INSIDE

CYLINDER HEAD DEVELOPMENTS

With over 30 years' experience Andy Weston at Cylinder Head Developments has well and truly mastered the art of head tuning.

Andy Weston is no stranger to a modified head. He has over 30 years' experience in the industry, starting his career back in 1977 at Autosprint Racing Engines. "I learnt my trade there, working purely on modified heads for race engines," recalls Andy.

After 20 years of working at Autosprint Andy finally parted with the company and, after a brief spell at a couple of other race engine builders, decided to set up on his own in 2000.

"I'd always wanted to set up my own business, but was never able to do it financially until then. So, when I got the chance to go it alone, I did and Cylinder Head Developments was born," grins Andy.

Starting up a new business is never easy, but the reputation for top quality work, great customer service and genuine power improvements soon spread, and Cylinder Head Developments found itself building up a steady customer base.

"I've always worked on performance engines, so when I set up Cylinder Head

Performance heads are ported to allow increased flow of gases

Combustion chambers are polished to reduce carbon build up

"I GOT THE CHANCE TO GO IT ALONE, AND CYLINDER HEAD DEVELOPMENTS WAS BORN."

CHD has always got heads waiting for the special treatment

QUICK TOUR

WE TAKE A LOOK TO SEE EXACTLY HOW CYLINDER HEAD DEVELOPMENTS BREATHES MORE LIFE INTO AN ENGINE

1 CLEAN IT

The first thing Andy does is strip and thoroughly clean the head. He uses a specialist chemical cleaner which has been designed to remove all the dirty carbon build up and oil residue that sits in the head, but without damaging the head itself. This is one of the most vital processes in head modification as without a clean base to start from any further work will just be a waste of time. Andy typically spends half a day on each head purely on the cleaning process. With the head cleaned up and stripped, Andy can see what he is working with.

2 PORT IT

Before porting, Andy checks the condition of the head. He also notes the shapes, sizes and designs of the original ports to establish the best way to improve airflow. "It's not all about the physical size of the port, the shape and way the air flows is just as, if not more, important," he says.

Andy takes particular care around the port throat where it's crucial to remove the right amount of material in the right areas, otherwise it plays havoc with complex issues such as gas speed etc. This is where experience comes in.

3 CUT IT

After porting, the head is washed and cleaned again before having the valve seats cut. Most performance heads Andy works on have three angles cut into the valve seats, which helps improve the airflow both into and out of the cylinder. To do this a special three-angle bit is needed on the seat cutter. With the seats cut, Andy gives them a thorough check and the head is cleaned yet again.

4 SKIM IT

The final machining process is to ensure the head surface is totally flat. To do this it needs to be skimmed by a specialist machine. Skimming the head affects how the compression ratio of an engine is altered, so Andy needs to take all of this information into consideration when deciding how much to take off the head.

5 BUILD IT

When the machining work is complete the final stage is to reassemble the head. This includes fitting and lapping in all the valves, fitting the valve springs, cam followers and the camshaft itself. Everything is lubed up, given one final check and is then ready to go.

PICK UP AND GO

80% OF CHD'S WORK COMES IN BY COURIER. IT CAN ARRANGE TO HAVE ITEMS COLLECTED FROM AROUND THE WORLD, AND HAS WORKED ON HEADS FROM GREECE, ITALY, GERMANY AND AUSTRALIA.

Developments I was entering a small niche market. I didn't want to spread myself too thinly though so decided to not even bother with standard head reconditioning or rebuilds, and concentrated purely on modified stuff. I chose to do what I'm good at and what I know," Andy explains.

Today Cylinder Head Developments' workshop is brimming with heads in various stages of modification. Most of which are Ford items, in particular Cosworth YB and CVH heads, as Andy explains that these are still incredibly popular and account for a large chunk of his work.

Andy believes part of the reason for Cylinder Head Developments' success is down to the customer service he provides, and says that it is just as important as the finished product.

"I've made it a priority to discuss in length with people exactly what it is they want before I even start to do any work on their head. I always ask what the car will be used for, what they want from it, how much they want to spend, and what they plan to do with it in the future. I find that way people are always happy with the end product, which helps build a good name and reputation," Andy explains.

With customer service like that it is no wonder Cylinder Head Developments has built up such a reputable name and loyal client base.

