

# WEATHERLY INDEX 002 Catalog No. EB-40-16 2016 Supersedes EB-40-14

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Use Of Clevite® engine bearings & engine parts, MAHLE Original® pistons and rings and Victor Reinz® gaskets products in aircraft or other specialty equipment may be a violation of Local, State or Federal Regulatory Agency laws, rules and regulations.

These products are intended solely for automotive applications. Under absolutely NO circumstances should these products ever be used in non-automotive applications including, without limitation, aircraft engines, medical equipment, atomic energy devices or reactors.

"Federal, State and local laws restrict the removal, rendering inoperative, or in some cases the modification of factory installed emission devices or systems. California restricts the use of parts which could increase emissions in vehicles designed for use on public streets or

highways. The sale or installation on emission controlled vehicles of certain emission control components not approved by the California Air Resources Board, which alter or modify the original design or performance of such vehicle's emission control system is prohibited. Some of the parts listed and offered for sale in this catalog may fall within the above restrictions. Such parts are intended only for use on off-road vehicles competing in competitive events or on other types of vehicles which are exempt from the applicable emission control laws. Installation of these parts on vehicles subject to emission control laws may be prohibited.

MAHLE Aftermarket recommends that the applicable emission control laws be reviewed before considering the installation of add-on or modified parts."

### Information at your fingertips

MAHLE Aftermarket - the technology leader in both products and electronic support materials - announces the electronic catalog expansion. These are a few of the features to make searching cyberspace for engine parts easier than ever:

- Interactive search capabilities
- New part data updated daily
- Real-time visibility of new products and added coverage
- Immediate updating of product images and specification data
- All products sold by MAHLE Aftermarket are visible in one search
- Competitive part number interchanges
- Dynamic part number look-up



### **Engine bearing catalog system**

They are arranged in alphabetical sequence with the manufacturer's name appearing in bold-face type at the outer margins of each page. The index at the front of this catalog will help to easily locate the desired manufacturer.

Each manufacturer listing also includes information on separate model lines and which engines are available for particular years.

### To find the correct Clevite part number:

- 1. Use the manufacturer's index in the front of this catalog to locate the vehicle manufacturer listing desired.
- 2. Turn to the indicated manufacturer section, and using the engine data provided, locate the corresponding block number listed to the right of the desired engine. Model data is also included to help identify what engines are used in particular models during regular production years.
- 3. Go to the block indicated and locate the quadrant with the appropriate part name desired (i.e. Rod Bearing, Cam Bearing Set, Main Bearing Set). Special notes regarding application data will be stated on the line directly under the part number (i.e. year breaks, serial number breaks). Pay particular attention to any special symbol footnotes listed, which call out alternate materials available and the availability of new, superseded or discontinued items.
- 4. Scan across to the part number required, making sure to select the desired undersize from the sizes that are currently available.

Each manufacturer listing includes **five** distinct sections. The **first** section, found at the beginning of each listing, consists of engine data used to assist in the correct identification of engines used by the manufacturer. Engine codes are also included for all European and

Japanese engines to help identify them. The **second** section consists of model data with correct engines used in specific vehicles and model years. The **third** section consists of original equipment connecting rod forging numbers referenced to the correct block number for rod bearing applications. The **fourth** section consists of original equipment crankshaft forging numbers references to the correct block number for main bearing applications. The **fifth** section consists of the actual set listings and pertinent shop data specifications.

Engines using the same parts are grouped together to save space in the listings. Engines are arranged first by number of cylinders in ascending order (i.e. 4 cylinder, 6 cylinder, 8 cylinder), and then by displacement in ascending order (i.e. 200-229, 231-252, 260 diesel). Each block in the fifth section is divided into four different quadrants. Each quadrant has information pertaining to the specific engines listed on the application data line above it. The following pages will help you in specifying the correct bearing part numbers and undersizes desired.

Quadrant A data includes the types of bearing and number of pairs required (if applicable), the bearing material designation (see chart on following pages), the Clevite® part number and all available undersizes. Positions for individual bearings and thrust washers within a set are also indicated to ensure proper installation in the engine. Any special application or installation information needed appears as a "NOTE" message under the affected set or individual part number. If a main bearing set does not include required thrust washers, the main set listed above it will have a NOTE reading "Requires thrust washers set [set number]."

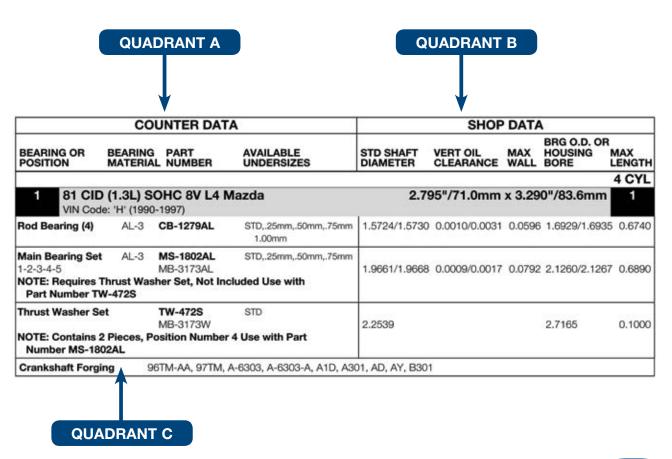
**Quadrant B** consists of shop data specifications corresponding to the individual Clevite® bearing

directly to its left in Quadrant A. This detailed shop data is divided into five columns reading from left to right:

- 1. Standard shaft diameter
- 2. Vertical oil clearance
- 3. Maximum wall at crown
- 4. Bearing outside diameter or housing bore
- 5. Maximum bearing length

All shop data is expressed in inch sizes, even if the engine is manufactured to metric specifications (a reminder of this appears in Quadrant B of all metric engines).

**Quadrant C** consists of connecting rod and crankshaft forging numbers that correspond to each particular engine in the block. These numbers will help identify the correct connecting rod bearings or main bearing sets for engines listed. Connecting rod forging numbers are listed as "C/S Forging."





### Major causes of bearing failure

As you know, every automotive engine part will eventually wear out. And if every part always performed for the full length of its expected life, your job would be fairly simple - to replace parts that have worn. Unfortunately, we cannot always count on an engine part failing only because its normal lifespan is exceeded. A technician must not only be a "replacer of parts" but, like a doctor, he must be capable of diagnosing his "patient" to determine why a part failed prematurely. The table below lists the eight major causes of premature engine bearing failure, along with percentage figures which indicate how often each has been found to be the prime contributor to a bearing's premature failure. However, it is important to note that in many cases a premature bearing failure is due to a combination of several of these causes.

### MAJOR CAUSES OF PREMATURE BEARING FAILURE

Dirt	45.4%
Misassembly	12.8%
Misalignment	12.6%
Insufficient Lubrication	11.4%
Overloading	8.1%
Corrosion	3.7%
Improper Journal Finish	3.2%
Other	2.8%

Thus we can reason that if a technician merely replaces a damaged bearing in an engine, without determining the cause of its failure, more than 99% of the time he will be subjecting the replacement bearing to the same cause that was responsible for the original failure. What this all means is that just as a doctor cannot cure a patient until he has determined what ails him, so, too, a technician cannot correct the cause of premature bearing failure until he first determines what causes the failure.

Each failure is organized, for your convenience, into four major subjects:

- Appearance an illustration and brief description of a bearing that has failed due to a specific cause.
- Damaging Action what actually damaged the bearing under the conditions which were present.
- Possible Causes a listing of those factors capable of creating the particular damaging action
- **4.** Corrective Action the action that should be taken to correct the cause of failure.

### Normal Appearance





Uniform wear pattern over approximately 2/3 of the bearing's surface. Wear should diminish near the parting line ends of the bearing and the wear pattern should extend uniformly across the bearing in the axial direction.

### Foreign particles in lining

### **APPEARANCE**

Foreign particles are embedded in the lining of the bearing. Scratch marks may also be visible on the bearing surface.

### **DAMAGING ACTION**

Dust, dirt, abrasives and/or metallic particles, present in the oil supply, embed in the soft babbitt bearing lining, displacing metal and creating a high-spot.

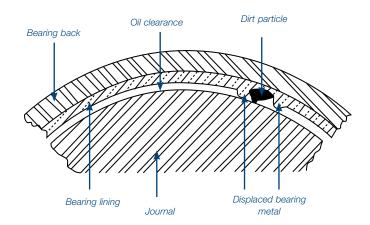
The high-spot may be large enough to make contact with the journal causing a rubbing action that can lead to the eventual breakdown and rupture of the bearing lining. Foreign particles may embed only partially and the protruding portion may come in contact with the journal and cause a grinding wheel action.

### **POSSIBLE CAUSES**

- 1. Improper cleaning of the engine and/or parts prior to assembly.
- Road dirt and sand entering the engine through the air-intake manifold or faulty air filtration.
- 3. Wear of other engine parts, resulting in small fragments of these parts entering the engine's oil supply.
- 4. Neglected oil filter and/or air filter replacement.

- Inspect journal surfaced and regrind if excesssive wear is discovered.
- 2. Install new bearings, following proper cleaning procedures.
- Recommend that the operator have the oil, air filter, oil filter and crankcase breatherfilter replaced as recommended by the manufacturer.





### Foreign particles on bearing back

### **APPEARANCE**

A localized area of wear can be seen on the bearing surface. Also, evidence of foreign particle(s) may be visible on the bearing back or bearing housing directly behind the area of surface wear.

#### **DAMAGING ACTION**

Foreign particles between the bearing and its housing prevent the entire area of the bearing back from being in contact with the housing base. As a result, the transfer of heat away from the bearing surface is not uniform causing localized heating of the bearing surface which reduces the life of the bearing.

Also, an uneven distribution of the load causes an abnormally high pressure area on the bearing surface, increasing localized wear on this material.

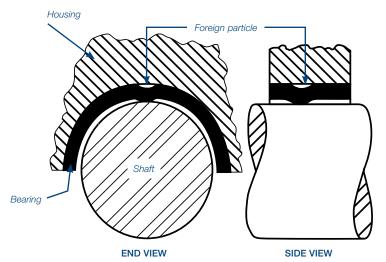
### **POSSIBLE CAUSES**

Dirt, dust abrasives and/or metallic particles either present in the engine at the time of assembly or created by a burr removal operation can become lodged between the bearing back and bearing housing during engine operation.

- Inspect journal surfaced and regrind if excesssive wear is discovered.
- 2. Install new bearings following proper cleaning and burr removal procedures.



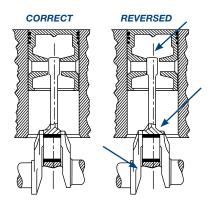




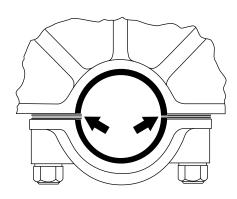
### Misassembly

Engine bearings will not function properly if they are installed incorrectly. In many cases, misassembly will result in premature failure of the bearing.

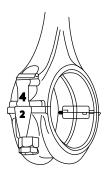
The following are typical assembly errors most often made in the installation of engine bearings.

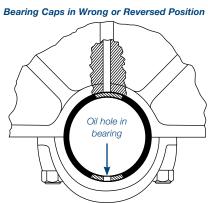


Position of Offset Connecting Rod Reversed

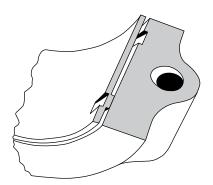


Improper Shim Installation

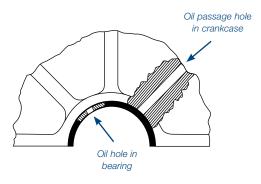




**Bearing Halves Reversed** 



**Locating Lugs Not Nested** 



Bearing Oil Hole Not Aligned With Oil Passage Hole



### Overlay fatigue

### **APPEARANCE**

All or part of the bearing surface covered by a network of fine cracks limited in depth to just the .0005" thick surface layer.

#### **DAMAGING ACTION**

Often the appearance is worse than the actual problem. Overlay fatigue is typically caused by the localized overloading of the bearing surface. Once the fine cracks form, the remaining overlay material will flow to fill in the cracks and relieve the load concentration. If the entire bearing surface shows this condition, it's an indication of overloading, possibly due to detonation or use of a standard bearing in a high performance application. If the bearing has seen the end of it's natural service life and the problem is noticed, proceed with normal repairs.



### **POSSIBLE CAUSES**

Overloading. Babbitt overlay materials are intended to provide surface action, reduce friction, accommodate slight misalignment and embed foreign particles. Babbitt materials don't have much fatigue strength and a heavily loaded engine can have enough rod bore flex under load to fatigue the overlay material and cause fractures.

- 1. If the service life for the old bearing was adequate, replace with the same type of bearing to obtain a similar service life.
- 2. If the service life of the old bearing was too short, replace with a heavier duty bearing to obtain a longer life.
- 3. Replace all other bearings (main, connectiong rod and camshaft) as their remaining service life may be short.
- Switch to Clevite H-Series racing bearings or TriArmor™ coated bearings if available.



### Excessive crush

### **APPEARANCE**

Bearing may have localized polishing or wear near the parting lines or adjacent to an oil hole. Contact frequently appears in an "X" shape pattern when at an oil hole.

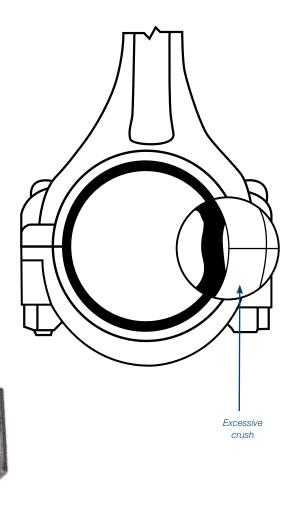
### **DAMAGING ACTION**

Bearing wall increased in thickness due to upset (yielding) of the steel back. This causes localized shaft contact with resulting polishing and wear.

#### **POSSIBLE CAUSES**

Bearings are designed to be a slight interference fit in their housing bore. Bearing "crush", which is designed into the bearing, controls this. Installing a bearing in an undersize housing hole increases crush and will cause the steel back to yield and get thicker at the point of least resistance. This is generally at an oil hole or adjacent to the parting lines if there is no hole.

- 1. Verify that the bearing installed was correct for the application.
- 2. Inspect housing for correct size within manufacturers limits and resize as required.
- 3. All Clevite high performance, as well as many standard passenger car and heavy duty diesel bearings are designed with maximum crush to provide the greatest amount of retention. Never try to reduce clearance by installing a bearing in a housing smaller than the minimum size specified.





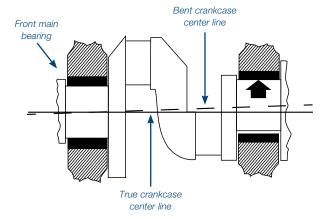
### Bent or twisted connecting rod

### **APPEARANCE**

Bent rods will exhibit heavy wear on diagonally opposite sides of each shell, typically in an edge-loaded pattern. Twisted rods will exhibit wear running diagonally across the bearing surface.

### **DAMAGING ACTION**

A bent or twisted connecting rod results in misalignment of the bore, causing the bearing to be cocked so the bearing edge makes metal-to-metal contact with the journal which can cause excessive wear on the bearing surface.



### **POSSIBLE CAUSES**

The most common cause of a bent rod is a previous engine failure such as a blown head gasket, allowing the cylinder to fill with coolant or a dropped valve causing a piston and rod to go under extreme load, resulting in rod deformation.

A twist is most likely introduced during the manufacturing or reconditioning process if upper and lower bores are not maintained parallel.

- Bent and twisted rods must not be re-used but either repaired or replaced. Re-use will result in the same failure.
- 2. Install new bearings, following proper cleaning procedures.



### Oil starvation / marginal oil film

### **APPEARANCE**

This failure is very common, but difficult to diagnose, especially for a person not seeing many bearing failures. The reason is the progression from early stage scratching from the journal surface penetrating the oil film and contacting the bearing, to ultimate failure (hot short) which may occur quickly and all inside the engine. Distress generally starts at the center of the bearing and progresses toward the outer edges.

#### **DAMAGING ACTION**

The absence of a sufficient oil film between the bearing and the journal allows for metal-to-metal contact. The resulting wiping action causes premature bearing failure.

### **POSSIBLE CAUSES**

- 1. Too little bearing oil clearance
- 2. Too much bearing clearance combined with heavy loads
- 3. Amount, quality and viscosity of the oil
- 4. Oil delivery or oil pressure issues
- 5. Misassembled parts blocking off oil holes
- 6. Dry start / no pre-lube
- High cylinder pressure causing reduced oil film thickness

- 1. Double-check all measurements taken during the bearing selection procedure to catch any errors in calculation. This can be done during assembly with Clevite Plastigage®
- 2. Check to be sure that the replacement bearing is the correct one for the application.
- Check the journals for damage and regrind if necessary
- 4. Check the engine for possible blockage of oil passages, oil suction screen and oil filter.
- 5. Check the operation of the oil pump and pressure relief valve.
- 6. Be sure that the oil holes are properly indexed when installing the replacement bearings.
- 7. Make sure the oil quality, additive base and viscosity is correct for the application.
- 8. Always prime the lubrication system before the engine is started for the first time.
- 9. Install new bearings, following proper cleaning procedures.



### Coated bearings

The exclusive Clevite® TriArmor™ engine bearings feature a .0003" thick dry film coating on the bearing surface providing extraordinary protection and lubricity. Enhanced wear characteristics increase bearing life in race engines and high performance street engines.

Now, high performance engine builders can enjoy the strength and durability of the legendary Clevite® TriMetal™ bearing construction coupled with the latest in coating technology - right out of the box.

The line of Clevite® TriArmor™ rod and main bearings include popular Ford, GM and Chrysler models as well as popular Sport Compact applications.

### **Exclusive Dry Film Treatment**

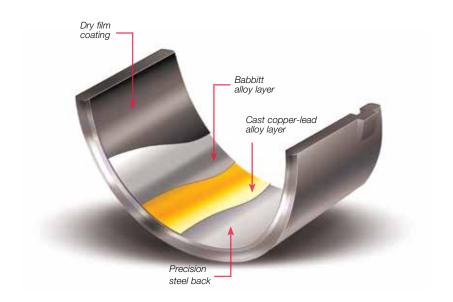
For years, engine builders have experimented with coating engine bearings for race engines and high performance street engines, with varying degrees of success. Now, MAHLE

engineers, after extensive research and development, have devised TriArmor™, a proprietary dry film coating.

Central to this breakthrough is the exclusive dry film and unique application and low temperature cure processes. These processes provide extremely uniform thickness coupled with unparalleled adhesion, all while protecting the metallurgical integrity of the bearing during the coating procedure.

The result? A .0003" thick protective coating that offers:

- Reduced friction and drag, resulting in increased horsepower
- Protection during start-up
- Embedability to resist damage from debris
- Ability to withstand extreme temperatures and pressures
- Conformability for distressed or imperfect surfaces
- Extraordinary strength and durability



### Coated bearing features & benefits

### **Tech Info**

In developing TriArmor™ materials and processing, MAHLE engineers relied on the science of tribology, the study of design, friction, wear, and lubrication characteristics of interacting surfaces. With our existing body of knowledge based on decades of producing bearings for street and track, this model enabled us to offer the most advanced and efficient coating material possible. The material gives good low load start-up protection. The coating

serves as a high pressure, high load dry film antiwear agent. It also provides additional protection across a broad range of temperatures, especially when oil flow is marginal and is especially slippery with an oil film.

### **Exclusive Clevite TriArmor™ Features**

- Coverage for Ford, GM and Chrysler as well as popular Sport Compact Applications
- Legendary Clevite quality

Feature	Advantage	Benefit
Dry Film Coating	Low friction	Reduces drag & increases HP
Dry Film Coating	Self-lubricating	Helps fight dry starts
Dry Film Coating	High strength	Good support for oil film
Dry Film Coating	Resists wear	Fights unfavorable surface finishes
Dry Film Coating	Not temperature sensitive	Protects hot or cold
Rated for 500 F 1	Resists breakdown	Welcomes tough racing applications
Rated for 600 F 2	Extra margin	Defends against severe conditions
Low Temp Cure	Bearing friendly	Protects metallurgical integrity of bearing
Inert Wear Layer	Conformability	Adapts as needed to the "real engine"
OEM Caliber processes	Superior quality	Tightest controls of thickness and curing temps
1 Continuous 2 Intermittent	. , ,	<u> </u>

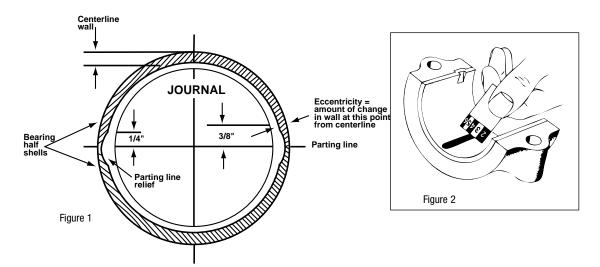
## How much clearance do your bearings need?

How much clearance do I need for my rod, main or camshaft bearings? This is one of the most frequently asked questions. Unfortunately, there isn't one simple answer that suits every case. Engine application, lubricant selection and operating conditions will dictate different clearance levels. This isn't to say we can't generalize on at least a starting point.

First, let's define how and where clearance should be measured. Half shell rod and main bearings do not have a uniform wall. The wall is thickest at 90 degrees from the split and drops off a prescribed amount toward each parting line, depending on the bearings intended application. This drop off is called "Eccentricity." In addition, there is a relief at the parting lines. Eccentricity is used to tailor the bearing shell to its mating hardware and to provide for hardware deflections in operation. Eccentricity also helps to promote oil film formation by providing a wedge shape in the clearance space. The relief at each parting line insures that there will not be a step at the split line due to bearing cap shift or the mating of bearing shells that differ slightly in thickness within allowed tolerance limits. (See figure 1.)

For these reasons, bearing clearances are specified as "vertical clearance" and must be measured at 90 degrees to the split line. The best method of measurement is with a dial bore gage that measures the bearing inside diameter when the bearings are installed at the specified torque without the shaft in place. Measurements should be taken at front, center and rear of each bearing position. Another common method of checking clearance is through the use of Clevite® Plastigage®. (See figure 2.)

For most applications .00075 to .0010" (three quarters to one thousandth of an inch) of clearance per inch of shaft diameter is a reasonable starting point. For example a 2.000" shaft diameter would require .0015 to .0020" bearing clearance. (.00075 X 2.000" = .0015" and .0010 X 2.000" = .0020") Using this formula will provide a safe starting point for most applications. For high performance engines it is recommended that .0005" be added to the maximum value determined by the above calculation. The recommendation for our 2.000" shaft would be .0025" of clearance.



Remember however, that these are only recommended starting points. The engine and its application will tell us where to go from these starting points. For example, a passenger car engine assembled at .0010" per inch of shaft diameter might turn out to be noisy on start-up, especially if the engine has an aluminum block. Most passenger car engines are originally assembled by "select fitting" to achieve clearances that are less than what would result from random selection of mating parts. This is because the stack-up of manufacturing tolerances on the mating parts may exceed the acceptable level for control of noise and vibration. In addition, most new passenger car engines are now designed to use 5W-30 weight oils to reduce HP loss and conserve energy. These lighter weight oils are capable of flowing more freely through tighter clearances.

Let's pick some typical manufacturing tolerances and look at the potential clearance range that results. A tolerance range (from min. to max. sizes) of .0010" is typical for most crankshaft journals as well as both rod and main bearing housing bores. If the engine uses bimetal bearings the wall tolerance is .0003" per shell or .0006" in total. Adding these up we get .0010" for the housing + .0010" for the shaft + .0006" for the bearings = .0026" total clearance variation possible due to mating part manufacturing tolerances. If our minimum assembled clearance is just .0005" this makes the maximum possible .0031." (.0005" min. + .0026 tolerance range = .0031" max.) For normal passenger car application .0031" of bearing clearance would generally be too much. However, if we take the same engine, let's say a small V-8, and put it in a truck used to pull a camping trailer and use a heavier weight oil, the larger clearance would be more acceptable.

Clearance is also somewhat of a safety factor when imperfections in alignment and component geometry creep in. As surfaces are more perfectly machined and finished, sensitivity to oil film break down is reduced and tighter clearances can be tolerated. Tighter clearances are desirable because they cause the curvature of the shaft and bearing to be more closely matched. This results in a broader oil film that spreads the load over more of the bearing surface thus reducing the pressure within the oil film and on the bearing surface. This will in turn improve bearing life and performance. Typically a used bearing should exhibit signs of use over 2/3 to 3/4 of its ID surface in the most heavily loaded half. (Lower main and upper rod halves.)

Clearance is just one of many variables that effects bearing performance. In addition, things like oil viscosity, which is determined by oil type and grade selection, engine operating temperature, oil pressure, engine RPM, oil hole drillings in both the block and crankshaft, bearing grooving and other bearing design features all interrelate in the function of an engines lubricating system.

Lighter weight oils have less resistance to flow, consequently their use will result in greater oil flow and possibly less oil pressure, especially at larger clearances. All oils thin out as they heat up; multi-grade oils, however, don't thin out as rapidly as straight grades. Original Equipment clearance specifications are necessarily tight due to the use of energy conserving light-weight

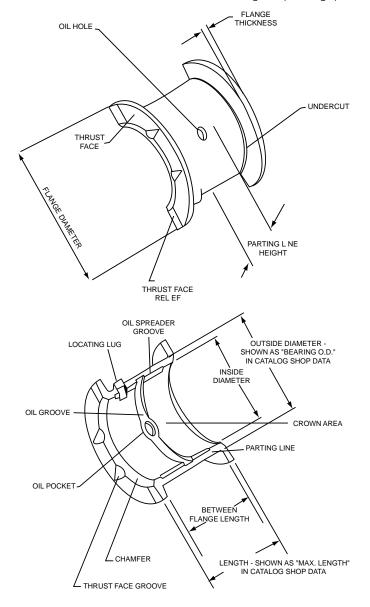
### Bearing clearance

oils, relatively high operating temperatures and a concern for control of noise and vibration, especially in aluminum blocks.

High performance engines on the other hand, typically employ greater bearing clearances for a number of reasons. Their higher operating speeds result in considerably higher oil temperatures and an accompanying loss in oil viscosity due to fluid film friction that increases with shaft speed. Increased clearance provides less sensitivity to shaft, block and connecting rod deflections and the resulting misalignments that result from the higher levels of loading in these engines. Use of synthetic oils with their better flow properties can help to reduce fluid film friction.

Friction and horsepower loss are prime concerns in high performance engines for obvious reasons. As a result, the coating of various engine components with friction reducing compounds has become common practice. Clevite offers TriArmor™ coated bearings for selected High Performance applications. Clevite wants to provide high performance engine builders with Clevite® performance series bearings already coated with a friction reducing surface treatment. Use of these coated bearings may result in slightly less clearance than the uncoated Clevite® high performance parts for the same application. This will typically be in the range of .0005." This is because the coating, although expected to remain in place during service, is considered to be somewhat of a sacrificial layer. Some amount of the coating will be removed during break-in and operation resulting in a slight increase in clearance. This is the reason no adjustment in bearing machining dimensions was made to allow for coating application.

Bearing clearance is not a subject that can be addressed without taking into account numerous variables including; geometry of the parts, oil viscosity, oil temperature, engine load, shaft diameter, bearing coatings and one's own ability to accurately measure and assess these variables.



## Influence of grooving on main bearing performance

Various forms of main bearing grooving have been used over the years. We are frequently asked what difference grooving makes.

First, it's essential to understand that bearings depend on a film of oil to keep them separated from the shaft surface. This oil film is developed by shaft rotation. As the shaft rotates it pulls oil into the loaded area of the bearing and rides up on this film much like a tire hydroplaning on wet pavement. Grooving in a bearing acts like tread in a tire to break up the oil film. While you want your tires to grip the road, you don't want your bearings to grip the shaft.

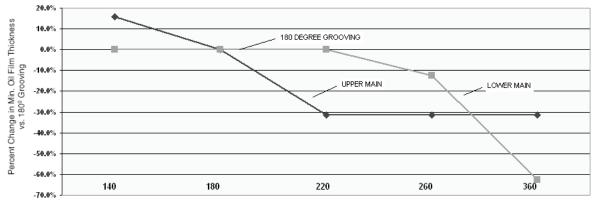
The primary reason for having any grooving in a main bearing is to provide oil to the connecting rods. Without rod bearings to feed, a simple oil hole would be sufficient to lubricate a main bearing. Many early engines used full grooved bearings and some even used multiple grooves. As engine and bearing technology developed, bearing grooving was removed from modern lower main bearings. The result is in a thicker film of oil for the shaft to ride on. This provides a

greater safety margin and improved bearing life. Upper main shells, which see lower loads than the lowers, have retained a groove to supply the connecting rods with oil.

In an effort to develop the best possible main bearing designs for performance engines, we've investigated the effects of main bearing grooving on bearing performance. The graphs illustrate that a simple 180 degree groove in the upper main shell is still the best overall design.

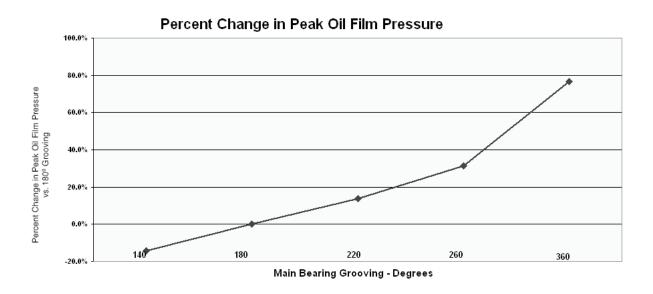
While a slightly shorter groove of 140 degrees provides a marginal gain, most of the benefit is to the upper shell, which doesn't need improvement. On the other hand, extending the groove into the lower half, even as little as 20 degrees at each parting line (220 degrees in total), takes away from upper bearing performance without providing any benefit to the lower half. It's also interesting to note that as groove length increases so do horsepower loss and peak oil film pressure which is transmitted directly to the bearing.

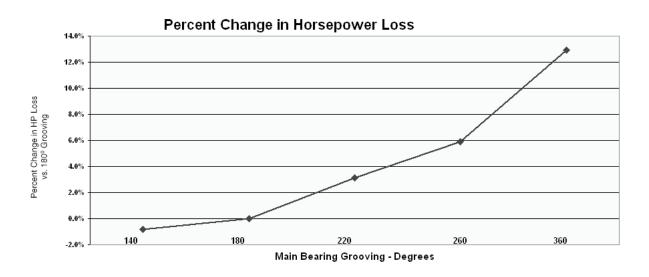
### Percent Change in Minimum Oil Film Thickness



Main Bearing Grooving - Degrees

### Main bearing grooving







1

### Crankshaft grinding and polishing

Crankshaft journal surfaces should be ground and polished to a surface finish of 15 micro inches roughness average Ra or better. Journals on highly loaded crankshafts such as diesel engines or high performance racing engines require a finish of 10 micro inches Ra or better.

The above is a simple straight forward specification which can be measured with special equipment. However, there is more to generating a ground and polished surface than just meeting the roughness specification. To prevent rapid, premature wear of the crankshaft bearings and to aid in the formation of an oil film, journal surfaces must be ground opposite to engine rotation and polished in the direction of rotation. This recommendation can cause a great deal of confusion in actual execution. Understanding the reasons behind the recommendation and examination of the following illustrations will help make the recommendation more clear.

Metal removal tends to raise burrs. This is true of nearly all metal removal processes. Different processes create different types of burrs. Grinding and polishing produces burrs that are so small that we can't see or feel them but they are there and can damage bearings if the shaft surface is not generated in the proper way. Rather than "burrs," let's call what results from grinding and polishing "microscopic fuzz." This better describes what is left by these processes. This microscopic fuzz has a grain or lay to it like the hair on a dog's back. Figure 1 is an illustration depicting the lay of this fuzz on a journal. (Note: All figures are viewed from nose end of crankshaft.) The direction in which a grinding wheel or polishing belt passes over

the journal surface will determine the lay of the micro fuzz.

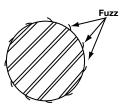


Figure 1

Journal illustrating fuzz from grinding and polishing.

In order to remove this fuzz from the surface, each successive operation should pass over the journal in the opposite direction so that the fuzz will be bent over backward and removed. Polishing in the same direction as grinding would not effectively remove this fuzz because it would merely lay down and then spring up again. Polishing must, therefore, be done opposite to grinding in order to improve the surface.

In order to arrive at how a shaft should be ground and polished, we must first determine the desired end result and then work backwards to establish how to achieve it. Figure 2 depicts a shaft turning in a bearing viewed from the front of a normal clockwise rotating engine. The desired condition is a journal with any fuzz left by the polishing operation oriented so it will lay down as the shaft passes over the bearing (Figure 2).

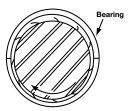


Figure 2
Journal rotating in bearing with the grain of the fuzz.

### Crankshaft grinding

The analogy to the shaft passing over the bearing is like petting a dog from head to tail. A shaft polished in the opposite direction produces abrasion to the bearing which would be like petting a dog from tail to head. To generate a surface lay like that shown in Figure 2, the polishing belt must pass over the shaft surface as shown in Figure 3.

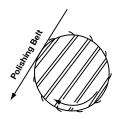


Figure 3
Direction polishing belt should pass over journal and grain of fuzz which results.

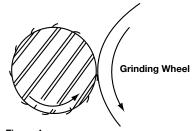
The direction of shaft rotation during polishing is not critical if a motorized belt type polisher is used because the belt runs much faster than the shaft. Stock removal during polishing must not exceed .0002" on the diameter.

Having determined the desired surface lay from polishing, we must next establish the proper direction for grinding to produce a surface lay opposite to that resulting from polishing. Figure 4 shows the grinding wheel and shaft directions of rotation and surface lay for grinding when viewed from the front or nose end of the crankshaft. This orientation will be achieved by chucking the flywheel flange at the left side of the grinder (in the headstock). Achieving the best possible surface finish during grinding will reduce the stock removal necessary during polishing.

The surface lay generated by grinding would cause abrasion to the bearing surfaces if left unpolished. By polishing in the direction shown in figure 3, the surface lay is reversed by the polishing operation removing fuzz created by grinding and leaving a surface lay which will not abrade the bearing surface.

Nodular cast iron shafts are particularly difficult to grind and polish because of the structure of the iron. Nodular iron gets its name from the nodular form of the graphite in this material. Grinding opens graphite nodules located at the surface of the journal leaving ragged edges which will damage a bearing. Polishing in the proper direction will remove the ragged edges from these open nodules.

All of the above is based on normal clockwise engine rotation when viewed from the front of the engine. For crankshafts which rotate counterclockwise, such as some marine engines, the crankshaft should be chucked at its opposite end during grinding and polishing. This is the same as viewing the crank from the flanged end rather than the nose end in the accompanying figures.



Pigure 4
Directions of shaft and grinding wheel rotation and lay of fuzz which results.

### Severe use recommendations

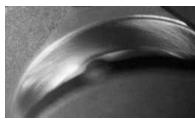
Crankshaft surface finish and shape are key factors affecting the performance of all bearings. These factors become even more critical for thrust surfaces. As in any bearing, increased loading reduces oil film thickness between shaft and bearing surfaces. This is a much more critical situation in thrust bearings due to their flat faces which make formation of an oil film extremely difficult. Radial bearings (those which carry loads in a radial direction like rod and main bearings) form a natural wedge where shaft and bearing surfaces come together in the clearance space. Shaft rotation pulls a wedge of oil into the loaded area of the bearing and forms an oil film that supports the load.

Thrust faces, on the other hand, are made up of two flat surfaces that do not form a natural wedge where they meet. In order to help form an oil film, artificial wedge shaped areas are machined into the bearing surfaces at the ends and sometimes adjacent to the grooves. In spite of all the common design efforts, thrust bearings still run on a much thinner film of oil that makes crankshaft surface finish critical in the successful performance of these bearings.

Recent samples of thrust face surface finish on crankshafts from blown fuel "Hemi" engines have confirmed that better finishes resulted in a reduced rate of bearing distress. The study also showed that when no damage occurred, the crankshaft surface finish was improved after running. The surface finishes of 12 crankshafts were measured (7 new and 5 used). The new shafts ranged from a high of 30 Ra to a low of 5 Ra. The used shafts had a very similar range from 31Ra to 4 Ra. Although this represents only a small sampling, it does

demonstrate a correlation between surface finish and performance when the condition of mating bearing surfaces was evaluated. Prior to these measurements, race experience had shown no problems on a crankshaft with a thrust-face Ra of 6 and did show problems on crankshafts when the Ra was over 20.

Obtaining a good finish on the thrust face of a crankshaft is difficult to do because it uses side-wheel grinding. Side grinding causes marks that spiral outward toward the OD of the thrust face and may also cause crosshatch marks resembling honing patterns. Both patterns are detrimental to the formation of an oil film because they work like wipers as the shaft rotates. Grinding marks must be removed by polishing. Only a circular pattern should remain. Surface finish should be checked in a tangential direction and must be held to 10 Ra max. The thrust surface should be flat within .0002" max.



avoid - swirl pattern



avoid - crosshatch pattern

## Pointers for selecting high performance rod and main bearings

Just like Fords differ from Chevrolets and Chryslers, the various specialty parts for these engines also differ from one specialty manufacturer to another. This is not to say that any one brand of connecting rod, for example, is necessarily better than another, they just exhibit different characteristics.

### **Background**

All bearings are an interference fit in their housing; this relates to something we call crush. Crush results from each half shell bearing being made a few thousandths more than a true half circle. When two bearing shells are placed together their outside diameter is slightly larger than the ID of the housing they fit into. When the housing cap is torqued the bearings are compressed, like a spring, resulting in a radial contact pressure between the bearings and the housing. Another way of looking at it is that the housing is squeezing inward on the bearings and the bearings are pushing back outward against the housing. Most of the interference fit is taken up by the bearings but the outward force exerted by the bearings against the housing also causes slight changes in the size and shape of the housing. This is called "Housing Bore Distortion" or just 'Bore Distortion". With these factors in mind, it's easy to understand why housings made of different materials like aluminum versus iron or steel will have different amounts of "Bore Distortion".

Compensating for differing amounts of bore distortion isn't as simple as just making an adjustment in the bearing clearance when the engine is assembled. The reason is that most housings (connecting rods and engine blocks) have irregular shapes surrounding the bearing.

Rods, for example, have a beam at the top, notches for bolt heads or nuts, some have ribs over the cap while others don't and of course, the parting line between the rod and cap is a weak point. The result is that bore distortions are seldom ever uniform in all directions. Some housings go out of round with the greatest dimension in the horizontal direction while others grow more in the vertical. Still others may bulge where there's a notch for bolt head clearance. All of these bore distortion characteristics relate to the static loads between the bearings and housing when the engine is not running. Still another consideration is what happens under the dynamic conditions of a running engine where loads are constantly changing in magnitude and direction. Engine loads placed on the bearings and their housings will result in still further changes in housing bore geometry.

Original equipment bearings are tailored to compensate for the combined static and dynamic distortions which occur in the housings. Specialty high performance parts like connecting rods and aluminum blocks are made for lighter weight and to withstand the higher loads and speeds of high performance engines. They seldom ever duplicate the bore distortion characteristics of the original equipment parts. Taking these facts into account, it should come as no surprise then that standard passenger car bearings are not suitable for engines modified extensively to produce higher horsepower and speeds. This not only explains why we have special bearings for high performance, but also why we offer several choices.

With so many different specialty high performance connecting rods and blocks available its

impossible for the bearing manufacturer to know the characteristics of every piece. Even if we did, the choices of related parts which influence such things as rotating and reciprocating weights and balancing, all effect bearing loads and consequently dynamic bore distortions.

### **Bearing Design**

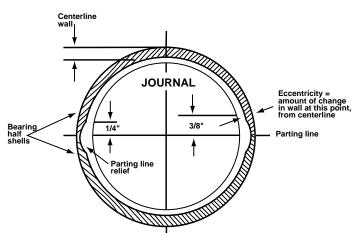
So just how are bearings tailored to compensate for bore distortions? To understand this important design concern, we must first determine what the most desirable shape for a bearing ID is. If everything remained constant like loading, speeds and housing geometry, a perfectly round bearing could be made to work very well. For example, electric motor bushings run almost indefinitely under these conditions. In an engine where we have the variables described above, it has been determined that a slightly oval bearing ID with the minimum diameter oriented in line with the maximum load is the most desirable. To produce this type of profile, bearings are made with what we call an eccentric wall. In nearly all cases the bearing wall is thickest at 90 degrees

to the parting line and tapers off from that point toward each parting line by some specified amount.

The amount of change, called eccentricity, is tailored to suit the bore displacement characteristics of the housing. A housing which experiences its greatest distortion in the horizontal direction (across the parting line) provides the desired oval shape so the bearing requires a minimum amount of eccentricity. If the housing experiences its maximum distortion in the vertical direction, a high eccentricity bearing is needed to compensate for this and produce the desired maximum ovality in the horizontal direction.

Connecting rods are subjected to high inertia loads at the top of the exhaust stroke when the weight of the piston, rings, wrist pin and top end of the rod are all pulling on the rod cap. This loading tries to stretch the rod and pulls the big end out of round, causing it to close in across the parting line. In this case, bearing wall eccentricity provides extra

clearance to let the rod flex without having the bearings contact the shaft. Besides low, medium and high eccentricity, Clevite high performance bearings are offered with numerous additional features to make them compatible with related parts and suitable for the loads and speeds of competition engines.



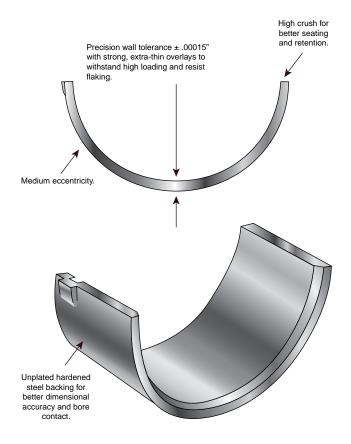
### H-Series Bearings

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.

These bearings are identified by a letter H or HN 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 are made without flash plating for better seating. To provide greater crankshaft fillet clearance, some bearings have been narrowed and bear the HN suffix (N= narrowed). Bearings with .001" extra clearance are available for standard size shafts and carry the suffix

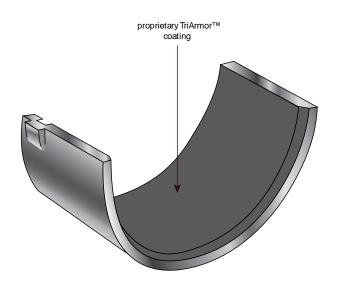
HX (X = extra clearance). Rod bearings are available with or without dowel holes (HD = with, H = without), main bearings are available with standard 180 degrees upper half grooving and with full 360 degrees grooving (H = 180 degrees, HG = 360 degrees). Use H-Series bearings with crankshafts that have 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.



### 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 .0003" dry film treatment applied to the bearings surface. The dry film coating gives good low load start-up protection. The coating

serves as a high pressure, high load dry film antiwear agent providing 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>TM</sup>, still offer the strength and durability of the legendary Clevite TriMetal<sup>TM</sup> bearing construction coupled with the latest in coating technology.

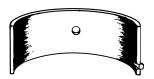


### Narrow wear pattern



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

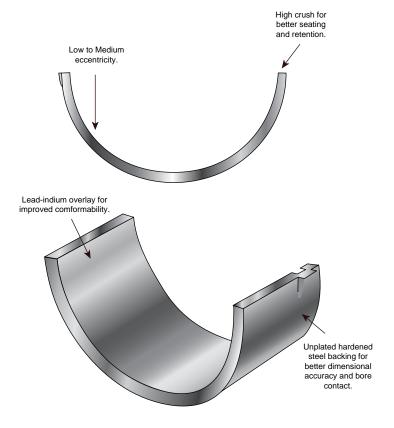
These parts essentially duplicate the former Vandervell parts under the Clevite part numbering system. (Same core part no. as standard passenger car parts but with a suffix letter "V").

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 lead-tin-copper overlay with slightly reduced wear resistance.

Some V-Series bearings also feature our Tri-Bore design. Tri-Bore bearings have a tapered face from the centerline of the bearing and were developed primarily for nitro engines to accommodate high crankshaft deflection.

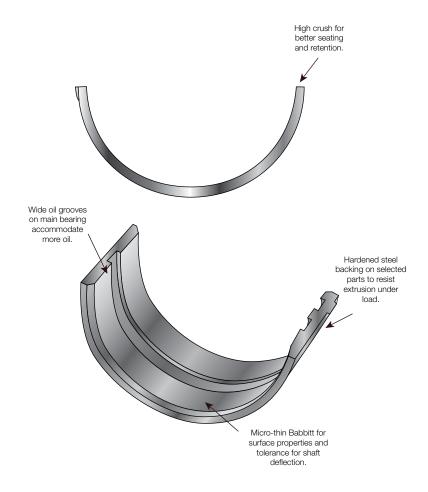


### M-Series bearings

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.





### Installation and fitting tips

When measuring bearings, measurements should always be taken at 90 degrees to the parting line to determine the minimum clearance. If measuring the bearing wall thickness, use a special micrometer with a ball anvil to fit the curvature of the bearing ID. The best way to determine bearing clearance is to measure the bearing ID with the bearings installed in the housing and the bolts torqued to the specified assembly torque. Use a dial bore gage to measure the bearing ID at 90 degrees to the parting line, then subtract shaft size from bearing ID to determine clearance. If the dial bore gage is zeroed at the actual diameter of the crankshaft journal to be installed, the dial bore gage will then read clearance directly and the subtraction calculation can be eliminated. About .001" clearance per inch of shaft diameter is a good rule of thumb for clearance. Increasing the total by about .0005" will add a little margin of safety when starting out, especially for rods. Example: .001" X 2.100 = .0021" then add .0005", so starting out set clearance at .0026" for a 2.100 shaft.

If clearance adjustments need to be made, use either an extra clearance part for more clearance, or an undersize part for less clearance. It is permissible to mix sizes if less than .001" adjustment in clearance is desired. When mixing sizes for select fitting never mix parts having more than .0005" difference in wall size, and always install the thickest wall shell in the upper position if installing a rod bearing, or the lower position if installing a main bearing. When working with a reground shaft always measure assembled bearing IDs first and have the shaft sized to produce the desired clearance since

there are no extra clearance parts available for undersize shafts.

When measuring a bearing ID or wall thickness avoid measuring at the parting line. As the "Bearing Design" diagram illustrates there is a parting line relief machined into nearly all bearing shells. This relief is to allow for any mis-match between upper and lower shells due to tolerance differences, or possibly resulting from cap shift or twist during assembly. To determine bearing wall eccentricity or assembled bearing ID ovality, measure at a point at least 3/8" away from the parting line.

When installing any bearing DO NOT ATTEMPT TO POLISH THE BEARING RUNNING SURFACE WITH ANY TYPE OF ABRASIVE PAD OR PAPER.

Bearing overlay layers are extremely soft and thin, typically .0005" on high performance parts. These thin layers can easily be damaged or removed by abrasive media. Because the overlay layer is electroplated, it may exhibit microscopic plating nodules that make it feel slightly rough. The nodules are the same material as the rest of the plated layer and will quickly be flattened by the shaft. Bearing surfaces can be lightly burnished with solvent and a paper towel if desired.

Arriving at the correct choice of high performance bearing for a given racing application is much like determining what clearance works best. We use past experience, our knowledge of the intended usage, and common sense to guide us in making an initial choice. From there on we can fine tune the selection process based on

results. The information given here is intended to aid in the initial selection as well as the fine tuning process.

The following table serves as a brief overview of the features included in each of the special Clevite® brand high performance bearing series.

	P-Series		H-Series		V-Series		M-Series	
	Rods	Mains	Rods	Mains	Rods	Mains	Rods	Mains
Eccentricity	Н	H-M	М	М	L-M	L-M	L-M-H	L-M
High Crush	Х	Х	Χ	Х	Χ	Х	X	Х
Hard Back	Х		Χ		Χ		Х	
O.S. Chamfers			Χ	Х	AS		S	Х
Dowel Hole	А		Α		Α		Х	
Thin Overlay	Х	Х	Χ					
No Flash	А	А	Χ	Х	Χ	Х	X	Х
Plating								
Reduced Wall			Χ	Х	Χ	Х		
Tolerance								
Full Grooving		А		А		А		А

### Legend:

A = Available for some applications

H = High eccentricity (up to .0015")

 $L = Low\ eccentricity\ (up\ to\ .0005")$ 

 $M = Medium \ eccentricity \ (up \ to \ .0010")$ 

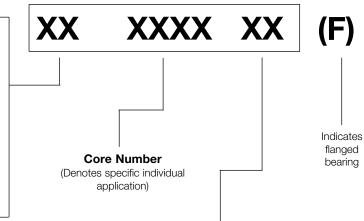
S = Shortened length at fillet end

X = Applies to all or nearly all parts



### Part Number Identification

### 



### **Suffixes**

### D

Bearing has dowel hole.

#### Н

High performance bearing (on main sets this indicates partial groove).

#### HG

High performance full annular grooved bearing.

#### HT

High performance with indentless locating lug. "Full Bore" design.

#### Κ

High performance bearing with proprietary  $TriArmor^{TM}$  coating applied to the bearing surface.

#### М

Steel backed bearings with a Micro-Babbitt lining. Precision undersizes are not resizable (material designation B-2).

### N

High performance bearing narrowed for greater crankshaft fillet clearance.

#### ٧

High performance bearing with a lead-indium overlay (on main sets this indicates partial groove).

#### VG

High performance bearing with a lead-indium overlay and a full annular groove.

#### X

Bearing has .001" more oil clearance than standard.

#### XX

Bearing has .002" more oil clearance than standard.

#### w

Indicates a part that is a thrust washer (may also be designated upper or lower).

### Material designations and terminology

## Bearing Material Designations & Terminology

#### B-1

Steel backed tin or lead base conventional babbitt (nominal .020" thickness).

### **B-2**

Steel backed tin or lead base with a Micro-Babbitt lining (nominal .006" thickness).

#### TM-77

Steel backed bearings with an intermediate layer of copper-lead alloy and an electro-plated lead-base overlay. Precision undersizes are not resizable.

#### TM-112

Steel backed bearings with an intermediate layer of copper-lead alloy and an electro-plated lead-base overlay. Precision undersizes are not resizable.

### VP-2

Steel backed bearings with an intermediate layer of copper-lead alloy and an electroplated lead indium overlay. Not resizable.

#### VP-3

Steel backed bearings with an intermediate layer of copper-lead alloy and an extra thick electroplated lead indium overlay. Not resizable.

### **Bearing Outside Diameter Or Housing Bore**

The minimum to maximum diameter of the hole in the engine block or the connecting rod.

### Crush

When the bearing half is in its place in the housing bore, there is a slight bit of material that extends above the housing bore. When the assembly is torqued to proper specification, force is then exerting onto the OD of the bearing causing a press fit. Crush also aids in bore distortion, and heat transfer by increasing the surface contact with the bearing and the bore. Clevite Performance bearings have added crush for heat transfer and bearing retention. The amount of crush will vary depending on application.

### **Eccentricity**

A gradual reduction in the bearing wall thickness starting at the crown and ending at approximately .380" from the parting lines.

#### **Full Annular Grooved**

Bearings having an oil groove cut from parting line to parting line in the internal surface of the half shell. When two grooved halves are joined, this creates a groove in the internal surface around the total circumference of the bearing.

### **Maximum Bearing Length**

The maximum length that the bearing may have (including the flange when it applies). The actual length is usually less than this value.

### **Maximum Wall At Crown**

The maximum thickness of the bearing wall at  $90^{\circ}$  from the parting lines. The actual thickness is usually less than this value.

### **Standard Shaft Diameter**

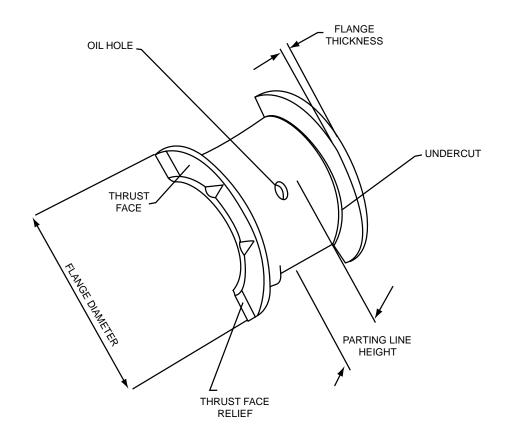
The minimum to maximum size of the standard main crankshaft journal, connecting rod journal or camshaft journal.

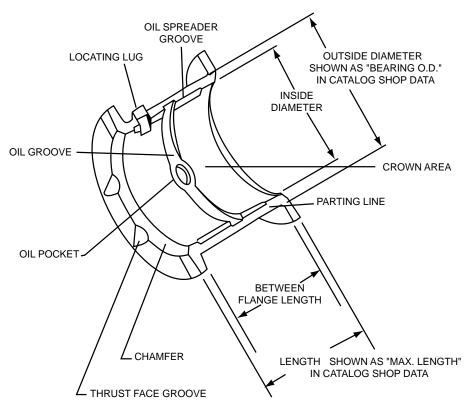
### **Vertical Oil Clearance**

The difference between the assembled inside diameter of the bearing and the outside diameter of the shaft, measured at 90° from the bearing parting lines.



### Bearing Nomenclature





### Crankshaft Designs and Bearing Locations

### **Crankshaft Designs**



Three main bearing - 4 cylinder



Seven main bearing - 6 cylinder



Five main bearing - 4 cylinder



Four main bearing - v6

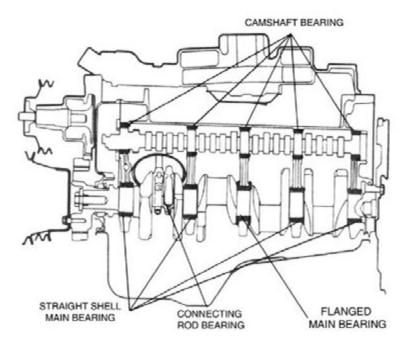


Four main bearing - 6 cylinder



Five main bearing - v8

### **Bearing Locations**





## Bolt Boots, Bearing Guard and Plastigage

### Clevite® Bolt Boots

Clevite bolt boots protect journal surfaces during engine assembly, preventing crankshaft damage. Shipped with 2 per bag and sold in cartons of 48 bagged pairs only.

**2800-B1** (quantities of 48 only)

### Clevite® Bearing Guard

Clevite Bearing Guard is specially formulated to provide proper lubrication for all engine components during assembly and the first crucial moments of operation after engine startup. Bearing Guard has an Extreme Pressure (EP) rating for the most severe applications.

2800-B2 8oz bottle (quantities of 12 only)2800-B4 1 gallon jug (sold individually)2800-B5 1-1/3 oz. package (quantities of 50 only)

**2800-B15** 15 gallon drum (sold individually) **CL-400** 4oz bottle (Cam Guard) (quanities of 12 only)

### Clevite® Plastigage

Plastigage was designed as a final check of total vertical oil clearance during reassembly. It was not meant as a replacement for properly measuring crankshaft journals, housing bores or bearing dimensions before engine reassembly with accurate mics and gauges.

To properly use Plastigage during reassembly, readings should be taken on the bearing cap half shell while the weight of the crankshaft or piston and rod assembly is supported by the other half shell.

Place a small amount of oil on the crankshaft journal only where the Plastigage will be placed and wipe any excess oil off with a clean rag. This will result in a more accurate reading by preventing the PLASTIGAGE from sticking to the journal.

Place a strand of Plastigage across the length of the journal parallel to the crankshaft.

Set the cap in place and tighten bolts to the proper OEM torque specification. NOTE: if the crankshaft is moved at this point it will smear the Plastigage, resulting in inaccurate readings.

Carefully remove the cap and measure the crushed Plastigage using the graduations printed on the package. Measure the crush along the entire length of the Plastigage, noting the highs and lows for proper clearance.

After you have made your measurements, carefully remove the crushed Plastigage from the components without scratching the bearing or the journal.

Clevite® Plastigage is available in four different sizes to check total vertical oil clearance on connecting rod and main bearings. Each package has a measuring scale printed in inches and millimeters. Strips are color coded for easy size identification and are soluble in oil.

MPG1 .001"-.003" (.025 -.075mm) Green★
MPR1 .002"-.006" (.050 -.15mm) Red★
MPB1 .004"-.009" (.10 -.23mm) Blue★
MPY1 .009"-.020" (.23 -.50mm) Yellow★

(★Sold in quantities of 12 strips only)





Application	Rod Bearing	Main Bearing Set	Camshaft Bearing Set	Thrust Washer Set
Chrysler 5.7 HEMI engines with VVT (2009+)	CB-1808HN	MS-2202H	SH-2191S	TW-611S
Chrysler 6.2 HEMI Hellcat	CB-1808HN	MS-2296H	-	TW-611S
Chrysler 6.4 HEMI engines with VVT (2009+)	CB-1808HN	MS-2296H	SH-2191S	TW-611S
Ford 6.2L	CB-1944H, HX	MS-2344H <sup>†</sup> , HX <sup>†</sup>	-	-
Ford 6.7L Diesel	CB-1953H, HX	MS-2334H, HX	-	TW-711S
General Motors 6.2L Gen V LT1 (2014+)		MS-2339H, HX	-	-
Nissan VR38DETT	CB-1972H*, HX*	MS-2353H*, HX*	-	TW-722S
Volkswagen 1.8L Turbo	CB-1426H	MS-2227H, HX	-	TW-704S
Volkswagen 1.9L Turbo Diesel	CB-1822P	MS-2227H, HX	-	TW-704S

Italicized part numbers are existing parts. Part numbers marked with the \* are available first quarter 2016; †includes thrust washer set

## Performance bearings sold in trays

Part Number	Tray Quantity	Part Number	Tray Quantity	Part Number	Tray Quantity
Rod B	earing	Main Beari	ng Cont'd.	Main Bearing -	Thrust Cont'd.
CB-1512ML(30)	30 Lower Shells	MB-3829HXL(25)	25 Lower Shells	MB-2036HU(5)	5 Upper Shells
CB-1512MU(30)	30 Upper Shells	MB-3829H-1L(25)	25 Lower Shells	MB-2036H-1U(5)	5 Upper Shells
CB-1512VL(30)	30 Lower Shells	MB-3829VL(25)	25 Lower Shells	MB-2036HXU(5)	5 Upper Shells
CB-1512VU(30)	30 Upper Shells	MB-3829VU(25)	25 Upper Shells	MB-2036HL(5)	5 Lower Shells
CB-1798H(32)	16 Pair	MB-3829VXL(25)	25 Lower Shells	MB-2036H-1L(5)	5 Lower Shells
CB-1798H-1(32)	16 Pair	MB-3829VXU(25)	25 Upper Shells	MB-2036HXL(5)	5 Lower Shells
CB-1798V(32)	16 Pair	MB-3829V-1L(25)	25 Lower Shells	MB-2122HL(5)	5 Lower Shells
CB-1798V-1(32)	16 Pair	MB-3829V-1U(25)	25 Upper Shells	MB-2121HXL(5)	5 Lower Shells
CB-1798VX(32)	16 Pair	MB-3852HL(25)	25 Lower Shells	MB-2121H-1L(5)	5 Lower Shells
Rod Bearing	with TriArmor	MB-3852VL(25)	25 Lower Shells	MB-3249ML(9)	9 Lower Shells
CB-1512VKL(30)	30 Lower Shells	MB-3852V-1L(25)	25 Lower Shells	MB-3249MU(9)	9 Upper Shells
CB-1512VKU(30)	30 Upper Shells	MB-3993HU(20)	20 Upper Shells	MB-3249VL(9)	9 Lower Shells
Main E	Bearing	MB-3993HXL(20)	20 Lower Shells	MB-3249VU(9)	9 Upper Shells
MB-2035HU(20)	20 Upper Shells	Main Bearing	g - TriArmor	Main Bearing - T	hrust - TriArmor
MB-2035HL(20)	20 Lower Shells	MB-3248VKL(24)	24 Lower Shells	MB-3249VKL(9)	9 Lower Shells
MB-2035HXL(20)	20 Lower Shells	MB-3248VKU(24)	24 Upper Shells	MB-3249VKU(9)	9 Upper Shells
MB-2121HL(24)	24 Lower Shells	Main Bearin	ng - Thrust	Main Beari	ng - Flange
MB-2121HXL(24)	24 Lower Shells	MB-1841HU(5)	5 Upper Shells	MB-2404HL(9)	9 Flange
MB-3248VL(24)	24 Lower Shells	MB-1841H1U(5)	5 Upper Shells	MB-2404HXU(9)	9 Flange
MB-3248VU(24)	24 Upper Shells	MB-1841HXU(5)	5 Upper Shells	MB-2509HL(9)	9 Flange
MB-3564VL(20)	20 Lower Shells	MB-1841HL(5)	5 Lower Shells	MB-2509HXU(9)	9 Flange
MB-3564VU(20)	20 Upper Shells	MB-1841H1L(5)	5 Lower Shells		
MB-3829HL(25)	25 Lower Shells	MB-1841HXL(5)	5 Lower Shells		





	COUNTER DAT	`A		SHOP	DATA	\	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
Rod Bearing NOTE: Quad 4 B No Dowel Hole	TM-77 CB-1663H earing Specifications, H-Se In Cap Half	STD,1,10 eries Performance	1.8885/1.8890	0.0010/0.0026	0.0625	2.0150/2.0155	0.7920
with TriArmor	TM-77 CB-1663HK earing Specifications, H-Se Maximum Wall Does Not In less, No Dowel Hole In Cap	clude	1.8885/1.8890	0.0010/0.0026	0.0625	2.0150/2.0155	0.7920
Bearing Wall .0	TM-77 CB-1663HX earing Specifications, H-Se 0005" Thinner For .0010" M Dowel Hole In Cap Half		1.8885/1.8890	0.0020/0.0036	0.0620	2.0150/2.0155	0.7920
with TriArmor	TM-77 CB-1663HXK earing Specifications, H-Se Bearing Wall .0005" Thinne Il Clearance Maximum Wall g Thickness, No Dowel Ho	r For I Does Not	1.8885/1.8890	0.0020/0.0036	0.0620	2.0150/2.0155	0.7920
Rod Bearing NOTE: IRL, H-Se	TM-77 CB-1664H ries Performance No Dowe	STD,1 el Hole In Cap Half	1.8495/1.8500	0.0008/0.0021	0.0786	2.0080/2.0082	0.6550
,,	TM-77 CB-1664HK ries Performance with TriA de Coating Thickness, No		1.8495/1.8500	0.0008/0.0021	0.0786	2.0080/2.0082	0.6550
,	TM-77 CB-1664HX ries Performance Bearing re Oil Clearance No Dowel		1.8495/1.8500	0.0018/0.0031	0.0781	2.0080/2.0082	0.6550
.0005" Thinner	TM-77 CB-1664HXK ries Performance with TriA For .0010" More Oil Cleara Does Not Include Coating In Cap Half	ince	1.8495/1.8500	0.0018/0.0031	0.0781	2.0080/2.0082	0.6550
Used In Engine	TM-77 CB-1665HND Performance Dowel Hole In es Without Doweled Conne One Side For Increased Cra	cting Rod	1.8885/1.8890	0.0010/0.0026	0.0625	2.0150/2.0155	0.8510
Half, Maximum Thickness May	TM-77 CB-1665HNDk Performance with TriArmon Wall Does Not Include Co Be Used In Engines Without Narrowed On One Side Regarance	r Dowel Hole In Cap ating out Doweled	1.8885/1.8890	0.0010/0.0026	0.0625	2.0150/2.0155	0.8510
.0010" More Oi May Be Used I	TM-77 CB-1665HXND Performance Bearing Wall II Clearance Dowel Hole In In Engines Without Dowele On One Side For Increase e	.0005" Thinner For Cap Half d Connecting	1.8885/1.8890	0.0020/0.0036	0.0620	2.0150/2.0155	0.8510
.0005" Thinner Hole In Cap Ha Coating Thickr Doweled Conn	TM-77 CB-1665HXND Performance with TriArmo For .0010" More Oil Cleara If, Maximum Wall Does No ness May Be Used In Engin ecting Rod Narrowed On Cook Fillet Clearance	r Bearing Wall Ince Dowel It Include es Without	1.8885/1.8890	0.0020/0.0036	0.0620	2.0150/2.0155	0.8510
Rod Bearing NOTE: H-Series	TM-77 CB-1775H Performance No Dowel Ho	STD,1 le In Cap Half	1.7715/1.7720	0.0006/0.0030	0.0586	1.8900/1.8905	0.7090



	СО	UNTER DAT	A		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
	Performanc	CB-1775HK e with TriArmon ness, No Dowel	STD,1  Maximum Wall Does Hole In	1.7715/1.7720	0.0006/0.0030	0.0586		
	Performanc	CB-1775HX e Bearing Wall No Dowel Hole	STD .0005" Thinner For In Cap	1.7715/1.7720	0.0016/0.0040	0.0581	1.8900/1.8905	0.7090
	Performanc For .0010" I Does Not I	More Oil Cleara nclude Coating	nce	1.7715/1.7720	0.0016/0.0040	0.0581	1.8900/1.8905	0.7090
Rod Bearing NOTE: NASCAR, Half		CB-1798H erformance No	STD,1 Dowel Hole In Cap	1.8495/1.8500	0.0010/0.0023	0.0625	1.9760/1.9762	0.7550
	H-Series Pe Include Coa	CB-1798HK erformance with ating Thickness	STD h TriArmor Maximum , No Dowel	1.8495/1.8500	0.0010/0.0023	0.0625	1.9760/1.9762	0.7550
,	H-Series P	CB-1798HT erformance No Lug "Full Bore"	STD,1 Dowel Hole In Cap Design	1.8495/1.8500	0.0010/0.0023	0.0625	1.9760/1.9762	0.7550
Rod Bearing NOTE: NASCAR, Thinner For .00 Hole In Cap Ha	H-Series P	CB-1798HX erformance Bea oil Clearance No	•	1.8495/1.8500	0.0020/0.0033	0.0620	1.9760/1.9762	0.7550
Wall .0005" Thi	H-Series Ponner For .00 Does Not In	010" More Oil C nclude Coating		1.8495/1.8500	0.0020/0.0033	0.0620	1.9760/1.9762	0.7550
	H-Series Po 10" More O	CB-1798HXT erformance Bea il Clearance No ss Locating Lug	Dowel	1.8495/1.8500	0.0020/0.0033	0.0620	1.9760/1.9762	0.7550
Rod Bearing NOTE: NASCAR, Half	VP-2 V-Series Pe		STD,1 Dowel Hole In Cap	1.8495/1.8500	0.0010/0.0023	0.0625	1.9760/1.9762	0.7550
Rod Bearing NOTE: NASCAR, Thinner For .00 Hole In Cap Ha	V-Series Po 10" More O	CB-1798VX erformance Bea oil Clearance No		1.8495/1.8500	0.0020/0.0033	0.0620	1.9760/1.9762	2 0.7550
Rod Bearing NOTE: H-Series I		CB-1856HN e No Dowel Ho	STD,1,10 le In Cap Half	1.9990/2.0000	0.0008/0.0029	0.1119	2.2247/2.2252	0.7920
	Performanc	CB-1856HXN e Bearing Wall No Dowel Hole	STD .0005" Thinner For In Cap	1.9990/2.0000	0.0018/0.0039	0.1114	2.2247/2.2252	0.7920
Main Bearing Set 1-2-4-5 3 NOTE: Pro-Stock Tri-bore Design	Chrysler, \	MS-2221V MB-3785V MB-2620V(F) V-Series Perform	STD		0.0002/0.0022 0.0006/0.0031			



	COL	JNTER DATA			SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
	R07 Cylinde Half And Pl Set, Not Inc	ain Lower Half R luded Use with P	equires	2.2983/2.2993	0.0004/0.0030	0.0954	2.4906/2.4916	0.8070
Clearance Groo Requires Thrus	R07 Cylinde 005" Thinne oved Upper t Washer Se	MS-2260HX MB-1808HX r Block, H-Series r For .0010" More Half And Plain Lo et, Not Included U 20), MB-3879WU	e Oil ower Half Jse with	2.2983/2.2993	0.0014/0.0040	0.0949	2.4906/2.4916	0.8070
I	R07 Cylinder rooved Bea	rings Requires T Jse with Part Nur	hrust	2.2983/2.2993	0.0003/0.0031	0.0954	2.4906/2.4916	0.8070
Clearance Cont	R07 Cylinde 005" Thinne tains Full Gr Set, Not Inc	r For .0010" More coved Bearings I luded Use with P	e Oil Requires	2.2983/2.2993	0.0013/0.0041	0.0949	2.4906/2.4916	0.8070
Main Bearing Set 1-2-4-5 3 NOTE: Dart LS No Grooved Upper	ext Cylinder		STD•,1•  Performance		0.0003/0.0020 0.0002/0.0020			
Main Bearing Set NOTE: Dart LS No Bearing Wall .00	ext Cylinder 005" Thinne	MS-2321HX	e Oil					
Main Bearing NOTE: NASCAR, Crankshafts, V- Half And Plain I	2.017" Main Series Perf	MB-3829V Bearing Journal ormance Groove		2.0174/2.0176	0.0010/0.0026	0.1088	2.2362/2.2370	0.7500
	2.017" Main Series Perf For .0010" N	ormance Bearing Nore Oil Clearand	Wall	2.0174/2.0176	0.0020/0.0036	0.1083	2.2362/2.2370	0.7500
	2.000" Main -Series Perf Lower Half,	MB-3852H Bearing Journal ormance Groove Indentless Locat	d Upper	1.9981/1.9985	0.0017/0.0032	0.0801	2.1605/2.1610	0.7400
,	2.000" Main Series Perf For .0010" N Half And Pl	ormance Bearing More Oil Clearand ain Lower Half,	y Wall	1.9981/1.9985	0.0027/0.0042	0.0796	2.1605/2.1610	0.7400



