



CHESTERFIELD SPECIAL CYLINDERS

CONTINUING OVER A CENTURY OF INNOVATION IN HIGH PRESSURE CYLINDERS



The Vulcan flies again!

Chesterfield contributes to one of the most extensive aviation restoration projects yet attempted

For the first time in 14 years, an Avro Vulcan - archetypal symbol of Britain's Cold War history - has taken to the skies, with just a little back-up from Chesterfield Special Cylinders. On 18 October, at the former RAF station at Bruntingthorpe, tucked away down the lanes of rural Leicestershire, Mk II Vulcan XH558 made a successful first flight, following a 6-year £6million refurbishment and restoration project of huge complexity.

Chesterfield was happy to be among around a hundred sponsors from the aviation sector and other branches of industry and business, who have contributed work and/or equipment free of charge to assist in the successful outcome of this massive engineering project on Britain's last surviving V-bomber airframe. £2.73m was also granted from the Heritage Lottery Fund in 2004. Thousands of members of the public have made individual contributions, ranging from Sir Jack Hayward's £500,000 to a schoolboy's pocket money of 94p.

Chesterfield supplied around 30 HP aircraft cylinders of between 0.44 and 10 litres capacity in as-new

condition. These cylinders are variously used for breathing and back-up actuation functions, including the breathing oxygen system, crew seat emergency breathing oxygen, rapid air start, auxiliary airborne power pack start and emergency canopy operation. Operational pressures are between 1800 and 3000 psi.

When we visited the enormous engineering hangar in May 2007, it was possible to see some of the cylinders installed in the aircraft, some in really inaccessible places - thus placing a further premium on operational reliability.

The size of the remaining task was also very evident, with two of the four Rolls Royce Olympus 202 engines, plus the giant bomb bay doors, waiting to be refitted to the aircraft, while seemingly miles of cabling was being connected and checked. It is a testimony to all the design, flight engineering and support staff that, less than 6 months later, the Vulcan took to the skies and safely carried out a 20-minute test flight, consuming around £1000 of aviation fuel in the process. [Story continued overleaf >](#)

The Vulcan takes to the skies again in October 2007, after 14 years on the ground.



Our contact on the project Colin Marshall, Logistics Manager of the Vulcan Operating Company, and Chesterfield's Sales & Marketing Director, Phil Redfern, examine one of the cylinders yet to be fitted in May 2007. In the foreground is one of the newly refurbished bomb bay doors.

Excellence recognised... again

Pressure Technologies plc - of which Chesterfield is the sole operating company - has won the Yorkshire Post Newspapers Excellence in Business Award for 2007.

The trophy was presented in Leeds - the city now ranked second only to London as a UK financial centre - during a dinner attended by more than 400 members of Yorkshire's business community.

The Award for business achievement by companies with a turnover of between £10-50M was sponsored by accountancy giant PricewaterhouseCoopers and presented by The Right Hon. William Hague MP,



The Rt. Hon. William Hague MP (left) with Chesterfield Sales & Marketing Director, Phil Redfern, Chairman, Richard Shacklady (holding the trophy), and Declan Curry, the presenter of BBC TV Business Breakfast, who hosted the evening's events.

Shadow Foreign Secretary, MP for Richmond in North Yorkshire and an out-and-out Yorkshireman, born and brought up only a few miles from Chesterfield's present factory.

The Award recognised the achievements of the business from near extinction in 2004, through the management buy-out, followed by complete re-location to Sheffield, and the flotation of Pressure Technologies as the holding company in June last year. Yet, in a period of sweeping changes in the business, the company holds record order books and nearly 80% of output is being exported. [Story continued overleaf >](#)

Like father, like son?

We have been trying to recall when was the last period that we had a father and son on the staff at the same time. Not since we re-located to Sheffield, we think.

Steve Adcock is Chesterfield's Health, Safety & Environment Officer who joined the company in March 2007. Now, son Simon has arrived as a Production Operative.

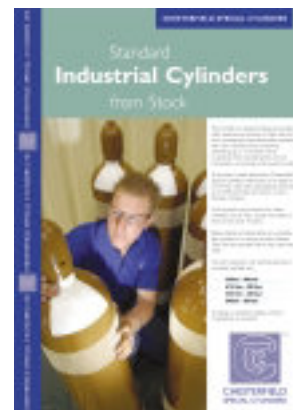
We are still unusually fortunate to have the service of long-serving staff today but, as recently as the 1970's, it was quite normal to commence work for a company and expect to be employed there for many, many years. It was not unusual to put in a word for sons and daughters to be taken on at the same firm. At its peak in the 1930's and 40's, at the former site in Chesterfield, nearly 2,000 people were on the payroll at one and the same time, so these were quite ordinary occurrences.

