

Sht 4 Hazard Identification & Risk Mitigation (HIRM) Worksheet

9 Sep '22

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HIRM REFERENCE NUMBER:		GAM/SMS/H-47(24)	
1. AREA / OPERATION / EQUIPMENT:		AIRCRAFT AIRBUS H175.	
2. HAZARD / THREAT [H/T]:		AMO CAPABILITY FOR H175.	
3. TOP-EVENT [TE]:		UNABLE TO PERFORM LINE MAINTENANCE.	
4. CONSEQUENCE [C]:		FAILURE TO GET THE CAPABILITY APPROVAL.	
Date Conducted	20-June-2024	Conducted by	Muqoddim (EIC), Emir (LAE), Ain (SE), Susanna (Safety Protégé)
Revision	00	Received by	Safety Department
Approved by	Wan Izaham Zameree b. Ishak (SM)	Document Control Number	GAM/SMS/HRC-003-01/21R2



HAZARD IDENTIFICATION AND RISK MITIGATION (HIRM) FORM

Top Event Mitigation															Ultimate Consequence Mitigation																																																																										
Existing Preventive Controls [E-PC]															New Preventive Controls [N-PC]															Existing Recovery Measures [E-RM]															New Recovery Measures [N-RM]																																												
AMO CAPABILITY FOR H175.															UNABLE TO PERFORM LINE MAINTENANCE.															1D															1D																																												
E-PC1															N-PC1															E-RM1															N-RM1															ERI & T															RRI & T														
E-PC2															N-PC2															E-RM2															N-RM2															Existing Risk Index															Resultant Risk Index														
E-PC3															N-PC3															E-RM3															N-RM3															Tolerability															Tolerability														
E-PC4															N-PC4															E-RM4															N-RM4															Escalation Factor [EF] or Unintended Consequence [UC]															Escalation Factor [EF] or Unintended Consequence [UC]														
E-PC5															N-PC5															E-RM5															N-RM5															Escalation Control [EC]															Escalation Control [EC]														
E-PC6															N-PC6															E-RM6															N-RM6															Escalation Control [EC]															Escalation Control [EC]														
E-PC7															N-PC7															E-RM7															N-RM7															Escalation Control [EC]															Escalation Control [EC]														
E-PC8															N-PC8															E-RM8															N-RM8															Escalation Control [EC]															Escalation Control [EC]														

Description of Existing Preventive Controls [E-PC]	BSV	Description of New Preventive Controls [N-PC]	BSV
E-PC1: Availability of Type-Rated Engineer. EF/UC-E-PC1: EC-EF/UC-E-PC1:	5	N-PC1: Establish maintenance support agreement with OEM (Airbus Malaysia). EF/UC-N-PC1: EC-EF/UC-N-PC1:	4
E-PC2: Availability of Technical Publication. EF/UC-E-PC2: EC-EF/UC-E-PC2:	5	N-PC2: EF/UC-N-PC2: EC-EF/UC-N-PC2:	0
E-PC3: Availability of the maintenance facilities. EF/UC-E-PC3: EC-EF/UC-E-PC3:	5	N-PC3: EF/UC-N-PC3: EC-EF/UC-N-PC3:	0
E-PC4: GAM is an Approved Maintenance Organisation (AMO) by CAAM. EF/UC-E-PC4: EC-EF/UC-E-PC4:	5	N-PC4: EF/UC-N-PC4: EC-EF/UC-N-PC4:	0
E-PC5: Availability of tools and equipment. EF/UC-E-PC5: EC-EF/UC-E-PC5:	5	N-PC5: EF/UC-N-PC5: EC-EF/UC-N-PC5:	0
E-PC6: EF/UC-E-PC6: EC-EF/UC-E-PC6:	0	N-PC6: EF/UC-N-PC6: EC-EF/UC-N-PC6:	0
E-PC7: EF/UC-E-PC7: EC-EF/UC-E-PC7:	0	N-PC7: EF/UC-N-PC7: EC-EF/UC-N-PC7:	0
E-PC8: EF/UC-E-PC8: EC-EF/UC-E-PC8:	0	N-PC8: EF/UC-N-PC8: EC-EF/UC-N-PC8:	0

<<< Unhide additional PC/ RM rows here where applicable.

Description of Existing Recovery Measures [E-RM]	BSV	Description of New Recovery Measures [N-RM]	BSV
E-RM1: Backup manpower, special tools and equipment by OEM (Airbus Malaysia). EF/UC-E-RM1: EC-EF/UC-E-RM1:	4	N-RM1: Engage third party Approved Maintenance Organisation (AMO). EF/UC-N-RM1: EC-EF/UC-N-RM1:	4
E-RM2: EF/UC-E-RM2: EC-EF/UC-E-RM2:	0	N-RM2: Fabricate tools and equipment and approve by Design Organisation Approval (DOA). EF/UC-N-RM2: EC-EF/UC-N-RM2:	5
E-RM3: EF/UC-E-RM3: EC-EF/UC-E-RM3:	0	N-RM3: EF/UC-N-RM3: EC-EF/UC-N-RM3:	0
E-RM4: EF/UC-E-RM4: EC-EF/UC-E-RM4:	0	N-RM4: EF/UC-N-RM4: EC-EF/UC-N-RM4:	0
E-RM5: EF/UC-E-RM5: EC-EF/UC-E-RM5:	0	N-RM5: EF/UC-N-RM5: EC-EF/UC-N-RM5:	0
E-RM6: EF/UC-E-RM6: EC-EF/UC-E-RM6:	0	N-RM6: EF/UC-N-RM6: EC-EF/UC-N-RM6:	0
E-RM7: EF/UC-E-RM7: EC-EF/UC-E-RM7:	0	N-RM7: EF/UC-N-RM7: EC-EF/UC-N-RM7:	0
E-RM8: EF/UC-E-RM8: EC-EF/UC-E-RM8:	0	N-RM8: EF/UC-N-RM8: EC-EF/UC-N-RM8:	0

<<< Unhide SC Rows here where applicable.

