

CVR TRANSCRIPT

Ce qui suit représente la transcription des éléments qui ont pu être compris au cours de l'exploitation de l'enregistrement phonique (CVR). Cette transcription comprend les échanges entre les membres de l'équipage, les messages de radiotéléphonie et des bruits divers correspondant par exemple à des manœuvres de sélecteurs ou à des alarmes.

L'attention du lecteur est attirée sur le fait que l'enregistrement et la transcription d'un CVR ne constituent qu'un reflet partiel des événements et de l'atmosphère d'un poste de pilotage. En conséquence, l'interprétation d'un tel document requiert la plus extrême prudence.

Les voix des membres d'équipage sont entendues par l'intermédiaire du microphone d'ambiance. Elles sont placées dans des colonnes séparées par souci de clarté. Une colonne est dédiée aux autres voix, bruits et alarmes également entendus par l'intermédiaire du microphone d'ambiance.

FOREWORD

The following is the transcript of the elements which were understood from the work on the CVR recording. This transcript contains conversations between crew members, radiotelephonic messages and various noises corresponding, for example, to the movement of selectors or to alarms.

The reader's attention is drawn to the fact that the recording and transcript of a CVR are only a partial reflection of events and of the atmosphere in a cockpit. Consequently, the utmost care is required in the interpretation of this document.

The voices of crew members are heard via the cockpit area microphone (CAM). They are placed in separate columns for reasons of clarity. Another column is reserved for the voices of others, the noises and alarms also heard via the CAM.

GLOSSARY

UTC	Timings in the transcript in the Preliminary Report were expressed in 25ths of a second. So as to improve readability, the data is now presented in tenths of a second.
FDR	Generated time as recorded by the FDR in seconds and tenths of a second
Ctl	Air traffic control centre on the frequency in use
Co	Dispatcher
Ground	Ground Personnel
FSL	Fire Service Leader
CC	Cabin Crew
SV	Synthetic voice
↓	Communications with ATC, the ground and the CC by interphone
?	Speaker not identified
()	Word or group of words in parentheses are doubtful
(...)	Word or group of words with no bearing on the flight
(*)	Word or group of words not understood

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
14 h 12 min 23 s	BEGINNING OF RECORDING						
12 min 24 s	(*)						
12 min 25 s	(*)						
12 min 26 s			(*) the INS is running				
12 min 27 s				Not yet			
12 min 28 s			not yet we can maybe navigate				
12 min 36 s			one hundred fourteen				
12 min 39 s			one hundred fourteen				
12 min 45 s			one hundred fourteen				
12 min 47 s		(*) stab fourteen fourteen					
12 min 50 s			radio altimeter one thousand eight confirmed				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
12 min 54 s		One thousand eight twenty-nine seventy-eight three hundred and fifty feet					
12 min 58 s			watches				
12 min 59 s		It's err fourteen					
14 h 13 min 02 s			well and mine isn't quite fourteen err isn't your watch right				
13 min 05 s		I have one thirteen err and twenty seconds					
13 min 09 s		I'm a bit fast	total fuel gauge				
13 min 13 s				So total fuel gauge I have ninety-six four and ninety-six three for ninety-five on board			
13 min 19 s		Ninety-five on board					
13 min 21 s			gear control lights				
13 min 23 s		down four greens					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
13 min 25 s			I N S				
13 min 26 s		So the departure position has been entered and checked					
13 min 30 s			man thrust reverser				
13 min 31 s		it's checked idle					
13 min 32 s			radio				
13 min 34 s		set					
13 min 35 s			radar transponder				
13 min 36 s		set stand by pardon					
13 min 38 s			engine debow				
13 min 39 s				Switched on not debow			
13 min 40 s			fire detection				
13 min 42 s				on both			
13 min 43 s			flight recorders with two hundred twenty				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
13 min 44 s				two hundred twenty inserted off			
13 min 46 s			fire protection				
13 min 47 s				tested			
13 min 48 s			pressurisation				
13 min 49 s				six thousand			
13 min 50 s			engine control schedule				
13 min 51 s			central ventilation	fly over auto four		CC: Ladies and gentlemen, good Day my name is (...) your chief flight attendant in the name of the cap...	
13 min 53 s			batteries	low tested they are on			
13 min 55 s							
13 min 57 s			INS				
13 min 58 s				I've released them			
14 h 14 min 00 s		So the programme ten eleven is checked and mode four is on nav					
14 min 04 s			ZFWZFCG				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
14 min 05 s				So I have ninety-one nine and fifty-two two			
14 min 09 s			aircraft weight total fuel				
14 min 10 s				one hundred eighty-six ninety-five			
14 min 12 s			totalizers				
14 min 14 s				At zero			
14 min 15 s			reference speeds				
14 min 23 s	so the reference speeds V1 one hundred fifty V R one hundred ninety-eight V 2 two hundred twenty two one hundred forty-two one hundred eighty it's displayed on the left				CC: (*)		
14 min 26 s			on the right				
14 min 27 s	and on backup						

