

1. HIRM REFERENCE NUMBER: GAM/SMS/H-129(21)
2. AREA/ OPERATION/ EQUIPMENT: Additional Aircraft Line Maintenance capabilities for AW139 Fleet in Kota Kinabalu (SAZMA)
3. HAZARD / THREAT [H/T]: Maintenance data, facility, tools and equipment, adequate personnel and appropriate training not meet safety standard as per CAAM requirement.
4. UNSAFE EVENT [UE]: Difficulties while performing aircraft maintenance activities may caused damage to aircraft and aircraft component.
5. ULTIMATE CONSEQUENCE [UC]: Not comply to the CAAM standard and requirement may impact to the aircraft safety during maintenance operation.
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Conducted by: Safety and AMO Department
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Main risk assessment table with columns for Hazard/Threat, Existing Preventive Controls [E-PC], New Preventive Controls [N-PC], Existing Recovery Measures [E-RM], and New Recovery Measures [N-RM]. Includes risk index calculations and a final risk assessment of Moderate Risk.

Description of Existing Preventive Controls [E-PC]
E-PC1: MOC raised by respective department for perform risk assessment to identify risk as safety measures for a safe operation.
E-PC2: Manpower required for the operation as manpower list.
E-PC3: Maintenance data, facilities, standaed tool, special tools and test equipment provided by SAZMA
E-PC4: Adequate and appropriate standard tools, GSE and Maintenance platform as per MOE Part 2.4
E-PC5: Appropriate additional training required to all maintenance staff as per MOE Part 3.4.5

Description of New Preventive Controls [N-PC]
N-PC1: GAM AMO in PGU KK equipment will be used if required. Distant from GAM AMO in PGU KK to Sazma Aviation facility is less than 100 meters away with no movement restriction.
N-PC2: Qualified personnel will be available from GAM PGU KK and GAM PGU Subang. Sazma provide their AW139 rated LAE to perform inspection under GAM AMO quality system.
N-PC3: The Maintenance Data which was in form of softcopy will be in the GAM AMO current maintenance laptop for other option.

Description of Existing Recovery Measures [E-RM]
E-RM1: Maintenance support agreement required to ensure the maintenance activities will carry out in a safe environment within GAM and SAZMA.
E-RM2: Verification audit has been carried out by AMO personnel to ensure the compliance as per CAAM requirement.

Description of New Recovery Measures [N-RM]
N-RM1: To perform periodically surveillance audit by GAM Safety & Quality.
N-RM2: SAZMA have to provide an appropriate training eg. Safety Briefing with include Emergency Respond Plan (ERP) to GAM staff for the respective facility.

5-1. Existing Risk Index [Hazard > Unsafe-Event]
A Assessed Existing Severity level of the UE [Wsh 5]: C
B Therefore, UE's Optimum No of Barriers (ONB) [Wsh 4A, Table3]: 4
C Applicable CBSV-Likelihood Table for this severity level [Table 3]: 4 (iii)
D Assessed BSV of individual Existing PCs [Table 1]:
E-PC1: 2, E-PC2: 3, E-PC3: 4, E-PC4: 4, E-PC5: 4, E-PC6: 0, E-PC7: 0, E-PC8: 0
E Therefore, CBSV (SUM) of all E-PCs: 17
F Assess CBSV of ONB [Applicable if E-PCs are more than ONBs]: 15
G Existing CBSV of UE (Item E or F, whichever is applicable): 15
H Existing Likelihood of the UE (CBSV-Likelihood Table of Item 3): 2
I Existing Risk Index of the UE [Sht8, RI & Tolerability]: 2C
J Existing Tolerability of the UE: Moderate Risk

5-2. Resultant Risk Index [Hazard > Unsafe-Event]
A Assessed Existing Severity level of the UE [Wsh 5]: C
B Therefore, UE's Optimum No of Barriers (ONB) [Table3]: 4
C Applicable CBSV-Likelihood Table for this severity level [Table 3]: 4 (iii)
D Assessed BSV of individual Existing PCs & New PCs [Table 1]:
E-PC1: 2, E-PC2: 3, E-PC3: 4, E-PC4: 4, E-PC5: 4, E-PC6: 0, E-PC7: 0, E-PC8: 0
N-PC1: 5, N-PC2: 5, N-PC3: 5, N-PC4: 0, N-PC5: 0, N-PC6: 0, N-PC7: 0, N-PC8: 0
E Therefore total (SUM) BSV of all E-PCs plus N-PCs: 32
F Assess total BSV of ONB [Applicable if E-PCs + N-PCs is more than ONBs]: 19
G Resultant CBSV of UE (Item E or F, whichever is applicable): 19
H Resultant Likelihood of UE (CBSV-Likelihood Table of Item 3): 1
I Resultant Risk Index of the UE [Sht8, RI & Tolerability]: 1C
J Resultant Tolerability of the UE: Low Risk

5-3. Existing Risk Index [Unsafe-Event > Consequence]
A Assessed Existing Severity level of the UC [Wsh 5]: C
B Therefore, UC's Optimum No of Barriers (ONB) [Table3]: 4
C Applicable CBSV-Likelihood Table for this severity level [Table 3]: 4 (iii)
D Assessed BSV of individual Existing RMs [Table 1]:
E-RM1: 3, E-RM2: 4, E-RM3: 0, E-RM4: 0, E-RM5: 0, E-RM6: 0, E-RM7: 0, E-RM8: 0
E Therefore, CBSV (SUM) of all E-RMs: 7
F Assess CBSV of ONB [Applicable if E-RMs is more than ONBs]: 7
G Existing CBSV of UC (Item E or F, whichever is applicable): 7
H Existing Likelihood of the UC (CBSV-Likelihood Table of Item 3): 4
I Existing Risk Index of the UC [Sht8, RI & Tolerability]: 4C
J Existing Tolerability of the UC: Moderate Risk

5-4. Resultant Risk Index [Unsafe-Event > Consequence]
A Assessed Existing Severity level of the UC [Wsh 5]: C
B Therefore, UC's Optimum No of Barriers (ONB) [Table3]: 4
C Applicable CBSV-Likelihood Table for this severity level [Table 3]: 4 (iii)
D Assessed BSV of individual Existing RMs & New RMs [Table 1]:
E-RM1: 3, E-RM2: 4, E-RM3: 0, E-RM4: 0, E-RM5: 0, E-RM6: 0, E-RM7: 0, E-RM8: 0
N-RM1: 4, N-RM2: 5, N-RM3: 0, N-RM4: 0, N-RM5: 0, N-RM6: 0, N-RM7: 0, N-RM8: 0
E Therefore total (SUM) BSV of all E-RMs plus N-RMs: 16
F Assess total BSV of ONB [Applicable if E-RMs + N-RMs is more than ONBs]: 16
G Resultant CBSV of UC (Item E or F, whichever is applicable): 16
H Resultant Likelihood of the UC (CBSV-Likelihood Table of Item 3): 1
I Resultant Risk Index of the UC [Sht8, RI & Tolerability]: 1C
J Resultant Tolerability of the UC: Low Risk