

Trenton, Ont, 22 Jul 52.

Commanding Officer,
RCAF Station,
Trenton, Ontario.

Mustang Aircraft
Oxygen System - Test Procedure

1 Reference is made to our letter of even file dated
15 Jul 52.

2 A recent fatal Mustang accident indicates that the
pilot was not aware of the procedure for testing the serviceability
of the Bendix oxygen system in the Mustang when the blinker indicator
had been removed. To quote special inspection EO 20-115CB-5/1
para 6(a) and (b), the correct testing procedure is as follows:

- "(a) Observe the diaphragm knob on the face
of the regulator for fluctuation under
operation.
- (b) In order to determine whether oxygen is
flowing depress the diaphragm knob with
the finger and check to see that pressure
builds up in the mask."

3 This testing procedure is to be brought to the
attention of all pilots flying the Mustang aircraft immediately.

(Sgd) E.R. Johnston, W/C
for AOC TC

File: 1038-80 (STSO)

R O Y A L C A N A D I A N A I R F O R C E

Trenton, Ont, 24 Jul 52

CO RCAF Stn Trenton Ont	CO RCAF Stn Claresholm Alta
CO RCAF Stn Camp Borden Ont	CO RCAF Stn MacDonald (Portage) Man
CO RCAF Stn Centralia Ont	CO RCAF Stn Moose Jaw Sask
CO RCAF Stn Summerside PEI	CO RCAF Stn Penhold Alta
CO RCAF Stn Winnipeg Man	CO RCAF Stn St. Johns PQ
CO RCAF Stn Saskatoon Sask	CO RCAF Stn Gimli Man
CO RCAF Stn London Ont	CO RCAF Stn Clinton Ont

Gp Cdr 14 Training Group Winnipeg Man

Modifications and Special Inspections
Information to Aircrew

1 Cases have occurred where fatal accidents have been attributed to the lack of knowledge by the pilot of modifications and special inspections that change the normal operation of the aircraft or the equipment in the aircraft. This condition is most unsatisfactory and immediate rectification is therefore necessary at unit level.

2 CTechOs are reminded that close co-ordination must be maintained with the CTrgO and that any information received that should be common knowledge to the aircrew, is to be brought to the attention of the CTrgO without delay. The CTrgO may then decide by what method the information will be passed to the aircrew.

(Sgd) H.W. Hows, G/C
for (RC Hawtrey) G/C
for AOC TC

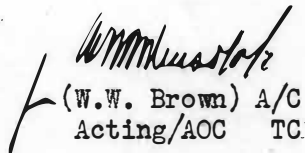
AOC's Remarks

1 I concur in the findings of this Board of Inquiry and wish to add the following statements regarding the recommendations.

- Recommendation 1 - Concur. A circular letter 1038-80(STSO) dated 24 Jul 52, copy attached, has been forwarded to all units informing them that if a modification or special inspection effects the characteristics of an aeroplane or airborne equipment, contents are to be brought to the attention of aircrew personnel.
- Recommendation 2 - Not considered necessary as EO 20-11 5CB-5/1 calls for the removal of the blinker. Letter 1038HQ-80 (SOAT) dated 22 Jul 52, copy attached, has informed Stn Trenton, the only unit concerned, of this fact.
- Recommendation 3 - Concur. 200 copies of EO 05-1-1 have been received by Station Trenton. This is the only unit in this Command at present who are using Mustang type aircraft.
- Recommendation 4 - I do not concur with recommendation 4. The policy in the Training Command for oxygen training is in conformance with 450-7(DAT) 8 Jan 52. It is felt that it will be more advantageous to the students to be taught oxygen systems as they require it. 450-7(DAT) 8 Jan 52 includes two hours of oxygen training at the selection centre of a general nature.

Recommendations 5, 6 and 7 are approved as commented on by the Commanding Officer, RCAF Station Trenton.

2 The cause of a fatal accident must remain obscure, however, it is believed in view of the evidence and facts presented in this Board of Inquiry that anoxia was a contributing factor. I wish to state that it is my belief supervisory error is a contributing factor to this accident in that aircrew were not notified of an important oxygen system modification and that F/O Newman had not received all the Aviation Medicine lectures and decompression tests as called for in the syllabus. This has been brought to the attention of Station Trenton.


(W.W. Brown) A/C
Acting/AOC TC

093-9555
8 Aug 52

Remarks of Commanding Officer:

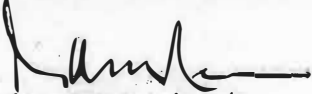
I concur in the Findings of the Board.

Concerning the Recommendations:

- Para 1 - EO's received by this Station which include instructions to aircrew will be included in Flying Orders.
- Para 2 - Where the oxygen blinker indicator has been disconnected from the line, as per EO 20 - 115CB-5/1, it has now been removed from the aircraft.
- Para 3 - This recommendation has been actioned at this Unit.
- Para 4 - I concur.
- Para 5 - I concur.
- Para 6 - Mustang exercise cards at this unit are being corrected and air speeds changed to knots.
- Para 7 - This recommendation has been actioned.

It is admitted that special Inspection T1407 d/19 May (Exhibit "E") states that A-13A Mask is to be used for this Inspection, and that LAC Weirmeir of Servicing Squadron said in his evidence (pp. 19,20) that he breathed through the tube, instead of using the mask. It is, however, considered unlikely that a Type A-12 regulator would have a seized valve, detectable by using a mask, yet not detectable by putting the tube in the mouth. However, tradesmen are now using the mask on all inspections.

Date 17 Feb 52


(GA McKenna) W/C
CO, RCAF Stn, Trenton

Trenton, Ont.

-5-

TERMS OF REFERENCE

For BOARD OF INQUIRY

Convened by CO RCAF Station, Trenton, Ont. DRO #116 dated 17 Jun 52

1. QR (Air) Art. 21.05
2. QR (Air) Art. 21.02 through Art. 21.12
3. QR (Air) Art. 21.55, 21.56 and 21.57
4. AFAO A6/3
5. "Guide for Officers Investigating Aircraft Accidents" -
TC File No. 093-1 (SASO/AIP).
6. QR (Air) Art. 21.41 and 21.42.

GBL

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JBL

1st WITNESS - F/O E Thornhill having been called and duly sworn STATES:

I am 2277 F/O E Thornhill, employed as Flying Control Officer at RCAF Station Trenton. I was on duty in the control tower from 1130 EST until 1612 EST. At 1330 EST I received a telephone call from WO Squirrel at Picton advising that he had received a report of an aircraft exploding in the Picton area. Since I was unable to understand the message in detail due to radio noise in the tower and to interruptions by aircraft radio communications I instructed Sgt. ^{JBK}Andst in operations to accept the message, note the detail, and advise me. Sgt. ^{JBK}Andst advised me it was near a certain beach of which I do not recall the name. I instructed him to pass the detail to Rescue Co-ordination Centre.