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
14 min 28 s			attitude				
14 min 29 s		it's thirteen degrees					
14 min 30 s			P seven				
14 min 31 s		P seven is thirty-nine point one					
14 min 32 s				I haven't done it			
14 min 33 s				thirty-nine one			
14 min 35 s				thirty-nine one			
14 min 36 s				thirty-nine one			
14 min 38 s			fuel flow	and thirty-nine... five			
14 min 41 s		fuel flow is twenty point three nineteen nine					
14 min 43 s			noise reduction				
14 min 45 s		the reduction is on seventy-three seconds					
14 min 47 s				seventy-three			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
14 min 48 s		Gilles is that okay for you?					
14 min 49 s		and minus five		yes			
14 min 53 s		then the thrust lever is at fourteen and you will have N2 of ninety-seven and a bit					
14 min 58 s				ninety-seven			
14 min 59 s			parking brake				
14 h 15 min 00 s		It's on park fifteen hundred in front					
15 min 03 s		three thousand three behind	central alarm system				
15 min 05 s		recall					
15 min 06 s			cancel				
15 min 07 s		inhibit					
15 min 09 s			the window				
15 min 11 s		It's closed locked on the left					
15 min 13 s			on the right				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
15 min 14 s			door light				
15 min 16 s				So I still have a cargo I have the forward left door and the aft left door			
15 min 26 s			secondary air doors				
15 min 28 s				auto			
15 min 29 s			feeder pump for three				
15 min 32 s				on			
15 min 33 s			hydraulic alternator for three				
15 min 38 s				off and off			
15 min 40 s			anti collision and seat belts				
15 min 43 s				the seat belts on are on on			
15 min 44 s			that's it (*)				
15 min 45 s					Cabin gong		
15 min 50 s						CC: yes	

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15 min 51 s			↓ yes it's aft no				
15 min 53 s						CC: no forward	
15 min 54 s						CC: Hervé the rear	
15 min 55 s			↓ yes Hervé there's still a door open aft				
15 min 57 s						CC: yeh yeh he's closing it right now	
15 min 59 s			↓ okay				
14 h 16 min 03 s			↓ ground				
16 min 07 s			↓ hello hello				
16 min 08 s						Ground: yes I'm listening	
16 min 10 s			↓ yes that where are we down there				

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16 min 11 s						Ground: well the mechanics have finished now they're just getting off the last ... the last tool box now but the loading isn't quite finished yet	
16 min 20 s			↓ the hold there the baggage?				
16 min 22 s						Ground: affirmative there's still a (*) to fill... to completely empty the...	
16 min 26 s			↓ well it's fortunate that we're three quarters of an hour late otherwise what would it have been like				
16 min 32 s			↓ that's what ten minutes more at least				
16 min 35 s						Ground: errr yes	

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16 min 39 s		yes I'm going to see it's because... there was a mechanical problem maybe					
16 min 42 s			oh no				
16 min 43 s				and if we hadn't been late (*) was late for the fill-up the tankers arrived half an hour before the theoretical departure time so you know (*) sometimes			
16 min 54 s				it's the engine change which			
16 min 57 s				so before starting up we'll do a blue check			
14 h 17 min 01 s			before starting up				
17 min 02 s				yes I prefer before starting up			
17 min 04 s			there are some servos which (*) the flight controls				

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17 min 07 s				no it's because we're there's there was a leak on the blue and I had a blockage with a low level blue we filled it up I'm going to press the blue in... the Ground blue pumps are on let's first close the air intakes that are blocked			
17 min 22 s			as soon as they've finished with their mess				
17 min 23 s				yeh			
17 min 26 s				and then after that we're going to start up			
17 min 27 s						Ground: okay in any case for the controls if you like we can do it	
17 min 34 s				↓ okay I'm... I'm applying hydraulic pressure			

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17 min 36 s						Ground: okay it's clear you can go	
17 min 40 s				you you have the controls			
17 min 42 s	I've got them						
17 min 44 s			ten minutes				
17 min 45 s					CC: how long		
17 min 46 s			ten minutes				
17 min 47 s					CC: ten minutes... wait here		
17 min 48 s			yeh yeh yeh				
17 min 49 s			it's not it's not the repair to the aircraft it's the baggage which are not loaded				
17 min 53 s					CC: ah okay		
17 min 54 s	but I don't dare tell them that						
17 min 56 s			we think (*)				

