

Alloy Connecting Rods with Built-Up Crankshafts?

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Alloy Connecting Rods with Built-Up Crankshafts? Here is what Mark Huggett said in 2000 about problems with aluminum con rods: (reprinted with permission) "There was a small series of R67/3 service motorcycles with side cars produced for the ADAC (German Automobile Association) for the autobahn patrol in 1955 with aluminum con rods running directly on the crankpin with no rollers. These were very successful, and BMW adopted this system in a series of Isetta as well as the R26. Due to the very light con rods, the crank webs had very small counter weights and the motors went like hell, revved well and were as smooth as sewing machines. However, the rods suffered from metal fatigue, and the old slinger story fed all the sludge to the bearing. The steel metallic parts in the sludge embedded themselves in the aluminum, and wore away the crankpin surface. This affected almost all the R26's, so BMW reluctantly went back to the forged steel con rod and roller bearing principal. The extra rod weight meant new crank webs with larger counter weights to achieve the 55% balance factor. All BMW workshops worldwide were instructed (some time in 1958 I think) to replace the complete crankshaft in the case of a failure of the old type. The 250cc clientele of BMW were the low budget customers.... they could just afford to buy a BMW, but couldn't afford the official BMW upkeep, and so these were usually repaired by the local village mechanic. When somebody ordered a new R26 con rod, they automatically received the new forged steel con rod as the aluminum rod had been discontinued. The machine shop just rebuilt the crank without giving two hoots about the balance factor. Balancing is just an added expense, and the customer is not prepared to pay much any way. Believe you me, this was the attitude in 1958, and is still the case and attitude today. As the old R26 crankshafts are more common than the newer replacement type, we cut out triangular blocks of metal and weld them onto the small webs and remachine them to the size and spec of the later crankshaft. It is a tedious and expensive process. It would be cheaper to just drill the webs and insert wolfram heavy metal weights, but we cannot get up enough weight with this method. When a customer send us an R26 crankshaft for an overhauled replacement, we send him the same type that he sent us i.e. if he sends us an old type, we send him an old type in return with built up counter weights. If he sends us a new type, we supply him with the new type in return. If any of you out there want to ask if you can buy new aluminum con rods, forget it! I also do not know of any workshop who has successfully repaired an aluminum rod." Mark Huggett
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