F/L LD Benninger, SFCO, came into the tower to assist. At 1345 EST, and during the next ten minutes four Texan aircraft were directed into the search area. At 1358 EST Search and Rescue (RCC) directed two aircraft to search Amherst Island. At 1420, Texan 962 reported an object in the water which might be a Mae West, and a fuel and oil slick on the water near Traverse Pt; map reference ^{JBK}43°57'N 76°52'W. At 1426 Mitchell 5205 was directed to the search area and shortly after all other aircraft were recalled except this Mitchell and Dakota 563. At 1441 ^{JBK}a marine craft was reported at the oil slick. Throughout this period the tower and the aircraft in the air continued to try to contact Mustang 9555 without success. Mitchell 5205 reported that the Ontario Provincial Police were at the scene and suggested they be contacted to question the occupants of the boat returning to Prince Edward Pt. At 1550 I received a message from Rescue Co-ordination Centre reporting that a Mr. McIntosh of Traverse Pt. picked up debris $\frac{1}{2}$ to $\frac{3}{4}$ of a mile out from Traverse Pt. His description was "looks like part of a wing". At 1600 I was advised that RCAF Marine Craft 178 was approaching the oil slick. I was then directed by RCC to have the information passed to Marine Craft 178 to pick up debris and information from the civilian boat crew. I was relieved at 1612.

QUESTIONED BY THE BOARD

Q 1. What clearance was given to Mustang 9555?

A He was cleared by R/T for D/VFR to 30000' for 1½ hours in the local area to distance of 50 miles.

Q 2. What was exact time of take-off?

A At 1250 EST.

E. Thornhill JBK

(E. Thornhill) F/O

JBK

2nd WITNESS - F/L LD Benninger having been called and duly sworn STATES:

I am 17506 F/L LD Benninger, RCAF Station Trenton, employed as Senior Flying Control Officer. I was advised by F/O Thornhill, the Flying Control Officer on duty, that there had been a report of an aircraft blowing up in the air near Picton. I immediately reported to the tower to assist F/O Thornhill. At that time we had no knowledge of the type of aircraft involved and we had no overdue aircraft on our local or daily traffic records. This phone call had been received by operations at 1330 EST and relayed to the Rescue Coordination Centre.

QUESTIONED BY THE BOARD

Q 3. Did you impound the log books?

A Yes, I impounded the L14, L17, of which I have a photostatic copy, and Airframe Log Book, Aero Engine Log Book and Propellor Log Book.

(Photostat of L14 received in evidence and marked as Exhibit "A" by the President and attached to the proceedings.
Photostat of L17 received in evidence and marked as Exhibit "B" by the President and attached to the proceedings).

Q 4. Did you impound the Pilot's Log Book?

A Only impound log books on definite information that a fatality or severe injury has occurred. This aircraft had not at this time been identified as Mustang 9555.

Q 5. What further action did you take?

A All flights were called to check F17s for overdue aircraft. The tender was advised to double check this traffic record for possible overdue aircraft. Homer was alerted at 1447 EST and had them call 9555 on A & C channels. The tower and GCA called on B. Tower also called on A. Various aircraft were requested to call 9555.

Q 6. How was it narrowed to 9555?

A All flights reported that they had no overdue aircraft and the tower was able to contact any they suggested might be overdue. The traffic was light and 9555 was the only aircraft that could not be contacted. At 1440 he was only 20 minutes overdue and at 1447 the tower was alerted. This aircraft was the one considered most possible if the aircraft was from Trenton. Reports of an aircraft blowing up and 9555 exercise coupled with contact of other aircraft led us to concentrate on this one. By 1444 all flights had reported all other aircraft accounted for.

Signed LD Benninger F/L
(LD Benninger) F/L

CERTIFIED TRUE COPY
(J.P. Lawrence) S/L
President

JSL

3rd WITNESS - Mr. D.H. Parkinson having been called and duly sworn STATES:

I am Mr. D.H. Parkinson of the Department of Transport, employed as a forecaster at RCAF Station Trenton. I was duty forecaster on the 10th of June and briefed F/O Newman for his flight. The 1230Z chart from which the pilot was briefed showed a deep low centred east of James Bay which was giving a strong north westerly flow of unstable polar continental air over the Trenton region.

FORECAST GIVEN IN BRIEFING - BRKN CU AND CU / BASE 4-5 THSD TOPS 8-10 THSD WITH OCNL CU / TOPS 15 THSD GIVING THE OCNLY RW-. VSBY UNL. SFC WINDS 20-30 AND GUSTY. FRLVL 11 THSD.

WINDS AND TMS

3-2930/17 6-2935/8 10-2940/1 15-2730/-5 20-2745/-13 25-2755/-27 30-2865/-43 35-2860/-48 TROPOPAUSE 36 THSD. THE JET STREAM REPORTED TO 110 KNOTS S OF LONDON AT 40 THSD.

ACTUAL WEATHER AT TRENTON - BRKN CU CU / BASE 4-5 THSD. SCTD SHWRS FROM 1700-1800Z. A TSTM WAS REPORTED TO N OF FIELD AT 1750Z. VSBY WAS 15 BUT LWRD TO 8-10 IN THE PCPN. THE SURFACE WINDS WERE 10-15 TILL 1852Z THEN SUDDENLY INCREASED TO 30 WITH GUSTS TO 40 AND REMAINED STRONG AND GUSTY FOR THE REMAINDER OF THE AFTERNOON. NO PCPN WAS REPORTED BETWEEN 1745 AND 2130Z.

ADDITIONAL UPPER AIR DATA

RELATIVE HUMIDITY AT 5000 - 40%
10000 - 50%
15000 - 20%
20000 - 30%
24000 - 50%

NOTE - FROM AVAILABLE TECHNICAL DATA, CONTRAILS WOULD NOT BE EXPECTED FROM 17000-24000 FT. OUR TEPHIGRAM DATA DOES NOT GO BEYOND 24 THSD. THE GRAPH USED TO DETERMINE THE PROBABILITY OF THE OCCURRENCE OF CONTRAILS DOES NOT EXTEND BELOW 17 THSD, BUT WITH THE ABOVE TEMPERATURES AND MOISTURE CONTENTS BELOW 17000 THSD, IT WOULD APPEAR THAT CONTRAILS WOULD NOT FORM EVEN BELOW THE 17000 LEVEL.

F/O Newman had agreed to telephone the forecast office on landing and report on the height of CU / that were in the area at the time of briefing.

D.H. Parkinson
Mr. D.H. Parkinson

JBL

4th WITNESS - Mr. Mel McIntosh having been called and duly sworn STATES:

I, Mr. Mel McIntosh, of South Bay, Ontario, was attracted by the sight of vapour trails from an aircraft at a very high altitude. The aircraft, when I saw it, had made one trail but I observed from the other trails that he had made several turns. While I was watching he started a circle to the left and very nearly completed it when he made a very sharp little turn to the left. At this time he started to come down. As I continued to watch the vapour trails I did not observe the aircraft for a short time. When I next saw it, it was still very high and was spinning or spiralling down at a very high speed and increasing. There was a terrific noise increasing to a high pitched whine as he came down. He continued like this until I estimate two thousand feet when the plane partially levelled off. The wing or part of it came off and then I heard a heavy explosion. At this time the aircraft engine made a much louder noise. The heaviest part of the aircraft disappeared behind the trees followed shortly by the wing. We immediately left in our boat for the scene of the crash. The first things we saw were small bits of wood and felt or rubber chunks saturated with gas, oil and water. We dropped a buoy to mark the position. We turned east of this buoy and saw the oil slick and picked up a yellow tank marked "oxygen". We also picked up several wooden wedges about 3" across the back running to a point and about 7" or 8" long. There were some black letters on some of these wedges. We also picked up bits of map. We dropped another buoy at this point. We looked for further pieces and then returned to shore and gave the material to the Ontario Provincial Police.