	CO	UNTER DATA			SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX .ENGTH
.0010" Thinner I Grooved Upper	2.000" Mair Series Perf For .0020" M Half And P	MB-3852HXX n Bearing Journa formance Bearing More Oil Clearand lain Lower Half, Full Bore" Design	g Wall ce	1.9981/1.9985	0.0037/0.0052	0.0791	2.1605/2.1610	0.7400
,	2.000" Mair Series Perf ower Half,	MB-3852V n Bearing Journa formance Groove Indentless Locat	ed Upper	1.9981/1.9985	0.0017/0.0032	0.0801	2.1605/2.1610	0.7400
.0005" Thinner I Grooved Upper	Series Perf For .0010" N Half And P	ormance Bearing	g Wall ce	1.9981/1.9985	0.0027/0.0042	0.0796	2.1605/2.1610	0.7400
.0010" Thinner I Grooved Upper	Series Perf For .0020" N Half And P	MB-3852VXX n Bearing Journa formance Bearing More Oil Clearand lain Lower Half, Full Bore" Design	g Wall ce	1.9981/1.9985	0.0037/0.0052	0.0791	2.1605/2.1610	0.7400
Thrust Washer Se NOTE: Contains 2 MS-2260V, MS-	20 Pieces U	MB-3879WU(20) MB-3879WU se with Part Nun		2.5980/2.6180			3.1260/3.1460	0.1080
Cam Bearing Set 1-2-3-4-5 NOTE: Dart Little	"M" Cylind	SH-2012ST SH-2012 er Block With 2.0 ide Diameter for		1.8682/1.8692	0.0010/0.0048	0.0644	1.9990/2.0010	0.7450
		Degree Spacing	Improved					
Cam Bearing Set 1-2-3-4-5		<b>SH-2013ST</b> SH-2013	STD			0.0841	2.1200	0.9850
		r Block With 2.12 ameter for Impro	00" Housing Bore					
		Degree Spacing	veu					
	Eagle Cylind on the Outsi	SH-2014ST SH-2014 der Block With 2. ide Diameter for Degree Spacing	9	1.9487/1.9497	0.0011/0.0049	0.0841	2.1190/2.1210	0.7600
Cam Bearing Set		SH-2015ST	STD					
1 2 3 4 5		SH-2015 SH-2016 SH-2017 SH-2018 SH-2019		2.0655/2.0665 2.0505/2.0515 2.0355/2.0365	0.0011/0.0049 0.0011/0.0049 0.0011/0.0049	0.0677 0.0752 0.0827	2.2030/2.2050 2.2030/2.2050 2.2030/2.2050 2.2030/2.2050 2.2030/2.2050	0.6650 0.6650 0.6650
NOTE: Dart Ford Bore Grooved of	n the Outsi		-					
Cam Bearing Set 1-2-4 3 5 NOTE: Nitro Cam		SH-2127S SH-710 SH-1111 SH-277 et For AJPE Cylin	STD  der Blocks	2.1238/2.1248	0.0011/0.0043	0.0618	2.2495/2.2505 2.2495/2.2505 1.8792/1.8802	0.5850





COUNTER DATA			SHOP DATA					
BEARING OR BEARING PART AVAILABLE POSITION MATERIAL NUMBER UNDERSIZES			STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH	
Cam Bearing Set 1-2-3-4-5		<b>SH-2142S</b> SH-2159	STD	2.1650/2.1670	0.0010/0.0062	0.0700	2.3079/2.3098	3 0.7800
NOTE: G.M. Performance LSX Bowtie Cylinder Blocks, .7800" Length, Performance Bearing Set								

Engine			Years	Block					
50. * 180.		6 CYL		550270					
466 CID (7.6L) Inte	mational Turboci			1					
466 CID (7.6L) Inte Diesel				1					
		COUNTER DA	TA			SH	IOP DA	TA	
Bearing or Position	Bearing Material	Clevite Part No.	Available Undersizes		Std. Shaft Diameter	Vert. Oil Clearance	Max. Wall	Brg. O.D. or Housing Bore	Max Length
6 CYL									
			charged Diesel charged/Interco		sel 6 Cyl			350in/135.9mm 350in/135.9mm	1
Rod Bearing(6) NOTE: Thru Engir Half	TM-112 ne Serial Numbe	CB-675H er 440035, H-Series	STD,10 Performance,No Dov	vel Hole In (	2.9977/2.9990 Cap	0.0020/0.0049	0.0995	3.2000/3.2010	1.2000
Rod Bearing(6) NOTE: Thru Engir Maximum	TM-112 ne Serial Numbe Wall Does Not I	CB-675HK er 440035, H-Series include Coating Thio	STD Performance With Tr kness,No Dowel Ho	iArmor™, le In Cap Ha	2.9977/2.9990 alf	0.0020/0.0049	0.0995	3.2000/3.2010	1.2000
Rod Bearing(6) NOTE: From Engi Half	TM-112 ne Serial Numb	CB-1365H er 440036, H-Series	STD,10 Performance,No Do	wel Hole In	2.9977/2.9990 Cap	0.0020/0.0049	0.0995	3.2000/3.2010	1.2600
		CB-1365HK er 440036, H-Series Does Not Include (	STD Performance With Coating Thickness,No	Dowel Hol	2.9977/2.9990 le In	0.0020/0.0049	0.0995	3.2000/3.2010	1.2600
Main Bearing Set 1-2-3-4-5-6 7	TM-112	MS-1343H MB-2628H MB-2629H(F)	STD,10	d Hanny Hal	3.3742/3.3755 3.3742/3.3755		0.1555 0.1555	3.6885/3.6895 3.6885/3.6895	1.2250 1.7770
1-2-3-4-5-6 7	ne Serial Numbe	MB-2628H MB-2629H(F)	STD,10 Performance,Groove	d Upper Ha	3.3742/3.3755				
1-2-3-4-5-6 7 NOTE: Thru Engir Plain Lowe Main Bearing Set 1-2-3-4-5-6 7	ne Serial Number Halves TM-112	MB-2628H MB-2629H(F) er 440035, H-Series MS-1642H MB3009H MB2629H(F)			3.3742/3.3755 3.3742/3.3755 3.3742/3.3755	0.0020/0.0049			
1-2-3-4-5-6 7 NOTE: Thru Engir Plain Lowe Main Bearing Set 1-2-3-4-5-6 7 NOTE: From Engi	ne Serial Number Halves TM-112 ne Serial Number Halves	MB-2628H MB-2629H(F) er 440035, H-Series MS-1642H MB3009H MB2629H(F)	Performance, Groove STD,10		3.3742/3.3755 3.3742/3.3755 3.3742/3.3755	0.0020/0.0049	0.1555	3.6885/3.6895 3.6885/3.6895	1.7770
1-2-3-4-5-6 7 NOTE: Thru Engin Plain Lowe Main Bearing Set 1-2-3-4-5-6 7 NOTE: From Engin Plain Lowe  JOHN DE  Engine	ne Serial Number Halves TM-112 ne Serial Number Halves ERE	MB-2628H MB-2629H(F) er 440035, H-Series MS-1642H MB3009H MB2629H(F)	Performance, Groove STD,10		3.3742/3.3755 3.3742/3.3755 3.3742/3.3755 Engine	0.0020/0.0049	0.1555 0.1555 0.1555	3.6885/3.6895 3.6885/3.6895	1.7770
1-2-3-4-5-6 7 NOTE: Thru Engin Plain Lowe Main Bearing Set 1-2-3-4-5-6 7 NOTE: From Engin Plain Lowe  JOHN DE  Engine	ne Serial Number Halves TM-112 ne Serial Number Halves ERE	MB-2628H MB-2629H(F) er 440035, H-Series MS-1642H MB3009H MB2629H(F) er 440036, H-Series	Performance, Groove STD, 10  Performance, Groove Years	d Upper Ha	3.3742/3.3755 3.3742/3.3755 3.3742/3.3755 Engine	0.0020/0.0049 0.0020/0.0049 0.0020/0.0049	0.1555 0.1555 0.1555	3.6885/3.6895 3.6885/3.6895 3.6885/3.6895 Years	1.7770 1.2990 1.7770
1-2-3-4-5-6 7 NOTE: Thru Engin Plain Lowe Main Bearing Set 1-2-3-4-5-6 7 NOTE: From Engin Plain Lowe  JOHN DE  Engine 466 CID (7.6L) 646  Bearing or	ne Serial Number Halves TM-112 ne Serial Number Halves ERE	MB-2628H MB-2629H(F) er 440035, H-Series  MS-1642H MB3009H MB2629H(F) er 440036, H-Series	Performance, Groove STD, 10  Performance, Groove Years	d Upper Ha	3.3742/3.3755 3.3742/3.3755 3.3742/3.3755 Engine	0.0020/0.0049 0.0020/0.0049 0.0020/0.0049	0.1555 0.1555 0.1555	3.6885/3.6895 3.6885/3.6895 3.6885/3.6895 Years	1.7770 1.2990 1.7770 Block 1
1-2-3-4-5-6 7 NOTE: Thru Engin Plain Lowe Main Bearing Set 1-2-3-4-5-6 7 NOTE: From Engin Plain Lowe JOHN DE Engine 466 CID (7.6L) 646 Bearing or Position	ne Serial Number Halves TM-112 ne Serial Number Halves ERE 6A Turbocharger Bearing Material	MB-2628H MB-2629H(F) er 440035, H-Series  MS-1642H MB3009H MB2629H(F) er 440036, H-Series  d/Intercooled Diesel  COUNTER DA  Clevite Part No.	Performance, Groove STD, 10 Performance, Groove Years TA Available Undersizes	Block	3.3742/3.3755 3.3742/3.3755 3.3742/3.3755  Engine 466 CID (7.6L) 6466  Std. Shaft Diameter	0.0020/0.0049  0.0020/0.0049  0.0020/0.0049  T Turbocharged Diese SH Vert. Oil Clearance	0.1555 0.1555 0.1555 0.1565	3.6885/3.6895 3.6885/3.6895 Years TA Brg. O.D. or Housing Bore	1.7770 1.2990 1.7770 Block 1
1-2-3-4-5-6 7 NOTE: Thru Engin Plain Lowe Main Bearing Set 1-2-3-4-5-6 7 NOTE: From Engin Plain Lowe JOHN DE Engine 466 CID (7.6L) 646 Bearing or Position  1 466 C Rod Bearing(6)	ne Serial Number Halves TM-112 ne Serial Number Halves ERE 6A Turbocharger Bearing Material ID (7.6L) 646 TM-112	MB-2628H MB-2629H(F) er 440035, H-Series  MS-1642H MB3009H MB2629H(F) er 440036, H-Series  d/Intercooled Diesel  COUNTER DA  Clevite Part No.	Performance, Groove STD, 10  Performance, Groove Years  TA  Available Undersizes  ed/Intercooled Ded Diesel 6 Cyl STD, 10	Block	3.3742/3.3755 3.3742/3.3755 3.3742/3.3755  Engine 466 CID (7.6L) 6466  Std. Shaft Diameter	0.0020/0.0049  0.0020/0.0049  0.0020/0.0049  T Turbocharged Diese SH Vert. Oil Clearance  4.563in./115.9 4.563in./115.9	0.1555 0.1555 0.1555 0.1565	3.6885/3.6895 3.6885/3.6895 Years  TA  Brg. O.D. or Housing Bore	1.2990 1.7770 Block 1 Max Length 6 CYI





ENGINE	YEAR	BORE & STROKE	BLOCK
1590 CC (1.6L) SOHC 16V L4 VTEC D16Y8	1997-2000	2.953"/75.0mm X 3.543"/90.0mm	1
1590 CC (1.6L) DOHC 16V L4 D16A1	1986-1989	2.953"/75.0mm X 3.543"/90.0mm	1
1678 CC (1.7L) DOHC 16V L4 VTEC B17A1	1992-1993	3.189"/81.0mm X 3.189"/81.0mm	2
1797 CC (1.8L) DOHC 16V L4 VTEC B18C1	1994-2001	3.189"/81.0mm X 3.433"/87.2mm	3
1797 CC (1.8L) DOHC 16V L4 VTEC B18C5	1997-2001	3.189"/81.0mm X 3.433"/87.2mm	3
1834 CC (1.8L) DOHC 16V L4 B18A1	1990-1993	3.189"/81.0mm X 3.504"/89.0mm	2
1834 CC (1.8L) DOHC 16V L4 B18B1	1994-2001	3.189"/81.0mm X 3.504"/89.0mm	2
1998 CC (2.0L) DOHC 16V L4 VTEC K20A2	2002-2004	3.390"/86.1mm X 3.386"/86.0mm	4
1998 CC (2.0L) DOHC 16V L4 VTEC K20A3	2002-2006	3.390"/86.1mm X 3.386"/86.0mm	5
1998 CC (2.0L) DOHC 16V L4 VTEC K20Z1	2005-2006	3.390"/86.1mm X 3.386"/86.0mm	4
2156 CC (2.2L) SOHC 16V L4 VTEC F22B1	1997	3.346"/85.0mm X 3.740"/95.0mm	6
2300 CC (2.3L) DOHC 16V Turbo. L4 i-VTEC K23A1	2007-2011	3.390"/86.0mm X 3.890"/99.0mm	4
2354 CC (2.4L) DOHC 16V L4 i-VTEC K24Z3	2009-2011	3.420"/87.0mm X 3.890"/99.0mm	4
2354 CC (2.4L) DOHC 16V L4 VTEC K24A2	2004-2008	3.420"/87.0mm X 3.890"/99.0mm	4

#### CONNECTING ROD FORGING NUMBERS

 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK

 C7917
 3.504in/89.0mm
 2
 PR4
 3.504in/89.0mm
 2
 |

#### CRANKSHAFT FORGING NUMBERS

 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK

 321
 3.543in/90.0mm
 1
 4456
 3.543in/90.0mm
 1
 |

	COUNTER DATA				SHOP DATA					
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH		
								4 CYL		
Years: 1	997-2000		VTEC D16Y8		53"/75.0mm					
	C (1.6L) [ 986-1989	DOHC 16V L	4 D16A1	2.9	53"/75.0mm	x 3.54	3"/90.0mm			
Rod Bearing (4) NOTE: H Series P Fillet Clearance	erformance			1.7707/1.7717	0.0008/0.0015	0.0592	1.8898/1.890	7 0.6780		
Rod Bearing (4) NOTE: H Series F .0010" More Oil Crank Fillet Cle	erformance Clearance I	Narrowed For I		1.7707/1.7717	0.0018/0.0025	0.0587	1.8898/1.890	7 0.6780		
Main Bearing Set 1-2-3-4-5 NOTE: H Series P Requires Thrus Part Number TV	erformance t Washer Se	MB-3760H Contains Full (	STD,.026mm,.25mm Grooved Bearings Use with	2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.323	7 0.7870		
Main Bearing Set 1-2-3-4-5 NOTE: H Series P .0010" More Oil Bearings Requi Use with Part N	erformance Clearance ( res Thrust V	MB-3760HX Bearing Wall .0 Contains Full G Vasher Set, Not		2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.323	7 0.7870		





	COUNTER DATA	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	R MAX LENGTH
4 CYL (cont.)							
(cont.) Years: 1	CC (1.6L) SOHC 16V L 1997-2000 CC (1.6L) DOHC 16V L			53"/75.0mm 53"/75.0mm			(cont.)
	986-1989	121011	2.0	00 770.0	A 0.0 1	0 700.011111	
	et TW-473S MB-3176W 2 Pieces, Position Number 04H, MS-1804HX	STD 4 Use with Part	2.4114/2.4213	3		3.2185/3.228	3 0.0980
Crankshaft Forg							
2 1678 0	CC (1.7L) DOHC 16V L	4 VTEC B17A1	3.1	89"/81.0mm	x 3.18	9"/81.0mm	2
Years: 1	CC (1.8L) DOHC 16V L 990-1993		3.1	89"/81.0mm	x 3.50	4"/89.0mm	
	CC (1.8L) DOHC 16V L	4 B18B1	3.1	89"/81.0mm	x 3.50	4"/89.0mm	
Rod Bearing (4)	TM-77 CB-1353H Performance No Dowel Hol	STD,.026mm,.25mm e In Cap Half with	1.7707/1.7717	7 0.0005/0.0034	0.0590	1.8898/1.890	7 0.7680
	TM-77 CB-1353HX Performance Bearing Wall I I Clearance No Dowel Hole ble in Bearing		1.7707/1.7717	0.0015/0.0044	0.0586	1.8898/1.890	0.7680
Lower Half Red	t TM-77 MS-2095H MB-3760H Performance Grooved Uppo quires Thrust Washer Set, N vith Part Number TW-473S		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.323	7 0.7870
Main Bearing Se 1-2-3-4-5 NOTE: H Series I .0010" More Oi Plain Lower Ha		Half And	2.1644/2.1654	0.0012/0.0037	0.0776	3 2.3228/2.323	7 0.7870
	et TW-473S MB-3176W 2 Pieces; Position Number 95H, MS-2095HX	STD 4; Use with Part	2.4114/2.4213	3		3.2185/3.228	3 0.0980
Connecting Rod	Forging C7917, PR4						
Years: 1	CC (1.8L) DOHC 16V L			89"/81.0mm			
	CC (1.8L) DOHC 16V L 1997-2001	4 VIEC B18C5	3.1	89"/81.0mm	x 3.43	3"/87.2mm	
Rod Bearing (4)	TM-77 CB-1785H Performance No Dowel Hol	STD,.25mm e In Cap Half	1.7707/1.7717	7 0.0008/0.0015	0.0595	1.8898/1.890	7 0.6880
	TM-77 CB-1785HK Performance with TriArmor ating Thickness, No Dowel		1.7707/1.7717	7 0.0008/0.0015	0.0595	1.8898/1.890	7 0.6880
	TM-77 CB-1785HX Performance Bearing Wall I I Clearance No Dowel Hole		1.7707/1.7717	0.0018/0.0025	0.0590	1.8898/1.890	7 0.6880





	COUNTER DATA		SHOP DATA				
	ARING PART TERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
3 1797 CC ( (cont.) Years: 1994-2	1.8L) DOHC 16V L4	VTEC B18C1	3.18	39"/81.0mm	x 3.43		(cont.)
	1.8L) DOHC 16V L4	VTEC B18C5	3.18	39"/81.0mm	x 3.43	3"/87.2mm	, ,
Rod Bearing (4) NOTE: H-Series Perfo .0005" Thinner For .0	TM-77 CB-1785HXK rmance with TriArmor E 0010" More Oil Clearand s Not Include Coating T	ce	1.7707/1.7717	0.0018/0.0025	0.0590	1.8898/1.8907	7 0.6880
1-2-3-4-5 NOTE: H Series Perfo	TM-77 MS-2095H MB-3760H rmance Grooved Upper		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.3237	0.7870
Included Use with P Main Bearing Set		STD					
.0010" More Oil Clea Plain Lower Half Re	MB-3760HX rmance Bearing Wall .00 arance Grooved Upper I quires Thrust Washer S art Number TW-473S	Half And	2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.3237	7 0.7870
Thrust Washer Set  NOTE: Contains 2 Pie Number MS-2095H,	TW-473S MB-3176W ces; Position Number 4 MS-2095HX	STD ; Use with Part	2.4114/2.4213			3.2185/3.2283	3 0.0980
	2.0L) DOHC 16V L4	VTEC K20A2	3.39	90"/86.1mm	x 3.38	6"/86.0mm	4
	2.0L) DOHC 16V L4	VTEC K20Z1	3.39	90"/86.1mm	x 3.38	6"/86.0mm	
	2.3L) DOHC 16V Tu	rbo. L4 i-VTEC K23	A1 3.39	90"/86.0mm	x 3.89	0"/99.0mm	
	2.4L) DOHC 16V L4	i-VTEC K24Z3	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
2354 CC (2 Years: 2004-2	2.4L) DOHC 16V L4	VTEC K24A2	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
Rod Bearing NOTE: H Series Perfo	TM-77 CB-1861H rmance	STD•	1.8888/1.8898	0.0005/0.0029	0.0588	2.0079/2.0087	0.6100
	TM-77 CB-1861HX rmance Bearing Wall .0 arance	STD• 005" Thinner For	1.8888/1.8898	0.0015/0.0039	0.0583	2.0079/2.0087	7 0.6100
1-2-3-4-5 NOTE: H Series Perfo	TM-77 MS-2095H MB-3760H rmance Grooved Upper s Thrust Washer Set, No		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.3237	0.7870
Included Use with P	art Number TW-473S	STD					
1-2-3-4-5 NOTE: H Series Perfor .0010" More Oil Clea Plain Lower Half Re	MB-3760HX rmance Bearing Wall .0 arance Grooved Upper I quires Thrust Washer S art Number TW-473S	005" Thinner For Half And	2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.3237	0.7870
Thrust Washer Set  NOTE: Contains 2 Pie Number MS-2095H,	TW-473S MB-3176W ces; Position Number 4 MS-2095HX	STD i; Use with Part	2.4114/2.4213			3.2185/3.2283	3 0.0980





	CO	UNTER DATA	<b>\</b>	SHOP DATA					
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH	
4 CYL				•					
	C (2.0L) 002-2006	DOHC 16V L	VTEC K20A3	3.39	90"/86.1mm	x 3.38	6"/86.0mm	5	
Main Bearing Set 1-2-3-4-5 NOTE: H Series P Lower Half Req Included Use w	erformance	MB-3760H e Grooved Uppe et Washer Set, N		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.3237	7 0.7870	
.0010" More Oil	Performance Clearance If Requires	Grooved Upper Thrust Washer S		2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.3237	7 0.7870	
Thrust Washer So NOTE: Contains 2 Number MS-20	2 Pieces; P		STD 4; Use with Part	2.4114/2.4213			3.2185/3.2283	3 0.0980	
2156 C Years: 1		SOHC 16V L4	VTEC F22B1	3.34	16"/85.0mm	x 3.74	0"/95.0mm	6	
Rod Bearing (4) NOTE: H-Series F Oil Hole in Bear	Performanc	CB-1780H e No Dowel Hole	STD,.25mm e In Cap Half with	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.0087	7 0.7650	
	Performanc	CB-1780HK e with TriArmor ness, No Dowel	STD Maximum Wall Does Hole In	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.0087	7 0.7650	
	Performanc	CB-1780HX e Bearing Wall .0 No Dowel Hole	STD 0005" Thinner For In Cap	1.8888/1.8898	0.0018/0.0046	0.0584	2.0079/2.0087	7 0.7650	
	Performanc For .0010" No Does Not In	More Oil Clearan nclude Coating T	ce	1.8888/1.8898	0.0018/0.0046	0.0584	2.0079/2.008	7 0.7650	

# AUDI

ENGINE	YEAR	BORE & STROKE	BLOCK
1588 CC (1.6L) SOHC 8V L4 Volkswagen CR DIESEL	1982	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V Turbo. L4 Volkswagen CY DIESEL	1982-1983	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V L4 Volkswagen JK DIESEL	1983	3.012"/76.5mm X 3.385"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 Volkswagen JN	1984	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 Volkswagen MG	1985-1987	3.189"/81.0mm X 3.386"/86.0mm	1
1781 CC (1.8L) DOHC 20V Turbo. L4 Volkswagen AMU	2000-2002	3.190"/81.0mm X 3.400"/86.4mm	1
1781 CC (1.8L) DOHC 20V Turbo. L4 Volkswagen ATC	2000-2001	3.190"/81.0mm X 3.400"/86.4mm	1
1781 CC (1.8L) DOHC 20V Turbo. L4 Volkswagen BEA	2003-2006	3.190"/81.0mm X 3.400"/86.4mm	1
1986 CC (2.0L) SOHC 10V L5 Volkswagen CN DIESEL	1979-1982	3.012"/76.5mm X 3.400"/86.4mm	2
1986 CC (2.0L) SOHC 10V Turbo. L5 Volkswagen DE DIESEL	1983-1985	3.012"/76.5mm X 3.400"/86.4mm	2
1984 CC (2.0L) SOHC 8V L4 Volkswagen 3A	1988-1991	3.248"/82.5mm X 3.650"/92.7mm	1





ENGINE	YEAR	BORE & STROKE	BLOCK	
2144 CC (2.1L) SOHC 10V Turbo. L5 Volkswagen KH	1984-1985	3.130"/79.5mm X 3.400"/86.4mm	2	
2144 CC (2.1L) SOHC 10V L5 Volkswagen WE	1984	3.130"/79.5mm X 3.400"/86.4mm	2	
2144 CC (2.1L) SOHC 10V L5 Volkswagen WU	1984	3.130"/79.5mm X 3.400"/86.4mm	2	
2144 CC (2.1L) SOHC 10V Turbo. L5 Volkswagen WX	1984-1986	3.130"/79.5mm X 3.400"/86.4mm	2	
2226 CC (2.2L) SOHC 10V L5 Volkswagen JT	1984-1987	3.189"/81.0mm X 3.386"/86.0mm	2	
2226 CC (2.2L) SOHC 10V L5 Volkswagen KX	1984-1987	3.189"/81.0mm X 3.386"/86.0mm	2	
2226 CC (2.2L) SOHC 10V L5 Volkswagen KZ	1985-1987	3.189"/81.0mm X 3.386"/86.0mm	2	
2226 CC (2.2L) SOHC 10V Turbo. L5 Volkswagen MC	1986-1991	3.189"/81.0mm X 3.386"/86.0mm	2	
2226 CC (2.2L) DOHC 20V Turbo. L5 AAN	1992-1995	3.189"/81.0mm X 3.386"/86.0mm	2	
2309 CC (2.3L) SOHC 10V L5 Volkswagen NF	1988-1991	3.248"/82.5mm X 3.386"/86.0mm	2	
2309 CC (2.3L) SOHC 10V L5 Volkswagen NG	1988-1992	3.248"/82.5mm X 3.386"/86.0mm	2	
2309 CC (2.3L) DOHC 20V L5 Volkswagen 7A	1989-1991	3.248"/82.5mm X 3.386"/86.0mm	2	

#### CRANKSHAFT FORGING NUMBERS

 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK

 035D
 3.386in/86.0mm
 2
 035D
 3.400in/86.4mm
 2
 |

	COL	JNTER DA	TA	SHOP DATA					
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAF		MAX WALL		MAX LENGTH	
								4 CYL	
1 1588	CC (1.6L) S	SOHC 8V L	.4 Volkswagen DIESEL	. 3	3.012"/76.5mm	x 3.38	5"/86.0mm	1	
1588	CC (1.6L) \$	онс 8V т	Turbo. L4 Volkswagen	DIESEL 3	3.012"/76.5mm	x 3.38	5"/86.0mm		
1780	CC (1.8L) \$	SOHC 8V L	.4 Volkswagen	3	3.189"/81.0mm	x 3.38	6"/86.0mm		
1781	CC (1.8L) I	DOHC 20V	Turbo. L4 Volkswager	n 3	3.190"/81.0mm	x 3.40	0"/86.4mm		
1984	CC (2.0L) \$	SOHC 8V L	4 Volkswagen	3	3.248"/82.5mm	x 3.65	0"/92.7mm		
Rod Bearing (4) NOTE: H Series		CB-1426H	STD•,.026mm•	1.8802/1.88	310 0.0005/0.0027	0.0553	1.9921/1.9929	0.7470	
Rod Bearing (4) NOTE: H Series .0010" More C	Performance	CB-1426HX Bearing Wa	STD• II .0005" Thinner For	1.8802/1.88	310 0.0015/0.0037	0.0548	1.9921/1.9929	0.7470	



	cou	INTER DA	TA	Π		SHOP	DATA	· · · · · ·	
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHA DIAMETE		RT OIL EARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
5 CYL									
2 1986 C	C (2.0L) S	OHC 10V	L5 Volkswagen DIESE	L	3.012"	/76.5mm	x 3.40	0"/86.4mm	2
1986 C	C (2.0L) S	OHC 10V	Turbo L5 Volkswagen	DIESEL	3.012"	/76.5mm	x 3.40	0"/86.4mm	
2144 C	C (2.1L) S	OHC 10V	Turbo. L5 Volkswager	1	3.130"	/79.5mm	x 3.40	0"/86.4mm	
2144 C	C (2.1L) S	OHC 10V	L5 Volkswagen		3.130"	/79.5mm	x 3.40	0"/86.4mm	
2226 C	C (2.2L) S	OHC 10V	L5 Volkswagen		3.189"	/81.0mm	x 3.38	6"/86.0mm	
2226 C	C (2.2L) S	OHC 10V	Turbo. L5 Volkswager	1	3.189"	/81.0mm	x 3.38	6"/86.0mm	
2226 C	C (2.2L) D	OHC 20V	Turbo. L5		3.189"	/81.0mm	x 3.38	6"/86.0mm	
2309 C	C (2.3L) S	OHC 10V	L5 Volkswagen		3.248"	/82.5mm	x 3.38	6"/86.0mm	
2309 C	C (2.3L) D	OHC 20V	L5 Volkswagen		3.248"	/82.5mm	x 3.38	6"/86.0mm	
Rod Bearing (5) NOTE: H Series P		CB-1426H	STD+,.026mm+	1.8802/1.	8810 0.0	0005/0.0027	0.0553	1.9921/1.992	9 0.7470
Rod Bearing (5) NOTE: H Series P .0010" More Oil	erformance	CB-1426HX Bearing Wal	STD• I .0005" Thinner For	1.8802/1.	8810 0.0	0015/0.0037	0.0548	1.9921/1.992	9 0.7470
Crankshaft Forgi	<b>ng</b> 035	5D							

## **CHRYSLER**

YEAR	BORE & STROKE	BLOCK
1989-1990	3.240"/82.3mm X 2.953"/75.0mm	1
1989	3.240"/82.3mm X 2.953"/75.0mm	1
1980-1984	3.028"/76.9mm X 3.386"/86.0mm	1
1971-1980	3.028"/76.9mm X 3.386"/86.0mm	1
1984-1990	3.028"/76.9mm X 3.386"/86.0mm	1
1989-1994	3.173"/80.6mm X 3.386"/86.0mm	1
1983-1992	3.346"/85.0mm X 3.465"/88.0mm	2
1989-1994	3.346"/85.0mm X 3.465"/88.0mm	3
1990-1998	3.346"/85.0mm X 3.465"/88.0mm	3
1990-1993	3.406"/86.5mm X 3.937"/100.0mm	3
1993-1996, 2001-2005	3.406"/86.5mm X 3.937"/100.0mm	4
1995-2010	3.445"/87.5mm X 3.976"/101.0mm	5
2003-2009	3.445"/87.5mm X 3.976"/101.0mm	6
1995-2000	3.290"/83.5mm X 2.992"/76.0mm	7
1987-2000	3.587"/91.1mm X 2.992"/76.0mm	8
2001-2005	3.587"/91.1mm X 2.992"/76.0mm	8
1991-1996	3.587"/91.1mm X 2.992"/76.0mm	8
1991-1996	3.587"/91.1mm X 2.992"/76.0mm	8
1964-1969	3.625"/92.1mm X 3.313"/84.2mm	12
1956-1957	3.750"/95.3mm X 3.130"/79.4mm	13
	1989-1990 1989 1980-1984 1971-1980 1984-1990 1989-1994 1983-1992 1989-1994 1990-1993 1990-1993 1993-1996, 2001-2005 1995-2010 2003-2009 1995-2000 1987-2000 2001-2005 1991-1996 1991-1996	1989-1990 3.240"/82.3mm X 2.953"/75.0mm 1989 3.240"/82.3mm X 2.953"/75.0mm 1980-1984 3.028"/76.9mm X 3.386"/86.0mm 1971-1980 3.028"/76.9mm X 3.386"/86.0mm 1984-1990 3.028"/76.9mm X 3.386"/86.0mm 1989-1994 3.173"/80.6mm X 3.386"/86.0mm 1983-1992 3.346"/85.0mm X 3.465"/88.0mm 1989-1994 3.346"/85.0mm X 3.465"/88.0mm 1990-1998 3.346"/85.0mm X 3.465"/88.0mm 1990-1993 3.406"/86.5mm X 3.937"/100.0mm 1993-1996, 2001-2005 3.406"/86.5mm X 3.937"/100.0mm 1995-2010 3.445"/87.5mm X 3.976"/101.0mm 2003-2009 3.445"/87.5mm X 3.976"/101.0mm 1995-2000 3.587"/91.1mm X 2.992"/76.0mm 1987-2000 3.587"/91.1mm X 2.992"/76.0mm 1991-1996 3.587"/91.1mm X 2.992"/76.0mm 1991-1996 3.587"/91.1mm X 2.992"/76.0mm 1991-1996 3.587"/91.1mm X 2.992"/76.0mm





ENGINE	YEAR	BORE & STROKE	BLOCK
301 CID (4.9L) 16V V8	1957	3.910"/99.3mm X 3.130"/79.4mm	13
303 CID (5.0L) 16V V8	1956	3.810"/96.8mm X 3.310"/84.1mm	13
313 CID (5.1L) 16V V8	1958-1964	3.875"/98.4mm X 3.310"/84.1mm	13
318 CID (5.2L) 16V V8 Magnum	1992-2003	3.910"/99.3mm X 3.313"/84.2mm	14
318 CID (5.2L) 16V V8	1957-1991	3.910"/99.3mm X 3.313"/84.2mm	15
326 CID (5.3L) 16V V8	1959	3.950"/100.4mm X 3.310"/84.1mm	13
340 CID (5.6L) 16V V8	1968-1973	4.040"/102.6mm X 3.313"/84.1mm	12
345 CID (5.7L) 16V V8 HEMI	2003-2012	3.917"/99.5mm X 3.580"/90.9mm	16
345 CID (5.7L) 16V V8 HEMI Hybrid	2009	3.917"/99.5mm X 3.580"/90.9mm	16
350 CID (5.7L) 16V V8	1958	4.063"/103.2mm X 3.375"/85.7mm	17
359 CID (5.9L) 12V Turbo. L6 Cummins 6BT DIESEL	1991-1999	4.016"/102.0mm X 4.724"/120.0mm	9
359 CID (5.9L) 24V Turbo. L6 Cummins ISB ETC DIESEL	1998-2002	4.016"/102.0mm X 4.724"/120.0mm	9
359 CID (5.9L) 24V Turbo. L6 Cummins ISB HO ETH DIESEL	2001-2002	4.016"/102.0mm X 4.724"/120.0mm	9
359 CID (5.9L) 24V Turbo. L6 Cummins ISBe/QSB ETC DIESEL	2003-2005	4.016"/102.0mm X 4.724"/120.0mm	10
359 CID (5.9L) 24V Turbo. L6 Cummins ISBe/QSB HO ETH	2003-2010	4.016"/102.0mm X 4.724"/120.0mm	10
DIESEL			
359 CID (5.9L) 12V Turbo. L6 Cummins DIESEL	1988-1991	4.016"/102.0mm X 4.724"/120.0mm	9
360 CID (5.9L) 16V V8	1971-2003	4.000"/101.6mm X 3.578"/90.9mm	18
361 CID (5.9L) 16V V8	1958-1966, 1969-1971	4.125"/104.8mm X 3.375"/85.7mm	17
370 CID (6.1L) 16V V8 HEMI	2005-2010	4.055"/103.0mm X 3.580"/90.9mm	16
383 CID (6.3L) 16V V8	1959-1971	4.250"/108.0mm X 3.375"/85.9mm	19
392 CID (6.4L) 16V V8 HEMI	2011-2012	4.090"/103.9mm X 3.720"/94.5mm	20
400 CID (6.6L) 16V V8	1971-1978	4.342"/110.3mm X 3.375"/85.7mm	17
408 CID (6.7L) 24V Turbo. L6 Cummins ETJ DIESEL	2007-2010	4.210"/107.0mm X 4.880"/124.0mm	11
413 CID (6.7L) 16V V8	1959-1965, 1969-1971	4.188"/106.4mm X 3.750"/95.3mm	21
426 CID (7.0L) 16V V8 HEMI	1964-1971	4.250"/108.0mm X 3.750"/95.2mm	22
426 CID (7.0L) 16V V8 Wedge	1963-1965	4.250"/108.0mm X 3.750"/95.2mm	22
440 CID (7.2L) 16V V8	1966-1979	4.320"/109.7mm X 3.750"/95.2mm	21
488 CID (8.0L) 20V V10 Magnum	1992-2003	4.000"/101.6mm X 3.882"/98.6mm	23
505 CID (8.3L) 20V V10	2003-2006	4.031"/102.4mm X 3.960"/100.6mm	24
515 CID (8.4L) 20V V10	2008-2010	4.055"/103.0mm X 3.960"/100.6mm	24

### CONNECTING ROD FORGING NUMBERS

FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BL	оск
1618699	3.313in/84.2mm	14	2406782	3.375in/85.9mm	19	529238	3.375in/85.7mm	17
1618699	3.313in/84.2mm	15	2406886	3.375in/85.7mm	17	529938	3.375in/85.7mm	17
1618699	3.375in/85.7mm	17	2406886	3.375in/85.9mm	19	532294	3.375in/85.7mm	17
1618699	3.375in/85.9mm	19	2406886	3.750in/95.2mm	21	541000	3.375in/85.7mm	17
1737692	3.375in/85.7mm	17	2406886	3.750in/95.3mm	21	544956	3.375in/85.7mm	17
1737692	3.375in/85.9mm	19	2406886	3.750in/95.2mm	22	699	3.313in/84.2mm	14
1851535	3.375in/85.7mm	17	2951908	3.375in/85.7mm	17	699	3.313in/84.2mm	15
1851535	3.375in/85.9mm	19	2951908	3.375in/85.9mm	19	72G	2.992in/76.0mm	8
1851535	3.750in/95.2mm	21	2951908	3.750in/95.2mm	21	72W	2.992in/76.0mm	8
1851535	3.750in/95.3mm	21	2951908	3.750in/95.3mm	21	782	3.313in/84.2mm	14
1851535	3.750in/95.2mm	22	2951908	3.750in/95.2mm	22	782	3.313in/84.2mm	15
2406395	3.375in/85.7mm	17	31	2.953in/75.0mm	1	D	2.953in/75.0mm	1
2406395	3.375in/85.9mm	19	31	3.386in/86.0mm	1	D	3.386in/86.0mm	1
2406395	3.750in/95.2mm	21	3418645	3.313in/84.2mm	14	DC549AAA0143	3.580in/90.9mm	16
2406395	3.750in/95.3mm	21	3418645	3.313in/84.2mm	15	DC549AAB0904	3.580in/90.9mm	16
2406395	3.750in/95.2mm	22	3901085	4.724in/120.0mm	9	F	2.953in/75.0mm	1
2406782	3.313in/84.2mm	14	3901566	4.724in/120.0mm	9	F	3.386in/86.0mm	1
2406782	3.313in/84.2mm	15	40F	3.937in/100.0mm	3	S	2.953in/75.0mm	1
2406782	3.375in/85.7mm	17	529007	3.375in/85.7mm	17	S	3.386in/86.0mm	1





#### **CRANKSHAFT FORGING NUMBERS**

CRANKSHA	FT FORGING	NUMBE	RS					
FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BL	оск
003K	3.386in/86.0mm	1	1855127	3.375in/85.7mm	17 <b> </b>	2658393	3.313in/84.2mm	15
003K	2.992in/76.0mm	8	1855127	3.375in/85.9mm	19	2843868	3.313in/84.2mm	14
003N	3.386in/86.0mm	1	1855127	3.750in/95,2mm	21	2843868	3.313in/84.2mm	15
003N	2.992in/76.0mm	8	1855127	3.750in/95.3mm	21	2NABC	3.386in/86.0mm	1
020201A1	3.386in/86.0mm	1	1855127	3.750in/95.2mm	22	2Y68-76	3.386in/86.0mm	1
020201A1	2.992in/76.0mm	8	1978698	3.375in/85.7mm	17	30R	3.386in/86.0mm	1
		1						1
09N	3.386in/86.0mm		1978698	3.375in/85.9mm	19	31-87	3.386in/86.0mm	1
09N	2.992in/76.0mm	8	1978698	3.750in/95.2mm	21	31M	3.386in/86.0mm	
1.9	3.386in/86.0mm	1	1978698	3.750in/95.3mm	21	3281N	3.386in/86.0mm	1
1.9	2.992in/76.0mm	8	1978698	3.750in/95.2mm	22	3294	3.375in/85.7mm	17
10-B	3.386in/86.0mm	1	19N	2.992in/76.0mm	8	3294	3.375in/85.9mm	19
10-B	2.992in/76.0mm	8	2128278	3.313in/84.2mm	14	3294	3.750in/95.2mm	21
103427	3.375in/85.7mm	17	2128278	3.313in/84.2mm	15	3294	3.750in/95.3mm	21
1174N	3.386in/86.0mm	1	2128869	3.313in/84.2mm	14	3294	3.750in/95.2mm	22
1174N	2.992in/76.0mm	8	2128869	3.313in/84.2mm	15	329880N	3.386in/86.0mm	1
11M	3.386in/86.0mm	1	2203155	3.375in/85.7mm	17	3418640	3.578in/90.9mm	18
11M	2.992in/76.0mm	8	2203155	3.375in/85.9mm	19	3418840-2	3.578in/90.9mm	18
1626123	3.313in/84.2mm	14	2203157	3.375in/85.7mm	17	3418995	3.578in/90.9mm	18
1626123	3.313in/84.2mm	15	2203157	3.375in/85.9mm	19	3462387	3.313in/84.2mm	14
1630270	3.313in/84.2mm	14	2205700	3.313in/84.2mm	14	3462387	3.313in/84.2mm	15
1630270	3.313in/84.2mm	15	2205700	3.313in/84.2mm	15	3462923	3.375in/85.7mm	17
1630276	3.313in/84.2mm	14	2205702	3.313in/84.2mm	14	3462923	3.375in/85.9mm	19
1630276	3.313in/84.2mm	15	2205702	3.313in/84.2mm	15	3482387	3.313in/84.2mm	14
1650270	3.313in/84.2mm	14	2206157	3.375in/85.7mm	17	3482387	3.313in/84.2mm	15
1650270	3.313in/84.2mm	15	2206157	3.375in/85.9mm	19	3698641	3.375in/85.7mm	17
1732557	3.313in/84.2mm	14	2206157	3.750in/95.2mm	21	3698641	3.375in/85.9mm	19
1732557	3.313in/84.2mm	15	2206157	3.750in/95.3mm	21	3698641	3.750in/95.2mm	21
1732559	3.313in/84.2mm	14	2206157	3.750in/95.2mm	22	3698641	3.750in/95.3mm	21
1732559	3.313in/84.2mm	15	2206158	3.375in/85.7mm	17	3698641	3.750in/95.2mm	22
1732610	3.313in/84.2mm	14	2206158	3.375in/85.9mm	19	3751841	3.313in/84.2mm	14
1732610	3.313in/84.2mm	15	2206158	3.750in/95.2mm	21	3751841	3.313in/84.2mm	15
1737641	3.375in/85.7mm	17	2206158	3.750in/95.3mm	21	3751877	3.375in/85.7mm	17
1737641	3.375in/85.9mm	19	2206158	3.750in/95.2mm	22	3751877	3.375in/85.9mm	19
1737642	3.375in/85.7mm	17	2206159	3.375in/85.7mm	17	3751888	3.375in/85.7mm	17
1737642	3.375in/85.9mm	19	2206159	3.375in/85.9mm	19	3751888	3.375in/85.9mm	19
1737642	3.750in/95.2mm	21	2206160	3.375in/85.7mm	17	3751888	3.750in/95.2mm	21
1737642	3.750in/95.3mm	21	2206160	3.375in/85.9mm	19	3751888	3.750in/95.3mm	21
1737642	3.750in/95.2mm	22	2206160	3.750in/95.2mm	21	3751888	3.750in/95.2mm	22
1821436	3.375in/85.7mm	17	2206160	3.750in/95.3mm	21	3751888-5	3.375in/85.7mm	17
1821436	3.375in/85.9mm	19	2206160	3.750in/95.2mm	22	3751888-5	3.375in/85.9mm	19
1821436	3.750in/95.2mm	21	2258393	3.313in/84.2mm	14	3751888-5	3.750in/95.2mm	21
1821436	3.750in/95.3mm	21	2258393	3.313in/84.2mm	15	3751888-5	3.750in/95.3mm	21
1821436	3.750in/95.2mm	22	2264182	3.313in/84.2mm	14	3751888-5	3.750in/95.2mm	22
1826123	3.313in/84.2mm	14	2264182	3.313in/84.2mm	15	3907804	4.724in/120.0mm	9
1826123	3.313in/84.2mm	15	2465747	3.313in/84.2mm	14	3YA	3.465in/88.0mm	3
1826129	3.313in/84.2mm	14	2465747	3.313in/84.2mm	15	3YA	3.937in/100.0mm	
1826129	3.313in/84.2mm		2482923	3.375in/85.7mm	17		3.578in/90.9mm	
		15		3.375in/85.9mm		4027169 4027172		18
1830276	3.313in/84.2mm	14	2482923		19		3.375in/85.7mm	17
1830276	3.313in/84.2mm	15	2532457	3.313in/84.2mm	14	4027172	3.375in/85.9mm	19
1851436	3.375in/85.7mm	17	2532457	3.313in/84.2mm	15	4027175	3.375in/85.7mm	17
1851436	3.375in/85.9mm	19	2558393	3.313in/84.2mm	14	4027175	3.375in/85.9mm	19
1851436	3.750in/95.2mm	21	2558393	3.313in/84.2mm	15	4027175	3.750in/95.2mm	21
1851436	3.750in/95.3mm	21	2656278	3.313in/84.2mm	14	4027175	3.750in/95.3mm	21
1851436	3.750in/95.2mm	22	2656278	3.313in/84.2mm	15	4027175	3.750in/95.2mm	22
1851527	3.375in/85.7mm	17	2658268	3.313in/84.2mm	14	407N	3.465in/88.0mm	3
1851527	3.375in/85.9mm	19	2658268	3.313in/84.2mm	15	407N	3.937in/100.0mm	
1851527	3.750in/95.2mm	21	2658278	3.313in/84.2mm	14	40F	3.465in/88.0mm	3
1851527	3.750in/95.3mm	21	2658278	3.313in/84.2mm	15	4196N	3.465in/88.0mm	3
1851527	3.750in/95.2mm	22	2658393	3.313in/84.2mm	14	4196N	3.937in/100.0mm	3





### **CRANKSHAFT FORGING NUMBERS**

FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BLO	оск
45-T	3.465in/88.0mm	3	4XC1-U	3.386in/86.0mm	1	9773382	3.375in/85.7mm	17
45-T	3.937in/100.0mm	3	4XCIU	2.953in/75.0mm	1	9773383	3.375in/85.7mm	17
4813	3.375in/85.7mm	17	4XCIU	3.386in/86.0mm	1	9773524	3.375in/85.7mm	17
481379	3.375in/85.7mm	17	53021300AA	3.580in/90.9mm	16	9773573	3.375in/85.7mm	17
481380	3.375in/85.7mm	17	531369	3.375in/85.7mm	17	9782646	3.375in/85.7mm	17
493654	3.375in/85.7mm	17	541585	3.375in/85.7mm	17	9782770	3.375in/85.7mm	17
496452	3.375in/85.7mm	17	544191	3.375in/85.7mm	17	9783785	3.375in/85.7mm	17
4A	3.465in/88.0mm	3	63-GC	3.465in/88.0mm	3	9783786	3.375in/85.7mm	17
4A	3.937in/100.0mm	3	63-GC	3.937in/100.0mm	3	9793573	3.375in/85.7mm	17
4AC	3.465in/88.0mm	3	63GC	3.465in/88.0mm	3	9794054	3.375in/85.7mm	17
4AC	3.937in/100.0mm	3	63GC	3.937in/100.0mm	3	97954	3.375in/85.7mm	17
4AL	3.465in/88.0mm	3	63GU	3.465in/88.0mm	3	9795479	3.375in/85.7mm	17
4AL	3.937in/100.0mm	3	63GU	3.937in/100.0mm	3	97TM	2.992in/76.0mm	8
4G-3	3.386in/86.0mm	1	65-RU	3.465in/88.0mm	3	A-6303	2.992in/76.0mm	8
4G1	2.953in/75.0mm	1	65-RU	3.937in/100.0mm	3	A-6303-A	2.992in/76.0mm	8
4G1	3.386in/86.0mm	1	69-GU	3.465in/88.0mm	3	A1D	2.992in/76.0mm	8
4G3	2.953in/75.0mm	1	69-GU	3.937in/100.0mm	3	A301	2.992in/76.0mm	8
4G3	3.386in/86.0mm	1	6AM	3.465in/88.0mm	3	A6303	2.992in/76.0mm	8
4G61	2.953in/75.0mm	1	6AM	3.937in/100.0mm	3	AD	2.992in/76.0mm	8
4G61	3.386in/86.0mm	1	8698461	3.375in/85.7mm	17	AY	2.992in/76.0mm	8
4K	2.953in/75.0mm	1	8698461	3.375in/85.9mm	19	B301	2.992in/76.0mm	8
4K	3.386in/86.0mm	1	8698461	3.750in/95.2mm	21	GE	3.465in/88.0mm	3
4K05	2.953in/75.0mm	1	8698461	3.750in/95.3mm	21	GE	3.937in/100.0mm	3
4K05	3.386in/86.0mm	1	8698461	3.750in/95.2mm	22	T3A	2.992in/76.0mm	8
4XC1-U	2.953in/75.0mm	1	96TM-AA	2.992in/76.0mm	8			





	COU	INTER DATA	1			SHOP	DATA		
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHA		VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL									
Years: 19	989-1990 <b>/ 1595 C</b> (		IC 16V L4 Mitsubish IC 16V Turbo. L4 Mit		4G6				1
	/ <b>1597 C</b> 0 980-1984	C (1.6L) SOH	C 8V L4 Mitsubishi		3.02	8"/76.9mm	x 3.38	6"/86.0mm	
98 CID Years: 19	/ <b>1597 C</b> 0 971-1980		C 8V L4 Mitsubishi			8"/76.9mm	x 3.38	6"/86.0mm	
Years: 19	984-1990				3.02	8"/76.9mm	x 3.38	6"/86.0mm	
	<b>D (1.8L) S</b> ( 989-1994	OHC 8V L4 I	Mitsubishi 4G37		3.17	'3"/80.6mm	x 3.38	6"/86.0mm	
Rod Bearing (4) NOTE: H-Series F Fillet Clearance	erformance			1.7710/1	.7717	0.0006/0.0027	0.0587	1.8897/1.8905	0.8550
Rod Bearing (4) NOTE: H-Series F .0010" More Oil Crank Fillet Cle	erformance Clearance N	Narrowed For In		1.7710/1	.7717	0.0016/0.0037	0.0582	1.8897/1.8905	0.8550
Connecting Rod Crankshaft Forgi	<b>ng</b> 003	3K, 003N, 02020	01A1, 09N, 1.9, 10-B, 1174 G61, 4K, 4K05, 4XC1-U, 4X		NABC	, 2Y68-76, 30R	, 31-87,	31M, 3281N, 3	29880N,
	<b>D (2.0L) S</b> ( 983-1992	OHC 8V L4 I	Mitsubishi "A" G63B		3.34	6"/85.0mm	x 3.46	5"/88.0mm	2
Rod Bearing (4) For Year(s): 1983- NOTE: H-Series F Fillet Clearance (Thru 3/92)	-1992 Performance			1.7710/1	.7717	0.0006/0.0027	0.0587	1.8897/1.8905	0.8550
Rod Bearing (4) For Year(s): 1983- NOTE: H-Series F .0010" More Oil Crank Fillet Cle (Thru 3/92)	-1992 Performance Clearance N	Narrowed For In		1.7710/1	.7717	0.0016/0.0037	0.0582	1.8897/1.8905	0.8550
Balance Shaft	AL-3	SH-1469S	STD						
Bearing Set									
LH; Rear		SH-1468		1.6129		0.0010/0.0031			0.8268
RH; Front RH; Rear		SH-1467 SH-1469		1.6526 1.6129		0.0010/0.0031			0.7480
For Year(s): 1985- NOTE: From 8/85 FOR VIN(S): D	1989	SH-1409		1.0129		0.0010/0.0031	0.0009	1.7555	0.0200
3 122 CI	<b>D (2.0L) D</b> 989-1994	OHC 16V L4	Mitsubishi 4G63		3.34	6"/85.0mm	x 3.46	5"/88.0mm	3
Years: 19	990-1998		rbo. L4 Mitsubishi 4			6"/85.0mm			
	D (2.4L) S 990-1993	One 8V L4 I	Mitsubishi 4G64	,	3.406	"/86.5mm x	3.937	7100.0mm	
Rod Bearing (4) For Year(s): 1992- NOTE: H Series P	TM-77 ( -1998 erformance	CB-1643H Larger Chamfe lowel Hole In C		1.7710/1	.7717	0.0004/0.0025	0.0589	1.8897/1.8905	0.8320





	СО	UNTER DATA	Α		SHOP	DATA		
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							4 CYL	(cont.)
(cont.) Years: 1 122 C	989-1994 ID (2.0L) I		l Mitsubishi 4G63 ırbo. L4 Mitsubishi 4		46"/85.0mm 46"/85.0mm		5"/88.0mm	3 (cont.)
144 C		SOHC 8V L4	Mitsubishi 4G64	3.40	6"/86.5mm x	3.937	"/100.0mm	
Rod Bearing (4)	990-1993 TM-77	CB-1643HX	STD	1 7710/1 7717	0.0014/0.0035	0.0583	1 8897/1 8905	0.8320
For Year(s): 1992 NOTE: H Series F .0010" More Oi	Performanc I Clearance	e Bearing Wall . Larger Chamfe arance No Dowe						
	-1992 Performano	CB-1120HN se Narrowed For Hole In Cap Hal	STD,.026mm,.25mm Increased Crank	1.7710/1.7717	0.0006/0.0027	0.0587	1.8897/1.8905	0.8550
.0010" More Oi	-1992 Performand I Clearance	CB-1120HXN ce Bearing Wall . Narrowed For I Dowel Hole In C		1.7710/1.7717	0.0016/0.0037	0.0582	1.8897/1.8905	0.8550
Main Bearing Set 1-2-4-5 3 For Year(s): 1992 NOTE: H Series F	-1998	MS-2039H MB-3504H MB-3505H(F) ee Grooved Uppe	STD,.026mm,.25mm		0.0005/0.0025 0.0005/0.0025			
Lower Half (From 4/92)								
Main Bearing Set 1-2-4-5 3 For Year(s): 1992	-1998	MS-2039HX MB-3504HX MB-3505HX(F)	STD		0.0015/0.0035 0.0015/0.0035			
NOTE: H Series F .0010" More Oi (From 4/92)			0005" Thinner For					
Balance Shaft Bearing Set	AL-3	SH-1469S	STD					
LH; Rear RH; Front RH; Rear		SH-1468 SH-1467 SH-1469		1.6129 1.6526 1.6129	0.0010/0.0031 0.0010/0.0031 0.0010/0.0031	0.0593	1.7726	0.8268 0.7480 0.8268
Connecting Rod Crankshaft Forg			196N, 45-T, 4A, 4AC, 4AL,	63-GC, 63GC, 6	3GU, 65-RU, 69	-GU, 6AI	M, GE	
	ID (2.4L) \$		Mitsubishi 4G64	3.40	6"/86.5mm x	3.937	"/100.0mm	4
Rod Bearing (4) NOTE: H Series F	TM-77 Performanc	CB-1643H		1.7710/1.7717	0.0004/0.0025	0.0589	1.8897/1.8905	0.8320
.0010" More Oi	Performanc I Clearance	CB-1643HX te Bearing Wall . Larger Chamfe arance No Dowe		1.7710/1.7717	0.0014/0.0035	0.0583	1.8897/1.8905	0.8320





	CO	UNTER DATA	A		SHOP	DATA		
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL (cont.)								
(cont.) Years: 1	993-1996, 2	001-2005	Mitsubishi 4G64	3.406	6"/86.5mm x	3.937	"/100.0mm	4 (cont.)
Main Bearing Set 1-2-3-4-5 For Year(s): 2001 NOTE: H-Series F Lower Half Req Included Use w	-2005 Performanc uires Thrus	t Washer Set, N		2.2435/2.2441	0.0005/0.0025	0.0785	2.4016/2.4024	0.8050
.0010" More Oil	-2005 Performanc Clearance If Requires	Grooved Upper Thrust Washer		2.2435/2.2441	0.0015/0.0035	0.0780	2.4016/2.4024	0.8050
Main Bearing Set 1-2-4-5 3 For Year(s): 1993 NOTE: H Series F Lower Half	-1996	MS-2039H MB-3504H MB-3505H(F) e Grooved Uppe	STD,.026mm,.25mm		0.0005/0.0025 0.0005/0.0025			
Main Bearing Set 1-2-4-5 3 For Year(s): 1993 NOTE: H Series F .0010" More Oil	-1996 Performance	MS-2039HX MB-3504HX MB-3505HX(F) Bearing Wall .0	STD  O005" Thinner For		0.0015/0.0035 0.0015/0.0035			
Thrust Washer So For Year(s): 2001 NOTE: Contains 2 Number MS-22	et -2005 2 Pieces, Po		STD 3 Use with Part	2.4842/2.4941			3.1693/3.1791	0.0830
Balance Shaft Bearing Set LH; Rear RH; Front RH; Rear		SH-1469S SH-1468 SH-1467 SH-1469	STD	1.6129 1.6526 1.6129	0.0010/0.0031 0.0010/0.0031 0.0010/0.0031	0.0593	1.7726	0.8268 0.7480 0.8268
		OHC 16V L4		3.44	5"/87.5mm x	3.976	"/101.0mm	5
Rod Bearing (4) NOTE: H-Series F		CB-1813H	STD,.026mm,.25mm	1.9677/1.9687	0.0008/0.0030	0.0584	2.0863/2.0869	0.7930
Rod Bearing (4) NOTE: H-Series F	TM-77 Performanc	CB-1813HX	STD 0005" Thinner For	1.9677/1.9687	0.0018/0.0040	0.0579	2.0863/2.0869	0.7930
Upper Half And	Performanc Plain Lowe	MS-2279H MB-3594H MB-3907H(F) er Half, Bearings with Full Groove			0.0005/0.0029 0.0005/0.0029			





	co	UNTER DATA	Α		SHOP	DATA		
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE I	MAX LENGTH
2 440.01	D (0 41 ) I	DOUG 40V T	urba 14	0.44		0.070		4 CYL
	D (2.4L) I 003-2009	DOHC 16V Tu	Irbo. L4	3.44	5"/87.5mm x	3.976	"/101.0mm	6
Rod Bearing (4) NOTE: H-Series I		CB-1813H e No Dowel Hol	STD,.026mm,.25mm e In Cap Half	1.9677/1.9687	0.0008/0.0030	0.0584	2.0863/2.0869	0.7930
	Performanc	CB-1813HX e Bearing Wall . No Dowel Hole	STD 0005" Thinner For In Cap	1.9677/1.9687	0.0018/0.0040	0.0579	2.0863/2.0869	0.7930
Upper Half And	Performanc	MS-2279H MB-3594H MB-3907H(F) te Position Number Half, Bearings with Full Groove			0.0005/0.0029 0.0005/0.0029			
								6 CYL
	<b>D (2.5L) \$</b> 995-2000	SOHC 24V V6	Mitsubishi EEB	3.29	90"/83.5mm	x 2.99	2"/76.0mm	7
Rod Bearing (6) NOTE: H-Series I		CB-1411H e No Dowel Hol	STD+,.026mm+ e In Cap Half	1.9677/1.9685	0.0007/0.0027	0.0587	2.0866/2.0868	0.6120
	Performanc	CB-1411HX se Bearing Wall . No Dowel Hole	STD• 0005" Thinner For In Cap	1.9670/1.9674	0.0017/0.0037	0.0582	2.0866/2.0874	0.6120
Thrust Washer S	et	TW-458S MB-3108W(L) MB-3108W(U)	STD	2.5984/2.6083 2.5984/2.6083			3.0492/3.0594 3.0492/3.0594	
Years: 1 181 CI	987-2000		Mitsubishi 6G72 Mitsubishi 6G72		37"/91.1mm 37"/91.1mm			8
		DOHC 24V V	Mitsubishi 6G72	3.58	37"/91.1mm	x 2.99	2"/76.0mm	
181 CI	991-1996 <b>D (3.0L) [</b> 991-1996	DOHC 24V Tu	ırbo. V6 Mitsubish	i 6G72T 3.58	87"/91.1mm	x 2.99	2"/76.0mm	
Rod Bearing (6) NOTE: H-Series I	TM-77	CB-1411H e No Dowel Hol	STD•,.026mm• e In Cap Half	1.9677/1.9685	0.0007/0.0027	0.0587	2.0866/2.0868	0.6120
	Performanc	CB-1411HX se Bearing Wall . No Dowel Hole	STD• 0005" Thinner For In Cap	1.9670/1.9674	0.0017/0.0037	0.0582	2.0866/2.0874	0.6120
Main Bearing Set 1-2-3-4 NOTE: H Series F		MS-2226H MB3791H e Grooved Uppe	STD•,.026mm•	2.3614/2.3622	0.0007/0.0032	0.0783	2.5197/2.5204	0.7120
	uires Thrus	st Washer Set, N						
Main Bearing Set		MS-2226HX MB3791HX	STD•	2.3614/2.3622	0.0017/0.0042	0.0778	2.5197/2.5204	0.0712
NOTE: H Series F .0010" More Oil	Clearance If Requires	e Bearing Wall . Grooved Upper Thrust Washer		2.3014/2.3022	0.0017/0.0042	0.0776	2.013112.3204	0.0712





	COL	JNTER DAT	Ά		SHOP	DATA	<b>\</b>	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
6 CYL (cont.)				•				
(cont.) Years: 1:	987-2000		6 Mitsubishi 6G72 6 Mitsubishi 6G72		87"/91.1mm 87"/91.1mm			(cont.)
Years: 2 181 CI	001-2005 D (3.0L) D		6 Mitsubishi 6G72	3.5	87"/91.1mm	x 2.99	2"/76.0mm	
181 CI	991-1996 <b>D (3.0L) D</b> 991-1996	OHC 24V T	urbo. V6 Mitsubishi (	6G72T 3.5	87"/91.1mm	x 2.99	2"/76.0mm	
Thrust Washer So  NOTE: Contains 4  Number MS-22	et 4 Pieces, Po		STD 3 Use with Part	2.5984/2.608 2.5984/2.608			3.0492/3.059 3.0492/3.059	
Connecting Rod Crankshaft Forgi	ing 00		201A1, 09N, 1.9, 10-B, 117 301, T3A	74N, 11M, 19N,	96TM-AA, 97TM	, A-6303	3, A-6303-A, A	1D, A301,
Years: 1: 359 CI Years: 1: 359 CI Years: 2: 359 CI	991-1999 <b>D (5.9L) 2</b> 998-2002 <b>D (5.9L) 2</b> 001-2002	4V Turbo. L 4V Turbo. L	.6 Cummins 6BT DIE .6 Cummins ISB ETC .6 Cummins ISB HO .6 Cummins DIESEL	DIESEL 4.016 ETH DIESEL 4.016	6"/102.0mm x	4.724	"/120.0mm	
Rod Bearing (6) NOTE: H-Series F Machined Conn	TM-1120 Performance	CB-1413H No Dowel Ho	STD,.026mm,.25mm sle In Cap Half,	2.7160/2.717	0.0015/0.0045	0.0775	2.8735/2.874	1.2250
Rod Bearing (6) NOTE: H-Series F .0010" More Oil Half, Machined	Performance Clearance I	No Dowel Hole	STD .0005" Thinner For a In Cap	2.7160/2.717	0.0025/0.0055	0.0770	2.8735/2.874	1.2250
Main Bearing Set 1-2-3-4-5-7 6 NOTE: H-Series F Lower Half, Cor Half Flanged Be	Performance	langed Bearin	0		2 0.0017/0.0047 2 0.0017/0.0047			
4.586"		(To Be Replace	d By MS-2328H)					
.0010" More Oil Plain Lower Ha	Performance Clearance ( If, Contains	Grooved Uppe Half Flanged E		0.20 0.200.	2 0.0027/0.0057 2 0.0027/0.0057			
Max Flange Dia		(To Be Replace	d By MS-2328HX) STD•026mm•25mm•					
Main Bearing Set 1-2-3-4-5-7 6 NOTE: H-Series F		MS-2328H MB-3110H MB-3109H(F) Grooved Upp	oer Half And Plain		2 0.0017/0.0047 2 0.0017/0.0047			
Lower Half, Cor Half Flanged Be 4.500"	ntains Half F	langed Bearin	g, Upper					





	COL	INTER DATA			SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE			MAX LENGTH
								(cont.)
(cont.) Years: 1 359 C	991-1999		Cummins 6BT DIE	DIESEL	"/102.0mm x "/102.0mm x			(cont.)
		4V Turbo. L6	Cummins ISB HO				11/400 0	
359 C	2001-2002 <b>ID (5.9L) 12</b> 1988-1991	2V Turbo. L6	Cummins DIESEL		"/102.0mm x "/102.0mm x			
Main Bearing Se 1-2-3-4-5-7 6 NOTE: H-Series .0010" More Oi Plain Lower Ha	t TM-77 I Performance I Clearance C lf, Contains I	MB-3110HX MB-3109HX(F) Bearing Wall .0 Grooved Upper I Half Flanged Be			2 0.0027/0.0057 2 0.0027/0.0057			
Max Flange Dia Connecting Rod								
Crankshaft Forg		07804		D === DI==				- 40
Years: 2	2003-2005		Cummins ISBe/QS	4.016	"/102.0mm x	4.724	"/120.0mm	10
	ID (5.9L) 24 2003-2010	4V Turbo. L6	Cummins ISBe/QS		DIESEL :"/102.0mm x	4.724	"/120.0mm	
Rod Bearing (6) NOTE: H-Series Fractured Con	Performance	CB-1873H No Dowel Hole	STD,.026mm,.25mm In Cap Half,	2.7160/2.7170	0.0015/0.0045	0.0775	2.8735/2.874	5 1.2250
	Performance I Clearance N	No Dowel Hole I	STD 1005" Thinner For n Cap	2.7160/2.7170	0.0020/0.0050	0.0770	2.8735/2.874	5 1.2250
Rod Bearing (6) For Year(s): 2003 NOTE: H-Series Machined Con	Performance	CB-1413H No Dowel Hole	STD,.026mm,.25mm	2.7160/2.7170	0.0015/0.0045	0.0775	2.8735/2.874	5 1.2250
	Performance I Clearance N	No Dowel Hole I	STD 0005" Thinner For n Cap	2.7160/2.7170	0.0025/0.0055	0.0770	2.8735/2.874	5 1.2250
<b>Main Bearing Se</b> 1-2-3-4-5-7 6	1	<b>MS-1717H</b> MB-3110H MB-3109H(F)	STD,.026mm,.25mm		2 0.0017/0.0047 2 0.0017/0.0047			
	Performance Intains Half F earing Only, I	langed Bearing Max Flange Dia	, Upper meter					
Main Bearing Se		To Be Replaced I MS-1717HX	STD STD					
1-2-3-4-5-7 6	1	MB-3110HX MB-3109HX(F)			2 0.0027/0.0057 2 0.0027/0.0057			
.0010" More Oi Plain Lower Ha	Performance I Clearance (	Grooved Upper Half Flanged Be						





	COUNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
6 CYL (cont.)							
(cont.) Years: 20	D (5.9L) 24V Turbo. L		4.016' SB HO ETH D	'/102.0mm x			10 (cont.)
Main Bearing Set 1-2-3-4-5-7 6 For Year(s): 2003-	MB-3110H MB-3109H(F) <b>2008</b>	STD•,.026mm•,.25mm•		0.0017/0.0047 0.0017/0.0047			
Lower Half, Con	erformance Grooved Upp stains Half Flanged Bearing aring Only, Max Flange Di	g, Upper					
Main Bearing Set 1-2-3-4-5-7 6 For Year(s): 2003-	MB-3110HX MB-3109HX(F) 2008	STD•		0.0027/0.0057 0.0027/0.0057			
.0010" More Oil	erformance Bearing Wall Clearance Grooved Upper f, Contains Half Flanged B meter 4.500"	Half And					
11 408 CII Years: 20	<b>D (6.7L) 24V Turbo. L</b> 007-2010	6 Cummins ETJ DIE	SEL 4.210	'/107.0mm x	4.880	"/124.0mm	11
Rod Bearing (6) NOTE: H-Series P Fractured Conn	TM-112 CB-1873H erformance No Dowel Holecting Rod	STD,.026mm,.25mm le In Cap Half,	2.7160/2.7170	0.0015/0.0045	0.0775	2.8735/2.8745	1.2250
.0010" More Oil	TM-112 CB-1873HX erformance Bearing Wall Clearance No Dowel Hole Connecting Rod		2.7160/2.7170	0.0020/0.0050	0.0770	2.8735/2.8745	1.2250
Main Bearing Set 1-2-3-4-5-7	MB-3110H MB-3109H(F)	STD,.026mm,.25mm		0.0017/0.0047 0.0017/0.0047			
Lower Half, Con	erformance Grooved Upp stains Half Flanged Bearing aring Only, Max Flange Di	g, Upper ameter					
Main Bearing Set 1-2-3-4-5-7 6	(To Be Replaced TM-112 MS-1717HX MB-3110HX MB-3109HX(F)	STD		0.0027/0.0057 0.0027/0.0057			
.0010" More Oil		r Half And					
Main Bearing Set 1-2-3-4-5-7 6 NOTE: H-Series P	· · · ·	STD•,.026mm•,.25mm•		0.0017/0.0047 0.0017/0.0047			
Lower Half, Con	tains Half Flanged Bearing aring Only, Max Flange Di	g, Upper					





	COUNTER DAT	Ά		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE			MAX LENGTH
			•			6 CYL	(cont.)
(cont.) Years: 2			ESEL 4.210	'/107.0mm x	4.880	"/124.0mm	11 (cont.)
.0010" More O	MB-3110HX MB-3109HX(F) Performance Bearing Wall il Clearance Grooved Uppe alf, Contains Half Flanged I	r Half And		0.0027/0.0057 0.0027/0.0057			
max range Di	unictor mood						8 CYL
	ID (4.5L) 16V V8		3.6	25"/92.1mm	x 3.31	3"/84.2mm	12
	ID (5.6L) 16V V8 1968-1973		4.04	0"/102.6mm	x 3.31	3"/84.1mm	
	TM-77 CB-481HN Performance Narrowed Or nk Fillet Clearance No Dow		2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980
Not Include Co	TM-77 CB-481HNK Performance with TriArmo pating Thickness, Narrowe ased Crank Fillet Clearance alf	d On One	2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980
.0010" More O	TM-77 CB-481HXN Performance Bearing Wall il Clearance Narrowed One nk Fillet Clearance No Dow	One Side For	2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.250	5 0.7980
.0005" Thinner Maximum Wall Narrowed On 0	TM-77 CB-481HXNK Performance with TriArmo For .0010" More Oil Cleara I Does Not Include Coating One Side For Increased Cra Dowel Hole In Cap Half	nnce Thickness,	2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.250	5 0.7980
with Full Groov	MB-2035H MB-2036H(F) MB-2559H Performance Bearings For yed Main Bearings Position boved Upper Half And Plain	Number 1,	2.4995/2.5005	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	2.6925/2.6930	1.1520
Position Numb	MB-2035H MB-2036H(F) MB-2559H Performance with TriArmo ter 5 with Full Grooved Mai ter 1, 2, 3, 4 Has Grooved U er Half, Maximum Wall Doo	n Bearings Ipper Half	2.4995/2.5005	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	2.6925/2.6930	1.1520





	co	UNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)								
12 273 CI (cont.) Years: 19	<b>D (4.5L)</b> 1 964-1969	16V V8		3.6	25"/92.1mm	x 3.31	3"/84.2mm	12 (cont.)
	<b>D (5.6L)</b> 1	16V V8		4.040	0"/102.6mm	x 3.31	3"/84.1mm	
Main Bearing Set	TM-77	MS-540HX	STD					
1-2-4		MB-2035HX		2.4995/2.5005	0.0014/0.0035	0.0953	2.6925/2.6930	0.8770
3		MB-2036HX(F)		2.4995/2.5005	0.0014/0.0035	0.0953	2.6925/2.6930	1.1520
5		MB-2559HX		2.4995/2.5005	0.0014/0.0035	0.0953	2.6925/2.6930	1.3270
NOTE: H-Series F with Full Groov .0005" Thinner I Position Numbe And Plain Lowe	ed Main Be For .0010" I er 1, 2, 3, 4	arings Bearing More Oil Cleara	nce					
Main Bearing Set	TM-77	MS-540HXK	STD					
1-2-4		MB-2035HX			0.0014/0.0035			
3		MB-2036HX(F)		2.4995/2.5005	0.0014/0.0035	0.0953	2.6925/2.6930	1.1520
5		MB-2559HX		2.4995/2.5005	0.0014/0.0035	0.0953	2.6925/2.6930	1.3270
NOTE: H-Series F Position Numbe Bearing Wall .00 Clearance Posit Upper Half And Not Include Coa	er 5 with Fu 005" Thinne tion Numbe Plain Lowe	III Grooved Main er For .0010" Me er 1, 2, 3, 4 Has er Half, Maximu	n Bearings ore Oil Grooved					
Main Bearing Set	VP-2	MS-963V	STD					
1-2-4		MB-2283V			0.0006/0.0031			
3		MB-2036V(F)			0.0006/0.0031			
5		MB-2559V		2.4995/2.5005	0.0006/0.0031	0.0958	2.6925/2.6930	1.2870
NOTE: Engines w V-Series Perfor Lower Half			earing Flange O.D. If And Plain					
Cam Bearing Set	B-1	SH-875S	STD					
1		SH-875		1.9980/1.9990	0.0015/0.0055	0.0645	2.1295/2.1305	0.9000
2		SH-326		1.9820/1.9830	0.0005/0.0045	0.0650	2.1135/2.1145	0.7700
3		SH-327		1.9670/1.9680	0.0005/0.0045	0.0650	2.0985/2.0995	0.7570
4		SH-328		1.9510/1.9520	0.0005/0.0045	0.0650	2.0825/2.0835	0.7700
5		SH-329		1 5005/4 5045	0.0005/0.0045	0.0050		





