

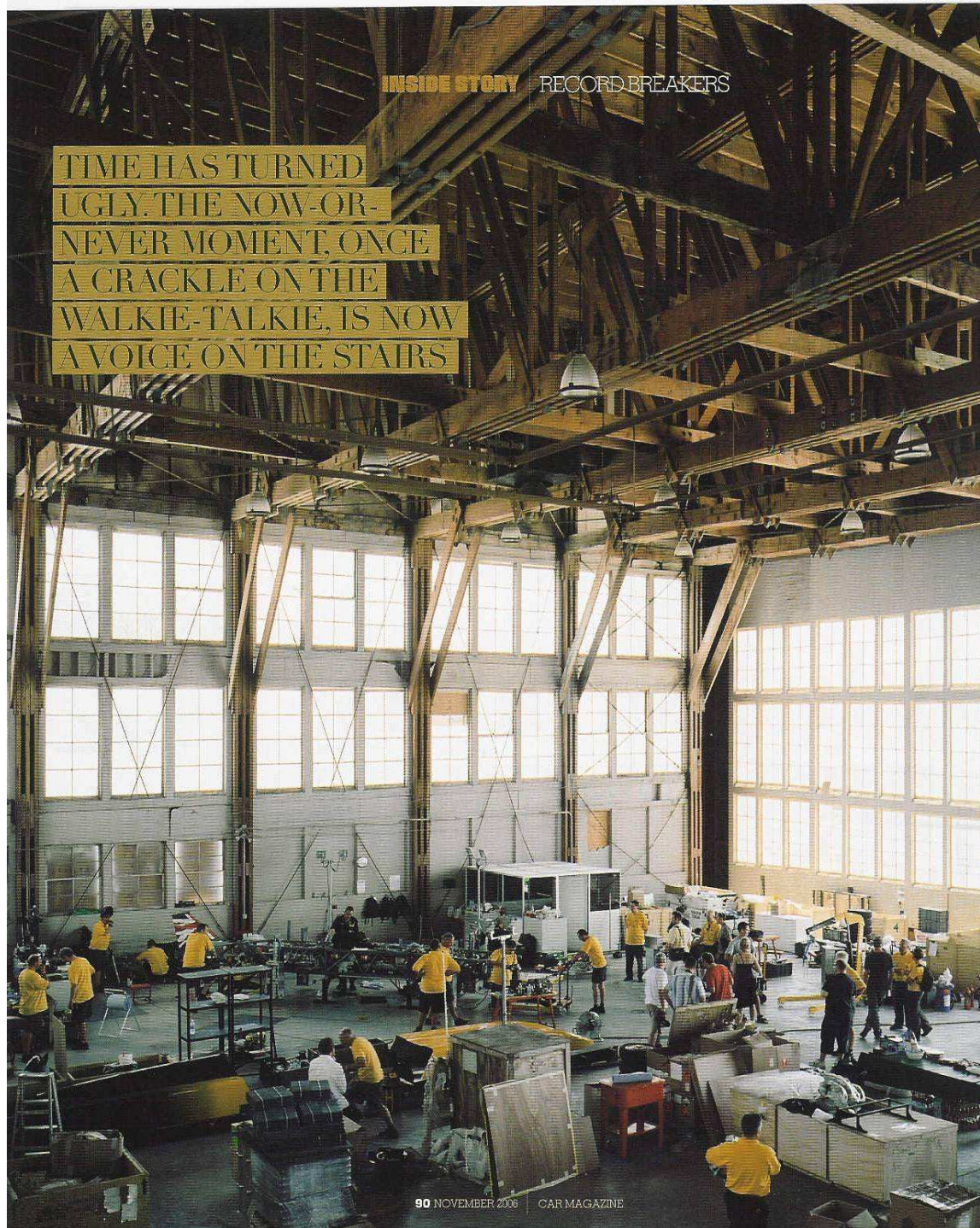
Photography Peter Dench

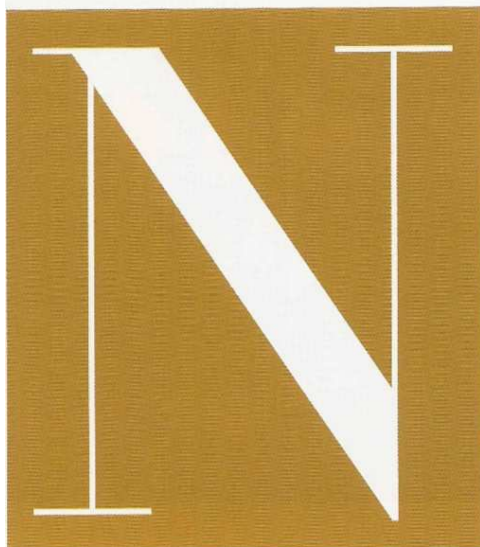
A ludicrously quick way to pass the salt

