

Oil Pan Modules



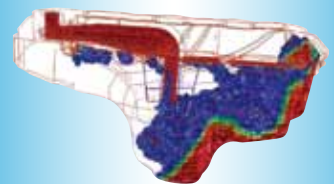
VICTOR REINZ®

Sealing Products



Integrated Thermoplastic Oil Pan Module From A Single Source.

Reducing weight under the hood is a key factor in fuel economy. Dana's advanced thermoplastic oil pan module integrates multiple parts into a single component, offering considerable reductions in weight and cost compared to a traditional stamped pan with related oil-handling components such as the pick-up tube, baffle, and gasket.



Oil Pan Modules

Applied Solutions.

As a leading cylinder-head cover module supplier, Dana has applied its considerable design expertise, analysis tools, and testing capabilities to oil pan module development. By combining proven technologies and processes with several new techniques, Dana is uniquely positioned to deliver outstanding design and manufacturing capabilities – quickly and cost-effectively.

Weight and Cost Reduction

With fuel economy an ever-growing concern in the marketplace, Dana's designers are constantly seeking new ways to reduce weight under the hood. Along with material supplier BASF, Dana has applied the advantages of thermoplastics to oil pans. Dana's Victor Reinz® plastic oil pan offers a significant weight reduction over the typical steel pan – as much as 50 percent – while a unique rib design delivers tough, reliable performance. Thermoplastics also allow for design integration, which facilitates component reduction and assembly cost savings.

Product Features

- Oil pan
- Oil windage tray
- Rubber gasket
- Oil pick-up tube
- Oil drain plug

Product Benefits

- Weight savings
- Component reduction
- Simplified assembly
- Improved noise, vibration, and harshness (NVH)
- Recyclable thermoplastic material
- Lower service cost
- Increased sump capacity



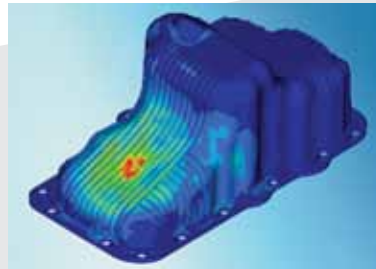
Oil Pan Product Integration

By using plastic, Dana is able to integrate additional features and functions into the design, producing a single module consisting of the pan, windage tray, rubber gasket, oil pick-up tube, and oil drain plug.



NVH Testing

Full vehicle heat rejection testing has been validated in a field study.



Computer-Aided Engineering (CAE) Analysis

Performing analysis as part of the design process demonstrated the proper positioning of the integrated sacrificial ribs, providing optimal strength and durability to the final product.



Performance Testing

Testing under simulated driving conditions successfully proved the pan's durability against stone impact.

Testing and Analysis

Analytical testing, including Computational Fluid Dynamics (CFD) and Computer-Aided Engineering (CAE), aids in the accelerated design of oil pan modules and allows customers to reach the market faster. Characteristics such as stone impact resistance, sealing pressure, and noise radiation can be predicted before tooling is produced. After prototype manufacturing, Dana can adapt validation to customer needs by testing at specified temperatures, pressures, or durability cycles.

Manufacturing

Dana's manufacturing capabilities include precision single- and multi-cavity thermoplastic injection molding, vibration welding, state-of-the-art assembly processes, and error-proofing machinery. Dana's experienced quality staff and in-house Coordinate Measuring Machine (CMM) department ensure a seamless production launch.

Dana Power Technologies Group

Global Research and Development Locations

Lisle, Illinois, USA
Gravataí, Brazil

Paris, Tennessee, USA
Wuxi, China

Oakville, Ontario, Canada
Neu-Ulm, Germany

Pune, India

For more information, please call 1-888-670-DANA (3262) or visit www.dana.com



Application Policy

Capacity ratings, features, and specifications vary depending upon the model and type of service. Application approvals must be obtained from Dana; contact your representative for application approval. We reserve the right to change or modify our product specifications, configurations, or dimensions at any time without notice.