## P-series bearings

These are not to be confused with the standard passenger car and light truck parts for the same retention applications which also have a "P" suffix letter. These high performance parts have unique core part numbers different from the standard parts for the same application. P series parts are the oldest series of Clevite high performance bearings. The rod bearings in this series typically have the greatest amount of eccentricity. Most rod bearings are available either with or without dowel holes for use in aluminum rods. Most P series main sets are full grooved to maximize oil flow to the rod bearings. Both rods and mains have high crush for maximum retention, and a reduced overlay thickness to prevent overlay fatigue, sometimes referred to as hen tracking.

Rod bearings use a hardened steel back for added strength and resistance to fretting. Extra clearance rod bearings are available for .001" additional clearance and select fitting. Use the P series rods where extremely high RPM's cause severe rod bore close-in. This is typically indicated by nearly full parting line to parting line shaft contact with bearings having less eccentricity. Use P series mains where higher eccentricity is desired to narrow bearing contact patterns and to provide increased oiling to rod earings. Rod bearing oil starvation is typically indicated by polishing and smearing of the bearing surface, possibly accompanied by discoloration predominantly concentrated at the axial center of the bearings.





## **Deltawall P-series bearings**

Deltawall bearings are only available for the early and late small block Chevrolet connecting rods. These bearings incorporate a patented design which produces a tighter clearance in the upper or rod half bearing to spread firing loads over more of the bearing surface, while providing greater clearance in the lower or cap half bearing to allow for rod bore close-in and to maintain oil flow for cool running. The upper and lower bearing shells differ in centerline wall thickness by .002". The upper is .001" thicker than a standard equal wall bearing, and the lower is .001" thinner than an equal wall design for the same application. Use Deltawall rod bearings in engines which operate over a broad range of RPM's with only brief periods of operation at maximum RPM; such as engines running on road courses or short tracks where the engine pulls hard through its mid-range.





## H-series bearings

These bearings are identified by a letter H in the part number suffix. Part numbering is based on the same core number as the standard passenger car parts for the same application. These bearings were developed primarily for use in NASCAR type racing, but are suitable for all types of competition engines.

H series bearings have a medium level of eccentricity, high crush, and rod bearings have a hardened steel back and thin overlay. These bearings also have enlarged chamfers for greater crankshaft fillet clearance and are made without flash plating for better seating. Bearings with .001" extra clearance are available for standard size shafts and carry the suffix HX" (X = extra

clearance). Rod bearings are available with or without dowel holes (HD = with, H = without), main bearings are available with standard 180 degrees upper half grooving and with full 360 degrees grooving (H = 180 degrees, HG 360 degrees). Use H series bearings with crankshafts that have oversize fillets and where engines run in the medium to high RPM range. H series bearings should be used if contact patterns obtained with P series parts are too narrow. Contact patterns should ideally cover 2/3 to 3/4 of the bearing surface. See accompanying contact pattern diagrams. If you aren't sure which type of performance bearing to start with, the H series bearing will be your best choice. Please note: Some "H" series bearings will no longer be available with enlarged chamfers. Instead, the bearings will be narrowed in place of the enlarged chamfer to provide greater crankshaft fillet clearance. The new narrowed bearings will be available with a "HN" suffix and will be replacing the standard "H" suffix part number.





# K-series bearings

These bearings are identified by a letter K in the part number suffix. Part numbering is based on the same core number as the high performance part and will service the same application. These bearings were developed primarily for high performance applications and all types of competition engines. K series bearings have a proprietary moly/graphite treatment applied to the bearings surface, but not the bearing parting lines. The PTFE carrier material gives good low load start-up protection. The moly serves as a high pressure, high load dry film anti-wear agent. Graphite provides additional protection across the broad range of temperatures, especially when oil flow is marginal and is especially slippery with an oil film. These bearings, which are also referred to as TriArmor<sup>™</sup>, still offer the strength and durability of the legendary Clevite TriMetal<sup>™</sup> bearing construction coupled with the latest in coating technology.



#### Narrow wear pattern



Too much eccentricity. Use the H-Series to correct this.

#### Wide wear pattern



Too little eccentricity. Use the P-Series to correct this.

### Ideal wear pattern



The wear pattern should cover 2/3 - 3/4 of the bearing surface area.



## V-series bearings

These parts essentially duplicate the former Vandervell parts under the Clevite part numbering system. (Same core part no. as standard passenger car parts but with a suffix letter "V").

V series rod bearings typically have low to medium eccentricity and a hardened steel back. All V series main sets use a single piece thrust bearing rather than the former Vandervell assembled type of construction. V series parts are not available with oversize chamfers. Extra clearance parts are available with a suffix VX (.001" extra clearance), and VXX (.002" extra clearance) for some applications. V series bearings do not have flash plating on the steel back. Narrowed parts are available with a VN suffix for some applications. These are made to accommodate increased crankshaft fillet clearance.

The chief difference between the V series and other Clevite TriMetal bearings is the use of a lead-indium overlay. Use V series bearings if prior experience has shown a preference for the lead-indium type of overlay. Lead indium overlay offers somewhat better conformability than leadtin-copper overlay with slightly reduced wear resistance.





### M-series bearings

Clevite "Micro" bearings make up the M series. These are special purpose bearings having a nominal .006" thick babbitt lining on a hardened steel back. M series rod bearings have been slightly narrowed at one end to provide extra fillet clearance without the need of a large chamfer. The lower rod shells have a dowel hole for use in aluminum rods with dowel pins. M series mains have enlarged chamfers and, for certain applications, oil holes and oil grooves have also been enlarged. Use M series parts to take advantage of the high degree of conformability offered by the babbitt lining. These parts are intended mainly for engines where severe crankshaft deflections cause edge loading of the bearings. Under these operating conditions bearing service life will be very short.

Frequent inspections are recommended and bearings should be replaced at the first signs of distress.