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17 min 57 s	(*)		to help him to load to speed things up	↓ okay okay I'm closing air intakes three and four			
14 h 18 min 03 s						Ground: okay it's done	
18 min 04 s	how are things in the back?						
18 min 05 s					CC: everything's okay		
18 min 06 s	that's true						
18 min 07 s							
18 min 08 s	well I'll say something just before start-up so as to (*)				CC: yes yes		
18 min 12 s				↓ well the air intakes are okay we can move the flight controls	CC: (*)		
18 min 16 s	(*)					Ground: okay roger it's clear you can go ahead	
18 min 18 s	eh						
18 min 19 s					CC: (*)		

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18 min 20 s		what shall I do (*)					
18 min 21 s					CC: (*)		
18 min 22 s		go ahead					
18 min 23 s		shall I do a bit of (*) and I (*)					
18 min 26 s				we're going to be in mechanical but it's not serious but (*)	Gong		
18 min 28 s			You don't need me eh				
18 min 30 s				no no			
18 min 32 s 18 min 34 s			We'll have to ask the dispatcher if he has a weight estimate... at the same time		Gong		
18 min 35 s		I 'm in mechanical maybe that's a problem because it doesn't respond like (*)					
18 min 38 s				no no it's not a problem			
18 min 41 s			you're bugging me (*)				

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18 min 42 s 18 min 44 s				yes you're bugging me if you're not ready (*)	Gong		Joking tone
18 min 49 s 18 min 50 s	well it's making some jumps in mechanical eh but maybe that's normal			yes yes no no but...			
18 min 53 s	so next the rudder						
14 h 19 min 00 s	well that's working eh						
19 min 01 s				okay			
19 min 05 s					Gong		
19 min 06 s				<p>↓ okay so the level has fallen slightly that's normal and it's stabilising the air intakes are closed the flight controls are working correctly I'm cutting hydraulic pressure</p>			
19 min 15 s						Ground: okay thanks	

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19 min 20 s				It's going to fall the the controls are going to go forward			
19 min 23 s	okay						
19 min 25 s				yes in mechanical it's going to be a bit hard to feel it flying on mechanical it's not (...)	Gong		Laughter
19 min 27 s	yes (*)						
19 min 31 s	well I remember						Laughter
19 min 40 s				okay it's dropped I'll deal with it			
14 h 20 min 04 s				there you are we're back on yellow			
20 min 05 s					Co: load sheet sir		
20 min 06 s					Co: good... in fact... there were some bags which were added I have two tons two of baggage		

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20 min 14 s					Co: for the BRS security software		
20 min 18 s		yes					
20 min 19 s					Co: there's a problem we haven't defined what I called the people who were in the BRS section err the baggage was correctly labelled as four five nine zero but it didn't go through		
20 min 29 s		hum					

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20 min 30 s					Co: so we tried to do a few things to call to ring a few bells but in the end we have two tons two of bags they are labelled but I can't read all the baggage to be loaded so I'll have to see with the people concerned to do that I'll warn the DO for me it's clear for security I have no no-shows and I have no extra bags		
20 min 56 s					Co: and all the bags have been through the x-ray according to the required random procedure		
14 h 21 min 03 s		okay			Co: I reckon that it's the monitor that's not working		

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21 min 08 s		okay			Co: I've adjusted the fuel to maximum for taxi because it's increased by two hundred kilos of baggage		
21 min 18 s		In any case it's what you told us eh ninety-one nine we were basing ourselves on that					
21 min 21 s					Co: okay		
21 min 22 s		So we're okay eh					
21 min 24 s		So because there you've put taxing a bit high eh...					
21 min 28 s					Co: I've put two two tons		
21 min 29 s		We'll be taking off with a bit more than that in fact eh					
21 min 31 s					Co: yes		
21 min 32 s		But that's okay it's not important					

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21 min 34 s					Co: does that suit you?		
21 min 35 s	So zero fuel is fifty-two three Gilles eh in fact						
21 min 37 s				yes I've corrected it			
21 min 38 s	You've corrected it eh			(*)			
21 min 41 s					Co: otherwise for loading we'll close the hold and we're ready		
21 min 45 s	So that's okay						
21 min 47 s	So here there's six and six twelve twelve and five ten seven						
21 min 50 s	right						
21 min 52 s	Four hundred well that's perfect						

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21 min 53 s				From the mechanical viewpoint the mechanical viewpoint it's over since			
21 min 57 s				(*)	Co: yes but err the baggage came and well it reset on the D but.... problem		
14 h 22 min 05 s					Co: that's it		
14 h 22 min 05 s					Co: that's it		
22 min 06 s	thanks						
22 min 07 s	Well sir till next time						
22 min 08 s					Co: goodbye gentlemen		
22 min 09 s	goodbye	goodbye					
22 min 11 s					Co: see you soon		
22 min 12 s	See you soon	See you soon					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
22 min 14 s		Fifty-two three well that's what he said it's forty kilos over but anyway	...				
22 min 17 s 22 min 19 s		(*)		And we have I've... I've taken the takeoff weight as one hundred and eighty-five tons			
22 min 22 s 22 min 24 s		Well we'll take one hundred eighty-five one hundred that's to say we'll be at the structural ... limits		With fifty-two two			
22 min 29 s		Structural err fifty-four for one hundred CG (*) see					
22 min 38 s		And we're really at the minimum					
22 min 42 s				fuel			
22 min 43 s		fuel yes					
22 min 44 s		good					
22 min 45 s				go			

