

Sht 4 Hazard Identification & Risk Mitigation (HIRM) Worksheet

9 Sep '22

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HIRARC REFERENCE NUMBER:		GAM/SMS/H-06 (24)	
1. AREA / OPERATION / EQUIPMENT:		PGU AW139/ 9M-PMD/MAIN ROTOR BLADE	
2. HAZARD / THREAT [H/T]:		CONGESTED HANGAR	
3. TOP-EVENT [TE]:		MAIN ROTOR BLADE TIP CAP SLIGHTLY DAMAGE	
4. CONSEQUENCE [C]:		AIRCRAFT UNSERVICABLE	
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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]														
Top-Event															Top-Event															ERI & T															RRI & T														
CONGESTED HANGAR															MAIN ROTOR BLADE TIP CAP SLIGHTLY DAMAGE															IE															IE														
E-PC1															N-PC1															E-RM1															N-RM1														
E-PC2															N-PC2															E-RM2																													
E-PC3																														E-RM3																													
E-PC4																														E-RM4																													

Description of Existing Preventive Controls [E-PC]	BSV	Description of New Preventive Controls [N-PC]	BSV
E-PC1: Allocated reserved parking space has been designated. EF/UC>E-PC1: EC>EF/UC>E-PC1:	5	N-PC1: Review hangar floor plan for aircraft parking. EF/UC>N-PC1: EC>EF/UC>N-PC1:	5
E-PC2: Preparation of aircraft arrangement as per schedule flight plan. EF/UC>E-PC2: EC>EF/UC>E-PC2:	5	N-PC2: Demarcation of the aircraft parking spot. EF/UC>N-PC2: EC>EF/UC>N-PC2:	5
E-PC3: Pre-inspection of tow truck before aircraft towing. EF/UC>E-PC3: EC>EF/UC>E-PC3:	5	N-PC3: EF/UC>N-PC3: EC>EF/UC>N-PC3:	0
E-PC4: Preparation of manpower for aircraft towing. EF/UC>E-PC4: EC>EF/UC>E-PC4:	5	N-PC4: EF/UC>N-PC4: EC>EF/UC>N-PC4:	0
E-PC5: EF/UC>E-PC5: EC>EF/UC>E-PC5:	0	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: The condition of main rotor blade has been inspected. EF/UC>E-RM1: EC>EF/UC>E-RM1:	5	N-RM1: Briefing to be conducted among maintenance crew before towing the aircraft. EF/UC>N-RM1: EC>EF/UC>N-RM1:	5
E-RM2: Safer card has been raised. EF/UC>E-RM2: EC>EF/UC>E-RM2:	5	N-RM2: EF/UC>N-RM2: EC>EF/UC>N-RM2:	0
E-RM3: Crisis Management Meeting has been conducted as per CAD-15. EF/UC>E-RM3: EC>EF/UC>E-RM3:	5	N-RM3: EF/UC>N-RM3: EC>EF/UC>N-RM3:	0
E-RM4: An interview with personnel involved during the incident has been conducted. 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]

- Severity level of Consequence [Sht 4C] >> **4**
- Consequence's Optimum No of Barriers (ONB) [Sht 4A, Table3] >> **1**
- Applicable CBSV-Likelihood Table [Sht 4A, Table 3] >> **4 (0)**
- BSV of E-PCs and Existing-RMs [Sht 4B]:

BSV	BSV
E-PC1: 5	E-RM1: 5
E-PC2: 5	E-RM2: 5
E-PC3: 5	E-RM3: 5
E-PC4: 5	E-RM4: 0
E-PC5: 0	E-RM5: 0
E-PC6: 0	E-RM6: 0
E-PC7: 0	E-RM7: 0
E-PC8: 0	E-RM8: 0
- CBSV (SUM) of E-PCs and E-RMs >> **35**
- CBSV of ONB (Applicable if No of E-PCs and E-RMs is > ONB) >> (SUM of best BSVs up to ONB) **10**
- CBSV of Consequence (CBSV in Step 5 or 6, whichever is applicable) >> **10**
- Existing Likelihood of Consequence (Table of item 3) >> **1**
- Existing Risk Index of Consequence (Pairing of Step 1 + 8) >> **1E**
- Existing Tolerability of Consequence [Sht 8] >> **Acceptable**

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

- Severity level of Consequence [Sht 4C] >> **4**
- Consequence's Optimum No of Barriers (ONB) [Sht 4A, Table3] >> **1**
- Applicable CBSV-Likelihood Table [Sht 4A, Table 3] >> **4 (0)**
- BSV of E-PCs, N-PCs, E-RMs, and N-RMs [Sht 4B]:

BSV	BSV	BSV	BSV
E-PC1: 5	N-PC1: 5	E-RM1: 5	N-RM1: 5
E-PC2: 5	N-PC2: 5	E-RM2: 5	N-RM2: 0
E-PC3: 5	N-PC3: 0	E-RM3: 5	N-RM3: 0
E-PC4: 5	N-PC4: 0	E-RM4: 0	N-RM4: 0
E-PC5: 0	N-PC5: 0	E-RM5: 0	N-RM5: 0
E-PC6: 0	N-PC6: 0	E-RM6: 0	N-RM6: 0
E-PC7: 0	N-PC7: 0	E-RM7: 0	N-RM7: 0
E-PC8: 0	N-PC8: 0	E-RM8: 0	N-RM8: 0
- CBSV (SUM) of E-PCs, N-PCs, E-RMs and N-RMs [Note comment flag] >> **50**
- CBSV of ONB (Applicable if No of PCs and RMs is > ONB) >> (SUM of best BSVs up to ONB) **10**
- CBSV of Consequence (CBSV in Step 5 or 6, whichever is applicable) >> **10**
- Resultant Likelihood of Consequence (Table of item 3) >> **1**
- Resultant Risk Index of Consequence (Pairing of Step 1 + 8) >> **1E**
- Resultant Tolerability of Consequence [Sht 8] >> **Acceptable**