Failure	2 - Provides erroneous fire warning.	
Effect	1 - Erroneous fire warning. Nuisance occurrence leading to engine shutdown.	
Failure Mode	2 - Failure of engine wiring harness.	

Question	Yes	No	Explanation
6A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
6B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
6C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6E: Is there any task or combination of tasks that will be applicable and effective?		X	

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Wiring Harness Assembly.	Assigned	RS	4000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 23 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	2 - To provide fire loop failure signal.	
Functional Failure	1 - Fails to provide fire loop failure signal.	
Effect	1 - Loss of fire loop failure detection signal.	
Failure Mode	1 - Responder failure.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
---	------------------	--------	------	-------------------	------	---------------



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 24 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	2 - To provide fire loop failure signal.	
Functional Failure	1 - Fails to provide fire loop failure signal.	
Effect	1 - Loss of fire loop failure detection signal.	
Failure Mode	2 - Engine wiring harness failure.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Wiring Harness Assembly.	Assigned	RS	4000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 25 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	2 - To provide fire loop failure signal.	
Functional Failure	2 - Provides erroneous fire loop failure signal.	
Effect	1 - Nuisance failure signal.	
Failure Mode	1 - Responder failure.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
---	------------------	--------	------	-------------------	------	---------------



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 26 of 44

Name	26.10.11 - Engine Fire Detection	FEC -7- Evident Economic
Function	2 - To provide fire loop failure signal.	
Functional Failure	2 - Provides erroneous fire loop failure signal.	
Effect	1 - Nuisance failure signal.	
Failure Mode	2 - Engine wiring harness failure.	

Question	Yes	No	Explanation
7A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
7C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Wiring Harness Assembly.	Assigned	RS	4000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 27 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -6- Evident Operational
Function	1 - Store extinguishing agent under pressure.	
Functional Failure	1 - Fails to maintain full quantity of agent at correct pressure.	
Effect	1 - Insufficient agent available in the Fire Extinguisher bottle for effective discharge.	
Failure Mode	1 - Leakage from Fire Extinguisher bottle assembly.	

Question	Yes	No	Explanation
6A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
6B: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
6C: Is a restoration task to reduce failure rate applicable and effective?	X		Restoration through hydrostatic test and replacement of burst disc & fill valve is applicable and effective. Requirements to be complied in accordance with Operator national requirements.
6D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6E: Is there any task or combination of tasks that will be applicable and effective?		X	

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	Remove Fire Bottles for Hydrostatic Test & Refurbishment.	Assigned	RS	14 Year		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 28 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -6- Evident Operational
Function	1 - Store extinguishing agent under pressure.	
Functional Failure	1 - Fails to maintain full quantity of agent at correct pressure.	
Effect	1 - Insufficient agent available in the Fire Extinguisher bottle for effective discharge.	
Failure Mode	2 - Uncommanded firing.	

Question	Yes	No	Explanation
6A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
6B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
6C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6E: Is there any task or combination of tasks that will be applicable and effective?		X	

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	Assigned	RS	2000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 29 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -9- Hidden Economic
Function	2 - Release extinguishing agent on command.	
Functional Failure	1 - Fails to release agent on command from primary fire extinguisher.	
Effect	1 - No, or insufficient, agent available for discharge. Secondary fire extinguisher must be used	
Failure Mode	1 - Cartridge failure.	

Question	Yes	No	Explanation
9A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
9B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
9C: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
9D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
9E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?	X		Component is Life Limited, a discard task is applicable and effective.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	Discard Fire Extinguisher Cartridge.	Assigned	DS	10 Year		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 30 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -9- Hidden Economic
Function	2 - Release extinguishing agent on command.	
Functional Failure	1 - Fails to release agent on command from primary fire extinguisher.	
Effect	1 - No, or insufficient, agent available for discharge. Secondary fire extinguisher must be used	
Failure Mode	2 - Failure of fire extinguishing electrical harness.	

