

# Vision-OE™ Premium Remanufactured Steering Products

- Rack and Pinion
- Power Steering Pumps
- Steering Gears



 Vision-OE™

# Remanufactured using an OE-engineered process

- All parts are inspected. Critical components are gauged and magnafluxed
- Daily contamination audits are conducted to meet OE-based standards
- 100% end-of-line functionally tested to meet OE-based specifications
- Individually serial numbered and recorded with archived test data

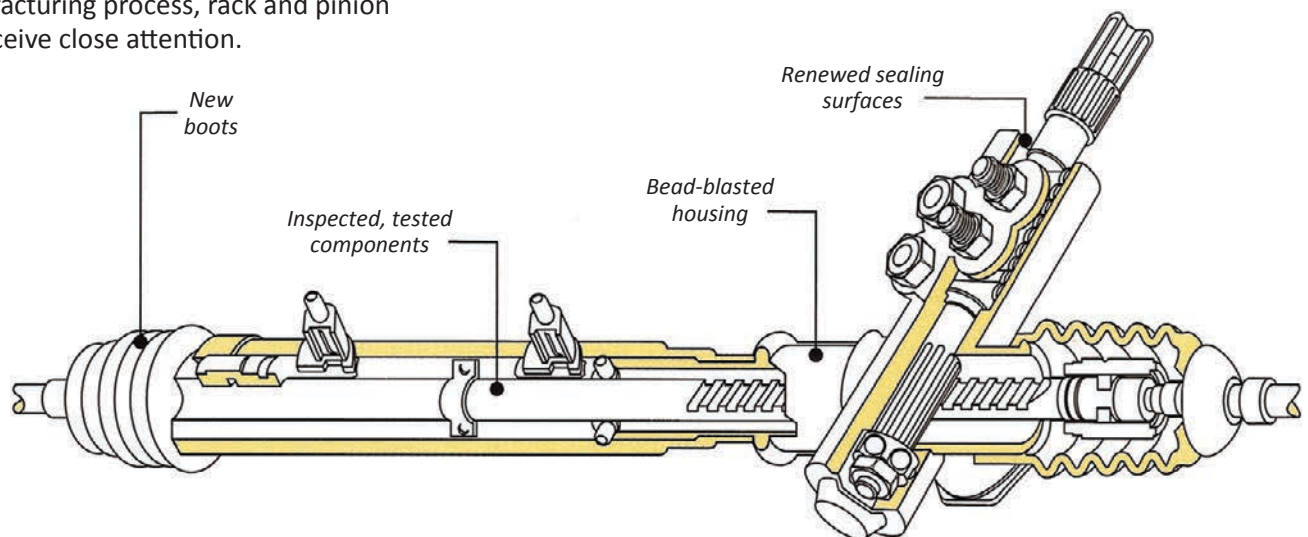
When Vision-OE™ engineers apply their OE experience and high standards to steering, the result is remanufactured rack and pinion products of exceptional quality for all makes and models.

- Components are inspected and tested for straightness and structural integrity
- Housings are bead-blasted to eliminate rust and/or corrosion
- Sealing surfaces are polished, restored and checked for smoothness
- Seals and boots are replaced with new OE-equivalent parts
- Assembled units are 100% functionally tested for leaks and steering performance

## Vision-OE™ premium remanufactured rack and pinion

*Restore like-new, leak-free steering performance*

Our goal is to provide service technicians with reman rack and pinion steering they can trust. This enables them to offer their customers dependable steering performance and great value. During our OE-engineered remanufacturing process, rack and pinion units receive close attention.



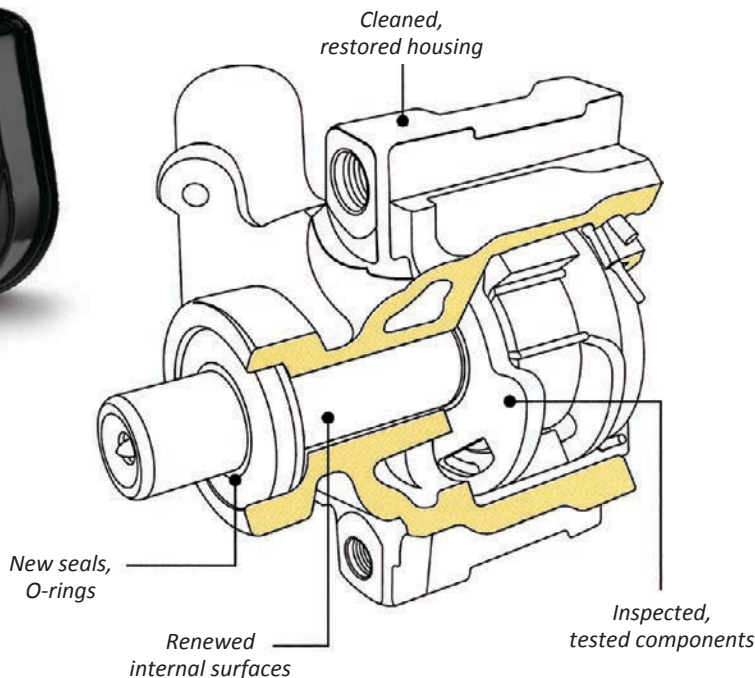
## Turn to Vision-OE™ for a new direction in steering

Automotive parts and service professionals can depend on Vision-OE™ steering products for the best all-makes, all-models coverage in the industry, plus enhanced profit opportunities, and an OE-engineered remanufacturing process with functional testing that reduces warranty claims.

