

In better nick than we'd hoped

Close inspection of the Yamaha twin's engine internals reveals a relatively happy state of affairs for spannerman Rod Gibson.

LAST month I stripped Lorenzo's 1979 XS650 engine down for exploratory surgery. The bike had proved troublesome on the daily commute and had been relegated to the back of a damp cellar for almost five years, neglected and forgotten. Despite the ravages of time the engine proved fairly straightforward to dismantle and I can now turn my attention to examining the internals to see what parts need attention before the rebuild.

Picture one: With the cylinder head off the combustion chambers show signs of heavy carbon deposits, particularly on the left cylinder. This looks dry, rather than oily, and leads me to wonder if the bike had been running too rich. Before cleaning up the combustion chambers I'll take a closer look at the pistons.

Picture two: The piston crowns also have heavy carbon deposits but otherwise look in fairly good shape. A few minutes work with some steel wool and Solvol Autosol reveals shiny alloy beneath. The pistons are standard, indicating that the bike has not yet been re-bored. This gives plenty of scope for reconditioning if required.

Picture three: The ring gap measurements are well within factory tolerances. I always measure the gaps at both the top and the bottom of the stroke. No wear ever occurs at the bottom of the cylinder bore so an excessive gap here gives a measure of piston ring wear.

Any wear on the bore itself will be at the top of the stroke; if the ring gap is appreciably larger here a re-bore might be necessary to recondition the bores. These simple measurements give a quick and

accurate indication of both bore and ring condition.

Picture four: Satisfied that the bores and piston rings are serviceable, I can now turn my attention to the valve gear. Each valve is retained in place by two split collets engaged into the top valve spring collar.

A valve spring compressor is needed to compress each spring far enough to remove the collets, then the springs can be lifted off and the valves slid downwards out of their guides.

Picture five: Once again, evidence of heavy carbon deposits. The backs of all four valves need a good cleaning up with a rotary wire brush before proceeding. The inlet valve on the left has still to be cleaned off, the one on the right has been cleaned up. Carbon build-up like this won't significantly affect the running of the engine but does nothing to