Question	Yes	No	Explanation
9A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
9B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
9C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
9D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
9E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	Assigned	RS	2000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 31 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -8- Hidden Safety
Function	2 - Release extinguishing agent on command.	
Functional Failure	2 - Fails to release agent on command from secondary fire extinguisher.	
Effect	1 - Loss of fire extinguisher redundancy.	
Failure Mode	1 - Cartridge failure.	

Question	Yes	No	Explanation
8A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
8B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
8C: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
8D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?	X		Component is Life Limited, a discard task is applicable and effective.
8F: Is there any task or combination of tasks that will be applicable and effective?	X		Component is Life Limited, a discard task is applicable and effective.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	Discard Fire Extinguisher Cartridge.	Assigned	DS	10 Year		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 32 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -8- Hidden Safety
Function	2 - Release extinguishing agent on command.	
Functional Failure	2 - Fails to release agent on command from secondary fire extinguisher.	
Effect	1 - Loss of fire extinguisher redundancy.	
Failure Mode	2 - Failure of fire extinguishing electrical harness.	

Question	Yes	No	Explanation
8A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
8B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
8C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
8D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8F: Is there any task or combination of tasks that will be applicable and effective?	X		GVI for condition and security is applicable and effective.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	Assigned	RS	2000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 33 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -8- Hidden Safety
Function	3 - Distribute extinguishing agent to fire hazard area.	
Functional Failure	1 - Fails to distribute agent to fire hazard area.	
Effect	1 - No, or insufficient agent available in fire hazard area.	
Failure Mode	1 - Damaged Fire Extinguisher bottle assembly.	

Question	Yes	No	Explanation
8A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
8B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
8C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
8D: Is a restoration task to reduce failure rate applicable and effective?	X		Restoration through hydrostatic test and replacement of burst disc & fill valve is applicable and effective. Requirements to be complied in accordance with Operator national requirements.
8E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8F: Is there any task or combination of tasks that will be applicable and effective?	X		GVI and a Restoration Task are applicable and effective.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System.	Assigned	RS	4000 Flight Hours		
2	Remove Fire Bottles for Hydrostatic Test & Refurbishment.	Assigned	RS	14 Year		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 34 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -8- Hidden Safety
Function	3 - Distribute extinguishing agent to fire hazard area.	
Functional Failure	1 - Fails to distribute agent to fire hazard area.	
Effect	1 - No, or insufficient agent available in fire hazard area.	
Failure Mode	2 - Two Way Check Tee and associated plumbing, leakage.	

Question	Yes	No	Explanation
8A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
8B: Is a check to verify operation applicable and effective?	X		An operational check to verify operation is applicable and effective.
8C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
8D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8F: Is there any task or combination of tasks that will be applicable and effective?	X		Periodic Op Ck and GVI are applicable and effective.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	Operational Check of Fire Extinguisher Distribution System.	Assigned	RS	10 Year		
2	General Visual Inspection of Engine Fire Extinguishing System.	Assigned	RS	4000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 35 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -8- Hidden Safety
Function	3 - Distribute extinguishing agent to fire hazard area.	
Functional Failure	1 - Fails to distribute agent to fire hazard area.	
Effect	1 - No, or insufficient agent available in fire hazard area.	
Failure Mode	3 - Misaligned, damaged or blocked distribution pipe.	

Question	Yes	No	Explanation
8A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
8B: Is a check to verify operation applicable and effective?	X		An operational check to verify operation is applicable and effective.
8C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
8D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
8F: Is there any task or combination of tasks that will be applicable and effective?	X		Periodic Op Ck and GVI are applicable and effective.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	Operational Check of Fire Extinguisher Distribution System.	Assigned	RS	10 Year		
2	General Visual Inspection of Engine Fire Extinguishing System.	Assigned	RS	4000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 36 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -9- Hidden Economic
Function	4 - Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.	
Functional Failure	1 - Fails to indicate when Fire Extinguisher bottle low pressure exists.	
Effect	1 - No indication of low pressure in Fire Extinguisher bottle.	
Failure Mode	1 - Pressure switch hung in 'High Pressure' position.	

