Specialist Components

Billet 7 Port Head Kit

Kit Description Fitting tips Wiring Loom

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Congratulations of the purchase of your SC 7 Port Cylinder Head Kit!

Kit contents:-

•Fully assembled 7 port head with 36*31 stainless one piece valves •Billet throttle bodies inc TPS sensor and throttle cable bracket

- •Typhoon ECU including "CAN dongle" and software disc
- •Wiring loom inc air temp sensor and water temp sensor
- •Coil/coil bracket and custom ignition leads, new injectors and clips
- •Trigger wheel kit and instructions
- •Rocker gear spacer shims
- •Exhaust manifold washers

Cylinder Head fitting:-

Fitment of the 7 port head is as per the usual 5 port unit with a few exceptions to take note of:-

Head gasket – SC recommend the AF470 copper head gasket for use on this head as it features fire rings suitable for alloy head use.

Torque head down to factory Rover specifications - use "hard" washers under the head nuts to stop damage to the head itself

The SC head comes drilled for 11 studs – modify your rocker cover/gasket as required for fitment if using the 11 stud option.

Rocker gear – we supply a selection of shims to allow the rockers to be spaced to suit the valve spacing on the head, try to ensure full rocker pad contact over the valve tips – *tip:* standard rocker gear springs ease this task.

The kit comes complete with stainless steel exhaust manifold "washers" to allow fitment of exhaust – we would suggest the "large bore" gasket be used and this can be trimmed so that you use only the exhaust sections of the gasket – looks neater!

Use thread lock or PTFE thread tape on the std water temp sensor in the head

Spark plugs – use NGK PLZKBR7A-G

Water temp sensor – we supply a sensor in your kit which needs to be fitted into the top hose of the engine – this sensor is for ECU operation, there are three options – a "T" piece in the top hose to allow fitment or drill and tap the thermostat housing or we can supply a billet stat housing ready drilled.

The throttle bodies come pre set from the factory but it is always advised that the balance of the individual cylinders is checked once the engine is running and the idle speed needs setting – go to AT Power website for details on balancing these parts.

Throttle cable - use a 1m general throttle cable.

Wiring:-

Your kit comes complete with a machine built OE spec wiring loom which has been designed to make fitment to the Mini very easy!





Aux connector – For tacho and (optional) Lambda sensor

On a conventional carb mini the fuse box has "spare" connection points on it for the Permanent 12v and switched 12v - use Haynes manual to determine correct position

Wiring install:- It is very important for the reliability of the wiring system that it is installed with regards to proper support, positioning and lack of tension.



Air temp sensor is Held to the fuel rail Between cyls 2+3

Note:- wiring loom clipped to fuel rail at regular intervals, smooth loops to inj Positions, stat housing with sensor fitted. The crank trigger leg of the loom is Long enough to position at the front of the engine by the alternator. Note coil position



Fuel system:- you need to Supply fuel at 3.5bar pressure To the fuel rail. This can be Single line feed or feed and Return. Top tip – Rover Mini MPI fuel tank and pump are Ideal for this conversion. With A fuel reg in the boot a single Line feed can be utilised with This tank. Rover SPI tanks Are good but need the pump Uprating to MPI spec.

Ignition coil positioning and fuel pipe run.