

FINAL INVESTIGATION REPORT ON NOSE WHEEL SHEAR OFF INCIDENT TO M/S SARASWATI AVIATION ACADEMY, ALARUS CH2000 AIRCRAFT VT-RJT, WHILE LANDING AT AMHAT AIRFIELD, SULTANPUR ON 23.08.2014

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ABBREVIATIONS USED IN THE REPORT

AFI : Assistant Flight Instructor

AME : Aircraft Maintenance Engineer

ATC : Air Traffic Control

AUW : All-up Weight

AVGAS : Aviation Gasoline

BHP : Brake Horse Power

CAR : Civil Aviation Requirements

CASA : Civil Aviation Safety Alert

CB : Cumulonimbus Clouds

CPL : Commercial Pilot License

CVR : Cockpit Voice Recorder

DGCA : Directorate General of Civil Aviation

DFDR : Digital Flight Data Recorder

DI : Daily Inspection

ELT : Emergency Locator Transmitter

FAA : Federal Aviation Administration

FDR : Flight Data Recorder

HZ : Haze

ICAO : International Civil Aviation Organisation

ILS : Instrument Landing System

IMD : Indian Meteorological Department

IST : Indian Standard Time

NLG : Nose Landing Gear

NDB : Non Directional Beacon

PIC: Pilot-in-Command

POH : Pilot's Operating Handbook

QNH : Pressure Setting to Indicate Elevation

ROD : Rate of Descent

RWY : Runway

SAA : Saraswati Aviation Academy

SB : Service Bulletin

SKC : Sky Clear

SPL : Student Pilot License

TEMPO : Temporary

TC : Transport Canada

TSN : Time Since New

TSO : Time Since Overhaul

U.P. : Uttar Pradesh

UTC : Universal Time Coordinated

VHF : Very High Frequency

VOR : VHF Omni Range

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1. Aircraft Type : ALARUS CH2000

Nationality : Indian

Registration : VT-RJT

2. Owner : Saraswathi Aviation Academy, Sultanpur, U.P.

3. Operator : Saraswathi Aviation Academy, Sultanpur, U.P.

4. Pilot in Command : CPL Holder

Extent of Injury : Nil

5. Place of Incident : RWY 29, Amhat Airfield, Sultanpur, U.P.

6. Geographical Location of Site : N 26⁰ 14²47.47" E82⁰ 02'43.67"

7. Last point of Departure : Amhat Airfield

8. Intended place of landing : Amhat Airfield

9. Type of operation : Training sortie

10. Date and time of Incident : 23/08/2014, 12:47 Hrs

11. Passengers/Crew on Board : 02 Crew only, Passenger- NIL

Extent of Injury : Nil

12. Phase of Operation : Landing

13. Type of Incident : Nose wheel sheared off while landing

(All the timing in the report is in IST)

SYNOPSIS

On 23/08/2014, an ALARUS CH2000 aircraft VT-RJT of M/s Saraswati Aviation Academy, Sultanpur, while operating training flights at Amhat airfield, Sultanpur (Uttar Pradesh), met with a serious incident of nose wheel detachment from the aircraft during landing.

The aircraft was released by Aircraft Maintenance Engineer (AME) after carrying out Daily/Pre-flight inspection, to operate training flights in the vicinity of Amhat airfield, Sultanpur. Flight Instructor In-charge was present at the time of release of aircraft. The aircraft started its first flying at 0815 hrs and made 14 landings including 08 solo landings which were uneventful.

The involved crew started their flying at 1215 hrs. with the same aircraft. An Assistant Flight Instructor (AFI) was in-command alongwith a trainee pilot on board the aircraft. They made two touch and go sorties which were uneventful. In the third sortie while making full stop landing on RWY29, aircraft touched on its main wheels at 1247 hrs. When the nose wheel of the aircraft came in contact with the runway it got detached from the aircraft. After detachment of nose wheel, engine propeller started striking the runway. Due to several strikes, both the propeller blades bent and got damaged. After the propeller blades bent, the aircraft started dragging on the nose landing gear strut and finally stopped to the left of the runway center line. Nose wheel assembly was found on the right side of the runway.

Nose wheel shock strut damaged due to continuous dragging on the runway. Both propeller blades bent rearwards. No other damage to the aircraft structure is observed. Both the instructor pilot and trainee pilot came out of the aircraft without receiving any injury. No sign of fuel or oil leakage/seepage observed at the site.

