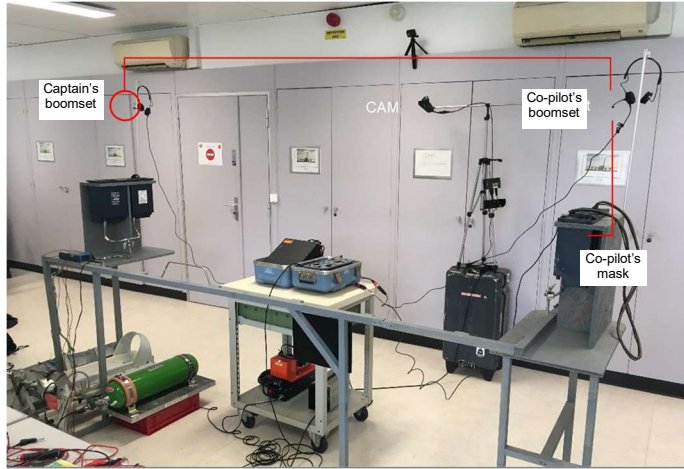


# Interruption of oxygen flow

First set of tests carried out on a reproduction of the oxygen assembly



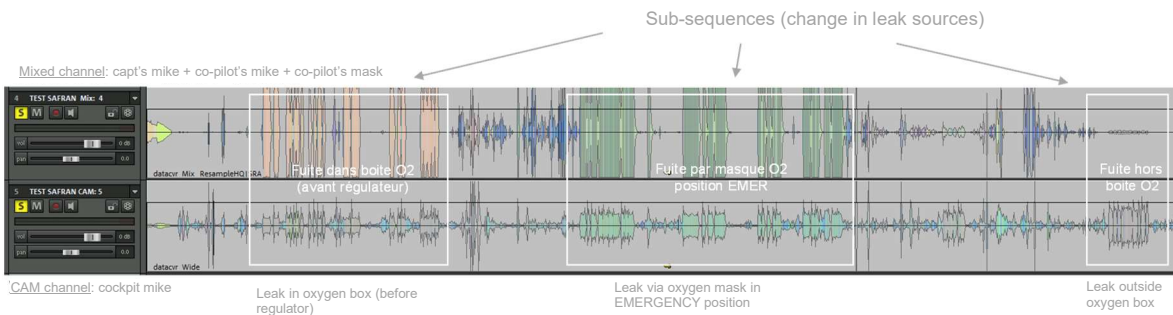
The complete A320 cockpit oxygen system assembly was taken from an aeroplane and set up in the laboratory.

The audio pick-up was performed by a "mobile CVR" system. A signal conditioning unit sent signals to the microphones on the co-pilot's mask and on the two flight crew boomsets.

The "CREW OXY SUPPLY" pushbutton on the A320's dedicated control panel was pressed several times to control the oxygen distribution solenoid valve, with variations in the frequency and hold time (random pressing of pushbutton and time pushbutton held pushed in) in an attempt to simulate a short interruption in the flow of oxygen.

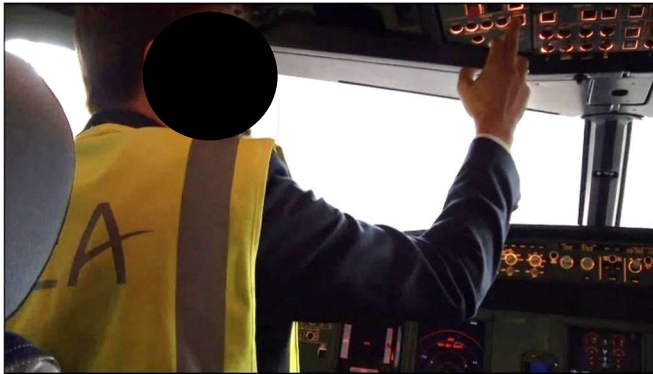


Electrical control of oxygen supply valve



Pressing the pushbutton twice in quick succession generated in all the cases, a **minimum interruption of 0.9 s** in the leaking noise to within the accuracy of the measurement.

## Second set of tests on an aeroplane



The sound sequences produced by pressing the CREW SUPPLY pushbutton (to control the oxygen distribution solenoid valve) were recorded on three aeroplane types, the A318, the A319 and the A321.

For the three aeroplanes, rapid double presses on the pushbutton activated the solenoid valve (click heard under the floor) with a **constant time delay of 0.9 s**.

## Synthesis

The tests of the CREW SUPPLY control carried out on the three aeroplanes - in addition to the previous tests carried out in the SAFRAN laboratory and at the BEA - confirmed that however quickly two consecutive inputs are made to control the cockpit oxygen supply valve, a time delay of 0.9 s is applied. Thus, no intentional action - even very rapid - on the oxygen supply control can produce the 0.5 s micro-interruption observed on the CVR of the occurrence.