## Vision-OE™ premium remanufactured power steering pumps

*Put OE-quality performance in the heart of the system*

Power steering systems depend on the hydraulic fluid circulated by the pump. When it's time to replace this vital part, technicians and their customers want performance and value that lasts. That's why we use a reman process with an OE-quality focus.



## Highlights of our OE-engineered remanufacturing process



*Gauging of parts to check critical dimensions*



*Shot-blasting rack and pinion housings removes dirt/rust and renews the appearance to "like new"*

## Our quality focus

- Components are inspected and cleaned of rust and corrosion.
- Shaft and internal surfaces are inspected, reconditioned and polished.
- Seals and O-rings are replaced with new, OE-equivalent parts.
- Assembled units are 100% functionally tested for leaks and performance.



*Pump functional testing to ensure OE-like performance*

Applying our OE-experience and standards results in remanufactured power steering pumps that offer like-new quality and dependability in a broad range of applications for all makes and models.





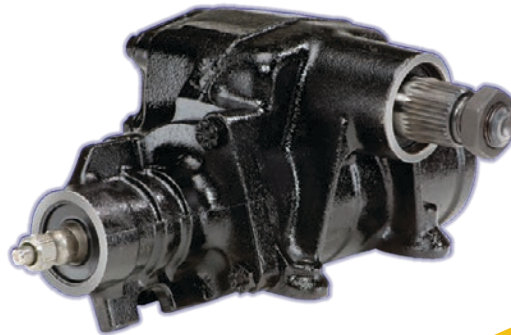
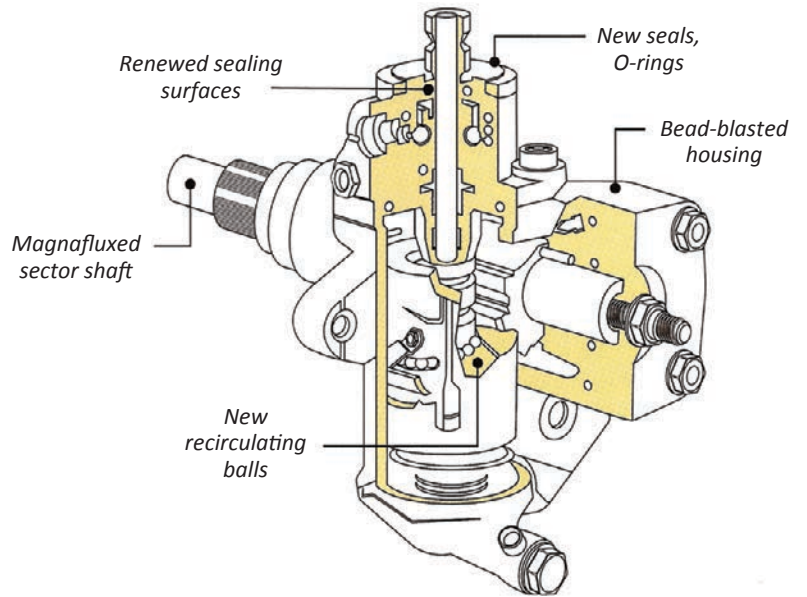
## Vision-OE™ premium remanufactured steering gears

*Help eliminate the play in worn steering systems*

Steering gears, also known as “recirculating ball gears” or “gear boxes,” are used in the steering systems for rear-wheel-drive cars and trucks. We remanufacture for all makes and models with precision, using an OE-engineered process that’s similar to how new gears are made:

- Gear housings are inspected and bead-blasted to eliminate rust and corrosion
- Sector shafts are magnafluxed to ensure structural integrity
- Sealing surfaces are inspected, reconditioned and polished
- Seals and O-rings are replaced with new, OE-equivalent parts
- Recirculating balls are 100% replaced with matched sets sized to ensure correct steering feel and performance
- Assembled units are 100% functionally tested for leaks and performance.

Because of our OE approach to remanufacturing, technicians and their customers can expect replacement steering gears that help to restore the responsive steering that cars, light trucks and SUVs had when they were new.



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## GM ELECTRONIC VARIABLE ORIFICE (EVO) STEERING SYSTEM

The “Electronic Variable Orifice” (EVO) steering system was introduced by General Motors. The vehicle’s computer monitored vehicle speed and steering wheel action to activate and deactivate a solenoid on the steering pump that controlled fluid flow to the steering gear. At slow speeds the EVO solenoid is fully open making the steering easier. At high speeds the EVO closes, restricting the flow, which makes the steering firmer.