	COUNTER DAT	A		SHOP	DATA	4	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
			•				8 CYL
	ID (4.5L) 16V V8 Plymo	outh	3.7	50"/95.3mm	x 3.13	0"/79.4mm	13
301 C Years:	ID (4.9L) 16V V8		3.9	10"/99.3mm	x 3.13	0"/79.4mm	
303 C Years:	ID (5.0L) 16V V8		3.8	10"/96.8mm	x 3.31	0"/84.1mm	
	ID (5.1L) 16V V8		3.8	75"/98.4mm	x 3.31	0"/84.1mm	
	1958-1964 ID (5.21) 16V V2		2.05	0"/100.4mm	v 2 24	011/04 1mm	
Years:	ID (5.3L) 16V V8		3.93	0°7100.4mm	X 3.31	U*/64.1IIIIII	
Main Bearing Se 1-2-4 3 5	t TM-77 <b>MS-540H</b> MB-2035H MB-2036H(F) MB-2559H	STD,1	2.4995/2.5005	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	3 2.6925/2.6930	1.1520
with Full Groov	Performance Bearings For ved Main Bearings Position oved Upper Half And Plain	Number 1,					
Position Numb	MB-2035H MB-2036H(F) MB-2559H Performance with TriArmoner 5 with Full Grooved Main	n Bearings	2.4995/2.5005	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	3 2.6925/2.6930	1.1520
And Plain Low Include Coatin	*	s Not					
Main Bearing Se 1-2-4	t TM-77 MS-540HX MB-2035HX	STD	2.4995/2.5005	0.0014/0.0035	0.0953	3 2.6925/2.6930	0.8770
3	MB-2036HX(F)			0.0014/0.0035			
with Full Groom		Wall nce	2.4995/2.5005	0.0014/0.0035	0.0953	3 2.6925/2.6930	1.3270
Main Bearing Se		STD	0.4005/0.5005	0.0044/0.0005	0.0050	0.0005/0.000	0.0770
1-2-4 3	MB-2035HX MB-2036HX(F)			0.0014/0.0035			
5 NOTE: H-Series Position Numb Bearing Wall .0 Clearance Pos Upper Half And	MB-2559HX Performance with TriArmoner 5 with Full Grooved Main 0005" Thinner For .0010" Moition Number 1, 2, 3, 4 Has d Plain Lower Half, Maximulating Thickness	n Bearings ore Oil Grooved	2.4995/2.5005	0.0014/0.0035	0.0953	3 2.6925/2.6930	1.3270
Cam Bearing Se 1 2 3 4 5	t B-1 SH-875S SH-875 SH-326 SH-327 SH-328 SH-329	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0055 0.0005/0.0045 0.0005/0.0045 0.0005/0.0045 0.0005/0.0045	0.0650 0.0650 0.0650	2.1135/2.1145 2.0985/2.0995 2.0825/2.0835	0.7700 0.7570 0.7700





	CC	DUNTER DAT	Ά		SHOP	DATA	١	
BEARING OR POSITION		G PART AL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	R MAX LENGTH
8 CYL								
	ID (5.2L) 1992-2003	16V V8 Magr	num	3.9	10"/99.3mm	x 3.31	3"/84.2mm	14
Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half	Performan	CB-481HN ce Narrowed Or earance No Dow		2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980
Not Include Co	Performan ating Thic ased Crank	CB-481HNK ce with TriArmo kness, Narrowe Fillet Clearance		2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980
.0010" More Oi	Performan I Clearanc	CB-481HXN ce Bearing Wall e Narrowed On earance No Dow		2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.250	5 0.7980
Maximum Wall	Performan For .0010" Does Not One Side F	More Oil Cleara Include Coating or Increased Cra	nnce Thickness,	2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.250	5 0.7980
•	vith 3.305"	MB-2283V MB-2036V(F) MB-2559V	STD earing Flange O.D. llf And Plain	2.4995/2.5005	0.0006/0.0031 0.0006/0.0031 0.0006/0.0031	0.0958	2.6925/2.693	0 1.1520
Main Bearing Se 1-2-4 3 5 NOTE: Engines v	vith 3.460"	MB-2283V MB-2620V(F) MB-2559V	STD earing Flange O.D. alf And Plain	2.4995/2.5005	0.0006/0.0031 0.0006/0.0031 0.0006/0.0031	0.0958	2.6925/2.693	0 1.1520
Cam Bearing Set 1 2 3 4 5	t B-1	SH-1112S SH-875 SH-1112 SH-1113 SH-1114 SH-329	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0055 0.0015/0.0055 0.0015/0.0055 0.0015/0.0055 0.0005/0.0045	0.0645 0.0645 0.0645	2.1135/2.114 2.0985/2.099 2.0825/2.083	5 0.6300 5 0.6300 5 0.6300
Connecting Rod Crankshaft Forg	ing	1626123, 16302 2128278, 21288	2, 3418645, 699, 782 70, 1630276, 1650270, 69, 2205700, 2205702, 8, 2658393, 2843868, 3462	2258393, 22641	82, 2465747,			
	<b>ID (5.2L)</b> 1957-1991	16V V8		3.9	10"/99.3mm	x 3.31	3"/84.2mm	15
Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half	Performan	CB-481HN ce Narrowed Or earance No Dow		2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980





	CO	UNTER DAT	TA		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
							8 CYL	<u> </u>
15 318 C (cont.) Years: 1	ID (5.2L)	16V V8		3.9	10"/99.3mm	x 3.31	3"/84.2mm	15
Rod Bearing (8)	TM-77 Performand ating Thick used Crank	ness, Narrowe		2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.2505	(cont.) 0.7980
Rod Bearing (8) NOTE: H-Series .0010" More Oi Increased Crar Cap Half	Performano I Clearance	Narrowed On		2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.2505	0.7980
Rod Bearing (8) NOTE: H-Series .0005" Thinner Maximum Wall Narrowed On C Clearance No I	Performand For .0010" Does Not I One Side Fo	More Oil Cleara nclude Coating r Increased Cra	ance Thickness,	2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.2505	0.7980
Main Bearing Se 1-2-4 3 5 NOTE: Engines v V-Series Perfor Lower Half	vith 3.305" /		STD earing Flange O.D. alf And Plain	2.4995/2.5005	0.0006/0.0031 0.0006/0.0031 0.0006/0.0031	0.0958	2.6925/2.6930	1.1520
Main Bearing Se 1-2-4 3 5 NOTE: Engines v V-Series Perfor Lower Half	vith 3.460" /		STD earing Flange O.D. alf And Plain	2.4995/2.5005	0.0006/0.0031 0.0006/0.0031 0.0006/0.0031	0.0958	2.6925/2.6930	1.1520
Main Bearing Se 1-2-4 3 5 NOTE: H-Series with Full Groov 2, 3, 4 Has Groov	Performano red Main Be	arings Position		2.4995/2.5005	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	2.6925/2.6930	1.1520
Half Main Bearing Se 1-2-4 3 5 NOTE: H-Series I Position Numb Position Numb And Plain Lowe Include Coatin	Performano er 5 with Fu er 1, 2, 3, 4 er Half, Max	ill Grooved Mai Has Grooved L imum Wall Doo	n Bearings Jpper Half	2.4995/2.5005	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	2.6925/2.6930	1.1520
Main Bearing Se 1-2-4 3 5	Performanced Main Be For .0010" ler 1, 2, 3, 4	MS-540HX MB-2035HX MB-2036HX(F) MB-2559HX te Bearings For tarings Bearing More Oil Cleara	Position Number 5 Wall ance	2.4995/2.5005	0.0014/0.0035 0.0014/0.0035 0.0014/0.0035	0.0953	2.6925/2.6930	1.1520





	COL	JNTER DATA				SHOP	DATA		
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAF		VERT OIL CLEARANCE	MAX WALL	BRG O.D. OI HOUSING BORE	R MAX LENGTH
8 CYL (cont.)									
15 318 CII (cont.) Years: 19		6V V8		3	3.91	0"/99.3mm	x 3.31	3"/84.2mm	15 (cont.)
Main Bearing Set		MS-540HXK	STD						
1-2-4		MB-2035HX				0.0014/0.0035			
3 5		MB-2036HX(F)				0.0014/0.0035			
NOTE: H-Series P Position Numbe Bearing Wall .00 Clearance Posit Upper Half And Not Include Coa	erformance r 5 with Full 05" Thinner ion Number Plain Lower	I Grooved Main r For .0010" Mor r 1, 2, 3, 4 Has G r Half, Maximum	Bearings re Oil rooved	2.4990/2.0/	005	0.0014/0.0035	0.0953	2.0925/2.093	0 1.3270
		SH-1112S	STD						
Cam Bearing Set		SH-11125 SH-875	310	1.9980/1 9	990	0.0015/0.0055	0.0645	2.1295/2.130	5 0.9000
2		SH-1112				0.0015/0.0055			
3		SH-1113				0.0015/0.0055			
4		SH-1114				0.0015/0.0055			
5	5	SH-329		1.5605/1.5	615	0.0005/0.0045	0.0650	1.6920/1.693	0.9500
For Year(s): 1979-	1991								
Cam Bearing Set	B-1	SH-875S	STD						
1	5	SH-875		1.9980/1.9	990	0.0015/0.0055	0.0645	2.1295/2.130	0.9000
2	5	SH-326		1.9820/1.9	830	0.0005/0.0045	0.0650	2.1135/2.114	5 0.7700
3		SH-327				0.0005/0.0045			
4		SH-328				0.0005/0.0045			
5		SH-329		1.5605/1.5	615	0.0005/0.0045	0.0650	1.6920/1.693	0.9500
For Year(s): 1957-	1978								
Connecting Rod Crankshaft Forgi	ng 160 210	26123, 1630270 28278, 2128869	3418645, 699, 782 0, 1630276, 1650270, 1 0, 2205700, 2205702, 2 2658393, 2843868, 3462	2258393, 22	641	82, 2465747,			
16 345 CI		6V V8 HEMI			_	7"/99.5mm	x 3.58	0"/90.9mm	16
	003-2012								
345 CII Years: 20		6V V8 HEMI I	Hybrid	3	3.91	7"/99.5mm	x 3.58	0"/90.9mm	
370 CII Years: 20		6V V8 HEMI		4.	055	5"/103.0mm	x 3.58	0"/90.9mm	
Rod Bearing (8)	TM-77	CB-1808HN	STD,.026mm,.23mm‡ .25mm,.28mm	2.1257/2.1	263	0.0009/0.0026	0.0625	2.2522/2.252	7 0.7410
NOTE: H-Series P Increased Cranl Cap Half									
Rod Bearing (8)		CB-1808HXN	STD	2.1257/2.13	263	0.0019/0.0036	0.0620	2.2522/2.252	7 0.7410
NOTE: H-Series P .0010" More Oil Increased Cranl Cap Half	Clearance N	Narrowed On Or	ne Side For						
Main Bearing Set 1-2-3-4-5		<b>MS-2220H</b> MB-3780H	STD,.026mm,.23mm‡ .25mm,.28mm	2.5589/2.5	592	0.0003/0.0015	0.0961	2.7517/2.752	2 0.8510
NOTE: H-Series P Lower Half Required Included Use wi	uires Thrust	Washer Set, No							





	COUNTER DATA	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
(cont.) Years: 2	ID (5.7L) 16V V8 HEMI 2003-2012 ID (5.7L) 16V V8 HEMI	Hybrid		17"/99.5mm 17"/99.5mm		0"/90.9mm	(cont.)
	2009 ID (6.1L) 16V V8 HEMI 2005-2010		4.05	5"/103.0mm	x 3.58	0"/90.9mm	
.0010" More O	MB-3780HX MB-3780HX Performance Bearing Wall .il Clearance Grooved Upper alf Requires Thrust Washer with Part Number TW-611S	Half And	2.5589/2.5592	0.0013/0.0025	0.0956	3 2.7517/2.7522	2 0.8510
	Set TW-611S MB-3780W 2 Piece, Position Number 3 220H, MS-2220HX	STD Use with Part	2.8600/2.8800	)		3.6760	0.1018
Cam Bearing Se 1 2 3 4 5 NOTE: For Year:	SH-1990 SH-1991 SH-1992 SH-1993 SH-1994	STD	2.2748/2.2756 2.2591/2.2598 2.2433/2.2441	0.0013/0.0042 0.0012/0.0042 0.0013/0.0042 0.0012/0.0042 0.0016/0.0054	0.0650 0.0650 0.0650	2.4068/2.4078 2.3911/2.392 2.3753/2.376	3 0.5920 1 0.5920 3 0.5920
Crankshaft Forg		C549AAB0904					
Years:				3"/103.2mm			
Years: 400 C	ID (5.9L) 16V V8 1958-1966, 1969-1971 ID (6.6L) 16V V8 1971-1978			5"/104.8mm 2"/110.3mm			
Rod Bearing (8) NOTE: H-Series Used In Engine	TM-77 CB-527HND Performance Dowel Hole In es Without Doweled Connec One Side For Increased Crai	ting Rod	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.5008	5 0.8620
Half, Maximum Thickness May	TM-77 CB-527HNDK Performance with TriArmor N Wall Does Not Include Coa y Be Used In Engines Withou od Narrowed On One Side Forearance	iting it Doweled	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.5008	5 0.8620
.0010" More O	TM-77 CB-527HXND Performance Bearing Wall . il Clearance Dowel Hole In C in Engines Without Doweled On One Side For Increased e	Cap Half Connecting	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.5002	2 0.8620
.0005" Thinner Hole In Cap Ha Coating Thick Doweled Conn	TM-77 CB-527HXNDK Performance with TriArmor For .0010" More Oil Clearar alf, Maximum Wall Does Not ness May Be Used In Engine tecting Rod Narrowed On On the Fillet Clearance	Bearing Wall nce Dowel Include s Without	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.5008	5 0.8620





	CO	UNTER DA	TA	SHOP DATA						
BEARING OR POSITION	BEARING MATERIAL	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH		
8 CYL (cont.)				_						
	D (5.7L) 1	6V V8		4.06	3"/103.2mm	x 3.37	′5"/85.7mm	17 (cont.)		
	<b>D (5.9L) 1</b> 958-1966, 1			4.12	5"/104.8mm	x 3.37	′5"/85.7mm	ו		
	D (6.6L) 1 971-1978	6V V8		4.34	2"/110.3mm	x 3.37	′5"/85.7mm	ו		
Main Bearing Set		MS-876P	STD,10,20,40‡							
1-2-4-5		MB-2065P			0.0011/0.0036					
3 NOTE: Engines u		MB-2456P(F)	Bearing Flange O.D.	2.6245/2.6255	0.0011/0.0036	0.0956	2.81/5/2.81	50 1.2240		
Contains Full G			bearing Flange C.D.							
Cam Bearing Set	B-2	SH-2152S	STD							
1		SH-2152		1.9980/1.9990	0.0015/0.0043	0.0645	2.1295/2.130	0.7550		
2		SH-2153			0.0015/0.0043					
3		SH-2154			0.0015/0.0043					
4		SH-2155			0.0015/0.0043					
5 <b>NOTE: Performa</b> r		SH-2156 Set		1.7480/1.7490	0.0015/0.0043	0.0645	1.8795/1.880	J5 U.755U		
	,	,	692, 1851535, 2406395,	2406792 2406996	2051009 520	007 52	0238 220038	5 522204		
Connecting Roa		10099, 17376		2400702, 2400000	, 2901900, 529	1007, 52	9230, 029930	), 332294,		
Crankshaft Forgi	22 40	206158, 22061 27175, 4813,	1, 1737642, 1821436, 18 59, 2206160, 2482923, 3 481379, 481380, 493654 73, 9782646, 9782770, 97	294, 3462923, 369 , 496452, 531369,	8641, 3751877, 541585, 54419	375188 1, 8698	8, 3751888-5, 461, 9773382,	4027172,		
18 360 CI	D (5.9L) 1				0"/101.6mm			18		
	971-2003									
Rod Bearing (8) NOTE: H-Series F Increased Cran Cap Half	Performance			2.1240/2.1250	0.0003/0.0024	0.0623	3 2.2500/2.250	05 0.7980		
Rod Bearing (8) NOTE: H-Series F Not Include Co Side For Increa Hole In Cap Ha	Performance ating Thickr sed Crank F	ness, Narrow		2.1240/2.1250	0.0003/0.0024	0.0623	3 2.2500/2.250	05 0.7980		
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	Performance Clearance	Narrowed On		2.1240/2.1250	0.0014/0.0035	0.0618	3 2.2500/2.250	0.7980		
Rod Bearing (8) NOTE: H-Series R .0005" Thinner Maximum Wall Narrowed On C Clearance No D	Performance For .0010" N Does Not In One Side For	More Oil Clear Include Coatin Increased C	or Bearing Wall rance g Thickness,	2.1240/2.1250	0.0014/0.0035	0.0618	3 2.2500/2.250	0.7980		
Main Bearing Set 1-2-4 3 5 NOTE: H-Series F		MS-1266HG MB-2622H MB-2623H(F) MB-2624H e Contains Fu	STD,1,10	2.8095/2.8105	0.0004/0.0025 0.0004/0.0025 0.0004/0.0025	0.0958	3.0025/3.003	30 1.1520		





	CO	UNTER DATA	\		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							8 CYL	(cont.)
(cont.) Years: 19		16 <b>V V</b> 8		4.00	0"/101.6mm	x 3.57	8"/90.9mm	18 (cont.)
	erformanc	MS-1266HGX MB-2622HX MB-2623HX(F) MB-2624HX e Bearing Wall .0 Contains Full Gr	O005" Thinner For	2.8095/2.8105	0.0014/0.0035 0.0014/0.0035 0.0014/0.0035	0.0953	3.0025/3.003	0 1.1520
Bearings								
Main Bearing Set 1-2-4 3 5 NOTE: Grooved U		MS-1051P MB-2590P MB-2591P(F) MB-2592P And Plain Lower	STD,10,20	2.8095/2.8105	0.0005/0.0032 0.0005/0.0032 0.0005/0.0032	0.0959	3.0025/3.003	0 1.1520
Cam Bearing Set 1 2 3 4 5 For Year(s): 1979-		SH-1112S SH-875 SH-1112 SH-1113 SH-1114 SH-329	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0055 0.0015/0.0055 0.0015/0.0055 0.0015/0.0055 0.0005/0.0045	0.0645 0.0645 0.0645	2.1135/2.114 2.0985/2.099 2.0825/2.083	5 0.6300 5 0.6300 5 0.6300
Cam Bearing Set 1 2 3 4 5 For Year(s): 1971-	B-1	SH-875S SH-875 SH-326 SH-327 SH-328 SH-329	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0055 0.0005/0.0045 0.0005/0.0045 0.0005/0.0045 0.0005/0.0045	0.0650 0.0650 0.0650	2.1135/2.114 2.0985/2.099 2.0825/2.083	5 0.7700 5 0.7570 5 0.7700
Crankshaft Forgi		119640 2419940	-2, 3418995, 4027169					
	D (6.3L) 1	-	-2, 0410330, 4027103	4.25	0"/108.0mm	x 3.37	5"/85.9mm	19
Rod Bearing (8) NOTE: H-Series P Used In Engines Narrowed On O	TM-77 erformance Without D	oweled Connec	ting Rod	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.500	5 0.8620
Rod Bearing (8) NOTE: H-Series P Half, Maximum Thickness May Connecting Rod Crank Fillet Clea	erformanc Wall Does Be Used In I Narrowed	Not Include Coa Engines Withou	t Doweled	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.500	5 0.8620
	erformanc Clearance Engines W On One Sid	Dowel Hole In C	Connecting	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.500	2 0.8620
Rod Bearing (8) NOTE: H-Series P .0005" Thinner F Hole In Cap Halt Coating Thickne Doweled Conne Increased Cranl	erformanc For .0010" N f, Maximun ess May Be ecting Rod	More Oil Clearan n Wall Does Not uSed In Engine Narrowed On Or	Bearing Wall ce Dowel Include s Without	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.500	5 0.8620





	COL	JNTER DAT	A	SHOP DATA					
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH	
8 CYL (cont.)									
19 383 CI (cont.) Years: 19	<b>D (6.3L) 1</b> 0 959-1971	6 <b>V V</b> 8		4.25	0"/108.0mm	x 3.37	5"/85.9mm	19 (cont.)	
	! 		STD,10,20,40‡ aring Flange O.D.		0.0011/0.0036 0.0011/0.0036				
Contains Full Gi Main Bearing Set 1-2-4-5 3 NOTE: Engines w M-Series Perfor	B-2   	MS-972M MB-2543M MB-2544M(F) 3.675" Main Be	STD aring Flange O.D.		0.0011/0.0032 0.0011/0.0032				
Bearings	mance con	tains ruii Groo	veu						
Cam Bearing Set 1 2 3 4 5	4	SH-2152S SH-2152 SH-2153 SH-2154 SH-2155 SH-2156	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0043 0.0015/0.0043 0.0015/0.0043 0.0015/0.0043 0.0015/0.0043	0.0645 0.0645 0.0645	2.1135/2.1145 2.0985/2.0995 2.0825/2.0835	0.7550 0.6740 0.7550	
NOTE: Performan	ce, Bearing	Set							
Crankshaft Forgi	ng 173 220 403 <b>D (6.4L) 1</b> 0	37641, 173764		1851527, 18551 94, 3462923, 369	27, 1978698,	375188	8, 3751888-5, 4	1027172,	
Rod Bearing (8)		CB-1808HN	STD,.026mm,.23mm‡	2.1257/2.1263	0.0009/0.0026	0.0625	2.2522/2.2527	0.7410	
NOTE: H-Series F Increased Cran Cap Half									
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	erformance Clearance	Narrowed On C		2.1257/2.1263	0.0019/0.0036	0.0620	2.2522/2.2527	0.7410	
Main Bearing Set 1-2-3-4-5	1	<b>MS-2296H</b> MB-3940H	STD,.026mm	2.5589/2.5592	0.0003/0.0015	0.0961	2.7517/2.7522	0.8510	
NOTE: H-Series F Lower Half Req Included Use w	uires Thrust	Washer Set, N							
Main Bearing Set 1-2-3-4-5 NOTE: H-Series F .0010" More Oil Plain Lower Hal	TM-77 I Performance Clearance ( f Requires 1	MS-2296HX MB-3940HX Bearing Wall . Grooved Upper Thrust Washer		2.5589/2.5592	0.0013/0.0025	0.0956	2.7517/2.7522	2 0.8510	
Included Use with	et '	TW-611S MB-3780W	STD	2.8600/2.8800			3.6760		





	COL	JNTER DAT	A	SHOP DATA						
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE			MAX LENGT		
								8 CYI		
	ID (6.7L) 1			4.18	3"/106.4mm	x 3.75	0"/95.3mm	21		
440 C	1959-1965, 19 <b>ID (7.2L) 1</b> 0 1966-1979			4.32	0"/109.7mm	x 3.75	0"/95.2mm			
Rod Bearing (8)	TM-77 Performance	oweled Connec	-	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.5005	0.8620		
Rod Bearing (8) NOTE: H-Series Half, Maximum Thickness May Connecting Ro Crank Fillet Cle	Performance Wall Does N Be Used In d Narrowed	lot Include Coa Engines Witho	ut Doweled	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.5005	0.8620		
Rod Bearing (8) NOTE: H-Series .0010" More Oi May Be Used I Rod Narrowed Fillet Clearance	Performance il Clearance I n Engines Wi On One Side	Dowel Hole In ( thout Doweled	Connecting	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.5002	0.8620		
Rod Bearing (8) NOTE: H-Series .0005" Thinner Hole In Cap Ha Coating Thickr Doweled Conn Increased Crar	Performance For .0010" M alf, Maximum ness May Be lecting Rod N	lore Oil Cleara Wall Does Not Used In Engind Iarrowed On O	Bearing Wall nce Dowel t Include es Without	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.5005	0.8620		
Main Bearing Se 1-2-4-5 3 NOTE: Engines v H-Series Perfo Bearings	with 3.870" / 3		STD  aring Flange O.D.  ved				2.9425/2.9430 2.9425/2.9430			
Main Bearing Se 1-2-4-5 3	with 3.555" / 3		STD aring Flange O.D. ved				5 2.9425/2.9430 5 2.9425/2.9430			
Main Bearing Se 1-2-4-5 3 NOTE: Engines v H-Series Perfo 3 Is Full Groov Grooved Uppe Narrowed Stra	with 3.555" / 3 rmance Bear ed, Position I r Half And Pla	rings For Positi Number 1, 2, 4, ain Lower Half,	5 Has Contains				2.9425/2.9430 2.9425/2.9430			
Cam Bearing Se 1 2 3 4 5	t B-2	SH-2152S SH-2152 SH-2153 SH-2154 SH-2155 SH-2156	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0043 0.0015/0.0043 0.0015/0.0043	0.0645 0.0645 0.0645	2.1295/2.1305 2.1135/2.1145 2.0985/2.0995 2.0825/2.0835 1.8795/1.8805	0.7550 0.6740 0.7550		
NOTE: Performa			0400000 0054000							
Connecting Rod Crankshaft Forg	ing 17	37642, 182143	5, 2406886, 2951908 6, 1851436, 1851527, 3-5. 4027175. 8698461	1855127, 1978698,	2206157, 2206	158, 22	06160, 3294, 3	698641		





	co	UNTER DATA	A	SHOP DATA					
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OR HOUSING BORE	MAX LENGTH	
8 CYL 22 426 C	ID (7 OL) ·	16V V8 HEMI		4 25	0"/108.0mm	v 2 75	∩"/05 2mm	22	
Years: 1	1964-1971 <b>ID (7.0L)</b> 1	16V V8 Wedg	e		0"/108.0mm				
	1963-1965	00 5071110	OTD 4 40	100740000750	0.000510.0000	0.0000	0.5000/0.500	- 0.0000	
Used In Engine	Performances Without D	CB-527HND te Dowel Hole In Doweled Connec r Increased Crai		2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.500	0.8620	
Half, Maximum Thickness May	Performand Wall Does Be Used In d Narrowed	CB-527HNDK se with TriArmor Not Include Coa Engines Withou d On One Side Fo	ıt Doweled	2.3740/2.3750	0.0005/0.0026	0.0622	2.5000/2.500	5 0.8620	
.0010" More Oi May Be Used I	Performand il Clearance n Engines V On One Sid	CB-527HXND te Bearing Wall . Dowel Hole In C Vithout Doweled de For Increased	Connecting	2.3740/2.3750	0.0016/0.0037	0.0617	2.5000/2.500	2 0.8620	
Hole In Cap Ha Coating Thickr	Performand For .0010" I alf, Maximur ness May Be lecting Rod	More Oil Clearar n Wall Does Not e Used In Engine Narrowed On Oi	Bearing Wall nce Dowel Include s Without	2.3740/2.3750	0.0016/0.0037	0.0617	<sup>7</sup> 2.5000/2.5009	5 0.8620	
	Dowel Hole I	CB-1512M a-Large Fillets, I In Cap Half May Connecting Roo	Be Used In	2.3740/2.3750	0.0015/0.0036	0.0620	2.5000/2.500	5 0.8460	
Rod Bearing (8) NOTE: Cranksha Performance C		_	STD M-Series	2.3740/2.3750	0.0015/0.0036	0.0620	2.5000/2.500	5 0.8460	
	oft With Extr Dowel Hole I	CB-1512V a-Large Fillets, \ In Cap Half May Connecting Roo	Be Used In	2.3740/2.3750	0.0015/0.0036	0.0620	2.5000/2.500	5 0.8460	
Rod Bearing (8) NOTE: Cranksha Performance C	ft With Extr		STD /-Series	2.3740/2.3750	0.0015/0.0036	0.0624	2.5000/2.500	5 0.8460	
	with 3.555" /	MS-972M MB-2543M MB-2544M(F) 3.675" Main Bentains Full Groot	STD aring Flange O.D. ved		0.0011/0.0032 0.0011/0.0032				
	with 3.555" /	h Tri-bore Desig	STD,10 aring Flange O.D. n Grooved		0.0005/0.0026 0.0005/0.0026				





	CO	UNTER DAT	Ά	SHOP DATA						
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH		
							8 CYL	(cont.)		
(cont.) Years: 1	964-1971	16V V8 HEMI 16V V8 Wedg			0"/108.0mm 0"/108.0mm			(cont.)		
	963-1965		,							
Main Bearing Set 1-2-3-4-5		MS-2067V MB-3564V	STD	2.9975/2.9980	0.0032/0.0049	0.0954	3.1911/3.1915	5 0.9490		
Tri-bore Design	nder Block, n Grooved l Thrust Wasi	V-Series Perfor Upper Half And her Set, Not Inc	rmance with Plain Lower							
Main Bearing Se 1-2-4-5 3 NOTE: Engines v		MS-2233HG MB-3789HG MB-2457HG(F) 7 3.675" Main Be	STD,10		0.0010/0.0031 0.0010/0.0031					
H-Series Perfo 3 Is Full Groove Grooved Upper	rmance Bea ed, Position r Half And F	arings For Posit Number 1, 2, 4 Plain Lower Half For Extra Cleara	ion Number , 5 Has , Contains							
Thrust Washer S	et	TW-120S MB-1739W(L) MB-1739W(U)	STD	3.3150/3.3250 3.3150/3.3250			3.8880/3.8980 3.8880/3.8980			
Main Bearing J	lournal Diar ces, Positio							0.0020		
Thrust Washer S	et	TW-120SK MB-1739W(L) MB-1739W(U)	STD	3.3150/3.3250 3.3150/3.3250			3.8880/3.8980 3.8880/3.8980			
Main Bearing J Contains 4 Pie	lournal Diar ces with Tri	. ,	Use with	3.010.000.002.00				0.0020		
Thrust Washer S	et	TW-130S MB-2292W(L) MB-2292W(U)	STD	3.0450/3.0550 3.0450/3.0550			3.5520/3.5620 3.5520/3.5620			
Bored To Acce Diameter Cran	pt, 3.000" N kshafts, Co	ning Journal, C Main Bearing Jo ntains 4 Pieces umber MS-2067	, Position							
Cam Bearing Set 1 2 3 4 5 NOTE: Performa		SH-2152S SH-2152 SH-2153 SH-2154 SH-2155 SH-2156 g Set	STD	1.9820/1.9830 1.9670/1.9680 1.9510/1.9520	0.0015/0.0043 0.0015/0.0043 0.0015/0.0043 0.0015/0.0043	0.0645 0.0645 0.0645	2.1135/2.1145 2.0985/2.0995 2.0825/2.0835	5 0.7550 5 0.6740 5 0.7550		
Connecting Rod Crankshaft Forg	ing 1	737642, 182143	5, 2406886, 2951908 6, 1851436, 1851527, 18 8-5, 4027175, 8698461	55127, 1978698,	2206157, 2206	158, 22	06160, 3294,	3698641,		





	COL	JNTER DAT	Α	SHOP DATA					
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH	
10 CYL									
	<b>ID (8.0L) 2</b> 1992-2003	OV V10 Mag	num	4.000	0"/101.6mm	x 3.88	2"/98.6mm	23	
Rod Bearing (10) NOTE: H-Series Increased Crai Cap Half	Performance			2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980	
Rod Bearing (10) NOTE: H-Series Not Include Co Side For Increa Hole In Cap Ha	Performance pating Thickr ased Crank F	ness, Narrowed		2.1240/2.1250	0.0003/0.0024	0.0623	2.2500/2.250	5 0.7980	
Rod Bearing (10) NOTE: H-Series .0010" More Oi Increased Crai Cap Half	Performance il Clearance	Narrowed On 0		2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.250	5 0.7980	
Rod Bearing (10) NOTE: H-Series .0005" Thinner Maximum Wall Narrowed On 0 Clearance No	Performance For .0010" N Does Not In One Side For	More Oil Cleara Iclude Coating Increased Cra	nce Thickness,	2.1240/2.1250	0.0014/0.0035	0.0618	2.2500/2.250	5 0.7980	
Main Bearing Se 1-2-4-5-6 3 For Year(s): 1992 NOTE: H-Series Lower Half, Alt FOR VIN(S): E	2-2002 Performance	MB-4002H MB-4003H(F) Grooved Upp	STD,1,10 er Half And Plain		0.0004/0.0025 0.0004/0.0025				
Main Bearing Se 1-2-4-5-6 3 For Year(s): 1992 NOTE: H-Series .0010" More O Plain Lower Ha FOR VIN(S): E	2-2002 Performance il Clearance	Grooved Uppe			0.0014/0.0035 0.0014/0.0035				
24 505 C	ID (8.3L) 2	0V V10		4.031	'/102.4mm x	3.960	"/100.6mm	24	
Years: 2 515 C	2003-2006 ID (8.4L) 2 2008-2010				'/103.0mm x				
Rod Bearing (10)  NOTE: H-Series Increased Crai	TM-77			2.1257/2.1263	0.0009/0.0026	0.0625	2.2522/2.252	7 0.7410	
Rod Bearing (10)	Performance il Clearance	Narrowed On (		2.1257/2.1263	0.0019/0.0036	0.0620	2.2522/2.252	7 0.7410	
Main Bearing Se 1-2-4-5-6 3 NOTE: H-Series Lower Half, Ali	Performance		STD,1,10 er Half And Plain		0.0004/0.0025 0.0004/0.0025				





	COUNTER DAT	ΓA		SHOP	DATA	١.	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OR HOUSING BORE	MAX LENGTH
						10 CYL	(cont.)
24 505	CID (8.3L) 20V V10		4.031	'/102.4mm x	3.960	"/100.6mm	24
(cont.) Years	: 2003-2006						(cont.)
515	CID (8.4L) 20V V10		4.055	'/103.0mm x	3.960	"/100.6mm	
Years	: 2008-2010						
Main Bearing 9	Set TM-77 MS-2253HX	STD					
1-2-4-5-6	MB-4002HX		2.9995/3.0005	0.0014/0.0035	0.0953	3.1925/3.1930	0.8770
3	MB-4003HX(F)		2.9995/3.0005	0.0014/0.0035	0.0953	3.1925/3.1930	0 1.1520
NOTE: H-Serie	s Performance Bearing Wall	.0005" Thinner For					
.0010" More	Oil Clearance Grooved Uppe	er Half And					
Plain Lower	Half, Aluminum Cylinder Blo	ck					

# **FORD**

ENGINE	YEAR	BORE & STROKE	BLOCK
97.5 CID (1.6L) DOHC 16V L4 Mazda B6D	1991-1994	3.071"/78.0mm X 3.307"/84.0mm	1
97.5 CID (1.6L) DOHC 16V Turbo. L4 Mazda B6T	1991-1994	3.071"/78.0mm X 3.307"/84.0mm	1
112 CID (1.8L) DOHC 16V L4 Mazda BP BP-ZE	1991-1996	3.268"/83.0mm X 3.346"/85.0mm	1
121 CID (2.0L) DOHC 16V L4 Duratec	2004-2013	3.445"/87.5mm X 3.270"/83.0mm	2
122 CID (2.0L) DOHC 16V L4 Zetec	1995-2004	3.339"/84.8mm X 3.461"/87.9mm	3
140 CID (2.3L) DOHC 16V L4 Duratec	2001-2009	3.440"/87.4mm X 3.700"/94.0mm	4
140 CID (2.3L) DOHC 16V L4 Duratec Hybrid	2005-2008	3.440"/87.4mm X 3.700"/94.0mm	4
152 CID (2.5L) DOHC 16V L4 Duratec	2009-2010	3.500"/88.9mm X 3.940"/100.1mm	5
152 CID (2.5L) DOHC 16V L4 Duratec Hybrid	2009	3.500"/88.9mm X 3.940"/100.1mm	5
221 CID (3.6L) 16V V8	1962-1963	3.500"/88.9mm X 2.880"/73.0mm	6
255 CID (4.2L) 16V V8	1980-1982	3.680"/93.5mm X 3.000"/76.2mm	6
260 CID (4.3L) 16V V8	1962-1965	3.800"/96.5mm X 2.880"/73.0mm	6
281 CID (4.6L) SOHC 16V V8	2006-2011	3.551"/90.2mm X 3.542"/90.0mm	7
281 CID (4.6L) SOHC 24V V8	2005-2010	3.551"/90.2mm X 3.542"/90.0mm	8
281 CID (4.6L) SOHC 16V V8 Romeo	1991-2010	3.551"/90.2mm X 3.542"/90.0mm	9
281 CID (4.6L) SOHC 24V V8 Triton	2009-2010	3.551"/90.2mm X 3.542"/90.0mm	8
281 CID (4.6L) SOHC 16V V8 Triton (Romeo)	1997-2011	3.551"/90.2mm X 3.542"/90.0mm	9
281 CID (4.6L) SOHC 16V V8 Triton (Windsor)	1997-2008	3.551"/90.2mm X 3.542"/90.0mm	10
281 CID (4.6L) DOHC 32V V8 InTech	1993-2005	3.551"/90.2mm X 3.542"/90.0mm	8
281 CID (4.6L) DOHC 32V V8	1996-2001, 2003-2004	3.551"/90.2mm X 3.542"/90.0mm	8
281 CID (4.6L) DOHC 32V SC V8	2003-2004	3.551"/90.2mm X 3.542"/90.0mm	8
289 CID (4.7L) 16V V8 Hi-Perf.	1963-1969	4.000"/101.6mm X 2.880"/73.0mm	6
289 CID (4.7L) 16V V8	1963-1968	4.000"/101.6mm X 2.880"/73.0mm	6
302 CID (5.0L) 16V V8 Boss/Eliminator	1969-1971	4.000"/101.6mm X 3.000"/76.2mm	11
302 CID (5.0L) 16V V8 HO	1982, 1984-1995	4.000"/101.6mm X 3.000"/76.2mm	12
302 CID (5.0L) 16V V8	1968-2001	4.000"/101.6mm X 3.000"/76.2mm	12
302 CID (5.0L) DOHC 32V V8 Coyote	2011-2012	3.630"/92.2mm X 3.650"/92.7mm	13
302 CID (5.0L) DOHC 32V V8 Coyote 99F	2011-2013	3.630"/92.2mm X 3.650"/92.7mm	13
302 CID (5.0L) DOHC 32V V8 Coyote 99U	2012-2013	3.630"/92.2mm X 3.650"/92.7mm	14
330 CID (5.4L) SOHC 16V V8 Triton (Windsor)	1997-2011	3.551"/90.2mm X 4.161"/105.7mm	10
330 CID (5.4L) SOHC 16V SC V8 Triton (Windsor)	1999-2004	3.551"/90.2mm X 4.161"/105.7mm	10
330 CID (5.4L) SOHC 24V V8 Triton (Windsor)	2004-2012	3.551"/90.2mm X 4.161"/105.7mm	10
330 CID (5.4L) DOHC 32V V8 InTech	1999-2004	3.551"/90.2mm X 4.161"/105.7mm	10
330 CID (5.4L) DOHC 32V V8 Windsor	2000	3.551"/90.2mm X 4.161"/105.7mm	10
330 CID (5.4L) DOHC 32V SC V8 Windsor	2005-2012	3.551"/90.2mm X 4.161"/105.7mm	15





ENGINE	YEAR	BORE & STROKE	BLOCK
351 CID (5.8L) 16V V8 Cleveland	1969-1974	4.000"/101.6mm X 3.500"/88.8mm	16
351 CID (5.8L) 16V V8 Cleveland Boss	1971-1972	4.000"/101.6mm X 3.500"/88.8mm	16
351 CID (5.8L) 16V V8 Cleveland Cobra Jet	1971-1974	4.000"/101.6mm X 3.500"/88.8mm	16
351 CID (5.8L) 16V V8 Modified	1975-1982	4.000"/101.6mm X 3.500"/88.8mm	17
351 CID (5.8L) 16V V8 Windsor	1969-1998	4.000"/101.6mm X 3.500"/88.8mm	18
351 CID (5.8L) 16V V8 Windsor HO	1993-1995	4.000"/101.6mm X 3.500"/88.8mm	18
370 CID (6.1L) 16V V8	1980-1991	4.050"/102.9mm X 3.590"/91.2mm	19
400 CID (6.6L) 16V V8	1971-1982	4.000"/101.6mm X 4.000"/101.6mm	17
415 CID (6.8L) SOHC 20V V10 Triton	1997-2012	3.551"/90.2mm X 4.161"/105.7mm	20
415 CID (6.8L) SOHC 30V V10 Triton	2005-2012	3.551"/90.2mm X 4.161"/105.7mm	20
429 CID (7.0L) 16V V8 Boss	1969-1970	4.360"/110.7mm X 3.590"/91.2mm	19
429 CID (7.0L) 16V V8 Cobra Jet/Super CJ	1970-1971	4.360"/110.7mm X 3.590"/91.2mm	19
429 CID (7.0L) 16V V8 Police	1971-1972	4.360"/110.7mm X 3.590"/91.2mm	19
429 CID (7.0L) 16V V8 Thunder Jet	1980-1998	4.360"/110.7mm X 3.590"/91.2mm	19
429 CID (7.0L) 16V V8	1968-1973	4.360"/110.7mm X 3.590"/91.2mm	19
460 CID (7.5L) 16V V8 HO	1973-1978	4.360"/110.7mm X 3.850"/97.8mm	19
460 CID (7.5L) 16V V8	1968-1998	4.360"/110.7mm X 3.850"/97.8mm	19
460 CID (7.5L) 16V V8 Police	1973-1974	4.360"/110.7mm X 3.850"/97.8mm	19

# CONNECTING ROD FORGING NUMBERS

FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BL	оск
C20E	3.000in/76.2mm	12	C8DE	3.000in/76.2mm	12	D1AE-A	3.500in/88.8mm	17
C20E	3.000in/76.2mm	6	C8DE	3.000in/76.2mm	6	D1AE-A	4.000in/101.6mm	17
C30E-A	3.000in/76.2mm	12	C8VE	3.590in/91.2mm	19	D60E	3.500in/88.8mm	18
C30E-A	3.000in/76.2mm	6	C8VE	3.850in/97.8mm	19	D6OE	3.500in/88.8mm	18
C3AE-D	3.000in/76.2mm	12	C8VE-A	3.590in/91.2mm	19	D6VE	3.590in/91.2mm	19
C3AE-D	3.000in/76.2mm	6	C8VE-A	3.850in/97.8mm	19	D6VE	3.850in/97.8mm	19
C3AE-J	3.000in/76.2mm	12	C90E	3.500in/88.8mm	18	D9TE	3.590in/91.2mm	19
C3AE-J	3.000in/76.2mm	6	C9OE	3.500in/88.8mm	18	D9TE	3.850in/97.8mm	19
C80E-A	3.000in/76.2mm	12	DOOE-A	3.590in/91.2mm	19	RFF1AE6205-AD	3.542in/90.0mm	10
C80E-A	3.000in/76.2mm	6	DOOE-A	3.850in/97.8mm	19	RFF1AE6205-AD	3.542in/90.0mm	9

CRANKSHA	FT FORGING N	NUMBER	RS					
FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BL	OCK
1J	3.000in/76.2mm	12	2M	3.000in/76.2mm	12	2Y	3.590in/91.2mm	19
1J	3.000in/76.2mm	6	2M	3.000in/76.2mm	6	2Y	3.850in/97.8mm	19
1K	3.500in/88.8mm	17	2MA	3.000in/76.2mm	12	2Y68-76	3.590in/91.2mm	19
1K	4.000in/101.6mm	17	2MA	3.000in/76.2mm	6	2Y68-76	3.850in/97.8mm	19
1KA	3.500in/88.8mm	17	2MAB	3.000in/76.2mm	12	2YA	3.590in/91.2mm	19
1KA	4.000in/101.6mm	17	2MAB	3.000in/76.2mm	6	2YA	3.850in/97.8mm	19
1M	3.000in/76.2mm	12	2MAC	3.000in/76.2mm	12	2YAB	3.590in/91.2mm	19
1M	3.000in/76.2mm	6	2MAC	3.000in/76.2mm	6	2YAB	3.850in/97.8mm	19
1MA	3.000in/76.2mm	12	2MAD	3.000in/76.2mm	12	2YABC	3.590in/91.2mm	19
1MA	3.000in/76.2mm	6	2MAD	3.000in/76.2mm	6	2YABC	3.850in/97.8mm	19
1V	3.590in/91.2mm	19	2MAE	3.000in/76.2mm	12	30R	3.590in/91.2mm	19
1V	3.850in/97.8mm	19	2MAE	3.000in/76.2mm	6	30R	3.850in/97.8mm	19
1VA	3.590in/91.2mm	19	2N	3.000in/76.2mm	12	31-87	3.590in/91.2mm	19
1VA	3.850in/97.8mm	19	2N	3.000in/76.2mm	6	31-87	3.850in/97.8mm	19
1VAB	3.590in/91.2mm	19	2NA	3.000in/76.2mm	12	31M	3.590in/91.2mm	19
1VAB	3.850in/97.8mm	19	2NA	3.000in/76.2mm	6	31M	3.850in/97.8mm	19
1YAB	3.590in/91.2mm	19	2NAB	3.000in/76.2mm	12	3281N	3.590in/91.2mm	19
1YAB	3.850in/97.8mm	19	2NAB	3.000in/76.2mm	6	3281N	3.850in/97.8mm	19
2H-A	3.000in/76.2mm	12	2NABC	3.000in/76.2mm	12	329880N	3.590in/91.2mm	19
2H-A	3.000in/76.2mm	6	2NABC	3.590in/91.2mm	19	329880N	3.850in/97.8mm	19
2J	3.000in/76.2mm	12	2NABC	3.850in/97.8mm	19	3C	3.500in/88.8mm	18
2J	3.000in/76.2mm	6	2NABC	3.000in/76.2mm	6	3M	3.500in/88.8mm	18





CHANCHA	rronamar		10					
FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BLC	CK
3MA	3.500in/88.8mm	18	C0E-A	3.000in/76.2mm	12	D7AE	4.000in/101.6mm	17
3Y	3.590in/91.2mm	19	C0E-A	3.000in/76.2mm	6	D7AE-A	3.500in/88.8mm	17
3Y	3.850in/97.8mm	19	C20E-A	3.000in/76.2mm	12	D7AE-A	4.000in/101.6mm	17
3YAB	3.590in/91.2mm	19	C20E-A	3.000in/76.2mm	6	D9TE-AA	3.590in/91.2mm	19
3YAB	3.850in/97.8mm	19	C20Z	3.000in/76.2mm	12	D9TE-AA	3.850in/97.8mm	19
4U	3.590in/91.2mm	19	C20Z	3.000in/76.2mm	6	D9TE-B	3.590in/91.2mm	19
4U	3.850in/97.8mm	19	C20Z-A	3.000in/76.2mm	12	D9TE-B	3.850in/97.8mm	19
4UA	3.590in/91.2mm	19	C20Z-A	3.000in/76.2mm	6	D9TE-BA	3.590in/91.2mm	19
4UA	3.850in/97.8mm	19	C2OZ	3.000in/76.2mm	12	D9TE-BA	3.850in/97.8mm	19
4UAB	3.590in/91.2mm	19	C2OZ	3.000in/76.2mm	6	D9TE-EA	3.590in/91.2mm	19
4UAB	3.850in/97.8mm	19	C2OZ-B	3.000in/76.2mm	12	D9TE-EA	3.850in/97.8mm	19
4UB	3.590in/91.2mm	19	C2OZ-B	3.000in/76.2mm	6	E1AE	3.000in/76.2mm	12
4UB	3.850in/97.8mm	19	C30E-B	3.000in/76.2mm	12	E1AE	3.000in/76.2mm	6
5M	3.500in/88.8mm	17	C30E-B	3.000in/76.2mm	6	E1AE-AA	3.000in/76.2mm	12
5M	4.000in/101.6mm	17	C30Z	3.000in/76.2mm	12	E1AE-AA	3.000in/76.2mm	6
5MA	3.500in/88.8mm	17	C30Z	3.000in/76.2mm	6	E4AE-BA	3.500in/88.8mm	18
5MA	4.000in/101.6mm	17	C3AE-F	3.000in/76.2mm	12	E7AE	3.000in/76.2mm	12
5MAB	3.500in/88.8mm	17	C3AE-F	3.000in/76.2mm	6	E7AE	3.000in/76.2mm	6
5MAB	4.000in/101.6mm	17	C3AF-N	3.000in/76.2mm	12	E7AE-AA	3.000in/76.2mm	12
5MABC	3.500in/88.8mm	17	C3AF-N	3.000in/76.2mm	6	E7AE-AA	3.000in/76.2mm	6
5MABC	4.000in/101.6mm	17	C3OZ	3.000in/76.2mm	12	F1AE-AD	3.542in/90.0mm	10
7M	3.500in/88.8mm	18	C3OZ	3.000in/76.2mm	6	F1AE-AD	3.542in/90.0mm	9
7MA	3.500in/88.8mm	18	C3OZ-B	3.000in/76.2mm	12	F1AE-AD-5D	3.542in/90.0mm	8
8M	3.500in/88.8mm	17	C3OZ-B	3.000in/76.2mm	6	F1AE-AD-7D	3.542in/90.0mm	8
8M	4.000in/101.6mm	17	C80E-B	3.000in/76.2mm	12	F1AE-AD-8D	3.542in/90.0mm	8
90-21-0	3.461in/87.9mm	3	C80E-B	3.000in/76.2mm	6	F1AE-AE	3.542in/90.0mm	10
90TM-AA	3.461in/87.9mm	3	C8SE-A	3.590in/91.2mm	19	F1AE-AE	3.542in/90.0mm	8
90TM-AB	3.461in/87.9mm	3	C8SE-A	3.850in/97.8mm	19	F1AE-AE	3.542in/90.0mm	9
9166N	3.461in/87.9mm	3	C8VE	3.590in/91.2mm	19	GS-M	3.000in/76.2mm	12
91A-6303-A	3.461in/87.9mm	3	C8VE	3.850in/97.8mm	19	GS-M	3.000in/76.2mm	6
91A-6303-B	3.461in/87.9mm	3	C8VE-A	3.590in/91.2mm	19	Н	3.590in/91.2mm	19
91H-6303-B	3.461in/87.9mm	3	C8VE-A	3.850in/97.8mm	19	Н	3.850in/97.8mm	19
91K	3.461in/87.9mm	3	C9AE-A	3.590in/91.2mm	19	RFF1AE6306-AD	3.542in/90.0mm	10
91TM-AA	3.461in/87.9mm	3	C9AE-A	3.850in/97.8mm	19	RFF1AE6306-AD	3.542in/90.0mm	9
B5A-6303-B	3.307in/84.0mm	1	C9AE-B	3.590in/91.2mm	19	SM	3.500in/88.8mm	17
B5Q-6303-A	3.307in/84.0mm	1	C9AE-B	3.850in/97.8mm	19	SM	4.000in/101.6mm	17
B5S-6303-A	3.307in/84.0mm	1	C9OE-A	3.500in/88.8mm	18	ZYA	3.590in/91.2mm	19
B616	3.307in/84.0mm	1	C9ZE-A	3.000in/76.2mm	12	ZYA	3.850in/97.8mm	19
B630	3.307in/84.0mm	1	C9ZE-A	3.000in/76.2mm	6			
B657	3.307in/84.0mm	1	D7AE	3.500in/88.8mm	17			

	COUNTER	DATA	SHOP DATA				
BEARING OR POSITION	BEARING PART MATERIAL NUMBI	AVAILABLE ER UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							4 CYL
Years: 1	991-1994	16V L4 Mazda B6D 16V Turbo. L4 Mazda B6T		71"/78.0mm 71"/78.0mm			
Years: 1	991-1994	6V L4 Mazda BP BP-ZE		68"/83.0mm	x 3.34	6"/85.0mm	
Rod Bearing (4) NOTE: H Series I	TM-77 CB-1453	SH STD,.026mm	1.7693/1.7699	0.0005/0.0023	0.0592	1.8898/1.8904	0.6750





		UNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL (cont.)								
(cont.) Years:	1991-1994		4 Mazda B6D		071"/78.0mm			1 (cont.)
	1991-1994	DOHC 16V I	urbo. L4 Mazda B6T	3.0	071"/78.0mm	x 3.30	/"/84.0mm	
112 C		DOHC 16V L	4 Mazda BP BP-ZE	3.2	268"/83.0mm	x 3.34	6"/85.0mm	
Rod Bearing (4) NOTE: H Series .0010" More O	Performanc	-	STD 0005" Thinner For	1.7693/1.769	9 0.0015/0.0033	0.0587	1.8898/1.8904	0.6750
Lower Half Re-	Performanc quires Thru:	MS-1802H MB3961H se Grooved Uppost Washer Set, Number TW-472S	STD,.026mm• er Half And Plain lot	1.9661/1.966	8 0.0005/0.0023	0.0792	2.1257/2.1262	0.6700
Main Bearing Se 1-2-3-4-5 NOTE: H Series .0010" More O Plain Lower Ha	Performance il Clearance alf Requires	MS-1802HX MB3961HX		1.9661/1.966	8 0.0015/0.0033	0.0787	2.1257/2.1262	0.6700
Thrust Washer S	Set	<b>TW-472S</b> MB-3173W	STD	2.2539			2.7165	0.1000
NOTE: Contains Number MS-18			4 Use with Part					
Crankshaft Forg			-6303-A, B5S-6303-A, B61					
	ID (2.0L) I	DOHC 16V L	1 Duratas					
Years: 5			+ Duratec	3.4	445"/87.5mm	x 3.27	0"/83.0mm	2
Years: 2 Rod Bearing (4) NOTE: H-Series	2004-2013 TM-77	CB-1840H	STD		445"/87.5mm 3 0.0010/0.0020			
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004	2004-2013 TM-77 Performand bt TM-77	CB-1840H ce No Dowel Ho MS-2245H MB-3822H MB-3823H(F)	STD le In Cap Half STD	1.8496/1.850		0.0599	1.9694/1.9702	0.6653
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004	2004-2013 TM-77 Performand bt TM-77	CB-1840H ce No Dowel Ho MS-2245H MB-3822H MB-3823H(F)	STD le In Cap Half	1.8496/1.850	2 0.0004/0.0024	0.0599	1.9694/1.9702	0.6653
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004 NOTE: H-Series Lower Half 3	TM-77 Performand t TM-77  4-2010 Performand	CB-1840H ce No Dowel Ho MS-2245H MB-3822H MB-3823H(F)	STD le In Cap Half STD er Half And Plain	1.8496/1.850 2.0464/2.047 2.0464/2.047	2 0.0004/0.0024	0.0599 0.0986 0.0985	1.9694/1.9702 2.2448/2.2455 2.2448/2.2455	0.6653 0.7520 1.0140
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004 NOTE: H-Series Lower Half 3	2004-2013 TM-77 Performand of TM-77 4-2010 Performand SID (2.0L) I 1995-2004 TM-77	CB-1840H se No Dowel Ho MS-2245H MB-3822H MB-3823H(F) se Grooved Upp DOHC 16V Le	STD le In Cap Half STD er Half And Plain 4 Zetec STD,.026mm,.25mm	1.8496/1.850 2.0464/2.047 2.0464/2.047	3 0.0010/0.0020 2 0.0004/0.0024 2 0.0006/0.0027	0.0599 0.0986 0.0985 x 3.46	1.9694/1.9702 2.2448/2.2455 2.2448/2.2455 <b>1"/87.9mm</b>	0.6653 0.7520 1.0140
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004 NOTE: H-Series Lower Half 3 122 C Years: Rod Bearing (4) NOTE: H-Series Rod Bearing (4) NOTE: H-Series	Performance TM-77 Performance TM-77  4-2010 Performance TM-77 Performance TM-77 Performance	CB-1840H DE NO DOWEL HO MS-2245H MB-3822H MB-3823H(F) DOHC 16V LO CB-1774H DE NO DOWEL HO CB-1774HX	STD le In Cap Half STD  er Half And Plain  4 Zetec  STD,.026mm,.25mm le In Cap Half STD .0005" Thinner For	1.8496/1.850 2.0464/2.047 2.0464/2.047 3.3	3 0.0010/0.0020 2 0.0004/0.0024 2 0.0006/0.0027 339"/84.8mm	0.0599 0.0986 0.0985 <b>x 3.46</b>	1.9694/1.9702 2.2448/2.2455 2.2448/2.2455 <b>1"/87.9mm</b> 1.9642/1.9650	0.6653 0.7520 1.0140 3
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004 NOTE: H-Series Lower Half 3 122 C Years: Rod Bearing (4) NOTE: H-Series Rod Bearing (4) NOTE: H-Series .0010" More O Half Main Bearing Se 1-2-4-5 3 NOTE: H-Series	Performance ID (2.0L) I 1995-2004 TM-77 Performance TM-77 Performance TM-77 Performance I Clearance I TM-77 Performance I Clearance	CB-1840H De No Dowel Ho MS-2245H MB-3822H MB-3823H(F) DOHC 16V Lo CB-1774H De No Dowel Ho CB-1774HX De Bearing Wall No Dowel Hole MS-2208HX MB-3753HX MB-3753HX MB-3754HX(F)	er Half And Plain  4 Zetec  STD,.026mm,.25mm le In Cap Half  STD  .0005" Thinner For	1.8496/1.850 2.0464/2.047 2.0464/2.047 1.8461/1.846 1.8461/1.846	3 0.0010/0.0020 2 0.0004/0.0024 2 0.0006/0.0027 339"/84.8mm 8 0.0008/0.0017	0.0599 0.0986 0.0985 <b>x 3.46</b> 0.0580	1.9694/1.9702 2.2448/2.2455 2.2448/2.2455 1"/87.9mm 1.9642/1.9650 1.9642/1.9650	0.6653 0.7520 1.0140 3 0.8020 0.8020
Rod Bearing (4) NOTE: H-Series Main Bearing Se 1-2-4-5 3 For Year(s): 2004 NOTE: H-Series Lower Half 3 122 C Years: Rod Bearing (4) NOTE: H-Series Rod Bearing (4) NOTE: H-Series .0010" More O Half Main Bearing Se 1-2-4-5 3 NOTE: H-Series .0010" More O	Performance of TM-77  Performance of TM-77  4-2010 Performance TM-77  Performance of TM-77  Performance of TM-77  Performance of TM-77  Performance of TM-77	CB-1840H DE NO DOWEL HO MS-2245H MB-3822H MB-3823H(F) DOHC 16V LO CB-1774H DE NO DOWEL HO CB-1774HX DE Bearing Wall NO DOWEL HOLE MS-2208HX MB-3753HX MB-3754HX(F) DE Bearing Wall DE Bearing Wall DE Bearing Wall	er Half And Plain  1 Zetec  STD,.026mm,.25mm le In Cap Half  STD  .0005" Thinner For In Cap  STD  .0005" Thinner For Half And	1.8496/1.850 2.0464/2.047 2.0464/2.047 1.8461/1.846 1.8461/1.846	3 0.0010/0.0020 2 0.0004/0.0024 2 0.0006/0.0027 339"/84.8mm 8 0.0008/0.0017 8 0.0018/0.0027	0.0599 0.0986 0.0985 <b>x 3.46</b> 0.0580	1.9694/1.9702 2.2448/2.2455 2.2448/2.2455 1"/87.9mm 1.9642/1.9650 1.9642/1.9650	0.6653 0.7520 1.0140 3 0.8020 0.8020





	COL	INTER DAT	Α	SHOP DATA					
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE			MAX LENGTH 4 CYL	
Years: 2 140 C	001-2009 D (2.3L) D	OHC 16V L4	Duratec Duratec Hybrid		40"/87.4mm 40"/87.4mm			4	
Rod Bearing (4)		CB-1838H	STD,.25mm	1.9677/1.9685	0.0010/0.0020	0.0598	2.0875/2.0883	0.6653	
NOTE: H-Series I Rod Bearing (4) NOTE: H-Series I Not Include Co Cap Half	TM-77 ( Performance	CB-1838HK with TriArmor	STD‡ Maximum Wall Does	1.9677/1.9685	0.0010/0.0020	0.0598	2.0875/2.0883	0.6653	
Rod Bearing (4)	Performance		STD 0005" Thinner For In Cap	1.9677/1.9685	0.0020/0.0030	0.0593	2.0875/2.0883	0.6653	
Main Bearing Set 1-2-4-5 3 NOTE: H-Series I Lower Half	!	MS-2245H MB-3822H MB-3823H(F) Grooved Uppe	STD er Half And Plain		0.0004/0.0024 0.0006/0.0027				
Years: 2	009-2010 D (2.5L) D	OHC 16V L4	Duratec Duratec Hybrid		0"/88.9mm x 0"/88.9mm x			5	
Main Bearing Set 1-2-4-5 3 NOTE: H-Series I Lower Half	1	MS-2245H MB-3822H MB-3823H(F) Grooved Uppe	STD er Half And Plain		0.0004/0.0024 0.0006/0.0027				
	- 10 OLV 1						011/200	8 CYL	
Years: 1	I <b>D (3.6L) 1</b> ( 962-1963			3.50	00"/88.9mm	x 2.88	0"/73.0mm	6	
	<b>D (4.2L) 1</b> ( 980-1982	6 <b>V V</b> 8		3.68	80"/93.5mm	x 3.00	0"/76.2mm		
	D (4.3L) 10	6 <b>V V</b> 8		3.80	00"/96.5mm	x 2.88	0"/73.0mm		
289 C	D (4.7L) 1	6V V8 Hi-Pe	rf.	4.000	0"/101.6mm	x 2.88	0"/73.0mm		
289 C	963-1969 I <b>D (4.7L) 1</b> 0 963-1968	6 <b>V V</b> 8		4.000	0"/101.6mm	x 2.88	0"/73.0mm		
Rod Bearing (8) NOTE: H-Series I Increased Cran Cap Half	TM-77 ( Performance			2.1228/2.1236	0.0006/0.0028	0.0575	2.2390/2.2398	0.6810	
Rod Bearing (8) NOTE: H-Series I Used In Engine Narrowed On C Clearance	Performance s Without Do	oweled Connec	•	2.1228/2.1236	0.0006/0.0028	0.0575	2.2390/2.2398	3 0.6810	
Rod Bearing (8) NOTE: H-Series I Not Include Co Side For Increa Hole In Cap Ha	Performance ating Thickn sed Crank F	ess, Narrowed		2.1228/2.1236	0.0006/0.0028	0.0575	2.2390/2.2398	3 0.6810	





	СО	UNTER DAT	Ά		SHOP	DATA	Α	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)	D (2 61 )	IEN NO		2.5	0011/00 0	. n oo	OII /72 O	6
	<b>D (3.6L)</b> 1 962-1963	IOV VO		3.5	00"/88.9mm	X 2.88	0"//3.Umm	(cont.)
255 CI	<b>D (4.2L)</b> 1980-1982	16V V8		3.6	80"/93.5mm	x 3.00	0"/76.2mm	(33111)
Years: 1	<b>D (4.3L)</b> 1 962-1965			3.8	00"/96.5mm	x 2.88	0"/73.0mm	
	<b>D (4.7L)</b> 1 963-1969	16V V8 Hi-Pe	erf.	4.00	0"/101.6mm	x 2.88	0"/73.0mm	
	<b>D (4.7L)</b> 1 963-1968	16V V8		4.00	0"/101.6mm	x 2.88	0"/73.0mm	
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	Performance Clearance	Narrowed On		2.1228/2.1236	0.0016/0.0038	0.0570	2.2390/2.2398	0.6810
Rod Bearing (8) NOTE: H-Series F .0005" Thinner I Maximum Wall Narrowed On O Clearance No D	Performand For .0010" I Does Not I Ine Side Fo	More Oil Cleara nclude Coating r Increased Cra	nce Thickness,	2.1228/2.1236	0.0016/0.0038	0.0570	2.2390/2.2398	3 0.6810
Main Bearing Set 1-2-4-5 3	TM-77	MS-590H MB-2121H MB-2122H(F)	STD,1,10		0.0006/0.0028			
NOTE: H-Series F Lower Half	Performano	e Grooved Upp	er Half And Plain					
Main Bearing Set 1-2-4-5	TM-77	MS-590HK MB-2121H MB-2122H(F)	STD,10		0.0006/0.0028			
NOTE: H-Series F And Plain Lowe Include Coating	r Half, Max	e with TriArmo	r Grooved Upper Half es Not		010000	0.000		
Main Bearing Set 1-2-4-5 3	TM-77	MS-590HX MB-2121HX MB-2122HX(F)	STD		0.0016/0.0038			
NOTE: H-Series F .0010" More Oil Plain Lower Ha	Clearance		.0005" Thinner For er Half And					
Main Bearing Set 1-2-4-5 3	TM-77	MS-590HXK MB-2121HX MB-2122HX(F)	STD		0.0016/0.0038			
NOTE: H-Series F .0005" Thinner I Grooved Upper Wall Does Not I	For .0010"   Half And P	e with TriArmo More Oil Cleara Plain Lower Hal	ance f, Maximum					
Main Bearing Set 1-2-4-5 3	VP-2	MS-590V MB-2121V MB-2122V(F)	STD‡		0.0004/0.0026			
NOTE: V-Series P	erformanc		er Half And Plain					
Main Bearing Set 1-2-4-5	VP-2	MS-590VX MB-2121VX	STD‡	2.2482/2.2490	0.0014/0.0036	0.0955	5 2.4412/2.4420	0.8900
3 NOTE: V-Series P .0010" More Oil Plain Lower Ha	Clearance		.0005" Thinner For er Half And	2.2482/2.2490	0.0014/0.0036	0.0955	5 2.4412/2.4420	1.1330





	COL	JNTER DATA	<u> </u>	Π	SHOP	DATA	<b>.</b>	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
6 221 C	ID (3.6L) 1	6V V8		3.50	00"/88.9mm	x 2.88		(cont.)
(cont.) Years: 1	962-1963							(cont.)
	I <b>D (4.2L) 1</b> ( 980-1982	6V V8		3.68	30"/93.5mm	x 3.00	0"/76.2mm	
260 C	D (4.3L) 1	6 <b>V V</b> 8		3.80	00"/96.5mm	x 2.88	0"/73.0mm	
289 C	962-1965 I <b>D (4.7L) 1</b> ( 963-1969	6V V8 Hi-Per	f.	4.000	0"/101.6mm	x 2.88	0"/73.0mm	
289 C	<b>D (4.7L) 1</b> 963-1968	6V V8		4.000	0"/101.6mm	x 2.88	0"/73.0mm	
Main Bearing		MB-2122HX	STD	2.2482/2.2490	0.0016/0.0038	0.0952	2.4412/2.442	0 1.1330
		e Bearing Wall .0 Contains Flange	005" Thinner For d Bearing					
		and Plain Lower	•					
Cam Bearing Set 1 2 3 4 5 NOTE: Performal		SH-1321S SH-1321 SH-1322 SH-1323 SH-1324 SH-1325 Set	STD	2.0655/2.0665 2.0505/2.0515 2.0355/2.0365	0.0011/0.0049 0.0011/0.0049 0.0011/0.0049 0.0011/0.0049 0.0011/0.0049	0.0602 0.0602 0.0602	2 2.1880/2.190 2 2.1730/2.175 2 2.1580/2.160	0 0.6650 0 0.6650 0 0.6650
Crankshaft Forg	ing 1J, C2 E1.	1M, 1MA, 2H-A	NE-D, C3AE-J, C80E-A, C8 N, 2J, 2M, 2MA, 2MAB, 2 DZ, C2OZ-B, C30E-B, C3 AE-AA, GS-M	MAC, 2MAD, 2N 0Z, C3AE-F, C3		30Z-B,	C80E-B, C9ZE	-A, E1AE,
	006-2011	OHC 10V VO		3.5	51"/90.2mm	X 3.54	2*/90.0mm	<u>'</u>
Rod Bearing (8)	TM-77	CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
NOTE: H-Series I FOR VIN(S): V	Performance	No Dowel Hole						
	Performance	CB-1442HK with TriArmor I ess, No Dowel I	STD Maximum Wall Does Hole In	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
	Performance	CB-1442HX Bearing Wall .0 No Dowel Hole I	STD 005" Thinner For n Cap	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
	Performance For .0010" M Does Not In	CB-1442HXK with TriArmor I lore Oil Clearan clude Coating T	ce	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
Main Bearing Set 1-2-3-4 5 5 NOTE: H-Series I Set with Lower	Performance Half Flange	MS-2007H MB-3139H MB-3139W MB-3140H(F) Contains 1 Pied d Thrust Bearing I Upper Half And	,		0.0005/0.0025 0.0005/0.0025			0.1151





	col	JNTER DAT	`A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)	- // 01 \ 0						011/00 0	
7 281 Cl (cont.) Years: 2		OHC 16V V	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	7 (cont.)
Main Bearing Set		MS-2007HK	STD,.25mm‡					
1-2-3-4		MB-3139H		2.6567/2.6577	0.0005/0.0025	0.0962	2.8504/2.8513	0.7580
5		MB-3139W		0.0507/0.0577	0.000510.0005	0.0000	0.050400.0540	0.1151
NOTE: H-Series F Thrust Washer: Bearing Positio Plain Lower Hal Coating Thickn FOR VIN(S): V	Performance Set with Lov n Number 5 If, Maximum	wer Half Flang Grooved Upp	er Half And	2.6567/2.6577	0.0005/0.0025	0.0962	2.8504/2.8513	0.8900
Main Bearing Set	TM-77	MS-2007HX	STD					
1-2-3-4		MB-3139HX		2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	0.7580
5		MB-3139W						0.1151
NOTE: H-Series F .0010" More Oil Washer Set with Position Number Lower Half FOR VIN(S): V	Performance Clearance h Lower Hal	Contains 1 Pie f Flanged Thru	st Bearing	2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	0.8900
Main Bearing Set		MS-2007HXK	STD					
1-2-3-4		MB-3139HX		2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	
5		MB-3139W MB-3140HX(F)		0.0507/0.0577	0.0015/0.0035	0.0057	0.0504/0.0540	0.1151
.0005" Thinner I Contains 1 Piec Flanged Thrust Upper Half And Not Include Co FOR VIN(S): V	e Thrust Wa Bearing Pos Plain Lowe	asher Set with sition Number r Half, Maximu	Lower Half 5 Grooved					
		OHC 24V V	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	8
281 CI	005-2010 <b>D (4.6L) S</b> 009-2010	OHC 24V V	8 Triton	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
281 CI		OHC 32V V	8 InTech	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
	D (4.6L) D 996-2001, 20	OHC 32V V	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
281 CI		OHC 32V S	C V8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
Rod Bearing (8)	TM-77	CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.2396	0.8270
NOTE: H-Series F FOR VIN(S): 8,H,F		No Dowel Ho	le In Cap Half					
Rod Bearing (8) NOTE: H-Series F Not Include Coa Cap Half FOR VIN(S): 8,H,I	Performance ating Thickn		STD r Maximum Wall Does I Hole In	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.2396	0.8270
Rod Bearing (8)	TM-77 Performance Clearance	-	STD .0005" Thinner For e In Cap	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.2396	0.8270