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22 min 50 s				Did you have time to do the certificates, Christian			
22 min 53 s		partially					
22 min 54 s		Two thirds					
22 min 55 s		I ... each time that I have some spare time I do some I have some now I'll go on					
22 min 59 s		I'm not far from the end I think		yes, I'll leave it to you			
14 h 23 min 00 s				I'll leave it to you			
23 min 01 s		But anyway I'll only pass over when we've passed the sound barrier eh because					
23 min 07 s		(...)		(*)			
23 min 10 s		(...)					
23 min 32 s							

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23 min 34 s			pardon				
23 min 35 s		I'm bothering you					
23 min 36 s			no no (*)				
23 min 41 s				so			
23 min 42 s				I just have the cargo open			
23 min 46 s			They're closing it				
14 h 24 min 02 s				To tell you the truth we have corrected the CG to fifty-two three instead of fifty-two two			
24 min 06 s			fine				
24 min 07 s		He made a mistake in the CG					
24 min 10 s			Unless it isn't him				Jokey tone
24 min 12 s		(*)					
24 min 31 s						Ground: Ground station are you receiving	
24 min 35 s		↓ yes					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
24 min 37 s						Ground: Well we've just locked the rear hold loading door the handle is in its recess	
24 min 44 s		↓ Well great so err if I understand the aircraft is clear there					
24 min 49 s						Ground: the aircraft cleared we're ready for start-up	
24 min 52 s			Go ahead pull				
24 min 55 s		↓ Fine so we'll start in normal sequence and then we will be pulled back err forwards so we'll start up the three first so otherwise the chocks ... nose gear are in position eh					
14 h 25 min 04 s						Ground: the nose gear chocks are not in position	

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
25 min 08 s		↓ Okay and you confirm that all doors are checked eh					
25 min 12 s						Ground: the doors are checked yes	
25 min 13 s			Is there a tractor?				
25 min 14 s		↓ Okay so err... yes good question is there an extinguisher in the corner there?					
25 min 20 s			A tractor				
25 min 21 s		↓ A tractor I mean is it there?					
25 min 23 s						Ground: the tractor is in position with the bar locked yes the lockpin is on the nose gear	
25 min 27 s			I haven't seen it no				
25 min 29 s		↓ Well err so we I'm reminding you about start-up on three					

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25 min 34 s				The pre-startup check-list has been done has been done		Ground: okay roger	
25 min 36 s			yes yes we're ready				
25 min 37 s	↓ Is air pressure established?						
25 min 39 s						Ground: no not yet but it won't be long	
25 min 41 s	↓ So call me back when air pressure is established						
25 min 45 s	↓ Ladies and gentlemen all is in order and we are starting up our engines						
25 min 51 s						Ground: air pressure established	
25 min 54 s	↓ Perfect start up three						
25 min 57 s				The three			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
25 min 58 s			(...)	Held			Song
14 h 26 min 00 s				Open			
26 min 01 s				start pump			
26 min 06 s		I'm passing over the lever Jean					
26 min 07 s			top				
		ten for one hundred					
26 min 08 s		top					
26 min 11 s			ignition				
26 min 12 s		ignition					
26 min 14 s		N1					
26 min 25 s		Twenty-five percent					
26 min 27 s				returned			
26 min 28 s				closed			
26 min 29 s		Closed okay					
26 min 30 s			Shall I take the lever?				

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26 min 32 s		If you like okay thanks fine					
26 min 35 s		stabilised debow					
26 min 37 s		Normal on three					
26 min 38 s				normal			
26 min 39 s		Released at sixty-seven					
26 min 53 s		Two hundred and ninety it's dropping					
26 min 58 s		Okay rotating stall		(*)			
14 h 27 min 01 s				Ready hydraulics			
27 min 02 s			Held	Ready hydraulics?			
27 min 03 s				hydraulics			
27 min 05 s			↓ Concorde four five nine zero good evening on Echo twenty-six we will be ready to pull in two minutes				
27 min 14 s		↓ Ready for two?					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
27 min 48 s					cabin gong		
27 min 53 s	Twenty-five percent						
27 min 55 s				returned			
27 min 56 s				closed			
27 min 57 s	closed						
14 h 28 min 02 s	stabilised below normal on two						
28 min 05 s				normal			
28 min 21 s					Noise		Increase in engine RPM
28 min 22 s	Two sixty-eight						
28 min 25 s	falling and rotating stall						
28 min 28 s	↓ Fine two is running so we can disconnect the units and call me back when the aircraft is away			We can disconnect the units			
28 min 35 s						Ground: okay roger	