The serious incident was notified by the operator and the investigation was ordered by DGCA under Rule 13(1) of the Aircraft (Investigation of Accidents and Incidents) Rules, 2012, by appointing the Inquiry Officer.

1. FACTUAL INFORMATION

1.1. HISTORY OF THE FLIGHT:

On 22/08/2014, a day before the serious incident, an Alarus aircraft VT-RJT of M/s Saraswati Aviation Academy, Sultanpur had flown for 06:45 Hrs. and made 25 uneventful landings. Pilot reported NIL snag after last flying of the day. No snag/defect was observed by the AME after completion of the last flying of the day.

On 23/08/2014, on the day of serious incident, pre-flight inspection of the aircraft was carried out by AME as per the approved daily inspection schedule and no defect was reported by him during the inspection. The aircraft was released for flying.

The aircraft started its first flight at 0815 hrs and made 14 landings including 08 solo landings till 1145 hrs. with different set of crew. All the landings were uneventful and neither of the pilots reported any abnormality in the operation of the aircraft.

The involved Assistant Flight Instructor and trainee pilot started local training flying at 1215 hrs with the same aircraft and made two touch and go sorties which were uneventful. In the third sortie while making full stop landing, the aircraft touched on main wheels followed by nose wheel contact on RWY 29 at 1247 hrs. The nose wheel got detached from the aircraft after contacting the runway and propeller started striking the runway. Due to several strikes, both the propeller blades bent rearwards. The instructor pilot immediately cut off the engine and the fuel selector valve was moved to OFF position. The aircraft continued sliding on the nose landing gear strut and travelled about 121 meters from the touchdown point of nose landing gear and finally stopped at 246 meters from the runway threshold point and 4.8 meter to the left of the runway center line. Instructor and Trainee Pilot immediately evacuated the aircraft safely. ATC tower raised the siren. Flight Instructor In-charge, Chief Engineer and other safety services rushed to the site. Nose wheel assembly was found about 50 meters away from the aircraft on the right side of the runway in the grassy area.

No other damage to the aircraft structure was observed. No sign of fuel or oil leakage/seepage was observed at the site. There was no fire. Incident occurred during day time at 1247 hrs and the weather reported was fine.

1.2. INJURIES TO PERSON

INJURIES	CREW	PASSENGERS	OTHERS
FATAL	Nil	Nil	Nil
SERIOUS	Nil	Nil	Nil
MINOR	Nil	Nil	Nil
NONE	2	Nil	

1.3. DAMAGE TO AIRCRAFT

Aircraft received substantial damage.

1.4. OTHER DAMAGE

Runway surface was damaged due to several strikes of the propeller blades and dragging of nose wheel shock strut on the runway.



1.5 PERSONNEL INFORMATION:

1.5.1. Pilot-in-Command

In the incident flight, an Assistant Flight Instructor was in command of the aircraft. She completed her training for the issue of CPL at International Aviation Academy, New Zealand and her first CPL was issued on 21.05.2009. She did conversion training at Saraswati Aviation Academy, Sultanpur and got Indian CPL on 11.08.2011. She underwent AFI Rating training in the same academy and got her rating as Assistant Flying Instructor on 02.04.2014.

Age : 27 Years

License type : CPL

Date of Initial Issue : 11/08/2011 CPL Valid up to : 10/08/2016

Aircraft Ratings as PIC : Cessna 172, Alarus CH2000

Date of Endorsement : 31/05/2013 for Alarus CH2000

 Medical Valid up to
 : 12/09/2014

 FRTO valid till
 : 10/08/2016

 Date of last IR check
 : 19/02/2014

 Progress Check
 : 30/05/2014

Flying Details:

Total Flying Experience : 516:11 Hrs

Total Flying as Instructor : 37:52 Hrs

As PIC : 315:33 Hrs

Total Experience as PIC on type : 164:37 Hrs
Flying during Last One year : 193:32 Hrs
Flying during last 6 months : 45:07 Hrs
Flying during Last 30 days : 19:22 Hrs
Flying during last 7 days : 04:42 Hrs.

During last 24 hours : 00:32 hrs

She had flown for 02 hrs on previous day till 11:00 am. She had taken proper rest before commencement of her first flight of the day on the day of occurrence. She was not involved in any Accident or Serious Incidents previously.

