

Case Study: Head Stud Removal



ASAP Power was engaged by a customer to erode 3x snapped head-bolts on a FIAT bulldozer. Failure to cleanly remove the 3x snapped studs would have left the engine as scrap.

The studs were snapped at the bottom of the coolant jacket, 270mm deep.

Despite bad weather, the trailer mounted 3~ 6kVA eromobil spark eroder was deployed.

Our experienced spark erosion team set up a bracket that was mounted on the side of the cylinder block, fitted a cross table to allow for accurate X/Y positioning. Our special made magnetic stand allowed feed in the Z axis.

To view the job, a borescope had to be utilized. Using a wet vacuum the coolant was evacuated from the coolant jacket and filtered prior to re-circulation.

A custom made 10mm electrode eroded the core of the M18 stud, relieving tension in the stud. The remaining spike was then eroded using 6mm electrode which provided the necessary clearance to use an "EasyOut" style extractor to remove the remains of the thread.

With our state-of-the-art equipment and skilled technicians all 3x studs were eroded.



Head studs



Snapped stud



Eroded hole



Extracted stud

Contact Us

The eromobil is available for sale and hire from ASAP Power and is capable of eroding most conductive materials from diameters 1-40mm.

Contact us today to discuss your specific requirements:

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