Due to inconsistent steering feel, GM introduced a kit (19168825) to remove the EVO component from the system. The kit has an adapter and union that allows the existing high pressure hose to be connected to the back of the pump after the EVO unit was removed. The GM kit allows the pump to function as a normal steering system would. This makes the steering feel “sportier” than it is with the EVO system.

Today, the EVO solenoids are no longer available on the market. The concept GM used for replacing the EVO solenoid has been integrated into the aftermarket. The EVO actuator (bypass pipe) replacement pumps have a direct connection to the power steering pressure hose. The pumps with bypass pipes installed fit the same as the OE unit and function as a standard steering system would.

Moving forward, all remanufactured EVO pumps will be built with the bypass pipe installed.

**Pump with EVO Solenoid Installed**

Part Numbers:

731-2259P1  
731-2259P2  
731-2262P1  
731-2262P2  
731-2268P1  
731-2271P



EVO Solenoid

**Pump with Bypass Pipe Installed**



Bypass Pipe

## THE IMPORTANCE OF FILTERING POWER STEERING SYSTEMS

Today's hydraulic power steering pumps are becoming lighter, smaller and more efficient. As a result, the tolerances in which these pumps operate are becoming tighter and tighter. These design changes make it more important than ever to filter the fluid in your power steering system. The Original Equipment Suppliers have recognized this need by incorporating mesh screens in their plastic molded reservoirs (Image 1). The downside to this innovation is the lack of bypass capability within the reservoir. Eventually, this reservoir screen becomes clogged with contamination restricting the flow of power steering fluid into the pump. This can lead to cavitation, noise, excessive heat and premature failure.

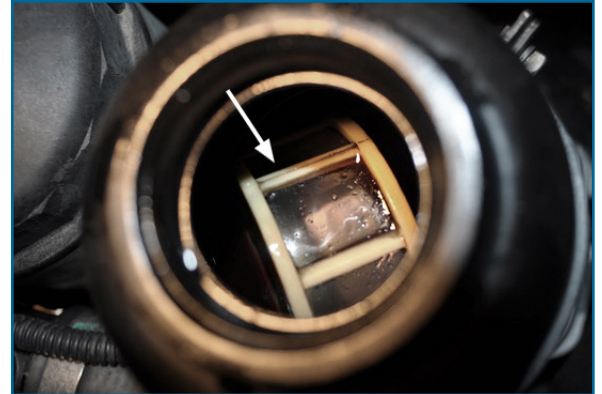


Image 1

Contamination is the number one cause of failure in a hydraulic system and the category has responded in two ways. First, a remote reservoir offering has been developed in order to supply the aftermarket. These remote reservoirs will cover many of the category's most problematic applications with a strong focus on Honda/Acura models (Image 2). On applications with little or no remote reservoir availability it is imperative the reservoir's mesh screen is inspected and cleaned before the replacement unit is installed. Secondly, install an in-line power steering filter with any pump, rack & pinion or steering gear. This will capture any contamination present after a system flush (Image 3). This inline filter contains a paper filtering element, a powerful magnet and a bypass mechanism that will trap any harmful contamination and prevent damage to critical components without restricting fluid flow. Finally, this filter will prevent the mesh reservoir screen from becoming clogged in the future, ensuring system longevity and reducing customer comebacks.



Image 2



Image 3

## NEW BLACK FINISH ON FORD CII PUMPS

Starting January 2017, BBB will be changing the finish on Ford CII pumps. Previously, the process was to ship units with a natural finish on both the reservoir and pump. With the age of the CII pump, getting a uniform color (finish) on reservoirs has become increasingly difficult. In order to ensure a uniform pump finish in every box, we are now painting the Ford CII black with a waterborne paint. Reservoirs are thoroughly cleaned, prepped and painted with the same matte black finish we use on our other reservoirs.

To differentiate the BBB remanufactured Ford CII pump, the dust cover will not be painted black. Currently, competing brands paint the entire pump black, except for the pump shaft. BBB elected not to do this to make our pump easy to identify.

Below are the affected part numbers, and pictures of the new product.

38-1001	38-1002	38-1003	38-1004	38-1005	38-1006	38-1007	38-1008
38-1009	38-1010	38-1011	38-1012	38-1013	38-1014	38-1015	38-1016
38-1017	38-1018	38-1019	38-1020	38-1021	38-1022	38-1023	38-1024
38-1025	38-1026	38-1027	38-1028	38-1029			

711-2113	711-2114	711-2115	711-2116	711-2117	711-2118	711-2119	711-2120
711-2121	711-2122	711-2123	711-2124	711-2125	711-2126	711-2127	711-2128
711-2128P	711-2130	711-2131	711-2131P	711-2133	711-2134	711-2135	711-2136
711-2137	711-2138	711-2139	711-2140	711-2141			



Old Pump



New Pump

Unpainted dust cover identifies pump as BBB unit.