

Land Rover 2.25 and 2.5 Petrol Cylinder Head Exchange Condition

These notes are intended to assist customers as to the suitability of their cylinder head for exchange or remanufacture and show a number of quick visual checks to make before despatch to our works, especially where shipping cost is high.

Land Rover 2.25 and 2.5 cylinder heads are generally durable units, and damage is usually related to severe overheating and resultant cracking of the casting. Unfortunately many early Land Rovers were not equipped with temperature gauges, and could be inadvertently driven until boiled dry.

We expect wear and tear, damaged threads, some corrosion, sheared bolts (better to leave than attempt drilling), sunken seats, burnt valves and 40 + years of use etc, and these are not a problem generally.

Damage which renders a cylinder head scrap and unsuitable for exchange or remanufacture generally relates to cracks. Cast iron does not weld reliably, and we do not use mechanical "stitch" repairs. Unfortunately cracks render a cylinder head as scrap. "Oversize" valve seats fitted in previous re-workings can be an issue which unacceptably weakens the cylinder head around the valve seat, and again renders the cylinder head as scrap.

Where to look for cracks:

The combustion chambers, especially the centre two around the exhaust valves on the sharp edge of the "Squish" area. This, indicated in red areas in pictures should be scraped clean and inspected for cracks. Also check, especially early 279562 and 525183 castings for cracks between the cylinders as yellow arrow indicates.



The cylinder head should be checked for a broken back. This is a long crack running (picture right) between core plugs. This condition is quite uncommon, and is suspected to relate to rocker shaft removal without slacking remaining head bolts. An engine with coolant leaking into in the oil is a good clue of this condition.



The area between the valves should be checked. However cracks are less common in this area.

Even if your cylinder head was "working perfectly" with a crack, its presence has weakened it, and as a policy we do not sell or remanufacture heads with these defects.

No particular skill or tools are needed to make these first visual tests, just a good eye, or a low powered magnifying glass will reveal.