	COUNTER DAT	Ά		SHOP	DAT	4	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
			•			8 CYL	. (cont.)
	ID (4.6L) SOHC 24V V	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	8 (cont.)
	ID (4.6L) SOHC 24V V	8 Triton	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
281 C	CID (4.6L) DOHC 32V V 1993-2005	8 InTech	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
281 C	EID (4.6L) DOHC 32V V 1996-2001, 2003-2004	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
281 C	CID (4.6L) DOHC 32V S	C V8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
Rod Bearing (8) NOTE: H-Series .0005" Thinner	TM-77 CB-1442HXK Performance with TriArmo For .0010" More Oil Cleara I Does Not Include Coating In Cap Half	ince	2.0859/2.0867	7 0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
Main Bearing Se 1-2-3-4 5	ot TM-77 <b>MS-2259H</b> MB-3841H MB-3139W MB-3842H(F)	STD,.026mm,.25mm		7 0.0003/0.0028			0.1151
Engine Contai Lower Half Fla	Performance Aluminum Cy ns 1 Piece Thrust Washer S inged Thrust Bearing Positi per Half And Plain Lower Ha ,R,V,Y	et with on Number					
Main Bearing Se 1-2-3-4 5	MB-3841H MB-3139W	STD,.25mm		7 0.0003/0.0028			0.1151
Block, Romeo Set with Lowe Position Numb	MB-3842H(F) Performance with TriArmo Engine Contains 1 Piece To r Half Flanged Thrust Beari per 5 Grooved Upper Half A aximum Wall Does Not Incl ,R,V,Y	hrust Washer ng nd Plain	2.6567/2.6577	7 0.0003/0.0028	0.0962	2 2.8504/2.851	3 0.8910
Main Bearing Se 1-2-3-4 5	TM-77 <b>MS-2259HX</b> MB-3841HX MB-3139W	STD		7 0.0013/0.0038			0.1151
NOTE: H-Series Engine, Bearin More Oil Clear Set with Lowe	MB-3842HX(F) Performance Aluminum Cy ng Wall .0005" Thinner For .0 rance Contains 1 Piece Thr r Half Flanged Thrust Beari per 5 Grooved Upper Half A ,R,V,Y	0010" ust Washer ng	2.000//2.00//	7 0.0013/0.0038	0.095/	2.3804/2.381	S 0.8910





	COUNTER DAT	Ά		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)			•				
	ID (4.6L) SOHC 24V V	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	8
281 C	2005-2010 ID (4.6L) SOHC 24V V 2009-2010	8 Triton	3.5	51"/90.2mm	x 3.54	2"/90.0mm	(cont.)
281 C	ID (4.6L) DOHC 32V V	8 InTech	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
	ID (4.6L) DOHC 32V V	8	3.5	51"/90.2mm	x 3.54	2"/90.0mm	
	1996-2001, 2003-2004	CVO	2.5	51"/90.2mm	v 2 E4	011/00 0mm	
	ID (4.6L) DOHC 32V S 2003-2004	C Vo	3.5	51 790.2mm	X 3.34	2°/90.0mm	
Main Bearing Se	t TM-77 MS-2259HXK	STD	0.0507/0.057	0.0010/0.0000	0.005	0.0504/0.054	0.7504
1-2-3-4 5	MB-3841HX MB-3139W		2.6567/2.6577	7 0.0013/0.0038	0.0957	2.8504/2.851	0.7580
5	MB-3842HX(F) Performance with TriArmo		2.6567/2.6577	0.0013/0.0038	0.0957	2.5804/2.581	3 0.8910
Coating Thickr FOR VIN(S): 8,H, Crankshaft Forg 9 281 C	R,V,Y	E-AD-7D, F1AE-AD-8D, F1 <b>8 Romeo</b>		51"/90.2mm	x 3.54	2"/90.0mm	9
Years: 1 281 C	991-2010 ID (4.6L) SOHC 16V V		3.5	51"/90.2mm	x 3.54	2"/90.0mm	
Rod Bearing (8)	TM-77 <b>CB-1442H</b>	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	7 0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
NOTE: H-Series FOR VIN(S): W,X		·					
	TM-77 CB-1442HK	STD	1.2 0.850/2 0.867	7 0 0011/0 0022	0.0759	2 2388/2 230	
	Performance with TriArmorating Thickness, No Dowe	r Maximum Wall Does	2.0003/2.0001	0.0011/0.0023	0.0100	£.£000 £.£00	6 0.8270
NOTE: H-Series Not Include Co Cap Half FOR VIN(S): W,X Rod Bearing (8) NOTE: H-Series	Performance with TriArmonating Thickness, No Dowe TM-77 CB-1442HX Performance Bearing Wall I Clearance No Dowel Hole	r Maximum Wall Does I Hole In  STD .0005" Thinner For		7 0.0021/0.0033			6 0.8270





	COUNTER DAT	A	Т	SHOP	DATA	<b>.</b>	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
						8 CYL	(cont.)
(cont.) Years: 1 281 C	ID (4.6L) SOHC 16V V 1991-2010 ID (4.6L) SOHC 16V V 1997-2011			51"/90.2mm 51"/90.2mm			9 (cont.)
Main Bearing Se 1-2-3-4 5 5 For Year(s): 1993	t TM-77 <b>MS-2007H</b> MB-3139H MB-3139W MB-3140H(F)	STD,.026mm,.25mm		0.0005/0.0025			0.1151
Engine Contain Lower Half Fla	ns 1 Piece Thrust Washer S nged Thrust Bearing Positi per Half And Plain Lower Ha	et with on Number					
Main Bearing Se 1-2-3-4 5	t TM-77 <b>MS-2007HK</b> MB-3139H MB-3139W	STD,.25mm‡		0.0005/0.0025			0.1151
Block, Romeo Set with Lower Position Numb	Performance with TriArmo Engine Contains 1 Piece Ti r Half Flanged Thrust Beari per 5 Grooved Upper Half A aximum Wall Does Not Incl	hrust Washer ng nd Plain					
Main Bearing Se 1-2-3-4 5	MB-3139HX MB-3139W	STD	2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	0.7580 0.1151
Engine, Bearin More Oil Clear Set with Lowe	Performance Cast Iron Cyl ig Wall .0005" Thinner For .t ance Contains 1 Piece Thr r Half Flanged Thrust Beari eer 5 Grooved Upper Half A	0010" ust Washer ng	2.6567/2.6577	0.0015/0.0035	0.0957	' 2.8504/2.8513	0.8900
Main Bearing Se 1-2-3-4 5	t TM-77 <b>MS-2007HXK</b> MB-3139HX MB-3139W	STD	2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	0.7580
For Year(s): 1993 NOTE: H-Series Block, Romeo For .0010" Mor Thrust Washer Bearing Positio	MB-3140HX(F) 3-2011 Performance with TriArmo Engine, Bearing Wall .0005 re Oil Clearance Contains 1 Set with Lower Half Flango on Number 5 Grooved Uppealf, Maximum Wall Does No	" Thinner Piece ed Thrust er Half And	2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	





	COL	JNTER DAT	ΓΑ		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
8 CYL (cont.)								
(cont.) Years: 1: 281 CI	991-2010 <b>D (4.6L) S</b>	OHC 16V V OHC 16V V	8 Romeo 8 Triton (Romeo)		51"/90.2mm 51"/90.2mm			(cont.)
Years: 1: Main Bearing Set	997-2011	MS-2259H	STD,.026mm,.25mm	1				
1-2-3-4 5		MB-3841H MB-3139W	310,.020HHI,.20HHI	2.6567/2.6577	0.0003/0.0028	0.0962	2.8504/2.851	3 0.7580 0.1151
5		MB-3842H(F)		2.6567/2.6577	0.0003/0.0028	0.0962	2.8504/2.851	3 0.8910
For Year(s): 1993- NOTE: H-Series F Engine Contain Lower Half Flan 5 Grooved Uppe FOR VIN(S): W	Performance s 1 Piece Th ged Thrust	rust Washer S Bearing Posit	ion Number					
Main Bearing Set	TM-77	MS-2259HK	STD,.25mm					
1-2-3-4		MB-3841H		2.6567/2.6577	0.0003/0.0028	0.0962	2.8504/2.851	
5		MB-3139W MB-3842H(F)		2 6567/2 6577	0.0003/0.0028	0.0962	2 8504/2 851	0.1151
Block, Romeo B Set with Lower Position Numbe Lower Half, Ma Thickness FOR VIN(S): W	Half Flange er 5 Grooved	d Thrust Bear I Upper Half A	ing And Plain					
Main Bearing Set 1-2-3-4		MS-2259HX MB-3841HX	STD	2.6567/2.6577	0.0013/0.0038	0.0957	2.8504/2.851	3 0.7580
5		MB-3139W		2.000172.0017	0.0010/0.0000	0.0007	2.000-72.001	0.1151
5		MB-3842HX(F)		2.6567/2.6577	0.0013/0.0038	0.0957	2.5804/2.581	3 0.8910
For Year(s): 1993- NOTE: H-Series F Engine, Bearing More Oil Cleara Set with Lower Position Numbe Lower Half FOR VIN(S): W	Performance 3 Wall .0005" Ince Contair Half Flange	Thinner For . ns 1 Piece Thr d Thrust Bear	rust Washer ing					
Main Bearing Set			STD	0.0507/0.0577	0.0040/0.0000	0.005	0.0504/0.054	0 0 7500
1-2-3-4 5		MB-3841HX MB-3139W		2.000//2.0577	0.0013/0.0038	0.0957	2.8504/2.851	0.7580
5		MB-3842HX(F)		2.6567/2.6577	0.0013/0.0038	0.0957	2.5804/2.581	
For Year(s): 1993- NOTE: H-Series F Block, Romeo E For .0010" More Thrust Washer Bearing Positio Plain Lower Hal Coating Thickn	Performance Engine, Bear e Oil Clearar Set with Lov n Number 5 lf, Maximum	ring Wall .0005 nce Contains wer Half Flang Grooved Upp	1 Piece ged Thrust ger Half And					





	COL	JNTER DATA	\		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OR HOUSING BORE	MAX LENGTH
							8 CYL	(cont.)
(cont.) Years: 1	991-2010	OHC 16V V8			51"/90.2mm			(cont.)
	997-2011	OHC 16V V8	Triton (Romeo)	3.50	51"/90.2mm	x 3.54	2"/90.0mm	
Main Bearing Set		MS-2202H	STD,.026mm,.25mm					
1 2-3-4-5 5		MB-3752H MB-3139H MB-3139W			0.0003/0.0032 0.0005/0.0025			
For Year(s): 2004 NOTE: H-Series I Shell Bearings	-2010 Performance And 3 Piece	Windsor Engin						0.1101
Main Bearing Set	t TM-77	MS-2202HX	STD					
1 2-3-4-5 5		MB-3752HX MB-3139HX MB-3139W			0.0013/0.0042 0.0015/0.0035			
	tht Shell Bea Set Position	fore Oil Clearan arings And 3 Pie a Number 5 Groo	ce					
Connecting Rod Crankshaft Forg			, RFF1AE6306-AD					
	D (4.6L) S	OHC 16V V8	Triton (Windsor)	3.5	51"/90.2mm	x 3.54	2"/90.0mm	10
330 CI		OHC 16V V8	Triton (Windsor)	3.551	1"/90.2mm x	4.161	"/105.7mm	
330 CI		OHC 16V SC	V8 Triton (Windsor	3.551	1"/90.2mm x	4.161	"/105.7mm	
330 CI		OHC 24V V8	Triton (Windsor)	3.551	1"/90.2mm x	4.161	"/105.7mm	
330 CI		OHC 32V V8	InTech	3.551	1"/90.2mm x	4.161	"/105.7mm	
	D (5.4L) D	OHC 32V V8	Windsor	3.55	1"/90.2mm x	4.161	"/105.7mm	
Rod Bearing (8)	TM-77	CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.2396	0.8270
NOTE: H-Series I FOR VIN(S): 5,L,\			In Cap Half					
.0010" More Oil Half	Performance   Clearance	No Dowel Hole	STD 0005" Thinner For In Cap	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.2396	6 0.8270
FOR VIN(S): 5,L,\ Rod Bearing (8)		CB-1442HXK	STD	2 0850/2 0967	0.0021/0.0033	0.0754	2 2388/2 220	S 0 8270
NOTE: H-Series I .0005" Thinner	Performance For .0010" N	with TriArmor fore Oil Clearan	Bearing Wall ice	2.0009/2.000/	0.0021/0.0033	0.0754	2.2000/2.2090	0.0210
No Dowel Hole FOR VIN(S): 5,L,\	In Cap Half	clude Coating T A,H	mickness,					





	COUNTER DAT	ГА		SHOP	DATA	A	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)							
(cont.) Years: 19				51"/90.2mm 1"/90.2mm x			10 (cont.)
Years: 19							
330 CII Years: 19		C V8 Triton (Windsor	3.55	1"/90.2mm x	4.161	"/105.7mm	
330 CII Years: 20	D (5.4L) SOHC 24V V	8 Triton (Windsor)	3.55	1"/90.2mm x	4.161	"/105.7mm	
	D (5.4L) DOHC 32V V	/8 InTech	3.55	1"/90.2mm x	4.161	"/105.7mm	
330 CII	D (5.4L) DOHC 32V V	8 Windsor	3.55	1"/90.2mm x	4.161	"/105.7mm	
Years: 20 Rod Bearing (8)	TM-77 <b>CB-1442HK</b>	STD	2 0859/2 0867	0.0011/0.0023	0.0759	2 2388/2 2396	0.8270
For Year(s): 1997- NOTE: H-Series P Not Include Coa Cap Half	2011 Performance with TriArmonting Thickness, No Dowe	or Maximum Wall Does	2.0003/2.000/	0.001170.0020	0.0700	2.2000/2.2030	0.0270
FOR VIN(S): 5,L,V							
Main Bearing Set 1 2-3-4-5 5	TM-77 <b>MS-2202H</b> MB-3752H MB-3139H MB-3139W	STD,.026mm,.25mm		0.0003/0.0032 0.0005/0.0025			
Shell Bearings A	erformance Windsor Eng And 3 Piece Thrust Washe er 5 Grooved Upper Half A .W.3.R.Z.6.A.H	er Set					
Main Bearing Set		STD					
1 2-3-4-5	MB-3752HX MB-3139HX MB-3139W			0.0013/0.0042 0.0015/0.0035			
NOTE: H-Series P .0005" Thinner F Contains Straigl	erformance Windsor Eng For .0010" More Oil Clears ht Shell Bearings And 3 P Set Position Number 5 Gr ower Half	ance iece					0.1.10
Connecting Rod I	Forging RFF1AE6205-AD	AE, RFF1AE6306-AD					
	D (5.0L) 16V V8 Boss		4.00	0"/101.6mm	x 3.00	0"/76.2mm	11
Main Bearing Set	TM-77 MS-590H	STD,1,10					
1-2-4-5 3	MB-2121H MB-2122H(F)			0.0006/0.0028 0.0006/0.0028			
NOTE: H-Series P Lower Half	erformance Grooved Upp	per Half And Plain					
Main Bearing Set 1-2-4-5 3 NOTE: H-Series P	TM-77 MS-590HX MB-2121HX MB-2122HX(F) Performance Bearing Wall	STD		0.0016/0.0038			
	Clearance Grooved Uppe						





	СО	UNTER DA	ТА		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							8 CYL	(cont.)
11 302 CI (cont.) Years: 1		16V V8 Boss	s/Eliminator	4.000	)"/101.6mm	x 3.00	0"/76.2mm	11 (cont.)
Main Bearing Set 1-2-4-5 3 NOTE: V-Series F		MS-590V MB-2121V MB-2122V(F) e Grooved Upi	STD‡ per Half And Plain		0.0004/0.0026 0.0004/0.0026			
Lower Half								
Main Bearing Set 1-2-4-5 3	t VP-2	MS-590VX MB-2121VX MB-2122VX(F)	STD‡		0.0014/0.0036 0.0014/0.0036			
NOTE: V-Series F .0010" More Oil Plain Lower Ha	l Clearance		l .0005" Thinner For er Half And					
Main Bearing NOTE: H-Series I .0010" More Oil Only, Grooved	Performanc I Clearance	Contains Flan		2.2482/2.2490	0.0016/0.0038	0.0952	2.4412/2.4420	1.1330
Cam Bearing Set 1 2 3 4 5		SH-1321S SH-1321 SH-1322 SH-1323 SH-1324 SH-1325	STD	2.0655/2.0665 2.0505/2.0515 2.0355/2.0365	0.0011/0.0049 0.0011/0.0049 0.0011/0.0049 0.0011/0.0049 0.0011/0.0049	0.0602 0.0602 0.0602	2.1880/2.1900 2.1730/2.1750 2.1580/2.1600	0.6650 0.6650 0.6650
NOTE: Performar			OTD.					
Cam Bearing Set 1 2 3 4 5 NOTE: Performar 2.204" Housing	nce, 302 SV		STD  e Cylinder Block With	2.0855/2.0865 2.0505/2.0515 2.0355/2.0365	0.0011/0.0053 0.0011/0.0049 0.0011/0.0049 0.0011/0.0048 0.0011/0.0049	0.0679 0.0752 0.0827	2.2030/2.2050 2.2030/2.2050 2.2030/2.2050	0.6650 0.6650 0.6650
		16V V8 HO		4.000	0"/101.6mm	x 3.00	0"/76.2mm	12
302 CI	982, 1984-1 ID (5.0L) 1 968-2001			4.000	)"/101.6mm	x 3.00	0"/76.2mm	
Rod Bearing (8) NOTE: H-Series F Increased Cran Cap Half	Performanc			2.1228/2.1236	0.0006/0.0028	0.0575	2.2390/2.2398	3 0.6810
Rod Bearing (8) NOTE: H-Series I Used In Engine Narrowed On C Clearance	Performances Without D	oweled Conne	•	2.1228/2.1236	0.0006/0.0028	0.0575	2.2390/2.2398	3 0.6810
Rod Bearing (8) NOTE: H-Series I Not Include Co Side For Increa Hole In Cap Ha	Performanc ating Thick sed Crank	ness, Narrowe		2.1228/2.1236	0.0006/0.0028	0.0575	2.2390/2.2398	0.6810
Rod Bearing (8) NOTE: H-Series I .0010" More Oil Increased Cran Cap Half	Performanc I Clearance	Narrowed On		2.1228/2.1236	0.0016/0.0038	0.0570	2.2390/2.2398	3 0.6810





	CO	UNTER DAT	Ά		SHOP	DATA	4	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)								
	<b>D (5.0L)</b> 982, 1984-1	16V V8 HO		4.00	0"/101.6mm	x 3.00	0"/76.2mm	
, ,	D (5.0L)			4.00	0"/101.6mm	x 3.00	0"/76 2mm	(cont.)
	968-2001	.00 00		4.00	0 7 10 1.0111111	× 0.00	0 770.211111	
Rod Bearing (8) NOTE: H-Series I .0005" Thinner Maximum Wall Narrowed On C Clearance No D	Performand For .0010"   Does Not I one Side Fo	More Oil Cleara nclude Coating r Increased Cra	nce Thickness,	2.1228/2.1236	0.0016/0.0038	0.0570	2.2390/2.239	8 0.6810
Main Bearing Set	TM-77	MS-590H	STD,1,10					
1-2-4-5		MB-2121H			0.0006/0.0028			
3 NOTE: U.Series I	Porformano	MB-2122H(F)	er Half And Plain	2.2482/2.2490	0.0006/0.0028	0.0957	2.4412/2.442	0 1.1330
Lower Half	enomano	e arooved opp	or rian And Fialli					
Main Bearing Set 1-2-4-5 3 NOTE: H-Series I And Plain Lowe Include Coating	Performancer Half, Max	timum Wall Doe	STD,10 r Grooved Upper Half		0.0006/0.0028 0.0006/0.0028			
Main Bearing Set	•	MS-590HX	STD					
1-2-4-5 3	I IIVI-77	MB-2121HX MB-2122HX(F)	310		0.0016/0.0038 0.0016/0.0038			
NOTE: H-Series I .0010" More Oil Plain Lower Ha	Clearance	•	.0005" Thinner For r Half And					
Main Bearing Set	TM-77	MS-590HXK	STD					
1-2-4-5 3		MB-2121HX			0.0016/0.0038			
NOTE: H-Series I .0005" Thinner Grooved Upper Wall Does Not	For .0010" Half And F Include Coa	More Oil Cleara Plain Lower Half	nce f, Maximum	2.2402/2.2490	0.0010/0.0000	0.0902	2.4412/2.442	0 1.1000
Main Bearing Set	VP-2	MS-590V	STD‡		0.0004/0.0000	0.000		
1-2-4-5 3		MB-2121V MB-2122V(F)			0.0004/0.0026			
NOTE: V-Series F Lower Half	Performanc		er Half And Plain	2.2-02/2.2-00	0.000-70.0020	0.0000	, 2,4412,2,442	7.1000
Main Bearing Set	VP-2	MS-590VX	STD‡	0.0400/0.04	0.0044/0.000	0.00	0.4440/0.445	
1-2-4-5 3		MB-2121VX MB-2122VX(F)			0.0014/0.0036			
-	Clearance	e Bearing Wall	.0005" Thinner For r Half And	2.2402/2.2490	0.0014/0.0000	0.0330	, 2,4412/2,442/	. 1.1330
Main Bearing NOTE: H-Series I .0010" More Oil Only, Grooved	Performano I Clearance	Contains Flang		2.2482/2.2490	0.0016/0.0038	0.0952	2.4412/2.442	0 1.1330
Cam Bearing Set	B-2	SH-1321S	STD					
1		SH-1321 SH-1322			0.0011/0.0049			
3		SH-1322 SH-1323			0.0011/0.0049			
4		SH-1324			0.0011/0.0049			
5		SH-1325		2.0205/2.0215	0.0011/0.0049	0.0602	2.1430/2.1450	0.6650
NOTE: Performar	nce Bearing	g Set						





	СО	UNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
(cont.) Years: 1	ID (5.0L) 1 982, 1984-1 ID (5.0L) 1				0"/101.6mm 0"/101.6mm		0"/76.2mm	(cont.)
Years: 1 Cam Bearing Set 1 2 3 4 5 NOTE: Performal 2.204" Housing	968-2001 t B-2 nce, 302 SV Bore Stepp	SH-2147S SH-2147 SH-2148 SH-2149 SH-2150 SH-2151 O Performance ped Cam Journa		2.0805/2.0815 2.0855/2.0865 2.0505/2.0515 2.0355/2.0365 2.0205/2.0215	0.0011/0.0053 0.0011/0.0049 0.0011/0.0049 0.0011/0.0048 0.0011/0.0049	0.0602 0.0679 0.0752 0.0827	2.2030/2.2050 2.2030/2.2050 2.2030/2.2050 2.2030/2.2050	0 0.6650 0 0.6650 0 0.6650 0 0.6650
Crankshaft Forg	ing 1.	J, 1M, 1MA, 2H-	ME-D, C3AE-J, C80E-A, C8 A, 2J, 2M, 2MA, 2MAB, 2 2OZ, C2OZ-B, C30E-B, C3 7AE-AA, GS-M	MAC, 2MAD, 2N				
Years: 2 302 C	2011-2012	DOHC 32V V	3 Coyote 3 Coyote 99F		30"/92.2mm 30"/92.2mm			
Rod Bearing (8)	TM-77	CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
Rod Bearing (8) NOTE: H-Series	TM-77 Performance	CB-1442HX	STD .0005" Thinner For	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
	Performand For .0010" I Does Not I	More Oil Cleara	nce	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	3 0.8270
	-2012 Performano	CB-1442HK e with TriArmor ness, No Dowel	STD Maximum Wall Does Hole In	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	5 0.8270
Set with Lower	Performanc Half Flange	MS-2292H MB-3931H MB-3932H(F) MB-3932W The Contains 1 Picted Thrust Bearing dupper Half Ar			0.0003/0.0028 0.0003/0.0028			
.0010" More Oi Washer Set wit	Performanc I Clearance th Lower Ha	MS-2292HX MB-3931HX MB-3932HX(F) MB-3932W te Bearing Wall Contains 1 Piec of Flanged Thru	st Bearing		0.0013/0.0038 0.0013/0.0038			





	COL	JNTER DATA	Α	3.630"/92.2mm x 3.650"/92.7mm 1 2.0859/2.0867 0.0011/0.0023 0.0759 2.2388/2.2396 0.8 2.0859/2.0867 0.0021/0.0033 0.0754 2.2388/2.2396 0.8 2.0859/2.0867 0.0021/0.0033 0.0754 2.2388/2.2396 0.8 2.0859/2.0867 0.0021/0.0033 0.0754 2.2388/2.2396 0.8				
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES				HOUSING	MAX LENGTH
8 CYL								
	<b>D (5.0L) D</b> 012-2013	OHC 32V V8	Coyote 99U	3.6	30"/92.2mm	x 3.65	0"/92.7mm	14
Rod Bearing (8)		CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
NOTE: H-Series F			· ·					
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Half	Performance		STD 0005" Thinner For In Cap	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
Rod Bearing (8) NOTE: H-Series F .0005" Thinner I Maximum Wall No Dowel Hole	Performance For .0010" N Does Not In	More Oil Clearar Iclude Coating	nce	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
Main Bearing Set 1-2-3-4 5 5		MS-2292H MB-3931H MB-3932H(F) MB-3932W	STD,.25mm,.026mm					
NOTE: H-Series F Set with Lower Position Number Lower Half	Half Flange	d Thrust Bearin						
Main Bearing Set 1-2-3-4 5 5		MS-2292HX MB-3931HX MB-3932HX(F) MB-3932W	STD		0.0013/0.0038 0.0013/0.0038			
NOTE: H-Series F .0010" More Oil Washer Set with Position Number Lower Half	Clearance h Lower Ha	Contains 1 Piec If Flanged Thrus	st Bearing					
	D (5.4L) D	OHC 32V SC	V8 Windsor	3.55	1"/90.2mm x	4.161	"/105.7mm	15
Rod Bearing (8)		CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
FOR VIN(S): S								
Rod Bearing (8) NOTE: H-Series F Not Include Coa Cap Half FOR VIN(S): S	Performance		STD Maximum Wall Does Hole In	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Half FOR VIN(S): S	Performance	-	STD 0005" Thinner For In Cap	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270
Rod Bearing (8) NOTE: H-Series F .0005" Thinner I Maximum Wall No Dowel Hole FOR VIN(S): S	Performance For .0010" N Does Not In	More Oil Clearar	nce	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.239	6 0.8270





POSITION N		PART NUMBER	AVAILABLE	SHOP DATA  BRG O.D. OR STD SHAFT VERT OIL MAX HOUSING MA				
(cont.) Years: 2005	(5.4L) D		UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE		HOUSING BORE	MAX LENGTH
(cont.) Years: 2005	(~, _	OHC 32V SC	V8 Windsor	3.551	I"/90.2mm x	4.161	8 CYL "/105.7mm	(cont.)
Main Bearing Set					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , , , , , , , , , , , , , , , , ,	(cont.)
2-3-4-5 5 For Year(s): 2007-20		<b>MS-2295H</b> MB-3939H MB-3139H MB-3139W	STD,.026mm		0.0003/0.0032 0.0005/0.0025			
NOTE: H Series Per Grooved Upper Ha FOR VIN(S): S	formance		ler Block,					
Main Bearing Set 1 2-3-4-5 5 For Year(s): 2007-20		MS-2295HX MB-3939HX MB-3139HX MB-3139W	STD		0.0013/0.0042 0.0015/0.0035			
NOTE: H Series Per .0010" More Oil Cl Block, Grooved Up FOR VIN(S): S	formance earance	Cast Iron Cylinde	er					
Main Bearing Set 1-2-3-4-5 5 For Year(s): 2005-20		<b>MS-2293H</b> MB-3139H MB-3139W	STD,.026mm,.25mm	2.6567/2.6577	0.0005/0.0025	0.0962	2.8504/2.8513	0.7580 0.1151
NOTE: H Series Peri Upper Half And Pl FOR VIN(S): S	formance	_	der Block, Grooved					
Main Bearing Set 1-2-3-4-5 5		<b>MS-2293HX</b> MB-3139HX MB-3139W	STD	2.6567/2.6577	0.0015/0.0035	0.0957	2.8504/2.8513	0.7580 0.1151
For Year(s): 2005-20 NOTE: H Series Peri .0010" More Oil Cl Grooved Upper Ha FOR VIN(S): S	formance earance	Aluminum Cylind						
16 351 CID		6V V8 Clevela	ınd	4.000	)"/101.6mm	x 3.50	0"/88.8mm	16
Years: 1969 351 CID Years: 197	(5.8L) 1	6V V8 Clevela	and Boss	4.000	)"/101.6mm	x 3.50	0"/88.8mm	
	(5.8L) 1	6V V8 Clevela	and Cobra Jet	4.000	)"/101.6mm	x 3.50	0"/88.8mm	
Rod Bearing (8) NOTE: H-Series Per Increased Crank F Cap Half	formance			2.3103/2.3111	0.0001/0.0023	0.0624	2.4361/2.4369	0.6760
Main Bearing Set 1-2-4-5 3 NOTE: H-Series Per		MS-1010H MB-2560H MB-2561H(F) Grooved Upper	STD,1‡,10  Half And Plain		0.0003/0.0025 0.0003/0.0025			
Lower Half Main Bearing Set	TM-77	MS-1010HK	STD					
1-2-4-5 3 NOTE: H-Series Per And Plain Lower H Include Coating Ti	formance lalf, Maxi	mum Wall Does			0.0003/0.0025 0.0003/0.0025			





	СО	UNTER DAT	A		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
8 CYL (cont.)								
	<b>D (5.8L)</b> 1 969-1974	16V V8 Cleve	land	4.000	0"/101.6mm	x 3.50	0"/88.8mm	16 (cont.)
	<b>D (5.8L)</b> 1 971-1972	16V V8 Cleve	land Boss	4.000	0"/101.6mm	x 3.50	0"/88.8mm	
351 CI		16V V8 Cleve	land Cobra Jet	4.000	0"/101.6mm	x 3.50	0"/88.8mm	
Main Bearing Set 1-2-4-5	TM-77	MS-1010HX MB-2560HX	STD		0.0013/0.0035			
3 NOTE: H-Series F .0010" More Oil Plain Lower Ha	Clearance		.0005" Thinner For r Half And	2.7484/2.7492	0.0013/0.0035	0.0957	2.9417/2.942	5 1.1180
Main Bearing Set 1-2-4-5 3		MS-1010HXK MB-2560HX MB-2561HX(F)	STD		0.0013/0.0035 0.0013/0.0035			
NOTE: H-Series F .0005" Thinner Grooved Upper Wall Does Not I	For .0010"   Half And P	More Oil Cleara Iain Lower Half	nce , Maximum					
Cam Bearing Set	B-1	SH-710S	STD					
1 2		SH-710 SH-511			0.0005/0.0045			
3		SH-512			0.0010/0.0050			
4		SH-513			0.0010/0.0050			
5	D /F 01 \ .	SH-514			0.0010/0.0050			
Years: 1	975-1982 <b>D (6.6L)</b>	16V V8 Modif	nea		0"/101.6mm '/101.6mm x			
	971-1982	IOV VO		4.000	7101.6IIIII X	4.000	7101.011111	
Rod Bearing (8) NOTE: H-Series F Increased Cran Cap Half	TM-77 Performano			2.3103/2.3111	0.0001/0.0023	0.0624	2.4361/2.436	9 0.6760
Main Bearing Set	TM-77	MS-1432H	STD,10	0.0004/0.0000	0.0005/0.0000	0.0000	0.1000/0.100	0 0 0 400
1-2-4-5 3	1000	MB-2754H MB-2558H(F)			0.0005/0.0029 0.0005/0.0029			
For Year(s): 1977 NOTE: H-Series F Lower Half		e Grooved Upp	er Half And Plain					
Main Bearing Set 1-2-4-5 3 For Year(s): 1977	-1982	MS-1432HK MB-2754H MB-2558H(F)	STD,10		0.0005/0.0029 0.0005/0.0029			
NOTE: H-Series F And Plain Lowe Include Coating FOR VIN(S): G,H,	er Half, Max g Thickness	imum Wall Doe	r Grooved Upper Half s Not					
Main Bearing Set 1-2-4-5 3 For Year(s): 1977		MS-1432HX MB-2754HX MB-2558HX(F)	STD		0.0015/0.0039 0.0015/0.0039			
	Performano Clearance		.0005" Thinner For r Half And					





	COL	JNTER DATA	1	SHOP DATA				
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE			MAX LENGTH
								(cont.)
(cont.) Years: 1	ID (5.8L) 10 1975-1982 ID (6.6L) 10	6V V8 Modifi 6V V8	ed		0"/101.6mm '/101.6mm x			(cont.)
	971-1982		OTO					
	'-1982 Performance For .0010" M	MS-1432HXK MB-2754HX MB-2558HX(F) with TriArmor lore Oil Clearan ain Lower Half,	ce		0.0015/0.0039 0.0015/0.0039			
Wall Does Not FOR VIN(S): G,H		ting Thickness						
Main Bearing Se 1-2-4-5 3 For Year(s): 1971	-1976	<b>MS-981H</b> MB-2557H MB-2558H(F)	STD,10		0.0005/0.0029 0.0005/0.0029			
			Grooved Bearings					
Cam Bearing Set		SH-710S SH-710 SH-511 SH-512 SH-513	STD	2.0655/2.0665 2.0505/2.0515 2.0355/2.0365	0.0005/0.0045 0.0010/0.0050 0.0010/0.0050 0.0010/0.0050	0.0608 0.0608 0.0608	3 2.1890/2.1900 3 2.1740/2.1750 3 2.1590/2.1600	0.6700 0.6700 0.6700
5		SH-514		2.0205/2.0215	0.0010/0.0050	0.0608	2.1440/2.1450	0.6700
Connecting Rod Crankshaft Forg			5MAB, 5MABC, 8M, D7AE	E. D7AE-A. SM				
	ID (5.8L) 1	6V V8 Winds	or	4.000	0"/101.6mm	x 3.50	0"/88.8mm	18
351 C		6V V8 Winds	or HO	4.000	0"/101.6mm	x 3.50	0"/88.8mm	
Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half	Performance	CB-831HN Narrowed On C rance No Dowe		2.3103/2.3111	0.0002/0.0024	0.0576	2.4265/2.4273	0.6760
Not Include Co	Performance ating Thickn sed Crank F	CB-831HNK with TriArmor ess, Narrowed illet Clearance I		2.3103/2.3111	0.0002/0.0024	0.0576	2.4265/2.4273	3 0.6760
.0010" More Oi	Performance I Clearance I	CB-831HXN Bearing Wall .0 Narrowed On Or rance No Dowe		2.3103/2.3111	0.0012/0.0034	0.0571	2.4265/2.4273	3 0.6760
Maximum Wall	Performance For .0010" M Does Not In One Side For	lore Oil Clearan clude Coating T Increased Cran	ce 'hickness,	2.3103/2.3111	0.0012/0.0034	0.0571	2.4265/2.4273	3 0.6760
Main Bearing Se 1-2-4-5 3 NOTE: H-Series Lower Half		MS-1432H MB-2754H MB-2558H(F) Grooved Uppe	STD,10 r Half And Plain		0.0005/0.0029 0.0005/0.0029			





	COL	JNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
8 CYL (cont.)								
(cont.) Years: 1	969-1998	6V V8 Winds			)"/101.6mm			(cont.)
	<b>D (5.8L) 1</b> 993-1995	6V V8 Winds	sor HO	4.000	)"/101.6mm	x 3.50	0"/88.8mm	
Main Bearing Set 1-2-4-5		MS-1432HK MB-2754H	STD,10		0.0005/0.0029			
3 NOTE: H-Series I And Plain Lowe Include Coating	Performance er Half, Maxi		Grooved Upper Half s Not	2,9994/3,0002	0.0005/0.0029	0.0960	3.1922/3.193	0 1.1330
Main Bearing Set 1-2-4-5 3	TM-77	MS-1432HX MB-2754HX MB-2558HX(F)	STD		0.0015/0.0039			
NOTE: H-Series I .0010" More Oil Plain Lower Ha	Performance Clearance	Bearing Wall	0005" Thinner For Half And					
Main Bearing Set 1-2-4-5 3		MS-1432HXK MB-2754HX MB-2558HX(F)	STD		0.0015/0.0039 0.0015/0.0039			
NOTE: H-Series I .0005" Thinner Grooved Upper Wall Does Not	Performance For .0010" N Half And Pl	with TriArmor lore Oil Cleara ain Lower Half	nce	2.9994/3.0002	0.0010/0.0009	0.0300	0.1322/0.130	0 1.1000
Main Bearing Set 1-2-3-4-5 NOTE: 351 Cleve Requires Main H-Series Perfor Lower Half Use MS-2255-SEMI	land Cranks Bearing Spa mance Groo	cer Set, Not In oved Upper Ha	If And Plain	2.7484/2.7492	0.0001/0.0015	0.0962	2.9417/2.942	5 0.8450
Main Bearing Set 1-2-3-4-5		MS-2256HX MB-3830HX	STD	2.7484/2.7492	0.0011/0.0025	0.0957	2.9417/2.942	5 0.8450
Requires Main H-Series Perfor For .0010" More And Plain Lowe MS-2254-SEMI	Bearing Spa mance Bea e Oil Clearar er Half Use v	cer Set, Not In ring Wall .0005 nce Grooved U rith Part Numb	Thinner					
Main Bearing Set 1-2-4-5 3		MS-981H MB-2557H MB-2558H(F)	STD,10		0.0005/0.0029 0.0005/0.0029			
			Grooved Bearings					
Main Bearing Spacer Set		MS-2254-SEMI	STD					
1-2-4-5 3 NOTE: Use With		MB-3831C MB-3833C(F)	nan Crankshoft				3.1922/3.193 3.1922/3.193	
M6303-E351 In Special Perform	A Windsor ( nance Main	ylinder Block,	Requires t Included,					





	COUNTER DAT	Ά		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
						8 CYL	(cont.)
(cont.) Years: 351 C	ID (5.8L) 16V V8 Wind 1969-1998 ID (5.8L) 16V V8 Wind 1993-1995			00"/101.6mm 00"/101.6mm			(cont.)
Main Bearing	MS-2255-SEM	I STD					
<b>Spacer Set</b> 1-2-4-5 3	MB-3831C MB-3832C(F)					3.1922/3.1930 3.1922/3.1930	
Windsor Cylind Performance M Contains Semi	Factory 351 Cleveland Cra der Block, Requires Specia Main Bearing Set Not Includi Finished Spacer Set Only MS-2256H, MS-2256HX	l led,					
Cam Bearing Se		STD					
1	SH-1321		2.0805/2.081	5 0.0011/0.0049	0.0602	2.2030/2.2050	0.6650
2	SH-1322			5 0.0011/0.0049			
3 4	SH-1323 SH-1324			5 0.0011/0.0049 5 0.0011/0.0049			
+ 5	SH-1325			5 0.0011/0.0049			
	nce Bearing Set		2.020072.021	0.001170.0048	0.0002	. 2.1400/2.1400	0.000
Cam Bearing Se	t B-2 SH-2147S	STD					
	SH-2147		2.0805/2.081	5 0.0011/0.0053	0.0602	2.2030/2.2050	0.665
2	SH-2148		2.0855/2.086	5 0.0011/0.0049	0.0679	2.2030/2.2050	0.665
3	SH-2149			5 0.0011/0.0049			
4	SH-2150			5 0.0011/0.0048			
5	SH-2151 ince, 351 SVO Performance	Culindar Block With	2.0205/2.021	5 0.0011/0.0049	0.0902	2.2030/2.2050	0.665
	Bore Stepped Cam Journ						
	1 Forging C90E, C90E, D60						
Crankshaft Forg	ID (6.1L) 16V V8	, 7MA, C9OE-A, E4AE-B		i0"/102.9mm	v 3 50	∩"/Q1 2mm	19
	1980-1991		4.00	0 / 102.511111	X 0.00	0 /31.2111111	13
429 C	ID (7.0L) 16V V8 Boss		4.36	0"/110.7mm	x 3.59	0"/91.2mm	
	1969-1970 ID (7.0L) 16V V8 Cobr	a Jet/Super CJ	4.36	60"/110.7mm	x 3.59	0"/91.2mm	
Years:	1970-1971		4.00	01/440.7	0 50	011/04 0	
	ID (7.0L) 16V V8 Police 1971-1972	е	4.30	60"/110.7mm	x 3.59	0"/91.2mm	
	ID (7.0L) 16V V8 Thun 1980-1998	der Jet	4.36	60"/110.7mm	x 3.59	0"/91.2mm	
429 C	ID (7.0L) 16V V8 1968-1973		4.36	60"/110.7mm	x 3.59	0"/91.2mm	
460 C	ID (7.5L) 16V V8 HO		4.36	0"/110.7mm	x 3.85	0"/97.8mm	
460 C	ID (7.5L) 16V V8		4.36	60"/110.7mm	x 3.85	0"/97.8mm	
460 C	1968-1998 I <b>ID (7.5L) 16V V8 Polic</b> 1973-1974	е	4.36	0"/110.7mm	x 3.85	0"/97.8mm	
Rod Bearing (8) NOTE: H-Series	TM-77 CB-818HN Performance Narrowed Ornk Fillet Clearance No Dow		2.4992/2.5000	0.0001/0.0023	0.0760	2.6522/2.6530	0.8110





	C	OUNTER DAT	`A		SHOP	DATA	١	
BEARING OR POSITION		G PART AL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE		BRG O.D. OF HOUSING BORE	R MAX LENGTH
8 CYL (cont.)								
19 370 CIE (cont.) Years: 19		16V V8		4.05	i0"/102.9mm	x 3.59	0"/91.2mm	19 (cont.)
, ,	7.0L)	16V V8 Boss		4.36	60"/110.7mm	x 3.59	0"/91.2mm	
Years: 19	70-1971		a Jet/Super CJ	4.36	0"/110.7mm	x 3.59	0"/91.2mm	
<b>429 CID</b> Years: 19	-	16V V8 Police	е	4.36	60"/110.7mm	x 3.59	0"/91.2mm	
<b>429 CID</b> Years: 19		16V V8 Thun	der Jet	4.36	60"/110.7mm	x 3.59	0"/91.2mm	
<b>429 CID</b> Years: 19		16V V8		4.36	0"/110.7mm	x 3.59	0"/91.2mm	
460 CIE Years: 19		16V V8 HO		4.36	0"/110.7mm	x 3.85	0"/97.8mm	
460 CIE Years: 19		16V V8		4.36	60"/110.7mm	x 3.85	0"/97.8mm	
	7.5L)	16V V8 Police	е	4.36	0"/110.7mm	x 3.85	0"/97.8mm	
Main Bearing Set 1-2-4-5 3 NOTE: H Series Pe		MB-2564H MB-2565H	STD,10		2 0.0004/0.0028 2 0.0004/0.0028			
Main Bearing Set 1-2-4-5 3 NOTE: H Series Pe .0010" More Oil 0	erforman	-	STD .0005" Thinner For		2 0.0014/0.0038 2 0.0014/0.0038			
Main Bearing Set 1-2-4-5 3 NOTE: V-Series Pe Upper Half And I	erforman	MB-2564V MB-2565V(F) ice with Tri-bore	STD,10  Design Grooved		2 0.0004/0.0028 2 0.0004/0.0028			
Cam Bearing Set 1-2-3-4-5		SH-1111S SH-1111	STD	2.1238/2.124	8 0.0011/0.0043	0.0618	3 2.2495/2.250	5 0.5850
Cam Bearing Set 1-2-3-4-5 NOTE: Oversize Al	B-1	SH-1766S SH-1766 ed Blocks with He	STD ousing Bore Size	2.1238/2.124	8 0.0011/0.0050	0.0694	2.2645/2.265	5 0.6300
2.2645" / 2.2655' Connecting Rod F Crankshaft Forgin	orging	1V, 1VA, 1VAB, 1	00E-A, D6VE, D9TE YAB, 2NABC, 2Y, 2Y68-7 4UAB, 4UB, C8SE-A, C6					
10 CYL								
Years: 19	97-2012	SOHC 20V V			51"/90.2mm x			
<b>415 CIE</b> Years: 20		SOHC 30V V	10 Triton	3.55	51"/90.2mm x	4.161	"/105.7mm	
Rod Bearing (10)		7 CB-1442H	STD,.026mm,.23mm .25mm,.28mm	2.0859/2.086	7 0.0011/0.0023	0.0759	2.2388/2.239	6 0.8270
NOTE: H-Series Po				0.0050/0.000	7 0 0004 10 0000	0.0354	0.0000/0.000	6 0 0070
	erforman	7 CB-1442HX nce Bearing Wall se No Dowel Hole	.0005" Thinner For e In Cap	2.0859/2.086	7 0.0021/0.0033	0.0754	2.2388/2.239	o U.8270





	CO	UNTER DAT	Α		SHOP	DATA		
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							10 CYL	(cont.)
20 415 CI (cont.) Years: 19		SOHC 20V V	10 Triton	3.55	1"/90.2mm x	4.161	"/105.7mm	20 (cont.)
	<b>D (6.8L) S</b> 005-2012	SOHC 30V V	10 Triton	3.55	1"/90.2mm x	4.161	"/105.7mm	
Rod Bearing (10) NOTE: H-Series P .0005" Thinner F Maximum Wall I No Dowel Hole	erformanc For .0010" Not Ir	More Oil Cleara	nce	2.0859/2.0867	0.0021/0.0033	0.0754	2.2388/2.2396	0.8270
Rod Bearing (10) NOTE: H-Series P Not Include Coa Cap Half	erformanc		STD r Maximum Wall Does I Hole In	2.0859/2.0867	0.0011/0.0023	0.0759	2.2388/2.2396	0.8270
Main Bearing Set 1 2-3-4-5-6 6 NOTE: H-Series P And 3 Piece Thr	erformanc		STD,.026mm,.25mm sight Shell Bearings		0.0003/0.0032 0.0005/0.0025			
Main Bearing Set 1 2-3-4-5-6 6 NOTE: H-Series P .0010" More Oil Bearings And 3 Number 6	erformanc Clearance	Contains Straig			0.0013/0.0042 0.0015/0.0035			

# GENERAL MOTORS CORP.

ENGINE	YEAR	BORE & STROKE	BLOCK
110 CID (1.8L) DOHC 16V L4 Toyota LNK	2003-2006	3.230"/82.0mm X 3.350"/85.0mm	1
122 CID (2.0L) DOHC 16V SC L4 Ecotec	2005-2007	3.386"/86.0mm X 3.385"/86.0mm	2
122 CID (2.0L) DOHC 16V Turbo. L4 Ecotec	2007-2011	3.386"/86.0mm X 3.385"/86.0mm	2
134 CID (2.2L) DOHC 16V L4 Ecotec	2002-2011	3.386"/86.0mm X 3.720"/94.6mm	2
145 CID (2.4L) DOHC 16V L4 Ecotec	2006-2011	3.464"/88.0mm X 3.850"/98.0mm	2
145 CID (2.4L) DOHC 16V L4 Ecotec Hybrid	2008-2010	3.464"/88.0mm X 3.850"/98.0mm	2
181 CID (3.0L) 12V V6 Buick	1982-1988	3.800"/96.5mm X 2.660"/67.6mm	3
196 CID (3.2L) 12V V6 Buick	1978-1979	3.500"/88.9mm X 3.400"/84.0mm	3
200 CID (3.3L) 12V V6 Chevrolet	1978-1979	3.500"/88.9mm X 3.484"/88.4mm	4
229 CID (3.8L) 12V V6 Chevrolet	1980-1984	3.736"/95.0mm X 3.484"/88.4mm	4
231 CID (3.8L) 12V V6 Buick	1978-1988	3.800"/96.5mm X 3.400"/86.4mm	3
231 CID (3.8L) 12V Turbo. V6 Buick	1978-1987, 1989	3.800"/96.5mm X 3.400"/86.4mm	3
252 CID (4.1L) 12V V6 Buick	1980-1984	3.965"/100.8mm X 3.400"/86.4mm	3
260 CID (4.3L) 16V V8 Oldsmobile DIESEL	1979	3.500"/88.9mm X 3.390"/86.1mm	5
262 CID (4.3L) 16V V8 Chevrolet	1975-1976	3.670"/93.2mm X 3.100"/78.7mm	6
265 CID (4.3L) 16V V8 Chevrolet	1955-1957	3.750"/95.3mm X 3.000"/76.2mm	7
267 CID (4.4L) 16V V8 Chevrolet	1979-1982	3.500"/88.9mm X 3.484"/88.4mm	6
283 CID (4.6L) 16V V8 Chevrolet	1957-1967	3.875"/98.4mm X 3.000"/76.2mm	9
294 CID (4.8L) 16V V8 Vortec	1999-2011	3.780"/96.0mm X 3.268"/83.0mm	10
302 CID (4.9L) 16V V8 Chevrolet	1967-1969	4.000"/101.6mm X 3.000"/76.2mm	8





ENGINE	YEAR	BORE & STROKE	BLOCK
305 CID (5.0L) 16V V8 Chevrolet	1976-1996	3.736"/95.0mm X 3.484"/88.4mm	6
305 CID (5.0L) 16V V8 Vortec	1996-2002	3.736"/95.0mm X 3.484"/88.4mm	6
307 CID (5.0L) 16V V8 Chevrolet	1968-1973	3.875"/98.4mm X 3.250"/82.6mm	6
325 CID (5.3L) 16V V8	2005-2009	3.780"/96.0mm X 3.622"/92.0mm	11
325 CID (5.3L) 16V V8 Vortec	1999-2011	3.780"/96.0mm X 3.622"/92.0mm	10
325 CID (5.3L) 16V V8 Vortec Hybrid	2004-2007	3.780"/96.0mm X 3.622"/92.0mm	11
326 CID (5.3L) 16V V8 Pontiac	1963-1967	3.719"/94.5mm X 3.750"/95.3mm	12
327 CID (5.3L) 16V V8 Chevrolet	1962-1969	4.000"/101.6mm X 3.250"/82.5mm	8
346 CID (5.7L) 16V V8 Chevrolet	1997-2005	3.898"/99.0mm X 3.622"/92.0mm	10
348 CID (5.7L) 16V V8 Chevrolet	1958-1965	4.125"/104.8mm X 3.250"/82.6mm	13
350 CID (5.7L) 16V V8 Oldsmobile DIESEL	1978-1985	4.057"/103.0mm X 3.385"/86.0mm	5
350 CID (5.7L) 16V V8 Pontiac	1968-1979	3.875"/98.4mm X 3.750"/95.3mm	12
350 CID (5.7L) 16V V8 Chevrolet	1967-1997	4.000"/101.6mm X 3.484"/88.5mm	6
350 CID (5.7L) 16V V8 Vortec	1995-2003	4.000"/101.6mm X 3.484"/88.5mm	6
364 CID (6.0L) 16V V8 Vortec	1999-2011	4.000"/101.6mm X 3.622"/92.0mm	10
364 CID (6.0L) 16V V8 Vortec Hybrid	2008-2011	4.000"/101.6mm X 3.622"/92.0mm	11
366 CID (6.0L) 16V V8 Chevrolet	1980-1998	3.938"/100.0mm X 3.766"/95.5mm	14
366 CID (6.0L) 16V V8	1966-1967	3.938"/100.0mm X 3.766"/95.5mm	15
368 CID (6.0L) 16V V8 Cadillac	1980-1984	3.800"/96.5mm X 4.060"/103.1mm	16
371 CID (6.1L) 16V V8 Oldsmobile	1959-1960	4.000"/101.6mm X 3.690"/93.7mm	16
376 CID (6.2L) 16V V8	2008-2011	4.065"/103.3mm X 3.622"/92.0mm	11
376 CID (6.2L) 16V VS	2009-2011	4.065"/103.3mm X 3.622"/92.0mm	17
376 CID (6.2L) 16V V8 Vortec	2007-2011	4.065*/103.3mm X 3.622*/92.0mm	11
389 CID (6.4L) 16V V8 Pontiac	1959-1966	4.063"/103.2mm X 3.750"/95.3mm	18
394 CID (6.5L) 16V V8	1959-1964	4.130"/104.8mm X 3.690"/93.7mm	16
396 CID (6.5L) 16V V8 Chevrolet	1965-1970	4.094*/104.0mm X 3.766*/95.5mm	15
		4.125"/104.8mm X 3.750"/95.3mm	19
400 CID (6.6L) 16V V8 Chevrolet 400 CID (6.6L) 16V V8 Oldsmobile	1970-1980		20
	1968-1969	3.875"/98.4mm X 4.250"/108.0mm	
400 CID (6.6L) 16V V8 Oldsmobile	1965-1967	4.000"/101.6mm X 4.000"/101.6mm	20 12
400 CID (6.6L) 16V V8 Pontiac	1967-1979	4.120"/104.7mm X 3.750"/95.3mm	
402 CID (6.6L) 16V V8 Chevrolet	1970-1972	4.125"/104.8mm X 3.766"/95.7mm	21
403 CID (6.6L) 32V Turbo. V8 Duramax DIESEL	2001-2011	4.055"/103.0mm X 3.898"/99.0mm	22
409 CID (6.7L) 16V V8 Chevrolet	1961-1965	4.313"/109.5mm X 3.500"/88.9mm	13
421 CID (6.9L) 16V V8 Pontiac	1961-1966	4.094"/104.0mm X 4.000"/101.6mm	
425 CID (7.0L) 16V V8 Cadillac	1977-1979	4.083"/103.7mm X 4.060"/103.1mm	
425 CID (7.0L) 16V V8 Oldsmobile	1966-1967	4.125"/104.8mm X 3.980"/101.0mm	
425 CID (7.0L) 16V V8	1965-1967	4.125"/104.8mm X 3.980"/101.0mm	
427 CID (7.0L) 16V V8 Chevrolet	1966-1969, 1980-1998	4.250"/108.0mm X 3.766"/95.7mm	15
427 CID (7.0L) 16V V8	2006-2011	4.125"/104.8mm X 4.000"/101.6mm	
428 CID (7.0L) 16V V8 Pontiac	1967-1969	4.120"/104.6mm X 4.000"/101.6mm	
454 CID (7.4L) 16V V8	1974	4.250"/108.0mm X 4.000"/101.6mm	
454 CID (7.4L) 16V V8 Chevrolet	1970-1997	4.250"/108.0mm X 4.000"/101.6mm	
454 CID (7.4L) 16V V8 Vortec	1996-2000	4.250"/108.0mm X 4.000"/101.6mm	
455 CID (7.5L) 16V V8 HO	1971-1972	4.150"/105.4mm X 4.210"/107.0mm	
455 CID (7.5L) 16V V8 Oldsmobile	1968-1976	4.125"/104.8mm X 4.250"/108.0mm	
455 CID (7.5L) 16V V8 Pontiac	1970-1976	4.150"/105.4mm X 4.210"/107.0mm	23
455 CID (7.5L) 16V V8 Pontiac Super Duty	1972-1974	4.150"/105.4mm X 4.210"/107.0mm	23
472 CID (7.7L) 16V V8 Cadillac	1968-1974	4.300"/109.2mm X 4.060"/103.1mm	16
496 CID (8.1L) 16V V8 Vortec	2001-2007	4.250"/108.0mm X 4.370"/111.0mm	24
500 CID (8.2L) 16V V8 Cadillac	1970-1976	4.300"/109.2mm X 4.300"/109.2mm	16
265 CID (4.3L) 16V V8 Chevrolet	1994-1996	3.750"/95.3mm X 3.000"/76.2mm	8





### **CONNECTING ROD FORGING NUMBERS**

COMMECTIN	id hob rond	III G NO	INIDENS					
FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BLO	оск
0997	3.385in/86.0mm	5	3703527	3.100in/78.7mm	6	3923282	3.250in/82.6mm	6
0997	3.390in/86.1mm	5	3703527	3.250in/82.6mm	6	3923282	3.484in/88.4mm	6
121	3.622in/92.0mm	10	3703527	3.484in/88.4mm	6	3923282	3.484in/88.5mm	6
121	3.268in/83.0mm	9	3703527	3.484in/88.5mm	6	3923282	3.000in/76.2mm	7
121	3.622in/92.0mm	9	3703527	3.000in/76.2mm	7	3933174	3.766in/95.5mm	13
1357201	2.660in/67.6mm	3	3703527	3.250in/82.5mm	7	3933174	4.000in/101.6mm	13
1357201	3.400in/84.0mm	3	3784000	3.100in/78.7mm	6	3933174	3.766in/95.7mm	14
1357201	3.400in/86.4mm	3	3784000	3.250in/82.6mm	6	3933174	3.750in/95.3mm	19
1357333	2.660in/67.6mm	3	3784000	3.484in/88.4mm	6	3946841	3.100in/78.7mm	6
1357333	3.400in/84.0mm	3	3784000	3.484in/88.5mm	6	3946841	3.250in/82.6mm	6
1357333	3.400in/86.4mm	3	3784000	3.000in/76.2mm	7	3946841	3.484in/88.4mm	6
1377248	2.660in/67.6mm	3	3784000	3.250in/82.5mm	7	3946841	3.484in/88.5mm	6
1377248	3.400in/84.0mm	3	380282	3.385in/86.0mm	5	3946841	3.000in/76.2mm	7
1377248	3.400in/86.4mm	3	380282	3.390in/86.1mm	5	3951629	3.750in/95.3mm	19
143	3.622in/92.0mm	10	380283	3.385in/86.0mm	5	397858	3.980in/101.0mm	20
143	3.268in/83.0mm	9	380283	3.390in/86.1mm	5	397858	4.250in/108.0mm	20
143	3.622in/92.0mm	9	380383	3.385in/86.0mm	5	398410	3.385in/86.0mm	5
201	2.660in/67.6mm	3	380383	3.390in/86.1mm	5	398410	3.390in/86.1mm	5
201	3.400in/84.0mm	3	3815281	3.100in/78.7mm	6	401406	3.980in/101.0mm	20
201	3.400in/86.4mm	3	3815281	3.250in/82.6mm	6	401406	4.250in/108.0mm	20
220	2.660in/67.6mm	3	3815281	3.484in/88.4mm	6	401456	3.980in/101.0mm	20
220	3.400in/84.0mm	3	3815281	3.484in/88.5mm	6	401456	4.250in/108.0mm	20
220	3.400in/86.4mm	3	3815281	3.000in/76.2mm	7	408	2.660in/67.6mm	3
222	4.060in/103.1mm	15	3815281	3.250in/82.5mm	7	408	3.400in/86.4mm	3
222	4.300in/109.2mm	15	384759	3.980in/101.0mm	20	410997	3.385in/86.0mm	5
230276	3.385in/86.0mm	5	384759	4.250in/108.0mm	20	410997	3.390in/86.1mm	5
230276	3.390in/86.1mm	5	3856239	3.766in/95.5mm	13	410999	3.980in/101.0mm	20
25509405	2.660in/67.6mm	3	3856239	4.000in/101.6mm	13	410999	4.250in/108.0mm	20
25509405	3.400in/84.0mm	3	3856239	3.766in/95.7mm	14	461	2.660in/67.6mm	3
25509405	3.400in/86.4mm	3	3856239	3.750in/95.3mm	19	461	3.400in/86.4mm	3
278410A	3.898in/99.0mm	22	3856240	3.766in/95.5mm	13	529007	3.750in/95.3mm	11
3185281	3.100in/78.7mm	6	3856240	4.000in/101.6mm	13	529238	3.750in/95.3mm	11
3185281	3.250in/82.6mm	6	3856240	3.766in/95.7mm	14	529938	3.750in/95.3mm	11
3185281	3.484in/88.4mm	6	3856240	3.750in/95.3mm	19	532294	3.750in/95.3mm	11
3185281	3.484in/88.5mm	6	3892671	3.100in/78.7mm	6	541000	3.750in/95.3mm	11
3185281	3.000in/76.2mm	7	3892671	3.250in/82.6mm	6	544956	3.750in/95.3mm	11
3185281	3.250in/82.5mm	7	3892671	3.484in/88.4mm	6	673	2.660in/67.6mm	3
3633111	4.060in/103.1mm	15	3892671	3.484in/88.5mm	6	673	3.400in/84.0mm	3
3633111	4.300in/109.2mm	15	3892671	3.000in/76.2mm	7	673	3.400in/86.4mm	3
3703526	3.100in/78.7mm	6	3916396	3.100in/78.7mm	6	763	2.660in/67.6mm	3
3703526	3.250in/82.6mm	6	3916396	3.250in/82.6mm	6	763	3.400in/84.0mm	3
3703526	3.484in/88.4mm	6	3916396	3.484in/88.4mm	6	763	3.400in/86.4mm	3
3703526	3.484in/88.5mm	6	3916396	3.484in/88.5mm	6	779	2.660in/67.6mm	3
3703526	3.000in/76.2mm	7	3916396	3.000in/76.2mm	7	779	3.400in/84.0mm	3
3703526	3.250in/82.5mm	7	3923282	3.100in/78.7mm	6	779	3.400in/86.4mm	3

FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BL	OCK.
103427	3.750in/95.3mm	11	1178	3.484in/88.5mm	6	1235419	3.390in/86.1mm	5
1130	3.100in/78.7mm	6	1178	3.000in/76.2mm	7	1254083	2.660in/67.6mm	3
1130	3.250in/82.6mm	6	1178	3.250in/82.5mm	7	1254083	3.400in/84.0mm	3
1130	3.484in/88.4mm	6	1182	3.100in/78.7mm	6	1254083	3.400in/86.4mm	3
1130	3.484in/88.5mm	6	1182	3.250in/82.6mm	6	12552216	3.622in/92.0mm	10
1130	3.000in/76.2mm	7	1182	3.484in/88.4mm	6	12552216	3.268in/83.0mm	9
1130	3.250in/82.5mm	7	1182	3.484in/88.5mm	6	12552216	3.622in/92.0mm	9
1178	3.100in/78.7mm	6	1182	3.000in/76.2mm	7	12553482	3.622in/92.0mm	10
1178	3.250in/82.6mm	6	1182	3.250in/82.5mm	7	12553482	3.268in/83.0mm	9
1178	3.484in/88.4mm	6	1235419	3.385in/86.0mm	5	12553482	3.622in/92.0mm	9





CHANKSHA	FIFORGING	NUMBE	HS					
FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE B	LOCK
1255645	2.660in/67.6mm	3	230278	3.400in/84.0mm	3 <b> </b>	2NABC	3.000in/76.2mm	7
1255645	3.400in/84.0mm	3	230278	3.400in/86.4mm	3	2Y68-76	3.100in/78.7mm	6
1255645	3,400in/86,4mm	3	230331	3,980in/101,0mm	20	2Y68-76	3,250in/82,6mm	6
1255646	2.660in/67.6mm	3	230331	4.250in/108.0mm	20	2Y68-76	3.484in/88.4mm	
1255646	3,400in/84.0mm	3	230376	3.385in/86.0mm	5	2Y68-76	3.484in/88.5mm	
1255646	3.400in/86.4mm	3	230376	3.390in/86.1mm	5	2Y68-76	3.000in/76.2mm	
1255674	2.660in/67.6mm	3	230376	3.100in/78.7mm	6	306275	3.100in/78.7mm	
1255674	3.400in/84.0mm	3	230376	3.250in/82.6mm	6	306275	3.250in/82.6mm	
1255674	3.400in/86.4mm	3	230376	3.484in/88.4mm	6	306275	3.484in/88.4mm	
1255846	2.660in/67.6mm	3	230376	3.484in/88.5mm	6	306275	3.484in/88.5mm	
1255846	3.400in/84.0mm	3	230376	3.000in/76.2mm	7	306275	3.000in/76.2mm	
1255846	3.400in/86.4mm	3	230377	3.980in/101.0mm	20	306276	3.100in/78.7mm	
1255862	2.660in/67.6mm	3	230377	4.250in/108.0mm	20	306276	3.250in/82.6mm	
1255862	3.400in/84.0mm	3	230378	3.980in/101.0mm	20	306276	3.484in/88.4mm	
1255862	3.400in/86.4mm	3	230378	4.250in/108.0mm	20	306276	3.484in/88.5mm	
1257125	2.660in/67.6mm	3	230378	2.660in/67.6mm	3	306276	3.000in/76.2mm	
1257125	3.400in/84.0mm	3	230378	3.400in/84.0mm	3	30R	3.100in/78.7mm	
		3			3	30R	3.250in/82.6mm	
1257125	3.400in/86.4mm 2.660in/67.6mm		230378	3.400in/86.4mm			3.484in/88.4mm	
1260877	3.400in/84.0mm	3	230905	3.385in/86.0mm	5	30R		
1260877		3	230905	3.390in/86.1mm	5	30R	3.484in/88.5mm	
1260877	3.400in/86.4mm	3	230907	3.980in/101.0mm	20	30R	3.000in/76.2mm	
1261438	2.660in/67.6mm	3	230907	4.250in/108.0mm	20	31-87	3.100in/78.7mm	-
1261438	3.400in/84.0mm	3	230908	3.980in/101.0mm	20	31-87	3.250in/82.6mm	
1261438	3.400in/86.4mm	3	230908	4.250in/108.0mm	20	31-87	3.484in/88.4mm	
1261787	2.660in/67.6mm	3	25505554	2.660in/67.6mm	3	31-87	3.484in/88.5mm	
1261787	3.400in/84.0mm	3	25505554	3.400in/84.0mm	3	31-87	3.000in/76.2mm	
1261787	3.400in/86.4mm	3	25505554	3.400in/86.4mm	3	310514	3.100in/78.7mm	
135411	3.484in/88.4mm	4	25506397	2.660in/67.6mm	3	310514	3.250in/82.6mm	
1354N	3.484in/88.4mm	4	25506397	3.400in/84.0mm	3	310514	3.484in/88.4mm	6
1357898	2.660in/67.6mm	3	25506397	3.400in/86.4mm	3	310514	3.484in/88.5mm	
1357898	3.400in/84.0mm	3	25506818	2.660in/67.6mm	3	310514	3.000in/76.2mm	
1357898	3.400in/86.4mm	3	25506818	3.400in/84.0mm	3	31M	3.100in/78.7mm	
1375802	3.385in/86.0mm	5	25506818	3.400in/86.4mm	3	31M	3.250in/82.6mm	
1375802	3.390in/86.1mm	5	25509404	2.660in/67.6mm	3	31M	3.484in/88.4mm	
1378351	2.660in/67.6mm	3	25509404	3.400in/84.0mm	3	31M	3.484in/88.5mm	
1378351	3.400in/84.0mm	3	25509404	3.400in/86.4mm	3	31M	3.000in/76.2mm	
1378351	3.400in/86.4mm	3	25514290	2.660in/67.6mm	3	3279	3.100in/78.7mm	
1378354	2.660in/67.6mm	3	25514290	3.400in/84.0mm	3	3279	3.250in/82.6mm	
1378354	3.400in/84.0mm	3	25514290	3.400in/86.4mm	3	3279	3.484in/88.4mm	-
1378354	3.400in/86.4mm	3	25520329	2.660in/67.6mm	3	3279	3.484in/88.5mm	
1398346	3.385in/86.0mm	5	25520329	3.400in/84.0mm	3	3279	3.000in/76.2mm	
1398346	3.390in/86.1mm	5	25520329	3.400in/86.4mm	3	3279	3.250in/82.5mm	7
143	3.484in/88.4mm	4	2680	3.100in/78.7mm	6	3281N	3.100in/78.7mm	6
1467292	4.060in/103.1mm	15	2680	3.250in/82.6mm	6	3281N	3.250in/82.6mm	6
1467292	4.300in/109.2mm	15	2680	3.484in/88.4mm	6	3281N	3.484in/88.4mm	6
147	3.484in/88.4mm	4	2680	3.484in/88.5mm	6	3281N	3.484in/88.5mm	6
1486424	4.060in/103.1mm	15	2680	3.000in/76.2mm	7	3281N	3.000in/76.2mm	7
1486424	4.300in/109.2mm	15	2680	3.250in/82.5mm	7	329880N	3.100in/78.7mm	6
1495094	4.060in/103.1mm	15	2690	3.100in/78.7mm	6	329880N	3.250in/82.6mm	6
1495094	4.300in/109.2mm	15	2690	3.250in/82.6mm	6	329880N	3.484in/88.4mm	6
1495095	4.060in/103.1mm	15	2690	3.484in/88.4mm	6	329880N	3.484in/88.5mm	6
1495095	4.300in/109.2mm	15	2690	3.484in/88.5mm	6	329880N	3.000in/76.2mm	7
1496793	4.060in/103.1mm		2690	3.000in/76.2mm	7	3521	4.000in/101.6mr	
1496793	4.300in/109.2mm		275	2.660in/67.6mm	3	3521	3.750in/95.3mm	
1609142R	4.060in/103.1mm		275	3.400in/86.4mm	3	353039	4.000in/101.6mr	
1609142R	4.300in/109.2mm		2NABC	3.100in/78.7mm	6	353039	3.750in/95.3mm	
230277	2.660in/67.6mm	3	2NABC	3.250in/82.6mm	6	354431	3.100in/78.7mm	
230277	3.400in/84.0mm	3	2NABC	3.484in/88.4mm	6	354431	3.250in/82.6mm	
230277	3.400in/86.4mm	3	2NABC	3.484in/88.5mm	6	354431	3.484in/88.4mm	
		-		3	- 1			_