Heroes, engineers, atom
bombs and diesel engines.
Here's what happened when
JCB tried to go faster than
ever. **By Greg Fountain**



TIME HAS TURNED
UGLY. THE NOW-OR-
NEVER MOMENT, ONCE
A CRACKLE ON THE
WALKIE-TALKIE, IS NOW
A VOICE ON THE STAIRS





NOBODY IN THE HANGAR SEEMS TO BE SPEAKING, BUT the covertly exchanged glances are enough. Twenty, maybe thirty men in uniformed but at-ease order, shuffle around the carcass of a machine that is about to change the world. They have been here for what seems like weeks. The air is stultifying, thick with dust particles, picked out by shards of horizontal sunlight typical of the Utah summer, tracing through shattered glass. Shadows dance, heavy duty boots kick up shuffled clouds.

The machine's chest cavity is open, its oily drips are up, its life-support monitors concurrently grumble with the exertion of exhaust evacuation or flicker with electronic diagnosis. Time, which has for some weeks now seemed an ally, has turned ugly. The now-or-never moment – once a crackle on the walkie-talkie – is now a voice on the stairs.

Tomorrow, these plain-faced, faintly sweating gentlemen will close up the patient, wheel it out of this vast shed and onto the runway at Wendover Airfield, ready for a journey that men will talk about in hushed, respecting whispers, sixty or so years from now.

The patient is a B-29 Superfortress, nicknamed Enola Gay, and it is nearing flight readiness. It is June 27th 1945, and the oil spilled in this hangar will be the lubricant for a chain of clinical, sleep-sapping events that in just a few weeks time will render Hiroshima as flat as the dry salt lakebed at Bonneville a mile or so up the road, where history-making of a different kind has established a residency.



Despite Bonneville's reputation for high-speed jinks, which was already honed by 1945, it's doubtful whether the men of the 509th composite bomb group were thinking of landspeed records that day. More doubtful still is whether they would have believed anybody who told them that, almost exactly 61 years later, another similarly anxious, similarly uniformed bunch of guys would be here in the hangar, trying to make a couple of English-built digger engines good for 300mph.

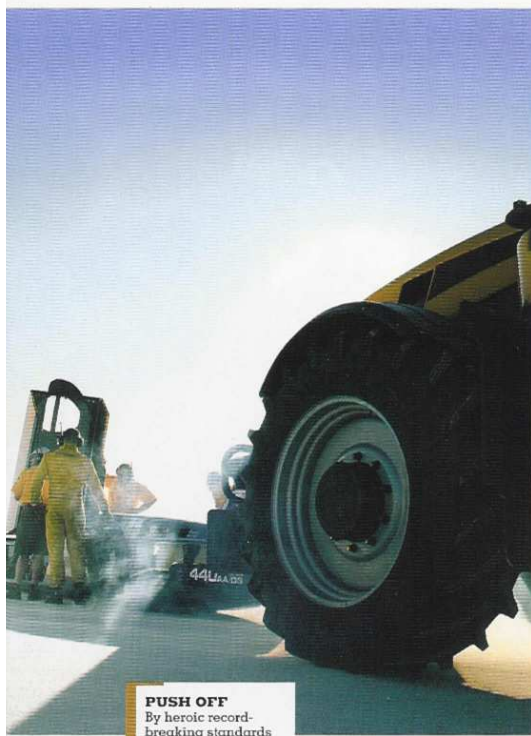
'Atomic bombs, ok, but diesel engines? With 1500bhp? Geez, those crazy Brits...'



MEN AT WORK

They brought 25 tonnes of kit, which is a quarter of a 747 cargo, so it had to be a very big shed. The engines, which normally run upright, have to be mounted on their sides, which calls for some creative spannering, and once braced they have to each develop 750bhp, with 450 percent more fuel than usual going through the injectors. Once the FIA scrutineers have sealed the engines, the team can't tweak them, so it's tense. A cracked block would be terminal. And lunch is at 11.30...





