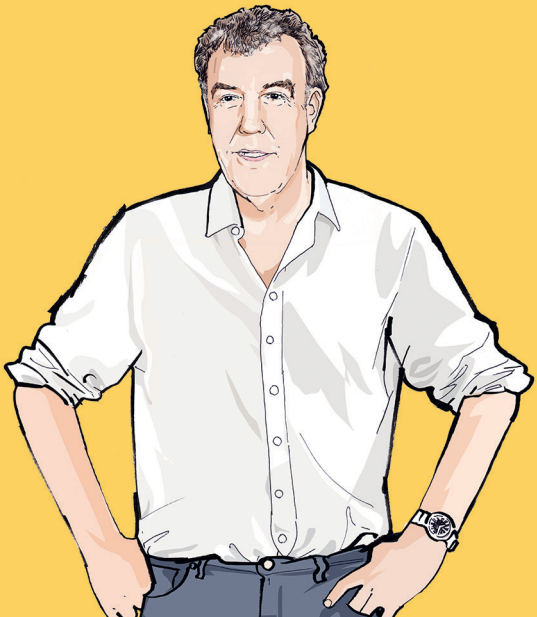
'Outrageously funny' *Time Out*

CLARKSON

I Know You Got Soul



PENGUIN BOOKS

I KNOW YOU GOT SOUL

Jeremy Clarkson began his career on the *Rotherham Advertiser*. Since then he has written for the *Sun*, the *Sunday Times*, the *Rochdale Observer*, the *Wolverhampton Express & Star*, all of the Associated Kent Newspapers and *Lincolnshire Life*.

By the same author

Motorworld
Jeremy Clarkson's Hot 100
Jeremy Clarkson's Planet Dagenham
Born to Be Riled
Clarkson on Cars
The World According to Clarkson
I Know You Got Soul
And Another Thing
Don't Stop Me Now
For Crying Out Loud!
Driven to Distraction
How Hard Can It Be?
Round the Bend
Is It Really Too Much To Ask?
What Could Possibly Go Wrong?
As I Was Saying . . .
If You'd Just Let Me Finish!
Really?

I Know You Got Soul

Machines with That Certain Something

JEREMY CLARKSON

PENGUIN BOOKS

PENGUIN BOOKS

UK | USA | Canada | Ireland | Australia
India | New Zealand | South Africa

Penguin Books is part of the Penguin Random House group of companies
whose addresses can be found at global.penguinrandomhouse.com.


Penguin
Random House
UK

First published by Michael Joseph 2005
Published in Penguin Books 2006
This edition published 2020
001

The picture credits on page 234 constitute an extension of this copyright page

Printed and bound in Great Britain by Clays Ltd, Elcograf S.p.A.

A CIP catalogue record for this book is available from the British Library

ISBN: 978–0–141–02292–5

www.greenpenguin.co.uk

Penguin Random House is committed to a sustainable future for our business, our readers and our planet. This book is made from Forest Stewardship Council® certified paper.

This book is dedicated to my children, Emily, Finlo and Katya, who had to walk round the house on tiptoes, and not listen to Radio One, while it was being written.

Acknowledgements

I'd like to thank my wife, who helped by locking the children in the cellar for three months and by agreeing that Radio One should not be played when 'Daddy's trying to write'. I'd also like to thank Rowland White at Penguin, who never shouted at me once.

Contents

Introduction

I suppose the inspiration for this book came from my reaction to the Concorde crash in Paris.

Normally when a plane goes down we mourn for the people on board, but on this occasion I found myself mourning, most of all, the death of the machine. How could something so wondrous and dazzling have come to grief? It really was as shocking as the death, just down the road, in fact, of Princess Diana.

The fact is that most machines are just a collection of wires and plastic. The computer, for instance, on which I've written this book has no more of a heart than a Toyota Corolla, which in turn is no more soulful than a Corby trouser press.

But some machines do have a soul. Sometimes, as is the case with Concorde and the AK47, it's because they possess that most human of qualities, a flaw, and sometimes it's because they were born carrying the genetic fingerprint of a foolish and

misguided inventor. Count Zeppelin springs to mind here.