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28 min 40 s			We are cleared to pull				
14 h 29 min 11 s					Noise		Similar to seat movement
29 min 15 s					Noise		Similar to seat movement
29 min 45 s						Ground: Ground station	
29 min 47 s			They're calling us				
29 min 49 s		↓ yes?					
29 min 50 s						Ground: So for the departure direction we haven't got much choice it's going to be westwards	
29 min 53 s		(...)					Laughter
29 min 54 s			no you say east				In a jokey manner
29 min 56 s		↓ yes that yes in fact I think that I don't see any other solution err ... I don't see any other solution yes					

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14 h 30 min 02 s						Ground: okay aircraft cleared ready to taxi	
30 min 05 s		↓ So we have clearance the brake is released we can go back ...					
30 min 11 s		↓ And we can put a block on ... sorry we can go on yes a block on thirty one	Go on go on				
30 min 13 s						Ground: thirty one okay roger	
30 min 30 s			(the barrier didn't see)				
30 min 54 s					Cabin gong		
14 h 31 min 27 s						Ground: you can start the other engines	
31 min 31 s		↓ okay so ready for four?					
31 min 33 s						Ground: ready all four	
31 min 35 s		↓ start-up four					

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31 min 36 s				held			
31 min 39 s				open			
31 min 40 s		N2					
31 min 41 s				start pump			
31 min 48 s		ten percent					
31 min 49 s		fuel					
31 min 50 s		top					
31 min 51 s		N1					
31 min 54 s		ignition					
14 h 32 min 04 s		Twenty-five percent					
32 min 05 s				returned			
32 min 06 s				closed			
32 min 07 s						Ground: push complete can you put on the parking brake please	
32 min 08 s		<p>↓ Yes parking brake on can we disconnect the yoke ready for one?</p>					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
32 min 11 s						Ground: ready for one	
32 min 17 s	↓ start-up one						
32 min 18 s	so stabilised debow thanks						
32 min 19 s				held			
32 min 23 s				open			
32 min 25 s				start pump			
32 min 26 s	N2						
32 min 37 s	ten percent						
32 min 38 s	fuel						
32 min 40 s	top N1						
32 min 42 s	ignition						
32 min 55 s	twenty-five percent						
32 min 57 s				returned			
32 min 58 s				closed			
32 min 59 s	Valves closed						
14 h 33 min 02 s	stabilised debow						

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
33 min 04 s		normal on four					
33 min 05 s				normal four			
33 min 17 s		So three hundred and ten it's dropping					
33 min 22 s		and rotating stall normal on one					
33 min 25 s				normal on one			
33 min 37 s			↓ Concorde four five nine zero we will be ready to taxi in one minute				
33 min 40 s		Three hundred and four					
33 min 42 s		It's falling				Ct: roger four five nine zero for taxi contact Ground one twenty one ninety seven	
33 min 44 s		Rotating stall				goodbye	
33 min 47 s			↓ goodbye				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
33 min 48 s		<p>↓ fine start-up complete so err you can stop listening in and make a sign on the left showing the hydraulic pin goodbye thanks for everything have a good day</p>					
33 min 55 s						Ground: I'll make a sign to the right	
33 min 56 s					Two gongs		
33 min 57 s		<p>↓ make a sign to the right okay goodbye</p>					
33 min 59 s					Gong		
14 h 34 min 00 s						Ground: goodbye	
34 min 01 s		T C U test			Gong		
34 min 03 s				yes	Gong		
34 min 05 s					Gong		
34 min 08 s				they've changed	Gong		
34 min 10 s		yes					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
34 min 17 s					Gong		
34 min 23 s				so			
34 min 24 s				(*) departure on			
34 min 33 s			↓ Concorde four five nine zero to taxi next to five south we are				
34 min 38 s						Ctl: Air France four five nine zero good day taxi to holding point twenty-six right via Romeo	
34 min 39 s			stab feel and trim (*)				
34 min 44 s			↓ via Romeo twenty-six right				
34 min 45 s		post start-up check-list					
34 min 46 s			stab feel and trim is engaged				
34 min 48 s		engaged					
34 min 49 s			flight controls I've checked				
34 min 50 s		clear on the right	clear on the right it's clear				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
34 min 51 s			he's indicating you can taxi to Romeo it's the... it's the				
34 min 55 s	first left						
34 min 56 s			first left				
14 h 35 min 03 s			T C U				
35 min 04 s	tested						
35 min 05 s				Tested			
35 min 06 s			engine de-icing				
35 min 07 s				off			
35 min 08 s			door lights				
35 min 09 s				Lights off			
35 min 10 s			central system recalled				
35 min 12 s			ramp and spill				
35 min 13 s				They are on auto and at zero			
35 min 15 s			secondary nozzle				
35 min 17 s	(*)						Gap in the recording due to tape splice

