



~~FOR OFFICIAL USE ONLY~~

## Aviation Safety Occurrence Report (ASOR) - Full Details

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**Reference Number:** ASOR: AAvnTC-095-2017

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No References Attached

**Aviation Unit:** AAVNTC **Unit Type:** Wing/Regiment

**Contractor Company:** Not Applicable

**Workflow Phase:** Historical **Classification:** Incident

**Title:** SAA A40 - Impact damage under aircraft forward of the lower strobe

**Occurrence Date:** December 15, 2017 **Occurrence Time:** 14:19

**Location:** Oakey

**Location Details**

Oakey Flying Training Area L5A, Pads 7 and 9

**Parachute Incident Report:** NO

**Movements Incident Report:** NO

**Physiological Incident Report:** NO

**DDAAFS:** NO **ATSB:** NO

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**Weather**

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**Light Conditions:** Day **Meteorological Conditions:** N/A **Environmental Facts:** N/A

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**Narrative**

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During an After Flight Servicing maintenance personnel discovered evidence of impact damage under the aircraft approximately 600 mm forward of the lower strobe. The impact damage measured 150 x 160 mm (refer CAMM2 Unserviceability AAOAXU725828). Two sorties had been flown prior to the After Flight Servicing. The first sortie had been Instrument approaches and is extremely unlikely to have resulted in the damage detected. The second sortie was a staff continuation sortie to check other landing pads in L5A and L4 for suitability for future training. While many approaches were carried out to overshoot, landings were made at L5A3, 7 and 9. Slope and long grass was a factor at L5A3, moderate slope was a factor in L5A7 and L5A9 is a pinnacle approach with a flat landing area. All landings were conducted with guidance from the single loadmaster, with no abnormalities noted at the time of flight.



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**Reference Number:** ASOR: AAvnTC-095-2017

**Aircraft Details**

**Aircraft:** MRH-90

**Tail Number:** S47E

NVD Aided	External NVG	Search NVG	Strobe Lights On	Landing Lights On	Anti Collision Lights On	Helmet Mounted Device	Engine Shut Down	Engine Mission Abort	Speed (KIAS)	Altitude (Feet AMSL)	Flight Path	Flight Phase
No	No	No	No	No	No	Yes	No	No	Not Entered	Not Entered	Not Entered	Landing

**Aircraft:** MRH-90

**Tail Number:** S47E

Fuel Dump	Fuel Dump Detail
No	



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### Investigation Details

**Investigation Status:** Completed **Investigator:** s47F

### Analysis

Reference No.	Agency	Title	Comment
001	AAvtTC Units	Pre-Flight Inspection	<p>The crew indicated that they conducted the pre-flight inspection in the same manner they had for all previous flights. They did not notice any damage to the under side of the aircraft near the lower strobe.</p> <p>The crew indicated that the procedure they used to conduct a visual inspection of the under side of the aircraft involved looking from three places. From the front of the aircraft near the nose wheel and also from both sides of the aircraft near the main wheels. From these positions it is possible that the crew may not have seen the area where the damage had occurred and there is a small chance the damage existed before the flight. Despite AF/BF being conducted by the maintainers.</p> <p>Subsequent to this event the crew have now included a visual inspection from the rear of the aircraft to ensure to visually inspect the area near the lower strobe.</p>
002	AAvtTC Units	Landing Areas	<p>The crew conducted landings at three approved landing pads in the low flying training area, L5A9, L5A7 and L5A3.</p> <p>L5A9 was a new pad for all the crew and as such a substantial low recce was conducted before landing. No obstacles were noted and the aircraft was landed seemingly without incident.</p> <p>L5A7 was a known pad to the crew and has some slope. The crew conducted a recce IAW extant procedures of this known area and landed the aircraft on minor slope without any incident noted.</p> <p>L5A3 was a new pad for the crew and due to some obstacles the aircraft was terminated to a hover and then landed. At the time of the landing the crew did not notice any impact damage.</p> <p>The aircrewman has since returned to the landing areas, a month later, on a subsequent sortie and has identified a stump in L5A3 that he had not seen when landing at the time of this incident.</p>
03	AAvtTC Units	L5A3 Landing	<p>On termination to the hover in L5A3 the aircrewman moved from the right side to the left side twice in order to clear the aircraft to the ground as there was a slight drift rearward in the hover.</p> <p>During the approach the aircrewman was on the right hand side of the aircraft and cleared the aircraft to the hover 20 foot short of the closest obstacles to the forward right of the aircraft. Once in the hover the aircrewman cleared the right hand side of the aircraft to ground. He then moved to the left side and cleared the aircraft on the left hand side.</p> <p>During this time the pilot inadvertently drifted the aircraft rearwards in the pad due to an illusion created from the slope and long grass in front of the aircraft. The aircrewman returned to the right hand side to clear the horizontal stabilator which sticks out to the right hand side at the rear of the aircraft. Once clearing the aircraft of the obstacles at the rear right, the aircrewman returned to the left and visually cleared the aircraft to the ground on the left side as there was a stump near the left main landing gear.</p> <p>It is most likely that during the drift back the aircraft was inadvertently positioned just over the stump. The aircrewman had multiple obstacles in his scan and failed to identify the vicinity of the stump after the aircraft had changed position.</p>
04	AAvtTC Units	Procedures	<p>The Flight Crew Checklist for MRH90 Taipan Exterior Checks, includes general condition of the rear fuselage, the area surrounding the lower strobe.</p> <p>The Aircraft Standardisation Manual for MRH90 Chapter 14 details the requirement to conduct a reconnaissance of a landing pad from height and to confirm the details on final approach. The crew conducted both of these reconnaissance and identified multiple obstacles and as such terminated to the hover before committing to the landing.</p> <p>Standing Instructions SI (TC) OPS 3-210 Annex A states s47E</p>