Whatever, just about all the machines here have formed the backbone of some incredible stories, none more so than the Spitfire. Of course we remember 'the few' whose bravery held back the Nazi hordes in that balmy summer of 1940. But, secretly, we know that much of their success was attributable to the incredible speed and manoeuvrability of the aeroplane they flew.

And yes, before you raise an eyebrow, I know all about the Hurricane but it lacks the film-star looks somehow, and the glamour. And anyway, I can't pretend this book is a comprehensive list of all the machines ever made with a soul. Nor is there any scientific basis for the choices. My editor and I simply went out for lunch one day and came up with a list on the back of a napkin. They were machines we liked, picked for emotional reasons, using our hearts rather than our heads.

The hard part was choosing which machine from a particular genre should be singled out. All battleships, for instance, had soul by the bucketful principally because they were flawed and usually useless, but there was only space here to look at

one so I went for the biggest. And most useless of them all – the astonishing *Yamato*.

The next difficult bit was choosing what to leave out. The Gibson Les Paul should be here, I know, but unfortunately, before I had the chance to include it the producer of *Top Gear* rang and said I really must get back to the bothersome business of making television programmes.

Sorry.

Concorde

There was much brouhaha when the last Concorde touched down at Heathrow in the summer of 2003. Television stations went live to the scene, tears were shed and commentators talked about how it was the end of an era. And yet in the midst of all this were a handful of Guardianistas saying 'good riddance'.

They pointed out that Concorde had cost £2.1 billion to design, which, even though this was the sixties, made it three times more expensive than the Dome. And with little specks of spittle at the corner of their mouths, they went on to remind everyone that for years the great white bird was, in fact, a great white elephant.

The taxpayer had met the cost of building it, and for many, many years they'd had to dig even further into their pockets to run it. And who benefited? Well, according to those of a sandal persuasion, it certainly wasn't the ordinary working man in the street. No. It was a bunch of fat

capitalist corporate raiders going to New York to do another deal that would make life even less pleasant for the poor sods who'd paid for the plane in the first place.

If you squint a bit, it is possible to see the logic in this argument. But if you open your eyes, then I'm afraid it makes no sense at all. Concorde was indeed extremely useful for those who make and break companies and countries for a living. You could sell GEC and GM over breakfast in London and then, over a second breakfast in New York, buy Guatemala and Chad.

But for these people it was only a tool, a time-saving device, like an electric razor or a toaster. And from inside the plane it really wasn't anything special. There was no shortage of legroom but the seats were no wider than the seats you get on a National Express coach, and headroom was pinched too.

What's more, because of the weight, passengers were denied even the basic frills that are commonplace in cattle class these days. Yes, the wine was fine, and free, but there was no in-flight movie system, no little map telling you where you were, no video camera in the nose wheel. You spent

three hours in a seat with nothing to do but devise a plan for buying Peru while staring at the bald patch of the man in front, who was trying to bankrupt Poland.

Exciting? You'd think so, wouldn't you, tearing through the stratosphere at Mach 2, but actually it wasn't exciting at all. Sure, there was a meaty kick on the runway but it was no more thrustful than a BMW 330i. And there was a satisfying surge as the tail cleared Cornwall and the pilot lit the afterburners to break through the sound barrier. But you could get more of an adrenalin rush on any fairground ride.

Far, far below, people crossing the Atlantic on boats would hear the sonic boom and yet on board there wasn't even a judder as the sound barrier was breached, and there was no view either. People say you could see the curvature of the earth but really it was no more pronounced than it is from the beach. And nor was it black or purple up there because, contrary to popular belief, you were not on the edge of space. You were not even halfway there.

Concorde flew at 60,000 feet, which is twice as high as a 747 goes, and that sounds impressive. But

60,000 feet is only 11 miles and that, when you remember the moon is 240,000 miles away, is not really very far at all.

So, on the upside Concorde was quick and comfortable because it did fly above the turbulence. But on the downside it was cramped, boring and so noisy in the back that Michael Winner and Roger Moore would have fist-fights over who'd get seat 1A where it was only deafening.

