

**DETAILS OF ACCIDENT/INCIDENT/OCCURRENCE/ISDR**

Date	:	<b>28-1-2020</b>
Time	:	<b>0945 HRS</b>
Place	:	<b>JBPM BERTAM AIR BASE</b>

**AIRCRAFT INFORMATION**

Aircraft type	:	<b>AW139</b>
Aircraft Registration	:	<b>9M-BOD</b>
Aircraft MSN	:	<b>31291</b>
A/F Hours	:	<b>2306:00</b>

**DESCRIPTION OF EVENTS**

**INTRODUCTION:**

- 1. Occurrence:** Pilot reported, an aircraft AW139 with registration 9M-BOD (SN: 31291) experienced Hoist Cable Cut Cartridge Exploded during Hoist Cut System ARM TEST on ground.
- 2. Observation before and during incident:** The aircraft was handed to the Pilot in an airworthy condition. Ground crew (Galaxy Personnel), observed that after the aircraft completed the start-up sequence, the pilot, co-pilot and the observer (AQM) was performing the hoist functional check before commencing take-off. One of the tasks required them to performed Hoist Cable Cut System Test (lift the guard on Hoist Cut Switch). Suddenly, an explosion happened inside the hoist it-self, result the hoist's hook assembly felt on the ground.
- 3. Observation post incident:** After the explosion happened (while the engine running), the Pilot briefly explained what the current situation and the last procedure they carried out to our Licensed Aircraft Engineer (LAE). Then, both pilot and co-pilot decided to continue for take-off to perform their flight training. The aircraft landed and shut down at Bertam Base after approximately 1:00 Hour flying.

**OBSERVATION:**

- 1.** A preliminary check was carried out by our LAE (Avionic) on the Hoist Cartridge Firing Test circuit, result no fault found at Pilot and Co-Pilot's switch. They found, a value of 28 VDC at the connector side that goes to the cartridge firing circuit, regardless of switch position. Further investigation/troubleshoot need to be carried out for final result.

**IMMEDIATE CORRECTIVE ACTION**

**INVESTIGATION/RECTIFICATION:**

1. Further investigation was carried out after the aircraft landed at Subang Base (30-1-2020)
2. Troubleshooting regarding the hoist cartridge inadvertent fired was carried out in accordance with:
  - a. AW139 AMP 39-A-25-96-00-00A-320B-K: Operation test single rescue hoist system
  - b. AW139 AMP 39-A-25-96-00-00A-320D-K: Squib circuit operation test
  - c. AW189 AMP 39-A-25-96-00-00A-051L-K: Wiring Diagram Single rescue hoist installation
3. Operational test of the hoist control panel system carried out, Pilot's hoist cut switch's guard lifted and found 28 VDC output is present at the connector cartridge B24P1 between PIN A-B and PIN C-D, it is supposedly 0 VDC according to the manual.
4. The Operator Hoist Control Panel and Cockpit Hoist Control Panel was swapped, but defect persist.
5. Performed continuity electrical check on the hoist system as per wiring diagram and found internal electrical shortage at the Terminal Block TB120

**CONCLUSION:**

1. From the investigation and troubleshoot process, we have confirmed that the cartridge is activated due to electrical shortage between Hoist Guard Connector and Cable Cut connection at Terminal Block TB120 which causing the voltage is present at the connector cartridge. The aircraft was in airworthy and satisfactory condition except for the hoist.
2. The affected Hoist Assembly was removed from the aircraft
3. The aircraft will not be fitted with any Hoist Assembly until that Terminal Block is replace and wiring check need to be performed in order to confirm Hoist System Serviceability.
4. Items involved and need to be replaced:
  - a. Cable Assembly, P/N: 43225-298
  - b. Cable Cutter Assembly, P/N: 42315-75-1
  - c. Cartridge, P/N: 42315-281
  - d. Packing, P/N: M28778-5
  - e. Connector Receptacle (Terminal Block TB120), P/N: 30-271-01WPN

**PREVENTIVE ACTION:**

1. Wiring check shall be carried out prior to installation of Hoist Assembly in the future

**ATTACHMENTS:**  Report  Photo  Video  Others, specify



**ACCIDENT/INCIDENT/OCCURRENCE/  
ISDR REPORT**

Form No.

GAM/Q-038

Revision

1

**FOR QA USE**

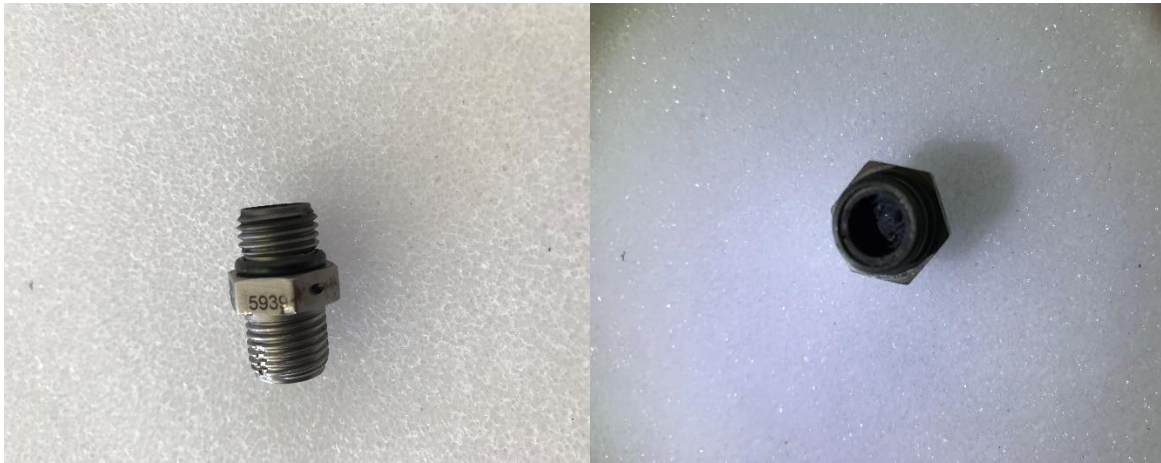
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2. Reportable to operator	<input type="checkbox"/> YES <input type="checkbox"/> NO
3. Reportable to Safety department.	<input type="checkbox"/> YES <input type="checkbox"/> NO
4. Date received	
5. Name	
6. Signature	



**FIGURE 1 – HOIST CUTTER ASSEMBLY**



**FIGURE 2 – HOIST CUTTER ASSEMBLY**



**FIGURE 3 – CARTRIDGE EXPLODED**



**FIGURE 4 – HOIST CABLE ASSEMBLY**