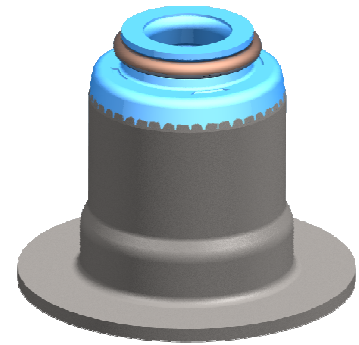
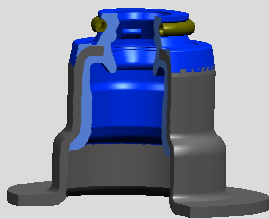


Gas Lip Valve Stem Seals

Gas lip valve stem seals are the popular choice for high pressure applications such as heavy-duty diesel engines. In high pressure applications the Simrit gas lip seal design helps to protect the main lip from blow-by and carbon build-up, which results in increased durability and reduced emissions.



With the strict regulations being imposed in the diesel engine market, the Simrit gas lip seal design not only meets, but exceeds the minimal standards. The gas lip seal design was developed to prevent the intrusion of exhaust gas sludge build-up, which is the leading cause of increased emissions. The unique seal design prevents high port pressures from opening the seal lip and causing the oil to flow backward. This protection of the main sealing lip results in increased seal durability.



Method of Operation

Valve stem seals are not typical seals. Valve stem seals are oil metering devices used to control the lubrication of the valve stem as it slides in the valve guide. If the oil metering rate is too high, engine emissions are adversely affected causing carbon build up on the valves resulting in loss of engine performance or, in extreme cases, the valves sticking. If the oil metering rate is too low, the valves will be insufficiently lubricated which could lead to valve stem wear as well as damage to the valve guide.

Comparison of Seal Function High Pressure Application

Exhaust Gas Sludge



Exhaust VSS with Step Lip

Lubricating Oil



Exhaust VSS with Step Lip & Gas Lip

Material Expertise & Service

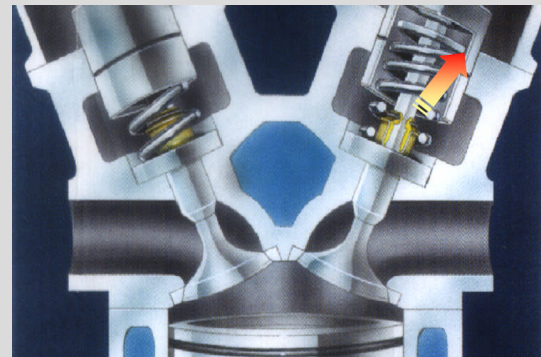
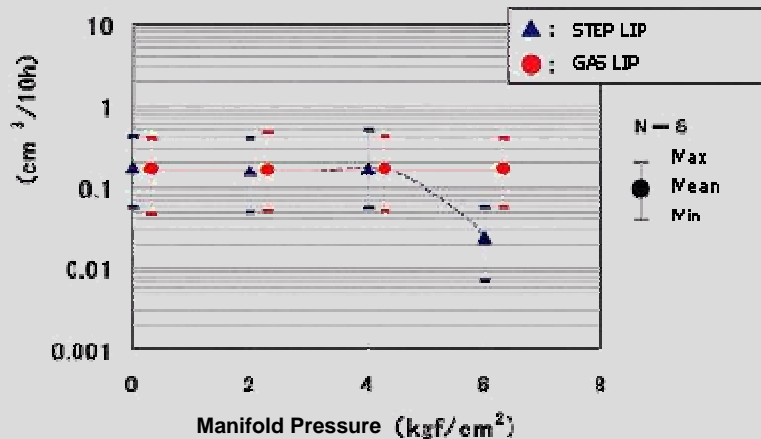
Simrit mixes rubber compounds in-house and tests at the time of production for quality. We offer an assortment of rubber colors allowing for easy part differentiation. Our molding and assembly processes includes 100% visual inspection at the source. At the time of new launch, products are matched with the production process that best meets goals for cost and performance. When new products are launched, prototype and production parts are manufactured using the same process ensuring a smooth launch from prototype to mass production.

Simrit is globally located to support you. We are ready to work with your team to understand your specific application requirements in order to offer a solution that optimizes valve durability, oil consumption and emissions.

Gas Lip Valve Stem Seals

Gas Lip Maintains Under High Manifold Pressure

Exhaust Blow-By



Benefits

- Further reduces and controls blow by over Step Lip Design
- Excellent for Diesels with higher boost levels
- Protects the main lip from blow-by and carbon build-up, which results in increased durability and reduced emissions
- Major trend for On-Road Commercial Engines which are consistently in higher boost regions >40psi
- Best choice for stringent EPA Regulations
- Reduces and controls exhaust blow-by
- Protects the main lip from carbon build-up, which results in increased durability and reduced emissions
- More consistent oil metering at adverse operating conditions versus Single Lip and Barrel Style Seals
- Increased durability due to Step Lip valve stem follow-ability
- Improved metering performance at high manifold pressures due to higher lip opening pressures (LOP)

World-Class Manufacturing

- **Zero Defect Philosophy** – Our global commitment to Six Sigma quality levels is evident in every step of every process and guarantees each part, no matter where it is produced.
- **Production Know How** – Simrit draws from more than 150 years experience in producing seals.
- **Global Production Flexibility** – With facilities world-wide we are capable of supporting production programs globally.
- **Testing** - State of the art test and measurement equipment for design validation and development.
- **System Responsible** – Our entire approach to effective sealing is based on the knowledge that consistency is the key to reliability. The complete value of our systems approach is a function of leveraging Simrit's quality and dependability in every component.