QUESTIONED BY THE BOARD

- Q 7. At approximately what time did the aircraft first appear?
A I couldn't say but we were out in the boat *JBL* around 3 o'clock.
- Q 8. Did the aircraft appear to be under control at any time during the dive?
A No, not at any time I saw him. The aircraft did as I said, appear to partially come out but I don't know if it was under control. It was only after he was partly down that it appeared from the speed and noise that I thought he was in trouble.
- Q 9. During the descent could you tell to which direction he was turning?
A I couldn't say for sure, but I knew he was turning from the sun flashing on the wings.
- Q 10. Was there much smoke from the explosion of the aircraft?
A No, it was hardly noticeable.

Sgd. Mel McIntosh
Mr. Mel McIntosh

CERTIFIED TRUE COPY
J. Lawrence
(JB Lawrence) S/L
President

JBL

- 11 - JPK

5th WITNESS - Mrs. Verdun Collier having been called and duly sworn STATES:

I, Mrs. Verdun Collier, of South Bay, heard this loud noise, a deafening roar, over my head. As I looked up I saw these little puffs of smoke and as I looked to see the aeroplane, it seemed to be falling apart. The body with one wing on it came down spinning around and hit the water. The other wing floated gradually towards the east where it landed in the water. There was another small black object came down and it landed about the same time as the wing. It seemed to come straight down closer to the aeroplane than the wing. The aeroplane was silver and had a single engine. After I saw the aeroplane crash I proceeded to tell the fishermen where the plane landed. I returned to the point where I could best see where the aircraft had crashed and watched the fishermen proceed to the point where the oil was on the water.

QUESTIONED BY THE BOARD

Q 11. Could you tell which direction the aircraft was turning?

A The aircraft appeared to be coming down turning tail first and I would say the left wing was off.

Q 12. Did it appear to fall tail-first?

A Yes, it was turning and that portion pointed down appeared to be the tail as it was longer from the wing back than to the nose.

Q 13. How did you recognize it as the tail?

A I saw only the one little tail piece sticking out as it went around.

Q 14. From what point did you observe the crash?

A The crash was about a mile from where I was.

Q 15. Did you observe the aircraft from explosion to hitting the water?

A Yes.

Q 16. Could you tell what time this was?

A It must have been about two-thirty.

Q 17. Did you see the aircraft in the area previously?

A No.

Q 18. Had you heard the aircraft?

A Yes, it sounded as though it had come from the S/W.

Q 19. Did you see the propeller turning?

A No.

Q 20. Did you hear any particularly loud noise from the engine after the explosion.

A No.

Q 21. What noise did you hear after the explosion?

A Nothing after the explosion, the loud sound of the dive had disappeared and it seemed to fall in silence.

Mrs Verdun Collier

JVK

Q 22. Did the aircraft appear to be falling straight down?

A Yes.

Q 23. Could you see the sun shining on the wing as it turned?

A Yes, that is what made me think it was silver. I could see the sun flashing on the wing as it turned.

Mrs. Verdun Collier

Mrs. Verdun Collier

JBL

6th WITNESS - Mr. J.K. McConnell ^{JK} having been called and duly sworn STATES:

I, Mr. James K. McConnell, employed as lighthouse keeper at False Duck Island (Swetman Is), first heard this aircraft and on seeing the vapour trails I got a pair of glasses to have a closer look. The vapour trails stopped and when they started again I picked up the aircraft easily in the glasses. The aircraft completed one wide turn at a high altitude. It then ran straight for a short distance and then dipped down in straight dive towards the ground. The vapour trails stopped just before the aircraft dipped down. The aircraft commenced to spiral to the right almost immediately. It continued in this manner until it was about half-way to the ground when I first observed a puff of smoke and the tail came away. The aircraft continued to spiral to the ground, turning at a faster rate, but descending a slower rate. I did not see the tail section again and I finally lost sight of the aircraft behind Timber Island. As the aircraft descended I could still hear it. Up to the time of the explosion the noise had developed to a high pitched whine. The noise of the explosion only reached me about the time the aircraft had crashed. After hearing the noise of the explosion, I heard nothing further. I immediately reported the matter to my father who contacted the DOT at Kingston by radio.

QUESTIONED BY THE BOARD

Q 24. At what time did the incident occur?

A At 1423, we first called DOT Kingston. The accident occurred about five minutes previously.

Q 25. Was it a single-engine aircraft?

A Yes.

Q 26. Could you recognize the type?

A No.

Q 27. What colour was it?

A Silver.

Q 28. How did you know it was the tail plane that came away?

A At the same time as the puff of smoke, I saw the back part come away and also several small pieces. The body was much shorter afterwards.

Q 29. Did you see the aircraft attempt to level out at all?

A No.

Q 30. How many vapour trails did you see?

A Several short ones drifting and he had just completed one turn at a very high speed before he dipped down.

Q 31. What colour was the puff of smoke?

A Brown. It was just a puff and then disappeared.

Certified true copy.
J. Lawrence
PRESIDENT

Q 32. Had you seen the aircraft doing any unusual manoeuvres other than turns before the dive?

A No. Only the last turn was very fast.

Q 33. What power are the glasses you used?

A About six.

Q 34. What ^{YBL}distance is Timber Island?

A ^{YBL}About a mile and a half.

Signed James K. McConnell

James K. McConnell

CERTIFIED TRUE COPY

J. B. Lawrence
(J.B. Lawrence) S/L
President

JOK

7th WITNESS - Mr. Earl Lobb having been called and duly sworn STATES:

I am Mr. Earl Lobb of RRL South Bay, Ontario. On the 10th of June, about two-thirty my attention was attracted by an aircraft making a loud noise. When I looked up I could see vapour trails. We watched the aircraft circling and making vapour trails for about ten or fifteen minutes. The only break would be when he disappeared behind high clouds to the west. We could just see him he was so high. He circled to the left about three times and then he started to come down. The sun flashed on him as he turned in and down. He kept corkscrewing to the left all the time. He was really going fast and the roar of the motor was something awful all the time. The noise kept getting louder as he came down. He continued down like this to about 2 or 3 thousand feet when the aircraft exploded with a small puff of smoke. One large part came off, I thought it was a wing, and all of it fell at a slower rate to the water. After it exploded, it fell a short distance and then disappeared behind the trees. After it went behind the trees we heard the sound of the explosion and later heard it hit the water.

QUESTIONED BY THE BOARD

Q 35. Did you see the aircraft making unusual manoeuvres other than turns?

A No.

Q 36. Did he appear to level off partially?

A Yes, it appeared to but he was still turning at the time, and it was then the aircraft exploded. It did look as though he was trying to get it out.

Q 37. In what direction was it pointed when it exploded?

A It was turning from east to north.

Q 38. Did you hear any unusual engine noises?

A Just a very loud roar. He was gaining speed all the time and the roar was getting louder all the time.

Q 39. Did the aircraft appear to be complete before the explosion?

A Yes, nothing appeared to be missing.

Q 40. How long do you estimate it took the aircraft to come down?

A Just seconds.

Q 41. As he turned when he was making vapour trails did he appear to be climbing or diving at all?

A It was too high to tell.

Earl Lobb

JBL

Q 42. While circling did he appear to be travelling very fast?

A Yes, very fast. I thought it was a jet. We had trouble at first associating the noise with this aircraft.