1.5.2. Trainee Pilot:

Type of Licence : SPL

 Valid till
 : 05/03/2019

 Date of Birth
 : 24/06/1992

 Medical Validity
 : 15/02/2016

 FRTOL (R) validity
 : 05/08/2024

 Total Flying Experience
 : 09:00 Hrs

Trainee Pilot had flown only 1 hour on previous day from 08:00 a.m. to 09:00 a.m. and had undergone proper rest before the commencement of flight involved in the incident.

1.5.3. Aircraft Maintenance Engineer

Aircraft Maintenance Engineer was working as a licensed engineer for last 13 years. Since last 04 years, he had obtained open rating in Category 'A' for maintenance of all single engine aeroplanes of all metal construction & not exceeding AUW of 3000Kg, and in Category 'C' for maintenance of all normally aspirated air-cooled piston engines not exceeding 300 B.H.P. His license was valid till 18.04.2015.

1.6 AIRCRAFT INFORMATION:

The Alarus CH2000 is a two-seater, fixed tricycle landing gear used primarily for flight training. It is manufactured by Aircraft Manufacturing and Design (AMD) Company, Eastman, Georgia. It is a low-wing aircraft, with one door located above each wing. It is fitted with one 4-cylinders piston engine in front of the aircraft, and a two bladed propeller is rotated by the engine to produce the thrust. Type of fuel required to run the engine to produce power is AVGAS 100LL.

AIRCRAFT:		
Manufacturer	Zen Air Ltd., Canada	
Туре	ALARUS CH2000	
Constructor's S.No.	20-1053	
Year of Manufacturer	2005	
Certificate of Airworthiness	6009, Issued on 24.06.2010,	
Airworthiness Review	No.: CAW/LKO/ARC/A-7/RJT,	
Certificate	Date of Last renewal 27/09/2013	
Continuate	Valid till 27.09.2014	
Category	Normal	
Sub Division	Passenger	
Certificate of Registration	No. 3900	
no. and validity	Validity: N/A	
2	Saraswati Aviation Academy, Amhat Airfield,	
Owner	National Highway-56, Sultanpur(U.P.)-228001	
Minimum Crew Required	01	
Maximum All Up Weight	768 Kg	
Authorised	7 00 Ng	
Last Major Inspection	100 Hrs/1 year at aircraft TSN 2135:10 Hrs on	
Last major mapositon	07.07.2014	
	Daily/Preflight inspection schedule at aircraft	
Last Inspection	TSN 2178:40 before commencement of day	
	flying on the day of occurrence i.e. 23.08.2014	
Air frame Hrs. Since New	2182:12 Hrs as on 23.08.2014	
Air frame Hrs. Since last	406:27 Hrs. since Last C of A	
C of A	2.5 1.1.5. 5.1.5. 2.5. 5 5.7.1	

ENGINE	
Manufacturer	Lycoming, USA.
Туре	Lycoming O-235 N2C, 4-Cylinders Opposed Piston Engine
Serial No.	L-25728-15
Hours Done Since New	2279:20 TSN
TSO	N/A
Last Major Inspection	100 Hrs/1 year at aircraft TSN 2135:10 Hrs on
Carried out	07.07.2014
Last Inspection Carried Out	Daily/Preflight inspection schedule at aircraft TSN 2178:40 before commencement of day flying on day of occurrence i.e. 23.08.2014
Average Fuel Consumption	18.10 lt./hr
Average Oil Consumption	0.06 lt./hr.

Propeller		
Manufacturer	SENSENICH	
Sr. No.	K3175	
Last Overhaul	20/01/2010	
Hours since Overhaul	811:10 TSO	

- At the time of incident, only Saraswati Aviation Academy was operating Alarus CH2000 aircraft in India.
- The involved aircraft was more than 09 years old. No known history of occurrence was available for the aircraft before its import to India.

- After issue of Indian Certificate of Airworthiness and before the subject occurrence, no significant occurrences were observed for the particular aircraft.
- The aircraft was in fully airworthy condition and was under regular flying.
- There was no reported/observed indication in the flying performance of the aircraft before or during subject flight.
- No MEL was invoked on the aircraft and no snag was pending at the time of release of aircraft for flying.
- Aircraft was flying as per the limitations given in POH. Performance of aircraft
 was quite satisfactory as per the data given in POH. There was no reported
 deterioration in the performance by the pilots/instructors.