CHANKSHA	rironamai	TOWIDE	no					
FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BLO	ОСК
354431	3.484in/88.5mm	6	3887114	3.766in/95.5mm	13	3930809	3.100in/78.7mm	6
354431	3.000in/76.2mm	7	3887114	4.000in/101.6mm	13	3930809	3.250in/82.6mm	6
359730	4.000in/101.6mm	13	3887114	3.766in/95.7mm	14	3930809	3.484in/88.4mm	6
359730	3.750in/95.3mm	19	3887114	3.750in/95.3mm	19	3930809	3.484in/88.5mm	6
3732444	3.100in/78.7mm	6	388766	3.385in/86.0mm	5	3930809	3.000in/76.2mm	7
3732444	3.250in/82.6mm	6	388766	3.390in/86.1mm	5	3930809	3.250in/82.5mm	7
3732444	3.484in/88.4mm	6	390275	3.385in/86.0mm	5	3932444	3.100in/78.7mm	6
3732444	3.484in/88.5mm	6	390275	3.390in/86.1mm	5	3932444	3.250in/82.6mm	6
3732444	3.000in/76.2mm	7	390370	3.980in/101.0mm	20	3932444	3.484in/88.4mm	6
3782680	3.250in/82.5mm	7	390370	4.250in/108.0mm	20	3932444	3.484in/88.5mm	6
3782690	3.250in/82.5mm	7	3904815	3.766in/95.5mm	13	3932444	3.000in/76.2mm	7
378354	2.660in/67.6mm	3	3904815	4.000in/101.6mm	13	393654	3.385in/86.0mm	5
378354	3.400in/84.0mm	3	3904815	3.766in/95.7mm	14	393654	3.390in/86.1mm	5
378354	3.400in/86.4mm	3	3904815	3.750in/95.3mm	19	3941172	3.100in/78.7mm	6
3804816	3.766in/95.5mm	13	3904816	3.766in/95.5mm	13	3941172	3.250in/82.6mm	6
3804816	4.000in/101.6mm	13	3904816	4.000in/101.6mm	13	3941172	3.484in/88.4mm	6
3804816	3.766in/95.7mm	14	3904816	3.766in/95.7mm	14	3941172	3.484in/88.5mm	6
3804816	3.750in/95.3mm	19	3904816	3.750in/95.3mm	19	3941172	3.000in/76.2mm	7
381269	3.385in/86.0mm	5	3911000	3.100in/78.7mm	6	3941172	3.250in/82.5mm	7
381269	3.390in/86.1mm	5	3911000	3.250in/82.6mm	6	3941174	3.100in/78.7mm	6
3815822	3.250in/82.5mm	7	3911000	3.484in/88.4mm	6	3941174	3.250in/82.6mm	6
381919	3.385in/86.0mm	5	3911000	3.484in/88.5mm	6	3941174	3.484in/88.4mm	6
381919	3.390in/86.1mm	5	3911000	3.000in/76.2mm	7	3941174	3.484in/88.5mm	6
3832442	3.100in/78.7mm	6	3911000	3,250in/82,5mm	7	3941174	3,000in/76,2mm	7
3832442	3.250in/82.6mm	6	3911001	3.100in/78.7mm	6	3941174	3.250in/82.5mm	7
3832442	3.484in/88.4mm	6	3911001	3.250in/82.6mm	6	3941180	3.766in/95.5mm	13
3832442	3.484in/88.5mm	6	3911001	3.484in/88.4mm	6	3941180	4.000in/101.6mm	13
3832442	3.000in/76.2mm	7	3911001	3.484in/88.5mm	6	3941180	3.766in/95.7mm	14
3836144	3.766in/95.5mm	13	3911001	3.000in/76.2mm	7	3941180	3.750in/95.3mm	19
3836144	4.000in/101.6mm		3911001	3.250in/82.5mm	7	3941184	3.100in/78.7mm	6
3836144	3.766in/95.7mm	14	3911011	3.100in/78.7mm	6	3941184	3.250in/82.6mm	6
3836144	3.750in/95.3mm	19	3911011	3.250in/82.6mm	6	3941184	3.484in/88.4mm	6
384722	3.980in/101.0mm	20	3911011	3.484in/88.4mm	6	3941184	3.484in/88.5mm	6
384722	4.250in/108.0mm	20	3911011	3.484in/88.5mm	6	3941184	3.000in/76.2mm	7
3863144	3.766in/95.5mm	13	3911011	3.000in/76.2mm	7	3942411	3.766in/95.5mm	13
3863144	4.000in/101.6mm	13	3911011	3.250in/82.5mm	7	3942411	4.000in/101.6mm	13
3863144	3.766in/95.7mm	14	391101A	3.100in/78.7mm	6	3942411	3.766in/95.7mm	14
3863144	3.750in/95.3mm	19	391101A	3.250in/82.6mm	6	3942411	3.750in/95.3mm	19
3874874	3.766in/95.5mm	13	391101A	3.484in/88.4mm	6	3951528	3.750in/95.3mm	19
3874874	4.000in/101.6mm	13	391101A	3.484in/88.5mm	6	3951529D	3.750in/95.3mm	19
3874874	3.766in/95.7mm	14	391101A	3.000in/76.2mm	7	395654	3.385in/86.0mm	5
3874874	3.750in/95.3mm	19	391101A	3.250in/82.5mm	7	395654	3.390in/86.1mm	5
3882841	3.750in/95.3mm	19	3912335	3.100in/78.7mm	6	3962523	4.000in/101.6mm	13
3882842	3.766in/95.5mm	13	3912335	3.250in/82.6mm	6	3962523	3.750in/95.3mm	19
3882842	4.000in/101.6mm	13	3912335	3.484in/88.4mm	6	3963523	4.000in/101.6mm	13
3882842	3.766in/95.7mm	14	3912335	3.484in/88.5mm	6	3963523	3.750in/95.3mm	19
3882842	3.750in/95.3mm	19	3912335	3.000in/76.2mm	7	3963524	4.000in/101.6mm	13
3882847	3.766in/95.5mm	13	3914681	3.100in/78.7mm	6	3963524	3.750in/95.3mm	19
3882847	4.000in/101.6mm	13	3914681	3.250in/82.6mm	6	3967463	4.000in/101.6mm	13
3882847	3.766in/95.7mm	14	3914681	3.484in/88.4mm	6	3967463	3.750in/95.3mm	19
3882847	3.750in/95.3mm	19	3914681	3.484in/88.5mm	6	397303	3.980in/101.0mm	20
3882848	3.766in/95.5mm	13	3914681	3.000in/76.2mm	7	397303	4.250in/108.0mm	20
3882848	4.000in/101.6mm	13	3914681	3.250in/82.5mm	7	397363	3.980in/101.0mm	20
3882848	3.766in/95.7mm	14	3914682	3.100in/78.7mm	6	397363	4.250in/108.0mm	20
3882848	3.750in/95.3mm	19	3914682	3.250in/82.6mm	6	3975945	4.000in/101.6mm	13
3882849	3.766in/95.5mm	13	3914682	3.484in/88.4mm	6	3975945	3.750in/95.3mm	19
3882849	4.000in/101.6mm		3914682	3.484in/88.5mm	6	398261	3.385in/86.0mm	5
3882849	3.766in/95.7mm	14	3914682	3.000in/76.2mm	7	398261	3.390in/86.1mm	5
3882849	3.750in/95.3mm	19	3914682	3.250in/82.5mm	7	398621	3.385in/86.0mm	5



FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE BLO	ск
398621	3.390in/86.1mm	5	481379	3.750in/95.3mm	11	9115	3.766in/95.5mm	13
400934	3.980in/101.0mm	20	481380	3.750in/95.3mm	11	9115	4.000in/101.6mm	13
400934	4.250in/108.0mm	20	493654	3.750in/95.3mm	11	9115	3.766in/95.7mm	14
403707	3.980in/101.0mm	20	496452	3.750in/95.3mm	11	9115	3.750in/95.3mm	19
403707	4.250in/108.0mm	20	496453	4.210in/107.0mm	23	9770488	4.210in/107.0mm	23
404	2.660in/67.6mm	3	531369	3.750in/95.3mm	11	9773382	3.750in/95.3mm	11
404	3.400in/86.4mm	3	541585	3.750in/95.3mm	11	9773383	3.750in/95.3mm	11
405954	3.980in/101.0mm	20	542990	4.210in/107.0mm	23	9773384	4.210in/107.0mm	23
405954	4.250in/108.0mm	20	544191	3.750in/95.3mm	11	9773524	3.750in/95.3mm	11
418882	3.385in/86.0mm	5	556607	3.385in/86.0mm	5	9773573	3.750in/95.3mm	11
418882	3.390in/86.1mm	5	556607	3.390in/86.1mm	5	9782646	3.750in/95.3mm	11
4568749	3.100in/78.7mm	6	5782680	3.250in/82.5mm	7	9782769	4.210in/107.0mm	23
4568749	3.250in/82.6mm	6	584722	3.980in/101.0mm	20	9782770	3.750in/95.3mm	11
4568749	3.484in/88.4mm	6	584722	4.250in/108.0mm	20	9783785	3.750in/95.3mm	11
4568749	3.484in/88.5mm	6	6223	3.766in/95.5mm	13	9783786	3.750in/95.3mm	11
4568749	3.000in/76.2mm	7	6223	4.000in/101.6mm	13	9783787	4.210in/107.0mm	23
4577	3.100in/78.7mm	6	6223	3.766in/95.7mm	14	9793573	3.750in/95.3mm	11
4577	3.250in/82.6mm	6	6223	3.750in/95.3mm	19	9794054	3.750in/95.3mm	11
4577	3.484in/88.4mm	6	7115	3.766in/95.5mm	13	97954	3.750in/95.3mm	11
4577	3.484in/88.5mm	6	7115	4.000in/101.6mm	13	9795479	3.750in/95.3mm	11
4577	3.000in/76.2mm	7	7115	3.766in/95.7mm	14	9799103	4.210in/107.0mm	23
4577	3.250in/82.5mm	7	7115	3.750in/95.3mm	19	N353039	4.000in/101.6mm	13
4672	3.100in/78.7mm	6	726N	3.484in/88.4mm	4	N353039	3.750in/95.3mm	19
4672	3.250in/82.6mm	6	732	2.660in/67.6mm	3	N853039	4.000in/101.6mm	13
4672	3.484in/88.4mm	6	732	3.400in/86.4mm	3	N853039	3.750in/95.3mm	19
4672	3.484in/88.5mm	6	7416	4.000in/101.6mm	13	N853638	4.000in/101.6mm	13
4672	3.000in/76.2mm	7	7416	3.750in/95.3mm	19	N853638	3.750in/95.3mm	19
4672	3.250in/82.5mm	7	8767	2.660in/67.6mm	3			
4813	3.750in/95.3mm	11	8767	3.400in/86.4mm	3			

	COUN	TER DAT	Ά	SHOP DATA					
BEARING OR POSITION	BEARING P.		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH	
4 CYL				•					
	ID (1.8L) DOI 2003-2006	HC 16V L	4 Toyota LNK	3.1	230"/82.0mm	x 3.35	0"/85.0mm	1	
Rod Bearing (4) NOTE: H Series		-1920H	STD•,.026mm•	1.7713/1.771	7 0.0005/0.0024	0.0588	3 1.8898/1.8907	7 0.6250	
Rod Bearing (4) NOTE: H Series I .0010" More Oi	Performance Be		STD• .0005" Thinner For	1.7713/1.771	7 0.0015/0.0034	0.0583	1.8898/1.890	7 0.6250	
	ID (2.0L) DOI	HC 16V S	C L4 Ecotec	3.0	386"/86.0mm	x 3.38	5"/86.0mm	2	
122 C		HC 16V T	urbo. L4 Ecotec	3.0	386"/86.0mm	x 3.38	5"/86.0mm		
	ID (2.2L) DOI 2002-2011	HC 16V L	4 Ecotec	3.0	386"/86.0mm	x 3.72	0"/94.6mm		
	ID (2.4L) DOI 2006-2011	HC 16V L	4 Ecotec	3.4	464"/88.0mm	x 3.85	i0"/98.0mm		
	ID (2.4L) DOI 2008-2010	HC 16V L	4 Ecotec Hybrid	3.4	464"/88.0mm	x 3.85	i0"/98.0mm		





	COUNTER DATA				CHOP	DAT		
		OUNTER D	AIA		SHOP	DAI		
BEARING OR POSITION		IG PART IAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE		BRG O.D. OF HOUSING BORE	R MAX LENGTH
								(cont.)
(cont.) Years: 2	2005-2007		/ SC L4 Ecotec		86"/86.0mm			(cont.)
Years: 2	2007-2011		/ Turbo. L4 Ecotec		86"/86.0mm			
Years: 2	2002-2011		/ L4 Ecotec		86"/86.0mm			
	1 <b>D (2.4L</b> ) 2006-2011	•	/ L4 Ecotec	3.4	64"/88.0mm	x 3.85	0"/98.0mm	
145 C		) DOHC 16V	/ L4 Ecotec Hybrid	3.4	64"/88.0mm	x 3.85	60"/98.0mm	
Rod Bearing (4)	TM-7	7 CB-1827H	STD Hole In Cap Half	1.9291/1.9297	7 0.0004/0.0022	0.0609	2.0519/2.052	5 0.7980
	ID (0.0)	101111			0011/00 5		1011 /0T C	6 CYL
	<b>ID (3.0L</b> ) 1982-1988	) 12V V6 Bu	ick	3.8	00"/96.5mm	x 2.66	60"/67.6mm	3
196 C		) 12V V6 Bu	ick	3.5	00"/88.9mm	x 3.40	0"/84.0mm	
	ID (3.8L)	) 12V V6 Bu	ick	3.8	00"/96.5mm	x 3.40	0"/86.4mm	
	ID (3.8L)	) 12V Turbo	. V6 Buick	3.8	00"/96.5mm	x 3.40	0"/86.4mm	
252 C		12V V6 Bu	ick	3.96	5"/100.8mm	x 3.40	0"/86.4mm	
Rod Bearing (6) NOTE: H-Series		7 CB-1398H nce No Dowel	STD,1,10 Hole In Cap Half	2.2480/2.2485	5 0.0015/0.0033	0.0619	2.3738/2.374	5 0.7420
Rod Bearing (6) NOTE: H-Series .0010" More Oi Half	Performa		/all .0005" Thinner For	2.2480/2.2485	0.0025/0.0043	0.0614	2.3738/2.374	5 0.7420
Rod Bearing (6) NOTE: V-Series	VP-2 Performar		STD Hole In Cap Half	2.2480/2.248	0.0015/0.0033	0.0619	2.3738/2.374	5 0.7380
Cam Bearing (4)	B-1	SH-1360	STD‡	1.7850/1.7860	0.0011/0.0053	0.0642	2 1.9155/1.917	5 0.7550
Connecting Rod Crankshaft Forg		1254083, 125 1357898, 137	7333, 1377248, 201, 220, 2 55645, 1255646, 125567 78351, 1378354, 230277, 520329, 275, 378354, 404,	4, 1255846, 1255 230278, 230378,	862, 1257125,			
		) 12V V6 Ch	evrolet	3.5	00"/88.9mm	x 3.48	4"/88.4mm	4
229 C	1978-1979 <b>ID (3.8L</b> ) 1980-1984	) 12V V6 Ch	evrolet	3.7	36"/95.0mm	x 3.48	34"/88.4mm	
Rod Bearing (6)	TM-7	7 CB-1227H	STD,1 Hole In Cap Half	2.0990/2.1000	0.0003/0.0033	0.0622	2.2247/2.225	7 0.7130
Rod Bearing (6)	TM-7 <b>Performa</b>	7 CB-1227HX	STD // SALL .0005" Thinner For	2.0990/2.1000	0.0013/0.0043	0.0617	2.2247/2.225	7 0.7130
Main Bearing Se 1-2-3 4 NOTE: Grooved		7 MS-1454P MB-2508P MB-2509P(F			3 0.0006/0.0036 3 0.0011/0.0041			





	COUNTER DA	TA		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
6 CYL (cont.)	)		_				
4 200 C (cont.) Years:	CID (3.3L) 12V V6 Cher 1978-1979	vrolet	3.5	00"/88.9mm	x 3.48	4"/88.4mm	4 (cont.)
	CID (3.8L) 12V V6 Cher 1980-1984	vrolet	3.7	36"/95.0mm	x 3.48	4"/88.4mm	1
Cam Bearing Se		STD	1 0000/4 000/	0.0040/0.0050	0.0744	0.0400/0.004	0 7500
2-4	SH-290 SH-288			2 0.0010/0.0050 2 0.0010/0.0050			
3	SH287			2 0.0010/0.0050			
Crankshaft For	ging 135411, 1354N,	143, 147, 726N					
B CYL							
5 260 C Years:	CID (4.3L) 16V V8 Olds 1979	mobile DIESEL	3.5	00"/88.9mm	x 3.39	0"/86.1mm	5
	CID (5.7L) 16V V8 Olds 1978-1985	mobile DIESEL	4.05	7"/103.0mm	x 3.38	5"/86.0mm	
Main Bearing Se		STD,1,10,20					
1	MB-2362H			3 0.0008/0.0038			
?-4 3	MB-2163H MB-2363H(F)			3 0.0008/0.0038 3 0.0008/0.0038			
	MB-2364H			3 0.0006/0.0038			
	Performance Bearings Fo	r Position Number 2,		0.00.00.00.00	0.0002	011000101100	70 77020
3, 4, 5 with Ful	II Grooved Main Bearings I	Position					
Number 1 Has Half	Grooved Upper Half And	Plain Lower					
Main Bearing Se		STD					
	MB-2362HX			3 0.0018/0.0048			
?-4 }	MB-2163HX MB-2363HX(F)			3 0.0018/0.0048 3 0.0018/0.0048			
,	MB-2364HX			3 0.0026/0.0059			
	Performance Bearing Wal						
	il Clearance Bearings For						
, ,	l, 5 with Full Grooved Main per 1 Has Grooved Upper I						
Lower Half	oci i rius diooved opper i	idii And i idiii					
Connecting Roo Crankshaft For	d Forging 0997, 230276, 33 ging 1235419, 13758	80282, 380283, 380383, 3 02, 1398346, 230376, 23		919, 388766, 39	0275, 39	93654, 395654	1, 398261
	398621, 418882						
	CID (4.3L) 16V V8 Che 1975-1976	vrolet	3.6	70"/93.2mm	x 3.10	0"/78.7mm	6
	CID (4.4L) 16V V8 Chev 1979-1982	vrolet	3.5	00"/88.9mm	x 3.48	4"/88.4mm	
	CID (5.0L) 16V V8 Cher 1976-1996	vrolet	3.7	36"/95.0mm	x 3.48	4"/88.4mm	
305 C	CID (5.0L) 16V V8 Vorte	ec	3.7	36"/95.0mm	x 3.48	4"/88.4mm	
307 C	CID (5.0L) 16V V8 Chev	vrolet	3.8	75"/98.4mm	x 3.25	0"/82.6mm	
	1968-1973 CID (5.7L) 16V V8 Che	vrolet	4.00	0"/101.6mm	x 3.48	4"/88.5mm	
	1067-1007		4.00	0"/101.6mm	x 3.48	4"/88 5mm	
Years: <b>350 C</b>	CID (5.7L) 16V V8 Vorte	ec	4.00	0 / 10 1.0111111	A 0. 10	4 /00.011111	
Years: <b>350 C</b>	CID (5.7L) 16V V8 Vorte 1995-2003	STD,1,9,10,11,19 20,21,30		0.0009/0.0030			52 0.7920





	COUNTER DAT	TA	Τ	SHOP	DATA	<b>.</b>	
						BRG O.D. O	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							L (cont.)
	ID (4.3L) 16V V8 Chev 1975-1976	rolet	3.6	70"/93.2mm	x 3.10	0"/78.7mn	n 6 (cont.)
	ID (4.4L) 16V V8 Chev 1979-1982	rolet	3.5	00"/88.9mm	x 3.48	4"/88.4mn	n
	ID (5.0L) 16V V8 Chev	3.7	36"/95.0mm	x 3.48	4"/88.4mn	n	
305 C	ID (5.0L) 16V V8 Vorte	ес	3.7	36"/95.0mm	x 3.48	4"/88.4mn	n
307 C	ID (5.0L) 16V V8 Chev	rolet	3.8	75"/98.4mm	x 3.25	0"/82.6mn	n
350 C	ID (5.7L) 16V V8 Chev	rolet	4.00	0"/101.6mm	x 3.48	4"/88.5mn	n
350 C	ID (5.7L) 16V V8 Vorte	ec	4.00	0"/101.6mm	x 3.48	4"/88.5mn	n
Rod Bearing (8) NOTE: H-Series Used In Engine	TM-77 CB-663HND Performance Dowel Hole I es Without Doweled Conne One Side For Increased Cra	cting Rod	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.22	52 0.7920
Half, Maximum Thickness May	TM-77 CB-663HNDK Performance with TriArmo n Wall Does Not Include Co y Be Used In Engines Witho d Narrowed On One Side I perance	r Dowel Hole In Cap pating out Doweled	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.22	52 0.7920
Not Include Co	TM-77 CB-663HNK Performance with TriArmo pating Thickness, Narrowe ased Crank Fillet Clearance alf	d On One	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.22	52 0.7920
.0010" More Oi	TM-77 CB-663HXN Performance Bearing Wall il Clearance Narrowed On the Fillet Clearance No Dow	One Side For	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
.0010" More Oi May Be Used I	TM-77 CB-663HXND Performance Bearing Wall il Clearance Dowel Hole In n Engines Without Dowele On One Side For Increase e	Cap Half d Connecting	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
.0005" Thinner Hole In Cap Ha Coating Thickr Doweled Conn	TM-77 CB-663HXNDI Performance with TriArmo For .0010" More Oil Cleara alf, Maximum Wall Does No ness May Be Used In Enginecting Rod Narrowed On Onk Fillet Clearance	r Bearing Wall ance Dowel of Include es Without	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
.0005" Thinner Maximum Wall Narrowed On O	TM-77 CB-663HXNK Performance with TriArmo For .0010" More Oil Cleara Does Not Include Coating One Side For Increased Cra Dowel Hole In Cap Half	nce Thickness,	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920



	CO	UNTER DAT	Ά		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)				•				
(cont.) Years: 19	975-1976	16V V8 Chev			70"/93.2mm			(cont.)
Years: 19	979-1982	16V V8 Chev			00"/88.9mm			
Years: 19	976-1996	16V V8 Chev			36"/95.0mm			
	<b>D (5.0L)</b> 1 996-2002	16V V8 Vorte	ec	3.7	36"/95.0mm	x 3.48	4"/88.4mm	
	<b>D (5.0L)</b> 1 968-1973	16V V8 Chev	rolet	3.8	75"/98.4mm	x 3.25	0"/82.6mm	
	<b>D (5.7L)</b> 1	16V V8 Chev	rolet	4.00	0"/101.6mm	x 3.48	4"/88.5mm	
	<b>D (5.7L)</b> 1	16V V8 Vorte	c	4.00	0"/101.6mm	x 3.48	4"/88.5mm	
Rod Bearing (8) NOTE: V-Series P Increased Cran Cap Half	VP-2 erformanc			2.0990/2.1000	0.0008/0.0028	0.0621	2.2247/2.225	2 0.7920
Rod Bearing (8) NOTE: V-Series P .0010" More Oil Increased Crani Cap Half	Clearance	Narrowed On		2.0990/2.1000	0.0018/0.0038	0.0616	3 2.2247/2.225	2 0.7920
Main Bearing Set 1-2-3-4 5 NOTE: H-Series P Lower Half		MS-909H MB-2508H MB-2509H(F) e Grooved Upp	STD,1,9,10,11,19 20,21,30 per Half And Plain		0.0006/0.0036 0.0011/0.0041			
Main Bearing Set 1-2-3-4 5		MS-909HG MB-2508HG MB-2509HG(F)			0.0006/0.0036 0.0011/0.0041			
			Grooved Bearings					
	erformanc		STD,1,10 r Grooved Upper Half		0.0006/0.0036 0.0011/0.0041			
And Plain Lowe Include Coating			s Not					
Main Bearing Set 1-2-3-4 5	TM-77	MS-909HX MB-2508HX MB-2509HX(F)	STD		0.0016/0.0046 0.0021/0.0051			
NOTE: H-Series P .0010" More Oil Plain Lower Hal	Clearance	e Bearing Wall	.0005" Thinner For er Half And					
Main Bearing Set 1-2-3-4	TM-77	MS-909HXK MB-2508HX	STD		0.0016/0.0046			
5 NOTE: H-Series P .0005" Thinner f Grooved Upper Wall Does Not I	For .0010" I Half And P	More Oil Cleara Iain Lower Halt	ince f, Maximum	2.4478/2.4488	0.0021/0.0051	0.0950	2.6406/2.6410	5 1.7180
Main Bearing Set 1-2-3-4 5 NOTE: V-Series P Lower Half		MS-909V MB-2508V MB-2509V(F) e Grooved Upp	STD,10		0.0005/0.0028 0.0005/0.0028			





	COUNTER DAT	Ά		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
			•			8 CYL	. (cont.)
(cont.) Years: 1	ID (4.3L) 16V V8 Chev 1975-1976			70"/93.2mm			(cont.)
Years: 1	ID (4.4L) 16V V8 Chev 1979-1982		3.5	00"/88.9mm	x 3.48	4"/88.4mm	
Years: 1	ID (5.0L) 16V V8 Chev 1976-1996		3.7	36"/95.0mm	x 3.48	4"/88.4mm	
	ID (5.0L) 16V V8 Vorte 1996-2002	c	3.7	36"/95.0mm	x 3.48	4"/88.4mm	
	ID (5.0L) 16V V8 Chev 1968-1973	rolet	3.8	75"/98.4mm	x 3.25	0"/82.6mm	
	ID (5.7L) 16V V8 Chev 1967-1997	rolet	4.00	0"/101.6mm	x 3.48	4"/88.5mm	
Years: 1	ID (5.7L) 16V V8 Vorte 1995-2003	c	4.00	0"/101.6mm	x 3.48	4"/88.5mm	
<b>Main Bearing Se</b> 1-2-3-4 5 5	t TM-77 <b>MS-1110H</b> MB-2650H MB-1769H(F) MB-2651C	STD,1,10		3 0.0005/0.0031 3 0.0010/0.0036	0.0954		6 1.7180
NOTE: Engine U	sing 283 Crankshaft, H-Ser acer To Be Used With Bear er 5 Grooved Upper Half A	ing In			0.0700	2.0400/2.041	0 1.0200
<b>Main Bearing Se</b> 1-2-3-4 5	t TM-77 <b>MS-1110HK</b> MB-2650H MB-1769H(F)	STD,1‡,10‡		3 0.0005/0.0031 3 0.0010/0.0036			
with TriArmor	MB-2651C sing 283 Crankshaft, H-Ser Contains A Spacer To Be U ition Number 5 Grooved Up er Half	Ised With			0.0753	3 2.6406/2.641	6 1.5200
Main Bearing Se 1-2-3-4	t TM-77 MS-1110HX MB-2650HX	STD	2.2983/2.2993	3 0.0015/0.0041	0.1700	2.6406/2.641	6 0.8070
5	MB-1769HX(F)		2.2978/2.2988	0.0020/0.0046			
Bearing Wall .0 Clearance Con	MB-2651C sing 283 Crankshaft, H-Ser 2005" Thinner For .0010" Me tains A Spacer To Be Used ition Number 5 Grooved Up er Half	ore Oil I With			0.0753	3 2.6406/2.641	6 1.5200
Main Bearing Se 1-2-3-4	MB-2650HX	STD		0.0015/0.0041			
5 5	MB-1769HX(F) MB-2651C		2.2978/2.2988	3 0.0020/0.0046		9 2.4906/2.491 3 2.6406/2.641	
NOTE: Engine Us with TriArmor .0010" More Oi Used With Bea	sing 283 Crankshaft, H-Ser Bearing Wall .0005" Thinne Il Clearance Contains A Sp ring In Position Number 5 d Plain Lower Half	r For acer To Be			0.0700	2.01002.011	0 1.0200
Bearing Wall .0 Clearance Con	TM-77 MB-1769HX sing 283 Crankshaft, H-Ser 0005" Thinner For .0010" Matains Flanged Bearing Only d Plain Lower Half	ore Oil	2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.491	6 1.7180
	TM-77 MB-2509H-1 Performance Contains Flar r Half And Plain Lower Half		2.4478/2.4488	3 0.0011/0.0041	0.0955	2.6406/2.641	6 1.7180





	С	OUNTER DAT	ТА		SHOF	DATA	١	
BEARING OR POSITION		G PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE		BRG O.D. O HOUSING BORE	R MAX LENGTH
8 CYL (cont.)				•				
		16V V8 Chev	rolet	3.6	70"/93.2mm	x 3.10	0"/78.7mn	
(/	1975-1976 <b>ID (4.4L)</b>	16V V8 Chev	rolet	3.5	00"/88.9mm	x 3.48	4"/88.4mn	(cont.)
	1979-1982			0.0	, , , , , , , , , , , , , , , , , , , ,	Α 0. 10	7 700. 111111	
305 CID (5.0L) 16V V8 Chevrolet				3.7	36"/95.0mm	x 3.48	4"/88.4mn	n
	1976-1996 ID <i>(</i> 5 OL)	16V V8 Vorte	20	2.7	'36"/95.0mm	v 2 /10	4"/99 Amn	
	1996-2002		50	5.7	30 /93.011111	× 0.40	4 /00.411111	
		16V V8 Chev	rolet	3.8	75"/98.4mm	x 3.25	0"/82.6mn	n
	1968-1973	16V VO Cha	malat	4.00	011/404 6mm	2 40	411/00 Emm	
	1 <b>D (5.7L)</b> 1967-1997	16V V8 Chev	rolet	4.00	0"/101.6mm	X 3.40	4"/00.511111	1
350 C		16V V8 Vorte	ec	4.00	0"/101.6mm	x 3.48	4"/88.5mn	n
Main Bearing	TM-7	7 MB-2509HX	STD	2.4478/2.4488	3 0.0021/0.0051	0.0950	2.6406/2.64	16 1.7180
		nce Bearing Wal ce Contains Flan	I .0005" Thinner For					
		If And Plain Low						
Cam Bearing Se	t B-2	SH-1349S	STD					
1 2-5		SH-1349 SH-1350			2 0.0010/0.0048 2 0.0010/0.0048			
3-4		SH-1351			2 0.0010/0.0048			
NOTE: Performa	nce Bearir	ng Set						
Cam Bearing Se	t B-2	SH-1772S	STD	1 0000/1 000/	0.0040/0.0049	0.0644	1 0000/2 00	10 0 7450
2-3-4-5		SH-1351 SH-2185			2 0.0010/0.0048 2 0.0010/0.0048			
	n Cylinder		ance Bearing Set					
Cam Bearing Se	t B-2	SH-1796S	STD					
1-2-3-4-5 NOTE: Oversize	Alian Bore	SH-1351	lousing Bore Size	1.8682/1.8692	2 0.0010/0.0048	0.0644	1.9990/2.00	10 0.7450
		mance Bearing						
Connecting Rod Crankshaft Forg	jing	1130, 1178, 118 3281N, 329880N	26, 3703527, 3784000, 38 2, 230376, 2680, 2690, 21 1, 354431, 3732444, 383 39, 3932444, 3941172, 39	NABC, 2Y68-76, 3 2442, 3911000, 3	06275, 306276, 3 911001, 391101	30R, 31- 1, 39110	87, 310514, 3	
	<b>ID (4.3L)</b> 1955-1957	16V V8 Chev	vrolet	3.7	′50"/95.3mm	x 3.00	0"/76.2mn	7
Rod Bearing (8) NOTE: H-Series Increased Crar	Performar	7 CB-745HN nce Narrowed O learance No Dov		1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.12	52 0.7920
Cap Half								
Used In Engine Narrowed On C	Performar es Without	7 CB-745HND nce Dowel Hole Doweled Conne for Increased Cr		1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.12	52 0.7920
Half, Maximum Thickness May	Performar Wall Doe Be Used	7 CB-745HNDK nce with TriArmo s Not Include Co In Engines With ed On One Side	or Dowel Hole In Cap pating out Doweled	1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.12	52 0.7920
Crank Fillet Cle	earance							





	CO	UNTER DAT	Α		SHOP	DATA	<b>A</b>	
BEARING OR	BEARING		AVAILABLE	STD SHAFT	VERT OIL	MAX	BRG O.D. OF HOUSING	MAX
POSITION	MATERIA	L NUMBER	UNDERSIZES	DIAMETER	CLEARANCE	WALL		LENGTH
205.01	D (4 OL)	01110		0.70		- 0 00		(cont.)
(cont.) Years: 1:	955-1957	16V V8 Chev			50"/95.3mm			(cont.)
Rod Bearing (8) NOTE: H-Series F Not Include Cos Side For Increa Hole In Cap Hal	Performanc ating Thick sed Crank	ness, Narrowe		1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	2 0.7920
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	Performanc Clearance	Narrowed On		1.9990/2.0000	0.0014/0.0035	0.0616	3 2.1247/2.125	2 0.7920
Rod Bearing (8) NOTE: H-Series F .0005" Thinner I Maximum Wall Narrowed On O Clearance No D	Performanc For .0010" I Does Not I one Side Fo	More Oil Cleara nclude Coating r Increased Cra	or Bearing Wall ance Thickness,	1.9990/2.0000	0.0014/0.0035	0.0616	3 2.1247/2.125	2 0.7920
Rod Bearing (8) NOTE: V-Series F Increased Cran Cap Half	erformanc			1.9990/2.0000	0.0010/0.0031	0.0620	2.1247/2.125	2 0.7920
Rod Bearing (8) NOTE: V-Series F .0010" More Oil Increased Cran Cap Half	Performance Clearance	Narrowed On		1.9990/2.0000	0.0020/0.0041	0.0615	2.1247/2.125	2 0.7920
Main Bearing Set 1-2-3-4 5 NOTE: H-Series F Lower Half		MS-429H MB-1808H MB-1769H(F) e Grooved Upp	STD,1,10 per Half And Plain		0.0004/0.0030 0.0010/0.0036			
Main Bearing Set 1-2-3-4 5 NOTE: H-Series F And Plain Lowe	Performanc		STD,10 or Grooved Upper Half		0.0004/0.0030 0.0010/0.0036			
Include Coating			es Not					
	Performanc		.0005" Thinner For		0.0014/0.0040 0.0020/0.0046			
.0010" More Oil Plain Lower Ha		Grooved Uppe	or nali And					
Main Bearing Set 1-2-3-4 5 NOTE: H-Series F .0005" Thinner Grooved Upper Wall Does Not I	Performanc For .0010" I Half And P	More Oil Cleara Iain Lower Hal	ance f, Maximum		0.0014/0.0040 0.0020/0.0046			
Main Bearing Set 1-2-3-4 5	VP-2	MS-429V MB-1808V MB-1769V(F)	STD per Half And Plain		0.0003/0.0031 0.0010/0.0036			





	COI	UNTER DAT	Ά		SHOP	DATA	١	
					001		BRG O.D. OF	1
BEARING OR POSITION	BEARING MATERIAL	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	HOUSING	MAX LENGTH
8 CYL (cont.)								
7 265 C (cont.) Years: 1		6V V8 Chev	rolet	3.7	50"/95.3mm	x 3.00	0"/76.2mm	7 (cont.)
Main Bearing Se 1-2-3-4 5 NOTE: V-Series I		MS-429VX MB-1808VX MB-1769VX(F) Bearing Wall	STD .0005" Thinner For		0.0013/0.0041 0.0020/0.0046			
.0010" More Oi Plain Lower Ha		Grooved Uppe	r Half And					
Main Bearing NOTE: Engine Us Bearing Wall .0 Clearance Con Upper Half And	sing 283 Cra 005" Thinne tains Flange	r For .0010" Me d Bearing Only	ore Oil	2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.491	6 1.7180
Cam Bearing Set 1 2 3-4 5 Connecting Rod Crankshaft Forg	Forging 31 ing 11 32	30, 1178, 1182 81N, 329880N,	STD 6, 3703527, 3784000, 3815 , 230376, 2680, 2690, 2NA 35443, 3732444, 38324	1.8682/1.8692 1.8682/1.8692 1.8682/1.8692 281, 3892671, 3 BC, 2Y68-76, 30 42, 3911000, 39	6275, 306276, 3 11001, 3911011	0.0694 0.0694 0.0694 2, 3946 30R, 31-	2.0090/2.0110 1.9990/2.0010 2.0090/2.0110 841 87, 310514, 31	0 0.7500 0 0.7500 0 0.9500 M, 3279,
8 302 C		6V V8 Chev	9, 3932444, 3941172, 3941		568749, 4577, 4 <b>0"/101.6mm</b>		011/76 0mm	8
Years: 1 327 C Years: 1	967-1969 ID (5.3L) 1 962-1969	6V V8 Chev	rolet	4.00	0"/101.6mm	x 3.25	0"/82.5mm	
	<b>ID (4.3L) 1</b> 994-1996	6V V8 Chev	rolet	3.7	50"/95.3mm	x 3.00	0"/76.2mm	
Rod Bearing (8)	TM-77	CB-663HN	STD,1,9,10,11,19	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
For Year(s): 1968 NOTE: H-Series I Increased Crar Cap Half	Performance							
Rod Bearing (8) For Year(s): 1968 NOTE: H-Series I Used In Engine Narrowed On C Clearance	-1996 Performance s Without D	oweled Conne	-	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
Rod Bearing (8) For Year(s): 1968 NOTE: H-Series I Half, Maximum Thickness May Connecting Ro Crank Fillet Cle	-1996 Performance Wall Does I Be Used In d Narrowed	Not Include Co Engines Witho	ut Doweled	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
Rod Bearing (8) For Year(s): 1968 NOTE: H-Series I Not Include Co Side For Increa	-1996 Performance ating Thickr	ness, Narrowed		2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920



Hole In Cap Half



	COUNTER DATA	<b>A</b>		SHOP	DATA	\	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
						8 CYL	<u> </u>
(cont.) Years:	CID (4.9L) 16V V8 Chevr 1967-1969			0"/101.6mm			8 (cont.)
Years:	CID (5.3L) 16V V8 Chevr 1962-1969			0"/101.6mm			
Years:	CID (4.3L) 16V V8 Chevr 1994-1996	olet		50"/95.3mm			
Rod Bearing (8) For Year(s): 196	8-1996	STD	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
.0010" More O	Performance Bearing Wall bil Clearance Narrowed On O nk Fillet Clearance No Dowe	ne Side For					
.0010" More O May Be Used	8-1996 Performance Bearing Wall . bil Clearance Dowel Hole In C In Engines Without Doweled I On One Side For Increased	Cap Half Connecting	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
.0005" Thinner Hole In Cap Ha Coating Thick Doweled Conr		Bearing Wall ace Dowel Include as Without	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
.0005" Thinner Maximum Wal Narrowed On		nce Thickness,	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
Rod Bearing (8) For Year(s): 196 NOTE: V-Series	VP-2 CB-663VN		2.0990/2.1000	0.0008/0.0028	0.0621	2.2247/2.2252	2 0.7920
Rod Bearing (8) For Year(s): 196 NOTE: V-Series .0010" More O		ne Side For	2.0990/2.1000	0.0018/0.0038	0.0616	2.2247/2.2252	2 0.7920
			1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.1252	2 0.7920
Used In Engine	TM-77 CB-745HND 2-1967 Performance Dowel Hole In es Without Doweled Connec One Side For Increased Crai	ting Rod	1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.1252	2 0.7920





	co	UNTER DATA			SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	R MAX LENGTH
8 CYL (cont.)								
(cont.) Years: 1	967-1969	16V V8 Chevro			0"/101.6mm			(cont.)
Years: 1	962-1969	16V V8 Chevro			0"/101.6mm			
Years: 1	<b>D (4.3L)</b> 1 994-1996	16V V8 Chevro			50"/95.3mm			
Rod Bearing (8) For Year(s): 1962	-1967	CB-745HNDK	STD,10	1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	2 0.7920
Half, Maximum Thickness May	Wall Does Be Used In d Narrowed	e with TriArmor I Not Include Coat Engines Withou On One Side Fo	t Doweled					
Rod Bearing (8) For Year(s): 1962		CB-745HNK	STD,1,10	1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	2 0.7920
NOTE: H-Series F Not Include Co.	Performanc ating Thick sed Crank	e with TriArmor I ness, Narrowed ( Fillet Clearance I						
.0010" More Oil	-1967 Performanc Clearance	CB-745HXN se Bearing Wall .0 Narrowed On Or arance No Dowel		1.9990/2.0000	0.0014/0.0035	0.0616	2.1247/2.125	2 0.7920
Maximum Wall	-1967 Performanc For .0010" I Does Not In One Side Fo	More Oil Clearan nclude Coating T r Increased Cran	ce hickness,	1.9990/2.0000	0.0014/0.0035	0.0616	2.1247/2.125	2 0.7920
Rod Bearing (8) For Year(s): 1962 NOTE: V-Series F Increased Cran Cap Half	-1967 Performance	CB-745VN e Narrowed On C arance No Dowel		1.9990/2.0000	0.0010/0.0031	0.0620	2.1247/2.125	2 0.7920
	-1967 Performanc Clearance	CB-745VXN e Bearing Wall .0 Narrowed On Or arance No Dowel	ne Side For	1.9990/2.0000	0.0020/0.0041	0.0615	2.1247/2.125	2 0.7920
Main Bearing Set 1-2-3-4 5		MS-909H MB-2508H MB-2509H(F)	STD,1,9,10,11,19 20,21,30		0.0006/0.0036			
For Year(s): 1968 NOTE: H-Series F Lower Half		e Grooved Upper	r Half And Plain					
Main Bearing Set 1-2-3-4 5 For Year(s): 1968	-1996	MS-909HG MB-2508HG MB-2509HG(F)	STD Brooved Bearings		0.0006/0.0036			





	CO	UNTER DAT	A		SHOP	DATA	4	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
				_			8 CYL	(cont.)
(cont.) Years: 1 327 C	967-1969	16V V8 Chevi			0"/101.6mm 0"/101.6mm			8 (cont.)
265 C		16V V8 Chevi	rolet	3.7	50"/95.3mm	x 3.00	0"/76.2mm	
Main Bearing Se 1-2-3-4 5 For Year(s): 1968 NOTE: H-Series And Plain Lowe	3-1996 Performanc		STD,1,10  Grooved Upper Half s Not		0.0006/0.0036 0.0011/0.0041			
Include Coating								
	3-1996 Performanc		STD  .0005" Thinner For		0.0016/0.0046 0.0021/0.0051			
.0010" More Oi Plain Lower Ha		Grooved Upper	r Half And					
	I-1996 Performanc For .0010" I	MS-909HXK MB-2508HX MB-2509HX(F) with TriArmore More Oil Cleara	nce		0.0016/0.0046 0.0021/0.0051			
		ating Thickness						
Main Bearing Se 1-2-3-4 5 For Year(s): 1968 NOTE: V-Series I Lower Half	3-1996	MS-909V MB-2508V MB-2509V(F) e Grooved Uppe	STD,10 er Half And Plain		0.0005/0.0028 0.0005/0.0028			
Main Bearing Se 1-2-3-4 5 5		MS-1110H MB-2650H MB-1769H(F) MB-2651C	STD,1,10		0.0005/0.0031 0.0010/0.0036	0.0954		1.7180
	sing 283 Cra acer To Be l	ankshaft, H-Seri Used With Bear d Upper Half A	ing In					
Main Bearing Set 1-2-3-4 5 5		MS-1110HK MB-2650H MB-1769H(F) MB-2651C	STD,1‡,10‡		0.0005/0.0031 0.0010/0.0036	0.0954		1.7180
	sing 283 Cra Contains A ition Numbe	ankshaft, H-Seri Spacer To Be U er 5 Grooved Up	sed With					





	CO	UNTER DAT	Ά		SHOP	DATA	A	
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
8 CYL (cont.)				•				
(cont.) Years: 1	1967-1969	16V V8 Chev 16V V8 Chev			0"/101.6mm 0"/101.6mm			(cont.)
Years: 1	1962-1969	16V V8 Chev			50"/95.3mm			
	1994-1996	ior to oner	10101	0.7	, , , , , , , , , , , , , , , , , , , ,	Α 0.00	, , , , o. <u>E</u> , , , , , ,	
Main Bearing Se	t TM-77	MS-1110HX	STD					
1-2-3-4		MB-2650HX			0.0015/0.0041			
5		MB-1769HX(F)		2.2978/2.2988	0.0020/0.0046			
5 For Year(s): 1968	1006	MB-2651C				0.0753	3 2.6406/2.641	6 1.5200
	sing 283 Cra 005" Thinne tains A Spa ition Numbe	er For .0010" M icer To Be Used	d With					
Main Bearing Se	t TM-77	MS-1110HXK	STD					
1-2-3-4		MB-2650HX		2.2983/2.2993	0.0015/0.0041	0.1700	2.6406/2.641	6 0.8070
5		MB-1769HX(F)		2.2978/2.2988	0.0020/0.0046			
5 For Year(s): 1968		MB-2651C				0.0753	3 2.6406/2.641	6 1.5200
.0010" More Oi Used With Bea Upper Half And	ring In Posi I Plain Low	tion Number 5 er Half	Grooved					
Main Bearing Se 1-2-3-4 5	t IM-77	MS-429H MB-1808H MB-1769H(F)	STD,1,10		0.0004/0.0030 0.0010/0.0036			
For Year(s): 1962		,	per Half And Plain	2.207 072.2500	0.0010/0.0000	0.000	2.4300/2.431	0 1.7 100
Main Bearing Se	t TM-77	MS-429HK	STD,10					
1-2-3-4		MB-1808H		2.2983/2.2993	0.0004/0.0030	0.0954	2.4906/2.491	6 0.8070
5		MB-1769H(F)		2.2978/2.2988	0.0010/0.0036	0.0954	2.4906/2.491	6 1.7180
For Year(s): 1962 NOTE: H-Series And Plain Lowe Include Coating	Performander Half, Max	imum Wall Doe	r Grooved Upper Half es Not					
Main Bearing Se	t TM-77	MS-429HX	STD					
1-2-3-4		MB-1808HX			0.0014/0.0040			
5 For Year(s): 1962	-1967	MB-1769HX(F)		2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.491	b 1.7180
	Performand I Clearance	•	.0005" Thinner For er Half And					
Main Bearing Se	t TM-77	MS-429HXK	STD					
1-2-3-4		MB-1808HX		2.2983/2.2993	0.0014/0.0040	0.0949	2.4906/2.491	6 0.8070
5		MB-1769HX(F)		2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.491	6 1.7180
For Year(s): 1962 NOTE: H-Series   .0005" Thinner Grooved Upper	Performand For .0010"	More Oil Cleara	ance					
Wall Does Not								





	COL	JNTER DAT	Ά		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	R MAX LENGTH
							8 CYL	. (cont.)
(cont.) Years: 1	967-1969	6V V8 Chev			)"/101.6mm			(cont.)
Years: 1	962-1969	6V V8 Chev			)"/101.6mm			
	ID (4.3L) 1 994-1996	6V V8 Chev	rolet	3.75	50"/95.3mm	x 3.00	0"/76.2mm	
Main Bearing Se 1-2-3-4 5	t VP-2	MS-429V MB-1808V MB-1769V(F)	STD		0.0003/0.0031 0.0010/0.0036			
For Year(s): 1962								
NOTE: V-Series I Lower Half	Performance	Grooved Upp	er Half And Plain					
Main Bearing Se		MS-429VX	STD					
1-2-3-4 5		MB-1808VX MB-1769VX(F)			0.0013/0.0041 0.0020/0.0046			
For Year(s): 1962 NOTE: V-Series I .0010" More Oi Plain Lower Ha	Performance I Clearance		.0005" Thinner For r Half And					
Main Bearing NOTE: Engine Us Bearing Wall .0 Clearance Con Upper Half And H-Series Perforn .0010" More Oi Only, Grooved	sing 283 Crai 005" Thinnei tains Flange I Plain Lowei nance Bearir I Clearance (	r For .0010" M d Bearing Only r Half ng Wall .0005" Contains Flans	y, Grooved Thinner For ged Bearing	2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.491	6 1.7180
Main Bearing For Year(s): 1968	TM-77 -1996 Performance	MB-2509H-1 • Contains Flar	STD nged Bearing Only,	2.4478/2.4488	0.0011/0.0041	0.0955	2.6406/2.641	6 1.7180
Main Bearing For Year(s): 1968 NOTE: H-Series .0010" More Oi Only, Grooved	-1996 Performance I Clearance	Contains Flang		2.4478/2.4488	0.0021/0.0051	0.0950	2.6406/2.641	6 1.7180
Cam Bearing Set 1 2-5 3-4 For Year(s): 1964	-1996	SH-1349S SH-1349 SH-1350 SH-1351	STD	1.8682/1.8692	0.0010/0.0048 0.0010/0.0048 0.0010/0.0048	0.0694	2.0090/2.011	0 0.7450
NOTE: Performa			OTD					
Cam Bearing Set 1 2-3-4-5		<b>SH-1772S</b> SH-1351 SH-2185	STD		0.0010/0.0048 0.0010/0.0048			
For Year(s): 1968		ock; Performa	ance Bearing Set					
NOTE: Aluminum			STD	_				





	COL	JNTER DAT	A		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OI HOUSING BORE	R MAX LENGTH
8 CYL (cont.)				•				
(cont.) Years: 1 327 CI	967-1969	6V V8 Chevr			0"/101.6mm 0"/101.6mm			(cont.)
	D (4.3L) 1 994-1996	6V V8 Chevr	olet	3.7	50"/95.3mm	x 3.00	0"/76.2mm	
Cam Bearing Set 1 2 3-4 5 For Year(s): 1962		SH-287S SH-290 SH-288 SH287 SH-289	STD	1.8682/1.8692 1.8682/1.8692	0.0010/0.0050 0.0010/0.0050 0.0010/0.0050 0.0010/0.0050	0.0694 0.0644	2.0090/2.011	0 0.7500 0 0.7500
Connecting Rod Crankshaft Forg	ing 11	30, 1178, 1182	5, 3703527, 3784000, 381 2, 2680, 3279, 3782680 2, 3930809, 3941172, 394	3782690, 3815		391100	)1, 3911011,	391101A,
	<b>D (4.6L) 1</b> 957-1967	6V V8 Chevr	olet	3.8	75"/98.4mm	x 3.00	0"/76.2mm	9
Rod Bearing (8) NOTE: H-Series F Increased Cran Cap Half	Performance			1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	2 0.7920
Rod Bearing (8) NOTE: H-Series I Used In Engine Narrowed On C Clearance	Performance s Without D	oweled Connec	•	1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	2 0.7920
Rod Bearing (8) NOTE: H-Series I Half, Maximum Thickness May Connecting Ro Crank Fillet Cle	Performance Wall Does I Be Used In d Narrowed	Not Include Coa Engines Witho	ut Doweled	1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	0.7920
Rod Bearing (8) NOTE: H-Series I Not Include Co Side For Increa Hole In Cap Ha	Performance ating Thickr sed Crank F	ess, Narrowed		1.9990/2.0000	0.0004/0.0025	0.0621	2.1247/2.125	52 0.7920
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	Performance Clearance	Narrowed On C		1.9990/2.0000	0.0014/0.0035	0.0616	2.1247/2.125	52 0.7920
Rod Bearing (8) NOTE: H-Series F .0005" Thinner Maximum Wall Narrowed On C Clearance No D	Performance For .0010" N Does Not In One Side For	More Oil Cleara Iclude Coating Increased Cra	nce Thickness,	1.9990/2.0000	0.0014/0.0035	0.0616	3 2.1247/2.125	52 0.7920
Rod Bearing (8) NOTE: V-Series F Increased Cran Cap Half	Performance			1.9990/2.0000	0.0010/0.0031	0.0620	2.1247/2.125	2 0.7920





	CO	UNTER DAT	Ά		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
								(cont.)
9 283 CI (cont.) Years: 19	957-1967	16V V8 Chev	rolet	3.87	75"/98.4mm	x 3.00	0"/76.2mm	9 (cont.)
Rod Bearing (8) NOTE: V-Series P .0010" More Oil Increased Crani Cap Half	Clearance	Narrowed On		1.9990/2.0000	0.0020/0.0041	0.0615	2.1247/2.1252	2 0.7920
Main Bearing Set 1-2-3-4 5	TM-77	MS-429H MB-1808H MB-1769H(F)	STD,1,10		0.0004/0.0030			
NOTE: H-Series P Lower Half	erformanc		er Half And Plain	2.207 072.2000	0.00 10 0.0000	0.000	2.7000/2.70	
Main Bearing Set 1-2-3-4 5		MS-429HK MB-1808H MB-1769H(F)	STD,10		0.0004/0.0030 0.0010/0.0036			
And Plain Lowe Include Coating	r Half, Max	imum Wall Doe						
Main Bearing Set 1-2-3-4 5	TM-77	MS-429HX MB-1808HX MB-1769HX(F)	STD		0.0014/0.0040 0.0020/0.0046			
NOTE: H-Series P .0010" More Oil Plain Lower Hal	Clearance		.0005" Thinner For r Half And					
Main Bearing Set 1-2-3-4 5	TM-77	MS-429HXK MB-1808HX MB-1769HX(F)	STD		0.0014/0.0040 0.0020/0.0046			
NOTE: H-Series P .0005" Thinner I Grooved Upper Wall Does Not I	or .0010" I Half And P	More Oil Cleara Plain Lower Half	nce f, Maximum					
Main Bearing Set 1-2-3-4	VP-2	MS-429V MB-1808V	STD		0.0003/0.0031			
5 NOTE: V-Series P Lower Half	erformanc	MB-1769V(F) e Grooved Upp	er Half And Plain	2.2978/2.2988	0.0010/0.0036	0.0954	2.4906/2.4916	5 1./180
Main Bearing Set 1-2-3-4	VP-2	MS-429VX MB-1808VX	STD		0.0013/0.0041			
5 NOTE: V-Series P .0010" More Oil Plain Lower Hal	Clearance		.0005" Thinner For r Half And	2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.4916	5 1.7180
Main Bearing NOTE: H-Series F .0010" More Oil Only, Grooved U	erformanc Clearance	Contains Flang		2.2978/2.2988	0.0020/0.0046	0.0949	2.4906/2.4916	6 1.7180
Cam Bearing Set 1 2-5 3-4	B-2	SH-1349S SH-1349 SH-1350	STD	1.8682/1.8692	0.0010/0.0048	0.0694	2.0090/2.0110	0.7450
ਰ-4 For Year(s): 1964- NOTE: Performan		SH-1351 Set		1.0002/1.0092	0.0010/0.0048	0.0644	1.3330/2.0010	0.7450
Cam Bearing Set 1-2-3-4-5		<b>SH-1796S</b> SH-1351	STD	1.8682/1.8692	0.0010/0.0048	0.0644	1.9990/2.0010	0.7450
For Year(s): 1964- NOTE: Oversize A 1.9990" / 2.0010	lign Bored	Blocks with He						





	COL	JNTER DAT	Ά		SHOP	DATA	A	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
8 CYL (cont.)				_				
9 283 CI (cont.) Years: 1		6V V8 Chev	rolet	3.8	75"/98.4mm	x 3.00	0"/76.2mm	9 (cont.)
Cam Bearing Set		SH-287S	STD					
1		SH-290			2 0.0010/0.0050			
2 3-4		SH-288 SH287			2 0.0010/0.0050 2 0.0010/0.0050			
5		SH-289			0.0010/0.0050			
or Year(s): 1957	-1963							
	<b>D (4.8L) 1</b>	6V V8 Vorte	С	3.7	80"/96.0mm	x 3.26	8"/83.0mm	10
	D (5.3L) 1	6V V8 Vorte	С	3.7	80"/96.0mm	x 3.62	2"/92.0mm	
346 CI		6V V8 Chev	rolet	3.8	98"/99.0mm	x 3.62	2"/92.0mm	
364 CI		6V V8 Vorte	С	4.00	0"/101.6mm	x 3.62	2"/92.0mm	
Rod Bearing (8)	TM-77	CB-663HN	STD,1,9,10,11,19 20,21,30	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	0.7920
NOTE: H-Series F Increased Cran Cap Half								
Rod Bearing (8) NOTE: H-Series F Used In Engine Narrowed On O Clearance	Performance s Without Do	oweled Conne	-	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	52 0.7920
Rod Bearing (8) NOTE: H-Series F Half, Maximum Thickness May Connecting Ro Crank Fillet Cle	Performance Wall Does N Be Used In d Narrowed	lot Include Co Engines Witho	ut Doweled	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
Rod Bearing (8) NOTE: H-Series F Not Include Co Side For Increa Hole In Cap Ha	Performance ating Thickn sed Crank F	ess, Narrowed		2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	52 0.7920
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	Performance Clearance I	Narrowed On (		2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	2 0.7920
Rod Bearing (8) NOTE: H-Series F .0010" More Oil May Be Used Ir Rod Narrowed Fillet Clearance	Performance Clearance I Engines Wi On One Side	Dowel Hole In ithout Doweled	d Connecting	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	0.7920
Rod Bearing (8) NOTE: H-Series F .0005" Thinner I Hole In Cap Hal Coating Thickn Doweled Conne	Performance For .0010" M If, Maximum ess May Be	lore Oil Cleara Wall Does No Used In Engin Iarrowed On C	r Bearing Wall nce Dowel t Include es Without	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	0.7920





	СО	UNTER DAT	Α		SHOP	DATA	4	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							8 CYL	(cont.)
(cont.) Years: 1	999-2011	16V V8 Vorte			80"/96.0mm			10 (cont.)
Years: 1	999-2011	16V V8 Vorte			80"/96.0mm			
Years: 1	997-2005	16V V8 Chev			98"/99.0mm			
Years: 1	999-2011	16V V8 Vorte			0"/101.6mm			0.7000
Maximum Wall	Performand For .0010"   Does Not I One Side Fo	More Oil Cleara nclude Coating r Increased Cra	nce Thickness,	2.0990/2.1000	0.0019/0.0040	0.0614	2.2241/2.2252	0.7920
Rod Bearing (8) NOTE: V-Series F Increased Cran Cap Half				2.0990/2.1000	0.0008/0.0028	0.0621	2.2247/2.2252	0.7920
.0010" More Oi	l Clearance			2.0990/2.1000	0.0018/0.0038	0.0616	2.2247/2.2252	0.7920
Main Bearing Set 1-2-4-5 3 NOTE: H-Series I Lower Half		MS-2199H MB-3591H MB-3592H(F) e Grooved Upp	STD,1,10 er Half And Plain		0.0005/0.0026 0.0005/0.0026			
Main Bearing Set 1-2-4-5 3 NOTE: H-Series I And Plain Lowe	Performancer Half, Max	imum Wall Doe	STD,10  r Grooved Upper Half s Not		0.0005/0.0026 0.0005/0.0026			
Include Coating	,							
	Performanc I Clearance	MS-2199HX MB-3591HX MB-3592HX(F) te Bearing Wall Grooved Uppe	.0005" Thinner For r Half And		0.0015/0.0036 0.0015/0.0036			
Main Bearing Set 1-2-4-5		MS-2199HXK MB-3591HX MB-3592HX(F)	STD		0.0015/0.0036			
	For .0010" Half And P	More Oil Cleara Plain Lower Half	nce , Maximum					
Main Bearing NOTE: H-Series I .0010" More Oil	TM-77 Performand I Clearance	MB-3592HX	STD .0005" Thinner For ged Bearing	2.5588/2.5593	0.0015/0.0036	0.0952	2.7509/2.7514	1.0280
	Performano	MB-3592H-1 e Contains Flar Plain Lower Half	nged Bearing Only,	2.5588/2.5593	0.0005/0.0026	0.0957	2.7509/2.7514	1.0280





	COUNTER DAT	ΓΑ		SHOP	DATA	1	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)			•				
10 294 C	ID (4.8L) 16V V8 Vorte	ес	3.7	80"/96.0mm	x 3.26	8"/83.0mm	10
(	1999-2011						(cont.)
	ID (5.3L) 16V V8 Vorte	ec	3.7	80"/96.0mm	x 3.62	2"/92.0mm	
	1999-2011	alat	2.0	98"/99.0mm	~ 2 60	011/00 0	
	ID (5.7L) 16V V8 Chev 1997-2005	roiet	3.0	96 /99.011111	X 3.02	2 /92.011111	
	ID (6.0L) 16V V8 Vorte	ec	4.00	0"/101.6mm	x 3.62	2"/92.0mm	
	1999-2011			. ,	Λ 0.02	_ , 0	
Cam Bearing Se		STD					
1-5	SH-2157			0.0022/0.0074			
2-4 3	SH-2158 SH-2159			0.0010/0.0062			
਼ For Year(s): 2003			2.1000/2.10/0	, 5.0010/0.0002	0.0700	2.0013/2.003	0.7000
NOTE: For 2003:	2nd Design, Position Nun	nber 1 And 5					
	is 2.3472" / 2.3492"						
Performance, Be	-	OTO					
Cam Bearing Set 1-5	t B-2 SH-2160S SH-2160	STD	2 1650/2 167/	0.0011/0.0063	0.0790	2 3276/2 320	5 0.6350
2-4	SH-2161			0.0011/0.0063			
3	SH-2162			0.0011/0.0063			
For Year(s): 1997							
	1st Design, Position Num	ber 1 And 5					
Performance, Be	is 2.3276" / 2.3295"						
-							
	l Forging 121, 143	3482					
Connecting Rod Crankshaft Forg	l Forging 121, 143	3482	3.7	80"/96.0mm	x 3.62	2"/92.0mm	11
Connecting Rod Crankshaft Forg 11 325 C Years: 2	Forging 121, 143 lping 12552216, 12553 ID (5.3L) 16V V8 2005-2009						
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C	IForging 121, 143 ling 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte			80"/96.0mm 80"/96.0mm			
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2	IForging 121, 143 ling 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007	ec Hybrid	3.7	80"/96.0mm	x 3.62	2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C	Forging 121, 143 ging 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte	ec Hybrid	3.7		x 3.62	2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2	IForging 121, 143 ling 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011	ec Hybrid	3.7 4.00	80"/96.0mm 0"/101.6mm	x 3.62 x 3.62	2"/92.0mm 2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C	IForging 121, 143 Iping 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8	ec Hybrid	3.7 4.00	80"/96.0mm	x 3.62 x 3.62	2"/92.0mm 2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2	IForging 121, 143 ging 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8	ec Hybrid ec Hybrid	3.7 4.00 4.06	80"/96.0mm 0"/101.6mm 5"/103.3mm	x 3.62 x 3.62 x 3.62	2"/92.0mm 2"/92.0mm 2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2	I Forging 121, 143 12552216, 12553 1D (5.3L) 16V V8 12005-2009 ID (5.3L) 16V V8 Vorte 12004-2007 ID (6.0L) 16V V8 Vorte 12008-2011 ID (6.2L) 16V V8 V0	ec Hybrid ec Hybrid	3.7 4.00 4.06	80"/96.0mm 0"/101.6mm	x 3.62 x 3.62 x 3.62	2"/92.0mm 2"/92.0mm 2"/92.0mm	
Connecting Rod Crankshaft Forg 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2	IForging 121, 143 ging 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8	ec Hybrid ec Hybrid	3.7 4.00 4.06 4.06	80"/96.0mm 0"/101.6mm 5"/103.3mm	x 3.62 x 3.62 x 3.62 x 3.62	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 Rod Bearing (8)	IForging 121, 143 Jing 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 2007-2011	ec Hybrid ec Hybrid ec STD,1,9,10,11,19 20,21,30 n One Side For	3.7 4.00 4.06 4.06	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm	x 3.62 x 3.62 x 3.62 x 3.62	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm	
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 Rod Bearing (8) NOTE: H-Series Increased Crar	IForging 121, 143 Jing 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 2007-2011 TM-77 CB-663HN Performance Narrowed Of	ec Hybrid ec Hybrid ec STD,1,9,10,11,19 20,21,30 n One Side For	3.7 4.00 4.06 4.06 2.0990/2.1000	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm	x 3.62 x 3.62 x 3.62 x 3.62	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm	2 0.7920
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half Rod Bearing (8) NOTE: H-Series Used In Engine	IForging 121, 143 Jing 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 Vorte 2007-2011 TM-77 CB-663HN Performance Narrowed Onk Fillet Clearance No Dov	ec Hybrid ec Hybrid ec STD,1,9,10,11,19 20,21,30 n One Side For vel Hole In  STD,1,10 In Cap Half May Be ecting Rod	3.7 4.00 4.06 4.06 2.0990/2.1000	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm	x 3.62 x 3.62 x 3.62 x 3.62	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm	2 0.7920
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 NOTE: H-Series Increased Crar Cap Half Rod Bearing (8) NOTE: H-Series Used In Engine Narrowed On C Clearance Rod Bearing (8)	I Forging 121, 143 ging 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 Vorte 2007-2011 TM-77 CB-663HND Performance Narrowed Onk Fillet Clearance No Dow TM-77 CB-663HND Performance Dowel Hole Idea Side For Increased Cr	STD,1,9,10,11,19 20,21,30 n One Side For wel Hole In  STD,1,10 In Cap Half May Be exting Rod ank Fillet  STD,1,10	3.7 4.00 4.06 4.06 2.0990/2.1000	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm	x 3.62 x 3.62 x 3.62 x 3.62 0.0619	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm 2 2.2247/2.225	2 0.7920
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 376 C Years: 2 Used In Engine Narrowed On C Clearance Rod Bearing (8) NOTE: H-Series Used In Engine Narrowed On C Clearance Rod Bearing (8) NOTE: H-Series	IFOrging 121, 143 Jing 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 Vorte 2007-2011 TM-77 CB-663HND Performance Narrowed Onk Fillet Clearance No Dow TM-77 CB-663HND Performance Dowel Hole Idea Side For Increased Critical Control of the Control	STD,1,9,10,11,19 20,21,30 n One Side For vel Hole In  STD,1,10 In Cap Half May Be exting Rod ank Fillet  STD,1,10 or Dowel Hole In Cap	3.7 4.00 4.06 4.06 2.0990/2.1000	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm 0 0.0009/0.0030	x 3.62 x 3.62 x 3.62 x 3.62 0.0619	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm 2 2.2247/2.225	2 0.7920
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half Rod Bearing (8) NOTE: H-Series Used In Engine Narrowed On C Clearance Rod Bearing (8) NOTE: H-Series Half, Maximum	IFOrging 121, 143 Jing 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 Vorte 2007-2011 TM-77 CB-663HN Performance Narrowed Onk Fillet Clearance No Dov TM-77 CB-663HND Performance Dowel Hole Is Without Doweled Conne Cone Side For Increased Critical Control of Wall Does Not Include Control of TM-77 CB-663HNDK	STD,1,9,10,11,19 20,21,30 n One Side For vel Hole In  STD,1,10 In Cap Half May Be exting Rod ank Fillet  STD,1,10 or Dowel Hole In Cap pating	3.7 4.00 4.06 4.06 2.0990/2.1000	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm 0 0.0009/0.0030	x 3.62 x 3.62 x 3.62 x 3.62 0.0619	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm 2 2.2247/2.225	2 0.7920
Connecting Rod Crankshaft Forg 11 325 C Years: 2 325 C Years: 2 364 C Years: 2 376 C Years: 2 376 C Years: 2 Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half Rod Bearing (8) NOTE: H-Series Used In Engine Narrowed On C Clearance Rod Bearing (8) NOTE: H-Series Half, Maximum Thickness May	IFOrging 121, 143 Jing 12552216, 12553 ID (5.3L) 16V V8 2005-2009 ID (5.3L) 16V V8 Vorte 2004-2007 ID (6.0L) 16V V8 Vorte 2008-2011 ID (6.2L) 16V V8 2008-2011 ID (6.2L) 16V V8 Vorte 2007-2011 TM-77 CB-663HND Performance Narrowed Onk Fillet Clearance No Dow TM-77 CB-663HND Performance Dowel Hole Idea Side For Increased Critical Control of the Control	STD,1,9,10,11,19 20,21,30 n One Side For vel Hole In  STD,1,10 In Cap Half May Be exting Rod ank Fillet  STD,1,10 or Dowel Hole In Cap beating out Doweled	3.7 4.00 4.06 4.06 2.0990/2.1000	80"/96.0mm 0"/101.6mm 5"/103.3mm 5"/103.3mm 0 0.0009/0.0030	x 3.62 x 3.62 x 3.62 x 3.62 0.0619	2"/92.0mm 2"/92.0mm 2"/92.0mm 2"/92.0mm 2 2.2247/2.225	2 0.7920





	COUNTER DA	ATA		SHOP	DATA	<b>A</b>	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
							L (cont.)
(cont.) Years:	ID (5.3L) 16V V8 2005-2009			'80"/96.0mm			(cont.)
Years:	ID (5.3L) 16V V8 Vor 2004-2007			'80"/96.0mm			
Years:	ID (6.0L) 16V V8 Vor	tec Hybrid		0"/101.6mm			
Years:	ID (6.2L) 16V V8 2008-2011			5"/103.3mm			
Years:	ID (6.2L) 16V V8 Vor 2007-2011			55"/103.3mm			
Not Include Co	oating Thickness, Narrow ased Crank Fillet Clearan	nor Maximum Wall Does ved On One	2.0990/2.1000	0.0009/0.0030	0.0618	3 2.2241/2.22	52 0.7920
.0010" More O	TM-77 CB-663HXN Performance Bearing Wail Clearance Narrowed Onk Fillet Clearance No Do	all .0005" Thinner For n One Side For	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
.0010" More O May Be Used I	TM-77 CB-663HXN Performance Bearing Wail Clearance Dowel Hole In Engines Without Dowel On One Side For Increase	all .0005" Thinner For In Cap Half eled Connecting	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
.0005" Thinner Hole In Cap Ha Coating Thick Doweled Conn	TM-77 CB-663HXN Performance with TriArn For .0010" More Oil Clea alf, Maximum Wall Does I ness May Be Used In Englecting Rod Narrowed On nk Fillet Clearance	nor Bearing Wall arance Dowel Not Include gines Without	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
.0005" Thinner Maximum Wal Narrowed On (	TM-77 CB-663HXN Performance with TriArn For .0010" More Oil Clea I Does Not Include Coatio One Side For Increased County	nor Bearing Wall arance ng Thickness,	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.22	52 0.7920
	VP-2 CB-663VN Performance Narrowed ( nk Fillet Clearance No Do		2.0990/2.1000	0.0008/0.0028	0.0621	2.2247/2.22	52 0.7920
.0010" More O	VP-2 CB-663VXN Performance Bearing Wa il Clearance Narrowed O nk Fillet Clearance No Do	all .0005" Thinner For in One Side For	2.0990/2.1000	0.0018/0.0038	0.0616	3 2.2247/2.22	52 0.7920
Main Bearing Se 1-2-4-5 3 NOTE: H-Series Lower Half	t TM-77 <b>MS-2199H</b> MB-3591H MB-3592H(F) <b>Performance Grooved U</b>	•		3 0.0005/0.0026 3 0.0005/0.0026			





