



## INA Service Info



# Failure of the water pump

## Incorrect adjustment of the high-pressure fuel pump

Manufacturer: Citroën  
 Ford  
 Opel  
 Peugeot  
 Toyota  
 Vauxhall

Engines: DW 10 F  
 DW 12 R

Part no.: 538 0077 10  
 530 0691 30



Image 1: Displaced impeller with scoring (left); correct position of the impeller (right)

See parts catalogue for current assignment

Within a relatively short operating time after repair work on the cylinder head in the above engine variants, the impeller of the water pump may be displaced on the shaft (Figure 1) and work its way into the engine block. This damage is caused by incorrect adjustment of the high pressure fuel pump during assembly.

The tensile loads that act on the toothed belt of the timing drive in these engines will vary depending on the torque requirements of the valve train and the fuel high pressure pump. If the high-pressure fuel pump is adjusted correctly, its greatest torque requirement is within a range where the valve train does not require much torque. The tensile load in the timing drive is therefore relatively uniform, meaning that the toothed belt runs with very few vibrations.

If the high-pressure fuel pump is adjusted incorrectly, the short-term high torque requirements of both systems may overlap. The resulting speed changes in the timing drive cause considerable vibration of the toothed belt. These vibrations cause the impeller to work loose from the shaft of the water pump, leading initially to noise and later to the water pump being blocked, which causes the toothed belt to fail.

**Note:**

In such cases, the adjustment of the high-pressure fuel pump must be checked and corrected in accordance with the vehicle manufacturer's instructions.

Please observe the vehicle manufacturer specifications!

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