

Pierburg Fuel Pumps

Possible damage through the use of bio diesel

Various applications:

Fuel pumping in vehicles,
construction machines/farm machines

Product: Electric fuel pumps

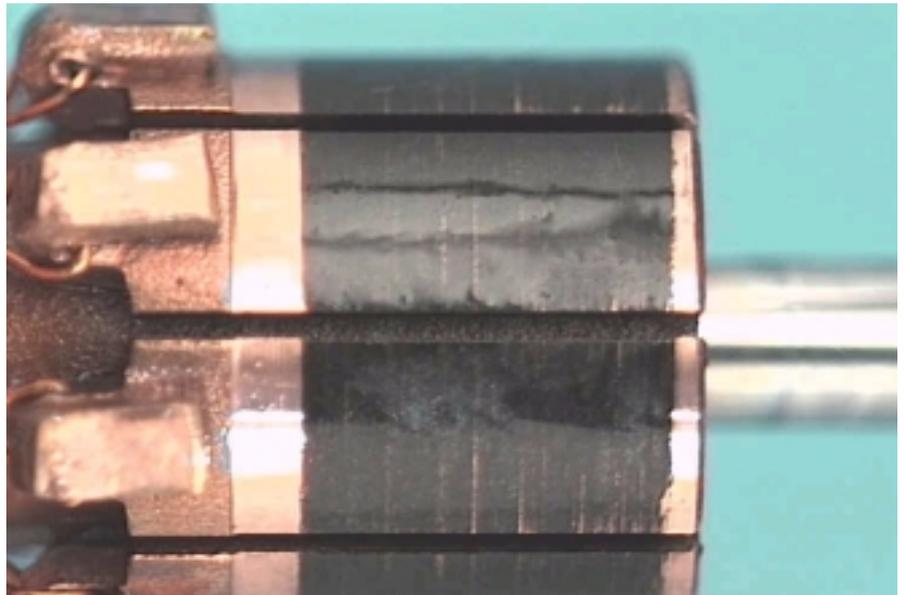
Frequent failures of our electric fuel pumps caused by bio diesel.

In the past chiefly RME (rape seed oil methyl ester) was used as bio diesel.

The *DIN EN 14214* standard for "fatty acid methyl esters" (FAME) in force since November 2003 allows beside the use of RME also the use of further blends like soya and sunflower oils as well as fatty waste oils (animal fats, fish oil etc).

Reviews performed within the scope of our quality management program have resulted in the finding that the use of bio diesel especially in the case of bio diesel fuels of low quality can cause, already after a short operating time, the following functional impairments and damage to our electric fuel pumps:

- Deposits will clog filters and block the pumps
- Deposits on commutators have an isolating effect
- Carbon brushes will burn out after a short operating time
- Contact corrosion will destroy metal parts



Damage caused by bio diesel: in this case RME (rape seed oil methyl ester) has caused after approximately 3 hours of operation an isolating coating on the commutator („pole changer“) – causing the pump to fail

In connection with the use of bio fuels we cannot grant any warranty (liability for defects) for our products.

We were forced to introduce this measure since despite all information we have provided, our fuel pumps are in many cases being operated with low quality bio diesel.

In order to avoid the aforementioned problems we are recommending upon selling of fuel pumps to point out under all circumstances that these must not be operated with bio diesel.

 This does not affect diesel fuel with a bio component share of 5% max. as introduced since January 1, 2004 to the market in accordance with DIN EN 590.