	CO	UNTER DA	ΓΑ		SHOP	DATA	A	
							BRG O.D. OF	3
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)								
	D (5.3L) 1	6V V8		3.7	'80"/96.0mm	x 3.62	2"/92.0mm	
(	005-2009	CV VO Vort	a a libratanial	0.7	/00II/06 0	0.00	011/00 0	(cont.)
Years: 2	004-2007	6V V8 Vort			'80"/96.0mm			
	I <b>D (6.0L) 1</b> 008-2011	6V V8 Vort	ec Hybrid	4.00	0"/101.6mm	x 3.62	2"/92.0mm	
376 CI	D (6.2L) 1	6V V8		4.06	5"/103.3mm	x 3.62	2"/92.0mm	
	008-2011	6V V8 Vorte	20	4.06	5"/103.3mm	v 2 62	2"/92 0mm	
	007-2011	00 00 0010		4.00	5 / 105.511111	X 3.02	.2 /92.011111	
Main Bearing Set		MS-2199HK	STD,10					
1-2-4-5		MB-3591H			3 0.0005/0.0026			
3 NOTE: H-Series I	Porformano	MB-3592H(F)	or Grooved Upper Half	2.5588/2.5590	3 0.0005/0.0026	0.0957	2.7509/2.751	4 1.0280
And Plain Lowe								
Include Coating	Thickness							
Main Bearing Set	TM-77	MS-2199HX	STD					
1-2-4-5		MB-3591HX			3 0.0015/0.0036			
3 NOTE: H-Series F	Performanc	MB-3592HX(F) e Bearing Wal	.0005" Thinner For	2.5588/2.559	3 0.0015/0.0036	0.0952	2.7509/2.751	4 1.0280
.0010" More Oil Plain Lower Ha	l Clearance							
Main Bearing Set	TM-77	MS-2199HXK	STD					
1-2-4-5		MB-3591HX			3 0.0015/0.0036			
3 <b>NOTE: H-Series F</b>		MB-3592HX(F) e with TriArmo		2.5566/2.559	3 0.0015/0.0036	0.0952	2.7509/2.751	4 1.0200
.0005" Thinner			•					
Grooved Upper			-					
Wall Does Not I								
Main Bearing		MB-3592HX	STD I .0005" Thinner For	2.5588/2.5593	3 0.0015/0.0036	0.0952	2.7509/2.751	4 1.0280
.0010" More Oil								
Only, Grooved								
Main Bearing		MB-3592H-1		2.5588/2.5593	3 0.0005/0.0026	0.0957	2.7509/2.751	4 1.0280
			nged Bearing Only,					
Grooved Upper								
Cam Bearing Set 1-5	B-2	SH-2157S SH-2157	STD	2 1650/2 167/	0.0022/0.0074	0.0800	2 2472/2 240	2 0 7200
2-4		SH-2158			0.0010/0.0062			
3		SH-2159			0.0010/0.0062			
NOTE: Performar	nce, Bearing	g Set						
Connecting Rod Crankshaft Forgi		21, 143 2552216, 1255	3482					
	<b>D (5.3L) 1</b> 963-1967	6V V8 Pont	iac	3.7	19"/94.5mm	x 3.75	0"/95.3mm	12
	<b>D (5.7L) 1</b> 968-1979	6V V8 Pont	iac	3.8	75"/98.4mm	x 3.75	0"/95.3mm	
400 CI		6V V8 Pont	iac	4.12	0"/104.7mm	x 3.75	0"/95.3mm	
Rod Bearing (8) NOTE: H-Series F Increased Cran Cap Half	TM-77 Performanc			2.2487/2.249	7 0.0012/0.0033	0.0619	2.3745/2.375	0 0.8460





	СО	UNTER DATA	Α		SHOP	DATA	<b>A</b>	
BEARING OR POSITION	BEARING		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX	BRG O.D. OR HOUSING	MAX LENGTH
							8 CYL	(cont.)
(cont.) Years: 350 C	1963-1967	16V V8 Pontia 16V V8 Pontia			19"/94.5mm 75"/98.4mm			12 (cont.)
400 C Years:		16V V8 Pontia	ac	4.12	0"/104.7mm	x 3.75	60"/95.3mm	
.0010" More O	Performano il Clearance	CB-758HXN se Bearing Wall . Narrowed On C arance No Dowe		2.2487/2.2497	0.0021/0.0042	0.0614	2.3745/2.3750	0.8460
Main Bearing Se 1-2-3 4 5 NOTE: Contains		MS-496P MB-1917P MB-1918P(F) MB-1891P d Bearings	STD,10,20,30	2.9990/3.0000	0.0007/0.0038 0.0007/0.0038 0.0007/0.0038	0.0938	3.1880/3.1890	1.1350
Cam Bearing Se 1-2-3-4-5	t B-1	<b>SH-292S</b> SH-292	STD	1.8992/1.8997	0.0010/0.0060	0.0643	3 2.0297/2.0317	0.6900
Connecting Roo Crankshaft Forg	ing 1	03427, 4813, 48	29938, 532294, 541000, 1379, 481380, 493654, 4 6, 9782770, 9783785, 978	96452, 531369,				9773524,
		16V V8 Chevr	olet	4.12	5"/104.8mm	x 3.25	0"/82.6mm	13
409 C	1958-1965 <b>ID (6.7L)</b> 1 1961-1965	16V V8 Chevr	olet	4.31	3"/109.5mm	x 3.50	0"/88.9mm	
Rod Bearing (8)	TM-77	CB-743HN	STD,1,9,10,11,19 20,21,30	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	0.8420
NOTE: H-Series Increased Cra Cap Half		e Narrowed On arance No Dowe	One Side For					
Used In Engine	Performances Without D	CB-743HND se Dowel Hole In Doweled Connec r Increased Cra	•	2.1990/2.2000	0.0010/0.0031	0.0619	9 2.3247/2.3252	2 0.8420
Half, Maximum Thickness May	Performand Wall Does Be Used In d Narrowed	CB-743HNDK se with TriArmor Not Include Cos a Engines Withor d On One Side F	Dowel Hole In Cap ating at Doweled	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
Not Include Co	Performand pating Thick ased Crank	CB-743HNK te with TriArmor ness, Narrowed Fillet Clearance		2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
.0010" More O	Performanci il Clearance	CB-743HXN se Bearing Wall . Narrowed On C arance No Dowe		2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.3252	0.8420





	СО	UNTER DAT	Ά		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE		BRG O.D. OF HOUSING BORE	R MAX LENGTH
8 CYL (cont.)								
	<b>D (5.7L)</b> 1 958-1965	16V V8 Chev	rolet	4.12	5"/104.8mm	x 3.25	0"/82.6mm	13 (cont.)
	<b>D (6.7L)</b> 1 961-1965	16V V8 Chev	rolet	4.31	3"/109.5mm	x 3.50	0"/88.9mm	
Rod Bearing (8)	TM-77 Performand Clearance Engines V On One Sid	Dowel Hole In Vithout Dowele	d Connecting	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I .0005" Thinner Hole In Cap Ha Coating Thickn Doweled Conne Increased Cran	Performand For .0010" I If, Maximur ess May Be ecting Rod	More Oil Cleara n Wall Does No e Used In Engin Narrowed On O	r Bearing Wall ance Dowel of Include ses Without	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I .0005" Thinner Maximum Wall Narrowed On C Clearance No D	Performand For .0010"   Does Not I one Side Fo	More Oil Cleara nclude Coating r Increased Cra	ance Thickness,	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F		CB-743V e No Dowel Ho	STD,1,10 le In Cap Half	2.1990/2.2000	0.0009/0.0030	0.0619	2.3247/2.325	2 0.8920
Rod Bearing (8) NOTE: V-Series F Used In Engine Narrowed On C Clearance	Performanc s Without D	Doweled Conne	•	2.1990/2.2000	0.0009/0.0034	0.0620	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F .0010" More Oil May Be Used In Rod Narrowed Fillet Clearance	l Clearance n Engines V On One Sid	e Bearing Wall Dowel Hole In Vithout Dowele	d Connecting	2.1990/2.2000	0.0019/0.0044	0.0615	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F .0010" More Oil Half		e Bearing Wall	STD .0005" Thinner For a In Cap	2.1990/2.2000	0.0019/0.0040	0.0614	2.3247/2.325	2 0.8920
Rod Bearing (8) NOTE: M-Series Used In Engine			STD In Cap Half May Be ecting Rod	2.1990/2.2000	0.0010/0.0031	0.0622	2.3247/2.325	2 0.8920
Main Bearing Set 1-2-3-4 5 NOTE: H Series F		MS-2323H MB-3993H MB-1841H	STD•		0.0006/0.0032 0.0020/0.0046			
Main Bearing Set 1-2-3-4 5	t TM-77	MS-2323HX MB-3993HX MB-1841HX	STD•		0.0016/0.0042			
NOTE: H Series F			CTD	+				
Cam Bearing Set 1 2 3-4 5	B-1	SH-398S SH-398 SH-399 SH-400 SH-401	STD	1.8682/1.8692 1.8682/1.8692	0.0010/0.0052 0.0010/0.0052 0.0005/0.0050 0.0010/0.0052	0.0694 0.0647	2.0090/2.011	0 0.8650 0 0.8700





	COUNTER DAT	A		SHOP	DATA	·	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OR HOUSING BORE	MAX LENGTH
							8 CYL
Years: 1	ID (6.0L) 16V V8 Chevi			8"/100.0mm			
Years: 1	ID (7.4L) 16V V8 Chevi			'/108.0mm x			
	ID (7.4L) 16V V8 Vorte 1996-2000	С	4.250	'/108.0mm x	4.000	/101.6mm	
Rod Bearing (8)	TM-77 <b>CB-743HN</b>	STD,1,9,10,11,19 20,21,30	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
	Performance Narrowed On nk Fillet Clearance No Dow						
Used In Engine	TM-77 CB-743HND Performance Dowel Hole In  the Without Doweled Connection Side For Increased Cra	cting Rod	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
Half, Maximum Thickness May	TM-77 CB-743HNDK Performance with TriArmon Wall Does Not Include Co Be Used In Engines Witho A Narrowed On One Side Fearance	ating ut Doweled	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
Not Include Co	TM-77 CB-743HNK Performance with TriArmore pating Thickness, Narrowed ased Crank Fillet Clearance alf	I On One	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	2 0.8420
.0010" More O	TM-77 CB-743HXN Performance Bearing Wall il Clearance Narrowed On C nk Fillet Clearance No Dow	One Side For	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
.0010" More O	TM-77 CB-743HXND Performance Bearing Wall II Clearance Dowel Hole In n Engines Without Doweled On One Side For Increased	Cap Half I Connecting	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
.0005" Thinner Hole In Cap Ha Coating Thickr Doweled Conn	TM-77 CB-743HXNDM Performance with TriArmon For .0010" More Oil Cleara If, Maximum Wall Does Noness May Be Used In Enginecting Rod Narrowed On Onk Fillet Clearance	r Bearing Wall nce Dowel t Include es Without	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
.0005" Thinner Maximum Wall Narrowed On G	TM-77 CB-743HXNK Performance with TriArmor For .0010" More Oil Cleara Does Not Include Coating One Side For Increased Cra Dowel Hole In Cap Half	nce Thickness,	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series	VP-2 CB-743V Performance No Dowel Hol	STD,1,10 e In Cap Half	2.1990/2.2000	0.0009/0.0030	0.0619	2.3247/2.3252	2 0.8920



	CO	UNTER DAT	ΓΑ		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)								
	<b>D (6.0L)</b> 980-1998	16V V8 Chev	rolet	3.93	8"/100.0mm	x 3.76	6"/95.5mm	14 (cont.)
		16V V8 Chev	rolet	4.250	"/108.0mm x	4.000	"/101.6mm	
454 CI	970-1997   <b>D (7.4L)</b>	16V V8 Vorte	ес	4.250	"/108.0mm x	4.000	"/101.6mm	
Rod Bearing (8)	VP-2 Performanc s Without D	Doweled Conne		2.1990/2.2000	0.0009/0.0034	0.0620	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F .0010" More Oil May Be Used Ir Rod Narrowed Fillet Clearance	Performanc I Clearance I Engines V On One Sid	Dowel Hole In Vithout Dowele	.0005" Thinner For Cap Half d Connecting	2.1990/2.2000	0.0019/0.0044	0.0615	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F .0010" More Oil Half		e Bearing Wall	STD .0005" Thinner For e In Cap	2.1990/2.2000	0.0019/0.0040	0.0614	2.3247/2.325	2 0.8920
Rod Bearing (8) NOTE: M-Series Used In Engine			STD In Cap Half May Be ecting Rod	2.1990/2.2000	0.0010/0.0031	0.0622	2.3247/2.325	2 0.8920
Main Bearing Set 1-2-3-4 5		MS-829H MB-2403H MB-2404H(F)	STD,1,9,10,11,19 20,21,30		0.0007/0.0032			
NOTE: H-Series F Lower Half	Performano	e Grooved Upp	per Half And Plain					
Main Bearing Set 1-2-3-4 5	TM-77	MS-829HG MB-2403HG MB-2404HG(F)	STD		0.0007/0.0032			
-	Performano		I Grooved Bearings	2.7470/2.7400	0.0012/0.0000	0.0550	2.5010/2.500	0 1.0110
Main Bearing Set 1-2-3-4 5		MS-829HK MB-2403H MB-2404H(F)	STD,1,10		0.0007/0.0032			
NOTE: H-Series F And Plain Lowe Include Coating	er Half, Max	cimum Wall Doc	or Grooved Upper Half es Not					
Main Bearing Set 1-2-3-4 5	TM-77	MS-829HX MB-2403HX MB-2404HX(F)	STD		0.0017/0.0042			
NOTE: H-Series F .0010" More Oil Plain Lower Ha	Clearance		.0005" Thinner For er Half And					
Main Bearing Set 1-2-3-4 5	t TM-77	MS-829HXK MB-2403HX MB-2404HX(F)	STD		0.0017/0.0042			
NOTE: H-Series F .0005" Thinner Grooved Upper Wall Does Not I	For .0010"   Half And F	e with TriArmo More Oil Cleara Plain Lower Hal	or Bearing Wall ance f, Maximum	24102.1400	3.00EE 0.0040	0.0001	2.001 012.000	- 1.0110
Main Bearing Set 1-2-3-4 5		MS-829V MB-2403V MB-2404V(F)	STD,1,10		0.0007/0.0035			
NOTE: V-Series F Lower Half	Performanc		er Half And Plain					





	CC	DUNTER DATA			SHOP	DATA	\	
BEARING OR POSITION		G PART AL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							8 CYL	(cont.)
(cont.) Years: 1	980-1998	16V V8 Chevro			3"/100.0mm '/108.0mm x			(cont.)
454 CI	970-1997 <b>D (7.4L)</b> 996-2000	16V V8 Vortec		4.250	'/108.0mm x	4.000	"/101.6mm	
Main Bearing Set 1-2-3-4		MS-829VX MB-2403VX MB-2404VX(F)	STD		0.0017/0.0045			
NOTE: V-Series P	Clearanc	ce Bearing Wall .0 e Grooved Upper I			0.000	0,000		
Main Bearing Set 1-2-3-4 5 NOTE: M-Series I Lower Half		MS-1732M MB-3111M MB-2404P(F) ace Grooved Uppe	STD r Half And Plain		0.0007/0.0037 0.0009/0.0039			
Main Bearing NOTE: H-Series F	Performan	MB-2404H-1 ce Contains Flang Plain Lower Half	STD ed Bearing Only,	2.7478/2.7488	0.0012/0.0038	0.0934	2.9370/2.938	0 1.8110
Main Bearing NOTE: H-Series F .0010" More Oil	TM-77 Performan Clearanc	MB-2404HX ce Bearing Wall .0 e Contains Flange f And Plain Lower	d Bearing	2.7478/2.7488	0.0022/0.0048	0.0929	2.9370/2.938	0 1.8110
Cam Bearing Set 1-2-3-4-5 NOTE: Align Bore Bore		SH-617S SH-617 With 2.1195" / 2.12	STD 205" Housing	1.9485/1.9495	0.0006/0.0046	0.0847	2.1195/2.120	5 0.9900
Cam Bearing Set 1 2-5 3-4		SH-2144S SH-2144 SH-2145 SH-2146	STD	1.9487/1.9497	0.0011/0.0047 0.0011/0.0047 0.0011/0.0047	0.0891	2.1290/2.131	0.9850
NOTE: Performar	ice, Beari	ng Set						
Connecting Rod Crankshaft Forgi	ng	3887114, 3904815,	3933174 1730, 3804816, 3836144 3904816, 3941180, 394 1353039, N853039, N853	2411, 3962523,				
15 366 CI	D (6.0L)	16V V8		3.938	3"/100.0mm	x 3.76	6"/95.5mm	15
396 CI	966-1967 <b>D (6.5L)</b> 965-1970	16V V8 Chevro	olet	4.094	4"/104.0mm	x 3.76	6"/95.5mm	
		16V V8 Chevro	olet	4.250	0"/108.0mm	x 3.76	6"/95.7mm	
Rod Bearing (8)	,	1980-1998 7 CB-743HN	STD,1,9,10,11,19 20,21,30	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	2 0.8420
		ce Narrowed On C earance No Dowel	one Side For					
Used In Engine	Performan s Without	CB-743HND ce Dowel Hole In C Doweled Connect or Increased Cran	ing Rod	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	2 0.8420





	COUNTER DAT	ΓΑ		SHOP	DATA	\	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OI HOUSING BORE	R MAX LENGTH
8 CYL (cont.)							
(cont.) Years: 1	ID (6.0L) 16V V8 966-1967			8"/100.0mm			(cont.)
	ID (6.5L) 16V V8 Chev 965-1970	rolet	4.09	4"/104.0mm	x 3.76	6"/95.5mm	
	ID (7.0L) 16V V8 Chev 966-1969, 1980-1998	rolet	4.25	0"/108.0mm	x 3.76	6"/95.7mm	
Half, Maximum Thickness May	TM-77 CB-743HNDK Performance with TriArmo Wall Does Not Include Co Be Used In Engines Witho d Narrowed On One Side	or Dowel Hole In Cap pating out Doweled	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	62 0.8420
Not Include Co	TM-77 CB-743HNK Performance with TriArmo ating Thickness, Narrowe sed Crank Fillet Clearance If	d On One	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	0.8420
.0010" More Oi	TM-77 CB-743HXN Performance Bearing Wall I Clearance Narrowed On k Fillet Clearance No Dow	One Side For	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	52 0.8420
.0010" More Oi May Be Used Ir	TM-77 CB-743HXND Performance Bearing Wall I Clearance Dowel Hole In n Engines Without Dowele On One Side For Increase	.0005" Thinner For Cap Half d Connecting	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	52 0.8420
.0005" Thinner Hole In Cap Ha Coating Thickn Doweled Conn	TM-77 CB-743HXND Performance with TriArmo For .0010" More Oil Cleara If, Maximum Wall Does No less May Be Used In Engire ecting Rod Narrowed On O lik Fillet Clearance	or Bearing Wall ance Dowel ot Include nes Without	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	0.8420
.0005" Thinner Maximum Wall Narrowed On C	TM-77 CB-743HXNK Performance with TriArmo For .0010" More Oil Clears Does Not Include Coating One Side For Increased Cro Dowel Hole In Cap Half	or Bearing Wall ance Thickness,	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F	VP-2 CB-743V Performance No Dowel Ho	STD,1,10 ole In Cap Half	2.1990/2.2000	0.0009/0.0030	0.0619	2.3247/2.325	2 0.8920
Used In Engine	VP-2 CB-743VND Performance Dowel Hole I is Without Doweled Conne One Side For Increased Cr	ecting Rod	2.1990/2.2000	0.0009/0.0034	0.0620	2.3247/2.325	0.8420
.0010" More Oi May Be Used Ir	VP-2 CB-743VNDX Performance Bearing Wall I Clearance Dowel Hole In In Engines Without Dowele On One Side For Increase	Cap Half d Connecting	2.1990/2.2000	0.0019/0.0044	0.0615	2.3247/2.325	2 0.8420





	CO	UNTER DAT	A		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE I	MAX LENGTH
15 366 CI	D (6.0L)	16V V0		2 02	8"/100.0mm	v 2 76	8 CYL	(cont.) 15
(cont.) Years: 1:	966-1967	16V V8 Chevr	olet		4"/104.0mm			(cont.)
Years: 1	965-1970	16V V8 Chevi			0"/108.0mm			
Years: 1	966-1969, 1							
		CB-743VX e Bearing Wall . No Dowel Hole	STD 0005" Thinner For In Cap	2.1990/2.2000	0.0019/0.0040	0.0614	2.3247/2.3252	0.8920
		CB-829M ce Dowel Hole In Doweled Connec	STD n Cap Half May Be cting Rod	2.1990/2.2000	0.0010/0.0031	0.0622	2.3247/2.3252	0.8920
Main Bearing Set 1-2-3-4 5	TM-77	MS-829H MB-2403H MB-2404H(F)	STD,1,9,10,11,19 20,21,30		0.0007/0.0032 0.0012/0.0038			
NOTE: H-Series F Lower Half	Performanc	1 7	er Half And Plain			0.0000		
Main Bearing Set 1-2-3-4 5 NOTE: H-Series F		MS-829HG MB-2403HG MB-2404HG(F)	STD  Grooved Bearings		0.0007/0.0032 0.0012/0.0038			
Main Bearing Set 1-2-3-4 5	TM-77 Performancer Half, Max	MS-829HK MB-2403H MB-2404H(F) se with TriArmor dimum Wall Does	STD,1,10  Grooved Upper Half		0.0007/0.0032 0.0012/0.0038			
Main Bearing Set 1-2-3-4 5 NOTE: H-Series F .0010" More Oil	TM-77 Performance	MS-829HX MB-2403HX MB-2404HX(F)	STD  O005" Thinner For Half And		0.0017/0.0042 0.0022/0.0048			
Plain Lower Ha Main Bearing Set 1-2-3-4 5 NOTE: H-Series F	TM-77	MS-829HXK MB-2403HX MB-2404HX(F) se with TriArmor	STD  Bearing Wall		0.0017/0.0042 0.0022/0.0048			
	Half And P	More Oil Cleara Plain Lower Half, ating Thickness						
Main Bearing Set 1-2-3-4 5 NOTE: V-Series P		MB-2403V MB-2404V(F)	STD,1,10 er Half And Plain		0.0007/0.0035 0.0011/0.0039			
Lower Half Main Bearing Set 1-2-3-4 5	VP-2	MS-829VX MB-2403VX MB-2404VX(F)	STD		0.0017/0.0045			
NOTE: V-Series P	Clearance		0005" Thinner For Half And					
Main Bearing Set 1-2-3-4 5 NOTE: M-Series I Lower Half		MS-1732M MB-3111M MB-2404P(F) ce Grooved Upp	STD er Half And Plain		0.0007/0.0037 0.0009/0.0039			





	CO	UNTER DA	TA		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		R MAX LENGTH
8 CYL (cont.)								
	<b>ID (6.0L)</b> 966-1967	16V V8		3.93	8"/100.0mm	x 3.76	6"/95.5mm	15 (cont.)
		16V V8 Che	vrolet	4.09	4"/104.0mm	x 3.76	6"/95.5mm	
427 C	965-1970 ID (7.0L) 1966-1969, 1	16V V8 Che	vrolet	4.25	0"/108.0mm	x 3.76	6"/95.7mm	
Main Bearing NOTE: H-Series	TM-77 Performand	MB-2404H-1 ce Contains Fla	STD anged Bearing Only,	2.7478/2.7488	0.0012/0.0038	0.0934	2.9370/2.938	1.8110
Grooved Uppe	r Half And F	Plain Lower Ha	lf					
Main Bearing NOTE: H-Series .0010" More Oi Only, Grooved	Performand I Clearance	Contains Flar		2.7478/2.7488	0.0022/0.0048	0.0929	2.9370/2.938	30 1.8110
Cam Bearing Se		SH-617S	STD					
1-2-3-4-5 For Year(s): 1967	-1000	SH-617		1.9485/1.9495	0.0006/0.0046	0.0847	2.1195/2.120	0.9900
NOTE: Align Bore Bore		With 2.1195" / 2	2.1205" Housing					
Cam Bearing Set	B-2	SH-2144S SH-2144	STD	1 0497/1 0407	0.0011/0.0047	0.0041	2 1200/2 141	0 0 9650
2-5		SH-2145			0.0011/0.0047			
3-4		SH-2146		1.9487/1.9497	0.0011/0.0047	0.0841	2.1190/2.121	0 0.9850
For Year(s): 1967 NOTE: Performa		g Set						
Cam Bearing Se	B-1	SH-615S	STD					
1		SH-615			0.0006/0.0046			
2 3-4		SH-616 SH-617			0.0006/0.0046			
5		SH-618			0.0006/0.0046			
For Year(s): 1965	-1966	0.1.0.0		11010011010	010000.010010	010001	211200121100	
Connecting Rod Crankshaft Forg	ing 3	804816, 3836	40, 3933174 144, 3863144, 3874874 80, 3942411, 6223, 7115,		347, 3882848,	388284	9, 3887114,	3904815,
		16V V8 Cad	illac	3.80	0"/96.5mm x	4.060	"/103.1mm	16
371 C	980-1984 ID (6.1L) 959-1960	16V V8 Olds	smobile	4.00	0"/101.6mm	x 3.69	0"/93.7mm	
394 C	ID (6.5L)	16V V8		4.13	0"/104.8mm	x 3.69	0"/93.7mm	
		16V V8 Cad	illac	4.083	"/103.7mm x	4.060	"/103.1mm	
472 C	1977-1979 I <b>D (7.7L)</b> 1968-1974	16V V8 Cad	illac	4.300	"/109.2mm x	4.060	"/103.1mm	
500 C		16V V8 Cad	illac	4.300	"/109.2mm x	4.300	"/109.2mm	
Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half	Performand			2.4988/2.4998	0.0007/0.0028	0.0620	2.6245/2.625	0.7810
Rod Bearing (8) NOTE: H-Series .0010" More Oi Increased Crar Cap Half	Performano I Clearance	Narrowed On		2.4988/2.4998	0.0017/0.0042	0.0615	2.6245/2.625	0.7810
Connecting Rod Crankshaft Forg			24, 1495094, 1495095, 14	496793, 1609142R				





	COUNTER DA	ΓΑ		SHOP	DATA	1	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							8 CYL
	ID (6.2L) 16V SC V8 2009-2011		4.06	5"/103.3mm	x 3.62	2"/92.0mm	17
427 C	ID (7.0L) 16V V8 2006-2011		4.125	'/104.8mm x	4.000	"/101.6mm	
Rod Bearing (8)	TM-77 CB-663HN	STD,1,9,10,11,19	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
	Performance Narrowed O nk Fillet Clearance No Dov						
Used In Engine	TM-77 CB-663HND Performance Dowel Hole es Without Doweled Conne One Side For Increased Cr	ecting Rod	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
Half, Maximum Thickness May	Performance with TriArmon Wall Does Not Include Co y Be Used In Engines With od Narrowed On One Side	or Dowel Hole In Cap pating out Doweled	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
Not Include Co	TM-77 CB-663HNK Performance with TriArmo pating Thickness, Narrowe ased Crank Fillet Clearance	d On One	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.225	2 0.7920
.0010" More O	TM-77 CB-663HXN Performance Bearing Wal il Clearance Narrowed On nk Fillet Clearance No Dov	One Side For	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	2 0.7920
.0010" More O	TM-77 CB-663HXND Performance Bearing Wal il Clearance Dowel Hole In n Engines Without Dowele On One Side For Increase e	I .0005" Thinner For Cap Half ed Connecting	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	2 0.7920
.0005" Thinner Hole In Cap Ha Coating Thick Doweled Conn	TM-77 CB-663HXND Performance with TriArmo For .0010" More Oil Clear alf, Maximum Wall Does No ness May Be Used In Enginecting Rod Narrowed On nk Fillet Clearance	or Bearing Wall ance Dowel ot Include nes Without	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	2 0.7920
.0005" Thinner Maximum Wall Narrowed On G	TM-77 CB-663HXNK Performance with TriArmo For .0010" More Oil Clear I Does Not Include Coating One Side For Increased Cr Dowel Hole In Cap Half	or Bearing Wall ance g Thickness,	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.225	2 0.7920
	VP-2 CB-663VN Performance Narrowed On nk Fillet Clearance No Dov		2.0990/2.1000	0.0008/0.0028	0.0621	2.2247/2.225	2 0.7920



	CO	UNTER DA	ГА	Т	SHOP	DATA	\	
BEARING OR POSITION	BEARING		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX	BRG O.D. OR HOUSING	MAX LENGTH
8 CYL (cont.)				•				
17 376 CI (cont.) Years: 2		16V SC V8		4.06	5"/103.3mm	x 3.62	2"/92.0mm	17 (cont.)
	D (7.0L) 1	16V V8		4.125	'/104.8mm x	4.000	"/101.6mm	
Rod Bearing (8)	VP-2 Performance Clearance	Narrowed On		2.0990/2.1000	0.0018/0.0038	0.0616	2.2247/2.2252	0.7920
Main Bearing Set 1-2-4-5 3 NOTE: H-Series F Lower Half		MS-2294H MB-3938H MB-3592H(F) e Grooved Up	STD,1 per Half And Plain		0.0005/0.0026 0.0005/0.0026			
Main Bearing Set 1-2-4-5 3	Performance	-	I .0005" Thinner For		0.0015/0.0036 0.0015/0.0036			
Main Bearing NOTE: H-Series F .0010" More Oil Only, Grooved	Performance Clearance	Contains Flan		2.5588/2.5593	0.0015/0.0036	0.0952	2.7509/2.7514	1.0280
Main Bearing NOTE: H-Series F Grooved Upper	Performanc		nnged Bearing Only, If	2.5588/2.5593	0.0005/0.0026	0.0957	2.7509/2.7514	1.0280
Cam Bearing Set 1-5 2-4 3 NOTE: Performar		SH-2157S SH-2157 SH-2158 SH-2159	STD	2.1650/2.1670	0.0022/0.0074 0.0010/0.0062 0.0010/0.0062	0.0799	2.3276/2.3295	0.7800
18 389 CI		16V V8 Pont	iac	4.063	3"/103.2mm	x 3.75	0"/95.3mm	18
Rod Bearing (8) NOTE: H-Series F Increased Cran Cap Half	TM-77 Performance			2.2487/2.2497	0.0012/0.0033	0.0619	2.3745/2.3750	0.8460
Rod Bearing (8) NOTE: H-Series F .0010" More Oil Increased Cran Cap Half	Performance Clearance	Narrowed On		2.2487/2.2497	0.0021/0.0042	0.0614	2.3745/2.3750	0.8460
Main Bearing Set 1-2-3 4 5 NOTE: Contains		MS-496P MB-1917P MB-1918P(F) MB-1891P d Bearings	STD,10,20,30	2.9990/3.0000	0.0007/0.0038 0.0007/0.0038 0.0007/0.0038	0.0938	3.1880/3.1890	1.1350
Cam Bearing Set 1-2-3-4-5	B-1	<b>SH-292S</b> SH-292	STD	1.8992/1.8997	0.0010/0.0060	0.0643	2.0297/2.0317	0.6900
Cam Bearing Set 1 2-3-4-5	B-1	SH-291S SH-291 SH-292	STD	1.8992/1.8997	0.0010/0.0060	0.0643	2.0297/2.0317	1.0700





	COL	JNTER DAT	Ά		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
								8 CYL
	<b>ID (6.6L) 1</b> 0 1970-1980	6V V8 Chev	rolet	4.125	5"/104.8mm	x 3.75	0"/95.3mm	19
Rod Bearing (8)	TM-77	CB-663HN	STD,1,9,10,11,19	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.2252	0.7920
NOTE: H-Series Increased Crar Cap Half								
Rod Bearing (8) NOTE: H-Series Used In Engine Narrowed On C Clearance	Performance s Without Do	weled Conne		2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.2252	2 0.7920
Rod Bearing (8) NOTE: H-Series Half, Maximum Thickness May Connecting Ro Crank Fillet Cle	Performance Wall Does N Be Used In I d Narrowed	lot Include Co Engines Witho	r Dowel Hole In Cap pating out Doweled	2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.2252	2 0.7920
Rod Bearing (8) NOTE: H-Series Not Include Co Side For Increa Hole In Cap Ha	Performance ating Thicknased Crank F	ess, Narrowe		2.0990/2.1000	0.0009/0.0030	0.0619	2.2247/2.2252	0.7920
Rod Bearing (8) NOTE: H-Series .0010" More Oi Increased Crar Cap Half	Performance I Clearance N	Narrowed On		2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
Rod Bearing (8) NOTE: H-Series .0010" More Oi May Be Used I Rod Narrowed Fillet Clearance	Performance I Clearance I n Engines Wi On One Side	Dowel Hole In thout Dowele	d Connecting	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
Rod Bearing (8) NOTE: H-Series .0005" Thinner Hole In Cap Ha Coating Thickr Doweled Conn Increased Crar	Performance For .0010" M alf, Maximum ness May Be ecting Rod N	lore Oil Cleara Wall Does No Used In Engin larrowed On (	r Bearing Wall ance Dowel ot Include nes Without	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	2 0.7920
Rod Bearing (8) NOTE: H-Series .0005" Thinner Maximum Wall Narrowed On C Clearance No I	Performance For .0010" M Does Not Inc One Side For	lore Oil Cleara clude Coating Increased Cra	nce Thickness,	2.0990/2.1000	0.0019/0.0040	0.0614	2.2247/2.2252	0.7920
Rod Bearing (8) NOTE: V-Series I Increased Crar Cap Half	Performance			2.0990/2.1000	0.0008/0.0028	0.0621	2.2247/2.2252	0.7920
Rod Bearing (8) NOTE: V-Series I .0010" More Oi Increased Crar Cap Half	Performance I Clearance N	Narrowed On		2.0990/2.1000	0.0018/0.0038	0.0616	2.2247/2.2252	0.7920





	COL	UNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIAL	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
8 CYL (cont.)								
(cont.) Years: 19	70-1980	6V V8 Chevi	olet	4.125	5"/104.8mm	x 3.75	0"/95.3mm	19 (cont.)
Main Bearing Set 1-2-3-4 5 NOTE: Engine Usi	ng 400 Cra	,	STD,1,9,10,11,19‡ 20,21 es Performance		0.0007/0.0031 0.0012/0.0036			
Grooved Upper	Half And P	lain Lower Half						
Main Bearing Set 1-2-3-4 5		MS-1038HG MB-2562HG MB-2563HG(F)	STD		0.0007/0.0031 0.0012/0.0036			
NOTE: Engine Usi Contains Full Gr	-		es Performance					
Main Bearing Set 1-2-3-4 5 NOTE: Engine Usi	TM-77	MS-1038HK MB-2562H MB-2563H(F)	STD,10		0.0007/0.0031 0.0012/0.0036			
with TriArmor G Half, Maximum \ Thickness	rooved Upp	per Half And Pla	ain Lower					
Main Bearing Set 1-2-3-4 5		MS-1038HX MB-2562HX MB-2563HX(F)	STD		0.0017/0.0041 0.0022/0.0046			
NOTE: Engine Usi Bearing Wall .00 Clearance Groo	05" Thinne ved Upper	r For .0010" Mo	ore Oil					
Main Bearing Set 1-2-3-4		MS-1038HXK MB-2562HX	STD		0.0017/0.0041			
O NOTE: Engine Usi with TriArmor B .0010" More Oil Plain Lower Hall Coating Thickne	ng 400 Cra earing Wall Clearance f, Maximun	.0005" Thinner Grooved Upper	For Half And	2.04/9/2.0468	0.0022/0.0046	0.0949	2.8400/2.8411	5 1.7160
Main Bearing Set 1-2-3-4 5		MS-1564P MB-2604P MB-2548P(F)	STD		0.0030/0.0045 0.0011/0.0039			
5 NOTE: Engine Usi Bearings For Po Main Bearings E 3, 4 Has Groove Contains A Spac Position Numbe	ng 350 Cra sition Num Searings Fo d Upper Ha cer To Be U	ber 5 with Full or Position Num alf And Plain Lo	Grooved ber 1, 2, wer Half			0.1003	2.8406/2.841	5 1.5200
Cam Bearing Set		SH-1349S	STD	4 0000/4 0000	0.0040/0.0040	0.0744	0.0400/0.004	0 0 7450
1 2-5 3-4		SH-1349 SH-1350 SH-1351		1.8682/1.8692	0.0010/0.0048 0.0010/0.0048 0.0010/0.0048	0.0694	2.0090/2.011	0.7450
NOTE: Performan								
Cam Bearing Set 1 2-3-4-5		SH-1772S SH-1351 SH-2185	STD		0.0010/0.0048			
NOTE: Aluminum			nce Bearing Set	1.0002/1.0092	0.0010/0.0048	0.0044	1.0000/2.001	0.0000
Cam Bearing Set 1-2-3-4-5 NOTE: Oversize A 1.9990" / 2.0010	B-2	SH-1796S SH-1351 Blocks with Ho	STD Jusing Bore Size	1.8682/1.8692	0.0010/0.0048	0.0644	1.9990/2.001	0 0.7450





	CO	UNTER DAT	Ά		SHOP	DATA	<b>\</b>	
							BRG O.D. OF	3
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	HOUSING	MAX LENGTH
							8 CYL	. (cont.)
(cont.) Years: 1	970-1980	16V V8 Chev		4.12	5"/104.8mm	x 3.75	0"/95.3mm	19 (cont.)
Connecting Rod Crankshaft Forg	ing 3	521, 353039, 3 882849, 38871	0, 3933174, 3951629 59730, 3804816, 3836 14, 3904815, 3904816 3, 3975945, 6223, 7115	5, 3941180, 39424	11, 3951528, 3	951529		
	<b>ID (6.6L)</b> 1 968-1969	16V V8 Olds	mobile	3.87	5"/98.4mm x	4.250	"/108.0mm	20
	ID (6.6L) 1 965-1967	16V V8 Olds	mobile	4.000	"/101.6mm x	4.000	"/101.6mm	
	<b>ID (7.0L)</b> 1 966-1967	16V V8 Olds	mobile	4.125	"/104.8mm x	3.980	"/101.0mm	
	ID (7.0L) 1 965-1967	16V V8		4.125	"/104.8mm x	3.980	"/101.0mm	
	<b>ID (7.5L)</b> 1 968-1976	16V V8 Olds	mobile	4.125	"/104.8mm x	4.250	"/108.0mm	
Rod Bearing (8)	TM-77	CB-542HN	STD,1,10,20	2.4988/2.4998	0.0007/0.0028	0.0620	2.6245/2.625	0 0.7810
NOTE: H-Series Increased Crar								
Cap Half Rod Bearing (8)	Th 4 77	CB-542HXN	STD	0.4000/0.4000	0.0017/0.0042	0.0045	0.0045/0.005	0 0 7040
	Performano I Clearance	e Bearing Wall Narrowed On	.0005" Thinner For One Side For	2.4300/2.4330	0.001770.0042	0.0010	2.0240/2.020	0.7010
Main Bearing Se	t TM-77	MS-804H	STD,1,10,20					
1		MB-2362H			0.0008/0.0038			
2-4 3		MB-2163H MB-2363H(F)			0.0008/0.0038			
5		MB-2364H			0.0016/0.0049			
	Performano		Position Number 2,	2,0000,010000	010010010010	010002	. 011000101100	110200
3, 4, 5 with Full	Grooved M	lain Bearings P	osition					
Number 1 Has Half	Grooved Up	oper Half And P	Plain Lower					
Main Bearing Se	• TM-77	MS-804HX	STD					
l	1101-77	MB-2362HX	0.0	2.9993/3.0003	0.0018/0.0048	0.0931	3.1880/3.189	0.9800
2-4		MB-2163HX		2.9993/3.0003	0.0018/0.0048	0.0931	3.1880/3.189	0.9790
3		MB-2363HX(F)			0.0018/0.0048			
5		MB-2364HX		2.9993/3.0003	0.0026/0.0059	0.0927	3.1880/3.189	0 1.6290
.0010" More Oi Number 2, 3, 4, Position Numb Lower Half	l Clearance 5 with Full	Bearings For F Grooved Main	Bearings					
Cam Bearing Set	B-1	SH-1354S	STD					
1		SH-1354		2.0365/2.0373	0.0015/0.0050	0.0646	2.1680/2.169	5 0.6930
2		SH-1355			0.0015/0.0050			
3		SH1356			0.0015/0.0050			
4 5		SH-1357 SH-1358			0.0015/0.0050			
,		3H-1308		1,9000/1,95/3	0.0013/0.0050	0.0046	2.0000/2.089	0.0930





	COUNTER DATA	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OR HOUSING BORE	MAX LENGTH
8 CYL							
Years: 1	ID (6.6L) 16V V8 Chevi	rolet		5"/104.8mm '/108.0mm x			21
Years: 1	ID (7.4L) 16V V8		4.250	7 100.0111111 X	4.000	7101.611111	
Rod Bearing (8)	TM-77 CB-743HN	STD,1,9,10,11,19 20,21,30	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	0.8420
	Performance Narrowed On nk Fillet Clearance No Dow						
Used In Engine	TM-77 CB-743HND Performance Dowel Hole In es Without Doweled Connec One Side For Increased Cra	cting Rod	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
Half, Maximum Thickness May	TM-77 CB-743HNDK Performance with TriArmor Mall Does Not Include Coo Be Used In Engines Withor Marrowed On One Side Fearance	ating ut Doweled	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420
Not Include Co	TM-77 CB-743HNK Performance with TriArmor pating Thickness, Narrowed ased Crank Fillet Clearance alf	On One	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	0.8420
.0010" More Oi	TM-77 CB-743HXN Performance Bearing Wall . il Clearance Narrowed On C nk Fillet Clearance No Down	ne Side For	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.3252	2 0.8420
.0010" More Oi May Be Used I	TM-77 CB-743HXND Performance Bearing Wall a il Clearance Dowel Hole In o n Engines Without Doweled On One Side For Increased	Cap Half I Connecting	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.3252	2 0.8420
.0005" Thinner Hole In Cap Ha Coating Thickr Doweled Conn	TM-77 CB-743HXNDK Performance with TriArmor For .0010" More Oil Cleara alf, Maximum Wall Does Not ness May Be Used In Engine tecting Rod Narrowed On O nk Fillet Clearance	Bearing Wall nce Dowel t Include es Without	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.3252	2 0.8420
.0005" Thinner Maximum Wall Narrowed On G	TM-77 CB-743HXNK Performance with TriArmor For .0010" More Oil Clearal Does Not Include Coating One Side For Increased Cra Dowel Hole In Cap Half	nce Thickness,	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.3252	2 0.8420
Rod Bearing (8) NOTE: V-Series	VP-2 CB-743V Performance No Dowel Hol	STD,1,10 e In Cap Half	2.1990/2.2000	0.0009/0.0030	0.0619	2.3247/2.3252	0.8920
Used In Engine	VP-2 CB-743VND Performance Dowel Hole In es Without Doweled Connec One Side For Increased Cra	cting Rod	2.1990/2.2000	0.0009/0.0034	0.0620	2.3247/2.3252	0.8420





	CO	UNTER DATA	<b>1</b>		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
21 402 CI	ID (6.6L)	16V V8 Chevr	olet	4.12	5"/104.8mm	x 3.76	8 CYL 6"/95 7mm	
(cont.) Years: 1			oiet		'/108.0mm x			(cont.)
.0010" More Oi	VP-2 Performanc I Clearance	Dowel Hole In C		2.1990/2.2000	0.0019/0.0044	0.0615	2.3247/2.3252	0.8420
	On One Sid	Vithout Doweled le For Increased						
	Performanc	CB-743VX e Bearing Wall .0 No Dowel Hole	STD 0005" Thinner For In Cap	2.1990/2.2000	0.0019/0.0040	0.0614	2.3247/2.3252	0.8920
l .		CB-829M ce Dowel Hole In Doweled Connec	STD Cap Half May Be ting Rod	2.1990/2.2000	0.0010/0.0031	0.0622	2.3247/2.3252	0.8920
Main Bearing Set 1-2-3-4 5		MS-829H MB-2403H MB-2404H(F)	STD,1,9,10,11,19 20,21,30		0.0007/0.0032 0.0012/0.0038			
NOTE: H-Series I Lower Half		e Grooved Uppe	er Half And Plain					
Main Bearing Set 1-2-3-4 5 NOTE: H-Series I		MS-829HG MB-2403HG MB-2404HG(F)	STD  Grooved Bearings		0.0007/0.0032 0.0012/0.0038			
Main Bearing Set 1-2-3-4 5 NOTE: H-Series I	t TM-77 Performancer Half, Max	MS-829HK MB-2403H MB-2404H(F) se with TriArmor dimum Wall Does	STD,1,10  Grooved Upper Half		0.0007/0.0032 0.0012/0.0038			
Main Bearing Set 1-2-3-4 5 NOTE: H-Series I .0010" More Oil	t TM-77 Performance	MS-829HX MB-2403HX MB-2404HX(F)	STD  O005" Thinner For Half And		0.0017/0.0042 0.0022/0.0048			
Plain Lower Ha Main Bearing Set 1-2-3-4 5		MS-829HXK MB-2403HX MB-2404HX(F)	STD		0.0017/0.0042			
Grooved Upper	For .0010"   Half And P	e with TriArmor More Oil Clearar Plain Lower Half, ating Thickness	nce					
Main Bearing Set 1-2-3-4 5	t VP-2	MS-829V MB-2403V MB-2404V(F)	STD,1,10		0.0007/0.0035 0.0011/0.0039			
NOTE: V-Series F Lower Half	Performanc		r Half And Plain					
Main Bearing Set 1-2-3-4 5		MB-2403VX MB-2404VX(F)	STD		0.0017/0.0045 0.0021/0.0049			
	l Clearance	e Bearing Wall .0 Grooved Upper	0005" Thinner For Half And					





	CC	UNTER DAT	A		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	AL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
8 CYL (cont.)								
21 402 C (cont.) Years: 1		16V V8 Chevr	olet	4.12	5"/104.8mm	x 3.76	6"/95.7mm	21 (cont.)
	ID (7.4L)	16V V8		4.250'	'/108.0mm x	4.000	"/101.6mm	
Years: 1		110 170011	OTD					
Main Bearing Se 1-2-3-4 5	t B-2	MS-1732M MB-3111M MB-2404P(F)	STD		0.0007/0.0037 0.0009/0.0039			
_	Performan	, ,	er Half And Plain	211 100/211 100	0.0000	0.0007	2.0070/2.000	
	Performan	MB-2404H-1 ce Contains Flan Plain Lower Half	STD ged Bearing Only,	2.7478/2.7488	0.0012/0.0038	0.0934	2.9370/2.938	0 1.8110
.0010" More Oi	Performand I Clearance	MB-2404HX ce Bearing Wall . Contains Flang And Plain Lowe	•	2.7478/2.7488	0.0022/0.0048	0.0929	2.9370/2.938	0 1.8110
Cam Bearing Set 1-2-3-4-5 NOTE: Align Bore Bore		SH-617S SH-617 With 2.1195" / 2.1	STD 1205" Housing	1.9485/1.9495	0.0006/0.0046	0.0847	2.1195/2.120	5 0.9900
22 403 C	ID (6.6L)	32V Turbo. V	8 Duramax DIESEL	4.05	5"/103.0mm	x 3.89	8"/99.0mm	22
	Performand	CB-1805H ce No Dowel Hol e used but the C a Nitride Heat T	rankshaft	2.4764/2.4772	0.0010/0.0034	0.0794	2.6372/2.637	8 0.9340
.0010" More Oi Half Undersize	Performand Clearance Bearings of	CB-1805HX ce Bearing Wall . e No Dowel Hole can be used but to rdened with a Ni	the	2.4764/2.4772	0.0020/0.0044	0.0789	2.6372/2.637	8 0.9340
Main Bearing Se 1-2-3-4-5		<b>MS-2218H</b> MB-3776H	STD,.026mm,.25mm	3.1459/3.1466	0.0009/0.0033	0.0994	3.3464/3.347	2 0.8200
Lower Half Und Crankshaft Mu	dersize Bea st Be Reha	ce Grooved Uppe arings Can Be Us ardened With A N Number TW-610	litride Heat					
.0010" More Oi Plain Lower Ha But The Cranks	Performand I Clearance alf Undersiz shaft Must	MS-2218HX MB-3776HX ce Bearing Wall . c Grooved Upper ce Bearings Can Be Rehardened	Be Used	3.1459/3.1466	0.0019/0.0043	0.0989	3.3465/3.347	2 0.8200
Nitride Heat Tr Thrust Washer S		TW-610S	STD					
NOTE: Contains Part Number M	,		1 And 5 Use with	3.5039/3.5137			4.2027/4.212	5 0.1181
Cam Bearing Set		<b>SH-1999S</b> SH-1999	STD	2.3988/2.4000			2.5590/2.560	
2-3-4-5	Faun'ma C	SH-2006		2.3988/2.4000		0.0790	2.5590/2.560	2 0.7100
Connecting Rod	Forging 2	2/841UA						





	CO	UNTER DAT	Α		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIA	A PART	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
								8 CYL
Years: 1	1961-1966	16V V8 Ponti			"/104.0mm x			23
Years: 1	1967-1969	16V V8 Ponti	ac		"/104.6mm x			
	<b>ID (7.5L)</b> 1971-1972	16V V8 HO		4.150	"/105.4mm x	4.210	"/107.0mm	
	<b>ID (7.5L)</b> 1970-1976	16V V8 Ponti	ac	4.150	"/105.4mm x	4.210	"/107.0mm	
	ID (7.5L)	16V V8 Ponti	ac Super Duty	4.150	"/105.4mm x	4.210	"/107.0mm	
Rod Bearing (8) NOTE: H-Series Increased Crar Cap Half	Performand	CB-758HN ce Narrowed On arance No Dow		2.2487/2.2497	0.0012/0.0033	0.0619	2.3745/2.3750	0.8460
.0010" More Oi	Performand Il Clearance	CB-758HXN ce Bearing Wall Narrowed On G arance No Dow		2.2487/2.2497	0.0021/0.0042	0.0614	2.3745/2.3750	0.8460
Main Bearing Se	t TM-77	MS-667H	STD,1,10					
1-2-3		MB-2215H			0.0005/0.0035			
4 5		MB-2216H(F) MB-2217H			0.0005/0.0035			
5 with Full Gro	oved Main I	ce Bearings For Bearings Position r Half And Plain						
Main Bearing Se	t TM-77	MS-667HX	STD	0.0100/0.0500				
1-2-3 4		MB-2215HX MB-2216HX(F)			0.0015/0.0045			
5		MB-2217HX			0.0015/0.0045			
.0010" More Oi Number 4, 5 w	Performand Il Clearance ith Full Grod er 1, 2, 3 Ha	ce Bearing Wall Bearings For F oved Main Bear as Grooved Upp	ings					
Cam Bearing Set 1-2-3-4-5	t B-1	<b>SH-292S</b> SH-292	STD	1 8992/1 8997	0.0010/0.0060	0.0643	2 0297/2 0317	0.6900
For Year(s): 1963	3-1976	011-202		1.0002/1.000/	0.0010/0.0000	0.0040	2.020772.0017	0.0000
Crankshaft Forg			9770488, 9773384, 97827					
	ID (8.1L) 2001-2007	16V V8 Vorte	С	4.250	"/108.0mm x	4.370	"/111.0mm	24
Rod Bearing (8)	TM-77	CB-743HN	STD,1,9,10,11,19 20,21,30	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	0.8420
NOTE: H-Series Increased Crar Cap Half		ce Narrowed On arance No Dow	One Side For					
Used In Engine	Performandes Without I	CB-743HND ce Dowel Hole In Doweled Conne or Increased Cra	-	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.3252	2 0.8420





	COL	INTER DAT	Ά		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
8 CYL (cont.) 24 496 CI (cont.) Years: 2		6V V8 Vorte	ec .	4.250	'/108.0mm x	4.370	"/111.0mm	24 (cont.)
Rod Bearing (8) NOTE: H-Series I Half, Maximum Thickness May Connecting Ro Crank Fillet Cle	Performance Wall Does N Be Used In I d Narrowed	lot Include Co Engines Witho	out Doweled	2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I Not Include Co Side For Increa Hole In Cap Ha	Performance ating Thickn sed Crank F	ess, Narrowed		2.1990/2.2000	0.0010/0.0031	0.0619	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I .0010" More Oil Increased Cran Cap Half	Performance Clearance N	Narrowed On		2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I .0010" More Oil May Be Used Ir Rod Narrowed Fillet Clearance	Performance Clearance I Engines Wi On One Side	Dowel Hole In thout Dowele	d Connecting	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I .0005" Thinner Hole In Cap Ha Coating Thickn Doweled Conne Increased Cran	Performance For .0010" M If, Maximum ess May Be ecting Rod N	ore Oil Cleara Wall Does No Used In Engin larrowed On C	r Bearing Wall Ince Dowel It Include es Without	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: H-Series I .0005" Thinner Maximum Wall Narrowed On C Clearance No D	Performance For .0010" M Does Not Ind One Side For	ore Oil Cleara clude Coating Increased Cra	nce Thickness,	2.1990/2.2000	0.0020/0.0041	0.0614	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F		CB-743V No Dowel Ho	STD,1,10 le In Cap Half	2.1990/2.2000	0.0009/0.0030	0.0619	2.3247/2.325	2 0.8920
Rod Bearing (8) NOTE: V-Series F Used In Engine Narrowed On C Clearance	Performance s Without Do	weled Conne		2.1990/2.2000	0.0009/0.0034	0.0620	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F .0010" More Oil May Be Used Ir Rod Narrowed Fillet Clearance	Performance Clearance I Engines Wi On One Side	Dowel Hole In thout Dowele	d Connecting	2.1990/2.2000	0.0019/0.0044	0.0615	2.3247/2.325	2 0.8420
Rod Bearing (8) NOTE: V-Series F .0010" More Oil Half	erformance		STD .0005" Thinner For e In Cap	2.1990/2.2000	0.0019/0.0040	0.0614	2.3247/2.325	2 0.8920
Rod Bearing (8) NOTE: M-Series Used In Engine	Performance		STD in Cap Half May Be cting Rod	2.1990/2.2000	0.0010/0.0031	0.0622	2.3247/2.325	2 0.8920





	COUNTER DATA				SHOP DATA					
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH		
							8 CYL	(cont.)		
24 496 CII (cont.) Years: 20		16V V8 Vorte	С	4.250	'/108.0mm x	4.370	"/111.0mm	24 (cont.)		
Main Bearing Set 1-2-3-4 5 NOTE: H-Series P Lower Half		MS-2327H MB-3774H MB-3775H(F) e Grooved Upp	STD•,10• per Half And Plain		0.0008/0.0031 0.0007/0.0030					
Cam Bearing Set 1-2-3-4-5 NOTE: Align Bore Bore		SH-617S SH-617 Vith 2.1195" / 2.	STD 1205" Housing	1.9485/1.9495	0.0006/0.0046	0.0847	2.1195/2.1208	5 0.9900		
Cam Bearing Set 1 2-5 3-4 NOTE: Performan		SH-2144S SH-2144 SH-2145 SH-2146 g Set	STD	1.9487/1.9497	0.0011/0.0047 0.0011/0.0047 0.0011/0.0047	0.0891	2.1290/2.1310	0.9850		

## **HONDA**

ENGINE	YEAR	BORE & STROKE	BLOCK
1590 CC (1.6L) SOHC 8V L4 D16B5 CNG	1998-2000	2.953"/75.0mm X 3.543"/90.0mm	1
1590 CC (1.6L) SOHC 16V L4 D16A6	1988-1991	2.953"/75.0mm X 3.543"/90.0mm	2
1590 CC (1.6L) SOHC 16V L4 D16Y7	1996-2000	2.953"/75.0mm X 3.543"/90.0mm	2
1590 CC (1.6L) SOHC 16V L4 VTEC D16Y5	1996-2000	2.953"/75.0mm X 3.543"/90.0mm	2
1590 CC (1.6L) SOHC 16V L4 VTEC D16Y8	1996-2000	2.953"/75.0mm X 3.543"/90.0mm	2
1590 CC (1.6L) SOHC 16V L4 VTEC D16Z6	1992-1995	2.953"/75.0mm X 3.543"/90.0mm	2
1595 CC (1.6L) DOHC 16V L4 VTEC B16A2	1996-1997, 1999-2000	3.189"/81.0mm X 3.047"/77.4mm	3
1595 CC (1.6L) DOHC 16V L4 VTEC B16A3	1994-1995	3.189"/81.0mm X 3.047"/77.4mm	3
1829 CC (1.8L) SOHC 12V L4 A18A1	1987	3.150"/80.0mm X 3.583"/91.0mm	4
1829 CC (1.8L) SOHC 8V L4 ES1	1983	3.150"/80.0mm X 3.583"/91.0mm	4
1829 CC (1.8L) SOHC 12V L4 ES2	1984-1985	3.150"/80.0mm X 3.583"/91.0mm	4
1829 CC (1.8L) SOHC 12V L4 ES3	1985	3.150"/80.0mm X 3.583"/91.0mm	4
1829 CC (1.8L) SOHC 8V L4 ET2	1984-1986	3.150"/80.0mm X 3.583"/91.0mm	4
1955 CC (2.0L) SOHC 12V L4 A20A1	1987-1989	3.258"/82.8mm X 3.583"/91.0mm	4
1955 CC (2.0L) SOHC 12V L4 A20A3	1987-1989	3.258"/82.8mm X 3.583"/91.0mm	4
1955 CC (2.0L) SOHC 12V L4 BS	1986	3.258"/82.8mm X 3.583"/91.0mm	4
1955 CC (2.0L) SOHC 12V L4 BT	1986	3.258"/82.8mm X 3.583"/91.0mm	4
1955 CC (2.0L) SOHC 12V L4 BTI	1985-1987	3.258"/82.8mm X 3.583"/91.0mm	4
1958 CC (2.0L) SOHC 12V L4 B20A3	1988-1990	3.189"/81.0mm X 3.740"/95.0mm	5
1958 CC (2.0L) DOHC 16V L4 B20A5	1988-1991	3.189"/81.0mm X 3.740"/95.0mm	6
1972 CC (2.0L) DOHC 16V L4 B20B4	1997-1998	3.307"/84.0mm X 3.504"/89.0mm	7
1972 CC (2.0L) DOHC 16V L4 B20Z2	1999-2001	3.307"/84.0mm X 3.504"/89.0mm	7
1997 CC (2.0L) DOHC 16V L4 VTEC F20C1	2000-2003	3.420"/87.0mm X 3.310"/84.0mm	8
1998 CC (2.0L) DOHC 16V L4 VTEC K20A3	2002-2005	3.390"/86.1mm X 3.386"/86.0mm	9
1998 CC (2.0L) DOHC 16V L4 VTEC K20Z3	2006-2011	3.390"/86.1mm X 3.386"/86.0mm	10
2056 CC (2.1L) DOHC 16V L4 B21A1	1990-1991	3.268"/83.0mm X 3.740"/95.0mm	6
2156 CC (2.2L) SOHC 16V L4 F22A1	1990-1996	3.346"/85.0mm X 3.740"/95.0mm	11
2156 CC (2.2L) SOHC 16V L4 F22A4	1990-1991	3.346"/85.0mm X 3.740"/95.0mm	11
2156 CC (2.2L) SOHC 16V L4 F22A6	1991-1993	3.346"/85.0mm X 3.740"/95.0mm	11
2156 CC (2.2L) SOHC 16V L4 F22B2	1994-1997	3.346"/85.0mm X 3.740"/95.0mm	11





ENGINE	YEAR	BORE & STROKE	BLOCK
2156 CC (2.2L) SOHC 16V L4 F22B6	1995-1997	3.346"/85.0mm X 3.740"/95.0mm	11
2156 CC (2.2L) SOHC 16V L4 VTEC F22B1	1994-1997	3.346"/85.0mm X 3.740"/95.0mm	11
2157 CC (2.2L) DOHC 16V L4 VTEC F22C1	2004-2009	3.425"/87.0mm X 3.571"/90.7mm	12
2157 CC (2.2L) DOHC 16V L4 VTEC H22A1	1993-1996	3.425"/87.0mm X 3.571"/90.7mm	11
2157 CC (2.2L) DOHC 16V L4 VTEC H22A4	1997-2001	3.425"/87.0mm X 3.571"/90.7mm	6
2259 CC (2.3L) DOHC 16V L4 H23A1	1992-1996	3.425"/87.0mm X 3.740"/95.0mm	11
2354 CC (2.4L) DOHC 16V L4 i-VTEC K24Z1	2007-2009	3.420"/87.0mm X 3.890"/99.0mm	13
2354 CC (2.4L) DOHC 16V L4 i-VTEC K24Z2	2008-2011	3.420"/87.0mm X 3.890"/99.0mm	13
2354 CC (2.4L) DOHC 16V L4 i-VTEC K24Z3	2008-2011	3.420"/87.0mm X 3.890"/99.0mm	13
2354 CC (2.4L) DOHC 16V L4 i-VTEC K24Z6	2010-2011	3.420"/87.0mm X 3.890"/99.0mm	13
2354 CC (2.4L) DOHC 16V L4 VTEC K24A1	2002-2006	3.420"/87.0mm X 3.890"/99.0mm	13
2354 CC (2.4L) DOHC 16V L4 VTEC K24A4	2003-2006	3.420"/87.0mm X 3.890"/99.0mm	13
2354 CC (2.4L) DOHC 16V L4 VTEC K24A8	2006-2011	3.420"/87.0mm X 3.890"/99.0mm	13

	COL	INTER DAT	ΓΑ		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE			MAX LENGTH
4 CYL				•				
	CC (1.6L) S 998-2000	OHC 8V L	4 D16B5 CNG	2.9	53"/75.0mm	x 3.54	3"/90.0mm	1
Rod Bearing (4) NOTE: H Series F Fillet Clearance	erformance	Narrowed Fo	STD,.026mm,.25mm or Increased Crank alf	1.7707/1.7717	0.0008/0.0015	0.0592	1.8898/1.8907	0.6780
Rod Bearing (4) NOTE: H Series F .0010" More Oil Crank Fillet Cle	Performance Clearance I	Narrowed For		1.7707/1.7717	0.0018/0.0025	0.0587	1.8898/1.8907	0.6780
	CC (1.6L) S	OHC 16V I	L4 D16A6	2.9	53"/75.0mm	x 3.54	3"/90.0mm	2
	CC (1.6L) S	OHC 16V I	L4 D16Y7	2.9	53"/75.0mm	x 3.54	3"/90.0mm	
1590 0		OHC 16V I	L4 VTEC D16Y5	2.9	53"/75.0mm	x 3.54	3"/90.0mm	
1590 0		OHC 16V I	L4 VTEC D16Y8	2.9	53"/75.0mm	x 3.54	3"/90.0mm	
1590 0		OHC 16V I	L4 VTEC D16Z6	2.9	53"/75.0mm	x 3.54	3"/90.0mm	
Rod Bearing (4) NOTE: H Series F Fillet Clearance	erformance	Narrowed Fo	STD,.026mm,.25mm or Increased Crank alf	1.7707/1.7717	0.0008/0.0015	0.0592	1.8898/1.8907	0.6780
Rod Bearing (4) NOTE: H Series F .0010" More Oil Crank Fillet Cle	Performance Clearance I	Narrowed For		1.7707/1.7717	0.0018/0.0025	0.0587	1.8898/1.8907	0.6780





	COUNTER DA	SHOP DATA					
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX	BRG O.D. OR HOUSING BORE	MAX LENGTH
2 1590 ( (cont.) Years: 1 1590 ( Years: 1 Main Bearing Set 1-2-3-4-5 NOTE: H Series R Requires Thrus Part Number T Main Bearing Set 1-2-3-4-5 NOTE: H Series R	MATERIAL NUMBER  CC (1.6L) SOHC 16V I 988-1991 CC (1.6L) SOHC 16V I 996-2000 CC (1.6L) SOHC 16V I 992-1995 t TM-77 MS-1804H MB-3760H Performance Contains Ful th Washer Set, Not Include W-473S t TM-77 MS-1804HX MB-3760HX Performance Bearing Wall	L4 D16A6 L4 D16Y7 L4 VTEC D16Y5 L4 VTEC D16Y8 L4 VTEC D16Z6 STD,.026mm,.25mm I Grooved Bearings and Use with STD	2.9 2.9 2.9 2.9 2.9 2.1644/2.1654		x 3.54 x 3.54 x 3.54 x 3.54 x 3.54	4 CYL 3"/90.0mm 3"/90.0mm 3"/90.0mm 3"/90.0mm 3"/90.0mm	(cont.) 2 (cont.)
Bearings Requ Use with Part N Thrust Washer S NOTE: Contains	I Clearance Contains Fullires Thrust Washer Set, Number TW-473S et TW-473S MB-3176W 2 Pieces, Position Numbe	ot Included STD	2.4114/2.4213	;		3.2185/3.228	3 0.0980
Years: 1 1595 (	CC (1.6L) DOHC 16V 996-1997, 1999-2000 CC (1.6L) DOHC 16V 994-1995			89"/81.0mm 89"/81.0mm			
Rod Bearing (4) NOTE: H-Series I	TM-77 <b>CB-1777H</b> Performance No Dowel Ho (To Be Replace	STD,.25mm ble In Cap Half and By CB-1353H)	1.7707/1.7717	0.0014/0.0043	0.0590	1.8898/1.890	7 0.7677
	TM-77 CB-1777HX Performance Bearing Wal I Clearance No Dowel Hol (To Be Replace		1.7707/1.7717	0.0024/0.0053	0.0585	1.8898/1.890	7 0.7677
Lower Half Red		STD,.026mm,.25mm per Half And Plain Not	2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.323	7 0.7870
.0010" More Oi Plain Lower Ha	t TM-77 MS-2095HX MB-3760HX Performance Bearing Wall I Clearance Grooved Uppoil If Requires Thrust Washe vith Part Number TW-4738	er Half And r Set, Not	2.1644/2.1654	0.0012/0.0037	0.0776	3 2.3228/2.323	7 0.7870
	et TW-473S MB-3176W 2 Pieces; Position Number 95H, MS-2095HX	STD er 4; Use with Part	2.4114/2.4213	ı		3.2185/3.228	3 0.0980





	SHOP DATA						
POSITION MATE	RING PART ERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
4 CYL 4 1829 CC (1.8	8L) SOHC 12V L	4 A18A1	3.1	50"/80.0mm	x 3.58	3"/91.0mm	4
Years: 1987	• • • • • • • • • • • • • • • • • • • •	, , , , , , , , , , , , , , , , , , , ,	х о.оо	. ,	•		
1829 CC (1.6 Years: 1983	3.1	50"/80.0mm	x 3.58	3"/91.0mm			
1829 CC (1.6 Years: 1984-19	3.1	50"/80.0mm	x 3.58	3"/91.0mm			
1829 CC (1.8	3.1	50"/80.0mm	x 3.58	3"/91.0mm			
Years: 1985 1829 CC (1.3 Years: 1984-19	3.1	50"/80.0mm	x 3.58	3"/91.0mm			
1955 CC (2.1 Years: 1987-19	3.2	58"/82.8mm	x 3.58	3"/91.0mm			
<b>1955 CC (2.</b> Years: 1987-19	<b>0L) SOHC 12V L</b> 89	4 A20A3	3.2	58"/82.8mm	x 3.58	3"/91.0mm	
1955 CC (2.0 Years: 1986	0L) SOHC 12V L	4 BS	3.2	58"/82.8mm	x 3.58	3"/91.0mm	
	0L) SOHC 12V L	4 BT	3.2	58"/82.8mm	x 3.58	3"/91.0mm	
<b>1955 CC (2.</b> Years: 1985-19	0L) SOHC 12V L 87	4 BTI	3.2	58"/82.8mm	x 3.58	3"/91.0mm	
Rod Bearing (4) TM NOTE: H-Series Perform Oil Hole in Bearing	1-77 CB-1353H nance No Dowel Ho	STD,.026mm,.25mm le In Cap Half with	1.7707/1.7717	0.0005/0.0034	0.0590	1.8898/1.890	7 0.7680
Rod Bearing (4) TM NOTE: H-Series Perform .0010" More Oil Cleara Half with Oil Hole in Bo	ance No Dowel Hole		1.7707/1.7717	0.0015/0.0044	0.0586	1.8898/1.890	7 0.7680
5 1958 CC (2.0 Years: 1988-19	0L) SOHC 12V L 90	4 B20A3	3.1	89"/81.0mm	x 3.74	0"/95.0mm	5
Rod Bearing (4) TM NOTE: H-Series Perform Oil Hole in Bearing	1-77 CB-1353H nance No Dowel Ho	STD,.026mm,.25mm le In Cap Half with	1.7707/1.7717	0.0005/0.0034	0.0590	1.8898/1.890	7 0.7680
Rod Bearing (4) TM NOTE: H-Series Perform .0010" More Oil Cleara Half with Oil Hole in Bo	ance No Dowel Hole		1.7707/1.7717	0.0015/0.0044	0.0586	1.8898/1.890	7 0.7680
	1-77 <b>MS-1804H</b> MB-3760H	STD,.026mm,.25mm	0.1644/0.1654	0.0000/0.0007	0.0701	0.0000/0.000	7 0 7070
1-2-3-4-5 NOTE: H Series Perform Requires Thrust Wash Part Number TW-473S	nance Contains Full er Set, Not Included		2.1644/2.1654	0.0002/0.0027	0.0781	2.3220/2.323	0.7870
1-2-3-4-5	MS-1804HX MB-3760HX	STD	2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.323	7 0.7870
NOTE: H Series Perform .0010" More Oil Cleara							
Bearings Requires The Use with Part Number	rust Washer Set, No						
Thrust Washer Set	<b>TW-473S</b> MB-3176W	STD	2.4114/2.4213	}		3.2185/3.228	3 0.0980
NOTE: Contains 2 Piece Number MS-1804H, M		4 Use with Part					





	col		SHOP DATA					
	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
Years: 198	88-1991	DOHC 16V L4			39"/81.0mm 38"/83.0mm			4 CYL 6
Years: 199 2157 CO	90-1991 C (2.2L) [		VTEC H22A4		25"/87.0mm			
Rod Bearing (4) NOTE: H-Series Pe Oil Hole in Bearing	TM-77 erformance	CB-1780H No Dowel Hole	STD,.25mm In Cap Half with	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.0087	0.7650
Rod Bearing (4) NOTE: H-Series Pe Not Include Coat Cap Half	erformance		STD Maximum Wall Does lole In	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.0087	0.7650
Rod Bearing (4) NOTE: H-Series Pe .0010" More Oil ( Half	erformance			1.8888/1.8898	0.0018/0.0046	0.0584	2.0079/2.0087	0.7650
Rod Bearing (4) NOTE: H-Series Pe .0005" Thinner Fo Maximum Wall D No Dowel Hole Ir	erformance or .0010" N loes Not In	More Oil Clearand clude Coating Ti	e	1.8888/1.8898	0.0018/0.0046	0.0584	2.0079/2.0087	0.7650
Main Bearing Set 1-2-3-4-5 NOTE: H Series Pe Requires Thrust Part Number TW	rformance Washer Se		•	2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.3237	0.7870
Main Bearing Set 1-2-3-4-5 NOTE: H Series Pe .0010" More Oil C Bearings Require Use with Part Nu	erformance Clearance es Thrust V	Contains Full Gro Vasher Set, Not I	poved	2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.3237	0.7870
Thrust Washer Set	Pieces, Po		STD Use with Part	2.4114/2.4213			3.2185/3.2283	0.0980
Years: 199	C (2.0L) [ 97-1998	DOHC 16V L4			07"/84.0mm 07"/84.0mm			7
Years: 199 Rod Bearing (4) NOTE: H Series Pe Fillet Clearance I	99-2001 TM-77 erformance	CB-1461HN Narrowed For Ir	STD,.026mm,.25mm		0.0008/0.0015			0.6780
Rod Bearing (4) NOTE: H Series Pe .0010" More Oil ( Crank Fillet Clea	TM-77 erformance Clearance	CB-1461HXN Bearing Wall .00 Narrowed For Inc	creased	1.7707/1.7717	0.0018/0.0025	0.0587	1.8898/1.8907	0.6780
Main Bearing Set 1-2-3-4-5 NOTE: H Series Pe Lower Half Requ Included Use wit	rformance	t Washer Set, No		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.3237	0.7870