Head porting requires a range of specialist tools

FIVE QUICK Q&AS WITH ANDY WESTON

Q What is your best selling product at the moment?

A *"It is still a split between the Cossie YB and the CVH heads, although we are seeing more Zetecs come in."*

Q What is your view on the current Ford tuning scene?

A *"It seems to me that people are becoming more sensible and now want a compromise between power and reliability. 10 years ago all people wanted, especially with the YBs and CVHs, was as much power as they could get. Now, they are prepared to sacrifice some power for a reliable engine, which I think is a good thing."*

Q What is the best part of your job?

A *"Getting praise from customers when they are happy with a product. It's nice when people take time out to tell you they are pleased with what you have done."*

Q What is Cylinder Head Developments' best accolade?

A *"Although it is not Ford-based, one of our heads is on Europe's most powerful fuel injected 1340cc A-Series engine."*

Q What's in store for CHD in the future?

A *"More of the same really, and keep up with modern engines by continuing development."*

"CHD'S WORKSHOP IS BRIMMING WITH HEADS IN VARIOUS STAGES OF MODIFICATION."

CHD's workload ranges from old-school V8s to hi-tech Japanese imports

All the work is carried out in-house by Andy

PRICES

Cosworth YB ported head with three-angle valve seats £464
Big-valve CVH ported head with three-angle valve seats £464
Cosworth BD10/14 cams.... £230 pair (exchange)
Zetec Kent Fast Road cams..... £230 pair (exchange)
Kent CVH35 cam kit ..... £305 (fitted)
Inlet manifold porting and port-matching.....£52
Zetec ported head with three-angle valve seats £464
Cosworth YB bronze valve guide..... £217 (fitted)

CONTACT

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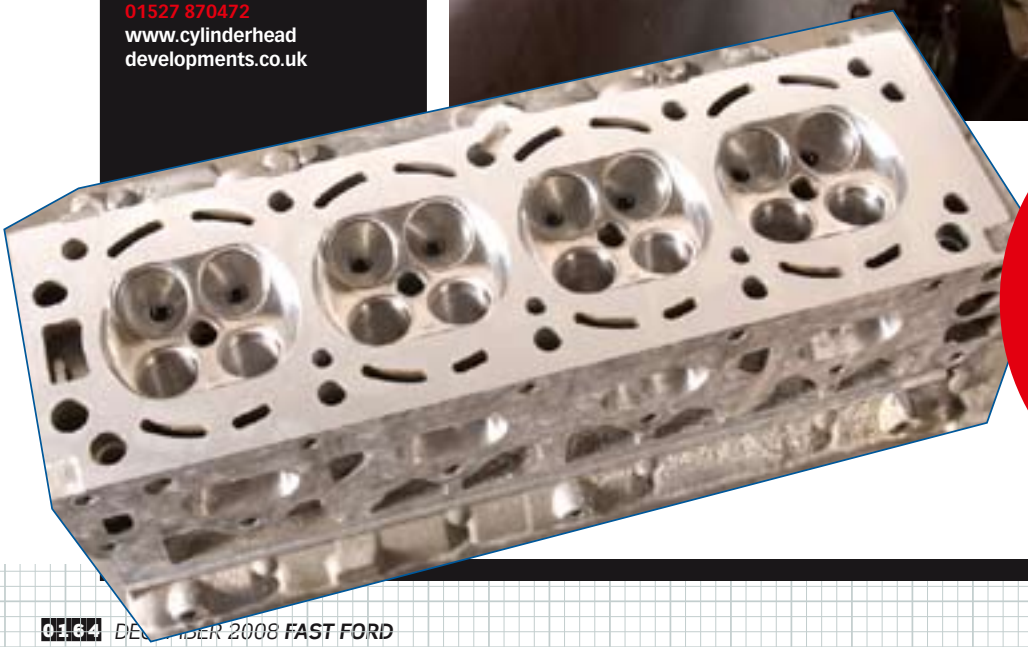

MAIN AGENT

CHD IS AN OFFICIAL DISTRIBUTOR FOR KENT CAMS, MEANING IT CAN SUPPLY PARTS WITHOUT DELAY, AND OFTEN AT A DISCOUNTED RATE TOO.