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### Investigation Details

**Investigation Status:** Completed **Investigator:** s47F

### Analysis

Reference No.	Agency	Title	Comment
			s47E [REDACTED] In this instance during the approach the aircrewman was on the right hand side to clear the aircraft to the hover. After termination to the hover the aircrewman systematically cleared each side of the aircraft in the hover before terminating to the ground. This is standard practice at Army Aviation Training Centre and is not in contravention to this instruction.  The crew complied with all extant procedures and it is concluded that this is an isolated, unfortunate incident.
05	AAvtTC Units	Pad Maintenance	Swartz Barracks Base Standing Instructions Operations 6 (SB BSI OPS6) details the requirements for landing area inspections. s47E [REDACTED] [REDACTED] [REDACTED]

### Findings

Reference No.	Title	Comment
001	Pre-flight Inspection	The aircrew did not identify any damage to the underside of the aircraft during the pre-flight inspection.
02	Landing Pads	The crew conducted landings at three approved landing pads in the low flying training area, L5A3, L5A9 and L5A7. It has since been identified that L5A3 was the pad in which the damage occurred.
03	L5A3 Landing	On termination to the hover in L5A3 there was some drift of the aircraft during the landing phase. The aircrewman failed to identify the stump obstacle which impacted the aircraft near the lower strobe on landing.
04	Procedures	The crew complied with all extant procedures and it is concluded that this is an isolated, unfortunate incident.
05	Pad Maintenance	s47E [REDACTED]



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### Contributing Factors

Contributing Factor Level 1	Contributing Factor Level 2	Contributing Factor Level 3	Contributing Factor	Contributing Factor Priority	Contributing Factor Other
Organisational Influences	Resource Management	Human Resources	<b>Staffing/ Manning</b>	Of high importance, but not the most important contributing factor	
Unsafe Acts or Conditions	Errors	Perceptual Errors (Due to)	<b>Misjudgement</b>	Most important (or equal most important) contributing factor	

### Defences

Defences Level 1	Defences Level 2	Defences	Defences Other
Detection - How was the problem revealed?	Detection - How was the problem revealed?	<b>Maintenance personnel</b>	
What, if anything, limited the consequences of the occurrence?	Procedures	<b>Other</b>	Landing technique

### Risk Management

**Risk Management Strategies:** Crew operated IAW extant risk management procedures.  
 Landing pads have not been maintained to required standard IAW orders

**Risk Management Effective:** No

**Risk Management Narrative:**

The manning issue at Airfield Operations is an ongoing issue.



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### Actions

Reference No.	Agency	Status	Actionee	Completed Date	Due By Date	Assigned Date	Title	Details	Response
01	AAvtTC Units	Completed	S47 F	Feb 6, 2018	Feb 2, 2018	Feb 2, 2018	Landing Pad Maintenance Request	A landing pad maintenance request for L5A3 is to be submitted to Airfield operations in order to increase the priority for maintenance of this particular pad.	Pad maintenance request submitted.



**Aviation Safety Reporting**  
Defence Aviation Safety Authority  
Directorate of Defence Aviation and Air Force Safety

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**Recommendations**

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No Recommendations Provided



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### Damage Details

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Small impact damage 150mm x 160mm on underside of aircraft

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### Correspondence

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No Related Correspondence

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### Unit Review

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### Supervisor Comments

SI MRH Comment: I note the detailed investigation carried out with a detailed interview of the single aircrewman that crewed the mission. It is of the belief of the investigating officer and the crew that the damage to the underside of the aircraft occurred in Lima 5A Pad 3.

s47E

There is a massive oversight here in the lack of pad maintenance that I believe contributed to the aircraft damage. s47E  
There are a number of pads in Lima 5 in particular that have become difficult to use due to overgrowth. The onus is clearly on the pilots to report these pads to initiate and further highlight the manning shortages that result in pad maintenance simply not being carried out. The use of single aircrewman for S-CON in this case remains supported.

### CO Comments

I agree with the SPVR, the crew took all possible steps to avoid obstacles. This is a hazard of operating in unprepared areas. The issue of pad maintenance is valid to raise. Now HQC has finished, SAA and Airfield Ops will convene in Mar 18 to discuss future training area use, pad requirements and training areas boundaries IOT define the requirements without Kiowa. Many of the smaller pads will no longer be required and can be decommissioned and some larger pads are needed, for CH-47 as well. MRH Wing, Op Spt Tp nd ACMN within ATTW are now aware of this pad and stump and will avoid it as we wait for the pad to be cleared if routine use is envisaged.

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### Board Review

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### Board Review Comments

DOPAW Comments: NFTA CoS.

DTAAS Comments: NFTA."