



# Test report



Send by **Meca** **EI & Diesel i Aneby AB** **Kalletal** **01 March 2010**

## DATES OF CLAIM:

Our claim number **R0085/10** HEPU - reference: **P980**  
Your claim number **1937493** Your reference: **1420-P980**

## VEHICLE DETAILS:

Vehicle: **Volvo V70** Engine: **2.4 ltr.**  
Date part fitted: **22 August 2008** mileage when fitted: **182059**  
Date part removed: **12 February 2010** mileage when failed: **331532**  
Days of mounting: **530** complete mileage: **149473**  
Production date of the waterpump: **01 October 2007** Reason for returning: **bearing failure**

Comment:

## TECHNICAL CONTROL:

- 1. To check measurements:
- 2. To check manufacturing process:
- 3. Checking consistence (air pressure) subject to the regulations:
- 4. Checking revolutions per minute by 750rpm; 1500rpm; 2500rpm; 3300rpm:
- 5. Temperature test:
- 6. Analysis: the bearing and mechanical seal

## REALIZED RESULT OF CONTROL:

- 1. Faultless material:
- 2. Faultless manufacturing process:
- 3. Leakage: **yes** 4. The condition of the bearing **damaged**
- 4. The condition of the mechanical seal **damaged**

The complaint is **rejected** (further details, please refer to the detailed report)

## THE CAUSE OF THE DAMAGED:

Reason of the claim: **dirty fluid**

## SUPPORTING EVIDENCE:

Picture 1: Picture 3: Picture 5:  
Picture 2: Picture 4: Picture 6:

## DETAILED REPORT:

An examination of the pump did not reveal any material or manufacturing error. The bearing and seal are completely destroyed. The body rusty sediments contaminated coolant can be seen. Reason of the bearing failure is dirty and rusty fluid in the cooling circulation. First the pump became leak by rusty and dirty fluid. You can see the dirt and rust on the added pictures. The small particles of rust and dirt have grinded the karbon- and ceramiking of the mechanical-seal so strong, that they became leak. This leakage was the reason, that the water was able to come into the bearing, cause the rubber-seals of them are only against stuff and not against fluid. Between water and grease it comes to an emulsion. Lubrication stops and the bearing is broken. In this case, the mechanical seal is completely destroyed. The rubber seal and the seal rings are completely missing. This shows that the pump has not been changed despite the strong leakage and the loudly noises!

**COMMENT:** As demonstrated by the very strong destruction of the bearing and the mechanical-seal, had the engine failure can be avoided. The collapse of the bearing has made at least 1000 - 1500 km noticeable before the engine damage had entered by loud noises from the timing-belt and significant water loss. Through the timely consideration of this indication the engine failure would have been avoided.

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## DETAILED REPORT:

Pictures