Q 43. How far do you estimate it is from your position to the crash?

A About a mile and a half.

Q 44. Which wing do you think came off?

A The right wing or the one on the outside of the turn.

Q 45. How long before you heard the explosion?

A About two or three seconds.

Earl Lobb

Mr. Earl Lobb

JR

8th WITNESS - 25598 Sgt. C.M Bowman having been called and duly sworn STATES:

I, 25598 Sgt. C.M. Bowman, am employed as I Tech in Repair Squadron RCAF Station Trenton. Mustang 9555 was in Maintenance for a considerable period of time and it was AOG'd to procure the type of oxygen regulator which could be used with the blinker. This was in accordance with EO 20-115CB-5/1. When the aircraft was made serviceable for all other purposes we switched the AOG to Mustang 9263 so that we could procure the oxygen regulator of the proper type. 9555 was returned to Servicing Squadron with a serviceable oxygen regulator installed but the blinker disconnected as per EO 20-115CB-5/1.

QUESTIONED BY THE BOARD

Q 46. Have you a copy of EO 20-115CB-5/1?

A Yes. I produced a copy of EO 20-115CB-5/1 and a copy of TC Signal TT1298 dated 14 September which preceded this EO.

(Copy of EO 20-115CB-5/1 is received in evidence and marked as Exhibit "C"; and TC signal TT1298 is received in evidence and marked as Exhibit "D").

Q 47. Does this mean that oxygen could be obtained by the pilot of 9555 but that there would be no visual indication to him by the blinker?

A That is right.

Q 48. In the L-14 Serviceability Log Serial No. 6, for Mustang 9555 is the EO number regarding this modification correct?

A Yes.

Q 49. In the L-14s Serial Number 7,8 and 9 for 9555 is the EO number EO-30-115CR-5/1 regarding this modification incorrect?

A Yes.

Q 50. Could this be an error in transcription?

A Yes it must be.

Q 51. Does EO-20-115CB-5/1 mean that with type A-12 and AN 6004-1 regulators that the oxygen system would be unserviceable with type A-13-A mask and A3 blinker type oxygen flow indicator connected?

A Yes, the system would be unserviceable with either of these combinations if the A3 blinker is connected.

Q 52. Was the A-3 blinker disconnected in 9555?

A Yes.

Q 53. What type of regulator was in 9555?

A Either the A-12 or An 6004-1 with the A-3 blinker. *C.M. Bowman Sgt*

Q 54. Do you know what company manufactured the regulator that was installed in 9555?

A No.

C.M. Bowman Sgt
(25598 C.M. Bowman) Sgt.

JBL

9th WITNESS - 32003 LAC A.V. Weirmeir having been called and duly sworn STATES:

I am 32003 LAC A.V. Weirmeir employed as Inst. Tech Group II in Servicing Squadron, RCAF Station, Trenton. At approximately 1800 hours on the 9th June 52 I was inspecting Mustang 9555 as part of my duties. As the last part of my Daily Inspection I checked the oxygen system for proper working and filled the system to 450 pounds.

QUESTIONED BY THE BOARD

Q 55. Is 450 lbs. maximum for the Mustang system?

A It is not maximum, they will stand more but that is what we fill them to. 450 lbs. is where the red limiting line is on the instrument.

Q 56. Is this gauge in cockpit?

A Yes.

Q 57. Is there any experience of leakage in these systems?

A Yes, but this particular aeroplane had not been leaking in the past few months to my knowledge.

Q 58. Do you recall what the bottle read when you recharged it?

A As close as I can say, 150 lbs.

Q 59. Are you acquainted with EO 20-115CB-5/1 (Exhibit "C") regarding the modification of oxygen systems on the Mustang?

A Yes. I carried out a check to determine if the blinker worked. Another tradesman completed the job by blanking off the blinker.

Q 60. Was this done on all the Mustangs you service?

A It was supposed to have been done on all of them although I was not on every aircraft myself.

Q 61. Do you wear a mask to check the flow?

A Not that night. But I did a special inspection on that aircraft about a week ago.

Q 62. Did you wear an A-13A mask for this inspection.

A Yes, I did.

Q 63. What was the special inspection?

A To determine if the oxygen blinker would work.

Q 64. Did it work?

A No, the blinker didn't work on that aircraft.

Q 65. Is this special inspection part of the D.I.?

A I don't know.

A.V. Weirmeir

JBL

Q65 Can you produce a copy of this inspection you speak of.

A65 Yes. This signal T 1407 dated 19 May on the notice board.

(Photostatic copy of TC message T 1407 dated 19 May is received in evidence and marked Exhibit "E" by the president and attached to the Proceedings)

Q67 Are you acquainted with this inspection.

A67 Yes, I am.

Q68 Do you always use the mask

A68 No. I breath through the tube, I misunderstood the signal.

Q69 Do you do this every night

A69 Yes

Q70 Do orders require a mask

A70 I dont know

Q71 Do you do many DI's on Mustang aircraft

A Two every night (one week out of three) on the two Mustang aircraft in # 6 Hangar

Q72 What percentage of your time is spent on oxygen systems

A Very little

Q73 Have you had lectures recently on oxygen

A Yes, In the past six months during trade advancement

Q74 What valve is liable to stick in the ARO regulator

A The dilutor control valve which is before the oxygen mask connection

Q75 Do you know the manufacturer of the regulator in 9555

A No

W. Weirmeir
32003 LAC AV Weirmeir

JBL

Both WITNESS - 27143 F/L P. E. Paquette having been called and duly sworn States;

I am 27143 F/L P.E. Paquette, employed as "D" Flight Commander FIS, RCAF Station, Trenton. F/O B.A. Newman of Course 5 was on SE(AFS) Instructors Course. The students of this course receive 5 hours of familiarization in the Mustang aircraft for the purpose of acquainting them with aircraft of higher speeds than the Harvard. Prior to the receipt of the 5 hours flying a two hour lecture is given covering the handling notes and flying characteristics of the aeroplane and a written examination must be successfully passed by each course member with a standard of 85% before they are considered qualified for check out. The Mustang familiarization consists of 3 exercises. F/O Newman had successfully completed the first two Mustang exercises and had been briefed for his third flight. He was briefed for this third flight in the Mustang by F/L Wooley .

Q76 Is F/L Wooley qualified to give Briefing on Mustang aircraft?

A Yes.

Q 77 Who was Newman's instructor?

A F/O Black.

Q 78 Why did F/O Black not give this briefing?

A F/O Black was scheduled for flying the same period and was not available.

Q 79 What arrangements do you make with CFS for the use of the Mustang ?

A We have a standing arrangement with CFS whereby we have the use of one of their two Mustangs every afternoon until our training commitment for each course is completed.

Q 80 How long has this arrangement been in effect?

A Since this type of training commenced in FIS last November approximately.

Q 81 Had you previously experienced difficulty with Mustang conversion on this type of course?

A No.

Q82 Had Newman had any previous accidents to your knowledge?

A Not during the 3½ weeks he was on course. This is the only period I could tell about.

Q 83 Had you flown with Newman?

A No.

Q 84 Have you had any reports about his flying ability?

A Only that he was very good.

Q 85 What lectures or briefings are given your students on the use of oxygen for high altitude flying?

