# Cylinder-Head Cover Modules





### One Module. One Source. One Partner.

Victor Reinz<sup>®</sup> cylinder-head cover modules provide more than just dust protection, noise shielding, and air/oil separation. With other features such as sealing and isolating elements, the part is optimized for improved efficiency and faster speed-to-market.



## **Cylinder-Head Cover Modules**

#### Testing Exceeds

Standards. Leakage tests, dynamic shaker tests, heat-aging tests in thermal cycle chambers, and NVH tests ensure that Victor Reinz® cylinder-head cover modules deliver a long service life under all conceivable operating and environmental conditions.

#### **Development Partner**

Already a sealing system leader, Dana combines this experience with its design, analysis, and molding capabilities of cylinder-head covers to provide its customers a fully integrated module. One part number. One partner responsible.

Depending on the need, Dana engineers can design anything from a simple cylinder-head cover to an integrated system. Cover, gasket and grommets, fastener assemblies, spark plug seals, baffle, brass inserts, oil fill cap, air/oil separation system – you name it, Dana will deliver.

#### **Product Features**

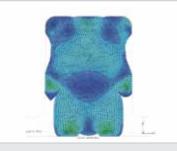
- Global experience in thermoset and thermoplastic materials
- Coupled or decoupled modules to support noise, vibration, and harshness (NVH) targets
- Integrated air/oil separation systems
- Inherent structural stiffness to reduce noise transmissibility
- Unique material formulations to improve durability

#### **Product Benefits**

- Component reduction
- · Simplified assembly
- Improved NVH
- Reduction of oil consumption
- · Recyclable thermoplastic materials



Systematic Manufacturing Highly automated production lines minimize time and cost.

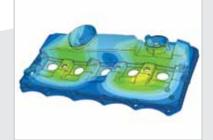


Finite Element Analysis (FEA) Optimal alignment of cylinder-head cover gasket and gasket groove is achieved via 2-D analysis.

As important as the design itself, the material and manufacturing process utilized impact the final product. Dana is experienced in using the utmost precision with injection and injection/compression molding of thermoset and thermoplastic materials. Single and dual cavity approaches can be performed.



**100% Leak Tested** Every cylinder-head cover is tested for sealing integrity.



NVH Testing Modal analysis combats noise.

#### **Plastic Advantages Over Metal**

Plastic cover modules reduce weight. Molding flexibility permits designs that deliver outstanding sound-absorption properties. Plastics enable cover modules to be manufactured simply, cost-effectively, and quickly. Time-consuming machining steps, such as turning, milling, and drilling, are eliminated because molded plastic cover modules come out of the machine in their final shape and finish. These are just a few of the many reasons to choose plastics.

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#### **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.