	COUNTER DAT	ΓΑ		SHOP	DATA	1	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OR HOUSING BORE	MAX LENGTH
4 CYL (cont.) 7 1972 (cont.) Years: 1	CC (2.0L) DOHC 16V I	L4 B20B4	3.30	07"/84.0mm	x 3.50	4"/89.0mm	7 (cont.)
1972 (	CC (2.0L) DOHC 16V I 999-2001	L4 B20Z2	3.30	07"/84.0mm	x 3.50	4"/89.0mm	
.0010" More Oi	MB-3760HX Performance Bearing Wall I Clearance Grooved Uppe	er Half And	2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.323	7 0.7870
	lf Requires Thrust Washer vith Part Number TW-473S						
Thrust Washer S	MB-3176W	STD	2.4114/2.4213			3.2185/3.228	3 0.0980
	2 Pieces; Position Numbe 95H, MS-2095HX	er 4; Use with Part					
	CC (2.0L) DOHC 16V I	L4 VTEC F20C1	3.42	20"/87.0mm	x 3.31	0"/84.0mm	8
Rod Bearing NOTE: H-Series I Oil Hole in Bea	TM-77 CB-1780H Performance No Dowel Ho ring	STD,.25mm ble In Cap Half with	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.008	7 0.7650
	TM-77 CB-1780HK Performance with TriArmo ating Thickness, No Dowe		1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.008	7 0.7650
	TM-77 CB-1780HX Performance Bearing Wall I Clearance No Dowel Hole		1.8888/1.8898	0.0018/0.0046	0.0584	2.0079/2.008	7 0.7650
.0005" Thinner	TM-77 CB-1780HXK Performance with TriArmo For .0010" More Oil Cleare Does Not Include Coating In Cap Half	ance	1.8888/1.8898	0.0018/0.0046	0.0584	2.0079/2.008	7 0.7650
	MB-3962H Performance Contains Full at Washer Set, Not Include		2.1644/2.1654	0.0004/0.0028	0.0982	2.3622/2.3630	0.7870
.010" More Oil Bearings Requ	t TM-77 MS-2309HX MB3962HX Performance Bearing Wall Clearance Contains Full G ires Thrust Washer Set, No Number TW-473S	irooved	2.1644/2.1654	0.0014/0.0038	0.0977	2.3622/2.3630	0.7870
Thrust Washer S	MB-3176W	STD	2.4114/2.4213			3.2185/3.228	3 0.0980
	2 Pieces, Position Number 99H, MS2309HX	r 4 Use with Part					
9 1998 0	CC (2.0L) DOHC 16V I	L4 VTEC K20A3	3.39	90"/86.1mm	x 3.38	6"/86.0mm	9
	MB-3760H Performance Grooved Upp		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.323	7 0.7870
	quires Thrust Washer Set, vith Part Number TW-473S						





	CO	UNTER DAT	A		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIAI	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
								(cont.)
(cont.) Years: 2	002-2005		4 VTEC K20A3	3.39	90"/86.1mm	x 3.38	6"/86.0mm	9 (cont.)
Main Bearing Set 1-2-3-4-5		MS-2095HX MB-3760HX	STD	2 1644/2 1654	0.0012/0.0037	0.0776	2 2228/2 222	7 0 7870
	Performance Clearance If Requires	Bearing Wall . Grooved Upper Thrust Washer		2.1044/2.1004	0.001270.0007	0.0770	2.0220/2.020	0.7070
Thrust Washer Se		<b>TW-473S</b> MB-3176W	STD	2.4114/2.4213			3.2185/3.228	3 0.0980
NOTE: Contains 2 Number MS-20	,		4; Use with Part					
	CC (2.0L) I 006-2011	DOHC 16V L	4 VTEC K20Z3	3.39	90"/86.1mm	x 3.38	6"/86.0mm	10
Rod Bearing NOTE: H Series F		CB-1861H	STD•	1.8888/1.8898	0.0005/0.0029	0.0588	2.0079/2.008	7 0.6100
Rod Bearing NOTE: H Series F .0010" More Oil	erformance	CB-1861HX Bearing Wall .	STD• 0005" Thinner For	1.8888/1.8898	0.0015/0.0039	0.0583	2.0079/2.008	7 0.6100
Main Bearing Set 1-2-3-4-5 NOTE: H Series F Lower Half Req Included Use w	erformance uires Thrus	t Washer Set, N		2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.323	7 0.7870
Main Bearing Set 1-2-3-4-5 NOTE: H Series F .0010" More Oil Plain Lower Ha Included Use w	Performance Clearance If Requires	Grooved Upper Thrust Washer		2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.323	7 0.7870
Thrust Washer Se		<b>TW-473S</b> MB-3176W	STD	2.4114/2.4213			3.2185/3.228	3 0.0980
NOTE: Contains 2 Number MS-20			4; Use with Part					
Years: 1	990-1996	SOHC 16V L			46"/85.0mm			
Years: 1	990-1991	SOHC 16V L			46"/85.0mm			
Years: 1	991-1993	SOHC 16V L			46"/85.0mm			
Years: 1	994-1997	SOHC 16V L			46"/85.0mm			
Years: 1	995-1997	SOHC 16V L			46"/85.0mm			
Years: 1	994-1997		4 VTEC H2281		46"/85.0mm			
Years: 1 2259 0	993-1996	DOHC 16V L	4 VTEC H22A1 4 H23A1		25"/87.0mm 25"/87.0mm			
Rod Bearing (4)	TM-77 Performance	CB-1780H e No Dowel Hol	STD,.25mm e In Cap Half with	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.008	7 0.7650





COUNTER DATA			SHOP	DATA		
- COUNTENDANA			0.101	DAIL	BRG O.D. O	D
BEARING OR BEARING PART POSITION MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	HOUSING	MAX LENGTH
4 CYL (cont.)						
11 2156 CC (2.2L) SOHC 16V L4 (cont.) Years: 1990-1996	F22A1	3.3	46"/85.0mm	x 3.74	0"/95.0mm	11 (cont.)
2156 CC (2.2L) SOHC 16V L4 Years: 1990-1991	F22A4	3.3	46"/85.0mm	x 3.74	0"/95.0mm	1
2156 CC (2.2L) SOHC 16V L4 Years: 1991-1993	F22A6	3.3	46"/85.0mm	x 3.74	0"/95.0mm	1
2156 CC (2.2L) SOHC 16V L4 Years: 1994-1997	F22B2	3.3	46"/85.0mm	x 3.74	0"/95.0mm	1
2156 CC (2.2L) SOHC 16V L4 Years: 1995-1997	F22B6	3.3	46"/85.0mm	x 3.74	0"/95.0mm	1
2156 CC (2.2L) SOHC 16V L4 Years: 1994-1997	VTEC F22B1	3.3	46"/85.0mm	x 3.74	0"/95.0mm	1
2157 CC (2.2L) DOHC 16V L4 Years: 1993-1996	VTEC H22A1	3.4	25"/87.0mm	x 3.57	1"/90.7mm	1
2259 CC (2.3L) DOHC 16V L4 Years: 1992-1996	H23A1	3.4	25"/87.0mm	x 3.74	0"/95.0mm	1
Rod Bearing (4) TM-77 CB-1780HK	STD	1.8888/1.8898	0.0008/0.0036	0.0589	2.0079/2.008	37 0.7650
NOTE: H-Series Performance with TriArmor N Not Include Coating Thickness, No Dowel H Cap Half						
Rod Bearing (4) TM-77 CB-1780HX NOTE: H-Series Performance Bearing Wall .00 .0010" More Oil Clearance No Dowel Hole In Half		1.8888/1.8898	3 0.0018/0.0046	0.0584	2.0079/2.008	37 0.7650
Rod Bearing (4) TM-77 CB-1780HXK NOTE: H-Series Performance with TriArmor B .0005" Thinner For .0010" More Oil Clearand Maximum Wall Does Not Include Coating Th No Dowel Hole In Cap Half	e	1.8888/1.8898	3 0.0018/0.0046	0.0584	2.0079/2.008	37 0.7650
12 2157 CC (2.2L) DOHC 16V L4 Years: 2004-2009	VTEC F22C1	3.4	25"/87.0mm	x 3.57	1"/90.7mm	12
Rod Bearing (4) TM-77 CB-1780H NOTE: H-Series Performance No Dowel Hole Oil Hole in Bearing	STD,.25mm In Cap Half with	1.8888/1.8898	3 0.0008/0.0036	0.0589	2.0079/2.008	37 0.7650
Rod Bearing (4) TM-77 CB-1780HK NOTE: H-Series Performance with TriArmor Not Include Coating Thickness, No Dowel H		1.8888/1.8898	3 0.0008/0.0036	0.0589	2.0079/2.008	37 0.7650
Rod Bearing (4) TM-77 CB-1780HX NOTE: H-Series Performance Bearing Wall .00 .0010" More Oil Clearance No Dowel Hole In Half		1.8888/1.8898	3 0.0018/0.0046	0.0584	2.0079/2.008	37 0.7650
Rod Bearing (4) TM-77 CB-1780HXK NOTE: H-Series Performance with TriArmor B .0005" Thinner For .0010" More Oil Clearand Maximum Wall Does Not Include Coating Th No Dowel Hole In Cap Half	е	1.8888/1.8898	3 0.0018/0.0046	0.0584	2.0079/2.008	37 0.7650
Main Bearing Set TM-77 MS-2309H 1-5 MB-3962H NOTE: H Series Performance Contains Full Gi	STD•,.026mm•	2.1644/2.1654	0.0004/0.0028	0.0982	2.3622/2.363	30 0.7870
Requires Thrust Washer Set, Not Included U Part Number TW-473S	•					





	col	JNTER DATA			SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
							4 CYL	(cont.)
(cont.) Years: 2	2004-2009	DOHC 16V L4		3.42	25"/87.0mm	x 3.57	1"/90.7mm	12 (cont.)
	Performance Clearance C ires Thrust V	ontains Full Groo Washer Set, Not I	oved	2.1644/2.1654	0.0014/0.0038	0.0977	2.3622/2.3630	0.7870
Thrust Washer S		<b>TW-473S</b> MB-3176W	STD	2.4114/2.4213			3.2185/3.228	3 0.0980
NOTE: Contains Number MS230			Use with Part					
	CC (2.4L) [ 2007-2009	DOHC 16V L4	i-VTEC K24Z1	3.42	20"/87.0mm	x 3.89	0"/99.0mm	13
	CC (2.4L) [ 2008-2011	DOHC 16V L4	i-VTEC K24Z2	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
	CC (2.4L) [ 2008-2011	DOHC 16V L4	i-VTEC K24Z3	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
	CC (2.4L) I	DOHC 16V L4	i-VTEC K24Z6	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
	CC (2.4L) I	DOHC 16V L4	VTEC K24A1	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
	CC (2.4L) [	DOHC 16V L4	VTEC K24A4	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
	CC (2.4L) I	DOHC 16V L4	VTEC K24A8	3.42	20"/87.0mm	x 3.89	0"/99.0mm	
Rod Bearing (4) NOTE: H Series I		CB-1861H	STD•	1.8888/1.8898	0.0005/0.0029	0.0588	2.0079/2.0087	7 0.6100
Rod Bearing (4) NOTE: H Series I .0010" More Oi	Performance	CB-1861HX Bearing Wall .00	STD• 005" Thinner For	1.8888/1.8898	0.0015/0.0039	0.0583	2.0079/2.008	7 0.6100
Main Bearing Se 1-2-3-4-5		<b>MS-2095H</b> MB-3760H	STD,.026mm,.25mm	2.1644/2.1654	0.0002/0.0027	0.0781	2.3228/2.323	7 0.7870
NOTE: H Series I Lower Half Red Included Use v	quires Thrus	t Washer Set, No						
Main Bearing Se 1-2-3-4-5		MS-2095HX MB-3760HX	STD	2.1644/2.1654	0.0012/0.0037	0.0776	2.3228/2.323	7 0.7870
	I Clearance	Grooved Upper H Thrust Washer S	lalf And					
Thrust Washer S NOTE: Contains Number MS-20	2 Pieces; Po		STD ; Use with Part	2.4114/2.4213			3.2185/3.228	3 0.0980





ENGINE	YEAR	BORE & STROKE	BLOCK

1998 CC (2.0L) DOHC 16V L4 Nissan SR20DE

1991-1996, 1999-2002 3.390"/86.1mm X 3.386"/86.0mm

1

	COL	JNTER DATA	1		SHOP	DATA	١	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL								
	C (2.0L) [ 991-1996, 19		Nissan SR20DE	3.39	90"/86.1mm	x 3.38	6"/86.0mm	1
Rod Bearing (4) NOTE: H Series P		CB-1629H	STD•	1.8880/1.8890	0.0006/0.0026	0.0592	2.0079/2.0084	0.6750
Rod Bearing (4) NOTE: H Series P .0010" More Oil	erformance	CB-1629HX Bearing Wall .0	STD• 0005" Thinner For	1.8880/1.8890	0.0016/0.0036	0.0587	2.0079/2.0084	0.6750
Main Bearing Set 1-2-3-4-5 NOTE: H Series P Lower Half Req Included Use w	erformance uires Thrus	MB3478H Grooved Uppe t Washer Set, N		2.1636/2.1646	0.0004/0.0030	0.0778	2.3206/2.3216	0.0755
Main Bearing Set 1-5 NOTE: H Series P .0010" More Oil Plain Lower Hal Included Use w	erformance Clearance f Requires	Grooved Upper Thrust Washer S	Half And	2.1636/2.1646	0.0014/0.0040	0.0773	2.3206/2.3216	0.0755
Thrust Washer Se NOTE: Contains 2 Number MS-20	Pieces; Po		STD 2; Use with Part	2.4314			3.2878	0.0770

# MAZDA

ENGINE	YEAR	BORE & STROKE	BLOCK	
1489 CC (1.5L) DOHC 16V L4 Z5-DE	1995-1998	2.965"/75.3mm X 3.268"/83.0mm	1	
1597 CC (1.6L) SOHC 16V L4 B6	1992-1993	3.071"/78.0mm X 3.307"/84.0mm	2	
1597 CC (1.6L) SOHC 8V L4 B6B	1986-1994	3.071"/78.0mm X 3.307"/84.0mm	2	
1597 CC (1.6L) DOHC 16V L4 B6-ZE	1990-1996	3.071"/78.0mm X 3.307"/84.0mm	2	
1597 CC (1.6L) DOHC 16V Turbo. L4 B6E	1988-1989	3.071"/78.0mm X 3.307"/84.0mm	2	
1839 CC (1.8L) SOHC 8V L4 BPE	1990-1994	3.268"/83.0mm X 3.346"/85.0mm	2	
1839 CC (1.8L) DOHC 16V L4 BP-4W	1999-2000	3.268"/83.0mm X 3.346"/85.0mm	2	
1839 CC (1.8L) DOHC 16V L4 BP-Z3	2001-2005	3.268"/83.0mm X 3.346"/85.0mm	2	
1839 CC (1.8L) DOHC 16V L4 BP-ZE	1994-1997	3.268"/83.0mm X 3.346"/85.0mm	2	
1839 CC (1.8L) DOHC 16V L4 BPD	1990-1998	3.268"/83.0mm X 3.346"/85.0mm	2	
122 CID (2.0L) DOHC 16V L4 Ford Zetec	2001-2004	3.339"/84.8mm X 3.461"/87.9mm	3	
1998 CC (2.0L) DOHC 16V L4 LFD	2004-2011	3.440"/87.5mm X 3.270"/83.1mm	4	
140 CID (2.3L) DOHC 16V L4 Ford Duratec	2001-2009	3.440"/87.4mm X 3.700"/94.0mm	5	
140 CID (2.3L) DOHC 16V Turbo. L4 Ford MZR L3T	2006-2012	3.440"/87.4mm X 3.700"/94.0mm	6	





ENGINE	YEAR	BORE & STROKE	BLOCK
140 CID (2.3L) DOHC 16V L4 Ford MZR L3V	2003-2010	3.440"/87.4mm X 3.700"/94.0mm	5
140 CID (2.3L) DOHC 16V L4 Ford MZR L3X	2007-2009	3.440"/87.4mm X 3.700"/94.0mm	5
140 CID (2.3L) DOHC 16V L4 Ford Duratec Hybrid	2008	3.440"/87.4mm X 3.700"/94.0mm	5
152 CID (2.5L) DOHC 16V L4 Ford Duratec	2009-2011	3.500"/88.9mm X 3.940"/100.1mm	7
152 CID (2.5L) DOHC 16V L4 Ford Duratec Hybrid	2009	3.500"/88.9mm X 3.940"/100.1mm	7

# **CRANKSHAFT FORGING NUMBERS**

FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK	FORGING NO	STROKE	BLOCK
B3C7	3.268in/83.0mm	1	B5A-6303-B	3.268in/83.0mm	1	B6S	3.307in/84.0n	nm 2
B4A-6303-B	3.268in/83.0mm	1	B630	3.307in/84.0mm	2	DOHC	3.307in/84.0n	nm 2
B4A-B	3.268in/83.0mm	1	B657	3.307in/84.0mm	2			

	COL	JNTER DAT	A		SHOP	DATA	4	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
				_				4 CYL
	C (1.5L) [ 995-1998	DOHC 16V L	4 Z5-DE	2.9	65"/75.3mm	x 3.26	8"/83.0mm	1
Main Bearing Set 1-2-3-4-5 NOTE: H Series P Lower Half Req Included Use wi	erformance uires Thrust	MB3961H Grooved Upp t Washer Set, I		1.9661/1.9668	0.0005/0.0023	0.0792	2.1257/2.1262	2 0.6700
Main Bearing Set 1-2-3-4-5 NOTE: H Series P .0010" More Oil Plain Lower Hal Included Use wi	erformance Clearance ( f Requires )	MB3961HX • Bearing Wall . Grooved Uppe Fhrust Washer		1.9661/1.9668	0.0015/0.0033	0.0787	2.1257/2.1262	2 0.6700
Thrust Washer Se NOTE: Contains 2 Number MS-180	Pieces, Po		STD 4 Use with Part	2.2539			2.7165	0.1000
Crankshaft Forgi	ng B3	C7, B4A-6303-	B, B4A-B, B5A-6303-B					





	COUNTER DAT	Δ	Т	SHOP	DATA	<u> </u>	
	0001112112711		+	0	27117	BRG O.D. OR	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL							
	CC (1.6L) SOHC 16V L 1992-1993	.4 B6	3.0	71"/78.0mm	x 3.30	7"/84.0mm	2
	CC (1.6L) SOHC 8V L4 1986-1994	1 B6B	3.0	71"/78.0mm	x 3.30	7"/84.0mm	
	CC (1.6L) DOHC 16V I	_4 B6-ZE	3.0	71"/78.0mm	x 3.30	7"/84.0mm	
1597	CC (1.6L) DOHC 16V 1	Γurbo. L4 B6E	3.0	71"/78.0mm	x 3.30	7"/84.0mm	
1839	CC (1.8L) SOHC 8V L4	BPE	3.2	68"/83.0mm	x 3.34	6"/85.0mm	
1839	1990-1994 CC (1.8L) DOHC 16V I	_4 BP-4W	3.2	68"/83.0mm	x 3.34	6"/85.0mm	
1839	1999-2000 CC (1.8L) DOHC 16V I	_4 BP-Z3	3.2	68"/83.0mm	x 3.34	6"/85.0mm	
1839	2001-2005 CC (1.8L) DOHC 16V I	_4 BP-ZE	3.2	68"/83.0mm	x 3.34	6"/85.0mm	
1839	1994-1997 CC (1.8L) DOHC 16V I 1990-1998	_4 BPD	3.2	68"/83.0mm	x 3.34	6"/85.0mm	
Rod Bearing (4) NOTE: H Series		STD,.026mm	1.7693/1.7699	0.0005/0.0023	0.0592	1.8898/1.8904	0.6750
Rod Bearing (4) NOTE: H Series .0010" More O	Performance Bearing Wall	STD .0005" Thinner For	1.7693/1.7699	0.0015/0.0033	0.0587	1.8898/1.8904	0.6750
Main Bearing Se 1-2-3-4-5	et TM-77 MS-1802H MB3961H	STD,.026mm•	1.9661/1.9668	0.0005/0.0023	0.0792	2.1257/2.1262	0.6700
Lower Half Re	Performance Grooved Upp quires Thrust Washer Set, with Part Number TW-472S	Not					
Main Bearing Se 1-2-3-4-5	et TM-77 <b>MS-1802HX</b> MB3961HX	STD	1.9661/1.9668	0.0015/0.0033	0.0787	2.1257/2.1262	0.6700
.0010" More O Plain Lower H	Performance Bearing Wall il Clearance Grooved Uppe alf Requires Thrust Washer with Part Number TW-472S	er Half And r Set, Not					
Thrust Washer S	Set TW-472S MB-3173W 2 Pieces, Position Number	STD r 4 Use with Part	2.2539			2.7165	0.1000
Number MS-1	802H, MS-1802HX						
Crankshaft For							
	CID (2.0L) DOHC 16V L 2001-2004	4 Ford Zetec	3.3	39"/84.8mm	x 3.46	1"/87.9mm	3
Rod Bearing (4) NOTE: H-Series	TM-77 CB-1774H Performance No Dowel Ho	STD,.026mm,.25mm ble In Cap Half	1.8461/1.8468	0.0008/0.0017	0.0585	1.9642/1.9650	0.8020
Rod Bearing (4) NOTE: H-Series		STD .0005" Thinner For	1.8461/1.8468	0.0018/0.0027	0.0580	1.9642/1.9650	0.8020
Main Bearing Se 1-2-4-5 3	t TM-77 <b>MS-2208HX</b> MB-3753HX MB-3754HX(F)	STD		0.0013/0.0026 0.0017/0.0040			
	Performance Bearing Wall il Clearance Grooved Uppe						





	COUNTER DAT	Ά		SHOP	DATA	\	
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE		BRG O.D. OF HOUSING BORE	MAX LENGTH
			•				4 CYL
	CC (2.0L) DOHC 16V I 004-2011	_4 LFD	3.4	40"/87.5mm	x 3.27	0"/83.1mm	4
Rod Bearing NOTE: H-Series I	TM-77 CB-1840H Performance No Dowel Ho	STD ble in Cap Haif	1.8496/1.8503	0.0010/0.0020	0.0599	1.9694/1.970	2 0.6653
	t TM-77 <b>MS-2245H</b> MB-3822H MB-3823H(F) Performance Grooved Upp	STD per Half And Plain		0.0004/0.0024 0.0006/0.0027			
	D (2.3L) DOHC 16V L	4 Ford Duratec	3.4	40"/87.4mm	x 3.70	0"/94.0mm	5
140 CI	001-2009 ID (2.3L) DOHC 16V L 003-2010	4 Ford MZR L3V	3.4	40"/87.4mm	x 3.70	0"/94.0mm	
140 CI	D (2.3L) DOHC 16V L	4 Ford MZR L3X	3.4	40"/87.4mm	x 3.70	0"/94.0mm	
	D (2.3L) DOHC 16V L	4 Ford Duratec Hyb	rid 3.4	40"/87.4mm	x 3.70	0"/94.0mm	
Rod Bearing (4) NOTE: H-Series I	TM-77 CB-1838H Performance No Dowel Ho	STD,.25mm ble In Cap Half	1.9677/1.9685	0.0010/0.0020	0.0598	2.0875/2.088	3 0.6653
	TM-77 CB-1838HK Performance with TriArmo ating Thickness, No Dowe		1.9677/1.9685	0.0010/0.0020	0.0598	2.0875/2.088	3 0.6653
	TM-77 CB-1838HX Performance Bearing Wall I Clearance No Dowel Hole		1.9677/1.9685	0.0020/0.0030	0.0593	2.0875/2.088	3 0.6653
Main Bearing Set 1-2-4-5 3	MB-3822H MB-3823H(F)	STD		0.0004/0.0024 0.0006/0.0027			
NOTE: H-Series I Lower Half	Performance Grooved Upp	per Half And Plain					
	D (2.3L) DOHC 16V T	urbo. L4 Ford MZR	L3T 3.4	40"/87.4mm	x 3.70	0"/94.0mm	6
Rod Bearing NOTE: H Series F	TM-77 CB-1925H Performance	STD,.026mm	2.0465/2.0472	0.0004/0.0022	0.0588	2.1662/2.166	7 0.6650
Rod Bearing NOTE: H-Series I .0010" More Oil	TM-77 CB-1925HX Performance Bearing Wall I Clearance	STD .0005" Thinner For	2.0465/2.0472	0.0014/0.0032	0.0583	2.1667/2.166	7 0.6650
Main Bearing Set 1-2-4-5 3 NOTE: H-Series I Lower Half	t TM-77 MS-2245H MB-3822H MB-3823H(F) Performance Grooved Upp	STD per Half And Plain		0.0004/0.0024 0.0006/0.0027			
7 152 CI	D (2.5L) DOHC 16V L	4 Ford Duratec	3.50	0"/88.9mm x	3.940	"/100.1mm	7
	009-2011 I <b>D (2.5L) DOHC 16V L</b> 009	4 Ford Duratec Hyb	rid 3.500	0"/88.9mm x	3.940	"/100.1mm	
Main Bearing Set 1-2-4-5 3		STD per Half And Plain		0.0004/0.0024 0.0006/0.0027			





ENGINE	YEAR	BORE & STROKE	BLOCK	
1595 CC (1.6L) DOHC 16V L4 4G61	1991-1992	3.240"/82.3mm X 2.953"/75.0mm	1	
1595 CC (1.6L) DOHC 16V Turbo. L4 4G61	1989-1990	3.240"/82.3mm X 2.953"/75.0mm	1	
1597 CC (1.6L) SOHC 8V Turbo. L4 G32B	1985-1988	3.028"/76.9mm X 3.386"/86.0mm	1	
1755 CC (1.8L) SOHC 8V L4 4G37	1989-1994	3.173"/80.6mm X 3.386"/86.0mm	1	
1794 CC (1.8L) SOHC 8V L4 G62B	1983	3.173"/80.6mm X 3.460"/88.0mm	1	
1794 CC (1.8L) SOHC 8V Turbo. L4 G62B	1984-1988	3.173"/80.6mm X 3.460"/88.0mm	1	
1997 CC (2.0L) SOHC 8V L4 4G63	1989-1992	3.346"/85.0mm X 3.465"/88.0mm	2	
1997 CC (2.0L) SOHC 16V L4 4G63	1993	3.346"/85.0mm X 3.465"/88.0mm	3	
1997 CC (2.0L) SOHC 8V L4 G63B	1983-1989	3.346"/85.0mm X 3.465"/88.0mm	4	
1997 CC (2.0L) DOHC 16V L4 4G63	1989-1994	3.346"/85.0mm X 3.465"/88.0mm	2	
1997 CC (2.0L) DOHC 16V Turbo. L4 4G63T	1990-1999, 2003-2006	3.346"/85.0mm X 3.465"/88.0mm	5	
1998 CC (2.0L) DOHC 16V Turbo. L4 MIVEC 4B11	2008-2011	3.400"/86.0mm X 3.400"/86.0mm	6	
2351 CC (2.4L) SOHC 8V L4 4G64	1989-1996	3.406"/86.5mm X 3.937"/100.0mm	3	
2351 CC (2.4L) SOHC 16V L4 4G64	1993-2005	3.406"/86.5mm X 3.937"/100.0mm	7	
2351 CC (2.4L) SOHC 8V L4 G64B	1985-1988	3.406"/86.5mm X 3.937"/100.0mm	4	
2351 CC (2.4L) DOHC 16V L4 4G64	1994	3.406"/86.5mm X 3.937"/100.0mm	3	
2378 CC (2.4L) SOHC 16V L4 4G69	2004	3.420"/87.0mm X 3.940"/100.0mm	8	
2497 CC (2.5L) SOHC 24V V6 6G73	1995	3.290"/83.5mm X 2.992"/76.0mm	9	
2972 CC (3.0L) SOHC 12V V6 6G72	1988-1999	3.587"/91.1mm X 2.992"/76.0mm	10	
2972 CC (3.0L) SOHC 24V V6 6G72	1995-2005	3.587"/91.1mm X 2.992"/76.0mm	10	
2972 CC (3.0L) DOHC 24V V6 6G72	1991-1999	3.587"/91.1mm X 2.992"/76.0mm	10	
2972 CC (3.0L) DOHC 24V Turbo. V6 6G72T	1991-1999	3.587"/91.1mm X 2.992"/76.0mm	10	

## CONNECTING ROD FORGING NUMBERS

 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK

 72G
 2.992in/76.0mm
 10
 72W
 2.992in/76.0mm
 10
 1

#### CRANKSHAFT FORGING NUMBERS

 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK

 19N
 2.992in/76.0mm
 10
 G37
 3.386in/86.0mm
 1
 T3A
 2.992in/76.0mm
 10

	COUNTER DA		SHOP DATA				
BEARING OR POSITION	BEARING PART MATERIAL NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. O HOUSING BORE	R MAX LENGTH
CYL			•				
	CC (1.6L) DOHC 16V	L4 4G61	3.2	40"/82.3mm	x 2.95	3"/75.0mn	1
	CC (1.6L) DOHC 16V	Turbo. L4 4G61	3.2	40"/82.3mm	x 2.95	3"/75.0mn	ו
	CC (1.6L) SOHC 8V T	urbo. L4 G32B	3.0	28"/76.9mm	x 3.38	6"/86.0mn	1
1755 (	CC (1.8L) SOHC 8V L	4 4G37	3.1	73"/80.6mm	x 3.38	6"/86.0mn	1
	CC (1.8L) SOHC 8V L	4 G62B	3.1	73"/80.6mm	x 3.46	0"/88.0mn	1
1794 (	CC (1.8L) SOHC 8V T	urbo. L4 G62B	3.1	73"/80.6mm	x 3.46	60"/88.0mn	ו





	INTER DATA		1	SHOP			
I							
BEARING OR BEARING POSITION MATERIAL		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BORE	MAX LENGTH
							. (cont.)
1 1595 CC (1.6L) D (cont.) Years: 1991-1992				40"/82.3mm			(cont.)
<b>1595 CC (1.6L) D</b> Years: 1989-1990				40"/82.3mm			
1597 CC (1.6L) S Years: 1985-1988				28"/76.9mm			
<b>1755 CC (1.8L) S</b> Years: 1989-1994				73"/80.6mm			
<b>1794 CC (1.8L) S</b> Years: 1983				73"/80.6mm			
1794 CC (1.8L) S Years: 1984-1988				73"/80.6mm			
Rod Bearing (4) TM-77 C NOTE: H-Series Performance Fillet Clearance No Dowel H		STD,.026mm,.25mm ncreased Crank	1.7710/1.7717	0.0006/0.0027	0.0587	1.8897/1.890	5 0.8550
Rod Bearing (4) TM-77 C NOTE: H-Series Performance .0010" More Oil Clearance N Crank Fillet Clearance No D	larrowed For Inc	reased	1.7710/1.7717	0.0016/0.0037	0.0582	1.8897/1.890	5 0.8550
Crankshaft Forging G33		p r ruii					
	-	Cea	2.2	46"/85.0mm	v 2 46	Ell /00 0mm	2
2 1997 CC (2.0L) S Years: 1989-1992	ONC OV L4 4	Gos	3.3	40 765.011111	X 3.40	5 700.UIIIII	l <sup>2</sup>
1997 CC (2.0L) D Years: 1989-1994	OHC 16V L4	4G63	3.3	46"/85.0mm	x 3.46	5"/88.0mm	
Rod Bearing (4) TM-77 C For Year(s): 1992-1994 NOTE: H Series Performance	CB-1643H	STD,.026mm,.25mm	1.7710/1.7717	0.0004/0.0025	0.0589	1.8897/1.890	5 0.8320
Crank Fillet Clearance No D	•						
Rod Bearing (4) TM-77 ( For Year(s): 1992-1994	CB-1643HX	STD	1.7710/1.7717	0.0014/0.0035	0.0583	1.8897/1.890	5 0.8320
NOTE: H Series Performance .0010" More Oil Clearance L Increased Crank Fillet Clear Cap Half	arger Chamfer F	or					
Rod Bearing (4) TM-77 C For Year(s): 1989-1992	CB-1120HN	STD,.026mm,.25mm	1.7710/1.7717	0.0006/0.0027	0.0587	1.8897/1.890	5 0.8550
NOTE: H-Series Performance Fillet Clearance No Dowel H (Thru 3/92)		ncreased Crank					
For Year(s): 1989-1992	CB-1120HXN	STD	1.7710/1.7717	0.0016/0.0037	0.0582	1.8897/1.890	5 0.8550
NOTE: H-Series Performance .0010" More Oil Clearance N Crank Fillet Clearance No D	larrowed For Inc	reased					
(Thru 3/92)		AMD 444	-				
1-2-4-5 N	MS-2039H MB-3504H MB-3505H(F)	STD,.026mm,.25mm		0.0005/0.0025 0.0005/0.0025			
For Year(s): 1992-1994 NOTE: H Series Performance Lower Half (From 4/92)	Grooved Upper	Half And Plain					





	CO	UNTER DATA	1		SHOP	DATA	\	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL (cont.)								
(cont.) Years: 1	989-1992 CC (2.0L)	SOHC 8V L4 DOHC 16V L4			46"/85.0mm 46"/85.0mm			2 (cont.)
Main Bearing Se 1-2-4-5 3		MS-2039HX MB-3504HX MB-3505HX(F)	STD		0.0015/0.0035 0.0015/0.0035			
For Year(s): 1992 NOTE: H Series F .0010" More Oi (From 4/92)	Performance	•	0005" Thinner For					
Balance Shaft Bearing Set	AL-3	SH-1469S	STD					
LH; Rear RH; Front RH; Rear		SH-1468 SH-1467 SH-1469		1.6129 1.6526 1.6129	0.0010/0.0031 0.0010/0.0031 0.0010/0.0031	0.0593	1.7726	0.8268 0.7480 0.8268
3 1997 (	CC (2.0L)	SOHC 16V L4	4G63	3.34	46"/85.0mm	x 3.46	5"/88.0mm	3
		SOHC 8V L4	4G64	3.40	6"/86.5mm x	3.937	"/100.0mm	
	CC (2.4L)	DOHC 16V L	1 4G64	3.40	6"/86.5mm x	3.937	"/100.0mm	
Rod Bearing (4) For Year(s): 1992 NOTE: H Series F Crank Fillet Cle	-1996 Performance	CB-1643H e Larger Chamfe Dowel Hole In C		1.7710/1.7717	0.0004/0.0025	0.0589	1.8897/1.8905	0.8320
Rod Bearing (4) For Year(s): 1992 NOTE: H Series F .0010" More Oi	TM-77 -1996 Performance I Clearance	CB-1643HX	STD 0005" Thinner For For	1.7710/1.7717	0.0014/0.0035	0.0583	1.8897/1.8905	5 0.8320
Main Bearing Set 1-2-4-5 3		MS-2039H MB-3504H MB-3505H(F)	STD,.026mm,.25mm		0.0005/0.0025 0.0005/0.0025			
For Year(s): 1992 NOTE: H Series F Lower Half (From 4/92)		e Grooved Uppe	r Half And Plain					
Main Bearing Set 1-2-4-5 3 For Year(s): 1992	-1994	MS-2039HX MB-3504HX MB-3505HX(F)	STD		0.0015/0.0035 0.0015/0.0035			
.0010" More Oi (From 4/92)			0005" Thinner For					
Balance Shaft Bearing Set	AL-3	SH-1469S	STD					
LH; Rear RH; Front RH; Rear		SH-1468 SH-1467 SH-1469		1.6129 1.6526 1.6129	0.0010/0.0031 0.0010/0.0031 0.0010/0.0031	0.0593	1.7726	0.8268 0.7480 0.8268





	CO	UNTER DAT	Ά		SHOP	DATA	1	
BEARING OR POSITION	BEARING MATERIA	PART L NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
		SOHC 8V L4	G63B	3.3	46"/85.0mm	x 3.46	5"/88.0mm	4 CYL 4
2351	983-1989 CC (2.4L) 985-1988	SOHC 8V L4	G64B	3.40	6"/86.5mm x	3.937	"/100.0mm	
Rod Bearing (4) NOTE: H-Series I Fillet Clearance	Performanc		STD,.026mm,.25mm r Increased Crank alf	1.7710/1.7717	0.0006/0.0027	0.0587	1.8897/1.8905	0.8550
Rod Bearing (4) NOTE: H-Series I .0010" More Oi Crank Fillet Cle	Performanc I Clearance	Narrowed For		1.7710/1.7717	0.0016/0.0037	0.0582	1.8897/1.8905	0.8550
	990-1999, 2		Turbo. L4 4G63T	3.3	46"/85.0mm	x 3.46	5"/88.0mm	5
Rod Bearing (4) For Year(s): 1992 NOTE: H Series F Crank Fillet Cle	-2006 Performance		STD,.026mm,.25mm  fer For Increased Can Half	1.7710/1.7717	0.0004/0.0025	0.0589	1.8897/1.8905	0.8320
Rod Bearing (4) For Year(s): 1992	TM-77 -2006 Performance I Clearance	CB-1643HX e Bearing Wall Larger Chamfe	STD .0005" Thinner For er For	1.7710/1.7717	0.0014/0.0035	0.0583	1.8897/1.8905	0.8320
Rod Bearing (4) For Year(s): 1990 NOTE: H-Series I Fillet Clearance (Thru 3/92)	-1992 Performanc		STD,.026mm,.25mm r Increased Crank	1.7710/1.7717	0.0006/0.0027	0.0587	1.8897/1.8905	0.8550
Rod Bearing (4) For Year(s): 1990 NOTE: H-Series I .0010" More Oi Crank Fillet Cle (Thru 3/92)	-1992 Performanc I Clearance	Narrowed For		1.7710/1.7717	0.0016/0.0037	0.0582	1.8897/1.8905	0.8550
Main Bearing Set 1-2-3-4-5 For Year(s): 1997 NOTE: H-Series I Lower Half Red Included Use w	-2006 Performanc quires Thrus	st Washer Set, I		2.2435/2.2441	0.0005/0.0025	0.0785	2.4016/2.4024	0.8050
Main Bearing Set 1-2-3-4-5 For Year(s): 1997 NOTE: H-Series I .0010" More Oi Plain Lower Ha Included Use w	-2006 Performanc I Clearance If Requires	Grooved Uppe Thrust Washer	Set, Not	2.2435/2.2441	0.0015/0.0035	0.0780	2.4016/2.4024	0.8050
Main Bearing Set 1-2-4-5 3 For Year(s): 1992 NOTE: H Series F Lower Half (From 4/92)	-1999	MS-2039H MB-3504H MB-3505H(F) e Grooved Upp	STD,.026mm,.25mm er Half And Plain		0.0005/0.0025 0.0005/0.0025			





	СО	UNTER DATA	١	SHOP DATA				
BEARING OR POSITION	BEARING		AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX	BRG O.D. OR HOUSING	MAX LENGTH
4 CYL (cont.)								
5 1997 C (cont.) Years: 19			urbo. L4 4G63T	3.34	16"/85.0mm	x 3.46	5"/88.0mm	5 (cont.)
Main Bearing Set 1-2-4-5 3 For Year(s): 1992-		MS-2039HX MB-3504HX MB-3505HX(F)	STD		0.0015/0.0035 0.0015/0.0035			
NOTE: H Series P .0010" More Oil (From 4/92)	erformance	e Bearing Wall .0	0005" Thinner For					
Thrust Washer Se	t	TW-677S MB-3854W	STD	2.4842/2.4941			3.1693/3.179	1 0.0830
For Year(s): 1997- NOTE: Contains 2 Number MS-226	Pieces, Po	sition Number	3 Use with Part					
Balance Shaft Bearing Set	AL-3	SH-1469S	STD					
LH; Rear RH; Front RH; Rear For Year(s): 1990-	1000	SH-1468 SH-1467 SH-1469		1.6129 1.6526 1.6129	0.0010/0.0031 0.0010/0.0031 0.0010/0.0031	0.0593	1.7726	0.8268 0.7480 0.8268
6 1998 C	C (2.0L)	DOHC 16V To	urbo. L4 MIVEC 4B1	1 3.40	00"/86.0mm	x 3.40	0"/86.0mm	6
Rod Bearing	TM-77	CB-1918H	STD•,.026mm•	2.0454/2.0461	0.0005/0.0021	0.0589	2.1654/2.165	7 0.6750
NOTE: H Series P Rod Bearing NOTE: H Series P .0010" More Oil	TM-77 erformance	CB-1918HX	STD• 0005" Thinner For	2.0454/2.0461	0.0015/0.0031	0.0584	2.1654/2.165	7 0.6750
Main Bearing Set 1-2-3-4-5 NOTE: H Series P Lower Half Req Included Use w	erformance uires Thrus	t Washer Set, N		2.0462/2.0467	0.0004/0.0022	0.7880	2.2047/2.2054	4 0.7100
Main Bearing Set 1-2-3-4-5 NOTE: H Series P .0010" More Oil Plain Lower Hal Included Use wi	erformance Clearance f Requires	Grooved Upper Thrust Washer S	Half And	2.0462/2.0467	0.0014/0.0032	0.0783	2.2047/2.205	4 0.7100
Thrust Washer Se	t	TW-694S MB3948W	STD	2.0462/2.0467			2.2047/2.2054	4 0.0770
NOTE: Contains 2 Number MS-230	,	sition Number 3	3 Use with Part					
	C (2.4L)	SOHC 16V L4	1 4G64	3.406	6"/86.5mm x	3.937	"/100.0mm	7
Rod Bearing (4) For Year(s): 1993- NOTE: H Series P Crank Fillet Clea	TM-77 2003 erformance			1.7710/1.7717	0.0004/0.0025	0.0589	1.8897/1.890	5 0.8320
Rod Bearing (4) For Year(s): 1993- NOTE: H Series P .0010" More Oil Increased Cranl Cap Half	TM-77 2003 erformance Clearance	CB-1643HX Bearing Wall .0 Larger Chamfer	STD 0005" Thinner For For	1.7710/1.7717	0.0014/0.0035	0.0583	1.8897/1.8909	5 0.8320





SHOP	DATA	١ -	
VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	MAX LENGTH
		4 CYL	(cont.)
"/86.5mm x	3.937	"/100.0mm	7 (cont.)
0.0005/0.0025	0.0785	5 2.4016/2.402	4 0.8050
0.0015/0.0035	0.0780	2.4016/2.402	4 0.8050
0.0005/0.0025 0.0005/0.0025			
0.0015/0.0035 0.0015/0.0035			
		3.1693/3.179	1 0.0830
0.0010/0.0031 0.0010/0.0031 0.0010/0.0031	0.0593	3 1.7726	0.8268 0.7480 0.8268
"/87.0mm x	3.940	"/100.0mm	8
0.0005/0.0025	0.0785	5 2.4016/2.402	4 0.8050
0.0015/0.0035	0.0780	2.4016/2.402	4 0.8050
		3.1693/3.179	1 0.0830
			3.1693/3.179





	COL	UNTER DAT	Ά	SHOP DATA				
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
4 CYL (cont.)								
		SOHC 16V L	4 4G69	3.420	)"/87.0mm x	3.940	"/100.0mm	
(cont.) Years: 2 Balance Shaft		SH-1469S	STD	1				(cont.)
Bearing Set	AL-0	011-14030	010					
LH; Rear		SH-1468		1.6129	0.0010/0.0031			0.8268
RH; Front RH; Rear		SH-1467 SH-1469		1.6526 1.6129	0.0010/0.0031			0.7480
6 CYL		3H-1409		1.0129	0.0010/0.0031	0.0009	1.7555	0.0200
	C (2.51.)	SOHC 24V V	I6 6G73	3 20	90"/83.5mm	v 2 99	2"/76 0mm	9
Years: 1		30110 244 4	0 00/0	0.2.	700.0111111	A 2.00	2 // 0.0111111	9
Rod Bearing (6) NOTE: H-Series I		CB-1411H e No Dowel Ho	STD+,.026mm+	1.9677/1.9685	0.0007/0.0027	0.0587	2.0866/2.0868	0.6120
Rod Bearing (6) NOTE: H-Series I .0010" More Oil Half	Performance		STD• .0005" Thinner For In Cap	1.9670/1.9674	0.0017/0.0037	0.0582	2.0866/2.0874	0.6120
Thrust Washer S	et	TW-458S	STD					
		MB-3108W(L)		2.5984/2.6083			3.0492/3.0594	
NOTE: Contains		MB-3108W(U)	3 Hee with Part	2.5984/2.6083			3.0492/3.0594	0.0778
Number MS-22			5 Ose with Part					
10 2972 0	CC (3.0L) \$	SOHC 12V V	6 6G72	3.58	37"/91.1mm	x 2.99	2"/76.0mm	10
2972	988-1999 CC (3.0L) \$ 995-2005	SOHC 24V V	6 6G72	3.58	37"/91.1mm	x 2.99	2"/76.0mm	
2972 (		DOHC 24V V	/6 6G72	3.587"/91.1mm x 2.992"/76.0mm				
2972		DOHC 24V 1	urbo. V6 6G72T	3.58	37"/91.1mm	x 2.99	2"/76.0mm	
Rod Bearing (6) NOTE: H-Series I	TM-77	CB-1411H e No Dowel Ho	STD•,.026mm• le In Cap Half	1.9677/1.9685	0.0007/0.0027	0.0587	2.0866/2.0868	0.6120
Rod Bearing (6) NOTE: H-Series I .0010" More Oil Half	Performance		STD• .0005" Thinner For In Cap	1.9670/1.9674	0.0017/0.0037	0.0582	2.0866/2.0874	0.6120
Main Bearing Set 1-2-3-4 NOTE: H Series F		MS-2226H MB3791H	STD+,.026mm+	2.3614/2.3622	0.0007/0.0032	0.0783	2.5197/2.5204	0.7120
Lower Half Red Included Use w	uires Thrus	t Washer Set, I						
Main Bearing Set 1-2-3-4		MS-2226HX MB3791HX	STD•	2.3614/2.3622	0.0017/0.0042	0.0778	2.5197/2.5204	0.0712
	Performance Clearance If Requires	Bearing Wall Grooved Uppe Thrust Washer				0.01.0		0.01.12
Thrust Washer S		TW-458S MB-3108W(L) MB-3108W(U)	STD	2.5984/2.6083 2.5984/2.6083			3.0492/3.0594 3.0492/3.0594	
NOTE: Contains Number MS-22	4 Pieces, Po	sition Number	3 Use with Part	2.0001/2.0000			SISTORI VIVOS	. 0.0110
Connecting Rod Crankshaft Forg		2G, 72W 9N, T3A						





ENGINE	YEAR	BORE & STROKE	BLOCK

1998 CC (2.0L) DOHC 16V L4 SR20DE

1991-2001

3.390"/86.1mm X 3.386"/86.0mm

1

	COL	JNTER DAT	Α		SHOP	DATA	<b>\</b>	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
				•				4 CYL
1 1998 C Years: 19	C (2.0L) I	3.39	90"/86.1mm	x 3.38	6"/86.0mm	1		
Rod Bearing (4) NOTE: H Series P		CB-1629H	STD•	1.8880/1.8890	0.0006/0.0026	0.0592	2.0079/2.0084	0.6750
Rod Bearing (4) NOTE: H Series P .0010" More Oil	erformance	CB-1629HX Bearing Wall	STD• .0005" Thinner For	1.8880/1.8890	0.0016/0.0036	0.0587	2.0079/2.0084	0.6750
Main Bearing Set 1-2-3-4-5 NOTE: H Series P Lower Half Required Use with	erformance uires Thrus	t Washer Set,		2.1636/2.1646	0.0004/0.0030	0.0778	2.3206/2.3216	0.0755
Main Bearing Set 1-5 NOTE: H Series P .0010" More Oil Plain Lower Hal Included Use wi	erformance Clearance f Requires	MB3478HX • Bearing Wall Grooved Uppe Thrust Washer		2.1636/2.1646	0.0014/0.0040	0.0773	2.3206/2.3216	0.0755
Thrust Washer Se NOTE: Contains 2 Number MS-201	Pieces; Po		STD r 2; Use with Part	2.4314			3.2878	0.0770

# **SUBARU**

ENGINE	YEAR	BORE & STROKE	BLOCK
1820 CC (1.8L) SOHC 16V H4 EJ18E	1993-1997	3.461*/87.9mm X 2.953*/75.0mm	1
1994 CC (2.0L) DOHC 16V Turbo. H4 EJ205	2002-2005	3.620"/92.0mm X 2.950"/75.0mm	1
2212 CC (2.2L) SOHC 16V H4 EJ222	1999-2001	3.815"/96.9mm X 2.953"/75.0mm	1
2212 CC (2.2L) SOHC 16V H4 EJ223	1999-2001	3.815"/96.9mm X 2.953"/75.0mm	1
2212 CC (2.2L) SOHC 16V H4 EJ22E	1990-1996, 1998-1999	3.815"/96.9mm X 2.953"/75.0mm	1
2212 CC (2.2L) SOHC 16V H4 EJ22EZ	1996-1998	3.815"/96.9mm X 2.953"/75.0mm	1
2212 CC (2.2L) SOHC 16V Turbo. H4 EJ22T	1991-1994	3.815"/96.9mm X 2.953*/75.0mm	1
2457 CC (2.5L) SOHC 16V H4 EJ251	1999-2004	3.917"/99.5mm X 3.110"/79.0mm	1
2457 CC (2.5L) SOHC 16V H4 EJ252	2000	3.917"/99.5mm X 3.110"/79.0mm	1
2457 CC (2.5L) SOHC 16V H4 EJ253	2001-2011	3.917"/99.5mm X 3.110"/79.0mm	1
2457 CC (2.5L) SOHC 16V H4 EJ259	2004	3.917"/99.5mm X 3.110"/79.0mm	1
2457 CC (2.5L) DOHC 16V Turbo. H4 EJ255	2004-2011	3.917"/99.5mm X 3.110"/79.0mm	1
2457 CC (2.5L) DOHC 16V Turbo. H4 EJ257	2004-2013	3.917"/99.5mm X 3.110"/79.0mm	1
2457 CC (2.5L) DOHC 16V H4 EJ25D	1996-1999	3.917"/99.5mm X 3.110"/79.0mm	1





ENGINE	YEAR	BORE & STROKE	BLOCK
2457 CC (2.5L) DOHC 16V H4 E (25DZ	1998	3 917"/99 5mm X 3 110"/79 0mm	1

COUN.	TER DATA		SHOP	DATA	<b>\</b>	
BEARING OR BEARING PARTICLE NO. 1		STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
					01/25 0	
1 1820 CC (1.8L) SOI	HC 16V H4	3.4	61"/87.9mm	x 2.95	3"/75.0mm	1
1994 CC (2.0L) DO	HC 16V Turbo. H4	3.6	20"/92.0mm	x 2.95	0"/75.0mm	
2212 CC (2.2L) SOI	HC 16V H4	3.8	15"/96.9mm	x 2.95	3"/75.0mm	
2212 CC (2.2L) SOI	HC 16V Turbo. H4	3.8	15"/96.9mm	x 2.95	3"/75.0mm	
2457 CC (2.5L) SOI	HC 16V H4	3.9	17"/99.5mm	x 3.11	0"/79.0mm	
2457 CC (2.5L) DO	HC 16V Turbo. H4	3.9	17"/99.5mm	x 3.11	0"/79.0mm	
2457 CC (2.5L) DO	HC 16V H4	3.9	17"/99.5mm	x 3.11	0"/79.0mm	
Rod Bearing (4) TM-77 CB-NOTE: H Series Performance	-1657H STD•,.25mm•	2.0466/2.0472	0.0002/0.0021	0.0590	2.1654/2.166	1 0.0650
Rod Bearing (4) TM-77 CB- NOTE: H Series Performance Be .0010" More Oil Clearance		2.0466/2.0472	0.0012/0.0031	0.0585	2.1654/2.166	1 0.0650
2-4 MBS	3981H 3982H 3840H(F)	2.3616/2.3622	2 0.0003/0.0016 2 0.0003/0.0016 2 0.0003/0.0016	0.0789	2.5197/2.520	4 0.5950
2-4 MBS	3552HXA 3552HXB 3804HX(F) earing Wall .0005" Thinner For	2.3616/2.3622	2 0.0012/0.0032 2 0.0012/0.0032 2 0.0012/0.0032	0.0784	2.5197/2.520	5 0.5905

# TOYOTA

ENGINE	YEAR	BORE & STROKE	BLOCK
1796 CC (1.8L) DOHC 16V L4 2ZZGE	2000-2006	3.230"/82.0mm X 3.350"/85.0mm	1
2997 CC (3.0L) DOHC 24V L6 2JZGE	1993-1998	3.386"/86.0mm X 3.386"/86.0mm	2
2997 CC (3.0L) DOHC 24V Turbo. L6 2JZGTE	1993-1998	3.386"/86.0mm X 3.386"/86.0mm	2





COUNTER DATA			SHOP DATA					
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL		MAX LENGTH
				•				4 CYL
	CC (1.8L) [ 2000-2006	OOHC 16V	L4 2ZZGE	3.2	30"/82.0mm	x 3.35	0"/85.0mm	1
Rod Bearing (4) NOTE: H Series I		CB-1920H	STD•,.026mm•	1.7713/1.7717	0.0005/0.0024	0.0588	1.8898/1.8907	0.6250
Rod Bearing (4) NOTE: H Series I .0010" More Oi	Performance	CB-1920HX Bearing Wall	STD• .0005" Thinner For	1.7713/1.7717	0.0015/0.0034	0.0583	1.8898/1.8907	0.6250
								6 CYL
Years: 1	993-1998	OOHC 24V			86"/86.0mm			2
	CC (3.0L) [ 993-1998	OOHC 24V	Turbo. L6 2JZGTE	3.3	86"/86.0mm	x 3.38	6"/86.0mm	
Rod Bearing (6) NOTE: H-Series		CB-1628H No Dowel He	STD,.25mm‡ ole In Cap Half	2.0465/2.0472	0.0014/0.0021	0.0595	2.1663/2.1670	0.7600
Rod Bearing (6) NOTE: H-Series .0010" More Oi Half	Performance		STD I .0005" Thinner For e In Cap	2.0465/2.0472	0.0024/0.0031	0.0590	2.1663/2.1670	0.7600
Main Bearing Se 1 2-3-4-5-6-7 NOTE: H Series I Lower Half Red Included Use w	Performance quires Thrust	Washer Set,			0.0005/0.0023 0.0005/0.0023			
Main Bearing Set 1 2-3-4-5-6-7	Performance	MS-2014HX MB-3477HX MB-3550HX Bearing Wall Grooved Uppe Thrust Washe	STD•  .0005" Thinner Forer Half And r Set, Not		0.0015/0.0033 0.0015/0.0033			
Thrust Washer S  NOTE: Contains Number MS-20	4 Pieces, Po	TW-589S MB-3477W(L) MB-3477W(U) sition Numbe	STD r 3 Use with Part	2.6535 2.6535			3.2244 3.2244	0.0776 0.0776

# **VOLKSWAGEN**

ENGINE	YEAR	BORE & STROKE	BLOCK
1588 CC (1.6L) SOHC 8V L4 1V DIESEL	1989-1992	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V L4 CR DIESEL	1981-1983	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V L4 CS DIESEL	1982-1984	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V Turbo, L4 CY DIESEL	1982-1984	3.012"/76.5mm X 3.385"/86.0mm	1



ENGINE	YEAR	BORE & STROKE	BLOCK
1588 CC (1.6L) SOHC 8V L4 JK DIESEL	1983-1984	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V Turbo. L4 MD DIESEL	1985	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V L4 ME DIESEL	1985-1992	3.012"/76.5mm X 3.385"/86.0mm	1
1588 CC (1.6L) SOHC 8V Turbo. L4 MF DIESEL	1985-1992	3.012"/76.5mm X 3.385"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 2H	1990-1993	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 ABG	1991-1993	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 ACC	1993-1998	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 GX	1985-1987	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 HT	1985-1986	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 JH	1983-1989	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 JN	1984-1985, 1987-1990	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 MZ	1985-1986	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 PF	1987-1992	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 RD	1985-1988	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 RV	1988-1992	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) SOHC 8V L4 UM	1987	3.189"/81.0mm X 3.386"/86.0mm	1
1780 CC (1.8L) DOHC 16V L4 PL	1987-1989	3.189"/81.0mm X 3.386"/86.0mm	1
1781 CC (1.8L) SOHC 8V SC L4 PG	1990-1992	3.190"/81.0mm X 3.400"/86.4mm	1
1781 CC (1.8L) DOHC 20V Turbo. L4 APH	1999-2001	3.190"/81.0mm X 3.400"/86.4mm	1
1984 CC (2.0L) SOHC 8V L4 ABA	1993-2002	3.248"/82.5mm X 3.650"/92.7mm	1
1984 CC (2.0L) SOHC 8V L4 AEG	1998-2001	3.248"/82.5mm X 3.650"/92.7mm	1
1984 CC (2.0L) DOHC 16V L4 9A	1990-1994	3.248"/82.5mm X 3.650"/92.7mm	1
2144 CC (2.1L) SOHC 10V L5 KM	1984	3.130"/79.5mm X 3.400"/86.4mm	2
2144 CC (2.1L) SOHC 10V L5 WE	1984	3.130"/79.5mm X 3.400"/86.4mm	2
2226 CC (2.2L) SOHC 10V L5 JT	1986-1987	3.189"/81.0mm X 3.386"/86.0mm	2
2226 CC (2.2L) SOHC 10V L5 KX	1985-1988	3.189"/81.0mm X 3.386"/86.0mm	2
2459 CC (2.5L) SOHC 10V L5 Audi AAF	1992-1994	3.190"/81.0mm X 3.760"/95.5mm	3

## CRANKSHAFT FORGING NUMBERS

 FORGING NO
 STROKE
 BLOCK
 FORGING NO
 STROKE
 BLOCK

 035D
 3.386in/86.0mm
 2
 035D
 3.400in/86.4mm
 2
 |

	COU	NTER DATA			SHOP	DATA	4	
BEARING OR POSITION	BEARING MATERIAL	PART NUMBER	AVAILABLE UNDERSIZES	STD SHAFT DIAMETER	VERT OIL CLEARANCE	MAX WALL	BRG O.D. OF HOUSING BORE	R MAX LENGTH
4 CYL								
1 1588	CC (1.6L) S	OHC 8V L4 [	DIESEL	3.0	12"/76.5mm	x 3.38	5"/86.0mm	1
1588	CC (1.6L) S	OHC 8V Tur	bo. L4 DIESEL	3.0	12"/76.5mm	x 3.38	5"/86.0mm	
1780	CC (1.8L) S	OHC 8V L4		3.1	89"/81.0mm	x 3.38	6"/86.0mm	
1780	CC (1.8L) D	OHC 16V L4		3.1	89"/81.0mm	x 3.38	6"/86.0mm	
1781	CC (1.8L) S	OHC 8V SC	L4	3.1	90"/81.0mm	x 3.40	0"/86.4mm	
1781	CC (1.8L) D	OHC 20V Tu	ırbo. L4	3.1	90"/81.0mm	x 3.40	0"/86.4mm	
1984	CC (2.0L) S	OHC 8V L4		3.2	248"/82.5mm	x 3.65	60"/92.7mm	





1984 CC (2.0L) DOHC 16V L4	3.248"/82.5mm x 3.650"/92.7mm
Rod Bearing (4) TM-77 CB-1426H STD•,.026mm• NOTE: H Series Performance	1.8802/1.8810 0.0005/0.0027 0.0553 1.9921/1.9929 0.7470
Rod Bearing (4) TM-77 CB-1426HX STD• NOTE: H Series Performance Bearing Wall .0005" Thinner For .0010" More Oil Clearance	1.8802/1.8810 0.0015/0.0037 0.0548 1.9921/1.9929 0.7470
	5 CYL
2 2144 CC (2.1L) SOHC 10V L5	3.130"/79.5mm x 3.400"/86.4mm
2226 CC (2.2L) SOHC 10V L5	3.189"/81.0mm x 3.386"/86.0mm
Rod Bearing (5) TM-77 CB-1426H STD•,.026mm• NOTE: H Series Performance	1.8802/1.8810 0.0005/0.0027 0.0553 1.9921/1.9929 0.7470
Rod Bearing (5) TM-77 CB-1426HX STD• NOTE: H Series Performance Bearing Wall .0005" Thinner For .0010" More Oil Clearance	1.8802/1.8810 0.0015/0.0037 0.0548 1.9921/1.9929 0.7470
Crankshaft Forging 035D	
3 2459 CC (2.5L) SOHC 10V L5 Audi	3.190"/81.0mm x 3.760"/95.5mm
Rod Bearing TM-77 CB-1426H STD•,.026mm• NOTE: H Series Performance	1.8802/1.8810 0.0005/0.0027 0.0553 1.9921/1.9929 0.7470
Rod Bearing TM-77 CB-1426HX STD•  NOTE: H Series Performance Bearing Wall .0005" Thinner For  .0010" More Oil Clearance	1.8802/1.8810 0.0015/0.0037 0.0548 1.9921/1.9929 0.7470





ACL	Clevite	ACL	Clevite
1B1442H025	CB-1442H026mm	 1B663H	CB-663HN-30
1B1442H25	CB-1442H25mm	1B663H-001	CB-663HN-1
1B1442H-STD	CB-1442H	1B663H-009	CB-663HN-9
1B1442HX-STD	CB-1442HX	1B663H-010	CB-663HN-10
1B1663H-001	CB-1663H-1	1B663H-011	CB-663HN-11
1B1663H-010	CB-1663H-10	1B663H-020	CB-663HN-20
1B1663H-STD	CB-1663H	1B663H-09	CB-663H-9
1B1663HX-STD	CB-1663HX	1B663H-1	CB-663H-1
1B1665HD-001	CB-1665HD-1	1B663H-10	CB-663H-1
1B1665HD-001	CB-1665HND1	1B663H-10	CB-663H-10
1B1665HD-STD	CB-1665HD	1B663H-11	CB-663H-11
1B1665HD-STD	CB-1665HND	1B663H-20	CB-663H-20
1B1665HXD-STD	CB-1665HXD	1B663H-30	CB-663HN-30
1B1665HXD-STD	CB-1665HXND	1B663HD-01	CB-663HD-1
1B1808H025	CB-1808HN026mm	1B663HD-01	CB-663HND-1
1B1808H25	CB-1808HN25mm	1B663HD-010	CB-663HND-10
1B1808H-STD	CB-1808HN	1B663HD-10	CB-663HD-10
1B1808HX-STD	CB-1808HXN	1B663HD-STD	CB-663HD
1B481H	CB-481H	1B663HD-STD	CB-663HND
1B481H-001	CB-481HN-1	1B663H-STD	CB-663HN
1B481H-01	CB-481H-1	1B663HXD-STD	CB-663HXD
1B481H-010	CB-481HN-10	1B663HXD-STD	CB-663HXND
1B481H-1	CB-481H-1	1B663HX-STD	CB-663HX
1B481H-10	CB-481H-10	1B663HX-STD	CB-663HXN
1B481H-STD	CB-481HN	1B743H	CB-743HN-30
1B481HX	CB-481HX	1B743H-01	CB-743H-1
1B481HX-STD	CB-481HXN	1B743H-01	CB-743HN-1
1B527HD	CB-527HD	1B743H-09	CB-743H-9
1B527HD-01	CB-527HD-1	1B743H-09	CB-743HN-9
1B527HD-010	CB-527HND-10	1B743H-1	CB-743H-1
1B527HD-010	CB-527HD-10	1B743H-10	CB-743H-10
1B527HD-10	CB-527HND	1B743H-10	CB-743HN-10
1B527HD-STD	CB-527HXND	1B743H-10	CB-743H-11
1B527HXD	CB-527HXD		CB-743HN-11
		1B743H-11	
1B634H	CB-634H	1B743H-20	CB-743HN 20
1B634H-001	CB-634HN-1	1B743H-20	CB-743HN-20
1B634H-009	CB-634HN-9	1B743H-30 1B743HD-01	CB-743HN-30
1B634H-01	CB-634H-1 CB-634HN-10		CB-743HD-1
1B634H-010	<u> </u>	1B743HD-01	CB-743HND-1
1B634H-011	CB-634HN-11	1B743HD-10 1B743HD-10	CB-743HD-10
1B634H-1 1B634H-10	CB-634H-1 CB-634H-10		CB-743HND-10
		1B743HD-STD	CB-743HD
1B634HD-010	CB-634HND-10	1B743HD-STD	CB-743HND
1B634HD10	CB-634HD-10	1B743H-STD	CB-743H
1B634HD-STD	CB-634HD	1B743H-STD	CB-743HN
1B634HD-STD	CB-634HND	1B743HXD-STD	CB-743HXD
1B634H-STD	CB-634HN	1B743HXD-STD	CB-743HXND
1B634HX	CB-634HX	1B743HX-STD	CB-743HX
1B634HX-STD	CB-634HXN	1B743HX-STD	CB-743HXN
1B663H	CB-663H	1B745H-01	CB-745H-1





ACL	Clevite
1B745H-01	CB-745HN-1
1B745H-1	CB-745H-1
1B745H-10	CB-745H-10
1B745H-10	CB-745HN-10
1B745HD-10	CB-745HD-10
1B745HD-10	CB-745HND-10
1B745HD-STD	CB-745HD
1B745HD-STD	CB-745HND
1B745H-STD	CB-745H
1B745H-STD	CB-745HN
1B745HX-STD	CB-745HX
1B745HX-STD	CB-745HXN
1B818H-10	CB-818H-10
1B818H-10	CB-818HN-10
1B818H-STD	CB-818H
1B818H-STD	CB-818HN
	CB-927H-1
1B927H-01	
1B927H-1	CB-927H-1
1B927H-10	CB-927H-10 CB-927HN-10
1B927H-10	
1B927H-STD	CB-927H
1B927H-STD	CB-927HN
4B1146H025	CB-1120HN026mm
4B1146H25	CB-1120HN25mm
4B1146H-STD	CB-1120HN
4B1146HX-STD	CB-1120HXN
4B1185H025	CB1643HN026MM
4B1185H025	CB-1643H026MM
4B1185H25	CB1643HN25MM
4B1185H25	CB-1643H25MM
4B1185H-STD	CB-1643HN
4B1185H-STD	CB-1643H
4B1185HX-STD	CB1643HXN
4B1185HX-STD	CB-1643HX
4B1236H-025MM	CB-1918H026MM
4B1236H-STD	CB-1918H
4B1236HX-STD	CB-1918HX
4B1606H025	CB-1426H026MM
4B1606H-STD	CB-1426H
4B1606HX-STD	CB-1426HX
4B1856HSTD	CB-1920H
4B1856HXSTD	CB-1920HX
4B1912H25	CB-1780H25mm
4B1912H-STD	CB-1780H
4B1912HX-STD	CB-1780HX
4B1925H25	CB-1785H25mm
4B1925H-STD	CB-1785H
4B1925HX-STD	CB-1785HX
4B1946H025	CB-1353H026mm
4B1946H25	CB-1353H25mm

ACL	Clevite
4B1946H-STD	CB-1353H
4B1946HX-STD	CB-1353HX
4B1956H025	CB-1461HN026mm
4B1956H25	CB-1461HN25MM
4B1956H-STD	CB-1461HN
4B1956HX-STD	CB-1461HXN
4B1972H-STD	CB-1861H
4B1972HX-STD	CB-1861HX
4B2960H-010	CB-1629HX
4B2960H-STD	CB-1629H
4B4390H025	CB-1840H026mm
4B4390H25	CB-1840H25mm
4B4390H-STD	CB-1840H
4B4390HX-STD	CB-1840HX
4B8170H.025	CB-1838H026mm
4B8170H.25	CB-1838H25mm
4B8170H-STD	CB-1838H
4B8170HX-STD	CB-1838HX
4B8172HSTD	CB-1925H
4B8172HXSTD	CB-1925HX
4B8296H025	CB-1657H026MM
4B8296H25	CB-1657H25MM
4B8296H-STD	CB-1657H
4B8296HX-STD	CB-1657HX
4B8351H-025	CB-1453H026MM
4B8351H-STD	CB-1453H
4B8351HX-STD	CB-1453HX
5M1010H-01	MS-1010H-1
5M1010H-10	MS-1010H-10
5M1010H-STD	MS-1010H
5M1010HX-STD	MS-1010HX
5M1038H-01	MS-1038H-1
5M1038H-10	MS-1038H-10
5M1038H-STD	MS-1038H
5M1038HX-STD	MS-1038HX
5M1039H-01	MS-1039H-1
5M1039H-10	MS-1039H-10
5M1039H-STD	MS-1039H
5M1039HX-STD	MS-1039HX
5M1186H25	MS-2039H25MM
5M1186H-025	MS-2039H026MM
5M1186H-STD	MS-2039H
5M1186HX-STD	MS-2039HX
5M1219H025	MS-2261H026mm
5M1219H25	MS-2261H-,25mm
5M1219H-STD	MS-2261H
5M1219HX-STD	MS-2261HX
5M1237H-025MM	MS-2307H026MM
5M1237H-STD	MS-2307H
5M1237HX-STD	MS-2307HX
OWITZOTTIN OTD	WO 200717