A Four hours are provided for Aviation Medicine lectures which cover the physiological aspects of high altitude flying and includes a decompression chamber run. Also upon receipt of

P. E. Paquette

PS

AL3A type headset from Safety Equipment Section each pilot is briefed and fitted for a helmet and mask. Prior to each flight part of the overall briefing is taken up with a briefing on the oxygen equipment in the Mustang.

Q 86

Had all the aviation medicine lectures and decompression tests been completed by Newman at this time?

A

No.

Q 87

What had Course 5 received in this regard by 10 Jun?

A

They had received none of the lectures nor the decompression test. This was completed two days after the crash as a result of previous commitments by the MO.

Q88

How many high altitude sorties had been completed by the course before these lectures?

A

This was the only one.

Q 89

Had F/O Newman had any previous lectures or decompression tests?

A

Not to my knowledge.

Q90

Why was Newman sent on this exercise before having a lecture on high altitude flying or a decompression test?

A

Mustang aircraft availability and programme scheduling required that this flight be made or the aircraft or student time was lost.

Q 91

Who authorized this flight?

A

F/O J.N. McLachlan.

Q 92

Was he qualified to do so?

A

Yes.

Q 93

What procedure is taught for recovery from high speed dives in the Mustang under the effects of compressibility?

A

Under the effects of compressibility if the normal method of control column back fails, throttle back and use both hands on the control column. If this has no effect hold the control column steady until lower altitude when aircraft should come out on its own.

Q 94

Have you the detail of the three exercises you mentioned?

A

Yes, I produce Mustang Exercise Cards, Numbers 1, 2 and 3.

(Mustang Exercise Cards 1, 2 and 3 received in evidence by the President, marked Exhibit "F" and attached to the proceedings.)

Q 95

Who compiled these exercise cards?

A

F/O McLachlan made these cards from an amalgamation of seven exercise cards used by CFS.

Q 96

On Mustang Ex. Card #3 para 7 for compressibility dive the speeds for the various levels are quoted as
30,000 - 25,000 - 365 mph
25,000 - 20,000 - 405 mph
20,000 - 10,000 - 455 mph.
For the 25,000 foot level which is the maximum speed your briefing lays down?

A

The student is briefed to reach a speed of 365 mph.

[Handwritten signature]

[Handwritten initials]

Q 97 Are you acquainted with the instructions to aircrew regarding Mustang oxygen equipment as contained in Training Command message TT 1298 dated 14 Sep, that is here marked as Exhibit "D"?

A Yes, the instructions were on circulation.

Q 98 Are these instructions in your Pilot's Order Book?

A No.

E. Paquette
27143 F/L E Paquette

JP

11th WITNESS - 120524 F/L SK Woolley having been called and duly sworn STATES:

" I am 120524 F/L SK Woolley employed as deputy Flight Commander "D" Flight, FIS, RCAF Stn. Trenton. On the 10th Jun I briefed F/O Newman on Mustang Ex Cd. # 3. The briefing consisted of highlighting the different parts of the exercise card".

QUESTIONED BY THE BOARD

- Q99 In what detail did you brief F/O Newman regarding use of oxygen.
- A Thoroughly. I told him to check L-14 regarding any unserviceability to oxygen. I told him to adjust plug properly and to check the blinker to see that it was functioning properly. I also mentioned that if there was any doubt that he was not getting oxygen on the ground to turn it to emergency and hold the mask to his eyes to check for a smarting sensation to indicate oxygen was flowing. I told him if he was suffering from lack of oxygen and on his climb he was to check his finger nails, if they were getting blue at all he was to come down. I mentioned to him the normal symtons and that he might not be aware of them.
- Q100 Did you ~~check~~ detail any further check of the aircraft oxygen equipment.
- A We checked to ensure he had the correct mask
- Q101 If your blinker is not workinf in the Mustang a/c what is this indicative of.
- A I would assume that I was not getting oxygen and I would check further.
- Q102 Have you flown Mustang 9555 at a high altitude requiring oxygen.
- A No
- Q103 Do all Mustangs have the blinker system
- A I only know two Mustangs in CFS flight 9555 and 9560 and thay both have the blinker
- Q104 Are you aware of the contents of TC signal TT 1298, marked Exhibit "D" regarding an aircrew test of the serviceability of the Mustang oxygen system.
- A No. I have not seen these instructions before and I did not include them in my briefing
- Q105 When did you last fly Mustang 9555.
- A 20 Apl 52, I did not fly it above 3,000'
- Q 106 Did you check the entry regarding oxygen in the minor unserviceabilities in the L -14 of 9555 the last time you flew it
- A No. Because I was not going to use oxygen
- Q 107 What briefing did you give F/O Newman regarding the carrying out of the compressibility dive.
- A I told him prior to starting his compressibility run at normal power settings (cruising) to ensure his coupe top was closed tightly, trimmed for straight and level and trims to be left alone during the entire run. He was to enter by winging over, not half rolling I emphasized that the figures on the EX. card were in MPH to make sure that if the aircraft was calibrated in knots to take 1/8 off these figures. By the time he got to 25,000' not to have exceeded the speed of 365 mph as laid down. I informed him that the aircraft would

SK

Woolley

be juddering followed by porpoising when he was reaching compressibility. He was not to continue past porpoising stage and if he did it would nose under. And if this did happen to get power off, leave trim alone and ease the aircraft out of the dive. I emphasized the speeds again

Q 108 In accordance with Mustang Ex card # 3 how long on the average should a student take to reach that part of the exercise for the compressibility, dive. *JBL*

A About one hour.

V. H. Woolley
120524 F/L/SK Woolley

JBL

12th WITNESS - 17914 F/O JN McLachlan, having been called and duly sworn STATES:

" I am 17914 F/O JN McLachlan, employed as an instructor in "D" Flight FIS, RCAF Stn. Trenton. On the afternoon of 10 Jun I was directed by my Flight Commander to proceed to OPS time office to authorize F/O Newman for Mustang Ex. Card # 3"

QUESTIONED BY THE BOARD

Q 109 Was F/O Newman qualified on Mustang aircraft

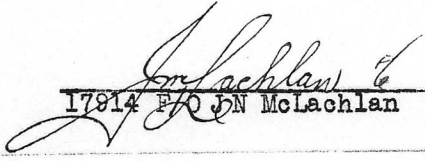
A Yes. I produce Pilots Log Book Endorsement form certifying F/O Newman's qualification on Mustang aircraft. (Photostatic copy of certificate received in evidence and marked Exhibit "G" by the President and attached to the Proceedings)

Q 110 As this certification is dated Aug 51 did F/O Newman attend lecture on the Mustang aircraft handling notes and flying characteristics given by you to the students of this present course.

A Yes. He attended every lecture.

Q 111 Did he re-write the exam.

A Yes. and passed satisfactorily.


17914 F/O JN McLachlan

13th WITNESS - Flying Officer RJ Black, having been called and duly sworn STATES:

" I am 35649 F/O RJ Black, employed as an instructor in "D" Flight, FIS RCAF Stn. Trenton, F/O Newman was my student and by 10 Jun had reached that part of his course where he was eligible to do Exercise Card # 3 in the Mustang."

QUESTIONED BY THE BOARD.

Q 112 Did you consider F/O Newman to be a steady type of pilot

A He was above average in all respects. He was conscientious and thorough pilot, not liable to diverge from any laid down exercise.

Q 113 Would you normally have briefed F/O Newman for this exercise.

A Yes, but I was flying at the time.

