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**FINAL INVESTIGATION REPORT OF
ACCIDENT TO GOVERNMENT OF
JHARKHAND IS-28M2/GR MOTOR GLIDER
VT-GJH AT DEOGHAR AIRSTRIP,
JHARKHAND ON 07/08/2013**

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Foreword

This document has been prepared based upon the evidences collected during the investigation, opinion obtained from the experts and laboratory examination of various components. The investigation has been carried out in accordance with Annex 13 to the convention on International Civil Aviation and under the Rule 11 of Aircraft (Investigation of Accidents and Incidents), Rules 2012 of India. The investigation is conducted not to apportion blame or to assess individual or collective responsibility. The sole objective is to draw lessons from this accident which may help to prevent such future accidents or incidents.

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**FINAL INVESTIGATION REPORT OF ACCIDENT TO
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GLIDER VT-GJH AT DEOGHAR AIRSTRIP,
JHARKHAND ON 07/08/2013**

- | | |
|---|---|
| 1. Aircraft Type
Nationality
Registration | : MOTOR GLIDER, IS-28M2/GR
: INDIAN
: VT – GJH |
| 2. Owner/ Operator | : Govt. of Jharkhand |
| 3. Pilot – in –Command
Extent of injuries | : Indian Glider Pilot License (GPL) Holder
: Nil |
| 4. Co-pilot
Extent of injuries | : Indian Glider Pilot License (GPL) Holder
: Serious |
| 5. Place of accident | : Deoghar Airstrip, Jharkhand |
| 6. Date & Time of accident | : 07 th August 2013
0610 UTC (Approx.) |
| 7. Last point of departure | : Deoghar Airstrip |
| 8. Point of intended landing | : Deoghar Airstrip |
| 9. Geographical location of accident | : 09 Runway End
Lat 24°27' N Long 86° 47' E |
| 10. Type of operation | : Test Flight |
| 11. Passengers on Board | : NIL |
| 12. Phase of operation | : Landing |
| 13. Type of accident | : Crashed during forced landing |

(ALL TIMINGS IN THE REPORT ARE IN UTC)

Synopsis:

On 07th August 2013, Govt. of Jharkhand Motor glider, VT-GJH was involved in an accident during test flight at Deoghar uncontrolled Airstrip at around 0610UTC.

The motor glider was under the command of the pilot who is a holder of a valid Glider Pilot License (GPL) endorsed on type. The co-pilot was a qualified instructor on type and was holding a valid GPL license. The accident flight was the first flight of the day. Prior to the flight, approved "Daily Inspection" and "Pre-flight Inspection" schedules of the motor glider was carried out by an AME having transit approval.

The motor glider took off approximately at 0610 hrs UTC from runway 09. At approximately 25 feet after take-off, the pilots observed the engine RPM/power was dropping. At approximately 50 feet height from ground the propeller stopped rotating. The crew decided to turn back and land on the airstrip. However while executing the right turn at low height with no power the glider lost height very fast and in the process the right wing hit the airfield boundary wall. Thereafter the motor glider crash landed short of runway 09 end. There was no injury to PIC, however the Instructor sustained serious injuries and was immediately rushed to the hospital. There was engine fire after impact. The fire fighting team arrived at the accident site and extinguished the fire. The motor glider sustained substantial damage.

The Ministry of Civil Aviation had constituted a committee of Inquiry under Rule 11 of Aircraft (Investigation of Accidents & Incidents) Rules 2012 to investigate the accident. The Committee is headed by Sh. A X Joseph, Assistant Director, AAIB with Sh. K Ramachandran as member.

1. FACTUAL INFORMATION.

1.1 History of flight

On 07.08.2013 Govt. of Jharkhand Motor Glider VT-GJH, was engaged in a test flight. The flight resulted into an accident while carrying out a force landing at Deoghar airstrip at around 0610 Hrs UTC.

The motor glider was under the command of the pilot holder of a valid Glider Pilot License (GPL) endorsed on type. The co-pilot was a qualified instructor on type and was holding a valid GPL license.

Approved "Daily Inspection" and "Pre-flight Inspection" schedules of the motor glider was duly carried out by an AME having transit approval (with no troubleshooting privilege) before the flight on 07.08.2013.

On the last flight the instructor had reported orally that the cylinder head temperature was high and power loss was experienced. The AME at Deoghar was only a transit approval holder and during inspection observed the coolant level low. Since troubleshooting was not in his privilege he topped up the coolant and asked the pilot to carry out a ground run and assess the performance of the engine. Prior to the accident flight the ground run was carried out by the pilot in two intervals for approximately 12 minutes and was reported to be satisfactory. However, prior to normal flying operation it was subjected to a test flight to assess the performance of the motor glider. The motor glider took off approximately at 0610 UTC with two pilots duly qualified on type. During take-off all the parameters were observed as normal. At approximately 25 feet after take-off the pilot observed the engine RPM/power was dropping. At around 50 feet height the propeller stopped rotating. The instructor took over controls and attempted a 180^o turn to land back on the airstrip. However in the process of executing the right turn at low height with no power the glider lost height very fast and the right wing hit the airfield

boundary wall. Thereafter the motor glider crash landed before the beginning of runway 09 end.