PUSH OFF

By heroic record-breaking standards the start is a bit embarrassing. Dieselmax needs a shove from a big, smoky tractor, which peels off at 40mph, after which the first thing pilot Green does is hit the brakes. Why? To hold the thing at a steady speed until the engines are up to temperature. The push-off saves the exertion of hauling 2740 kilos from a standing start, which neither of the twin six-speed gearboxes will appreciate. Spectators (right) are few, but heavy



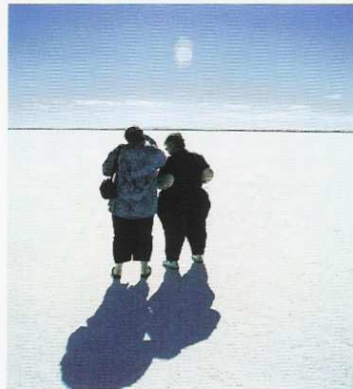
TECHNICALLY, I'M ON HOLIDAY,' CONFESSES Andy Green, aka The World's Fastest Man. He demonstrates the point by caressing a glass of red wine. 'I have an excellent day job – but this is what I like to do when I'm on leave. There's nothing like good old fashioned endeavour; taking ordinary things and making them do extraordinary things.' His eyes betray only containment, the ooze of a being operating inside his tolerances. You or I might have just mentioned we like basket weaving, albeit on a never-before-attempted scale. *He's* talking about an international landspeed record.

I'm 4200ft up, 3000 miles from home and the air pressure is roughly equivalent to 6000ft above sea level. We've brought with us a vehicle that has been tested only at sea level. Nobody's ever built something like this in 12 weeks and then expected it to perform straight out of the box, but that's why we're here. Richard Noble phoned me about it and I said yes exactly two seconds later. There's nobody here who doesn't understand the risk involved.'

Risk is, of course, a relative thing. Last time Green went for a drive on one of America's flat bits he was at the wheel of Noble's rocket-powered Thrust SSC, and the 763mph he clocked up that day in 1997 remains a record. For a man who likes to pootle along at 14 times the speed limit, this week's activities ought to offer all the drama of floating on a lilo, but that's not the point. Consider this instead: if it's so easy, what price failure?

The question seems to hang in the air on Sunday evening, just about 36 hours before launch. We're in some kind of restaurant, cowering beneath the least lamentable hotel in Wendover, just a couple of hundred yards from the runway on which the JCB Dieselmax streamliner will undergo final shakedown tomorrow. Green is calm, but then Green is always calm. Around him, however, the senior JCB team is less adept, less brilliant at burying tension beneath bravado.

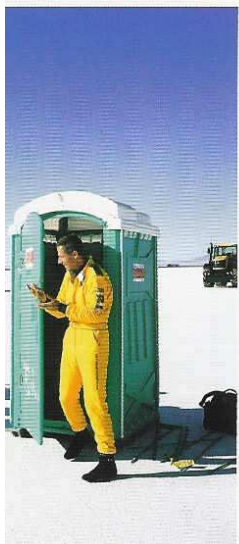
'I want the salad and I want it NOW!' hisses communications chief Daniel Ward, addressing the restaurant manager while hurling his napkin to the table. 'We agreed there would be an appetiser. Please get it sorted.' The outburst may not actually be green-leaf related; this has all the



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COOL BOX
Out on the salt in 40degC of heat, the crew raid the freezer for 200 litres of ice which, when fitted in the nose cone, cools both engines. Where's Green? In the toilet, actually



INSIDE STORY RECORD BREAKERS

symptoms of a final straw. Months – no, *years* – of planning have gone into JCB's wholly improbable attempt to use its proudly Derbyshire-made diesel engine to break a world speed record, and the hapless waitress might as well have just said she'd accidentally blown up the engine in question. Salad duly followed.

Much of the tension is derived from the scale of this mission, and you get the feeling even JCB had never really understood what the view would look like from here. The place is chock full of reporters and camera-wielders, each jostling for a view, an angle, and by Tuesday the massed ranks of US film crews will achieve throng status, stumbling over each others' tripods as they surge for The Shot.

