SEALED POWER®

Premium Engine Solutions

BECAUSE DOWNTIME IS NOT AN OPTION.

Engine Replacement Parts You Can Depend On.

You know what it takes to get an engine back to OE performance, and that is why you depend on Sealed Power® premium engine replacement parts. They help ensure the job is done right the first time…because downtime is not an option. Our engine parts are validated by our Engineering team to ensure superior performance and reliability for virtually any light truck or passenger car.

For over a century, Sealed Power has offered engine replacement parts that carry the load and do the job for everyday work or play vehicles. Our drive comes from our OE pedigree which we leverage across our aftermarket engine replacement parts.

Sealed Power premium parts utilize proprietary technologies including:

- *Digital Diamond Profiled piston skirts*
- *DUROSHIELD piston skirt coating*
- *PRECISION BORE pin bores*
- *Thermal Arching Compensation piston ring grooves*
- *A-Series bearing material*
- *IROX® bearing coating*
- *Ramp and Flat™ contoured flange bearing design*

This is why engine professionals rely on Sealed Power to provide the solution for today's engine rebuilds.

Pistons

Using proprietary materials and machining processes, Sealed Power manufactures pistons for everyday work or play vehicles, stock rebuilds and high-compression race engines.

Cast Pistons

- Sealed Power cast pistons are designed using a variety of alloys, from eutectic to hypereutectic, that are selected based on the demands of the application
- These alloys vary in strength, heat resistance, and thermal expansion to provide optimal durability and performance in today's engines

All pistons include these innovative features:

Thermal Arching Compensation (TAC) Ring Groove Geometry

- Ring grooves are machined with an uptilt to offset thermal "arching" distortion; uptilt squares the ring face to the cylinder for increased power and decreased oil consumption
- CNC groove machining process consistently produces precise ring groove flatness, assuring the rings sit in the groove firmly and correctly, maximizing ring seal

PRECISON BORE Pin Bores

- Pin boring process produces a rounder and smoother surface, absorbing extreme and continuous radial loads
- Allows for quieter operation and enables tighter tolerances

DUROSHIELD Skirt Coating

- Antifriction skirt coating reduces friction and related scuffing
- Increases wear resistance for long life, provides superior NVH reduction and increases horsepower
- Skirt window measures the exact skirt size for precise bore clearance

Digital Diamond Profiled (DDP) Technology

- Digital-actuated diamond turning process ensures precision barrel skirt profiles, helping control oil consumption and improving piston stability
- Proprietary technology optimizes oil wedge between skirt and cylinder wall

Weight-Matched Piston/Pin Assemblies

- To ensure a balanced engine repair, every piston set is weight-machined to 4 grams (+/- 2 grams)
- Eliminates vibration potential and ensures a smooth engine performance

Engine Bearings

Sealed Power® engine bearings are manufactured to today's precise tolerances to ensure performance and durability in the extreme heat. The advanced materials and proprietary designs meet the application-specific demands of engine rebuilds.

Premium Bearing Materials

- Proprietary A-Series material reduces or eliminates bearing wear; this environmentally friendly, bi-metal material offers corrosion resistance, superior fatigue rating and seizure resistance
- H-24 Tri-Metal copper alloys provide desirable fatigue resistance and strength characteristics for demanding applications
- Babbitt alloys provide high embeddability and conformability in camshaft bearings and sets

Innovative Coatings

IROX® Coating

- Improves fuel consumption and lowers CO_2 emissions by reducing friction and wear in hybrid and start/stop engine designs
- Enables downsizing of high output engines through increased bearing strength and reliability
- IROX coating is available on Sealed Power plain and flanged bearings

Tin Flash

- Rust inhibitor tin flash coating on Sealed Power tri-metal alloy engine bearings protects and extends bearing shelf life