Since the runway strip had high backward slope from the point of impact causing rearward slide of motor glider. During landing the right wing of the motor glider hit the boundary wall, thereafter the motor glider became uncontrollable and impacted on its nose, where engine was mounted.

The pilot immediately opened the seat belts and escaped out of the glider. He then assisted the Instructor to also escape from the glider as he sustained serious injuries. Due to engine impact the oil and fuel line had ruptured and caused fire. The fire fighting team arrived at the accident site and extinguished the fire. The Instructor was immediately rushed to the hospital.

1.2 Injuries to persons.

INJURIES	CREW	PASSENGERS
FATAL	Nil	Nil
SERIOUS	1	Nil
MINOR/NONE	1	Nil

1.3 Damage to aircraft.

The motor glider sustained substantial damage.

1.4 Other damage: Nil

1.5 Personnel information:

1.5.1 Pilot – in – Command:

Age/ Date of Birth	: 43 Years
License	: GPL Holder
Date of Issue	: 25/08/2011
Valid up to	: 24/08/2021
Category	: Glider
Class	: Open rating upto 600 kg and Motor Glider
Endorsements as PIC	: IS28M2/GR
Date of Last Medical Exam	: 12/06/2013
Med. Exam Valid upto	: 11/12/2013
FRT0 (R) License No.	: Valid
Date of issue	: 06/07/2010
Valid up to	: 05/07/2015
Total flying experience	: 200:30 Hrs
Experience on type	: 85:30 Hrs
Experience on type as PIC	: 50:50 Hrs
Total flying experience during last 90 days	: 05:30 Hrs
Total flying experience during last 30 days	: 04:25 Hrs
Total flying experience during last 07 Days	: 01:30Hrs
Total flying experience during last 24 Hours	: NIL

1.5.2 Co-Pilot (Instructor):

Age/ Date of Birth	: 45 Years
License	: GPL Holder
Date of Issue	: 15/04/1993
Valid up to	: 07/12/2022
Category	: Glider
Class	: Open rating upto 600 kg and Motor Glider
Endorsements as PIC	: Primortes, Kartik, L-23, Ardhra, ITG-3, Rohini, T21 B, IS28B2, IS28M2/GR, Stemme S6RT and Sinus 912
Date of Last Medical Exam	: 02/06/2013
Med. Exam Valid upto	: 01/06/2014
FRT0(R) License No.	: Valid
Date of issue	: 03/02/2007
Valid up to	: 02/02/2017
Total flying experience	: 4212:30 Hrs
Experience on type	: 414:01 Hrs
Experience of type as PIC	: 397:09 Hrs
Total flying experience during last 90 days	: 48:25 Hrs
Total flying experience during last 30 days	: 38:00 Hrs
Total flying experience during last 07 Days	: 04:15 Hrs
Total flying experience during last 24 Hours	: NIL

The certificate of Airworthiness Number 119/G under "Normal" category was issued by DGCA on 14th November, 2007. The specified minimum operating crew is 01 and the maximum all up weight is 780 kg. At the time of accident, the Certificate of Airworthiness was current and was valid upto 23rd March, 2017. As on 07th August, 2013 the aircraft had logged 588:20 Airframe Hours.

Scrutiny of maintenance documents revealed that logbook entries for all previous schedules of the motor glider and its Engine were complete as per the maintenance program consisting of calendar period / flying Hours or Cycles. The maintenance program is approved by Regional Airworthiness Office.

Accordingly, the last major inspection 100 hrs/01 years check was carried out at 539:35 Hours on 06th April, 2013. The last lower inspection was 25 hrs/ 01 month was due on 29.07.2013. Though the entries for the inspection schedule were made, the same was not carried out.

The motor glider was last weighed on 08th November 2008 at Ranchi and the weight schedule was prepared and duly approved by the office of Director of Airworthiness, DGCA. As per the approved weight schedule the Empty weight of the motor glider is 582 kgs. Maximum fuel capacity is 40.15 kgs. Empty weight CG is 2.46 meter aft of datum. As there has not been any major modification affecting weight and balance since last weighing, hence the next weighing was not required. Prior to the accident flight the weight and balance of the aircraft was well within the operating limits.

All the concerned Airworthiness Directive, Service Bulletins, DGCA Mandatory Modifications on this motor glider and its engine has been complied with as on date of event.

Transit Inspections are carried out as per approved Transit Inspection schedules and all the higher inspection schedules include checks/ inspection as per the

manufacturer's guidelines as specified in Maintenance Program and are approved by the Quality Manager.