Q 114 What is the maximum speed permissible at 25,000'

A Appx. 375 mph

Q 115 Did you know that F/O Newman was going on this exercise.

A Yes

Q 116 Did you know that F/O Newman had not done decompression tests or had lectures on oxygen during this course by the M.O.

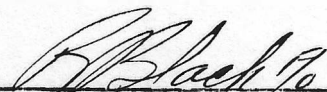
A Yes, I knew that

Q 117 Did you know if F/O Newman had had any accidents previously.

A Not to my knowledge

Q 118 Were you aware of the instructions to aircrew in EO -20 -115CB-5/1 ~~EXHIB~~ regarding test of oxygen equipment in the Mustang.

A No.


35649 F/O RJ Black

JPK

14th WITNESS - Flying Officer BE Morgan, having been duly called and duly sworn STATES:

" I am 32835 F/O BE Morgan employed as a ~~instructor~~ ^{STUDENT} on # 5 SE(AFS) Course, in "D" Flight FIS, RCAF Stn. Trenton. On 27 May I flew Mustang 9555 and I noticed that there was an entry in the L-14 regarding the unserviceability of the oxygen system. Again on 3 June I flew the a/c for 15 minutes but I did notice that the oxygen system was empty. The pressure read zero. On emergency I could get no oxygen.

QUESTIONED BY THE BOARD.

- Q 119 Were you briefed for flight above 10,000'
- A Yes, on both flights, I was to go to 12,000' on the second trip on 3 June, the first trip I mentioned on 27 May was just local practice.
- Q 120 Was the oxygen system u/s on the first flight that you completed
- A It was serviceable
- Q 121 How did you check the serviceability of it.
- A By testing the regulator valve in both auto-mix and 100% oxygen position (marked ON /OO) and further by cracking the emergency valve and noting a continuous oxygen flow.
- Q 122 Did you observe the blinker to be working
- A No, for the flight on the 27th.
- Q 123 Did you think at any other time that it was working.
- A No, I couldn't say.
- Q 124 Would you expect the blinker system to work if you were to go to altitude.
- A Yes, I would expect it to work
- Q 125 Are you familiar with the EO-20-115CB5/ 1, exhibit "C" regarding the modification of the oxygen system in the Mustang.
- A No, I have not seen it before.
- Q 126 Did you make any enquiries about the unserviceabilities as entered in the L-14
- A No I did not
- Q 127 Have you ever done the test for oxygen system serviceability as laid down in EO 20-115CB -5/1
- A No
- Q 128 Have you been briefed for compressability dives
- A No.
- Q 129 Did you know F/O Newman very well
- A Only from my acquaintance on this course
- Q 130 Did you consider him a steady type of pilot
- A Yes, from my knowledge.

Bruce E. Morgan F/O
32835 F/O BE Morgan

15th WITNESS - Flight Lieutenant LW Schunk, having been called and duly sworn STATES:

" I am 17300 F/L LW Schunk employed as Examining Officer, CFS, RCAF Stn. Trenton. On the 29th May I was requested to test fly Mustang 9555, as a minor inspection had just been completed. I carried out the engine run-up and test flight of about 45 minutes duration. The aircraft appeared to be serviceable in all respects. On completion of the flight the L-14 was certified that the test flight had been carried out."

QUESTIONED BY THE BOARD

Q 131 What was the maximum height you went to

A 9,500'

Q 132 Did you check the oxygen system

A Not other than the blinker was operating

Q 133 What type of mask were you using

A The old RAF type with tube adjusted for Mustang

Q 134 Do you consider a check of the oxygen system a part of the serviceability test for the aircraft

A Yes, to check that the blinker was working

Q 135 Is this the only check of the oxygen system you carried out

A Yes

Q 136 Are you familiar with EO 20-115CB-5/1, exhibit "C" regarding modification of the Mustang oxygen system.

A No

Q 137 Did you make any enquiries regarding the minor unserviceability entries in the L-14

A No

Sgd. LW Schunk

17300 F/L LW Schunk

CERTIFIED TRUE COPY

J B Lawrence
(JB Lawrence) S/L
President.

JBL

16th WITNESS- Corporal J I McLaren, having been called and duly sworn STATES:

" I am 23812, Cpl J I McLaren, employed as AF Tech Grp 3 and time keeper in CFS time office at RCAF Stn Trenton,

QUESTIONED BY THE BOARD.

Q 138 Were you on duty on the afternoon of 10 June

A Yes

Q 139 Did you observe F/O Newman when he was signing the F-17 or L -14

A I knew he was there to sign out an aircraft

Q 140 Did he make any enquiries about the minor unserviceabilities entered in the L-14

A Not to me

Q 141 Would any enquiries he would make of other airmen present normally be referred to you.

A In most cases.

Sgd. J I McLaren

23812 Cpl. J I McLaren.

CERTIFIED TRUE COPY

J B Lawrence
(JB Lawrence) SL
President.

JH

17th ^{JR} WITNESS:- Sergeant JR Ouellet, having been called and duly sworn, STATES:

" I am 24173 Sgt. JR Ouellet, employed as NCO in charge of SE Section RCAF Stn. Trenton.

QUESTIONED BY THE BOARD.

Q 142 Did your section issue F/O Newman with type Al3A oxygen mask

A Yes

Q 143 How good a fit did the individual get

A There are 3 sizes, large, medium and small. We try and fit the person with the mask best suited for his face. If aman has a particularly high bridge to his nose the mask has a tendency not to fit closely on either side of it. However we adjust the straps of the mask to give the best fit possible. I advise them to adjust the mask by fitting it low on the face and letting it slide up in position drawing the skin with it. This helps block up any gaps. If the vision is impaired we adjust further.

~~QUESTIONED BY THE BOARD~~

Q144 Do you give a briefing on the use of the mask

A We explain the two main inlet valves and their plastic covers which should be pointing in the down position. The reason for this is that a gap is at the bottom by the arrow permitting the condensation to drain away and the oxygen to enter freely. The two inlet valves are the main valves and their functions must be perfect or the exhalation valve will not work. The pilot would know this as the pressure builds up in the mask.

Q 145 Do you demonstrate this

A No, but I have always told them.

Q 146 Are the masks fitted with the helmets

A Yes, they go together. We advise that an adjustment of the helmet may help the fitting of the mask.

JR Ouellet
24173 Sgt. JR Ouellet

18th WITNESS:- Sergeant CA Bowes, having been called and duly sworn
STATES:

" I am 22932 Sgt. CA Bowes, employed as NCO in charge of Parachute Section,
S.E., at RCAF Stn. Trenton.

QUESTIONED BY THE BOARD.

Q 147 Did you issue F/O Newman with a parachute

A Yes

Q 148 What type of parachute and number

A Parachute SQR type, # 22608

C. A. Bowes

22932 Sgt. CA Bowes.

JBR

19th WITNESS: - Corporal F. Andrews , having been called and duly sworn STATES;

I am 29490 Cpl. F. Andrews, employed as an Instrument Technician in Servicing Squadron, RCAF Station, Trenton.

QUESTIONED BY THE BOARD

Q 149 Did you do the special inspection EO 20- 115DA - 5/1 as per Training Command message T1407 dated 19 May, here marked Exhibit "E", on the oxygen regulator in Mustang 9555?

A Yes.

Q 150 When?

A 22 May.

Q 151 What type and manufacture was this regulator?

A Type A-12. I don't know the manufacturer.