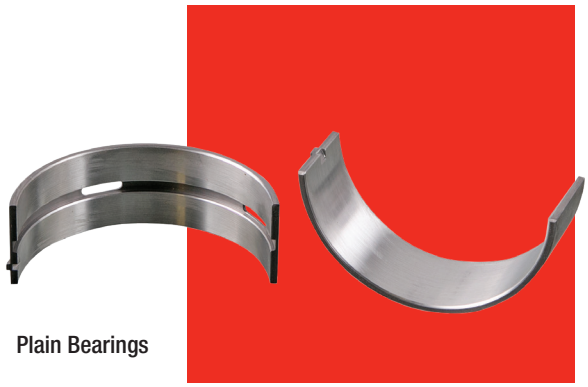
Proprietary Designs

Ramp and Flat™ Contoured Flange Face Design

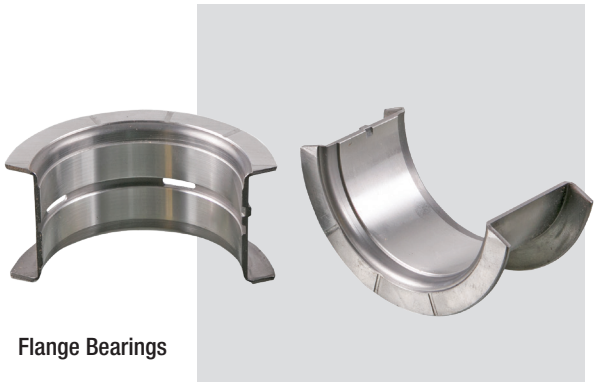
- Hydrodynamic profile design on the flange surface maintains oil onto the surface of the flange face
- Ramp and Flat design reduces wear and extends bearing life
- This design is available on many Sealed Power thrust washers and flanged bearings

Bored Design

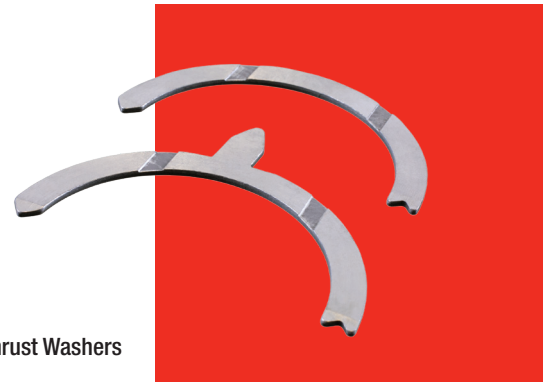
- Proprietary bored design removes contaminates from the crankshaft



Plain Bearings



Flange Bearings



Thrust Washers

Bushings

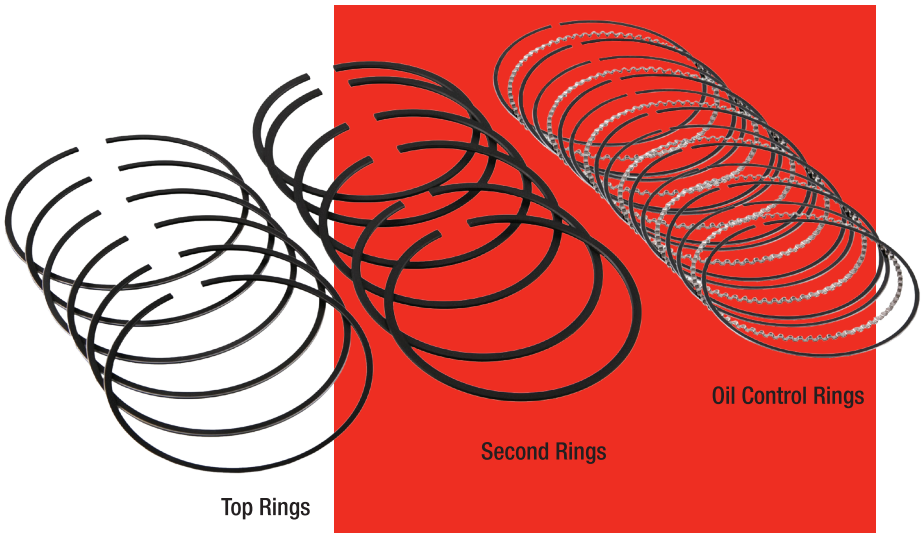
Piston Rings

Sealed Power® piston ring sets are designed for optimal horsepower, oil control and durability. They are carefully selected for the best combination of top, second and oil control rings, delivering the ideal ring technology for the application and operating environment.

Piston rings material strength ensures sealing integrity at extreme pressure and RPM.

Top Rings

- Sealed Power upper compression top rings seal combustion gases and related products, preventing blow-by and conducting heat away from the piston
- The top rings are manufactured with high strength cast iron or steel for reliable durability
- Surface treatments and coatings, including phosphating and molybdenum, resist scuffing and scoring, enhancing long-term performance



Second Rings

- Second rings, also known as lower compression “scraper” rings, scrape excess oil, reducing the potential for oil migration into the combustion chamber
- Cast iron or steel base material for excellent durability and superior oil control
- Application-specific designs, including internally-beveled rings, provide additional sealing and scraping capabilities, creating torsional twist to prevent blow-by

Oil Control Rings

- Sealed Power oil control rings prevent oil from leaking into the combustion chamber
- They come in a variety of designs, from a one-piece body to a three-piece (two rails and an expander), to compensate for bore distortion
- The body directional openings provide oil scraping action, allowing excess oil to drain back into the crankcase
- Expanders create the precise tension to load the oil ring body or rails against the piston groove and/or cylinder walls for proper oil control



SEALED POWER®

Professionals Trust Sealed Power® Premium Engine Solutions for Light Truck and Passenger Car Rebuilds

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