The motor glider is fitted with single Rotax 912 A3 engine manufactured by GMBH, Austria. The Engine S/N 4.410.713 had logged 588:20 Hours. Previous to the accident flight, on 06.08.2013 the pilot had reported that the cylinder head temperature was high and power loss was experienced. The AME had observed coolant level low, the same was replenished and the motor glider was cleared for flight. However the engine failed in the subsequent flight.

Scrutiny of the snag register revealed that there was no written snag reported on the motor glider prior to the accident flight.

1.7 Meteorological information:

The airstrip at Deoghar is an uncontrolled airstrip, hence no Meteorological facility is available. The nearest MET facility available is at Ranchi which is at 110 Nm from Deoghar. The local weather and trends were obtained telephonically from Ranchi to carry out the flying operations.

1.8 Aids to navigation:

Other than the wind sock there is no navigational facility available in the uncontrolled airstrip at Deoghar.

1.9 Communications:

The Deoghar airstrip is an Uncontrolled airstrip.

1.10 Aerodrome Information.

The airstrip at Deoghar is an uncontrolled airfield. There runway orientation is 09/27 which is approximately 975 m (3200 feet) long and 45 m (148 feet) in width.

Co-ordinates:

ARP	: 24° 27' N 86° 47' E
Elevation	: 110 m
Runway Orientation and Dimension	: 09/27 and 3200 feet long.
Runway & Taxi Tracks Markings	: Non-Standard (not as per Annex. 14).
Night landing facility	: Not available.
MET Services	: Met Service not available.
Navigation Aids	: Not Available

Airspace Information:

Deoghar airstrip is located approximately at 110 Nm from Ranchi airport. The uncontrolled airspace allocated for flying motor glider is 1000 feet AGL. Any flying required to carry out above this level needs to be co-ordinated with ATC, Ranchi.

1.11 Flight recorders: Neither fitted nor required.

1.12 Wreckage and impact information.

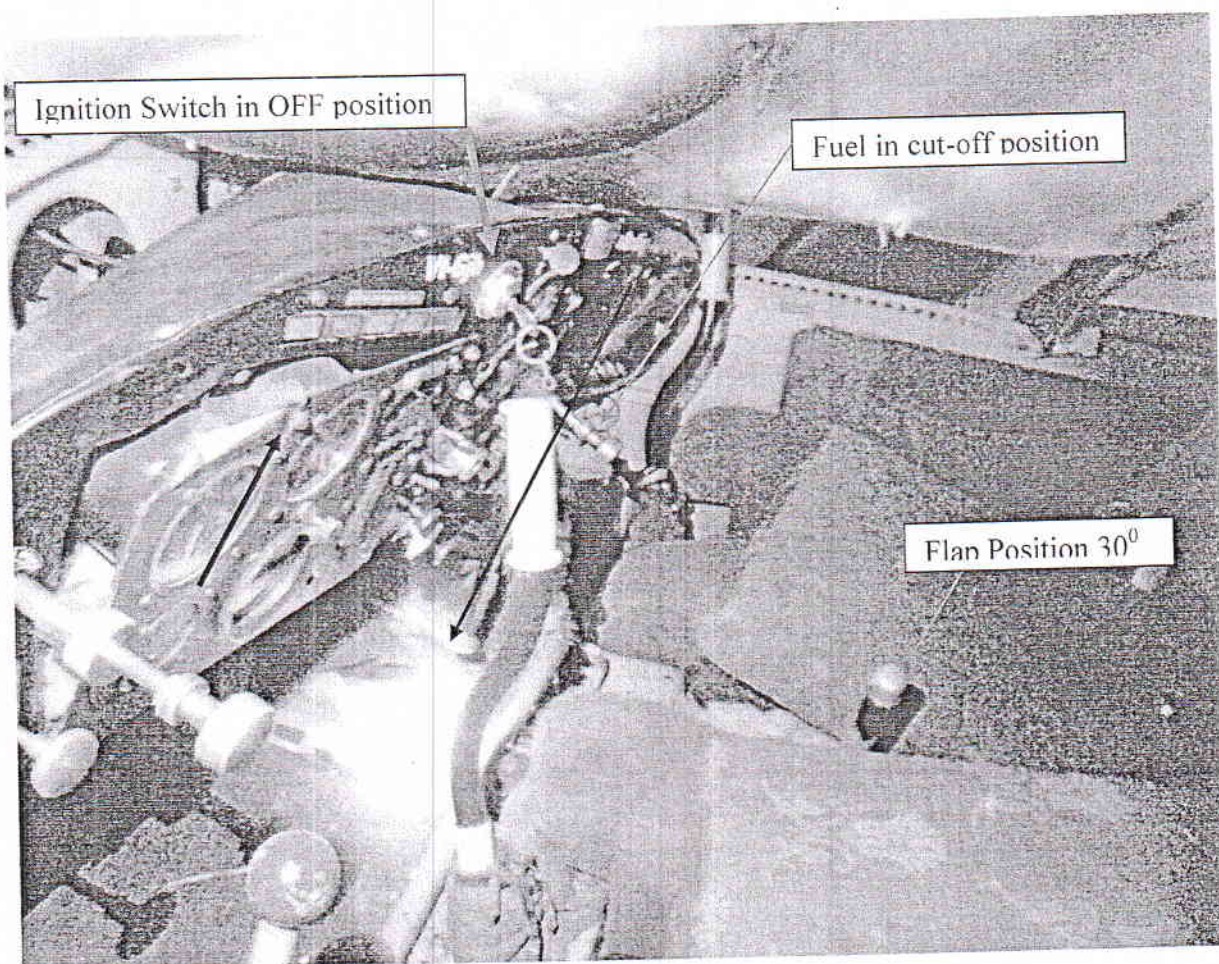
During examination of the wreckage at site, it was observed that the motor glider was lying with its nose resting on the ground and the empennage against the airfield boundary wall. The engine had dislodged from its mountings and moved upwards towards the windshield. The right wing had hit the boundary wall and was substantially damaged. The propeller had also dislodged after the impact with the ground.