Today we believe it is comparatively rare, so it is even more surprising to discover that this is not the first time Simon has followed in his father's footsteps. During the time Steve was Health & Safety Advisor at Orrmac Coatings from 2000-2007, Simon was there from 2002-2005, employed as a painter and shot-blaster, then Mewap operator and forklift driver - gaining his licence for the last two jobs.



Simon also has an NVQ in motor vehicle maintenance and has been an apprentice motor vehicle mechanic, but doesn't list anything speedy or mechanical among his hobbies. However, he does get himself in the right place at the right time. In the few weeks he has been here, he has already been filmed for the Sheffield Business Awards profile of Chesterfield Special Cylinders, and found his way onto the front cover of the company promotional data sheet for our range of stock cylinders.

However, it is Adcock Senior who is likely to have the high profile in the coming months as he pilots the company's progress to achieving ISO14001, the international standard for Environmental Management Systems (EMS). Indeed, Steve is well qualified to do so, having achieved a number of professional qualifications in health and safety in the workplace, in environmental practice, and including becoming a graduate of the Institution of Occupational Safety & Health. We wish him success in this important task.



The work of the company's Charity Donations Committee for 2007 has embraced a wide variety of charitable causes.

Each month a regular fund is donated by the company and disbursed by the Committee. Its members are drawn from all parts of the business and the current team is Lee Lawrence, David Chapman, Paddy Harvey, Dave Walker, Peter Davey and Dominique Mountford.

Besides well-known national charities such as the Lifeboats and the British Heart Foundation, local charities also benefit. Among the latter is Pathways - established to help those who are homeless or rootless in the town of Chesterfield and surrounding areas. Pathways offers food, warmth, support, advice and information.

Regionally 2007 was a difficult year with two major floods during the summer. Indeed our factory suffered some flooding during June. As well as donating to the South Yorkshire Flood Appeal, a specific donation was made to help recover an important piece of local industrial heritage - the River Don Engine. Before the flood damage, it was the most powerful working steam engine remaining in Europe.



It is housed at the Kelham Island Museum in Sheffield, part of the Sheffield Industrial Museums Trust. Built in 1905, the engine originally powered an armoured plate rolling mill before being transferred to the British Steel Corporation's River Don Works where it functioned in the heavy plate mill until 1978. Since then it was obtained by the museum and returned to working order.

Chesterfield's contribution will help get it operational again - just one example of the scope of the Committee's reach. We wish them well in their deliberations in 2008.

Excellence recognised - continued

The submission for the Award also recognised the motivation of all our staff. On the day following disastrous and disruptive floods in the Sheffield area last summer, 95% were in work on or before time to help get the partially flooded manufacturing facility and offices fit for production, ensuring that promised delivery dates to customers were achieved.

The new silverware will sit alongside the trophy for the Company Achievement Award, carried off by Chesterfield Special Cylinders earlier last year in a national competition, organised by the Confederation of British Metalforming (CBM). We were also one of only 4 companies nominated for the award of Outstanding Business of the Year at the Sheffield Chamber of Commerce & Industry B2B Awards 2007. The Sheffield Chamber, of which Chesterfield is an enthusiastic member, is one of the largest and most active organisations of its kind in the UK.

Chief Executive, John Hayward was unable to attend the Awards Ceremony, but eventually got his hands on the trophy.



The Vulcan flies again! - continued

The size of the aircraft cannot fail to impress those who have not seen one close-up before. But size mattered. Together with the Victors and Valiants which made up Britain's V-force, the Vulcan was required to deliver a 10,000 pound nuclear bomb from 45,000 feet onto a target up to 3,500 miles away. 134 Vulcans were built, of which XH558 was the first of the Mk1s, entering service with the RAF in 1960 and finally retiring from display flying in 1992.

It is to be hoped that it will have a much more placid and less demanding future, with a finite service life of around 600 flying hours (expected to be around 10-15 years) appearing at air shows and on certain ceremonial and commemorative duties, thus earning its keep.

So one of the most recognisable wing shapes in the history of aviation will be visible in the skies once again, with a little bit of Chesterfield engineering tucked away and performing vital functions.



Left: Phil Redfern did not need asking twice to sit in the pilot's seat of the training cockpit. Despite the huge size of the aircraft, the crew of five had to operate in remarkably cramped spaces.

Right: Phil examines one of the Chesterfield 10-litre HP air cylinders fitted inside the Vulcan's bomb bay.