

## Tools & Tricky Bits



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We have been building performance engines for over 2 decades and have developed, via necessity, a number of specialist tools to facilitate various specialist engine building procedures such as checking dimensions, measuring cams, etc. We have also made or found many simple fixes to common problems and share these finds with our customers. Have a look over the following tricky bits to see if there is anything that will assist you to become a better engine builder!

#### On-car Valve Spring Removal Tool to suit Ford 6 Cylinder DOHC

Our Patented (Patent # 2006100221) tool is a simple device to facilitate quick and easy removal of valvetrain components in Ford 4.0L VCT twin cam Barra engines. The unique features of the tool are as follows:

- The cylinder head does not need to be removed to gain access to the valve springs
- Once the tool is fitted, all 4 valve springs per cylinder can be changed concurrently
- No special skills are required to use the tool
- The possibility of collets falling into the engine is greatly reduced

The tool saves many hours of labour when changing one or many valve springs, valve stem seals or retainers - a mechanic can change all 24 springs in about 3 hours. Changing valve springs is very common due to the varying tensions of standard springs and their rapid deterioration in service, which in turn caused erratic idling and drivability issues. They are also regularly changed in Ford turbo vehicles as higher boost can bring about premature valve float.

To use the tool, simply remove the camshafts, fit the tool to number #1 cylinder and the 4 springs can be changed in about 10 minutes. Refit the tool to the next cylinder in sequence and continue until all are changed, refit the cams and the job is done!

#### #100704

Valve spring removal tool suit Ford DOHC 6 cyl



#### Solid Checking Lifter - Ford DOHC 6 Cylinder, DOHC V8 and V10 DOHC Modular Engine

This tool is used when installing and degreasing in camshafts in the above engines. Simply dropped into the lifter gallery in place of the original hydraulic lifter it can be adjusted to provide a solid base for checking camshaft phasing. Sold in pairs.



### #100705

Solid checking lifter

### Water Bypass Pipe O-ring Support Sleeve to suit Ford Inline 6 Cylinder Engines

This is a simple fix to the common problem of a displaced O-ring on the water pump bypass line on Ford 6 cylinder engines. Simply remove the bypass tube from the water pump and slide the sleeve in place and fit a new O-ring to be assured of a leak proof seal.



### #100706

Water bypass O-ring support sleeve

### Crossman Bleeder Valve - Cooling System

Due to a low bonnet height and a relatively tall engine stance, Ford SOHC and DOHC 6 cylinder engines can suffer from air trapped in the cooling system if not bled correctly. This trapped air can cause inefficient operation of the cooling system and usually leads to localised overheating, resulting in engine damage.

Atomic produces a simple air bleeder kit to facilitate removal of air trapped in the cooling system. The Crossman valve is installed into the top of the thermostat housing (the highest point of the cooling system) and when opened, allows trapped air to escape.

Please note that basic mechanical aptitude is required to install this kit and that a thermostat housing is not included.



### #100707

Crossman Bleeder Valve Kit

### Oversize Head Dowels to suit DOHC Ford 6 Cylinder

These are required when using an oversize head stud. Made from 1045 steel, they have a larger inside diameter to accommodate our 14.3mm head studs but retain the standard outside diameter, so they simply fit in place of the stock dowels - no machining required.



### #306130

Head dowels