Q152 Have you any record of the manufacturer of the regulators in the various aircraft you service?

A No.

Q 153 Was the special inspection as per TC message T1407 to be carried out subsequently even if the regulator was not manufactured by ARO Equipment Co.?

A Yes, it would be done on each daily inspection.

Q 154 Do you wear a mask to do this check?

A Yes.

F. Andrews Cpl
29490 Cpl. F. Andrews

JBL

20th WITNESS: - Sergeant AP Castellarin having been called and duly
~~sworn~~ sworn STATES:

I am 24765 Sgt. AP Castellarin, employed as an Air Frame Technician at 6RD, Trenton.

On 11 June I was detailed as NCO in charge of salvage party to proceed at 1145 to Pt. Traverse to locate and salvage Mustang 9555. On 12 June the first contact was made about 0900 and a hook was made secure at about 1100. In hooking the aircraft the jarring caused bits of flesh, oil and gas bubbles to rise to the surface. We placed the flesh in a pan but it had dissolved before the medical staff could inspect it. W/C Powell was notified through 6RD that we considered this was an indication that the pilot was in the wreckage. I was instructed not to move the aircraft until a diver reached the scene. On 13 June W/C Powell arrived about 1230. The tug with the diver arrived about 1400 and the diver commenced his first dive about 1515. This first attempt failed and a second attempt was made at 1600. As the diver had reported "soft wreckage" W/C Powell and his medical staff took over the work line. The parachute was retrieved at this time. On 14 June the diver went down at 0700 and this first dive resulted in the propeller being brought up. Several further dives were made without result. On 15 June the diver went over the side at 1130 and a line was made fast to the wreckage and the starboard side of the fuselage with the starboard wing hanging to it by the control wires was brought to the surface. Dragging operations continued until the 20th without success. On the 20th the wireless set, part of the engine mount, part of the reduction gear, part of the cockpit and various lines were recovered. On the 21st the master brake cylinder, part of the windscreen and various parts of engine and coolant radiator were recovered. On 22 June the undercarriage door and more parts of the cockpit and coolant radiator were retrieved. Dragging ceased on 22nd of June. Throughout this period high winds at times hampered operations. The search for the body continued throughout when possible.

QUESTIONED BY THE BOARD

Q 155 What is "soft wreckage"?

A It is the term used by divers when referring to the human body.

Q 156 At approximately what position were dragging operations carried out?

A At approximately 76° 52' W and 43° 57' N.

AP Castellarin
24765 Sgt AP Castellarin

JBL

8th WITNESS: - The 8th WITNESS, Sgt CM Bowman on being recalled on his former oath STATES:

QUESTIONED BY THE BOARD

Q 157 If Mustang 9555 had been equipped with an ARO regulator and the special inspection as per TC message T1407, dated 19 May, Exhibit "E", had not been regularly carried out is there a possibility the valve might have been sticking?

A According to the message, yes.

Q 158 Have you inspected the wreckage of 9555 as delivered to 6RD by the salvage party?

A Yes.

Q 159 Were you able to locate the oxygen regulator?

A No.

Q 160 Would locating the oxygen regulator be the only way to determine if it was manufactured by ARO Equipment Co.?

A Yes.

Q 161 What purpose does RCAF form W11 serve?

A It is intended as a record of serial numbers of instruments fitted in a particular aircraft, and also as a record of the last calibration or overhaul of the instrument?

Q 162 Does form RCAF W11 contain any information as to the manufacturer of the instrument?

A Sometimes, and it includes the name of the last company to overhaul the instrument.

C. M. Bowman Sgt
25598 Sgt CM Bowman

JBL

21st WITNESS - W/C TJ Powell, having been called and duly sworn:
STATES:

I am 30062 W/C TJ Powell, employed as Senior Medical Officer, RCAF Station, Trenton, Ontario. On Friday 13th June off Traverse Point, a diver located what he thought was the body of the pilot killed in the Mustang crash on 10th of June. He attached a line to the parachute harness and I hauled the body to the surface. By some mischance the parachute harness locking box released the parachute harness below the surface of the water and the body disappeared. The locking box was not recovered.

QUESTIONED BY THE BOARD:

Q 163 What was the parachute number ?

A Number 1 R 22603 . I hand you the inspection tag which I removed from the parachute.

(Photostatic copy of Parachute Inspection Tag is received in evidence and marked Exhibit "H" by the President and attached to the Proceedings)

Q 164 Were the parts of the body recovered by the salvage crew on 12 June recognizable as human body?

A No

Q 165 Can the pilot be pronounced dead ?

A No, not without a body. He is officially listed as missing for six months and then may be pronounced presumed dead.

Q 166 How long would it take a person to become unconscious while climbing at 1500' a minute to over 24,000'?

A Assuming it took 20 minutes to reach this altitude, without oxygen it is doubtful if an individual taking that length of time would be conscious when he reached that altitude, but he might possibly have one or two minutes of useful consciousness after he reached that altitude.

Q 167 If a pilot descended from above 24,000' in an unconscious state and the descent was ~~made~~ in less than a minute could the pilot regain consciousness on reaching a lower level.?

A It is possible that he might regain consciousness between 30 and 40 seconds but his mind would be clouded and his movements erratic.

Sgd. TJ Powell

30062 W/C TJ Powell

CERTIFIED TRUE COPY.

J. Lawrence
(JB Lawrence) S/L
President.

JBL

22nd WITNESS - LAC JC Brown, having been called and duly sworn,
STATES:

I am 28892 LAC JC Brown, I am employed as AE Tech. Group 3, in Servicing Squadron at RCAF Station Trenton, Ontario. On the 10th of June I was assisting the pilot of Mustang 9555 to start his aircraft. The pilot was adjusting his straps and mask when he called me up on the wing. He asked me if I knew anything about the mask and oxygen system, I advised him it was not my trade, so he said he would start the engine and see if he had oxygen after he had started the engine. He started the engine after about three minutes and about two minutes later waved everything was OK and waved me away, I withdrew the battery cart.

QUESTIONED BY THE BOARD:

- Q 168 Did the pilot appear uncertain about the oxygen system ?
A He was not sure, he said he was not receiving oxygen.
Q 169 Did he ask for any further assistance ?
A No
Q 170 Did you see the oxygen pressure guage ?
A Yes
Q 171 What did it read ?
A 400 lbs.
Q 172 Did you see the diaphragm on the oxygen regulator working ?
A Yes, it was working
Q 173 Did you see the oxygen blinker ?
A No
Q 174 Did you see where the air dilutor control valve was set ?
A No.

J. C. Brown
28892 LAC JC Brown.

JCB

STATEMENT BY THE BOARD

The Board was fortunate in having several eye-witnesses to the accident. Despite the discrepancies in the observations of the civilian witnesses, the sequence of events immediately prior to the crash can be easily summarized.

Mustang 9555 was seen to make about three turns to the left at a very high altitude and leaving vapour trails. The meteorological report establishes that this height must have been somewhere above 24,000' on 10th June. The aircraft next turned down into a spiral dive with increasing speed and noise until it was seen to partially level off, at which time it exploded and fell into the water. The Board estimates the height of the explosion at approximately 1500' to 2000'. This estimate is based on the fact that the fourth and seventh witnesses observed the explosion just above tree top level. They were situated about 200' from a group of trees about 30' or 40' high and the aircraft crashed at a distance of about 1½ miles.

