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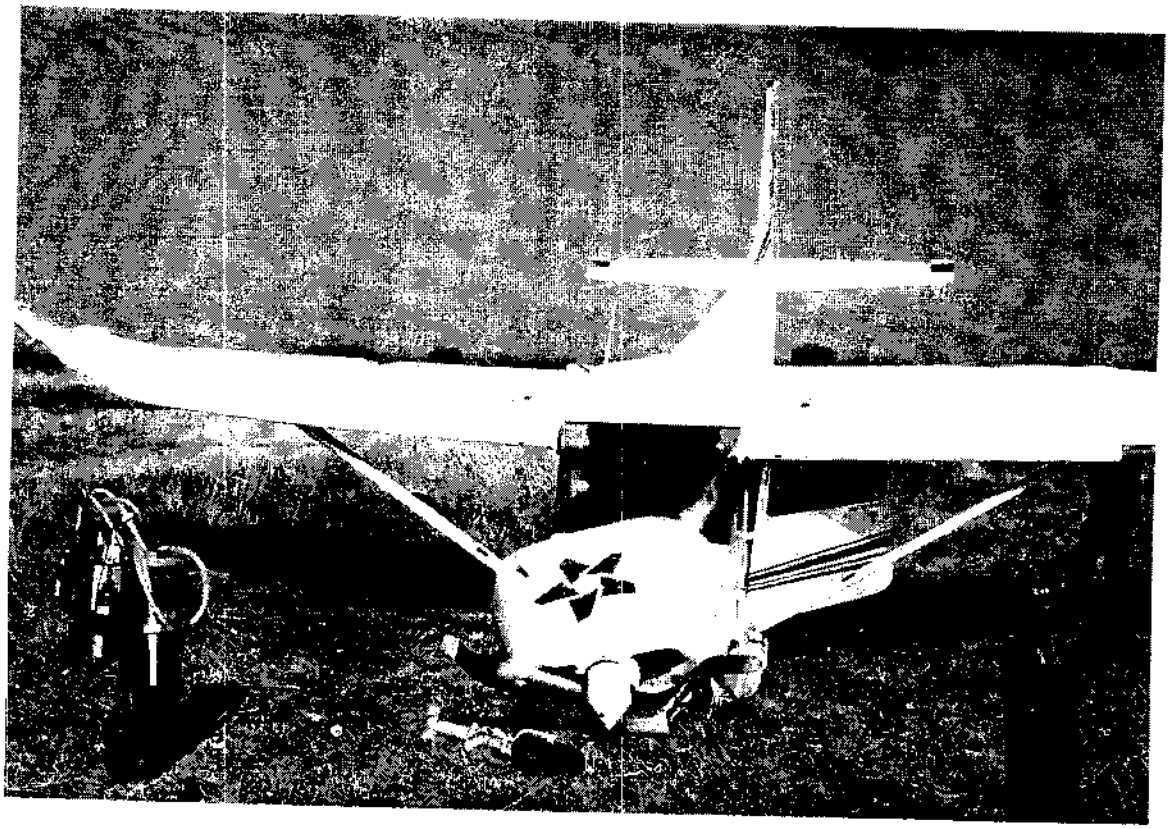
DIRECTORATE GENERAL OF CIVIL AVIATION

FINAL INVESTIGATION REPORT ON ACCIDENT TO M/S. CHIMES AVIATION C-172R AIRCRAFT , VT-CAJ ON 3RD FEB. 2012 AT DHANA AIRSTRIP, DIST., SAGAR, M.P.

OFFICE OF DIRECTOR OF AIRSAFETY (WESTERN REGION)
GOVERNMENT OF INDIA
MUMBAI OLD AIRPORT, MUMBAI-400029.

FINAL INVESTIGATION REPORT ON ACCIDENT TO M/s. CHIMES AVIATION, CESSNA 172R AICRAFT VT-CAJ ON 03.02.2012 AT DHANA AIRSTRIP, DIST., SAGAR, MP



INVESTIGATION & REPORT BY :-

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FINAL INVESTIGATION REPORT ON ACCIDENT TO M/s. CHIMES AVIATION, CESSNA 172R AICRAFT VT-CAJ ON 03.02.2012 AT DHANA AIRSTRIP, DIST., SAGAR, MP

1.	Aircraft	
	Type	: CESSNA
	Model	: 172R
	Nationality	: INDIAN
	Registration	: VT-CAJ
2.	Name of the Owner/ Operator	: Chimes Aviation Pvt. Ltd., New Delhi
3.	Place of the Accident	: Dhana Airstrip, Dist. Sagar, Madhya pradesh.
4.	Date and Time of Accident	: 03/02/2012 & Approx. 04:20UTC
5.	Pilot in command	: Student Pilot License
6.	Co-Pilot	: N/A
7.	Extent of Injury	: Minor
8.	No. of Passengers	: Nil
9.	Last point of Departure & its coordinates	: Dhana Airstrip., 23°45'9"N 78°51'24"E
10.	Point of intended landing & its coordinates	: Dhana Airstrip. , 23°45'9"N 78°51'24"E
11.	Geographical location of site Of Accident (Lat. Long)	: 23°45'9"N 78°51'24"E
12.	Type of operation	: Solo Local Circuit & Landing.
13.	Phase of operation	: Landing.
14.	Type of accident	: Runway Excursion.