Question	Yes	No	Explanation
9A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
9B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
9C: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
9D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
9E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
---	------------------	--------	------	-------------------	------	---------------



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 37 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -9- Hidden Economic
Function	4 - Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.	
Functional Failure	1 - Fails to indicate when Fire Extinguisher bottle low pressure exists.	
Effect	1 - No indication of low pressure in Fire Extinguisher bottle.	
Failure Mode	2 - Failure of fire extinguishing electrical harness.	

Question	Yes	No	Explanation
9A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
9B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
9C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
9D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
9E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	Assigned	RS	2000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 38 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -6- Evident Operational
Function	4 - Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.	
Functional Failure	2 - False indication of low pressure in Fire Extinguisher container.	
Effect	1 - False indication of low pressure in Fire Extinguisher bottle.	
Failure Mode	1 - Pressure switch hung in 'Low Pressure' position.	

Question	Yes	No	Explanation
6A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because the rate of reduction in failure resistance is not predictable.
6B: Is an inspection or functional check to detect degradation of function applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
6E: Is there any task or combination of tasks that will be applicable and effective?		X	

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
---	------------------	--------	------	-------------------	------	---------------



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 39 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -6- Evident Operational
Function	4 - Provides low pressure indication, when a low pressure condition exists in the Fire Extinguisher bottle.	
Functional Failure	2 - False indication of low pressure in Fire Extinguisher container.	
Effect	1 - False indication of low pressure in Fire Extinguisher bottle.	
Failure Mode	2 - Failure of fire extinguishing electrical harness.	

Question	Yes	No	Explanation
6A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
6B: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
6C: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
6E: Is there any task or combination of tasks that will be applicable and effective?		X	

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	Assigned	RS	2000 Flight Hours		



MAINTENANCE TASK SELECTION

Date: 8/31/2015

Page 40 of 44

Name	26.20.21 - Engine Fire Extinguishing	FEC -9- Hidden Economic
Function	5 - Provides EMI & HIRF/L protection of Fire Extinguishing System.	
Functional Failure	1 - Fails to provide EMI, HIRF/L protection of Fire Extinguishing System.	
Effect	1 - Loss of EMI, HIRF/L protection for Fire Extinguisher system.	
Failure Mode	1 - Damage or failure of electrical harness.	

Question	Yes	No	Explanation
9A: Is a lubrication or servicing task applicable and effective?		X	Task is not applicable because there is no consumable to replenish.
9B: Is a check to verify operation applicable and effective?		X	Task is not cost-effective based on the cost of the task vs. the economic effects of possible multiple failures.
9C: Is an inspection or functional check to detect degradation of function applicable and effective?	X		GVI for condition and security is applicable and effective.
9D: Is a restoration task to reduce failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.
9E: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?		X	Task is not applicable because item does not show degradation at an identifiable age.

#	Task Description	Status	Type	Assigned interval	Crew	Task Duration
1	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	Assigned	RS	2000 Flight Hours		



TASKS

Date: 8/31/2015

Page 41 of 44

Task ID	Task Description	Type	Status	Reference Document	Proposed Interval	Assigned interval	Condition	Comments	Zone	Access	Last Updated By	Last Updated	Name	Failure Mode
37	Detailed Inspection of Engine Fire Detection Loops.	RS	Assigned			2000 Flight Hours	2000 ft/hr	Inspect for condition and security.	400		ReliaSoft Corporation	8/31/2015 4:19 PM	Engine Fire Detection	Loss of sensor pressure.
80	Discard Fire Extinguisher Cartridge.	DS	Assigned			10 Year	10 yr	Per manufacturer life limit recommendations.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Cartridge failure.
80	Discard Fire Extinguisher Cartridge.	DS	Assigned			10 Year	10 yr	Per manufacturer life limit recommendations.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Cartridge failure.
78	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	RS	Assigned			2000 Flight Hours	2000 ft/hr	Inspect for chafing, damage, security, loose connectors and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Failure of fire extinguishing electrical harness.
78	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	RS	Assigned			2000 Flight Hours	2000 ft/hr	Inspect for chafing, damage, security, loose connectors and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Uncommanded firing.
78	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	RS	Assigned			2000 Flight Hours	2000 ft/hr	Inspect for chafing, damage, security, loose connectors and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Failure of fire extinguishing electrical harness.



TASKS

Date: 8/31/2015

Page 42 of 44

78	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	RS	Assigned		2000 Flight Hours	2000 ft/hr	Inspect for chafing, damage, security, loose connectors and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Failure of fire extinguishing electrical harness.
78	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	RS	Assigned		2000 Flight Hours	2000 ft/hr	Inspect for chafing, damage, security, loose connectors and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Failure of fire extinguishing electrical harness.
78	General Visual Inspection of Engine Fire Extinguishing System Wiring Harness Assembly.	RS	Assigned		2000 Flight Hours	2000 ft/hr	Inspect for chafing, damage, security, loose connectors and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Damage or failure of electrical harness.
76	General Visual Inspection of Engine Fire Extinguishing System.	RS	Assigned		4000 Flight Hours	4000 ft/hr	Inspect fire bottle, pipes and mounting structure for condition and security.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Misaligned, damaged or blocked distribution pipe.
76	General Visual Inspection of Engine Fire Extinguishing System.	RS	Assigned		4000 Flight Hours	4000 ft/hr	Inspect fire bottle, pipes and mounting structure for condition and security.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Two Way Check Tee and associated plumbing, leakage.
76	General Visual Inspection of Engine Fire Extinguishing System.	RS	Assigned		4000 Flight Hours	4000 ft/hr	Inspect fire bottle, pipes and mounting structure for condition and security.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Damaged Fire Extinguisher bottle assembly.



TASKS

Date: 8/31/2015

Page 43 of 44

79	General Visual Inspection of Engine Wiring Harness Assembly.	RS	Assigned			4000 Flight Hours	4000 ft/hr	Zonal Transfer - Inspect for chafing, damage, security, loose connectors, and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:19 PM	Engine Fire Detection	Engine wiring harness failure.
79	General Visual Inspection of Engine Wiring Harness Assembly.	RS	Assigned			4000 Flight Hours	4000 ft/hr	Zonal Transfer - Inspect for chafing, damage, security, loose connectors, and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:19 PM	Engine Fire Detection	Failure of engine wiring harness.
79	General Visual Inspection of Engine Wiring Harness Assembly.	RS	Assigned			4000 Flight Hours	4000 ft/hr	Zonal Transfer - Inspect for chafing, damage, security, loose connectors, and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:19 PM	Engine Fire Detection	Engine fire detection wiring harness failure.
79	General Visual Inspection of Engine Wiring Harness Assembly.	RS	Assigned			4000 Flight Hours	4000 ft/hr	Zonal Transfer - Inspect for chafing, damage, security, loose connectors, and evidence of contamination or corrosion.	400		ReliaSoft Corporation	8/31/2015 4:19 PM	Engine Fire Detection	Engine wiring harness failure.



TASKS

Date: 8/31/2015

Page 44 of 44

128	Operational Check of Fire Extinguisher Distribution System.	RS	Assigned			10 Year	10 yr	Check of Fire extinguisher distribution system using shop air.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Misaligned, damaged or blocked distribution pipe.
128	Operational Check of Fire Extinguisher Distribution System.	RS	Assigned			10 Year	10 yr	Check of Fire extinguisher distribution system using shop air.	400		ReliaSoft Corporation	8/31/2015 4:21 PM	Engine Fire Extinguishing	Two Way Check Tee and associated plumbing, leakage.
77	Remove Fire Bottles for Hydrostatic Test & Refurbishment.	RS	Assigned			14 Year	Per Mfr Recommendation	ATA/RTA Members 14 Yrs, Non-ATA/RTA Members 5 Yrs, or per Operator's national requirements.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Leakage from Fire Extinguisher bottle assembly.
77	Remove Fire Bottles for Hydrostatic Test & Refurbishment.	RS	Assigned			14 Year	Per Mfr Recommendation	ATA/RTA Members 14 Yrs, Non-ATA/RTA Members 5 Yrs, or per Operator's national requirements.	400		ReliaSoft Corporation	8/31/2015 4:20 PM	Engine Fire Extinguishing	Damaged Fire Extinguisher bottle assembly.