When Sir Anthony Bamford, son and heir to the original JCB himself (Joseph Cyril), first mentioned the idea, it didn't look like this. 'He stopped me in the corridor in the autumn of 2003,' says project director Dr Tim Leverton. 'He said he was keen to do something special to showcase our new engine. I hadn't been here that long. Frankly I thought he was just being a mad old sod, so I didn't think much more about it. The next time he mentioned it to me he was fairly pointed; "Tim," he said, "I want you to start Taking This Thing Seriously"'. Next thing I knew Richard Noble had been invited to come in. We did more work on the project the week before he arrived than we'd done in the previous year.'

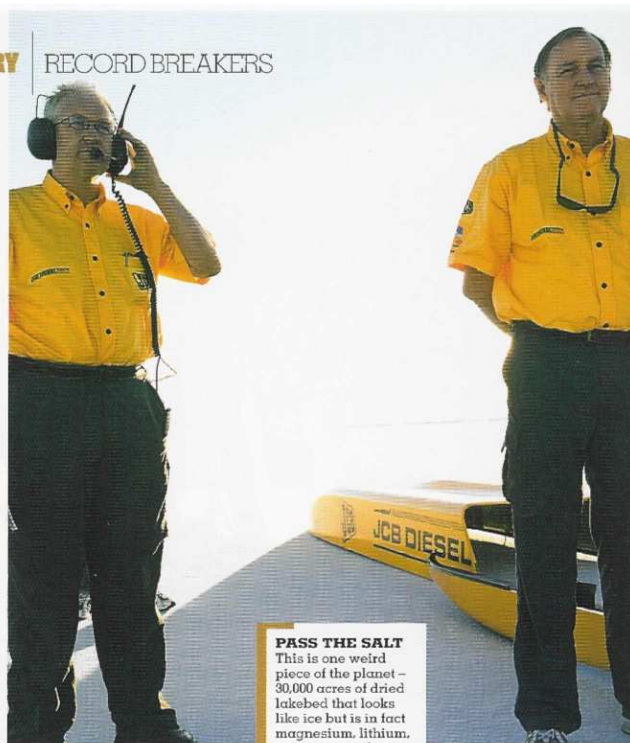
It was Noble who pointed out that, despite the existing record standing at a modest 235mph, anything less than 300mph would be a waste of effort. This presented a problem because the JCB444 engine is built to burble along with a trickly 140bhp, annoying the crap out of backed up motorists, and even at five times the output it was never going to work. 'Simple,' said Noble. 'We'll use two.'

IT IS A MEASURE OF WENDOVER'S CULTURAL AMBITION that it would really like to be Las Vegas. Few of the world's conurbations would aim so low, let alone miss the target by miles, yet the extent of Wendover's under-achievement is such that it invokes an urgent, throbbing desire to go straight back to Salt Lake City. There is nothing to do in Wendover other than play the slots, and these are arranged in banks of hundreds on the daylight-excluded, mirror-ceilinged, neon-coated ground floors of the town's four 'hotels'. At each machine perches a zimmer-framed, oxygen-tank-equipped heavyweight of variable sex, grimly getting acclimatised to what hell is going to be like when, any day now, 50 years of selecting from the US menu finally pays out.

The customers arrive in 737s, landing on the runway and, on a couple of occasions, delaying the JCB team's critical last-minute preparations. Two hours in a coach is beyond them when there's a jet option, and you wonder at the betrayed spirit of their pioneer forefathers, who rode 60 miles a day and set up a town at each stop. But these people aren't pioneers; the extent of their desire is to get out of Utah and into Nevada, where you're *allowed* to gamble, and the state line just happens to cross Main Street, exactly dissecting our hotel (the car park is in Utah but, crucially, the casino building is in Nevada).

But in one sense Wendover is a boon to the speed record breakers, because it is a great focuser of the mind. You may as well concentrate on why you came here, and try to get the job done quickly. Temptation, like snowfall, has never been recorded. Even after endless fretful hours in the hangar, the JCB boys never look as if they're hankering wistfully for a few beers in Southern Xposure, the town's only bar and the workplace of strippers so tame that even a *Blue Peter* editor would remain unvexed by footage.