ACL	Clevite	ACL	Clevite
5M1432H-01	MS-1432H-1	5M829H-20	MS-829H-20
5M1432H-10	MS-1432H-10	5M829H-30	MS-829H-30
5M1432H-STD	MS-1432H	5M829H-STD	MS-829H
5M1432HX-STD	MS-1432HX	5M829HX-STD	MS-829HX
5M1799H	MB-3852H	5M8309H025	MS-2258H026MM
5M1799H1	MB-3852H-1	5M8309H25	MS-2258H25MM
5M1799H1X	MB-3852HX	5M8309H-STD	MS-2258H
5M1913H025MM	MS-2309H026MM	5M8309HX-STD	MS-2258HX
5M1913H-STD	MS-2309H	5M8353H025MM	MS-1802H026MM
5M1913HX-STD	MS-2309HX	5M8353H-STD	MS-1802H
5M1957H025	MS-1804H026MM	5M8353HX-STD	MS-1802HX
5M1957H25	MS-1804H25MM	5M909H-01	MS-909H-1
5M1957H-STD	MS-1804H	5M909H-09	MS-909H-9
5M1957HX-STD	MS-1804HX	5M909H-10	MS-909H-10
5M1959H025	MS-2095H026MM	5M909H-11	MS-909H-11
5M1959H25	MS-2095H25MM	5M909H-20	MS-909H-20
5M1959H-STD	MS-2095H	5M909H-30	MS-909H-30
5M1959HX-STD	MS-2095HX	5M909H-STD	MS-909H
5M2220H025	MS-2220H026mm	5M909HX-STD	MS-909HX
5M2220H25	MS-2220H25mm	6B8100H25	CB-1628H25mm
5M2220H-STD	MS-2220H	6B8100H-STD	CB-1628H
5M2220HX-STD	MS-2220HX	6B8100HX-STD	CB-1628HX
5M2964H25	MS-2015HX	7M8103H-STD	MS-2016H
5M2964H-STD	MS-2015H	7M8103HX-STD	MS-2016HX
5M429H-01	MS-429H-1	8B1442H025	CB-1442H026mm
5M429H-10	MS-429H-10	8B1442H25	CB-1442H25mm
5M429H-STD	MS-429H	8B1442H-STD	CB-1442H
5M429HX-STD	MS-429HX	8B1442HX-STD	CB-1442HX
5M5645HSTD	MS-2293H	8B1663H-001	CB-1663H-1
5M5645HXSTD	MS-2293HX	8B1663H-010	CB-1663H-10
5M5647H-STD	MS-2259H	8B1663H-STD	CB-1663H
5M5647HX	MS-2259HX	8B1663HX-STD	CB-1663HX
5M590H-01	MS-590H-1	8B1665HD-001	CB-1665HD-1
5M590H-09	MS-590H-9	8B1665HD-001	CB-1665HND1
5M590H-10	MS-590H-10	8B1665HD-STD	CB-1665HD
5M590H-11	MS-590H-11	8B1665HD-STD	CB-1665HND
5M590H-STD	MS-590H	8B1665HXD-STD	CB-1665HXD
5M590HX-STD	MS-590HX	8B1665HXD-STD	CB-1665HXND
5M7296H025	MS-2202H026mm	8B1808H025	CB-1808HN026mm
5M7296H25	MS-2202H25mm	8B1808H-,25	CB-1808HN25mm
5M7296H-STD	MS-2202H	8B1808H-STD	CB-1808HN
5M7296HX-STD	MS-2202HX	8B1808HX-STD	CB-1808HXN
5M7298H-01	MS-2199H-1	8B481H-001	CB-481HN-1
5M7298H-10	MS-2199H-10	8B481H-010	CB-481HN-10
5M7298H-STD	MS-2199H	8B481H-STD	CB-481HN
5M7298HX-STD	MS-2199HX	8B481HX-STD	CB-481HXN
5M829H-01	MS-829H-1	8B527HD-010	CB-527HND-10
		8B527HD-STD	CB-527HND
5M829H-09	MS-829H-9		
5M829H-10	MS-829H-10	8B527HXD-STD	CB-527HXND





ACL	Clevite
8B634H-009	CB-634HN-9
8B634H-010	CB-634HN-10
8B634H-011	CB-634HN-11
8B634HD-010	CB-634HND-10
8B634HD-STD	CB-634HND
8B634H-STD	CB-634HN
8B634HX-STD	CB-634HXN
8B663H-001	CB-663HN-1
8B663H-009	CB-663HN-9
8B663H-010	CB-663HN-10
8B663H-011	CB-663HN-11
8B663H-020	CB-663HN-20
8B663HD-001	CB-663HND-1
8B663HD-010	CB-663HND-10
8B663HD-STD	CB-663HND
8B663H-STD	CB-663HN
8B663HXD-STD	CB-663HXD
8B663HX-STD	CB-663HXN
8B743H-01	CB-743HN-1
8B743H-09	CB-743HN-9
8B743H-10	CB-743HN-10
8B743H-11	CB-743HN-11
8B743H-20	CB-743HN-20
8B743HD-01	CB-743HND-1
8B743HD-10	CB-743HND-10
8B743HD-STD	CB-743HND
8B743H-STD	CB-743HN
8B743HXD-STD	CB-743HXND
8B743HX-STD	CB-743HXN
8B745H-01	CB-745HN-1
8B745H-10	CB-745HN-10
8B745HD-10	CB-745HND-10
8B745HD-STD	CB-745HND
8B745H-STD	CB-745HN
8B745HX-STD	CB-745HXN
8B818H-10	CB-818HN-10
8B818H-STD	CB-818HN
8B927H-10	CB-927HN-10
8B927H-STD	CB-927HN



King	Clevite	King	Clevite
5568XP-010	MS-1804H25MM	CR8026XP-021	CB-743HN-21
CR4002XP-STD	CB-1453H	CR8026XP-030	CB-743HN-30
CR4033XP25	CB-1780H25mm	CR8026XP-STD	CB-743HN
CR4033XP-STD	CB-1780H	CR8026XP-STDX	CB-743HXN
CR4033XPX	CB-1780HX	CR8027XP-001	CB-1665HND1
CR4046XP-STD	CB-1461HN	CR8027XP-010	CB-1665HND-10
CR4120XP-STD	CB-1643H	CR8027XP-STD	CB-1665HND
CR4125XP	CB-1657H	CR8027XP-STDX	CB-1665HXND
CR4136XP25	CB-1629HX	CR8028XP-001	CB-1663H-1
CR4136XP-STD	CB-1629H	CR8028XP-010	CB-1663H-10
CR426M.75MM	CB-1590A75MM(4)	CR8028XP-STD	CB-1663H
CR426M.75MM	CB-1590A75MM	CR8028XP-STDX	CB-1663HX
CR4287HP-010	CB-1785H25mm	CR803HPN	CB-745HN
CR4287XP	CB-1785H	CR803HPN-001	CB-745HN-1
CR4287XP-STDX	CB-1785HX	CR803HPN-010	CB-745HN-10
CR4337HP	CB-1353H	CR803HPN-STDX	CB-745HXN
CR4337HP-010	CB-1353H25mm	CR803XPN	CB-745HN
CR4337HP-STDX	CB-1353HX	CR803XPN-001	CB-745HN-1
CR4375HP	CB-1785H	CR803XPN-010	CB-745HN-10
CR4375HP-010	CB-1785H25mm	CR803XPN-STDX	CB-745HXN
CR4375HP-STDX	CB-1785HX	CR804HPN-010	CB-634HN-10
CR439XP-010	CB-1353H25mm	CR804HPN-STD	CB-634HN
CR439XP-STD	CB-1353H	CR804HPN-STDX	CB-634HXN
CR439XP-STDX	CB-1353HX	CR804XPN-010	CB-634HN-10
CR4481XP-STD	CB-1120HN	CR804XPN-STD	CB-634HN
CR6754XP	CB-1628H	CR804XPN-STDX	CB-634HXN
CR8008HP	CB-481HN	CR805XPN-001	CB-481HN-1
CR8008HP-001	CB-481HN-1	CR805XPN-010	CB-481HN-10
CR8008HP-010	CB-481HN-10	CR805XPN-STD	CB-481HN
CR8008HP-STDX	CB-481HXN	CR805XPN-STDX	CB-481HXN
CR8011HP	CB-831HN	CR806HPHD-STD	CB-527HND
CR8011HP-001	CB-831HN-1	CR806HPND-001	CB-527HND-1
CR8011HP-010	CB-831HN-10	CR806HPND-010	CB-527HND-10
CR8011HP-STDX	CB-831HXN	CR806HPND-STDX	CB-527HXND
CR8025XP-001	CB-663HN-1	CR806XPND-001	CB-527HND-1
CR8025XP-010	CB-663HN-10	CR806XPND-010	CB-527HND-10
CR8025XP-010X	CB-663HN-9	CR806XPND-STD	CB-527HND
CR8025XP-011	CB-663HN-11	CR806XPND-STDX	CB-527HXND
CR8025XP-020	CB-663HN-20	CR807HPN-001	CB-663HN-1
CR8025XP-020X	CB-663HN-19	CR807HPN-010	CB-663HN-10
CR8025XP-021	CB-663HN-21	CR807HPN-010X	CB-663HN-9
CR8025XP-030	CB-663HN-30	CR807HPN-011	CB-663HN-11
CR8025XP-STD	CB-663HN	CR807HPN-020	CB-663HN-20
CR8025XP-STDX	CB-663HXN	CR807HPN-020X	CB-663HN-19
CR8026XP-001	CB-743HN-1	CR807HPN-021	CB-663HN-21
CR8026XP-010	CB-743HN-10	CR807HPN-030	CB-663HN-30
CR8026XP-010X	CB-743HN-9	CR807HPND-001	CB-663HND-1
CR8026XP-011	CB-743HN-11	CR807HPND-010	CB-663HND-10
CR8026XP-020	CB-743HN-20	CR807HPND-STD	CB-663HND
CR8026XP-020X	CB-743HN-19	CR807HPND-STDX	CB-663HXND
0110020A1 -020A	OD 140HIN-19	011007111 ND-31DA	OD OOO INND





King	Clevite
CR807HPN-STD	CB-663HN
CR807HPN-STDX	CB-663HXN
CR807XPN-001	CB-663HN-1
CR807XPN-010	CB-663HN-10
CR807XPN-010X	CB-663HN-9
CR807XPN-011	CB-663HN-11
CR807XPN-020	CB-663HN-20
CR807XPN-020X	CB-663HN-19
CR807XPN-021	CB-663HN-21
CR807XPN-030	CB-663HN-30
CR807XPND-001	CB-663HND-1
CR807XPND-010	CB-663HND-10
CR807XPND-STD	CB-663HND
CR807XPND-STDX	CB-663HXND
CR807XPN-STD	CB-663HN
CR807XPN-STDX	CB-663HXN
CR808HPN-001	CB-743HN-1
CR808HPN-010	CB-743HN-10
CR808HPN-010X	CB-743HN-9
CR808HPN-020	CB-743HN-20
CR808HPN-030	CB-743HN-30
CR808HPND-001	CB-743HND-1
CR808HPND-010	CB-743HND-10
CR808HPND-010X	CB-743HND-9
CR808HPND-STD	CB-743HND
CR808HPND-STDX	CB-743HXND
CR808HPN-STD	CB-743HN
CR808HPN-STDX	CB-743HXN
CR808XPN-001	CB-743HN-1
CR808XPN-010	CB-743HN-10
CR808XPN-010X	CB-743HN-9
CR808XPN-011	CB-743HN-11
CR808XPN-020	CB-743HN-20
CR808XPN-020X	CB-743HN-19
CR808XPN-030	CB-743HN-30
CR808XPND-001	CB-743HND-1
CR808XPND-010	CB-743HND-10
CR808XPND-STD	CB-743HND
CR808XPND-STDX	CB-743HXND
CR808XPN-STD	CB-743HN
CR808XPN-STDX	CB-743HXN
CR814XPN-001	CB-831HN-1
CR814XPN-010	CB-831HN-10
CR814XPN-STD	CB-831HN
CR814XPN-STDX	CB-831HXN
CR848HP	CB-663HN
CR848HP-001	CB-663HN-1
CR848HP-009	CB-663HN-9
CR848HP-010	CB-663HN-10
CR848HP-011	CB-663HN-11
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King         Clevite           CR848HP-020         CB-663HN-20           CR848HP-021         CB-663HN-21           CR848HP-030         CB-663HN-30           CR848HP-STDX         CB-663HNN           CR848HP-STDX         CB-663HNN           CR849HP         CB-743HN           CR849HP-010         CB-743HN-10           CR849HP-010         CB-743HN-19           CR849HP-011         CB-743HN-9           CR849HP-020         CB-743HN-20           CR849HP-021         CB-743HN-19           CR849HP-021         CB-743HN-21           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HN-30           CR849HP-010         CB-663HND-1           CR850HP-010         CB-663HND-1           CR850HP-010         CB-663HND-1           CR850HP-STDX         CB-663HND           CR851HP         CB-745HN-1           CR851HP-STDX         CB-663HND           CR851HP-010         CB-745HN-1           CR851HP-STDX         CB-745HN-1           CR851HP-O10         CB-745HN-20           CR851HP-STDX         CB-745HND-1           CR852HP         CB-745HND-1           CR853HP-O10         CB-743HND-1 </th <th>17'</th> <th></th>	17'	
CR848HP-020X         CB-663HN-19           CR848HP-021         CB-663HN-21           CR848HP-030         CB-663HN           CR848HP-STDX         CB-663HN           CR849HP         CB-743HN           CR849HP-001         CB-743HN-1           CR849HP-010X         CB-743HN-10           CR849HP-010X         CB-743HN-9           CR849HP-011         CB-743HN-9           CR849HP-020         CB-743HN-20           CR849HP-020         CB-743HN-21           CR849HP-030         CB-743HN-30           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HN-30           CR849HP-STDX         CB-663HND-1           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR851HP         CB-745HN           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-1           CR851HP-STDX         CB-745HN-20           CR851HP-STDX         CB-745HN-10           CR851HP-010         CB-745HN-10           CR851HP-010         CB-745HN-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-1		
CR848HP-021		<u> </u>
CR848HP-030         CB-663HN-30           CR848HP-STDX         CB-663HXN           CR849HP         CB-743HN           CR849HP-010         CB-743HN-1           CR849HP-010X         CB-743HN-9           CR849HP-011         CB-743HN-11           CR849HP-020         CB-743HN-20           CR849HP-020X         CB-743HN-19           CR849HP-021         CB-743HN-21           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-010         CB-663HND-1           CR850HP-STD         CB-663HND-10           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR851HP         CB-745HN-1           CR851HP         CB-745HN-1           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-1           CR852HP         CB-745HND           CR853HP-010         CB-743HND           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-1 <td></td> <td></td>		
CR848HP-STDX         CB-663HXN           CR849HP         CB-743HN           CR849HP-001         CB-743HN-1           CR849HP-010         CB-743HN-9           CR849HP-011         CB-743HN-1           CR849HP-021         CB-743HN-20           CR849HP-020         CB-743HN-20           CR849HP-021         CB-743HN-9           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-O10         CB-663HND-1           CR850HP-STD         CB-663HND-10           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR851HP         CB-745HN           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-002         CB-745HN-20           CR851HP-STDX         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR853HP-010         CB-745HND           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-11           CR853HP-STDX         CB-634HN-1		
CR849HP         CB-743HN           CR849HP-001         CB-743HN-1           CR849HP-010         CB-743HN-10           CR849HP-011         CB-743HN-9           CR849HP-020         CB-743HN-20           CR849HP-020X         CB-743HN-19           CR849HP-021         CB-743HN-30           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HN-30           CR849HP-STDX         CB-743HN-30           CR850HP-STD         CB-663HND-1           CR850HP-STD         CB-663HND-10           CR850HP-STD         CB-663HND           CR851HP         CB-745HN           CR851HP         CB-745HN           CR851HP-001         CB-745HN-10           CR851HP-010         CB-745HN-10           CR851HP-010         CB-745HN-10           CR851HP-010         CB-745HN-10           CR851HP-010         CB-745HN-20           CR851HP-STDX         CB-745HN-20           CR852HP         CB-745HND-10           CR853HP         CB-745HND-10           CR853HP         CB-745HND-10           CR853HP         CB-743HND-11           CR853HP-010         CB-743HND-11           CR853HP-011         CB-743HND-11     <		0=000
CR849HP-001         CB-743HN-1           CR849HP-010         CB-743HN-10           CR849HP-010X         CB-743HN-9           CR849HP-011         CB-743HN-11           CR849HP-020         CB-743HN-19           CR849HP-021         CB-743HN-19           CR849HP-021         CB-743HN-30           CR849HP-STDX         CB-743HN-30           CR849HP-STDX         CB-743HN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HND           CR851HP         CB-745HN           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-10           CR851HP-STDX         CB-745HN-20           CR851HP-STDX         CB-745HND           CR851HP-010         CB-745HND           CR852HP         CB-745HND           CR853HP-010         CB-745HND           CR853HP-010         CB-743HND           CR853HP-010         CB-743HND-1           CR853HP-011         CB-743HND-11           CR853HP-STDX         CB-634HN           CR854HP-011         CB-634HN-1           CR854HP-010         CB-634HN-1     <		
CR849HP-010         CB-743HN-10           CR849HP-010X         CB-743HN-9           CR849HP-011         CB-743HN-11           CR849HP-020         CB-743HN-19           CR849HP-021         CB-743HN-21           CR849HP-STDX         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR851HP         CB-745HN-1           CR851HP-001         CB-745HN-1           CR851HP-001         CB-745HN-1           CR851HP-002         CB-745HN-10           CR851HP-010         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR853HP-010         CB-745HND           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-STDX         CB-743HND-11           CR853HP-STDX         CB-634HN           CR854HP-STDX         CB-634HN           CR854HP-STDX         CB-634HN-		
CR849HP-010X         CB-743HN-9           CR849HP-011         CB-743HN-11           CR849HP-020         CB-743HN-20           CR849HP-020X         CB-743HN-19           CR849HP-021         CB-743HN-21           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR851HP         CB-745HN-1           CR851HP         CB-745HN-1           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-20           CR851HP-STDX         CB-745HND-10           CR852HP         CB-745HND           CR853HP-010         CB-745HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-11           CR853HP-STDX         CB-743HND-11           CR854HP-STDX         CB-634HN-1           CR854HP-O11         CB-634HN-10           CR854HP-STDX         CB		
CR849HP-011         CB-743HN-11           CR849HP-020         CB-743HN-20           CR849HP-020X         CB-743HN-19           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HNN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-001         CB-745HN-1           CR851HP-001         CB-745HN-20           CR851HP-STDX         CB-745HN-20           CR851HP-STDX         CB-745HN-20           CR852HP         CB-745HND           CR852HP         CB-745HND           CR853HP-010         CB-745HND           CR853HP         CB-745HND           CR853HP-010         CB-743HND           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-STDX         CB-743HND-1           CR854HP         CB-634HN           CR854HP         CB-634HN           CR854HP-011         CB-634HN-1           CR854HP-STDX         CB-634HND-10		
CR849HP-020		
CR849HP-020X         CB-743HN-19           CR849HP-021         CB-743HN-21           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HXND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR852HP         CB-745HND           CR853HP-010         CB-743HND-10           CR853HP-001         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-011         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-011         CB-743HND-11           CR853HP-STDX         CB-743HND-11           CR854HP-010         CB-634HN           CR854HP-010         CB-634HN-1           CR855HP-010         CB-634HN-1           CR855HP-O10         CB-634HN-1           CR855HP         CB-634HND-10           CR863HP         CB-1512M(J) <td></td> <td></td>		
CR849HP-021         CB-743HN-21           CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HND           CR850HP-STDX         CB-663HXND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-1           CR851HP-010         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR852HP-010         CB-745HND-10           CR853HP-010         CB-743HND-10           CR853HP-001         CB-743HND-1           CR853HP-010         CB-743HND-10           CR853HP-011         CB-743HND-11           CR853HP-010         CB-743HND-11           CR853HP-STDX         CB-743HND-11           CR854HP-O11         CB-634HN           CR854HP-010         CB-634HN           CR854HP-011         CB-634HN-1           CR855HP         CB-634HN-1           CR855HP         CB-634HN-10           CR855HP         CB-634HN-10           CR863HP         CB-1512M(U)		
CR849HP-030         CB-743HN-30           CR849HP-STDX         CB-743HXN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HXND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-10           CR851HP-010         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR852HP-010         CB-745HND           CR853HP         CB-743HND           CR853HP-001         CB-743HND-1           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-11           CR853HP-011         CB-743HND-9           CR853HP-011         CB-743HND-11           CR853HP-STDX         CB-743HND           CR854HP         CB-634HN           CR854HP-010         CB-634HN-1           CR854HP-011         CB-634HN-1           CR854HP-010         CB-634HN-10           CR855HP         CB-634HND-10           CR863HP         CB-1512M(U)           CR863HP         CB-1512M(U)		
CR849HP-STDX         CB-743HXN           CR850HP-001         CB-663HND-1           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HXND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-10           CR851HP-020         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR852HP         CB-745HND           CR853HP         CB-745HND-10           CR853HP         CB-743HND           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-011         CB-743HND-11           CR853HP-STDX         CB-743HND-11           CR854HP-001         CB-634HN-1           CR854HP-010         CB-634HN-1           CR854HP-011         CB-634HN-1           CR855HP         CB-634HN-1           CR863HP         CB-1512M(U)           CR863HP         CB-1512M(U)           CR863HP         CB-1856HN-1		
CR850HP-001         CB-663HND-1           CR850HP-010         CB-663HND-10           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HXND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-10           CR851HP-020         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR852HP-010         CB-745HND-10           CR853HP         CB-743HND           CR853HP-001         CB-743HND-1           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-10           CR853HP-010         CB-743HND-11           CR853HP-011         CB-743HND-11           CR853HP-STDX         CB-743HND-11           CR854HP-001         CB-634HN-1           CR854HP-010         CB-634HN-1           CR854HP-011         CB-634HN-1           CR855HP         CB-634HND-10           CR863HP         CB-1512M(U)           CR863HP         CB-1512M(U)           CR867PN-010         CB-1856HN           CR867YPN-STD         CB-1856HN </td <td>CR849HP-030</td> <td>CB-743HN-30</td>	CR849HP-030	CB-743HN-30
CR850HP-010         CB-663HND-10           CR850HP-STD         CB-663HND           CR850HP-STDX         CB-663HXND           CR851HP         CB-745HN           CR851HP-001         CB-745HN-1           CR851HP-010         CB-745HN-10           CR851HP-020         CB-745HN-20           CR851HP-STDX         CB-745HND           CR852HP         CB-745HND           CR852HP-010         CB-745HND           CR853HP         CB-743HND           CR853HP-001         CB-743HND-1           CR853HP-010         CB-743HND-1           CR853HP-010         CB-743HND-9           CR853HP-011         CB-743HND-9           CR853HP-011         CB-743HND-11           CR854HP         CB-634HN           CR854HP-001         CB-634HN-1           CR854HP-010         CB-634HN-1           CR854HP-011         CB-634HN-1           CR855HP         CB-634HND-10           CR855HP         CB-634HND-10           CR863HP         CB-1512M(U)           CR863HP         CB-1512M(U)           CR867PP         CB-1856HN           CR867YPN-001         CB-1856HN-1           CR867YPN-STD         CB-1856HN           <		
CR850HP-STD	CR850HP-001	CB-663HND-1
CR850HP-STDX CR851HP CR851HP-001 CR851HP-001 CR851HP-010 CR851HP-010 CR851HP-020 CR851HP-STDX CR851HP-STDX CR852HP CR852HP CR852HP-010 CR853HP-010 CR853HP-011 CR853HP-011 CR853HP-011 CR853HP-011 CR854HP CR854HP CR864HP CR863HP CR854HP CR854HP CR854HP-010 CR854HP CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-O11 CR854HP-O11 CR854HP-O10 CR863HP CR867XPN-001 CR867XPN-010 CR867XPN-STD CR868HPN-010 CR868HPN-STD CR668HPN-STD CR668HPN	CR850HP-010	CB-663HND-10
CR851HP CR851HP-001 CR851HP-010 CR851HP-020 CR851HP-020 CR851HP-STDX CR851HP-STDX CR852HP CR852HP CR852HP CR853HP-010 CR853HP-011 CR853HP-STDX CR854HP CR854HP CR854HP CR854HP CR854HP CR854HP-010 CR855HP CR863HP CR867XPN-001 CR867XPN-010 CR867XPN-STD CR868HPN-STD CR686HPN-STD CR6	CR850HP-STD	CB-663HND
CR851HP-001 CB-745HN-1 CR851HP-010 CB-745HN-20 CR851HP-020 CB-745HN-20 CR851HP-STDX CB-745HNN CR852HP CB-745HND CR852HP-010 CB-745HND CR853HP-010 CB-743HND CR853HP-001 CB-743HND-10 CR853HP-010 CB-743HND-10 CR853HP-010 CB-743HND-11 CR853HP-010 CB-743HND-11 CR853HP-011 CB-743HND-11 CR853HP-STDX CB-743HND CR854HP CB-634HN CR854HP CB-634HN CR854HP-010 CB-634HN-10 CR854HP-011 CB-634HN-10 CR854HP-010 CB-634HNN CR855HP CB-634HNN CR855HP CB-634HND CR855HP CB-634HND CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512MU(30) CR867XPN-001 CB-1856HN CR867XPN-010 CB-1856HN-1 CR867XPN-010 CB-1856HN-1 CR867XPN-STD CB-1856HN CR867XPN-STD CB-1856HN CR868HPN-010 CB-1442H256mm CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442H CR868HPN-STDX CB-1442H	CR850HP-STDX	CB-663HXND
CR851HP-010 CR851HP-020 CR851HP-STDX CR851HP-STDX CR852HP CB-745HND CR852HP CB-745HND CR853HP CB-745HND CR853HP CB-745HND CR853HP-001 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-011 CR853HP-011 CR853HP-011 CR853HP-STDX CB-743HND-11 CR853HP-STDX CB-743HND CR854HP CB-634HN CR854HP CB-634HN CR854HP-010 CR854HP-010 CR854HP-011 CR854HP-010 CR854HP-010 CR854HP-011 CR854HP-STDX CB-634HN-11 CR854HP-STDX CB-634HN CR855HP CB-634HND CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512MU(30) CR867XPN-001 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-STD CB-1856HN CR868HPN-STD CB-1442H026mm CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD	CR851HP	CB-745HN
CR851HP-020 CR851HP-STDX CB-745HNN CR852HP CB-745HND CR852HP-010 CR853HP CB-745HND CR853HP CB-745HND CR853HP-001 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-011 CR853HP-011 CR853HP-STDX CB-743HND-11 CR853HP-STDX CB-743HND CR854HP CB-634HN CR854HP-010 CR854HP-010 CR854HP-011 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-O10 CR854HP-STDX CB-634HN CR855HP CB-634HN CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1856HN CR867XPN-010 CR867XPN-STD CB-1856HN CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-STD CB-1442H026mm CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442HX	CR851HP-001	CB-745HN-1
CR851HP-STDX CR852HP CB-745HND CR852HP-010 CR853HP CB-745HND-10 CR853HP CB-743HND-1 CR853HP-001 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-011 CR853HP-011 CR853HP-STDX CB-743HND-11 CR853HP-STDX CB-743HND-11 CR854HP CB-634HN CR854HP CB-634HN CR854HP-010 CR854HP-011 CR854HP-010 CR854HP-010 CR855HP CB-634HNN CR855HP CB-634HND CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512MU(30) CR867HP CB-1856HN CR867XPN-001 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR868HPN-STD CB-1856HN CR868HPN-O11 CR868HPN-O11 CR868HPN-O11 CR868HPN-O11 CR868HPN-O10 CR868HPN-O10 CR868HPN-STD CB-1442H026mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442HX	CR851HP-010	CB-745HN-10
CR852HP CR852HP-010 CR853HP CB-745HND-10 CR853HP CB-743HND CR853HP-001 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-011 CR853HP-011 CR853HP-STDX CR853HP-STDX CR854HP CR854HP-001 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-010 CR854HP-STDX CR854HP-O10 CR854HP-STDX CR856HP CR856HP CR865HP CR867HP CR867HP CR867HP CR867HP CR867XPN-001 CR867XPN-010 CR868HPN-STD CR868HPN-O10 CR868HPN-O10 CR868HPN-STD CR868HPN-O10 CR867XPN-O10 CR867XPN-O10 CR867XPN-O10 CR867XPN-O10 CR867XPN-O10 CR867XPN-O10 CR867XPN-O10 CR867XPN-O10 CR868HPN-STD CR	CR851HP-020	CB-745HN-20
CR852HP-010 CR853HP CB-743HND CR853HP-001 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-010 CR853HP-011 CR853HP-011 CR853HP-STDX CR853HP-O11 CR854HP CB-634HN CR854HP-001 CR854HP-010 CR854HP-010 CR854HP-011 CR854HP-011 CR854HP-011 CR854HP-010 CR854HP-011 CR854HP-STDX CR634HN CR855HP CB-634HND CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512M(U) CR867XPN-001 CR867XPN-010 CR867XPN-010 CR868HPN-STD CR868HPN-O10 CR868HPN-STD	CR851HP-STDX	CB-745HXN
CR853HP CR853HP-001 CR853HP-010 CR853HP-010 CR853HP-010X CB-743HND-10 CR853HP-011 CR853HP-011 CR853HP-STDX CB-743HND-11 CR853HP-STDX CB-743HND-11 CR854HP CB-634HN CR854HP-001 CR854HP-010 CR854HP-011 CR854HP-011 CR854HP-STDX CB-634HN-10 CR854HP-STDX CB-634HN-11 CR854HP-STDX CB-634HND CR855HP CB-634HND CR865HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512MU(30) CR867XPN-001 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR868HPN-STD CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-STD CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD CR868HPN-STD CB-1442HX	CR852HP	CB-745HND
CR853HP-001 CB-743HND-1 CR853HP-010 CB-743HND-10 CR853HP-010X CB-743HND-9 CR853HP-011 CB-743HND-11 CR853HP-STDX CB-743HXND CR854HP CB-634HN CR854HP-001 CB-634HN-1 CR854HP-010 CB-634HN-11 CR854HP-STDX CB-634HNN CR854HP-STDX CB-634HND CR854HP-O11 CB-634HND CR854HP-O11 CB-634HND CR855HP CB-634HND CR865HP CB-634HND CR867HP CB-1512MU(30) CR863HP CB-1512MU(30) CR867XPN-001 CB-1856HN CR867XPN-010 CB-1856HN-1 CR867XPN-010 CB-1856HN CR867XPN-STD CB-1856HN CR868HPN-O10 CB-1442H026mm CR868HPN-O10 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442HX	CR852HP-010	CB-745HND-10
CR853HP-010 CR853HP-010X CB-743HND-9 CR853HP-011 CR853HP-STDX CB-743HND-11 CR853HP-STDX CB-743HND CR854HP CB-634HN CR854HP-001 CR854HP-010 CR854HP-011 CR854HP-STDX CB-634HN-10 CR854HP-STDX CB-634HN-11 CR854HP-STDX CB-634HND CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512MU(0) CR867XPN-001 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-STD CB-1856HN CR867XPN-STD CB-1856HN CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-O10 CR868HPN-STD CR868HPN-STD CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD CR868HPN-STD CB-1442HX	CR853HP	CB-743HND
CR853HP-010X	CR853HP-001	CB-743HND-1
CR853HP-011	CR853HP-010	CB-743HND-10
CR853HP-STDX CR854HP CR854HP CR854HP-001 CR854HP-010 CR854HP-011 CR854HP-011 CR854HP-STDX CR854HP-STDX CR855HP CR855HP CR855HP CR855HP CR856HP CR863HP CR863HP CR863HP CR863HP CR867XPN-001 CR867XPN-010 CR867XPN-STD CR868HPN-STD CR868HPN-O10 CR868HPN-STD	CR853HP-010X	CB-743HND-9
CR854HP CR854HP-001 CR854HP-010 CR854HP-010 CR854HP-011 CR854HP-011 CR854HP-STDX CB-634HN-11 CR854HP-STDX CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512MU(30) CR867HP CB-1856HN CR867XPN-001 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-010 CR867XPN-STD CB-1856HN CR868HPN-STD CB-1442H026mm CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H	CR853HP-011	CB-743HND-11
CR854HP-001 CB-634HN-1 CR854HP-010 CB-634HN-10 CR854HP-011 CB-634HN-11 CR854HP-STDX CB-634HNN CR855HP CB-634HND CR855HP-010 CB-634HND-10 CR863HP CB-1512MU(30) CR863HP CB-1512MU(0) CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-O11 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442HX	CR853HP-STDX	CB-743HXND
CR854HP-010 CR854HP-011 CR854HP-STDX CB-634HN-11 CR855HP CB-634HND CR855HP CB-634HND CR863HP CB-1512MU(30) CR863HP CB-1512M(U) CR867HP CB-1856HN CR867XPN-001 CR867XPN-010 CR867XPN-010 CR867XPN-STD CR868HPN-010 CR868HPN-STD CR868HPN-STD CR868HPN-STD CR868HPN-STD CB-1442H CR868HPN-STD CB-1442HX	CR854HP	CB-634HN
CR854HP-011 CB-634HN-11 CR854HP-STDX CB-634HXN CR855HP CB-634HND CR855HP-010 CB-634HND-10 CR863HP CB-1512MU(30) CR863HP CB-1512M(U) CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H	CR854HP-001	CB-634HN-1
CR854HP-STDX         CB-634HXN           CR855HP         CB-634HND           CR855HP-010         CB-634HND-10           CR863HP         CB-1512MU(30)           CR863HP         CB-1512M(U)           CR867HP         CB-1856HN           CR867XPN-001         CB-1856HN-1           CR867XPN-STD         CB-1856HN           CR867XPN-STD         CB-1856HN           CR868HPN-001         CB-1442H026mm           CR868HPN-STD         CB-1442H           CR868HPN-STD         CB-1442H           CR868HPN-STDX         CB-1442HX	CR854HP-010	CB-634HN-10
CR855HP CB-634HND CR855HP-010 CB-634HND-10 CR863HP CB-1512MU(30) CR863HP CB-1512M(U) CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1856HN CR868HPN-010 CB-1442H026mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H	CR854HP-011	CB-634HN-11
CR855HP-010 CB-634HND-10 CR863HP CB-1512MU(30) CR863HP CB-1512M(U) CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442HX	CR854HP-STDX	CB-634HXN
CR863HP CB-1512MU(30) CR863HP CB-1512M(U) CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H	CR855HP	CB-634HND
CR863HP CB-1512M(U) CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442HX	CR855HP-010	CB-634HND-10
CR867HP CB-1856HN CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STD CB-1442H	CR863HP	CB-1512MU(30)
CR867XPN-001 CB-1856HN-1 CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442HX	CR863HP	CB-1512M(U)
CR867XPN-010 CB-1856HN-10 CR867XPN-STD CB-1856HN CR868HPN-001 CB-1442H026mm CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442HX	CR867HP	CB-1856HN
CR867XPN-STD         CB-1856HN           CR868HPN-001         CB-1442H026mm           CR868HPN-010         CB-1442H25mm           CR868HPN-STD         CB-1442H           CR868HPN-STDX         CB-1442HX	CR867XPN-001	CB-1856HN-1
CR868HPN-001       CB-1442H026mm         CR868HPN-010       CB-1442H25mm         CR868HPN-STD       CB-1442H         CR868HPN-STDX       CB-1442HX	CR867XPN-010	CB-1856HN-10
CR868HPN-010 CB-1442H25mm CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442HX	CR867XPN-STD	CB-1856HN
CR868HPN-STD CB-1442H CR868HPN-STDX CB-1442HX	CR868HPN-001	CB-1442H026mm
CR868HPN-STDX CB-1442HX	CR868HPN-010	CB-1442H25mm
CR868HPN-STDX CB-1442HX	CR868HPN-STD	CB-1442H
	CR868HPN-STDX	
CR868XPN-001 CB-1442H026mm	CR868XPN-001	CB-1442H026mm





King	Clevite	King	Clevite
CR868XPN-010	CB-1442H25mm	MB5143HP-020	MS-1038H-20
CR868XPN-STD	CB-1442H	MB5143HP-021	MS-1038H-21
CR868XPN-STDX	CB-1442HX	MB5143HP-STDX	MS-1038HX
CR874HP	CB-818HN	MB5147HP	MS-829H
CR874HP-010	CB-818HN-10	MB5147HP-001	MS-829H-1
CR874HP-011	CB-818HN-11	MB5147HP-010	MS-829H-10
CR889HP	CB-1442H	MB5147HP-010X	MS-829H-9
CR889HP-001	CB-1442H026mm	MB5147HP-011	MS-829H-11
CR889HP-010	CB-1442H25mm	MB5147HP-020	MS-829H-20
CR889HP-STDX	CB-1442HX	MB5147HP-020X	MS-829H-19
MB 5112HP	MS-1010H	MB5147HP-030	MS-829H-30
MB5013HP	MS-2199H	MB5147HP-STDX	MS-829HX
MB5013HP-001	MS-2199H-1	MB5160HP	MS-909HG
MB5013HP-010	MS-2199H-10	MB5161HP	MS-590H
MB5013HP-STDX	MS-2199HX	MB5161HP-001	MS-590H-1
MB5013XP-001	MS-2199H-1	MB5161HP-010	MS-590H-10
MB5013XP-010	MS-2199H-10	MB5161HP-STDX	MS-590HX
MB5013XP-STD	MS-2199H	MB5164HP	MS-829HG
MB5013XP-STDX	MS-2199HX	MB5169HP	MS-1010H
MB509HP-001	MS-1038H-1	MB5169HP-010	MS-1010H-10
MB509HP-010	MS-1038H-10	MB5169HP-STDX	MS-1010HX
MB509HP-020	MS-1038H-20	MB5209XP-STD	MS-2039H
MB509HP-STD	MS-1038H	MB5243XP-,25	MS-2015HX
MB509HP-STDX	MS-1038HX	MB5243XP-STD	MS-2015H
MB509XP	MS-1038H	MB5259XP-010	MS-2095H25MM
MB509XP-001	MS-1038H-1	MB5259XP-STD	MS-2095H
MB509XP-010	MS-1038H-10	MB5259XP-STDX	MS-2095HX
MB509XP-010X	MS-1038H-9	MB5280HP-STD	MS-2202H
MB509XP-020	MS-1038H-20	MB5280XP-STD	MS-2202H
MB509XP-021	MS-1038H-21	MB5282HP	MS-2007H
MB509XP-STDX	MS-1038HX	MB5282HP-001	MS-2007H026mm
MB5116HP-010	MS-2233HG-10	MB5282HP-010	MS-2007H25mm
MB5116HP-STD	MS-2233HG	MB5282HP-STDX	MS-2007HX
MB5116XP-010	MS-2233HG-10	MB5283HP	MS-2259H
MB5116XP-STD	MS-2233HG	MB5283HP-001	MS-2259H026mm
MB5142HP	MS-909H	MB5283HP-010	MS-2259H25mm
MB5142HP-001	MS-909H-1	MB5283HP-STD	MS-2259H
MB5142HP-010	MS-909H-10	MB5283HP-STDX	MS-2259HX
MB5142HP-010X	MS-909H-9	MB5283XP-010	MS-2259H-,25mm
MB5142HP-011	MS-909H-11	MB5283XP-STD	MS-2259H
MB5142HP-020	MS-909H-20	MB5283XP-STDX	MS-2259HX
MB5142HP-020X	MS-909H-19	MB529HP-010	MS-590H-10
MB5142HP-021	MS-909H-21	MB529HP-STD	MS-590H
MB5142HP-030	MS-909H-30	MB529HP-STDX	MS-590HX
MB5142HP-STDX	MS-909HX	MB529XP-010	MS-590H-10
MB5143HP	MS-1038H	MB529XP-STD	MS-590H
MB5143HP-001	MS-1038H-1	MB529XP-STDX	MS-590HX
MB5143HP-010	MS-1038H-10	MB5304XP-STD	MS-1802H
MB5143HP-010X	MS-1038H-9	MB5315XP-STD	MS-180211 MS-2261H
MB5143HP-011	MS-1038H-11	MB5353HP-001	MS-2007H026mm
143HF-U11	IVIO-1000П-11	IVID0000HF-001	1VIO-2007 17020111111





NING         Clevite           MB6353HP-010         MS-2007H-25mm           MB5353HP-STD         MS-2007H-026mm           MB5353XP-010         MS-2007H-25mm           MB5353XP-STD         MS-2007H-25mm           MB5385XP-STD         MS-2207H           MB5385HP         MS-540H           MB5385HP         MS-540H           MB5385HP-O01         MS-540HX           MB5392HP         MS-1432H           MB5392HP-STDX         MS-1432H-10           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP         MS-2202H-026mm           MB5407HP-010         MS-2202H-25mm           MB5407HP-010         MS-2202H-25mm           MB5407HP-NTDX         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-001         MS-909H-1           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-9           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-2           MB5425XP-020         MS-909H-2           MB5425XP-021         MS-909H-30           MB5425XP-020         MS-909H-30           MB5426XP-030         MS-829H-1	Vina	Clavita
MB5353HP-STD         MS-2007H           MB5353XP-001         MS-2007H-026mm           MB5353XP-010         MS-2007H-026mm           MB5353XP-STD         MS-2007H           MB5383XP-STD         MS-2007H           MB5385HP         MS-540H           MB5385HP         MS-540H           MB5385HP-001         MS-540H-1           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-STDX         MS-1432H           MB5392HP-STDX         MS-1432H           MB5407HP         MS-2202H           MB5407HP         MS-2202H           MB5407HP-MD-01         MS-2202H-026mm           MB5407HP-010         MS-2202H-026mm           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425HP-010         MS-909H-1           MB5425XP-011         MS-909H-1           MB5425XP-010X         MS-909H-1           MB5425XP-010X         MS-909H-19           MB5425XP-020         MS-909H-20           MB5425XP-030         MS-909H-19           MB5425XP-STD         MS-909H           MB5425XP-010         MS-829H-10	King	Clevite
MB5353XP-001         MS-2007H026mm           MB5353XP-STD         MS-2007H           MB5353XP-STD         MS-2007H           MB5363XP-STD         MS-2007H           MB5385HP         MS-540H           MB5385HP         MS-540H           MB5385HP-001         MS-540H1           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-010         MS-2202H026mm           MB5407HP-011         MS-2202H25mm           MB5407HP-O10         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-010         MS-209H25mm           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-9           MB5425XP-010         MS-909H-10           MB5425XP-010         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-19           MB5425XP-021         MS-909H-19           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-829H-1           MB5426XP-010         MS-829H-1		200111 .2011111
MB5353XP-010         MS-2007H-25mm           MB5353XP-STD         MS-2007H           MB5382XP-STD         MS-2058H           MB5385HP         MS-540H           MB5385HP         MS-540H           MB5385HP-001         MS-540HX           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-O10         MS-1432H           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-001         MS-2202H026mm           MB5407HP-010         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2067V           MB5425HP-STDX         MS-909H-1           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-9           MB5425XP-010X         MS-909H-1           MB5425XP-020         MS-909H-20           MB5425XP-STD         MS-909H-30           MB5425XP-STDX         MS-909H-30           MB5425XP-STDX         MS-909H           MB5426XP-010         MS-829H-1		
MB5353XP-STD         MS-2007H           MB5382XP-STD         MS-2258H           MB5385HP         MS-540H           MB5385HP         MS-540H           MB5385HP-001         MS-540HX           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-010         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-001         MS-2202H026mm           MB5407HP-010         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2206TV           MB5425XP-010         MS-909H-1           MB5425XP-001         MS-909H-10           MB5425XP-010X         MS-909H-1           MB5425XP-020         MS-909H-20           MB5425XP-021         MS-909H-21           MB5425XP-021         MS-909H-21           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5425XP-010         MS-829H-1           MB5426XP-010         MS-829H-1 <tr< td=""><td></td><td></td></tr<>		
MB5382XP-STD         MS-2258H           MB5385HP         MS-540H           MB5385HP         MS-1344V           MB5385HP-001         MS-540H-1           MB5385HP-STDX         MS-640HX           MB5392HP         MS-1432H           MB5392HP-STDX         MS-1432HX           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-010         MS-2202H026mm           MB5407HP-STDX         MS-2202H026mm           MB5407HP-STDX         MS-2202H026mm           MB5407HP-STDX         MS-2006TV           MB5420HP         MS-2006TV           MB5425WP-010         MS-909H-1           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-1           MB5425XP-011         MS-909H-20           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-21           MB5425XP-020         MS-909H-30           MB5425XP-020         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-020         MS-829H-1		
MB5385HP         MS-540H           MB5385HP         MS-1344V           MB5385HP-001         MS-540H-1           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-O10         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-O01         MS-2202H026mm           MB5407HP-O10         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425WP-010         MS-909H-1           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-1           MB5425XP-011         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-021         MS-909H-1           MB5425XP-001         MS-909H-30           MB5425XP-001         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-020         MS-829H-1      <		
MB5385HP         MS-1344V           MB5385HP-001         MS-540H-1           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-STDX         MS-1432HX           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H026mm           MB5407HP-010         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425NP-010         MS-909H-1           MB5425XP-010         MS-909H-1           MB5425XP-010         MS-909H-1           MB5425XP-010         MS-909H-1           MB5425XP-010         MS-909H-1           MB5425XP-010         MS-909H-9           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-20           MB5425XP-030         MS-909H-30           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909HX           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-9           MB5426XP-011         MS-829H-1           MB5426XP-020         MS-829H-1     <		
MB5385HP-001         MS-540H-1           MB5385HP-STDX         MS-540HX           MB5392HP         MS-1432H           MB5392HP-O10         MS-1432HX           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-O01         MS-2202H026mm           MB5407HP-O10         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425HP-O10         MS-909H-1           MB5425HP-O20         MS-909H-1           MB5425HP-O20         MS-909H-1           MB5425HP-O20         MS-909H-2           MB5425HP-O20         MS-909H-2           MB5425HP-O30         MS-909H-3           MB5425HP-O30         MS-829H-1           MB5426HP-O30         MS-829H-1           MB5426HP-O30         MS-829H-1           MB5426HP-O30         MS-829H-2           MB5426HP-O30         MS-829H-3		
MB5385HP-STDX         MS-640HX           MB5392HP         MS-1432H           MB5392HP-O10         MS-1432HX           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-010         MS-2202H026mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010         MS-909H-9           MB5425XP-011         MS-909H-11           MB5425XP-011         MS-909H-19           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-19           MB5425XP-021         MS-909H-30           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-010         MS-829H-1           MB5426XP-O10         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-011         MS-829H-1           MB5426XP-020         MS-829H-20           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-30           MB5426XP-030         MS-829H-30           MB55426XP-STD         MS-829H-30 <td></td> <td></td>		
MB5392HP         MS-1432H           MB5392HP-010         MS-1432H-10           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-001         MS-2202H026mm           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010         MS-909H-1           MB5425XP-010         MS-909H-9           MB5425XP-011         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-19           MB5425XP-021         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-STD         MS-829H-1           MB5426XP-O10         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-020         MS-829H-20           MB5426XP-020         MS-829H-20           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5503XP-STD         MS-1010H-10		
MB5392HP-010         MS-1432HX           MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-001         MS-2202H026mm           MB5407HP-STDX         MS-2202HX           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010         MS-909H-9           MB5425XP-011         MS-909H-9           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-21           MB5425XP-STD         MS-909H           MB5426XP-STD         MS-909H           MB5426XP-STD         MS-829H-1           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-9           MB5426XP-010         MS-829H-1           MB5426XP-020         MS-829H-19           MB5426XP-020         MS-829H-20           MB5426XP-STD         MS-829H-30           MB5426XP-STD         MS-829H-30           MB5426XP-STD         MS-829H-30           MB5503XP-STD         MS-1010H <td></td> <td>MS-540HX</td>		MS-540HX
MB5392HP-STDX         MS-1432HX           MB5407HP         MS-2202H           MB5407HP-001         MS-2202H026mm           MB5407HP-010         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010         MS-909H-9           MB5425XP-011         MS-909H-9           MB5425XP-020         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-20           MB5425XP-021         MS-909H-21           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-STD         MS-829H-1           MB5426XP-O10         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-020         MS-829H-20           MB5426XP-020         MS-829H-20           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829H           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-11010H<		
MB5407HP         MS-2202H           MB5407HP-001         MS-2202H026mm           MB5407HP-010         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010X         MS-909H-9           MB5425XP-011         MS-909H-9           MB5425XP-020         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-STD         MS-909HX           MB5426XP-STD         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-9           MB5426XP-020         MS-829H-20           MB5426XP-020         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H-30           MB5426XP-STD         MS-829H           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010H<	MB5392HP-010	MS-1432H-10
MB5407HP-001         MS-2202H026mm           MB5407HP-010         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010X         MS-909H-9           MB5425XP-011         MS-909H-9           MB5425XP-020         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-20           MB5425XP-020         MS-909H-19           MB5425XP-021         MS-909H-19           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5426XP-STD         MS-909H           MB5426XP-O01         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-9           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H-30           MB5426XP-STD         MS-829HX           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010H           MB5505XP-STD         MS-1432H           MB5505XP-STD         MS-1432	MB5392HP-STDX	MS-1432HX
MB5407HP-010         MS-2202H25mm           MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-10           MB5425XP-011X         MS-909H-9           MB5425XP-020         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-21           MB5425XP-STD         MS-909H           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-9           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-11           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H-30           MB5426XP-STD         MS-829H           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010H           MB5505XP-STDX         MS-1432H           MB5568XP-STDX         MS-1432H </td <td>MB5407HP</td> <td>MS-2202H</td>	MB5407HP	MS-2202H
MB5407HP-STDX         MS-2202HX           MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-9           MB5425XP-011         MS-909H-1           MB5425XP-020         MS-909H-1           MB5425XP-020X         MS-909H-20           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909H           MB5425XP-STDX         MS-909H           MB5426XP-01         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-11           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829H           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010H           MB5505XP-STDX         MS-1432H           MB5568XP-STDX         MS-1804H <td>MB5407HP-001</td> <td>MS-2202H026mm</td>	MB5407HP-001	MS-2202H026mm
MB5420HP         MS-2067V           MB5425XP-001         MS-909H-1           MB5425XP-010X         MS-909H-9           MB5425XP-011         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-1           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-1           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-20           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829H           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010H           MB5505XP-STDX         MS-1432H           MB5568XP-STD         MS-1804H           MB5568XP-STD         MS-1804H           MB556HP-001         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010         MS-829H-10	MB5407HP-010	MS-2202H25mm
MB5425XP-001         MS-909H-1           MB5425XP-010         MS-909H-10           MB5425XP-010X         MS-909H-9           MB5425XP-011         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020X         MS-909H-21           MB5425XP-021         MS-909H-21           MB5425XP-STD         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-19           MB5426XP-020         MS-829H-19           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5505XP-STD         MS-1010H           MB5505XP-STD         MS-1432H-10           MB5568XP-STD         MS-1432HX           MB5668XP-STD         MS-1804H           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-1	MB5407HP-STDX	MS-2202HX
MB5425XP-010         MS-909H-10           MB5425XP-010X         MS-909H-9           MB5425XP-021         MS-909H-11           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-010         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829HX           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010H           MB5505XP-STD         MS-1432H           MB5505XP-STD         MS-1432H           MB5568XP-STD         MS-1804H           MB556HP-001         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010         MS-829H-9	MB5420HP	MS-2067V
MB5425XP-010X         MS-909H-9           MB5425XP-011         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020         MS-829H-21           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010HX           MB5505XP-STD         MS-1432H           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804H           MB556HP-001         MS-829H-10           MB556HP-010         MS-829H-9	MB5425XP-001	MS-909H-1
MB5425XP-011         MS-909H-11           MB5425XP-020         MS-909H-20           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432H           MB5568XP-STDX         MS-1804H           MB5568XP-STDX         MS-1804H           MB5568HP-001         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-010	MS-909H-10
MB5425XP-020X         MS-909H-20           MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-20           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STDX         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-010         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010         MS-829H-9	MB5425XP-010X	MS-909H-9
MB5425XP-020X         MS-909H-19           MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010X         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-STDX         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STDX         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-011	MS-909H-11
MB5425XP-021         MS-909H-21           MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-11           MB5426XP-020         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-O10         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432H           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-020	MS-909H-20
MB5425XP-030         MS-909H-30           MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010X         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5505XP-STDX         MS-1432H-10           MB5505XP-STD         MS-1432H           MB5568XP-STDX         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-10           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-020X	MS-909H-19
MB5425XP-STD         MS-909H           MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-9           MB5426XP-020         MS-829H-11           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-010         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-021	MS-909H-21
MB5425XP-STDX         MS-909HX           MB5426XP-001         MS-829H-1           MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-021         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-STD         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-030	MS-909H-30
MB5426XP-001         MS-829H-1           MB5426XP-010X         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5426XP-STDX         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STD         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STD         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-STD	MS-909H
MB5426XP-010         MS-829H-10           MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-STD         MS-829H           MB5426XP-STD         MS-829HX           MB5503XP-O10         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5425XP-STDX	MS-909HX
MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-O10         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5426XP-001	MS-829H-1
MB5426XP-010X         MS-829H-9           MB5426XP-011         MS-829H-11           MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-O10         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STD         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5426XP-010	MS-829H-10
MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-010         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STDX         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9		
MB5426XP-020         MS-829H-20           MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-010         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-STDX         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STD         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9	MB5426XP-011	MS-829H-11
MB5426XP-020X         MS-829H-19           MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-010         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-O10         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STDX         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9		
MB5426XP-021         MS-829H-21           MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-010         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-O10         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STDX         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9		
MB5426XP-030         MS-829H-30           MB5426XP-STD         MS-829H           MB5426XP-STDX         MS-829HX           MB5503XP-010         MS-1010H-10           MB5503XP-STD         MS-1010H           MB5503XP-STDX         MS-1010HX           MB5505XP-O10         MS-1432H-10           MB5505XP-STD         MS-1432HX           MB5568XP-STDX         MS-1804H           MB5568XP-STDX         MS-1804HX           MB556HP-001         MS-829H-1           MB556HP-010         MS-829H-10           MB556HP-010X         MS-829H-9		
MB5426XP-STD MS-829H MB5426XP-STDX MS-829HX MB5503XP-010 MS-1010H-10 MB5503XP-STD MS-1010H MB5503XP-STDX MS-1010HX MB5505XP-O10 MS-1432H-10 MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STDX MS-1804H MB5568XP-STDX MS-1804H MB556HP-001 MS-829H-1 MB556HP-010X MS-829H-10 MB556HP-010X MS-829H-9		
MB5426XP-STDX MS-829HX MB5503XP-010 MS-1010H-10 MB5503XP-STD MS-1010H MB5503XP-STDX MS-1010HX MB5505XP-010 MS-1432H-10 MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STDX MS-1804H MB5568XP-STDX MS-1804H MB5566HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5503XP-010 MS-1010H-10 MB5503XP-STD MS-1010H MB5503XP-STDX MS-1010HX MB5505XP-010 MS-1432H-10 MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STD MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5503XP-STD MS-1010H MB5503XP-STDX MS-1010HX MB5505XP-010 MS-1432H-10 MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STDX MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5503XP-STDX MS-1010HX MB5505XP-010 MS-1432H-10 MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STD MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5505XP-010 MS-1432H-10 MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STD MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010X MS-829H-9		
MB5505XP-STD MS-1432H MB5505XP-STDX MS-1432HX MB5568XP-STD MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5505XP-STDX MS-1432HX MB5568XP-STD MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5568XP-STD MS-1804H MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB5568XP-STDX MS-1804HX MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB556HP-001 MS-829H-1 MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB556HP-010 MS-829H-10 MB556HP-010X MS-829H-9		
MB556HP-010X MS-829H-9		
MB556HP-011 MS-829H-11		
	MR220HP-011	MS-829H-11

King	Clevite
MB556HP-020	MS-829H-20
MB556HP-020X	MS-829H-19
MB556HP-030	MS-829H-30
MB556HP-STD	MS-829H
MB556HP-STDX	MS-829HX
MB556XP-001	MS-829H-1
MB556XP-010	MS-829H-10
MB556XP-010X	MS-829H-9
MB556XP-011	MS-829H-11
MB556XP-020	MS-829H-20
MB556XP-020X	MS-829H-19
MB556XP-030	MS-829H-30
MB556XP-STD	MS-829H
MB556XP-STDX	MS-829HX
MB557HP-001	MS-909H-1
MB557HP-010	MS-909H-10
MB557HP-010X	MS-909H-9
MB557HP-011	MS-909H-11
MB557HP-020	MS-909H-20
MB557HP-020X	MS-909H-19
MB557HP-021	MS-909H-21
MB557HP-030	MS-909H-30
MB557HP-STD	MS-909H
MB557HP-STDX	MS-909HX
MB557XP-001	MS-909H-1
MB557XP-010	MS-909H-10
MB557XP-010X	MS-909H-9
MB557XP-011	MS-909H-11
MB557XP-020	MS-909H-20
MB557XP-020X	MS-909H-19
MB557XP-021	MS-909H-21
MB557XP-030	MS-909H-30
MB557XP-STD	MS-909H
MB557XP-STDX	MS-909HX
MB5650HP-010	MS-1039V-10
MB5650HP-STD	MS-1039V
MB5650XP-010	MS-1039V-10
MB5650XP-STD	MS-1039V
MB5673XP025MM	MS-2309H026MM
MB5673XP-STD	MS-2309H
MB5673XP-STD	MS-2309HX





Sealed Power	Clevite	Sealed Power	Clevite
108M	MS-804H	141M20	MS-829H-20
108M10	MS-804H-10	141M21	MS-829H-21
108M1X	MS-804HX	141M30	MS-829H-30
108M20	MS-804H-20	141M9	MS-829H-9
26M	MS-1010H	144M	MS-2256H
126M10	MS-1010H-10	144M10	MS-2256H-10
126M1X	MS-1010HX	145MSEMI	MS-2254-SEMI
129M	MS-590H	146M	MS-1010H
29M1	MS-590H-1	146M10	MS-1010H-10
29M10	MS-590H-10	146M1X	MS-1010HX
29M1X	MS-590HX	147MSEMI	MS-2255-SEMI
30M	MS-1432H	148M	MS-2007H
30M10	MS-1432H-10	148M.026MM	MS-2007H026mm
30M1X	MS-1432HX	148M.25MM	MS-2007H25mm
30M1X	MS-1432HXK	148M026X	MS-2007HX
34M	MS-1039V	149M	MS-2259H
34M	MS-1039H	149M.026MM	MS-2259H026mm
34M10	MS-1039V-10	149M.026X	MS-2259HX
34M10	MS-1039H-10	149M.25MM	MS-2259H25mm
34M1X	MS-1039HX	151M	MS-667H
36M	MS-1732M	151M10	MS-667H-10
38M	MS-429H	152M	MS-2199H
38M1	MS-429H-1	152M1	MS-2199H-1
38M10	MS-429H-10	152M10	MS-2199H-10
39M	MS-909H	152M1X	MS-2199HX
39M1	MS-909H-1	153M	MS-2202H
39M10	MS-909H-10	153M.026MM	MS-2202H026mm
39M11	MS-909H-11	153M.25MM	MS-2202H25mm
39M19	MS-909H-19	153M026X	MS-2202HX
39M1X	MS-909HX	154M	MS-2203H
39M20	MS-909H-20	156M	MS-2253H
39M21	MS-909H-21	156M1	MS-2253H-1
39M30	MS-909H-30	156M1X	MS-2253HX
39M9	MS-909H-9	158M.026MM	MS-2208H026mm
40M	MS-1038H	159M	MS-2095H
40M1	MS-1038H-1	159M.026MM	MS-2095H026MM
40M10	MS-1038H-10	159M.026X	MS-2095HX
40M11	MS-1038H-11	159M.25MM	MS-2095H25MM
40M1X	MS-1038HX	160M	MS-1804H
40M20	MS-1038H-20	2210SB20	CB-436B-20
40M21	MS-1038H-21	2570SA10	CB-673B-10
40M9	MS-1038H-9	3645CP	CB-979M
415SB10	CB-503B-10	3645CP10	CB-979M-10
415SB30	CB-503B-30	3735SB	CB-1221M
41M	MS-829H	3735SB10	CB-1221M-10
41M1	MS-829H-1	4-7195CH	CB-1780H
41M10	MS-829H-10	4-7195CH10	CB-1780H25mm
41M11	MS-829H-11	4-7195CH1X	CB-1780HX
41M19	MS-829H-19	4-7195CHTX 4-7305CH	CB-1760HX CB-1774H





Sealed Power	Clevite
6-1415SB10	CB-503B-10
6-1415SB30	CB-503B-30
6-7120CH	CB-1398H
6-7120CH1	CB-1398H-1
6-7120CH10	CB-1398H-10
7100CH	CB-663HN
7100CH1	CB-663HN-1
7100CH10	CB-663HN-10
7100CH1X	CB-663HXN
7100CH20	CB-663HN-20
7100CH30	CB-663HN-30
7125CH	CB-481HN
8-7040CH	CB-542HN
8-7040CH10	CB-542HN-10
8-7040CH1X	CB-542HXN
8-7040CH20	CB-542HN-20
8-7050CH	CB-758HN
8-7050CH1	CB-758HN-1
8-7050CH10	CB-758HN-10
8-7050CH1X	CB-758HXN
8-7065CH	CB-745HN
8-7065CH1	CB-745HN-1
8-7065CH10	CB-745HN-10
8-7065CH1X	CB-745HXN
8-7065CHA	CB-745HND
8-7065CHA10	CB-745HND-10
8-7095CH	CB-663HN
8-7095CH1	CB-663HN-1
8-7095CH10	CB-663HN-10
8-7095CH1X	CB-663HXN
8-7095CH20	CB-663HN-20
8-7095CH30	CB-663HN-30
8-7100CH	CB-663HN
8-7100CH1	CB-663HN-1
8-7100CH10	CB-663HN-10
8-7100CH11	CB-663HN-11
8-7100CH19	CB-663HN-19
8-7100CH1X	CB-663HXN
8-7100CH20	CB-663HN-20
8-7100CH21	CB-663HN-21
8-7100CH30	CB-663HN-30
8-7100CH9	CB-663HN-9
8-7100CHA	CB-663HND
8-7100CHA1	CB-663HND-1
8-7100CHA10	CB-663HND-10
8-7100CHA1X	CB-663HXND
8-7125CH	CB-481HN
8-7125CH10	CB-481HN-10
8-7135CH	CB-527HND
8-7135CH10	CB-527HND-10

Sealed Power	Clevite
8-7155CH	CB-831HN
8-7155CH10	CB-831HN-10
8-7160CH	CB-634HN
8-7160CH10	CB-634HN-10
8-7160CH1X	CB-634HXN
8-7175CH10	CB-927HN-10
8-7185CH	CB-818HN
8-7185CH10	CB-818HN-10
8-7195CH	CB-1780H
8-7195CH10	CB-1780H25mm
8-7195CH1X	CB-1780HX
8-7200CH	CB-743HN
8-7200CH1	CB-743HN-1
8-7200CH10	CB-743HN-10
8-7200CH11	CB-743HN-11
8-7200CH1X	CB-743HXN
8-7200CH20	CB-743HN-20
8-7200CH21	CB-743HN-21
8-7200CH30	CB-743HN-30
8-7200CH9	CB-743HN-9
8-7200CHA11	CB-743HND-11
8-7200CHA9	CB-743HND-9
8-7250CH	CB-1442H
8-7250CH.026MM	CB-1442H026mm
8-7250CH.026X	CB-1442HX
8-7250CH.25MM	CB-1442H25mm
8-7300SHA	CB-1512V
8-7300SHA	CB-1512M
8-7300SHA10	CB-1512V-10
10-7250CH	CB-1442H
10-7250CH.026MM	CB-1442H026mm
10-7250CH.026X	CB-1442HX
C8-7065CH	CB-745HNK
C8-7065CHA	CB-745HNDK
C8-7100CH	CB-663HNK
C8-7100CH-1	CB-663HNK-1
C8-7100CH-10	CB-663HNK-10
C8-7100CH1X	CB-663HXNK
C8-7100CHA	CB-663HNDK
C8-7155CH	CB-831HNK
C8-7155CH10	CB-831HNK-10
C8-7160CH	CB-634HNK
C8-7160CH10	CB-634HNK-10
C8-7200CH	CB-743HNK
C8-7200CH10	CB-743HNK-10
C8-7200CH1X	CB-743HXNK
C8-7200CHA	CB-743HNDK
C8-7200CHA10	CB-743HNDK-10
C129M	MS-590HK
C129M10	MS-590HK-10





Sealed Power	Clevite
C129M1X	MS-590HXK
C130M	MS-1432HK
C130M10	MS-1432HK-10
C139M	MS-909HK
C139M1	MS-909HK-1
C139M10	MS-909HK-10
C139M1X	MS-909HXK
C140M	MS-1038HK
C140M10	MS-1038HK-10
C141M	MS-829HK
C141M10	MS-829HK-10
C141M1X	MS-829HXK



#### CRANKCASE TOLERANCES

Finish of Main Bores: 60-90 micro inches Ra.

Bore Tolerance: .001" (.025mm) up to 10.000" (250mm) bore Out-of-Round: .001" (.025mm) max if horizontal is larger than vertical

#### Alignment

.002" (.050mm) max overall misalignment	(.001"025mm for HD or highly loaded engines)
.001" (.025mm) max misalignment on adjacent bores	(.0005"013mm for HD or highly loaded engines)

# CRANKSHAFT TOLERANCES MAIN BEARING AND CRANKPIN JOURNALS

**Finish of Journals:** 15 micro inches Ra. or better (10 micro inches Ra. or better for HD or highly loaded engines)

#### **Diameter Tolerance:**

.0005" (.013mm) up to 1.500" (38mm) journal

.001" (.025mm) for 1.500" (38mm) to 10.000" (250mm) journal

#### Out-of-Round:

.0005" (.013mm) maximum	.0002"005mm for HD or
up to 5.000" (125mm)	highly loaded engines
iournal	

(Never use a maximum out-of-round journal with a maximum out-of-round bore.)

### Taper:

.0002" (.005mm) max up to 1.000" (25mm) long journal	.0001"003mm for HD or highly loaded engines
.0004" (.010mm) max for 1.000" (25mm) to 2.000" (50mm) long journal	.0002"005mm for HD or highly loaded engines
.0005" (.013mm) max for 2.000" (50mm) or longer journal	.0003"008mm for HD or highly loaded engines
Alignment:	
.001" (.025mm) max misalignment on adjacent journals	.0005"013mm for HD or highly loaded engines
.002" (.050mm) max overall misalignment	.001"025mm for HD or highly loaded engines
Crankpin and main journals should be parallel within	.0005"013mm for HD or highly loaded engines

Hour-Glass or Barrel Shape Condition: Same as taper

Oil Holes: Must be well blended into journal surface.

### **BEARING SPREAD**

.001" (.025mm)

Main bearings: .005" (.13mm) to .020" (.50mm) in excess of crankcase bore diameter

Connecting rod bearings: .020" (.50mm) in excess of rod bore

#### CRANKSHAFT END CLEARANCE

Shaft Diameter	End Clearance
2.000"-2.750"	.003"007"
(50mm-70mm)	.075mm175mm)
2.813"-3.500"	.005"009"
(71mm-88mm)	(.125mm225mm)
3.500" or over	.007"011"
(89mm or over)	(.175mm275mm)

#### **CONNECTING ROD TOLERANCES**

Finish of Rod Bores: 60-90 micro inches Ra.

#### **Rod Tolerance:**

.0005" (.013mm) up to 3.250" (81mm) diameter

.001" (.025mm) from 3.250"(81mm)to 10.000" (250mm) diameter

Out-of-Round: .001" (.025mm) maximum if horizontal is larger than vertical

#### Taper:

.0002" (.005mm) up to 1.000" (25mm) length	.0001"003mm for HD or highly loaded engines
.0004" (.010mm) for 1.000" (25mm) to 2.000" 50mm) length	.0002"005mm for HD or highly loaded engines
.0005" (.013mm) for 2.000" (50mm) or longer	.0003"008mm for HD or highly loaded engines

Hour-Glass or Barrel Shape Condition: Same as taper

Parallelism: Between rod bore and wrist pin hole .001" (.025mm) in 5.000" (125mm)

Twist: .001" (.025mm) in 6.000" (150mm)

### **CONNECTING ROD END CLEARANCE**

Fillets at end of crankpin should not bind on ends of rod bearing, .004" (.10mm) to .010" (.25mm) clearance recommended.

#### **OIL CLEARANCE - RESIZED BEARINGS**

The oil clearance shown in this catalog are for the factory manufactured precision sizes. When installing a resized bearing, adjust the oil clearance shown as follows:

For babbitt and TM- copper-lead: Add .0004" (.010mm) to both low and high limit

For TM-112 copper-lead: Add .0008" (.020mm) to low limit and .0004"(.010 mm) to high limit

### **PIN BUSHINGS**

Resizing: Light Ream: .007"/.015" Bore: .015"/.030"





				2424
	Fraction	1 /0 /	Decimal	MM
		1/64	.01563	.3969
	1/32		.03125	.7938
			.03937	1.0000
		3/64	.04688	1.1906
1/16			.06250	1.5875
		5/64	.07813	1.9844
			.07874	2.0000
	3/32		.09375	2.3813
		7/64	.10938	2.7781
			.11811	3.0000
1/8			.12500	3.1750
		9/64	.14063	3.5719
	5/32		.15625	3.9688
			.15748	4.0000
		11/64	.17188	4.3656
3/16			.18750	4.7625
			.19685	5.0000
		13/64	.20313	5.1594
	7/32		.21875	5.5563
		15/64	.23438	5.9531
			.23622	6.0000
1/4			.2500	6.3500
		17/64	.26563	6.7469
			.27559	7.0000
	9/32		.28125	7.1438
		19/64	.29688	7.5406
5/16			.31250	7.9375
			.31496	8.0000
		21/64	.32813	8.3344
	11/32		.34375	8.7313
			.35433	9.0000
		23/64	.35938	9.1281
3/8			.37500	9.5250
		25/64	.39063	9.9219
			.39370	10.0000
	13/32		.40625	10.3188
		27/64	.42188	10.7156
			.43307	11.0000
7/16			.43750	11.1125
		29/64	.45313	11.5094
	15/32		.46875	11.9063
			.47244	12.0000
		31/64	.48438	12.3031

MM X .03937 = Inches / Inches X 25.4 = MM

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	Fraction		Decimal	MM
1/2			.50000	12.7000
			.51181	13.0000
		33/64	.51563	13.0969
	17/32		.53125	13.4938
		35/64	.54688	13.8906
			.55118	14.0000
9/16			.56250	14.2875
		37/64	.57813	14.6844
			.59055	15.0000
	19/32		.59375	15.0813
		39/64	.60938	15.4781
5/8			.62500	15.8750
			.62992	16.0000
		41/64	.64063	16.2719
	21/32		.65625	16.6688
			.66929	17.0000
		43/64	.67188	17.0656
11/16			.68750	17.4625
		45/64	.70313	17.8594
			.70866	18.0000
	23/32		.71875	18.2563
		47/64	.73438	18.6531
			.74803	19.0000
3/4			.75000	19.0500
		49/64	.76563	19.4469
	25/32		.78125	19.8438
			.78740	20.0000
		51/64	.79688	20.2406
13/16			.81250	20.6375
			.82677	21.0000
		53/64	.82813	21.0344
	27/32		.84375	21.4313
		55/64	.85938	21.8281
			.86614	22.0000
7/8			.87500	22.2250
		57/64	.89063	22.6219
	00/00		.90551	23.0000
	29/32	/	.90625	23.0188
1-2-2-		59/64	.92188	23.4156
15/16			.93750	23.8125
		04/04	.94488	24.0000
	0.1.400	61/64	.95313	24.2094
	31/32		.96875	24.6063
		00/04	.98425	25.0000
		63/64	.98438	25.0031
1			1.00000	25.4000