1.7 METEOROLOGICAL INFORMATION:

Anemometer is not available at Amhat Airfield, Sultanpur,. Windsock is used for predicting wind direction and speed.

At 1030 IST (0500 UTC), visibility reported by ATC was 5 km and wind direction/speed was 280/05 knots with no significant change.

At 1230 IST (0700 UTC) wind was reported 290/07 knots with no significant change and no change in visibility.

MET information for Lucknow & Varanasi airports was also obtained from IMD website. Details are given below:

Lucknow:

230600Z 27008KT 5000 HZ FEW 100 37/26 Q1005 NOSIG 230700Z 29009KT 5000 HZ FEW 100 37/25 Q1004 NOSIG 230730Z 29006KT 5000 HZ FEW 100 39/26 Q1004 NOSIG

Varanasi:

230530Z 29006KT 5000 HZ FEW 025 33/27 Q1006

230630Z 28005KT 6000 HZ SCT200 34/26 Q1005

230730Z 28004KT 6000 HZ SCT030 SCT200 35/26 Q1005

Aircraft landed on RWY29 at 1247 Hrs. and weather was not contributed factor to the incident.

1.8 AIDS TO NAVIGATION:

No Navigational aid is available at Amhat Airfield, Sultanpur.

1.9 COMMUNICATIONS:

ATC is equipped with licensed VHF radio station.

1.10 AERODROME INFORMATION:

Amhat Airfied, Sutanpur (U.P.) is owned by Govt. of Uttar Pradesh. M/s Saraswati Aviation academy Pvt. Ltd. is using the airfield for flying training. Minor maintenance and manning of Aerodrome is provided by the Academy. However, major repair, maintenance or re-carpeting is only done by Govt. of Uttar Pradesh.

No Navigational (NAV) Aid or Instrument Landing Aid (VOR, ILS, NDB etc) is available at the Aerodrome. Night flying facility is available at this aerodrome and goose neck flares are used for runway lighting. No Electrical Runway lighting system is available. Aerodrome beacon is available. Landing T and wind sock is electrically lighted for night flying. Aerodrome has only one runway for take-off and landings.

1.11 FLIGHT RECORDERS:

The Alarus CH2000 is a light aircraft and it is not fitted with any type of flight recorder.

1.12 WRECKAGE AND IMPACT INFORMATION:



The aircraft landed on RWY 29. From the impact marks on runway it was observed that the aircraft landed on main wheels and nose wheel of the aircraft came in contact with the runway at 125 meters from the runway 29 threshold point and got detached from the aircraft after contacting the runway. After detachment of nose wheel, ground clearance of the propeller blade tip reduced and propeller started striking the runway. Ten cuts by propeller tips were clearly visible on the runway surface. Due to several strikes, both the propeller blades bent rearwards. Thereafter, the aircraft started dragging on the nose landing gear strut and it travelled about 121 meters from the touchdown point of nose landing gear. The

aircraft finally stopped at 246 meters from the runway threshold point and 4.8 meter to the left of the runway center line. Nose wheel assembly was found about 50 meters away from the aircraft on the right side of the runway.



Nose wheel shock strut damaged due to continuous dragging on the runway. No other damage to the aircraft structure was observed. Both the instructor pilot and trainee pilot were safe. No sign of fuel or oil leakage/seepage was observed at the site.

Cockpit Assessment

- 1. Throttle position was in Idle.
- 2. Mixture was in cut-off position.
- 3. Flaps were in 50% down position.
- 4. Elevator trim was in slightly nose up position.

- 5. Fuel shut off valve was in OFF position.
- 6. ELT was in armed position.



1.13 MEDICAL AND PATHOLOGICAL INFORMATION:

NIL

1.14 FIRE:

There were no sign of pre incident/ post incident fire.

1.15 SURVIVAL ASPECTS:

On hearing the siren from ATC, all the safety services were rushed to the site. Both the crew on board the aircraft were safe and came out of the aircraft by themselves. No injury were reported to any person on-board the aircraft or on ground. Nose wheel was found 50 metre away from the aircraft on the right side of the runway.