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
35 min 18 s			Engine idle				
35 min 20 s				low			
35 min 21 s			Feeder pumps				
35 min 22 s				All on on			
35 min 32 s						Ct: Air France four five nine zero Do you want Whisky ten or err Romeo taxiway?	
35 min 37 s			↓ err I need all the runway eh				
35 min 38 s						Ct: okay So you taxi for Romeo Air France four five nine zero	
35 min 41 s			↓ fine roger four five nine zero via Romeo				
35 min 46 s			feeder pumps				
35 min 48 s				All on on			
35 min 49 s			hydraulics electrics				
35 min 50 s				checked			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
35 min 53 s			Backup alternator				
35 min 54 s				checked			
35 min 55 s			engine overheat				
35 min 57 s				tested			
35 min 58 s			Front wheel steering apparently there isn't any				
14 h 36 min 00 s		well...					
36 min 01 s		It's working					
36 min 03 s		I'm managing to control the aircraft					
36 min 05 s			taxi turn are on "on"				
36 min 07 s			Aircraft clear signal received				
36 min 10 s		yes					
36 min 11 s			Nose droop at five				
36 min 27 s		I'll get up a bit of speed before trying the brakes					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
36 min 29 s			Be careful it's going fast				
36 min 31 s	I mean that...						
36 min 32 s			yes (*)				
36 min 33 s	I'll let it go eh...						
36 min 34 s			yes yes let it go on the contrary				
36 min 36 s	That's what I meant						
36 min 43 s			So we have to continue on the taxiway to get to the end eh				
36 min 47 s	Yes fine okay						
36 min 49 s			(shouldn't) take Tango Tango we don't go to the end				
36 min 53 s	Emergency brake test						
36 min 57 s			not good				
14 h 37 min 03 s	Normal braking						

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
37 min 07 s		No pressure, no jumping, no release					
37 min 10 s		Taxiing check-list					
37 min 11 s				yes			
37 min 18 s			(*)	So the brake fan light is on on			
37 min 19 s		eh?					
37 min 20 s				auto ignition...			
37 min 21 s			(*) as long as possible				
37 min 22 s				on			
37 min 23 s				Reheat A D S drain static and ice			
37 min 25 s		Four on two low	two	(*)			
37 min 27 s				And on and total inhibit			
37 min 28 s					Gong		
37 min 29 s		P F C					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
37 min 32 s			Ah you've got the rudders going to green all the time I think that we'll leave it that's the second time it's done it during the tests		Gong		
37 min 38 s							
37 min 39 s			Shall I reset or not?				
37 min 43 s			I don't see which one (*)				
37 min 45 s				Reset - we'll see			
37 min 46 s			no no				
37 min 47 s				If it sounds during takeoff we touch nothing while we (start) it			
37 min 51 s			It's already done it to me twice				
37 min 54 s				twice... so the brakes			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
37 min 56 s		emerg tested normal no pressure no jumping no release					
14 h 38 min 00 s				the trims for fifty-four percent			
38 min 02 s		Actually zero zero for fifty-four I see two and a half checked ico flight					
38 min 08 s				Pressurisation and air conditioning checked			
38 min 14 s				Fuel transfer is under way pipe safeties			
38 min 21 s				Fine on arrival			
38 min 22 s			yes				
38 min 26 s		yes					
38 min 27 s 38 min 29 s		off attached		Seats and harness over-pull off and anti-skid off and de-icing and takeoff briefing			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
38 min 33 s		re...			Gong		
38 min 34 s				Ah it's dropped again			
38 min 35 s			That's it it's dropped				
38 min 36 s				You're right let's stay in yell in green			
38 min 40 s			We're staying in green eh				
38 min 43 s		Both rudders or the upper					
38 min 44 s				yes both yes			
38 min 45 s		Both eh					
38 min 46 s		(*)	oh yes yes yes oh well you have to... they're always together aren't they?				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
38 min 49 s				Yes no but when you press you switch to the green system but the the ... was the drop on both of them... or on just one?			
38 min 56 s			On both of course no? no?				
38 min 59 s				I don't think no you can only have one maybe			
14 h 39 min 00 s			ah I don't know well err...				
14 h 39 min 04 s		So the takeoff is ... at maximum takeoff weight one hundred eighty tons one hundred which means four reheats with a minimum failure N2 of ninety eight					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
39 min 21 s 39 min 25 s		between zero and one hundred knots I stop for any aural warning the tyre flash				(Ct) Air France four five nine zero contact the Tower on one hundred twenty decimal nine	
39 min 29 s			↓ one hundred twenty-nine four five nine zero good afternoon				
39 min 35 s		tyre flash and failure callout from you right					
39 min 38 s		between one hundred knots and V1 I ignore the gong I stop for an engine fire a tyre flash and the failure callout					
39 min 45 s				yes			
39 min 46 s		after V1 we continue on the SID we just talked about we land back on runway twenty-six right					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
39 min 51 s		and the quick reference handbook is ready for an overweight landing					
39 min 56 s						(CtI) Air France four five nine zero hello	
39 min 58 s			↓ hello threshold twenty-six right four five nine zero				
14 h 40 min 01 s						(CtI) (*) four five nine zero line up on runway twenty-six right	
40 min 04 s			↓ we line up and hold on twenty-six right four five nine zero				
40 min 07 s		Ready in the back?					
40 min 10 s			Let's go				
40 min 11 s		↓ CC prepare for takeoff					
40 min 16 s		pre-takeoff check-list					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
40 min 19 s		How much fuel have we used?					
40 min 23 s				We've got eight hundred kilos there			
40 min 24 s		eight hundred kilos?					
40 min 28 s		right	No difference on the second segment				
40 min 31 s		We haven't left yet, have we (*)					
40 min 35 s		Err brakes one hundred degrees					
40 min 37 s				Before takeoff Takeoff monitor			
40 min 39 s			armed				
40 min 40 s		armed					
40 min 41 s				The parameters for take...			
40 min 43 s				Takeoff parameters	(CC) cabin ready		
40 min 44 s							