(All timings in the report are in UTC unless or otherwise specified)

SYNOPSIS:

M/s Chimes Aviation Academy Cessna 172R aircraft registration VT CAJ on 03rd Feb.2013, during landing of second solo sortie of a trainee pilot, approximately 25-30 ft above the runway35, aircraft left wing dropped and the aircraft hit the ground on the left shoulder of the runway at about 1200ft from the beginning of the runway 35.

The Accident was informed to DGCA, India and the Investigation was carried out by an inspector of accident appointed by DGCA order vide letter No. AV.15013/2/2012-AS dated 06.02.2012, in accordance with the requirements of Rule 71 of Aircraft Rules 1937.

On investigation, it was observed that during the time of landing, the aircraft's nose attitude was high. The wrong procedure used for go around had lead the aircraft to stall and resulted the accident.

1. FACTUAL INFORMATION

1.1 History of the flight:

On 03.02.2012, Authorised AME carried out the daily inspection of the aircraft in accordance with approved Daily Inspection procedure and found satisfactory. The aircraft uplifted with 200litres of fuel and 6.8 quarts of oil. Tyre pressure of 34PSI on Nose wheel tyre and 29PSI on each main wheel tyre was maintained. The aircraft released for training operations with nil snag.

As per the schedule, the trainee pilot reported for the flight program at 0845 IST. The trainee pilot accepted the aircraft with no snag. The trainee pilot carried out walk around / pre flight inspection and instructor briefed weather (Winds 350/05 kts, Visibility 5 kms) and circuits and landings to him. With AFI onboard, the trainee pilot performed four circuits and landings checks. He was found fit by AFI and hence, the trainee pilot was released for the second solo by AFI under the supervision of CFI. During the time of second solo release, the fuel onboard was around 185litres.

As per the training school procedure, the respective student's instructor handles RT communication with the aircraft from ATC facility. During the time of the second solo flight, the AFI was handling RT from ATC facility and gave instructions to the trainee pilot.

During the solo flight, first circuit pattern, AFI had observed that the aircraft was on proper glide path and the safe anding was performed by the trainee pilot. Hence, AFI cleared him for the second circuit & landing with 178litres of fuel onboard. During this second circuit and landing exercise, AFI had observed that when the aircraft approached close to runway, the trainee pilot reduced the power and flared out higher than the normal. After flare out he floated for some distance, while floating, the aircraft was in high nose attitude. At that time the trainee pilot was about 1000 ft from threshold of Runway 35 and about 25-30 ft above the runway. AFI immediately advised on R/T to open full power, pitch down and execute a 'Go Around'. Student performed the go around by the way of opened full power & pitch down as instructed by the AFI. However, the trainee pilot observed that the aircraft was not coming down and at the same time he heard stall warning horn and the aircraft stalled, as a result of which the aircraft left wing dropped & the aircraft hit the ground on the left shoulder of the runway at about 1200ft from the beginning of the runway 35. Upon crash landing, the airbag deployed, there was no fire on the aircraft and there were no injuries to the trainee pilot or any personnel on ground. There was no fuel leakage. The trainee pilot came out of the aircraft without any injury.

After the accident, approximately 171 litres of Fuel was removed and approx. 1litre of oil from the engine oil sump were collected from the aircraft.

During time of accident, CFI was flying with the other student in local circuit and landing exercise.

Fig1: Dhana Airstrip Rwy 35-17 on google map

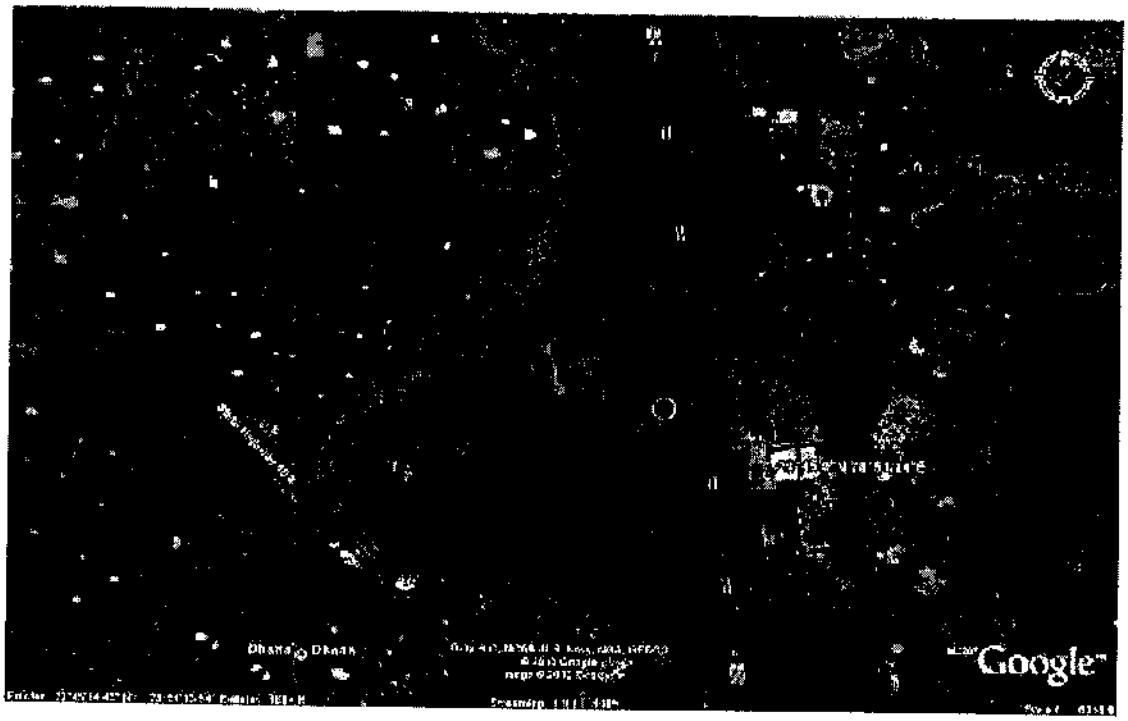
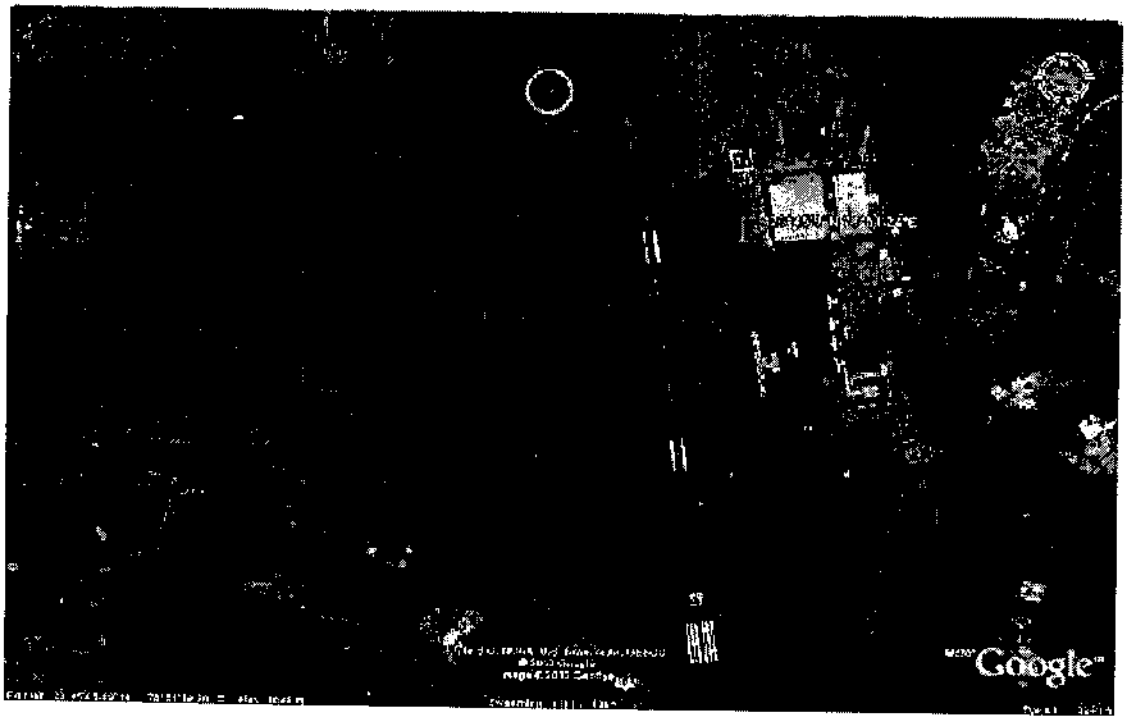


Fig2: Dhana Airstrip Rwy 35 end accident location on google map



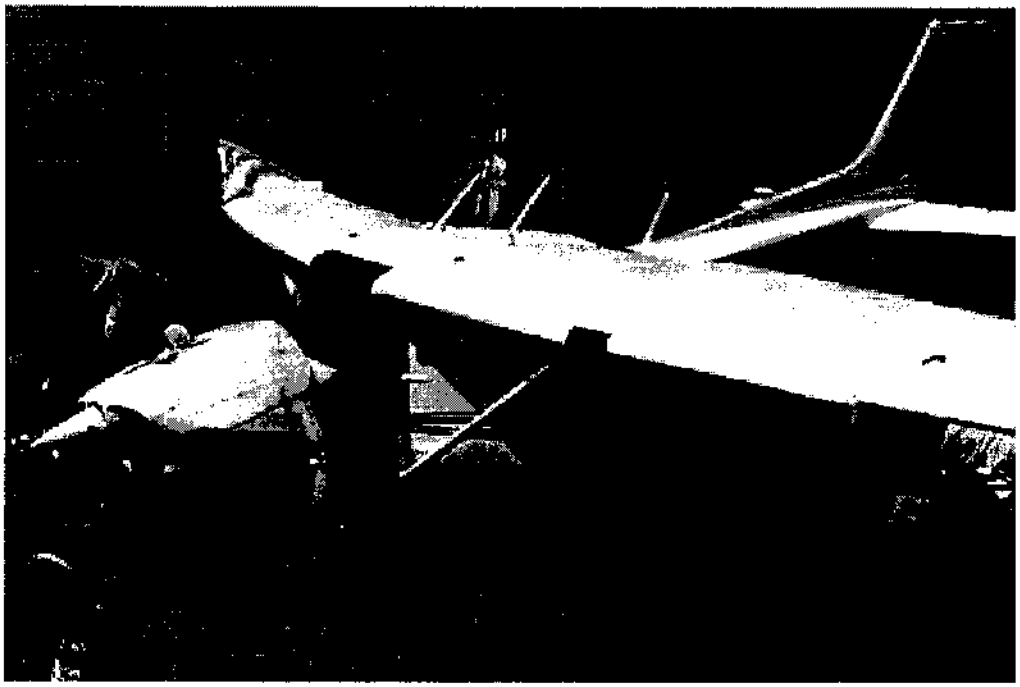
1.2 **Injuries to persons.**

INJURIES	CREW	PASSENGERS	OTHERS
FATAL	Nil	Nil	Nil
SERIOUS	Nil	Nil	Nil
MINOR/NONE	Nil/ 01	Nil	Nil

1.3 Damage to aircraft

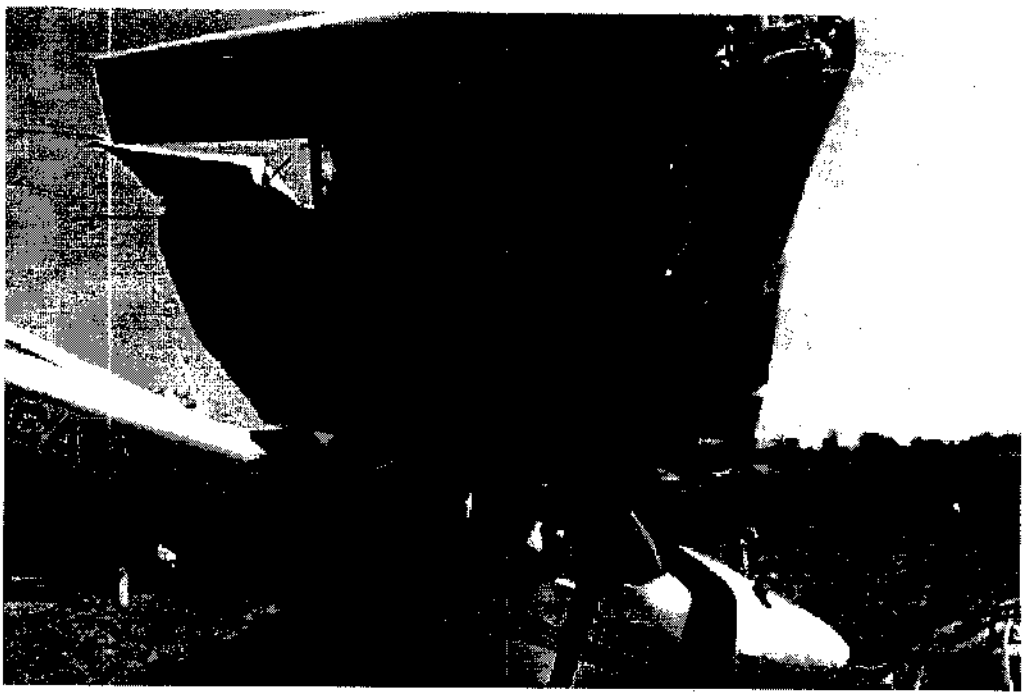
Following major structural damages were observed:

Aircraft was severely damaged in nose section & wing tips. The propeller twisted and both tips were sheared off. Engine Mount found broken & nose landing gear found sheared off from its attachment due to impact. Both wings were bent upward at wing tip area. Firewall buckled & moved slightly inwards. Cabin & rear section intact with minor buckling at some places and both main landing gears were intact. The airbag assembly was found inflated on pilot seat.



1.3.1 Left Wing:

1. Wing bent upwards from station 190 & aileron also damaged at the corresponding section. Wing tip was missing & pieces were recovered from the site.
2. Leading edge skin between station 190 to 208 & between 156 to 172 found crushed.
3. Wing upper skin wrinkled & deformed from wing strut attachment point.
4. Wing lower skin found deformed from wing strut attachment point to tip. Wrinkles were observed from strut attachment point to integral fuel tank.



1.3.2 Right Wing

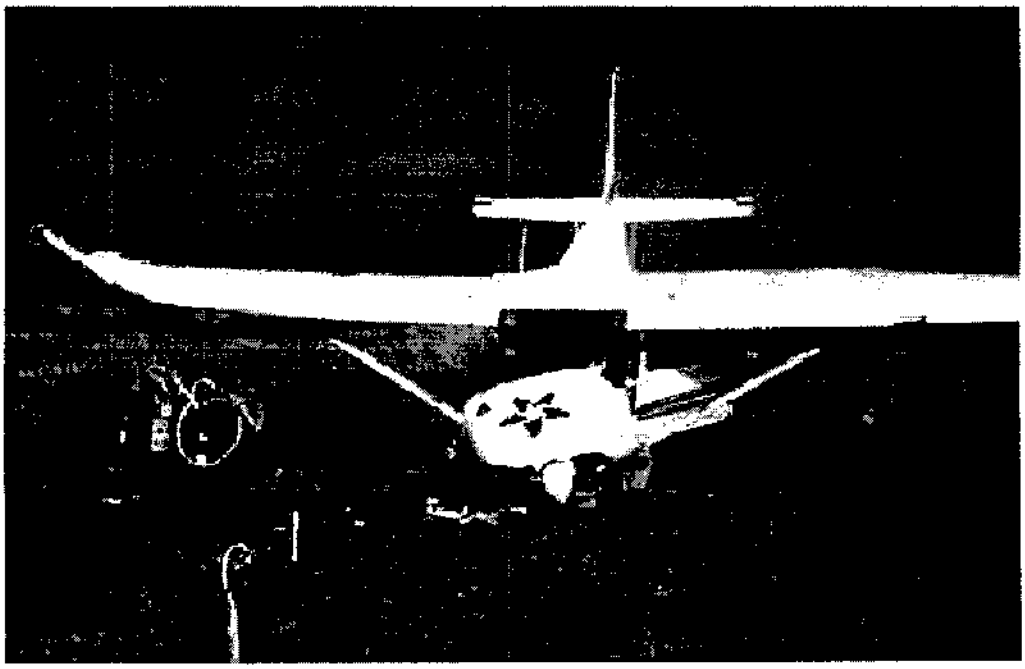
1. Wing tip found bent upwards. Wing tip found attached to the wing with wing tip leading edge broken.
2. Wing leading edge found crushed from Station 140 to Station 208.
3. Wing lower skin found wrinkled from Station 85 to Station 208 and graze marks were observed on skin from Station 140 to Station 208 especially on leading edge.
4. The aileron was found bent at Station 190 & at Station 140.
5. Wing Upper Skin found deformed from Station 140 to Station 208, wrinkled between Station 100 to Station 140 & Crushed between Station 71 to Station 100.
6. LH flap found to be moved inboard crushing side window pane and aft upper cabin area, which indicates wing bent backward due to impact.

1.3.3 Nose section

Nose section severely damaged.

1. LH lower cowling separated at mount section, the attachment rivets found sheared off. The FRP section torn to the exhaust tail pipe opening. RH Side of nose Cowling found broken. RH lower Cowling found attached to nose cowling.
2. All anti shock cowl mounts found sheared off.
3. The fuel filter bowl found opened and fuel return hose pipe Found to be sheared.
4. Nose landing gear sheared off from attachment.
5. Firewall found crushed & buckled.
6. The main electronic junction box found bent with cover broken. All internal components except main CB's which sheared from panel. Battery found intact with minor deformation, no evidence of acid leakage were observed.

7. Lower portion of forward fuselage crushed. LH & RH Steering Rod found bend with part of steering arm attached on it. Upper Nose gear mount found missing and lower nose gear mount sheared and attached to fuselage.
8. Engine mount found to be broken at all four mounting points towards engine. The shock mounts & frame found attached to the engine. The mount structure at fuselage found attached to firewall at all four points.



1.3.4 Engine

1. Engine air intake box separated from engine. Fuel servo assembly found attached to engine with both throttle & mixture control attached to it.
2. All four exhaust risers found deformed. The muffler found intact with shroud deformed. Exhaust tail pipe found crushed at the tip.
3. Oil filter found crushed slightly with oil leaks.
4. Starter ring gear found cracked at alternator pulley area in one point.
5. LH from baffle found buckled.

1.3.5 Propeller

Propeller found attached to engine with spinner intact. Slight graze marks were observed at spinner nose.

1. Propeller found twisted. Both tips found sheared off about one inch from tip.
2. Severe material erosion were observed on the leading edges towards the propeller tips

1.3.6 Fuselage

1. Fuselage cabin section found intact with minor deformation on LH&RH side.
2. RH side window found broken due to flap moved inward.
3. AFT cabin section found with minor buckling.

1.3.7 Main landing gear

1. LH brake cylinder found rubbed on ground & bleeder screw found missing.

1.3.8 Nose landing gear

1. Landing gear sheared off.
2. Upper torque link attachment bolts found sheared at both points.
3. Shimmy dampener rear attachment point found sheared and shimmy dampener found attached to gear at front attach point.
4. Shock strut upper barrel found dented near upper attachment point. Upper attachment point found intact & attached to gear upper strut.

1.3.9 Cabin

1. Forward Section of cabin found buckled at floor board. Rudder paddles found intact but frozen due to buckling of floor board. Both control column push pull tube found to be bent.
2. Amsafe Inflatable Bag found to be activated due to impact.

1.4 Other Damage:

Nil.

1.5 Personnel information:

1.5.1 Pilot-In-Command :

Age	*20 yrs (Approx.)*
License	*Student pilot license*
Date of Issue	*6.10.2011*
Valid	*05.10.2016*
Category	*Student pilot*
Endorsement as PIC	*Nil*
Class	*Single engine*
Date of last Med. Exam	*07.09.2011 (Class I)*
Med. Exam valid up to	*06.09.2012*
FRTO Date of Issue	*10.01.2012*
FRTO Valid up to	*09.01.2022*
Flying hours (Dual)	*17hr 25 min*
Flying hours (Solo)	*20 minutes*
First Solo	*02.02.2012*
Flying in Last 90 Days	*17hr 25 min*
Flying in Last 30 Days	*10hr 20 min*
Flying in Last 07 Days	*05 hr 25 min*
Flying in Last 24 Hours	*55 min*

The trainee pilot joined Chimes Aviation Academy on 24.06.2011, as a trainee pilot and started flying from 05.11.2011. On 02.02.2012, when the trainee pilot had completed 15:30 hrs. he was released for First Solo by Flight Instructor. His approach and landing in the First Solo was satisfactory.

There were total of 59 successful landings carried out in the entire training program of the trainee pilot and out of which 02 were solo flights and remaining 57 were dual flights.

On 3rd Feb 2012, there were total of 06 landings were carried out and out of which 04 were dual and 02 were solo flight and during the second solo landing exercise, the aircraft met with an accident.

From the FTPR records, it is observed that the student was not proficient enough to handle the stalls, and there were no debriefing records available.

1.5.2 Assistant Flight Instructor:

AFIR Date of issue	*16.08.2011*
AFIR Valid up to	*15.08.2017*
License	*Commercial pilot license holder.*
CPL Date of issue	*06.03.2009*
CPL Valid up to	*05.03.2014*
PIC Endorsement on CPL	*C-152, C-172 R and BE- 76*
AFIR Endorsement	*C-152*
IR	*Valid*
FRTOL Date of issue	*06.03.2009*
FRTOL Valid up to	*05.03.2014*
RTR (A) Date of issue	*20.01.2009*
RTR (A) Valid up to	*19.01.2014*
Date of last Med. Exam	*21.10.2011 (Class I)*
Med. Exam valid up to	*20.10.2012*
Total Flying Hours	*497 Hours*
Total Instructional Hours	*205 Hours*

As per the regulations, AFI may impart training to the trainee pilot under the supervision of CFI during daytime.

1.6 Aircraft information:

The Airplane is high wing monoplanes of all metal semi-monocoque construction, equipped with fixed tubular spring steel main gear struts and a steer-able nose gear in tricycle configuration. The nose gear has an air/oil fluid shock strut. Cabin has a four place seating arrangement with all up weight (AUW) 1111.3 kg. This aircraft is powered by four cylinder horizontally opposed, air – normally aspirated LycomingIO-360-L2A engine with power output 160 BHP at 2400 RPM driving a McCauley fixed pitch all metal propeller with Model no. IC235/LFA7570. Engine operates with AV GAS 100LL and the total fuel capacity 210 litres (56 U.S.G) and total usable 200 litres (53 U.S.G). Wings are of all metal, strut – braced, semi-monocoque construction, utilizing two spars and full – cantilever, all metal tail group consists of a vertical stabilizer and rudder, and a horizontal stabilizer and elevators.

Aircraft	C-172R
Aircraft Registration	VT – CAJ
MSN Sl. No.	17281486
Year of Manufacture	2007
Category	Normal, Passenger
Max. AUW	1111.3Kgs.
C of A	19.05.2009 to 12.12.2012
C of R	11.04.2008
Wt. Schedule	13/12/2007
Engine Sl No.	L-33830-51E
Aircraft Hours (Since New)	1958:20
Engine Hours (Since New)	1958:20
Propeller Hours(Since New)	1958:20
Aircraft Station	Dhana, Dist Sagar,M.P
Navigation equipments on board	
Automatic Direction finder (ADF)	BENDIX – KR 87
Instrument landing system(ILS)	
Localizer	GARMIN- GMA 1347
Glide path receiver	GARMIN- GMA 1347
VOR receiver	
Marker receiver	GARMIN- GMA 1347
ATC transponder Mode C	GARMIN- GTX 33
GPS receiver	GARMIN- GIA 63
ELT	ARTEX ME 406
The following communication equipments(a) installed	
Communication Set 1	GARMIN- GIA 63
Communication Set 2	GARMIN- GIA 63

The aircraft Airframe Record reveals that it had logged 1958:20 total airframe hours since new and all inspections were carried out on the aircraft from the time since assembly/ Certificate of Airworthiness. The schedules of 400hrs/02years Inspection, 200 hrs/01 year, 100 hrs/06 month inspection, 50 hrs/01 month, 25hours inspection where carried out as per the maintenance program.

The Engine records reveal that the engine was manufactured by M/s Lycoming and the Model no. is IO-360-L2a and S/N is L-33830-51E had logged 1958:20 hrs since new. The McCauley Propeller Model No. IC235/LFA7570, S/N is ABA48521A had been installed on the engine and it had logged 1958:20 hrs since new.

All the Inspection Schedules carried out on L-33830-51E Engine Time since Assembly/ C of A. The 50hrs/01 month inspection, 100hrs/06 month inspection, 200 hrs/ 01year Inspection were carried out as schedule as per maintenance program.

1.7 Meteorological information:

MET information was obtained from IMD website for the city of Bhopal. The anemometer used and kept in control tower (ATC) facility at Dhana airstrip found to be non operational. The Instructor, informed the trainee pilot about the weather condition as Visibility of 5 km and winds from 350/05 knots prior to the flight. The wind sock is being used for predicting the wind speed and direction.

1.8 Aids to navigation:

The aircraft Cessna-172R VT-CAJ was equipped with Garmin-1000 GPS system which is capable of giving 3-dimensional aircraft position in relation to the ground from any number of way points on a moving map display. Garmin-1000 also gives TAS, Ground speed, Heading required to be flown to maintain the desired track, EET and ETA to a way point. Students prepare a map and flight log for the cross-country flight which cross checked by their respective flight instructor before the flight. The cross countries are usually flown by using the techniques of pilotage and dead reckoning.

1.9 Communications:

Dhana ATC is equipped with licensed VHF radio station with elevated antenna and normal radio range at flight 075 is about 100nm. ATC tower does not have ATC personnel to take the responsibilities of ATC official. In this accident case, it was handled by the Assistant Flight Instructor.

1.10 Aerodrome information:

This aerodrome is owned by state government and maintained by the organisation. The runway surface is not a paved one. The runway 35 is not feasible for operation as it was full of pebbles.

Runway Orientation	35/17
Length	3000 ft
Width	70 ft
Elevation	1709 ft
ARP	23°45'9"N 78°51'24"E
Airspace	Unrestricted 5 Nm from the Airstrip. Beyond 5 nm is controlled under Mumbai FIC.
ATC Tower Facility	ATC tower has VHF radio installed but no ATC official to take the responsibilities of ATC.

1.11 Flight recorders:

N.A.

As the aircraft weight is below 5700 kilograms. Hence the aircraft not equipped with either CVR or DFDR.

1.12 Wreckage and impact information:

The wreckage was closely confined to the spot where the aircraft came to a complete stop at around 1200ft from the beginning of the runway 35. In order to resume the operation, the aircraft was removed from the site and kept behind the hanger for further inspection and investigation. The surface condition of the runway was found with full of pebbles, the trail for impact could not be found.

After the accident, approximately 171 litres of fuel was defueled and approximately one litre of oil from the engine oil sump was collected from the aircraft.

1.13 Medical and pathological Information:

The trainee pilot was not subjected to any post accident medical check-up as Flight Training school was unaware about the post flight medical check-up immediately after the accident.

1.14Fire:

There was no fire.

1.15 Survival aspects:

The accident was survivable.

1.16 Tests and research:

Not Applicable.

1.17 Organisational and Management information:

Chimes Aviation Academy is a subsidiary of Chimes Aviation Pvt. Ltd. with its registered office at New Delhi. Director s a head of Chimes Aviation Pvt. Ltd., the Accountable Manager and Chief operating officer oversees the functioning and operations of the Academy. Day to Day functioning of Chimes Aviation Academy at Dhana is managed by CFI. The Academy has a Hangar and associated buildings for maintenance of aircraft and conduct flying training. The flying club has CAR 145 approval for maintenance of their aircraft.

1.18 Additional Information:

Nil

1.19 Useful or effective investigation techniques

Nil.

2. Analysis:

2.1 Maintenance Aspect:

i. The aircraft was inspected in accordance with approved Daily Inspection procedure.
ii. As per the records, all the maintenance schedules were followed and complied with.
iii. The aircraft was released with valid C of A and C of R.
iv. For the second solo sortie, the aircraft was released with approx.178 liters of fuel and approx. 6.8 quarts of oil onboard.
v. As per the maintenance records, the condition and performance of aircraft, engine and system were satisfactory at the time of Daily Inspection. No snag was reported during the previous flights. No snag was observed during Daily Inspection and No snag was reported by the student pilot or instructor while carrying out pre-flight or while flying.

vi. After the accident Approximately 171 liters of fuel was defueled from the aircraft and approximately one litre of oil was collected from the engine oil sump.

Hence, it could be concluded that the maintenance aspect is not a contributory factor for this accident.

2.2 Operational Aspect:

1. The trainee pilot started flying training from 05.11.2011 on the aircraft Cessna 172R at Chimes Aviation Flight Academy, Dhana, Dist Sagar, Madhya Pradesh.
2. On 02.02.2012, the trainee pilot was released for first solo by FI and found satisfactory.
3. The trainee pilot after taken adequate rest reported for duty on 03.02.2012 around 08:45IST.
4. The trainee pilot undergone second solo check with AFI on 03.02.2012 and as his performance was found satisfactory; the student pilot was released for second solo.
5. During the second solo landing, AFI witnessed that the trainee pilot was well on approach and when the aircraft approached close to runway, the trainee pilot reduced the power and flared out higher than the normal. After flare out he floated for some distance, while floating, the aircraft was in high nose attitude with idle power. At that time the trainee pilot was about 1000 ft from threshold of Runway 35 and about 25-30 ft above the runway. AFI immediately advised on R/T to open full power, pitch down and execute a 'Go Around'.
6. Student performed the go around by the way of opened full power & pitch down as instructed by the AFI. However, the trainee pilot observed that the aircraft was not coming down and at the same time he heard stall warning horn and the aircraft stalled, as a result of which the aircraft left wing dropped & the aircraft hit the ground on the left shoulder of the runway at about 1200ft from the beginning of the runway 35.
7. The AFI, instructed the trainee pilot to perform Go around maneuver without analyzing the cockpit environment was hypothetical.
8. The trainee pilot simply followed instructions provided by the AFI who is outside the cockpit without analyzing the cockpit configuration.
9. The trainee pilot was not able to recognize the stall condition and correct the pitch attitude and power configuration.
10. The trainee pilot performed Full power, Nose down and Go Around instructions provided by the instructor instead to recover from stall condition by lowering the nose and then applying full power.
11. From the FTPR records, it has been observed that the student required additional training for the stall maneuver recovery.
12. There was no post flying de-briefing record maintained by the training academy.
13. Prior to the accident sortie, the trainee pilot carried out one safe landing and no snag was encountered by him.

From the above it has been observed that when the aircraft was around 25-30 feet above ground, the aircraft was floating in the ground effect and the power was reduced to idle. Speed was already decreasing and the aircraft was in nose high attitude. With the aircraft was floating with high

attitude, the instructor instructed on the hand held radio from ATC tower to go around by applying full power and nose down, trainee immediately added full power which in turn, further increased the nose attitude which has resulted the aircraft to stall. However, to break the stall, nose down and then apply sufficient power procedure to be performed. The opposite manoeuvre resulted into power off stall situation which finally lead to the crash landing of the aircraft.

2.3. Weather condition

1. The wind condition was predicted by the help of windsock as the instrument meant for this was not in serviceable condition. The prevailed weather condition was predicted as Visibility of 5 km and wind from 350/05 knots prior to the flight by the use of windsock. This indicates that the weather is not a contributory factor to this accident.

2.4 Other Aspects:-

1. The runway 35-17 was found with full of pebbles. However, the aircraft tyres were found intact and were holding pressure. Hence, runway condition was not a contributory factor. Though the Govt. of Madhya Pradesh is accountable for maintenance of the Airstrip, there is no check and balance be ng kept in place by the training school to ensure the Airstrip fitness for regular day to day operations and the accountable authority was not informed about the discrepancy to carry out the adequate maintenance work.
2. The AFI is a CPL holder with PIC endorsement on C-152, C-172 R and BE-76 and his AFIR rating states C-152 airplane on which instructions can be imparted.
3. The C-152 is an analog instrument aircraft which comes under 1500 kilogram weight category. The C-172R is also under 1500 kilogram weight and is comparatively more advanced glass cockpit aircraft equipped with Garmin 1000 digital instrument panels.
4. AFI is performing the privileges of Assistant flight instructor rating on C – 172R as per the Aircraft Rules 1937, Privileges of AFIR.
5. As per the regulations, AFI can release second solo to the trainee pilot under the supervision of FI/CFI. On that day, CFI was available at station. During time of accident, CFI was flying with the other student in local circuit and landing exercise.

3. CONCLUSION:-

3.1 Findings:

1. The aircraft had valid C of A & C of R .
2. The aircraft had all the valid documents required for operation of the aircraft.
3. Aircraft was maintained in fully airworthy condition and no maintenance work was pending before release for training purpose.
4. After completing the daily inspection and being completely satisfied, the AME had released the aircraft on 03.02.2012 for training flights with 200 litres of fuel and 6.8 quantity of oil was on board.
5. MET information was obtained from IMD website for the city of Bhopal and AFI predicted local weather by using wind sock and provided the weather information to the student
6. The trainee pilot was released for 2nd solo after assessing his performance by AFI.

7. As per the regulations, AFI can release solo to the trainee pilot under the supervision of FI/ CFI. During the time of Accident, CFI was carrying out local flying with other trainee pilot within the vicinity of the airstrip and AFI was in ATC control tower to handle RT communication with the trainee pilot.
8. During the second landing, the trainee pilot was well on approach. When the aircraft was around 25-30 feet, the aircraft was floating in the ground effect with nose high altitude and the power was reduced to idle. As speed was already decreasing due to nose high attitude and no power in aircraft, resulted stall warning.
9. As the aircraft was floating the instructor instructed "Full Power, Nose Down, and Go Around."As the aircraft had no power and nose high attitude, the trainee pilot added power as per instructor instructions without analyzing the cockpit environment. Due to addition of power with nose high attitude, the nose of aircraft pitched up and stall warning was triggered. Further the aircraft undergone in power off stall.
10. The procedure followed to break the stall is "Nose Down-Full Power" whereas, the Assistant Flight Instructor given the wrong instructions of "Full Power-Nose Down-Go Around" which was followed by the student which lead to stalling of the aircraft and leading to left wing dropping and the aircraft to crash on the left shoulder of the runway at about 1200ft from the beginning of the runway 35.
11. Flight training school was not aware about the post flight medical checkup of the trainee pilot immediately after the accident. Hence no post flight medical checkup of the trainee pilot was carried out.
12. Aircraft substantially damaged.
13. After the accident the remaining fuel & oil was removed from the aircraft.
14. During the inspection after the accident, the runway was found to be full of pebbles. This depicts that the training school had not informed the Accountable authority responsible for maintaining the serviceability of Airstrip and ensuring the fitness of runway for regular day to day operation.
15. There is no de-briefing record maintained by the Flight school to assess the trainee pilot's improvement in performance in handling of aircraft.

3.2 Probable Cause:

During the time of landing, the aircraft's nose attitude was high and the wrong go around procedure adopted by the trainee pilot as directed by the AFI, resulted into the aircraft stall thereby causing the accident.

4. SAFETY RECOMMENDATIONS:

1. Necessary corrective training may be imparted to the trainee pilot.
2. Necessary corrective action to be taken against AFI for instructing wrong procedure to the trainee pilot without properly assessing the situation.

3. The training institute to be instructed to carry out necessary runway surface maintenance/ repair work and to ensure that the serviceable instruments/ equipments are made available at the ATC tower. Necessary arrangement to be made to provide Accurate MET information to the students.
4 Any other action as deemed fit by the competent authority.

30.05.2013
MUMBAI – 29.

(R.RAJENDRAN)
INSPECTOR OF ACCIDENT
of VT-CAJ

ABBREVIATIONS

AFI	Assistant Flight Instructor
Aircraft Hours	Total Hours flown by Aircraft
Aircraft Registration	Registration of aircraft
Aircraft Station	Base of aircraft
Airstrip	Runway used for landing of aircraft
ATCO	Air Traffic Controller Officer
Authorized AME	Licensed AME of the aircraft.
C of A	Certificate of Airworthiness
C of R	Certificate of Registration
CB's	Circuit Breakers
CCTS	Circuits.
CFI	Chief Flight Instructor
Circuit	Pattern followed for landing
Competent authority	DGCA/Civil Aviation Department
CPL	Commercial Pilot License
Crosswind	Winds across the runway
CVR or FDR	Cockpit Voice Recorder or Flight Data Recorder
Daily inspection	Inspection of aircraft carried out on daily basis
Deformation	Change of structure due to accident
Dual	Student pilot along with Instructor
ELT	Emergency Locator Transmitter
Engine Hours	Hours flown by the aircraft with respective engine
ETA	Estimated time of Arrival
Flying Hours	Hours flown by individual pilot.