The first important discrepancy in the evidence is regarding the fact that the aircraft partially levelled off. The fourth and seventh witnesses were positioned as indicated on a map of the area attached to these proceedings by the Board and marked Appendix "A". As both these witnesses state the aircraft was pointing east or north-east at the time, this would place them at a right angle to it from which any attempt to level off would be most easily seen. The sixth eye witness, position as marked on map Appendix "A" would not readily observe the partial levelling off of an aircraft pulling out of a dive towards him at the time. Therefore, the Board considers that the aircraft exploded after partially levelling off.

The second important discrepancy is that the sixth witness stated that the tail came off when the aircraft was about half way down and at the time of the explosion. This witness was about 3½ miles from the crash area and the power of the field glasses being used, while stated to be six, were not considered by the Board to be more than half that power at the most. The glasses were small and unmarked. The Board is also of the opinion that a man looking through glasses at an aircraft descending can see nothing but the aircraft outlined against the sky and therefore has no references against which to estimate height. The port wing and the tail section were not recovered, therefore, from the evidence given, it is difficult to ~~ascertain~~ establish if the tail section came away at the explosion or on hitting the water.

The foregoing summarizes the immediate period of the accident. It is now intended to review generally the circumstances of the flight.

F/O Newman was authorized to carry out Mustang Exercise Card, # 3, as attached at Exhibit "F". This exercise involved a climb to 30,000'. The pilot had received no indoctrination in the physiology of high altitude flying and had had no decompression tests, either during his aircrew selection period or on his course at FIS. This is substantiated in the evidence and by Institute of Aviation Medicine message attached to these proceedings by the Board as Appendix "B".

It is worthy of note here that FIS Mustang Exercise Card # 3 details a take-off to be made at 46" Hg. This is contrary to AFRO 363/51 which directs that 61" Hg. be used at all times for take-off with the Mustang. Also the maximum speeds laid down for the various levels are not in accordance with the official handling notes for the Mustang. The limiting speeds quoted on Card # 3 are placed in the 5,000' layer above those of the handling notes. Despite the briefing stated to be given to clarify this the possibility of a misunderstanding by the student exists. These speeds also appear in m.p.h. rather than in knots.

On signing out the aircraft F/O Newman made no apparent effort to ascertain the meaning of the minor unserviceabilities entered, one of which stated that the oxygen blinker was u/s in accordance with EO 30-115CB-5/1. This EO number was found to be an error in transcription that had existed through three L-14's. It should have read EO20-115CB-5/1, a copy of which is attached as Exhibit "C". However, F/O Newman made no query about this entry, nor did several other pilots, all of whom were unaware of the existence of this order, and the aircrew check of the oxygen system contained therein.

JBL

The daily inspection of the aircraft had been completed, the eighth witness having inspected the oxygen system of the aircraft at 1300 hrs. on 9 Jun. The inspection was not carried out entirely in accordance with Training Command message T 1407 dated 9 May, copy attached as Exhibit "E" in that the airman concerned did not even wear a mask. The uncertainty of this witness under questioning regarding an inspection which he knew existed and his misunderstanding of and not following of the instructions is indicative of a certain amount of laxity. The signature of the eighth witness does not appear on the photostatic copy of this signal (exhibit "E") as it was attached to the notice board in his section.

An attempt to find a witness who may have spoken to the pilot of the aircraft was unsuccessful at the time the sixteenth witness was interviewed. The airman who was on the wing with the pilot was absent on leave and the second airman at the aircraft when questioned noted nothing untoward. The twenty-second witness, since available, has stated that the pilot queried him about the oxygen system as he could not get any oxygen. The airman noticed that the oxygen pressure guage did read 400 lbs. and that the diaphragm was working. F/O Newman advised him that he would start the engine and check it again. The pilot subsequently indicated that all was OK and he was ready to proceed.

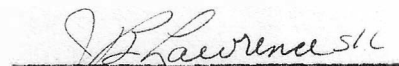
F/O Newman became airborne in Mustang 9555 at 1350 EDT. He climbed to the south and south east where the skies were clear. At approximately 1418 EDT his aircraft was observed to crash as previously stated. The approximate time of the crash was determined from the evidence of the sixth witness who, with his father, had established radio contact with DOT, Kingston at 1423 EDT to report the crash.

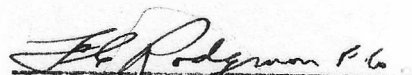
The aircraft was airborne about 28 minutes during which time the pilot climbed and was observed to have made several turns with vapour trails forming, at a high altitude. As the exercise card # 3 requires stalls, steep turns in both directions, and aerobatics to be performed first it is unlikely that the pilot would commence a compressibility dive only to have to regain altitude. The eleventh witness advises that the pilot should be airborne normally about an hour before he should carry out the dive if all other exercises were completed as laid down. Further it is not likely that a pilot, already a "B" category instructor with over one thousand hours flying experience, would attempt this compressibility dive in a spiral. Therefore, the Board considers that the aircraft came down out of control, probably due to the pilots lack of oxygen. On reaching a low level, some measure of consciousness could have been regained, and a sudden attempt made to pull the aircraft out of the dive.

Unfortunately, amongst the wreckage recovered there was only one oxygen bottle and the pressure guage with short pieces of line attached. These were of no value in determining if there was a failure in the oxygen system. There is no permanent record kept of the name of the manufacturer of a particular type of instrument fitted in an aircraft, therefore as the oxygen regulator was not recovered it is impossible to say if it was defective or not.

The serial number of the propellor recovered from the scene of the crash corresponded to that of the propellor Log Book for Mustang 9555 thereby establishing the identity of the aircraft.

The number of the parachute and the parachute inspection tag therein corresponded to the number of the parachute issued to F/O Newman.


President


Member



FINDINGS

1. Mustang 9555 crashed at approximately 76.52 W and 43.57 N at about 1418 hours on 10th Jun 52, and was damaged beyond repair.
2. The accident was caused by the aircraft exploding during the partial levelling off from a high speed dive and crashing into the water.
3. The pilot, 14972 F/O BA Newman is missing. It is the opinion of the Board that, in view of the evidence available, F/O BA Newman died in the crash of Mustang 9555 on 10 Jun 52.
4. 14972 F/O BA Newman is not to be blamed for the accident.
5. No existing record was available to indicate that F/O Newman had received an indoctrination in the physiology of high altitude flying or a decompression test on any occasion.

RECOMMENDATIONS

It is recommended that:

1. That where Engineering Orders on the modification of aircraft or aircraft equipment include instructions to aircrew, these instructions be annotated for inclusion in Flying Orders of the units concerned.
2. That all aircraft effected by EO20-115CB-5/1 have the oxygen blinker system placarded as u/s.
3. That EO-05-1-1, Revised Notes on Oxygen for aircrew be made available to all flying units immediately.
4. That all aircrew officers be given indoctrination in the physiology of high altitude flying and decompression tests as part of their aircrew selection procedure.
5. That the limiting speeds laid down for Mustang aircraft be reviewed by competent authority and revised as necessary.
6. That FIS Mustang Exercise Cards be corrected and airspeeds changed to knots.
7. That Servicing Squadron, RCAF Station, Trenton, take steps to ensure that daily inspections are carried out in accordance with existing instructions and that these instructions are available to and understood by the tradesmen concerned.

J. B. Lawrence SA
President

J. C. Pollock PL
Member