The wreckage was confined around the point of impact and there was no in-flight disintegration of any part of the motor glider.

After the engine impacted the ground the fuel and oil line had ruptured and the motor glider caught fire. The fire was localized around the engine area. The rudder and the elevator were also damaged due impact with the boundary wall.

In the cockpit the fuel levers were found in OFF position, flaps in 30° positions and the ignition was OFF. Since the motor glider had impacted the ground the windshield plexi had broken. The tail wheel has also sheared and dislocated from its position.

The fuselage structure and the engine cowlings were found damaged at various places due to impact. The aircraft has suffered extensive structural damage.



Position of switches in cockpit

1.13 Medical and pathological Information:

After the accident, the instructor sustained serious injuries and was admitted to the local hospital, thereafter he was airlifted from Deoghar to Ranchi and was hospitalized at Ranchi for treatment. There was no injury to Pilot in command. However no PFMC was carried out after the accident.

1.14 Fire:

During accident the engine impacted the ground, the fuel and oil line had ruptured and the motor glider caught fire. However the fire was localized around the engine area, which was extinguished by the Government of Jharkhand personnel.

1.15 Survival aspects:

The accident was survivable. The PIC escaped unhurt and thereafter rescued the Instructor from the cockpit as he had suffered serious injuries.

1.16 Tests and research:

The engine was sent to M/s Varman Aviation, Bangalore which is the authorized center for Rotax -912 A3 engines for strip examination.

Engine Type: Rotax 912 A3

Engine SL No. : 4410713

TSN: 588:20 hrs

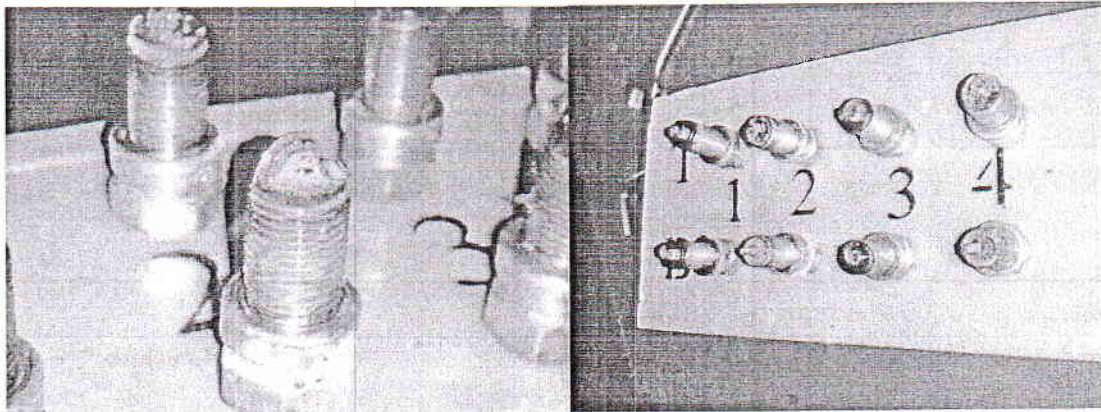
Physical Observations:

- 1) Oil tank had sheared off.
- 2) Muffler was damaged and distorted.
- 3) Coolant radiator was dislocated and touching the muffler.
- 4) Carburettor cables were cut.
- 5) Exhaust connection at cylinder No. 1 was broken.
- 6) Connection stainless steel pipe from suspension tank to the radiator was damaged as a result of abrasion having resulting a hole in the pipe.
- 7) Compensating tube broken in RH Carburetor.
- 8) Carburetor air filter bracket connection to carburettor was burned.
- 9) Coolant was dipping from coolant tube from cylinder no. 3.
- 10) Ignition cover and trigger points was totally burned.
- 11) RH carburetor to air filter connection was burned.
- 12) Fuel connection from cam block to fuel tank was cut.

The strip examination revealed:

I. ENGINE DISASSEMBLY AND OBSERVATION/DEFECTS NOTICED:

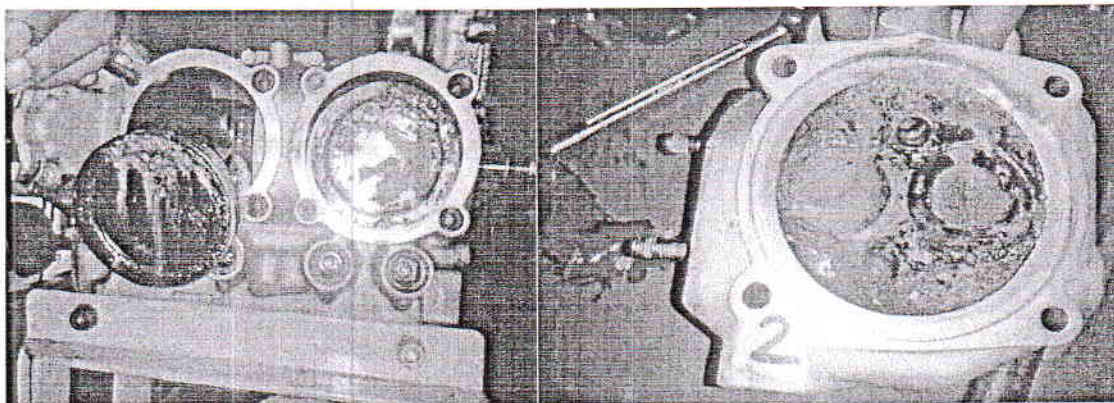
1. During disassembly it was observed cylinder 2 spark plug was having traces of coolant.



Heavy deposits were observed on the spark plugs

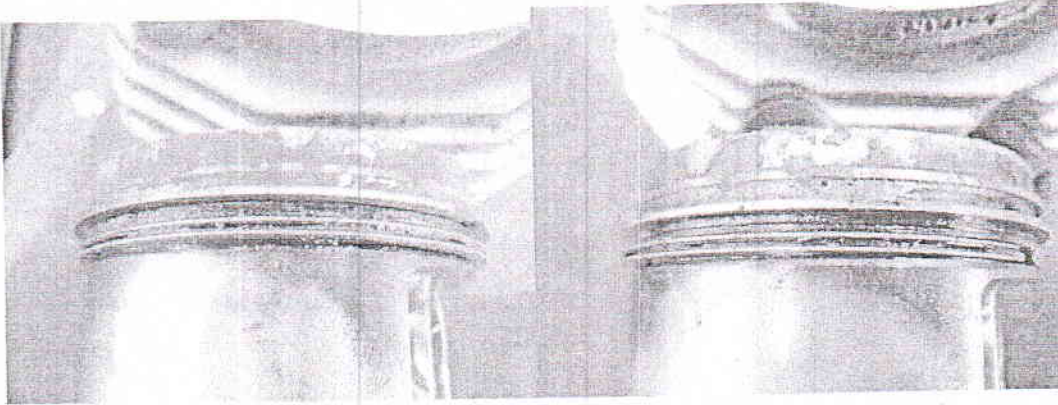
Among the 8 spark plugs, 3 spark plugs (Cylinder No.2 bottom spark plug, Cylinder No. 4 bottom and top spark plug) found not functioning.

2. Cylinder No. 1,2,3 had traces of oil in the combustion chamber and Cylinder no. 4 was dry.



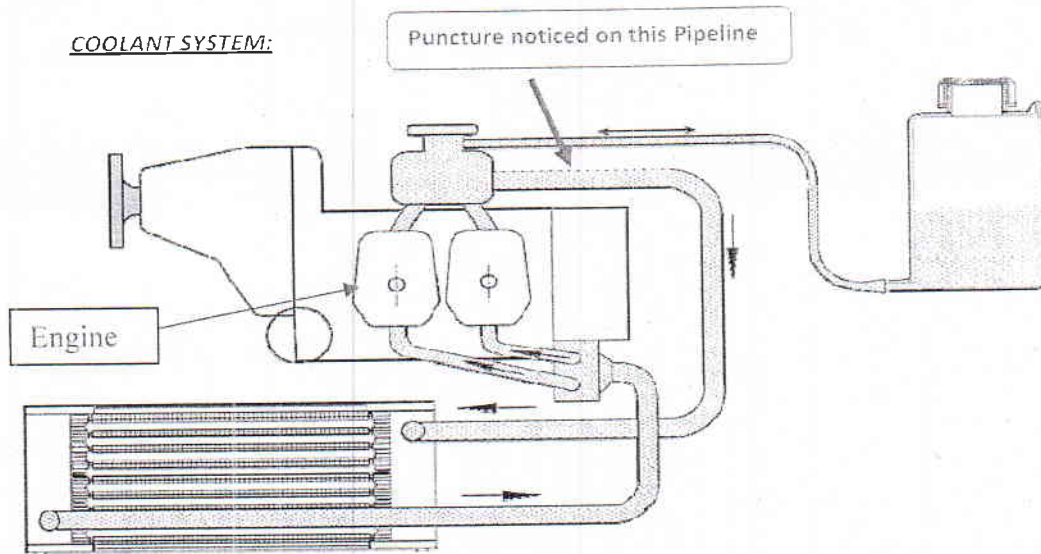
Heavy carbon deposits observed on all pistons and valves