Description of Existing Severity Controls [SC] to mitigate C	Description of New Severity Controls [SC] to mitigate C
E-SC1:	N-SC1:
E-SC2:	N-SC2:

5-1. Existing Risk Index [Hazard > Consequence]

1 Severity level of Consequence [Sht 4C] >>	D																											
2 Consequence's Optimum No of Barriers (ONB) [Sht 4A, Table3] >>	3																											
3 Applicable CBSV-Likelihood Table [Sht 4A, Table 3] >>	4 (0)																											
4 BSV of E-PCs and Existing-RMs [Sht 4B]:																												
<table border="1"> <tr><th>BSV</th><th>E-RM1</th><th>BSV</th></tr> <tr><td>E-PC1</td><td>5</td><td>4</td></tr> <tr><td>E-PC2</td><td>5</td><td>0</td></tr> <tr><td>E-PC3</td><td>5</td><td>0</td></tr> <tr><td>E-PC4</td><td>5</td><td>0</td></tr> <tr><td>E-PC5</td><td>5</td><td>0</td></tr> <tr><td>E-PC6</td><td>0</td><td>0</td></tr> <tr><td>E-PC7</td><td>0</td><td>0</td></tr> <tr><td>E-PC8</td><td>0</td><td>0</td></tr> </table>	BSV	E-RM1	BSV	E-PC1	5	4	E-PC2	5	0	E-PC3	5	0	E-PC4	5	0	E-PC5	5	0	E-PC6	0	0	E-PC7	0	0	E-PC8	0	0	
BSV	E-RM1	BSV																										
E-PC1	5	4																										
E-PC2	5	0																										
E-PC3	5	0																										
E-PC4	5	0																										
E-PC5	5	0																										
E-PC6	0	0																										
E-PC7	0	0																										
E-PC8	0	0																										
5 CBSV (SUM) of E-PCs and Existing-RMs >>	29																											
6 CBSV of ONB [Applicable if No of E-PCs and E-RMs is > ONB] >> (SUM of best BSVs up to ONB)	15																											
7 CBSV of Consequence [CBSV in Step 5 or 6, whichever is applicable] >>	15																											
8 Existing Likelihood of Consequence (Table of Item 3) >>	1																											
9 Existing Risk Index of Consequence [Pairing of Step 1 + 8] >>	1D																											
10 Existing Tolerability of Consequence [Sht 8] >>	Acceptable																											

5-2. Resultant Risk Index [Hazard > Consequence]

1 Severity level of Consequence [Sht 4C] >>	D																																				
2 Consequence's Optimum No of Barriers (ONB) [Sht 4A, Table3] >>	3																																				
3 Applicable CBSV-Likelihood Table [Sht 4A, Table 3] >>	4 (0)																																				
4 BSV of E-PCs, N-PCs, E-RMs, and N-RMs [Sht 4B]:																																					
<table border="1"> <tr><th>BSV</th><th>N-PC1</th><th>E-RM1</th><th>N-RM1</th></tr> <tr><td>E-PC1</td><td>5</td><td>4</td><td>4</td></tr> <tr><td>E-PC2</td><td>5</td><td>0</td><td>5</td></tr> <tr><td>E-PC3</td><td>5</td><td>0</td><td>0</td></tr> <tr><td>E-PC4</td><td>5</td><td>0</td><td>0</td></tr> <tr><td>E-PC5</td><td>5</td><td>0</td><td>0</td></tr> <tr><td>E-PC6</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>E-PC7</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>E-PC8</td><td>0</td><td>0</td><td>0</td></tr> </table>	BSV	N-PC1	E-RM1	N-RM1	E-PC1	5	4	4	E-PC2	5	0	5	E-PC3	5	0	0	E-PC4	5	0	0	E-PC5	5	0	0	E-PC6	0	0	0	E-PC7	0	0	0	E-PC8	0	0	0	
BSV	N-PC1	E-RM1	N-RM1																																		
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E-PC7	0	0	0																																		
E-PC8	0	0	0																																		
5 CBSV (SUM) of E-PCs, N-PCs, E-RMs and N-RMs [Note comment flag] >>	42																																				
6 CBSV of ONB [Applicable if No of PCs and RMs is > ONB] >> (SUM of best BSVs up to ONB)	15																																				
7 CBSV of Consequence [CBSV in Step 5 or 6, whichever is applicable] >>	15																																				
8 Resultant Likelihood of Consequence (Table of Item 3) >>	1																																				
9 Resultant Risk Index of Consequence [Pairing of Step 1 + 8] >>	1D																																				
10 Resultant Tolerability of Consequence [Sht 8] >>	Acceptable																																				