

VMI engine remanufacturers contribute to CO₂ reduction

In times of deep concerns about CO₂ emissions, a product's total emissions becomes increasingly important. When considering the life cycle of components in terms of the environmental impact, the cost of service and repairs must be included.

The decision whether to remanufacture a used part or manufacture a new part is based on the relative economic value of the investment. Here, remanufacturing – besides its important economic advantages – offers an additional benefit due to its contribution to reducing global warming.



Günter Wolf, President of VMI

"Engine remanufacturers contribute substantially to CO₂ reduction as well as to the preservation of resources," says Günter Wolf, President of VMI, the German Association of Engine Remanufacturers. "In effect, CO₂ emissions can be reduced significantly by the use of remanufactured engines instead of new engines.

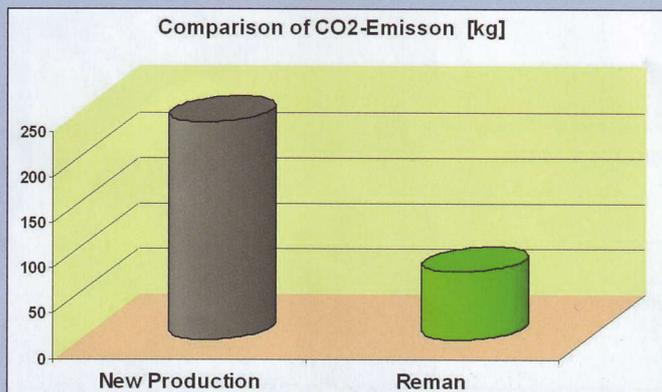
HTW of Saarland

To provide evidence, VMI, which represents 70 remanufacturing businesses in Ger-

many, decided to develop a CO₂ balance statement for remanufactured engines. In cooperation with the University of Applied Science (HTW) of Saarland in Southern Germany under Prof. Dr Ing. Harald Altjohann, an investigation was carried-out aimed at comparing CO₂ emissions from the remanufacturing process for a passenger car engine (long block) to those deriving from the manufacture of a new engine. All production processes were considered – from raw materials to the final component and the tests were carried-out at a VMI-member's own workshop.

With regard to reman, all operations are integrated in order to convert a used or failed engine into 'as good as new'.

The remanufacturing process was documented and analysed by the university in tandem with its research into the manufacturing process of a new engine. The study investigated in detail the energy requirements for the production of a comparable engine.



Conclusion

In its conclusions HTW confirms that the remanufacture of engines reduces the average CO₂ emission-level by 68.8 per cent compared to the production of a new engine while the average output from new-engine-production is about 74.4 kg.

Furthermore the average consumption of electrical energy during remanufacturing of an engine is significantly lower, i.e. about 80 per cent than the energy needed for the manufacturing a new engine.

The conclusion, therefore, is that there are considerable environmental benefits in choosing a remanufactured engine instead of a new engine.



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