I flew on Concorde twice. Once when I was given an upgrade and once as a guest on its final flight from New York. I never paid for a ticket and I never wanted to because I never saw it as a tool. For me, watching Concorde was so much better than being on it.

This is the point the Guardianistas missed. They thought the ordinary miner and nurse had paid for Concorde and derived no benefit. But we did. Because we were the ones on the ground, pointing . . .

For eighteen years I lived in Fulham, slap bang in the middle of the flight path into Heathrow, and as a result I never once heard the second item on either the six or the ten o'clock news. Every night, at 6.03 and 10.03, the gentle hum of London would be drowned out by the immense

crackling thunder of those four Olympus engines. And every night I'd go to the window to watch the source of this roar slide by.

In Barbados all the planes are made to fly miles from the coast so they don't disturb the holiday-makers. But Concorde was allowed to come right down the beaches of the West Coast, skimming the palm trees with its broken nose, the jet wash rippling the sand. To watch the Americans wetting themselves with excitement over the spectacle – and it was pure theatre – made me almost gooey with pride.

£2.1 billion? Bah! It was cheap.

It was a scientist with NASA who summed up Concorde better than anyone I've ever met. 'Putting a man on the moon was easy,' he said, 'compared to getting Concorde to work.'

First of all there were the political hurdles. To get Armstrong onto the lunar surface NASA simply furnished a bunch of German rocket scientists with a lot of American dollars and sat back to reap the rewards. But over here we had no German scientists. They refused to come here after the war because it was felt we didn't have enough money.

They were right. We had the bones of an

engine but not the funds to build a plane. So in 1962 we had to join forces with the French, who had the bones of a plane but no engine. This meant France and England would have to work together. And that's a bit like Arsenal teaming up with Manchester United. Macmillan and de Gaulle fell out after about seven minutes. No one could even agree about how Concorde should be spelled – with or without the 'e'.

It was Tony Benn, the then minister for science and technology, who pushed the deal forward, forcing the French to sign a 'no-get-out clause'. This meant that, no matter what, they would be required to stick with the project and not pull out leaving the British taxpayer holding the billion-dollar albatross.

It sounded like a good idea at the time because you can't trust Johnny Frog. However, as the years rolled by, it was a succession of shaky British governments who wanted out but couldn't because of Benn's clause in the contract.

Meanwhile the engineers were hard at work. Now you have to remember that this was a time when top-loading washing machines were considered advanced. There were no CD players or push-button phones. There were computers, but

they were the size of houses and took all day to get through the seven-times table. So Concorde was going to be designed by men, with pencils.

It seemed like a truly impossible dream. There were fighter jets capable of getting through the sound barrier, but they only had a range of fifteen minutes at full power and they were flown by RAF pilots who sat on ejector seats and needed oxygen masks. What's more, after one sortie the planes would need weeks of maintenance.

So the idea of building a plane that could fly all the way to America faster and higher than any fighter, and then turn round and come straight home again, seemed ludicrous, especially as the people inside would be wearing lounge suits, rather than g-suits.

The main problem was the atmosphere. When a plane is travelling subsonically it parts the air easily, but when it goes up past Mach 1 the air no longer knows it's coming and does not part. It smashes into the leading edges of the plane with such force that people on the ground, miles below, can actually hear it being rent asunder. This is the sonic boom.

This collision creates massive heat, so massive that Concorde really does grow by seven inches in

flight. On one early trip across the Atlantic a pilot put his hat in a space between two bulkheads and was alarmed to find on landing that the bulkheads were joined together more tightly than two coats of paint. Not until the return leg, when the plane had swelled up again, could he get his hat back, although by then it was more a mortar board really.

Some of the heat that generated this expansion transferred itself into the cabin. There was one part of the dashboard that was hot enough at Mach 2 to double up as a frying pan. The tiny windows were hot to the touch. And 10 per cent of the power produced by the engines had to be used to juice the air conditioners.

