

FACT SHEET

Plastic oil pan for commercial vehicle applications



Maximum functionality – minimum weight
Oil pan made by ElringKlinger

Plastic oil pans offer higher functional integration, less costs and weight in comparison to metallic oil pans. Moreover, bigger volume for the engine's oil is provided which leads to longer service intervals. Various components can be integrated, the complete module reduces the components during the assembly of the engine. Moreover, tailored ribbing structures and appropriate designs improve NVH and stone impact behavior.

Technology

Commercial vehicles oil pans are typically produced in a single cavity tooling on large injection machines (2700 – 3200 t clamping force) due to the size of the parts. Usually, the overall mass of polyamide is up to 9 kg shot weight. Specially injection strategies in combination with cambered tooling compensate

the anisotropic shrinkage behavior of short glass fiber reinforced thermoplastic materials. The following welding process (e.g. for the covers of the side pockets → more oil volume) or assembly and embedding processes (bolts, studs, gaskets, inserts etc.) finalize the complete module with various integrated functions.

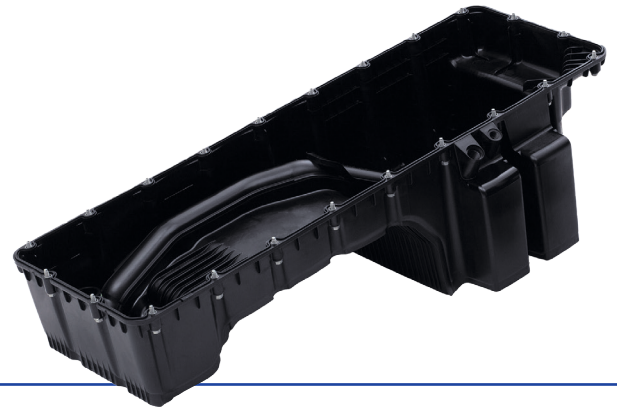
Benefits

PRODUCT BENEFITS

- + High weight reduction potential
- + Multi functional integration (sensors, oil drain plug, attachment points, wiring, clips etc.)
- + Reduction of bolts feasible
- + Excellent stone impact and NVH behavior
- + High static loads on the pan feasible
- + Sealing already integrated or potential usage of RTV as sealing agent
- + High dimensional accuracy
- + Cost reduction

MANUFACTURING PROCESS

- + No machining afterwards needed
- + High process stability and repeatability



ELRINGKLINGER – YOUR PARTNER FOR OIL PANS

Product Development (Design, Engineering and Simulation) – Process Development – Tool Shop – Tool Sampling/Prototyping – Testing – Change-Management – Series Production – Part Measurement

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