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
40 min 45 s		Well they're confirmed, nothing has changed					
40 min 47 s				Noise reduction parameters confirmed engine rating light on take-off			
40 min 55 s				N1 limiter four ninety eight eighty idle on high			
14 h 41 min 00 s				Central alarm system			
41 min 01 s 41 min 02 s 41 min 03 s		recall inhibit				(CtI) Air France four five nine zero so I will call you back as soon as it's free in front	
41 min 04 s			↓ holding position four five nine zero				
41 min 05 s				The transponder			
41 min 08 s				I'm putting it on			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
41 min 09 s				Brake temperatures checked one hundred fifty the CG is at fifty Four two			
41 min 17 s				Reheat four whites de-icing			
41 min 19 s	okay						
41 min 20 s	Is it hotter on the left or the right there?						
41 min 28 s				It's about the same you know			
41 min 30 s			What's the max ?				
41 min 32 s				There we're at one hundred fifty			
41 min 33 s			Yeah it goes up fast on this taxiway we'll have to watch out				
41 min 45 s 41 min 47 s	So um depart on the centreline to one hundred		On the centreline level one hundred				
41 min 55 s				CG fifty four			

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
14 h 42 min 08 s				(*)			
42 min 17.0 s	97547.5					(Ct) Air France four five nine zero runway twenty-six right wind zero ninety eight knots cleared for takeoff	
42 min 21.6 s	97552.1		↔ Four five nine zero takeoff				
42 min 23.3 s	97553.7		twenty-six right		Noise of selector		
42 min 24.8 s	97555.3	Is everybody ready					
42 min 25.8 s	97556.3		yes				
42 min 26 s	97556.5			yes			
42 min 26.6 s	97557.1	To one hundred V1 one hundred fifty					
42 min 28.8 s	97559.3	(*)					
42 min 30.4 s	97560.9				Noise of selector		Clicking of thrust levers
42 min 31 s	97561.5	top					
42 min 31.3 s	97561.8				Change in background noise		Increase in the airflow in the air conditioning and an increase in engine speed

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
42 min 35.3 s	97565.8					(?) go Christian	
42 min 37.4 s	97567.9					Two transmission clicks	
42 min 43.3 s	97573.8			We have four reheats			
42 min 47.5 s	97578				Noise of selector		Movement of automatic selector on passing 60 kt
42 min 54.6 s	97585.1		one hundred knots				
42 min 55.1 s	97585.5				Noise		
42 min 55.5 s	97586	checked					
42 min 57 s	97587.5			Four greens			
14 h 43 min 03.7 s	97594.2		V 1				
43 min 10.1 s	97600.6				Noise		
43 min 11 s	97601.5				Change in background noise (*)		Unintelligible noise
43 min 11.9 s	97602.4						
43 min 13 s	97603.5		watch out				