3. Piston in cylinder no. 2 & 4 found seized.

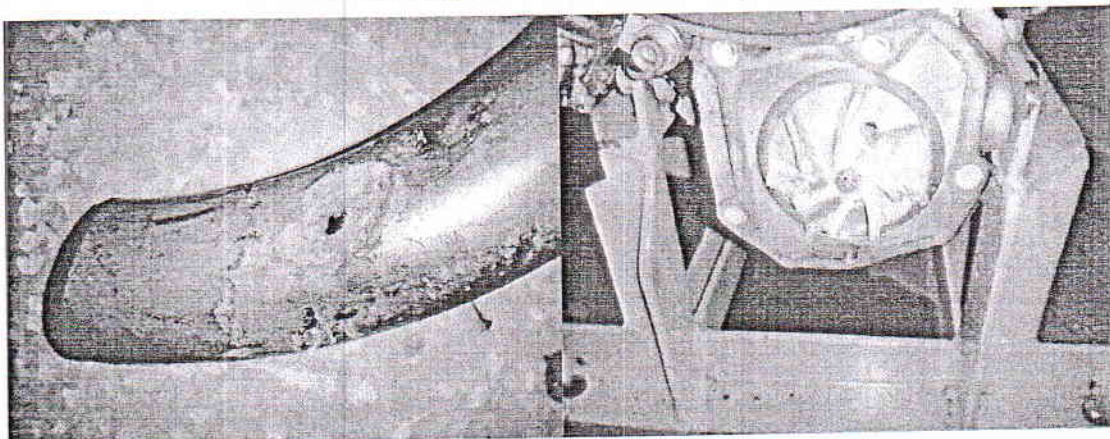


Condition of piston rings

4. Coolant System



Block Diagram of Coolant system



Coolant holes punctured

No sign of coolant in the impeller

5. Testing of Ignition Unit: SMD (Surface Mount Device) Electronic modules A & B found functioning satisfactory on the test rig.

Following observations were made during the Strip Examination.

1. Connection tube identified at No. 9 above from suspension tank to radiator was found punctured due to abrasion which had caused the coolant to be drained from the coolant system during flight. Hence engine was running dry of coolant resulting over heating of cylinder heads. This was also evident from the complaint impeller which was totally dry during disassembly of the engine.
2. Cylinders No. 2 & 4 piston ring was seized due to heavy deposits caused by burning of lubricating oil inside the combustion chamber due to overheating, which might have caused engine seizure / stoppage.
3. The engine failure was due to non-supply of coolant to the cylinder head because of the punctured coolant pipe resulting into overheating and subsequently seizure/stoppage of pistons of No. 2 & No. 4 cylinders and failure of engine.

1.17 Organizational and management information:

The Civil Aviation Department, Government of Jharkhand has a fleet of 07 aircrafts i.e. 03 Zlin aircrafts, 01 Beach Baron 55, 02 unpowered gliders and 01 powered glider which was involved in the accident at Deoghar. Out of these aircrafts 02 aircrafts (01 Beach Baron 55 & 01 unpowered glider) are unserviceable and does not possess a valid Certificate of Airworthiness

The Civil Aviation Department is headed by Special Secretary, assisted by Deputy Secretary and Director of Operations. The Director of Operations, Instructor on the motor glider was co-pilot on the accident flight. There are 04 assistant glider pilot instructors who are on contract basis with the Civil Aviation Department.

Government of Jharkhand does not have its own maintenance set up and maintenance is outsourced to M/s ACRS (Airborne Component Repairs & Services Pvt. Ltd.) based at New Delhi. Scrutiny of the Engineering Records revealed that previously the Government of Jharkhand did not had any approved CAM (Continuous Airworthiness Manager) to oversee the maintenance work carried out by the outsourced company as per DGCA, Civil Aviation Requirements (CAR). Instead all the maintenance schedule/ scope of work were under the signature of M/s ACRS only.

The Government of Jharkhand had appointed a person for the duties of CAM which was approved by DGCA in April 2013. Prior to this there was no maintenance check/audit by Government of Jharkhand on the maintenance agency as required by CAR.

1.18 Additional information:

1.18.1 Emergency procedures for engine failure after take-off:

As per the Pilot Operating Handbook in case of an Engine Failure following procedure is recommended:

- | | |
|---------------------------|--|
| - Stick | push slightly, until the level flight is reached |
| - Air brakes | extended |
| - Fuel cock | closed |
| - Ignition switch | cut |
| - After touch-down | stick to limit aft position |
| - Landing gear break | actuated |
| - Propeller | to horizontal |
| - Feathering pitch handle | up |
| - Flaps | 30° |

1.18.2 Incorrect entries made in Journey Log Book:

Scrutiny of the records revealed that the 25 hrs/01 month schedule was due on 29.07.2013. The AME at Deoghar was a transit approval holder and was not qualified to carry out the above schedule. As the licensed AME was based at Ranchi, the motor glider was scheduled to fly to Ranchi for maintenance. As per the entries made by the AME in the airframe and engine log book the maintenance was carried out at Ranchi. Scrutinizing the journey log book it was known that the instructor had also made entries in the journey log book and in his personal log book for the above flight.