It was the heat that screwed the Americans. Like the British and French, they never foresaw millions of holidaymakers paying £99 for trips to Florida with Freddie Laker. Flying, for 50 years, had been the preserve of the rich, and as a result they thought the future lay beyond Mach 1.

Unfortunately, they felt Mach 2 wasn't fast enough, and with their SST project aimed for Mach 3. That's what finished them. They tried and tried, but at the time neither the technology nor the materials were available to get them past

the drawing board. As a result they gave up and designed the Boeing 747 instead. Subsonic, cheap transport for the masses. Well, you never know. It might work . . .

The Russians, too, developed a supersonic passenger plane that did actually fly. Into the ground. At an air show.

But even before this mishap Concordski was doomed because it had a range of just 1,500 miles, which would get it from Moscow to a point exactly 300 yards from the middle of nowhere. Technically it was clever because it could do Mach 2.2, like its European rival. Commercially it wasn't going anywhere, so Ivan jacked it in.

The British and French, however, did not give up. I have seen film of the engineers throwing an endless succession of paper darts down the wind tunnel at Bristol as they struggled to work out which shape worked best.

The second problem, after the heat, is that the supersonic shockwave has a nasty habit of sitting on the trailing edges of the wings, causing the ailerons to jam. It was this that caused a number of Spitfires to crash in the Second World War. In a dive, without realising it, the pilots were getting awfully close to Mach 1 and as a result

they were dealing with forces they couldn't comprehend. What they could comprehend, in their last moments before they hit the ground, was that for no obvious reason the controls had jammed.

It was boffins at the Miles Aircraft Corporation who figured this one out, and knew the key to supersonic flight was to lose the ailerons. The whole wing had to move. Or you needed a delta wing as was used on the Vulcan bomber, and eventually Concorde. But the shape of that wing had to be precise because, and this is not an exaggeration, life on the far side of the sound barrier is the most hostile place on earth. Mach 1 makes the Arctic Ocean or the Sahara Desert look like Battersea Park.

And if the forces were troublesome enough for the plane, they were a complete nightmare for the engines. Because if you let the spindly blades of a jet crash into the air at Mach 2, they will shatter and that will be that.

So the plane would be travelling at 1,500 mph, but the air going into the engines could only be moving at 500 mph. How do you do that? Well, you need to have paid attention in your physics lessons, that's for sure.

As the engineers toiled away the marketing

men were having even bigger problems because of Concorde's range. It was better than a fighter, and better than the Russian attempt. But it was never going to be able to cross the Pacific and even the Atlantic was a struggle. It could get to New York from London or Paris, but not from Frankfurt. This meant the number of routes it could fly was limited, and that meant the number of airlines that might buy it was equally small.

And then, after the Yom Kippur War and the subsequent oil crisis, the number dwindled from sixteen to just two. The national carriers of the countries involved. So although the engineers surmounted all the technical problems, no outsider wanted to buy their creation.

And to make matters worse, the Americans, spiteful because their supersonic plane had come to nought, invented all sorts of reasons why it should not be allowed in their air space. Farmers even argued that it would knock over their cows.

In the end just fourteen Concordes were made, the last going to Air France for just £1, and the only place you could fly to from London was Bahrain. Absurd. The greatest technological achievement of all time and no one could find a use for it.

Eventually the Americans caved in, and later still British Airways even worked out how their white elephant could be turned into a cash cow. Passengers were asked how much they thought their ticket had cost – each had PAs and assistants to deal with travel agents so they didn't know – and amazingly most guessed way above the actual price. So BA simply matched the cost to the expectation.

It seemed that Concorde's future was assured. Compared to normal planes, which bounce around the world's airports like they're on speed, BA's flagship had a very small workload. There were very few landings and take-offs. And very little time spent in the air so there was quite literally no end in sight. Concorde would keep going until another visionary kick-started a project to build a replacement.

But then one of them crashed.

There had been near misses before. Tyres had burst, sending chunks of rubber into the wings. And on one notable occasion a BA plane had damn nearly run out of fuel coming in to land at Heathrow. It actually conked out while taxiing to the terminal building.

None of these incidents had really made the