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
43 min 13.4 s	97603.9				End of change in background noise	(Ct) Concorde zero... four five nine zero you have flames (*)	(?) (*) right SIMULTANEOUS BROADCASTS
43 min 13.8 s	97604.3			(stop)	Noise of selector	you have flames behind you	
43 min 16.1 s	97606.6						
43 min 16.4 s	97606.9						
43 min 18.8 s	97609.3		↓ roger				
43 min 20.4 s	97610.9			Failure eng... failure engine two			
43 min 21.3 s	97611.8				2 selector noises		TCU movement passing from main to alternate
43 min 22.8 s	97613.3				Bell		Fire alarm
						(?) it's really burning eh	
43 min 23.5 s	97614				Gong		
43 min 24.8 s	97615.3			Shut down engine two			
43 min 25.8 s	97616.3	Engine fire procedure					
43 min 26.2 s	97616.7				Noise of selector		Thrust lever reduction or HP shutoff
43 min 26.8 s	97617.3				End of bell		

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
43 min 27.2 s	97617.7		Watch the airspeed the airspeed the airspeed		Noise of selector Gong		Automatic trim selector
43 min 27.5 s	97617.9						
43 min 28.2 s	97618.7						
43 min 28.7 s	97619.2				Noise of selector	(?) it's really burning and I'm not sure it's coming from the engines	Fire handle being pulled
43 min 29.3 s	97619.8						
43 min 30 s	97620.5	Gear on retract					
43 min 31.6 s	97622.1			The gear	Toilet smoke detection alarm	(CtI) four five nine zero you have strong flames behind you	
43 min 32 s	97622.5						
43 min 32.6 s	97623.1						
43 min 34.5 s	97624.5					Beginning of reception of a Middle Marker	
43 min 34.7 s	97625.2		↓ yes roger				
43 min 35.5 s	97626			The gear (Jean)			
43 min 37 s	97627.5				Gong		
43 min 37.3 s	97627.8			gear	Noise	(CtI) so do as you wish you have priority for a return to the field	
43 min 37.7 s	97628.2				Noise		
43 min 38.4 s	97628.9		no				
43 min 39 s	97629.5	(gear) retract					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
43 min 41.2 s	97631.7		↓ roger				
43 min 42.3 s	97632.8				Bell		Fire alarm
43 min 43 s	97633.5				Gong		
43 min 44.7 s	97635.2				3 selector noises		Fire extinguisher fired with first shot
43 min 45.6 s	97636.1		(I'm trying)	I'm firing it			
43 min 46.3 s	97636.8	(are you) shutting down engine two there			End of toilet smoke detection alarm		
43 min 4.28 s	97638.7			I've shut it down			
43 min 49.3 s	97639.8					End of reception of Middle Marker	
43 min 49.9 s	97640.4		The airspeed				
43 min 53 s	97643.5				Noise		
43 min 54.8 s	97645.3				End of bell		
43 min 56.7 s	97647.2		The gear isn't retracting				
43 min 58.6 s	97649.1				Bell		Fire alarm
43 min 59.1 s	97649.6				(SV) whoop whoop pull up		GPWS warning
43 min 59.4 s	97649.9				Gong		

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
14 h 44 min 00.6 s	97651.1				(SV) whoop whoop pull up		GPWS warning
44 min 00.7 s	97651.2		The airspeed				
44 min 02 s	97652.5				(VS) whoop whoop pull up		GPWS warning
44 min 03 s	97653.5					(FSL) De Gaulle tower from fire service leader	
44 min 05.2 s	97655.7					(Ct) fire service leader err... the Concorde I don't know his intentions get into position near the southern double runway	
44 min 10.5 s	97661				Noise of selector		
44 min 12 s	97662.5	(*)					
44 min 13.2 s	97663.7					(FSL) De Gaulle tower from fire service leader	
44 min 14.6 s	97665.1		Le Bourget Le Bourget			authorisation to enter twenty-six right	
44 min 16.5 s	97666.7	(too late)					

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
44 min 18.1 s	97668.6						
44 min 19.8 s	97670.3	(no time no)				(Ct) Fire service leader correction the Concorde is returning on runway zero nine in the opposite direction	
44 min 22.8 s	97673.2		↓ negative we're trying for Le Bourget				
44 min 24.7 s	97675.2				Noise of selector		
44 min 25.1 s	97675.6				Noise of selector		
44 min 25.4 s	97675.9				Noise of selector		
44 min 26.2 s	97676.7				Noise of selector		
44 min 26.4 s	97676.9		(no)				
44 min 26.6 s	97677.1				Gong	(FSL) De Gaulle tower from fire service leader can you give me the situation of the Concorde now	
44 min 27 s	97677.5				Gong and noise of selector		
44 min 27.5 s	97678				Noise of selector and beginning of movement of objects in cockpit		
44 min 29 s	97679.5	(*)					Noises of effort

CVR UTC	FDR TIME	CAPTAIN	FIRST OFFICER	FLIGHT ENGINEER	COCKPIT AREA MICROPHONE	VHF, INTERPHONE, PA	OBSERVATIONS
44 min 30 s	97680.5 (*)						
44 min 30.7 s	97681.2 (*)						
14 h 44 min 31.6 s	97682.1	END OF RECORDING					