As per records presented by Government of Jharkhand the 25 hrs/01 month schedule was carried out at Ranchi and the motor glider was flown back to Deoghar on 30.07.2013. Scrutinizing the documents with ATC Ranchi it was found that the motor glider VT-GJH had not operated any flight Deoghar-Ranchi on 29.07.2013 and also there was no flight Ranchi - Deoghar for VT-GJH on 30.07.2013.

1.19 Useful or effective investigation techniques: NIL

2. ANALYSIS

2.1 Serviceability of the aircraft

Motor glider model VT-GJH (MSN. 081) had been manufactured on 14th March, 2007. The glider was registered with DGCA under the ownership of Govt. of Jharkhand, Civil Aviation Department, Ranchi on 14th November 2007. The Motor Glider is registered under category 'A' and the Certificate of Registration No. G-304, (CFR).

The certificate of Airworthiness Number 119/G under "Normal" category was issued by DGCA on 14th November, 2007. The specified minimum operating crew is 01 and the maximum all up weight is 780 kg. At the time of accident, the Certificate of Airworthiness was current and was valid upto 23rd March, 2017. As on 07th August, 2013 the aircraft had logged 588:20 Airframe Hours.

The last major inspection 100 hrs/01 year check was carried out at 539:35 Hours on 06th April, 2013. The last 25 hrs/01 month inspection was not carried out, however the log book entries for the same were made.

The maintenance program was approved by Regional Airworthiness Office consisting of calendar period / flying Hours or Cycles based on maintenance manual. However the motor glider Aircraft VT-GJH and its Engine were not being maintained as per the maintenance program by the maintenance agency M/s ACRS.

Previous to the accident flight the pilot had reported orally to AME that the cylinder head temperature was high and power loss was experienced. The AME had observed coolant level low which was replenished and the motor glider was cleared for flight. However the engine failed in the subsequent flight. The engine was subjected to strip examination and it was known that the connection tube from suspension tank to radiator was found punctured due to abrasion which had caused the coolant to drain from the coolant system during flight. Hence engine was running dry of coolant resulting over heating of cylinder heads. This was also evident from the complaint impeller which was totally dry during disassembly of the engine. The puncturing of the tube had not occurred on the accident flight it had probably occurred over a long period of time which was not observed by the AME during maintenance check. This reflects the perfunctory inspections and poor maintenance from the maintenance agency. After the accident the spark plugs were examined and it was observed that out of 08 spark plugs, 04 spark plugs were completely unserviceable and 02 spark plugs were performing partially. Further cylinders No. 2 & 4 piston ring were seized due to heavy deposits caused by burning of lubricating oil inside the combustion chamber due to overheating, which might have caused engine seizure / stoppage. Scrutiny of the snag register revealed that there was no written snag reported on the motor glider prior to the accident flight.

Further the 25 hrs/ 01 months schedule was due on 29.07.2013, however the schedule was physically not carried out on the Motor Glider VT-GJH and false entries were made in the airframe/engine log books.

In view of the above, it can therefore be inferred that serviceability of the aircraft is a factor to the accident.

2.2 Pilot handling of the aircraft:

On 07.08.2013 Govt. of Jharkhand Motor Glider VT-GJH, was planned to carry out a test flight at Deoghar airstrip under the command of pilot holding a valid Glider Pilot License (GPL) endorsed on type with co-pilot who is a qualified instructor on type and was holding a valid GPL license.

The instructor after the last flight had reported orally that the cylinder head temperature was high and power loss was felt. The AME had topped up the coolant and asked the pilot to carry out a ground run and assess the performance of the engine. The pilot had carried out ground run twice, first for a period of 07 minutes and after a gap of about 15 minutes another ground run was carried out for approximately 05 minutes. As per the pilot both the ground run were satisfactory. Thereafter the motor glider was subjected to test flight to assess the performance. The motor glider took off approximately at 0610 UTC. During take-off roll all the parameters were observed normal, however after getting airborne at approximately 25 feet the pilots observed the engine RPM/power was dropping and at around 50 feet height the RPM/power became zero. On observing this the Instructor took over the controls from the PIC and decided to land back the Motor Glider on the airstrip. The instructor took right turn of 180 degrees in order to land back on runway. As per the engine failure procedures, the fuel was cut off and the ignition was put to off position however as required the flaps remained in the take-off position. The instructor did not followed the Pilot Operating Handbook (POH) procedures of levelling off the motor glider and make a straight landing ahead, instead executed the right turn. While executing a right turn with no engine power the motor glider lost height very quickly and in the process the right wing hit the boundary wall of the

airstrip. Thereafter the motor glider crash landed before the beginning of the runway 09 end.