But while focus is a good thing, it's beginning to unveil a picture of rising concern in the JCB team. Noble didn't physically place a spanner in the works with his twin-engine scheme, but the effect is the same. The two engines aren't working together, one or the other of them being off-boost at any one time, and with just a day left before the first



PASS THE SALT
This is one weird piece of the planet – 30,000 acres of dried lakebed that looks like ice but is in fact magnesium, lithium, potassium and sodium chloride. The main thing is, it's flat and tyres can get a grip on it. Seconds after the record, the team get scribbling excitedly (below)



**HE WAS KEEN TO DO
‘SOMETHING SPECIAL’. I
THOUGHT HE WAS JUST
BEING A MAD OLD SOD**



FAST PEOPLE
For Sir Anthony Bamford (second right) happiness is a small piece of paper and a pair of white strides. 'I'm thrilled,' he said. 'We don't loud British engineers enough, but this is what they can do.' Nobody seemed to know how to celebrate so instead they decided to come back and do it all over again tomorrow. 'I'm excited,' said Green



recorded attempt there's a whiff of angst in the thin, diesely air. The team have been here nearly two weeks, the boss is flying in tomorrow and they still haven't run the Dieselmax with its proper engines, which are frantically being bolted in right now.

The answer to the boost problem is to run a balance pipe between the two engines, a process described by Green as the 'Apollo 13 situation'—when you're making adjustments in the field you have to work with what you've got, not what you wish you had.' It works, and with the sun straying closer to the 80-miles-away horizon, the contender steps out onto the runway for a test that Better Bloody Work. Without its swoopy streamliner carbonfibre clothes on, the thing looks like what it actually is—a hunk of Corus steel tubing with a digger engine bolted at each end and a tiny carbon cockpit in the middle. Inside, Green grips a steering wheel he's not going to need (with just seven degrees of steering he can forget opposite locking) and concentrates instead on two screens bearing eight pages of data and a GPS read-out that will get confused at 223mph and return to zero. To a fighter pilot, this is all tea-sippingly simple, though it might not seem so at dawn tomorrow.

ANYBODY WHO THOUGHT THIS WORLD RECORD ATTEMPT WAS nothing to do with heavy duty earth-moving equipment should look away now. The Bonneville Salt Flats are awash with JCB-branded juggernauts, diggers, lifting platforms and, naturally enough, a bloody great tractor called Fastrac, the world's fastest ploughing tractor (not that you'd be allowed to prove such a thing out here). Fastrac has been pressed into service to give Dieselmax a huge shove off the line, saving its clutch for activities above 40mph. It looks teeth-grittingly unheroic as it chunters into place behind the streamliner, towering over it, seemingly poised to flatten.

Overhead, in the pristine blue sky, Sir Anthony's executive jet does a fly-by, and then settles into a slow, circular bank, giving him the best view of his dream giving up the ghost two miles into its first 12-mile run. Electrical meltdown. Wires chafing in the cockpit. All the hard stuff has been fixed, now the easy bit pulls the rug. But they've come too far, these folk. They've refused to smile for a reason and now they refuse to cry. They fix it.

The international diesel landspeed record is then reeled off in a couple of undramatic minutes (albeit the gap between the two required runs eases the whole effort out to about 50 minutes in total). There is so little drama when everything is happening at least six miles away from wherever you choose to stand, that it's hard to get a sense of euphoria. Sir Ant turns up in a white suit and a white Lincoln Navigator, looking like the bloke from Fantasy Island, beaming and being aristocratic in his gracious acceptance of a certificate no more impressive than the one I got for 60 metres breaststroke. There is no champagne and little whooping. Green talks of 'performance to spare', though he hastens to the single, desolate portaloos immediately afterwards, as if to remind us that he may be a hero, but he still needs to wee.

It was, in the end, so easy to achieve 328mph that they popped back next day to do it again, finally reaching 350mph, a symbolically round figure that everybody here knows could be obliterated again by anybody with some nicer tyres. The effect is unedifying, seeming to devalue the achievement they worked so long and hard for, but what the hell. It's a job well done.

Except, we seem not to know what the job actually was. Was it, as Sir Ant claims, a celebration of British engineering? Was it an almighty plug for what is certainly a very good diesel engine? Was it a huge corporate flag-waving gig? A proof of enduring endeavour? Or maybe this, passed to me so eloquently by a sagey local at the bar in Southern Exposure: 'They say you have to move Heaven and Earth to break a landspeed record out on the flats,' he philosophised blatantly. 'And these guys already know how to move earth, right...?'

Right.