1.16 TESTS AND RESEARCH:

Failed part of Nose Landing Gear of aircraft was sent to Aircraft Engineering Directorate, Technical Centre, DGCA for detailed examination. During detailed examination, it was observed that a small vent hole is provided at the lower side of

strut pipe between strut plate and strut pipe in the rearward direction. A portion of the welded area was observed failed on both side of the vent hole. Entire area under fracture was found fully corroded, except small fresh portion. Corroded surface indicates that there was a pre-developed crack due to corrosion. On the fresh surface, fracture was slant and fibrous which indicates failure under overload. Fresh fractured surface was observed less compare to old fractured surface. Due to less portion of remaining surface, the strut tube with nose wheel assembly could not sustain the load and failed.

1.17 ORGANIZATIONAL AND MANAGEMENT INFORMATION:

Saraswati Aviation Academy (SAA) is a flying training institute owned by Saraswati Group. It was established in the year 2008 at Amhat Airfield, Sultanpur. The Airfield is owned by Govt. of Uttar Pradesh and has been leased out to SAA for pilots training.

The academy has 05 aircraft in its fleet and also has its own simulator training. Maintenance of the aircraft is carried out by academy's own engineering set-up approved by DGCA.

1.18 ADDITIONAL INFORMATION:

There was a similar type of incident reported by Federal Aviation Administration (FAA), USA to Transport Canada as quoted in CASA document no 2011-04. It is also reflected in the CASA document that the operator reported cracks developing in the welded portion of another Alarus CH2000 aircraft's Nose Landing Gear (NLG).

The design approval holder M/s Zen Air Ltd. investigated the issues and published a Service Bulletin (SB) in February 2011 as a preventive measure. As per the SB, one time visual inspection of the welded area of NLG was recommended thereafter to repeat the visual inspection in annual /100 hrs scheduled inspection and after every hard landing as per the Service Manual. If visual inspection indicates suspicious crack, a Fluorescent Liquid Penetrant Inspection can be performed to confirm the crack.

In view of the Service Bulletin issued by the manufacturer, the Transport Canada had issued a Civil Aviation Safety Alert (CASA) 2011-04 dated 02.09.2011, to ensure the visual inspection of the welded portion of NLG in every 100 hrs scheduled inspection and also after every hard landing.

In compliance with CASA 2011-04, M/s Saraswati Aviation Academy had included the visual inspection in their 100 Hrs schedule as well as in the Daily Inspection Schedule and same was approved by DGCA.

As per the Airframe Log Book, last 100 hrs inspection was carried out on 07.07.2014 which includes the visual inspection of the welded part. However, the crack was not recognised in the visual inspection. Aircraft operated for 47:02 hrs. after the last 100 hrs inspection till the incident.

1.19 USEFUL OR EFFECTIVE INVESTIGATION TECHNIQUES.

Nil.

2. ANALYSIS:

Factual information was analysed and analysis is given below:

2.1 Aircraft:

2.1.1 Airworthiness:

The aircraft was in fully airworthy condition and was under regular flying. No known history of occurrence was available for the particular aircraft before its import to India. After issue of Indian Certificate of Airworthiness and before the subject occurrence, no significant occurrences were observed for the aircraft. Last 100 hrs inspection was carried out on 07.07.2014. Visual inspection of the welded portion of strut plate of the nose landing gear was carried out by a qualified AME in compliance with CASA 2011-04 dated 02.09.2011 issued by Transport Canada. Visual inspection was also carried out during pre-flight inspection as per the Daily Inspection Schedule. No crack was detected during visual inspection.

A day before the occurrence, the aircraft had flown for 06:45 Hrs. and made 25 uneventful landings. Pilot reported NIL snag after last flying of the day. No snag/deficiency was observed by AME during post flight inspection.

On the day of occurrence, no snag/deficiency was observed by AME while carrying out approved Daily/Pre-flight inspection before the commencement of first flight of the day. No MEL or snag was pending at the time of release of aircraft for flying. The aircraft had flown for 03:32 Hrs. and made 16 uneventful landings. The nose wheel of the aircraft detached from the aircraft while making the 17th landing of the day.

2.1.2 Operation:

There was no reported/observed indication in the flying performance of the aircraft before or during subject flight. Aircraft was flying as per the limitations given in POH. Performance of aircraft was quite satisfactory as per the data given in POH.

2.2 Examination of the Failed Part:

During detailed examination of the welded portion of nose wheel strut pipe and strut plate, a pre-developed crack was observed on both side of the vent hole. Fresh fractured surface was observed less compare to pre-fractured surface. Due to less portion of remaining welded surface, the nose wheel assembly could not sustain the load and detached from the strut tube along with the strut plate.