From the foregoing it is inferred that, the Instructor after taking over controls from PIC did not followed the emergency procedure laid down in POH and executed a 180⁰ turn which eventually resulted into the accident. Hence pilot handling of the motor glider is a factor to the accident.

2.3 Weather:

The airstrip at Deoghar is an uncontrolled airstrip and no Meteorological facility is available. The nearest MET facility available is at Ranchi which is at 110 Nm from Deoghar. The local weather and trends were obtained telephonically from Ranchi to carry out the operations. The weather on the day of accident at Deoghar was reported as Temperature 34⁰C, visibility around 6 Kms with clear skies.

From the foregoing it is evident that weather is not a contributory factor to the accident.

2.4 Circumstances leading to the accident:

On the Previous flight prior to the accident the instructor had reported orally that the cylinder head temperature was high and power loss was felt. The AME at Deoghar was only a transit approval holder during inspection observed the coolant level to be low. Since troubleshooting was not in his privilege, the AME without carrying out the detailed inspection on the engine released the motor glider for test flight after refuelling the coolant. The engine failed immediately after take-off at approximately 50 feet AGL as the cylinder piston rings had seized, since the coolant in the engine drained from the hole in the return line of the system. The decision of the instructor to execute a right turn of 180 degrees with no engine power resulted into a sudden loss of height. The motor glider with large wing span in a bank condition hit the boundary wall, resulting into an accident.

3. CONCLUSIONS:

3.1 Findings:

1. The motor glider had valid certificate of Airworthiness.
2. Both the pilots had valid Glider Pilot License to undertake the flight.
3. The Daily Inspection schedule of the motor glider was carried out by the approval holder before the flight.
4. Prior to the accident flight the ground run was carried out as the instructor had reported high cylinder head temperature with power loss on previous flight.
5. The ground run was found satisfactory and thereafter the motor glider was released for performance check flight.
6. Immediately after take-off power loss was experienced by the PIC.
7. The instructor took over controls and attempted to land back on the airstrip by executing 180⁰ turn with no engine power.
8. Since the height was less with no engine power the glider lost height and in the process of turn the right wing hit the boundary wall of airstrip.
9. The PIC escaped unhurt however the instructor received injuries and was taken to the hospital.
10. There was fire however it was localized near the engine area.
11. During strip examination of Engine it was inferred that the engine failed due non supply of coolant to the cylinder head because of punctured coolant pipe resulting into overheating, seizure/stoppage of the pistons of No. 2 & 4.
12. False entries were made in the engine and airframe log book of motor glider VT-GJH for carrying out 25 hrs/01 month schedule at Ranchi as the motor glider had never flown to Ranchi from Deoghar on 29.07.2013 for maintenance.
13. False entries were made in the Journey Log Book by the Instructor for motor glider VT-GJH flight to Ranchi on 29.07.2013 and back to Deoghar on 30.07.2013 as records of ATC does not support the entries.
14. Scrutiny of the record also revealed that the CAM was appointed to supervise the maintenance work from outsource agency in April 2013 only. Prior to that the maintenance work was supervised by the operations department of Government of Jharkhand.

15. The weather was fine and not a contributory factor to the accident.

3.2 Probable cause of the accident:

The instructor's actions of initiating 180⁰ right turn with no engine power at low height is non adherence to SOP for engine failure which resulted into sudden loss of height. Due which the right wing of the motor glider hit the boundary wall of the airfield resulting into the accident.

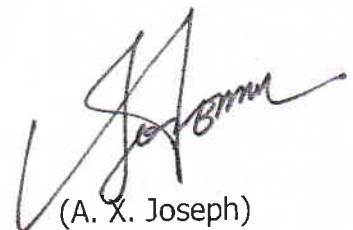
Perfunctory inspection schedule carried out by the AME/Maintenance Agency reflects poor maintenance of Motor glider/engine is a contributory factor.

4. SAFETY RECOMMENDATIONS:

1. DGCA may take necessary action on AME/Maintenance Agency regarding incorrect maintenance logbook entries for 25hrs/01 month maintenance inspection schedule carried out at Ranchi on 29.07.2013. Perfunctory inspection schedules were carried out by the AME/Maintenance agency.
2. DGCA may take necessary action regarding incorrect flying logged by Government of Jharkhand pilot for the sector Deoghar-Ranchi on 29.07.2013 & Ranchi-Deoghar on 30.07.2013 respectively to carry out maintenance at Ranchi.

K. Ramachandran

(K Ramachandran)
Air Safety Officer (E) - AAIB
Member, Committee of Inquiry VT-GJH



(A. X. Joseph)
Assistant Director - AAIB
Chairman, Committee of Inquiry VT-GJH

Date: 11/07/2014

Place: New Delhi