



FAILURE INFORMATION

CRACK FORMATION IN THE CYLINDER LINERS DUE TO HYDRAULIC LOCKOUT

Description of the Failure

Inner surface of the cylinder liner is cracked or broken at the top (Figure 1). Broken pieces cause damage in the piston. Piston seizure and marks of deformation occur. These marks of deformation can be observed throughout the piston.



Figure 1

Causes of the Failure

- Water or fuel is pumped into the cylinder while the engine does not operate.
- The vehicle passes over water and water enters the engine through the inlet system. The liquid inside the cylinder causes explosion during operation of the engine and pieces are broken off from the cylinder liner due to the pressure.
- The cylinder head gasket may be faulty. The coolant fluid leaking through the gasket gets into the cylinder.
- The injection nozzle needle of the system injecting fuel into the cylinder is faulty and fuel is accumulated inside the cylinder while the engine does not operate.

Recommendations

- The vehicle should not pass over waters, which are high enough to let the water enter the engine.
- The cylinder head gasket should be checked.
- The engine's fuel injection system should be checked and faulty injection nozzles should be replaced.
- The engine of the vehicle should be overhauled.