The incidents of failure of welded portion between the strut plate and strut pipe were also reported earlier by FAA to Transport Canada as quoted in CASA document no 2011-04 dated 02.09.2011 issued by Transport Canada.

2.3 Maintenance Personnel:

Aircraft Maintenance Engineer (AME) had sufficient maintenance experience. He was working as a licensed engineer for last 13 years. 04 years back, he had obtained open rating in Category 'A' for maintenance of all single engine

aeroplanes of all metal construction & not exceeding AUW of 3000 Kg, and in Category 'C' for maintenance of all normally aspirated air-cooled piston engines not exceeding 300 B.H.P. His license was valid at the time of incident.

2.4 Flight Instructor/ Pilot in Command:

An Assistant Flight Instructor was on command at the time of occurrence. She has no previous history of her involvement in any accident/serious incident. At the time of occurrence, she had valid Commercial Pilot License (CPL) on Cessna 152 and ALARUS CH2000 aircraft.

2.5 Weather:

Weather was reported normal at Amhat Airfield, Sultanpur at the time of incident. As per ATC weather report, wind direction was 290° and wind speed was 07 Kts. Visibility reported was more than 5 km.

3. CONCLUSIONS:

3.1. FINDINGS:

- 1. The aircraft had valid C of A and was in fully airworthy condition.
- The aircraft was under regular flying.
- 3. No MEL or snag was pending on the aircraft.
- 4. There was no reported indication in the flying performance of the aircraft before or during subject flight.
- Similar type of incident has been reported by FAA occurred to Alarus CH2000 aircraft.
- 6. Manufacturer issued a Service Bulletin to carry out the visual inspection of the welded portion in every 100 hrs scheduled inspection.
- 7. Transport Canada had issued a Civil Aviation Safety Alert 2011-04 dated 02.09.2011, in view of the Service Bulletin issued by the manufacturer and

- advised to carry out the visual inspection of the welded portion in every 100 hrs scheduled inspection.
- 8. Last 100 hrs scheduled inspection of the aircraft was carried out on 07.07.2014 and welded part of the Nose Landing Gear was visually inspected.
- 9. A day before the occurrence, the aircraft flown for 06:45 Hrs. and made 25 uneventful landings.
- 10. Pilot reported NIL snag after last flying of the day.
- 11.On the day of occurrence, Daily/Pre-flight inspection was carried out by AME as per the approved schedule.
- 12. Visual inspection of the welded part was also carried out during daily inspection.
- 13. No crack was detected during the inspection and aircraft released for flying.
- 14. The aircraft had flown for 03:32 Hrs. and made 16 landings which were uneventful.
- 15. During the 17th landing of the day, the nose wheel of the aircraft detached from the aircraft.
- 16. During detailed examination of the Nose Landing Gear welded area, a predeveloped crack due to corrosion was observed on both side of the vent hole in the welded portion.
- 17. Fresh fractured surface was observed less compare to pre- fractured surface.

 Due to less portion of remaining surface, the strut tube with nose wheel assembly could not sustain the load and failed.
- 18. Finding No. 11 to 17 indicates that AME was unable to detect the pre-developed crack during visual inspection while carrying out pre-flight inspection which led to failure of nose landing gear just after 17 landings.
- 19. Weather was reported normal at Amhat Airfield, Sultanpur at the time of incident. Wind direction was 290° and wind speed was 07 Kts. Visibility reported was more than 5 km.

3.2 PROBABLE CAUSES:

A fully corroded pre-developed crack observed during investigation which was not

detected during visual inspection of the welded part and the structure could not

sustain the repeated impact load, which led to the incident.

Repetition of crack in the welded portion of the strut pipe and strut plate for the

same type of aircraft operating by different operators in different countries leads to a

structural weakness or improper welding technique.

4. SAFETY RECOMMENDATIONS:

1. Manufacturer may develop a more rigid structure or effective welding technique

to reduce or avoid repetition of development of crack in the welded portion

between nose wheel shock strut pipe and the strut plate.

2. Since the visual inspection is not effective, the matter may be taken up with the

manufacturer to prescribe an NDT inspection at regular interval to detect any

crack developed internally in the welded area.

(Rupinder Singh) Assistant Director Air Safety

Inquiry Officer (VT-RJT)

Place: New Delhi

22.02.2017

Dated: