This is NOT a full catalog, it is intended to be used in conjunction with the 2014 Engine Parts Catalog. Please contact Dura-Bond for a complete listing of new parts, application and prices.
Manufacturing began in the spring of 1947 in a small former woodworking plant in Palo Alto, California’s industrial section. After destroying 50 percent of early production due to flaws, Dura-Bond finally delivered its first 5,000 unit order and set a goal of 20,000 units a month. Quite simple, they began to fill a growing need. The staff quickly learned that when a mechanic replaced an old camshaft bearing, he hammered the new one into place – requiring force to square the end away. Oftentimes the hammering created nicks along the edge, resulting in a damaged bearing. Dura-Bond’s idea was to make it a solid circle of metal, which inserted easily and fit perfectly. The “all-round” design of solid metal soon replaced the interlocking design as an industry standard. The breakthrough meant no oil loss – no seepage from bearing onto shaft.

Though originally designed for replacement purposes in cars and trucks, under the leadership of Francis R. Burke, a Harvard graduate, Dura-Bond cam bearings quickly extended into many specialized applications, such as: marine, farm equipment, antique vehicles, and more. Enduring products have included standard, aluminum overhead, and high performance bearings. More recent additions to the product mix have resulted from the purchasing of a well-respected valve seat manufacturer. In late 1996, Dura-Bond began offering new technology powder metal valve seat inserts with superior machinability and designed for today’s varying fuel requirements.

Today over 70 years later, Dura-Bond has grown into a sophisticated 85,000 square foot facility located in Carson City, NV. Its employees are among the most qualified engine rebuilding component technicians in the world. Current production and distribution sources include a long list of distributors, engine rebuilders, and original equipment manufacturers throughout America and abroad. Since its humble beginnings, Dura-Bond’s “all-round” camshaft bearing has assumed the enviable position of being the industry’s standard against which all others are judged.

Dura-Bond continues in the fine tradition it has developed over 70 years with its employees, customers and vendors. Our customers depend on our quality and innovative products to provide ever-increasing demands to provide solutions. These solutions range from all the basics of just-in-time delivery, quality – ISO 9001 certification, Oliver Wight Class “A” MRP II and competitive pricing, and engineering design.

According to President/Owner, Charles Barnett, Dura-Bond Bearing Company strives to exceed the exceptional level of quality and service that the company has maintained during the last 70 years. Says Barnett, “Our commitment to excellence and dedication continues to strengthen our customer relationships. These loyal customers are the reason we are still here, and the reason why we’ll be around to see another 70 years.”
AFTER A YEAR IN THE MAKING, DURA-BOND IS PROUD TO ANNOUNCE THE RELEASE OF OUR NEW WEBSITE!

We have redesigned it with you in mind, streamlining menus, simplifying navigation, building a responsive layout for all platforms, viewed in any language and providing more resources and information on our products and services.

We encourage everyone to visit and explore the site, discovering the full spectrum of educational content, such as the latest Videos, Webinars, and Technical Support Documents. Download our most recent 2019 New Product Supplement, Part Guides, Catalogs, and Product Informational Flyers. Stay up-to-date with our currently trending News and Product Announcements.

We will continue to expand our resources and our website to deliver the most updated and relevant information for the Aftermarket. Don’t forget to sign up to receive our quarterly newsletter.

On Our NEW Site You Will Also Discover:

- World’s Finest Engine & Transmission Products
- The all New and Redesigned Part Search Lookup
- Request A Quote
- Frequently Asked Questions
- Distribution Centers, Sales Rep & Territory Listings
- Photo Gallery
- Credit Application
- Employment
- And So Much More . . .

Visit Dura-Bond Today!
www.dura-bondbearing.com
Dura-Bond Bearing Company is a world leader in camshaft bearings, powder metal valve seats and valve spring shim design and manufacturing. This has been recognized by over 70 years of experience as the standard of the industry, and the internationally recognized ISO9001 and MRP – Oliver Wight Class “A” certifications.

The natural process of matching complimentary valve train components provides solutions that are designed as a system, not as only individual components.

CAM BEARINGS/BUSHINGS – The seamless, 100% machined surface design provides the tightest tolerances in the industry. The centerless ground OD, centerless bored ID results in wall variations of .0004 in., giving the customer increased system design flexibility. Discrete manufacturing lines can supply both high and low volumes economically. We can be a valued strategic partner with our design, development and manufacturing capabilities.

Dura-Bond bimetal bearings are constructed of seamless steel tube with a thin layer of lead based babbitt material. Seamless construction makes installation easy, eliminating breakage and bearing surface interruptions.

Lead based babbitt provides ideal properties for nearly all engine applications. Babbitt’s superior embedability, conformability, and anti-seizure characteristics have proven to reduce engine failures that harder bearing materials can cause. Dura-Bond Bearing offers:
- Oversize and undersize bearings for many applications: Oversize ODs for line bored blocks. Undersized IDs for cam salvage.
- Semi-finished IDs for line boring requirements: Unbored IDs allow line boring after bearing installation.
- OHC repair bearings: Provides a method to repair aluminum OHC heads. Repairs scored or seized cam/housings and restores cam alignment.
- High Performance line for racing applications: Fatigue life of the bearing is nearly doubled with micro-babbit, chill cast, and burnished construction.
- Coated High Performance bearings: Fluoropolymer coated high performance for maximum fatigue life and improved surface properties.
- Special small run bearings/bushings for prototype or block salvage

VALVE SEAT INSERTS – Patented materials and processing of these powder metal valve seats offer excellent machinability, along with low wear and high heat resistance. These inserts have finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles to provide all the properties an application requires. Special compositions and processing have been developed to perform in the most extreme duty applications. Complete in-house capabilities, from development and tooling to testing, reduces lead time and cost.

SHIMS – Valve seat shims and other applications can be supplied in sizes ranging up to 3.00 in. diameter and .060 in. thick, in hardened or annealed condition. Unique tooling design provides short lead times and low economical run quantities.

HARDWARE – The engine tear down and cleaning process can lead to broken, bent, distorted, or lost service parts. These items can be troubling to any engine rebuilder, especially when they are difficult to obtain. That’s why Dura-Bond offers many of the hard to find OEM service parts you need at substantially lower prices.

HARDWARE FINISHING KITS – Most rebuilders know the time and expense of trying to reclaim service parts. A recent study revealed that an average rebuilder could spend up to 15-20 minutes per engine searching for a reclaimed service part. That is why Dura-Bond has introduced a new line of engine hardware finishing kits. These kits include all of the necessary hardware and components needed to complete a rebuild such as dowel pins, cam bolts, seal housing components, woodruff keys, cam eccentrics, by-pass valves, etc. The engine hardware finishing kits allow rebuilders an easy way to inventory and recoup lost costs on these components. All this adds up to saving time and money.

Our customers have come to expect our diverse, high level of service. They know that beyond the manufacture of component parts we are a valued partner in solving problems. From engineering design, to prototype development, sourcing and assembly work…they depend on us as their partner. Our teams of Design, Materials, Application and Manufacturing Engineers are ready to be a part of your team in simultaneous engineering and integration. We would like to work with you, not just as a “production supplier”, but as a strategic partner. If your requirements range from prototypes to high volume, let Dura-Bond Bearing Company be part of the solution.
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This is not a full catalog, it is intended to be used in conjunction with the 2014 Engine Parts Catalog.

Please contact Dura-Bond for a complete listing of new parts, application and prices.

DISCLAIMER
This catalog contains parts information only. Before installing any part listed, consult the appropriate vehicle manufacturer’s instructional manual for detailed installation instructions. Although the information in this catalog has been gathered from the best available sources and every possible effort has been made to ensure accuracy, we cannot accept responsibility for any errors or omissions. We would very much appreciate being advised of any inaccuracies which might come to your attention. Dura-Bond reserves the right to update and change product specifications at any time without notice.

WARRANTY
Dura-Bond Bearing Company products are warranted to be free from defects of materials or workmanship for one year from the date of purchase. Dura-Bond Bearing Company’s responsibility is limited to the replacement value of the product if Dura-Bond determines the product to be defective under normal use and service. Claims for labor or related component cost will not be considered. No other warranty, either expressed or implied, is made.

Copywriter, Editor, Design Layout - William E. Dolak

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Dura-Bond bimetal bearings are constructed of seamless steel tube with a thin layer of lead based babbitt material. Seamless construction makes installation easy, eliminating breakage and bearing surface interruptions.

Lead based babbitt provides ideal properties for nearly all engine applications. Babbitt’s superior embedability, conformability, and anti-seizure characteristics have proven to reduce engine failures that harder bearing materials can cause.

The seamless, 100% machined surface design provides the tightest tolerances in the industry. The centerless ground OD, centerless bore ID results in wall variations of .0006 in., giving the customer increased system design flexibility. Discrete manufacturing lines can supply both high and low volumes economically. We can be a valued strategic partner with our design, development and manufacturing capabilities.

If your requirements range from prototypes to high volume, let Dura-Bond Bearing Company be part of the solution.
Performance Engines Deserve **HIGH PERFORMANCE** Cam Bearings.

If you want to match performance levels and get the most out of your engines, use Dura-Bond “Red Box” High Performance Cam Bearings!

**HIGH PERFORMANCE CAM BEARINGS**
- Precision Machined - Centerless Ground/Bored
- More Than Double the Fatigue Strength of Standard Bearings - Withstands Racing Spring Loads
- Micro-Babbitt/Grain-Controlled Babbitt/ Roller Burnished

**“COATED” HIGH PERFORMANCE CAM BEARINGS**
- Retains Engine Oil on the Surface, Even Under Extreme Heat and Pressure
- Secondary Lubrication in the Event Momentary Oil Starvation Occurs

**ENHANCED ENGINEERING SOLUTIONS**

For the past 60 years our customers have come to expect our diverse, high level of service. They know that beyond the manufacture of component parts we are a valued partner in solving problems. From engineering design, to prototype development, sourcing & assembly work, they depend on us as their partner. Our team of Design, Materials, Application and Manufacturing Engineers are ready to be a part of your team in simultaneous engineering and integration.

**DURA-BOND PROVIDES THE REBUILDER WITH ENHANCED ENGINEERING SOLUTIONS!**
- Redesigned sets from O.E. to improve in the aftermarket (i.e. B-12B, CH-11B, CH-12B, CH-18A, F-47B and PD-28B)
- O.D. grooved to increase oil flow and optimize oil inlet locations
- Oversize O.D. Bearings for blue printing blocks
- Undersize I.D. sets for optimizing oil clearance
- Semi-Finished I.D. for line boring requirements

3200 Arrowhead Drive, Carson City, NV 89706 · TEL (800) 227-8360 · FAX (775) 883-9497 · www.dura-bondbearing.com
## SPECIALTY BEARING COMPONENT PROGRESSIVE LISTING BY HOUSING BORE

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Cam Bearing Set - Chrysler

**PD-41, PDP-41, PDP-41T**

**Application:**
- **Chrysler** - Hemi Gen. III 5.7L (2009-Up), 6.4L (2011-Up)

Connecting Rod Bushings

**RBC-2, RBG-2**

**Application:**
- **RBC-2 - Chrysler** 4.0L (241ci) Eng. (2007-2011)
- **RBG-2 - GM** 2.8L, 3.5L, 4.2L (Gen. III & IV LS) Eng. (2006-Up)

HP Cam Bearing Set - GM

**CHP-26T**

**Application:**
- **GM** - 6.2L (376ci) LT1 (2014-2018)

Cam Bearing Set - Ford

**F-67**

**Application:**

**Interchanges with:** OE# BC3Q-6A251-AA
Cam Bearing Set - Cummins

CU-15

Application:
CUMMINS - 3.9L, 5.9L B Series (2003-2006)
Interchanges with: OE# 3940059

Interchanges with:
OE# 3940059

Cam Bearing - Cummins

CU-15-1

Application:
CUMMINS - 15.0L (912ci) ISX/QSX (1997-2010)
(7 Bearings Required for Block)
Interchanges with: OE# 4026423

Interchanges with:
OE# 4026423

Cam Bearing Set IHC (Navistar)

IN-22

Application:
IHC (Navistar) - 7.6L (466ci) DT466E (2004-2016)
IHC (Navistar) - 8.7L (530ci) DT530E (2004-2006)
Interchanges with: OE# 1875869C92

Cam Bearing Set IHC (Navistar)

IN-23

Application:
IHC (Navistar) - 4.5L (275ci) MaxxForce 5 VT275
(2005-2010)
Interchanges with: OE# 1828127C1

Interchanges with:
OE# 1828127C1
LS Engine Parts Guide

- Cam Bearings (Stock Replacement, Block Saver, Cam Saver)
- Connecting Rod Bushings
- Engine Hardware
- Engine Hardware Kits
- Valve Seats
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**Denotes Auxiliary / Balance Shaft Bearing
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<th>POSITION</th>
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**Denotes Auxiliary / Balance Shaft Bearing
"und" Denotes Undersized ID
OPTIMUM PLACEMENT OF CAMSHAFT BEARING OIL FEED HOLE LOCATION

Maximum camshaft support will be realized by installing the cam bearing oil feed hole to the optimum clock location. Blocks and heads using a 360° oil groove located behind the bearing oil feed, allow one to move the clock position of the cam bearing oil feed hole. This way you can adjust the clock position during cam bearing installation to make sure that the optimum location for the best hydrodynamic wedge is selected. Locating and installing the cam bearing to take advantage of this hydrodynamic wedge will supply the maximum support for the camshaft during engine operation. The direction of camshaft rotation and the engine oil entry point into the bearing control the placement of the hydrodynamic wedge.

If the oil feed passage in the block or head is just a hole without a 360° groove, the bearing oil hole must line up with the oil feed passage in the block or head. In some instances, the bearing oil feed hole in the cam bearing also lines up with a groove cut in the camshaft journal. In those instances, the location of the bearing oil feed hole in the bearing is also very critical fore and aft and may not match up 100% with the hole in the block or head.

If the camshaft being used is driven with a gear-to-gear arrangement, or is a reverse rotation engine with a chain drive, the cam bearing oil feed hole will require repositioning to the opposite lower side. This is due to the fact that the camshaft is turning in the opposite direction.

(The illustration shows the optimum engine oil feed hole location for a camshaft that is turning clockwise as viewed from the front of the engine.)

This information was provided by AERA - Engine Builders Association.
## Conversion Size Chart

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## Conversion Formula

**INCHES X 25.4 = MILLIMETERS**

**MILLIMETERS / 25.4 = INCHES**
Dura-Bond now has a line of engine hardware available.

The engine tear down and cleaning process can lead to broken, bent, distorted, or lost service parts. These items can be troubling to any engine rebuilder, especially when they are difficult to obtain. That is why Dura-Bond offers many of the hard to find OEM service parts you need at substantially lower prices.

- Manufactured to precise OEM dimensions for exact fit
- Extensive product coverage
- Lower prices mean more profits to rebuilders
- Offer hard to find and OEM discontinued parts

If you have any additional OEM hardware needs, we invite you to inquire.

We Make It, Not Just Distribute It!

For further information, please contact Dura-Bond Bearing.
Spark Plug Tubes

Application:
SPT-13: BMW (1.6L Mini Cooper Eng.)
SPT-1: CHRYSLER (3.2L, 3.5L Eng.)
SPT-12: CHRYSLER (3.6L Pentastar Eng.)
SPT-10: FORD (5.0L Coyote Eng.)
SPT-4: GM (3.6L High Feature Eng.)
SPT-11: HYUNDAI (1.8L G4 GM Eng.)
SPT-5: TOYOTA (2.2L, 5SFE Eng.)
SPT-2: TOYOTA (3.0L, 1MZ Eng.)
SPT-3: TOYOTA (3.4L, 5VZ Eng.)
SPT-7: TOYOTA (3.5L, 2GR-FE Eng.)
SPT-9: TOYOTA (4.7L, 2UZ-FE Eng.)

Spring Retainers

Application:
SR-779: CATERPILLAR 3116 Series
SR-627: CHRYSLER 2.5L (150ci), 4.0L (243ci)
SR-570: CHRYSLER 4.7L (287ci)
SR-318: CHRYSLER 5.2L (318ci), 5.9L (360ci) (Early)
SR-626: CHRYSLER 5.2L (318ci), 5.9L (360ci) (Late)
SR-183: FORD 1.6L (98ci), 1.9L (116ci), 3.0L (183ci)
SR-536: FORD 2.8L, 2.9L, 4.0L
SR-220: GENERAL MOTORS 2.2L (134ci)
SR-500: GENERAL MOTORS 5.7L (350ci) Hi Perf.
SR-366: GENERAL MOTORS 7.4L (454ci)
SR-809: NISSAN 2.5L QR25
SR-014: WAUKESHA VGF F18/H24GL/GLD LCR/HCR, L36/P48GL/GLD HCR

Distributor Tower Shaft Bushing

Application:
CHRYSLER (318ci-440ci) “LA” V8

Interchanges with: OE# 2863584, OE# 318-440, 839007, PC-780

AD-584
Rotator Eliminators

The exhaust rotator eliminators are used to make up the difference when doing away with factory big block Chevy exhaust rotators.

No longer will you have to stack shims to take up the space! The old standard shims simply will not hold up to the extreme pressures and high rpm found in today’s performance engines.

These rotator eliminators also provide a step for the valve spring so that it cannot walk around on the cylinder head.

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Knock Sensor Stud

ST-1

Application: FORD 4.6L

Interchanges with: OE# W704602-S309

Crankshaft Inserts

AD-699, AD-605

Application:

AD-699 - GM 2.5L (w/Automatic Trans.)
AD-605 - GM 2.5L (w/Manual Trans.)
Rocker Arm Pedestal Shims

The Rocker Arm Pedestal Shim utilizing non-adjustable pedestal mounted rocker arms. The hydraulic lifters in these engines may have excessive preload due to a camshaft change, valve job, head resurfacing, etc.

These shims cure this problem without resorting to different pushrods. The shims are placed between the rocker arm pedestal and the cylinder head, to reduce the preload.

<table>
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<th>PART NO.</th>
<th>MAKE &amp; APPLICATION</th>
<th>THICKNESS</th>
</tr>
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<tbody>
<tr>
<td>S-220-10-P</td>
<td>GM 2.2L (134ci)</td>
<td>.010” Thickness</td>
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<tr>
<td>S-220-20-P</td>
<td>GM 2.2L (134ci)</td>
<td>.020” Thickness</td>
</tr>
<tr>
<td>S-006-10-P</td>
<td>GM 3.1L (189ci), 3.4L (207ci)</td>
<td>.010” Thickness</td>
</tr>
<tr>
<td>S-006-20-P</td>
<td>GM 3.1L (189ci), 3.4L (207ci)</td>
<td>.020” Thickness</td>
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<tr>
<td>S-006-30-P</td>
<td>GM 3.1L (189ci), 3.4L (207ci)</td>
<td>.030” Thickness</td>
</tr>
</tbody>
</table>

Cam Chain Oil Tab

AS-001-P

Application: CHRYSLER (273ci-360ci) “LA” V8

Interchanges with: OE# 03671649

Cam Retainer

AW-9016-P

Application: GM (294ci-427ci) LS
**Cam Eccentric**

<table>
<thead>
<tr>
<th>Model</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AE-003-P - FORD 5.0L (302ci), 5.8L (351ci) w/Fuel Injection - Fuel Injected</td>
</tr>
<tr>
<td></td>
<td>AE-004-P - FORD (332ci-428ci) “FE” V8 - Inner</td>
</tr>
</tbody>
</table>

**Bypass Valves**

<table>
<thead>
<tr>
<th>Model</th>
<th>Application</th>
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<tbody>
<tr>
<td></td>
<td>AV-001-P (11 psi) - GM 1.4L (85ci), 1.6L (97ci), 1.8L (110ci), 2.0L (122ci), 2.8L (173ci), 3.8L (229ci), 4.3L (262ci), 4.9L (301ci)</td>
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<tr>
<td></td>
<td>AV-580-PHD (21 psi) - GM 1.4L (85ci), 1.6L (97ci), 1.8L (110ci), 2.0L (122ci), 2.8L (173ci), 3.8L (229ci), 4.3L (262ci), 4.9L (301ci)</td>
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<tr>
<td></td>
<td>AV-280-P - GM 2.3L (140ci), 2.5L (151ci), 3.2L (194ci), 3.8L (230ci), 4.1L (250ci), 4.8L (292ci)</td>
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**Coolant Tube (O-Ring or Slip-Fit Type)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Application</th>
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<tbody>
<tr>
<td></td>
<td>AE-003-P - FORD 5.0L (302ci), 5.8L (351ci) w/Fuel Injection - Fuel Injected</td>
</tr>
<tr>
<td></td>
<td>AE-004-P - FORD (332ci-428ci) “FE” V8 - Inner</td>
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</table>

**Timing Gear Oilier (Press in Type)**

<table>
<thead>
<tr>
<th>Model</th>
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<tr>
<td>TC-4</td>
<td>Application:</td>
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<tr>
<td></td>
<td>GM 2.5L (151ci), 3.8 (230ci), 4.1L (250ci), 4.8L (292ci) 4-6 cyl (1963-1986)</td>
</tr>
<tr>
<td></td>
<td><strong>Interchanges with:</strong> OE# 3875950, PG-380</td>
</tr>
</tbody>
</table>

**Application:**

- **FORD** 4.6L, 5.4L 8 cyl  
  - TC-1 (O-Ring)  
  - TC-2 (Slip-Fit)  
  - TC-1-00 (O-Ring for TC-1)
## ENGINE HARDWARE

<table>
<thead>
<tr>
<th>PART NO.</th>
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<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
<th>MAKE &amp; APPLICATION</th>
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<tbody>
<tr>
<td><strong>AMC</strong></td>
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<tr>
<td>AB-030-P</td>
<td>3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)</td>
<td>Bolt</td>
<td>1/2-20 x 1-1/4 Hex</td>
<td>CAM BOLTS &amp; WASHERS</td>
</tr>
<tr>
<td>AW-011-P</td>
<td>3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci)</td>
<td>Washer</td>
<td>2-1/16 x 1/2 x 3/16 Washer</td>
<td></td>
</tr>
</tbody>
</table>

| **HEAD DOWELS** | | | | |
| AD-258 | 2.5L (150ci), 4.0L (242ci), 4.2L (258ci), 5.0L (304ci), 5.9L (360ci), 6.6L (401ci) | Hollow Dowel | 0.6250 | 0.523 | 0.500 |
| AD-927-P | 3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci) | Solid Dowel | 0.3125 | Solid | 0.565 |
| AD-0112 | 1966-69 (290ci), (343ci), (390ci) w/1970-Later Heads | Stepped Hollow Dowel | 0.6250/0.5620 | 0.450 | 0.500 |

| **OIL FILTER PIN** | | | | |
| AD-007-P | (199ci-258ci) | Roll Pin | 1/4 x 1-1/2 |

| **OIL PUMP DOWELS** | | | | |
| AD-148 | 3.8L (232ci), 4.0L (242ci), 4.2L (258ci) | Hollow Dowel | 0.5615 | 0.454 | 0.812 |

| **TRANSFORMATION DOWELS** | | | | |
| AD-148 | 3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci), (290ci), (304ci), (343ci), (360ci), (390ci), (401ci) | Hollow Dowel | 0.5615 | 0.454 | 0.812 |

| **WOODRUFF KEYS** | | | | |
| AK-002-P | 3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci) | Woodruff Key | 3/16 x 3/4 |
| AK-010-P | 3.3L (199ci), 3.8L (232ci), 4.0L (242ci), 4.2L (258ci) | Woodruff Key | 3/16 x 7/8 |

| **SPARK PLUG TUBES** | | | | |
| SPT-13 | 1.6L Mini Cooper | Spark Plug Tube | 0.9845 | 0.902 | 5.710 |

| **CATERPILLAR** | | | | |
| SR-779 | Caterpillar 3116 Series | Spring Retainer | Valve Stem Diameter 0.315 |

| **CATERPILLAR** | | | | |
| SP-7489 | Caterpillar 3304, 3306 Series | Spacer | 1.3750 | 0.675 | 1.063 |

| **CHRYSLER** | | | | |
| AB-012-P | (273ci-360ci) "LA" V8 | Bolt | 7/16-14 x 1-1/4 Hex |
| AW-002-P | (273ci-360ci) "LA" V8 | Cupped Washer | 1-1/2 x 7/16 x 5/16 Washer |
| AW-005-P | 5.2L (318ci), 5.9L (360ci) w/Roller Cam | Cupped Washer | 1-1/2 x 7/16 x 7/16 Washer |
| AW-006-P | 5.2L (318ci), 5.9L (360ci) w/Roller Cam, (361ci-440ci) V8 | Tapered (Bellville) Washer | 1-1/2 x 7/16 x 1.8 Washer |
| AB-040-P | (361ci-440ci) V8 | Bolt | 7/16-14 x 1 Hex |
| AB-042-P | (361ci-440ci) V8 | Bolt | 3/8-16 x 3/4 Hex |

| **CAM CHAIN OIL TABS** | | | | |
| AS-001-P | (273ci-360ci) "LA" V8 | Chain Oil Tab | N/A | N/A | N/A |

| **CAM PLUG** | | | | |
| FP-0007-P | 5.7L, 6.1L, 6.4L Hemi Gen III | Cam Plug (Rear) | N/A | N/A | N/A |

| **CAM SPROCKET DOWELS** | | | | |
| AD-402 | 2.2L, 2.5L Mitsubishi SOHC Vin A-E, J, K | Solid Dowel | 0.2318 | Solid | 0.630 |

| **CAM TRAY BOLTS** | | | | |
| AB-005-P | 5.2L (318ci), 5.9L (360ci) w/Roller Cam | Bolt | 5/16-18 x 5/8 Flanged Hex |

| **CRANK SEAL RETAINER CARRIER DOWELS** | | | | |
| AD-466 | 5.7L, 6.1L, 6.4L Hemi Gen III | Hollow Dowel | 0.3973 | 0.281 | 0.305 |
## ENGINE HARDWARE

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>MAKE &amp; APPLICATION</th>
<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
<th>DIMENSION</th>
<th>DIMENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-584</td>
<td>(318ci-440ci) &quot;LA&quot; V8</td>
<td>Distributor Tower Shaft Bushing</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>FP-0008-P</td>
<td>5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Expansion Plug</td>
<td>1-1/4 Disc Plug</td>
<td></td>
<td></td>
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<tr>
<td>AD-111</td>
<td>2.0L, 2.4L, 2.6L Includes Mitsubishi Eng.</td>
<td>Hollow Dowel</td>
<td>0.6300</td>
<td>0.500</td>
<td>0.505</td>
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<tr>
<td>AD-402</td>
<td>2.2L, 2.5L Mitsubishi SOHC Vin A-E, J, K.</td>
<td>Solid Dowel</td>
<td>0.2318</td>
<td>Solid</td>
<td>0.630</td>
</tr>
<tr>
<td>AD-849</td>
<td>2.4L, 2.6L (G54B), 2.7L Includes Mitsubishi Eng. 5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Hollow Dowel</td>
<td>0.6313</td>
<td>0.500</td>
<td>0.485</td>
</tr>
<tr>
<td>AD-856</td>
<td>3.3L (202ci)</td>
<td>Hollow Dowel</td>
<td>0.5913</td>
<td>0.452</td>
<td>0.488</td>
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<tr>
<td>AD-849A</td>
<td>4.7L</td>
<td>Hollow Dowel</td>
<td>0.6313</td>
<td>0.500</td>
<td>0.385</td>
</tr>
<tr>
<td>AD-927-P</td>
<td>(273ci-360ci) &quot;LA&quot; V8</td>
<td>Solid Dowel</td>
<td>0.3125</td>
<td>Solid</td>
<td>0.565</td>
</tr>
<tr>
<td>AD-1284-P</td>
<td>(361ci-440ci) V8</td>
<td>Solid Dowel</td>
<td>0.2466</td>
<td>Solid</td>
<td>0.630</td>
</tr>
<tr>
<td>FP-0009-P</td>
<td>5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Oil Indicator Tube Plug</td>
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<td></td>
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<tr>
<td>AP-024-P</td>
<td>5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Oil Galley Plug</td>
<td>1/4-18 x .46 Internal Hex, w/Sealant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP-003-P</td>
<td>5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Oil Galley Plug</td>
<td>3/8-18 x .46 Internal Hex, w/Sealant</td>
<td></td>
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<tr>
<td>SPT-1</td>
<td>2.0L, 3.2L, 3.5L</td>
<td>Spark Plug Tube</td>
<td>1.0275</td>
<td>0.965</td>
<td>5.035</td>
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<tr>
<td>SPT-12</td>
<td>3.6L Pentastar Eng.</td>
<td>Spark Plug Tube</td>
<td>0.9845</td>
<td>0.902</td>
<td>3.418</td>
</tr>
<tr>
<td>SR-627</td>
<td>2.5L (150ci) (1998-2002), 4.0L (243ci) (1999-2006)</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter 0.311/0.312</td>
<td></td>
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</tr>
<tr>
<td>SR-318</td>
<td>5.2L (318ci), 5.9L (360ci) (Early)</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter 0.370/0.373</td>
<td></td>
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</tr>
<tr>
<td>SR-626</td>
<td>5.2L (318ci), 5.9L (360ci) (Late)</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter 0.311/0.312</td>
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</tr>
<tr>
<td>SR-570</td>
<td>5.7L (345ci), 6.4L (392ci) Hemi Gen III</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter 0.272/0.273</td>
<td></td>
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</tr>
<tr>
<td>AB-001-P</td>
<td>(318ci-360ci) &quot;LA&quot; V8</td>
<td>Cam Thrust Plate Bolt</td>
<td>5/16-18 x 3/4 Hex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AD-1284-P</td>
<td>(361ci-440ci) V8</td>
<td>Solid Dowel</td>
<td>0.2466</td>
<td>Solid</td>
<td>0.630</td>
</tr>
<tr>
<td>AD-849</td>
<td>2.4L, 2.6L (G54B), 2.7L Includes Mitsubishi Eng.</td>
<td>Hollow Dowel</td>
<td>0.6310</td>
<td>0.500</td>
<td>0.485</td>
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<tr>
<td>AD-821</td>
<td>2.4L, 2.7L, 3.3L Includes Mitsubishi Eng.</td>
<td>Hollow Dowel</td>
<td>11mm</td>
<td>8.5mm</td>
<td>8.3mm</td>
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<tr>
<td>AD-270</td>
<td>2.7L</td>
<td>Hollow Dowel</td>
<td>0.5510</td>
<td>0.410</td>
<td>0.485</td>
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<tr>
<td>AD-532</td>
<td>3.9L V6, (318ci-440ci) &quot;LA&quot; V8, 5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Solid Dowel</td>
<td>0.4960</td>
<td>Solid</td>
<td>0.740</td>
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<td>AD-649A</td>
<td>4.7L</td>
<td>Hollow Dowel</td>
<td>0.6313</td>
<td>0.500</td>
<td>0.385</td>
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<tr>
<td>AK-002-P</td>
<td>(273ci-360ci) &quot;LA&quot; V8</td>
<td>Woodruff Key</td>
<td>3/16 x 3/4</td>
<td></td>
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</tr>
<tr>
<td>AK-005-P</td>
<td>(273ci-440ci) &quot;LA&quot; V8</td>
<td>Woodruff Key</td>
<td>3/16 x 1-13/16</td>
<td></td>
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<tr>
<td>AK-034-P</td>
<td>3.7L, 4.7L</td>
<td>Woodruff Key</td>
<td>3/16 x 2.077</td>
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<tr>
<td>AK-035-P</td>
<td>5.7L, 6.1L, 6.4L Hemi Gen III</td>
<td>Woodruff Key</td>
<td>3/16 x 1.072</td>
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<tr>
<td>AD-397A</td>
<td>5.4L</td>
<td>Hollow Dowel</td>
<td>0.6305</td>
<td>0.469</td>
<td>0.964</td>
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## ENGINE HARDWARE

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<tr>
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<td>LENGTH</td>
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### CAM BOLTS & WASHERS

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<th>MAKE &amp; APPLICATION</th>
<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB-032-P</td>
<td>3.8L (232ci)</td>
<td>Bolt &amp; Washer</td>
<td>10mm-1.5 x 34mm Hex, 35mm Integral Washer</td>
</tr>
<tr>
<td>AW-001-P</td>
<td>[221ci-351ci] Windsor V8, (370ci-460ci) &quot;Lima&quot; V8</td>
<td>Washer</td>
<td>1-1/4 x 3/8 x 1/4 Washer</td>
</tr>
<tr>
<td>AB-013-P</td>
<td>[332ci-428ci] &quot;FE&quot; V8</td>
<td>Bolt</td>
<td>7/16-14 x 1-3/4 Hex</td>
</tr>
<tr>
<td>AW-003-P</td>
<td>[332ci-428ci] &quot;FE&quot; V8</td>
<td>Washer</td>
<td>1-1/4 x 7/16 x 1/4 Washer</td>
</tr>
<tr>
<td>AB-014-P</td>
<td>(460ci) V8 w/Fuel Injection</td>
<td>Bolt</td>
<td>3/8-16 x 1-3/8 Hex</td>
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### CAM ECCENTRIC

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<tr>
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<th>MAKE &amp; APPLICATION</th>
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<th>DIMENSION</th>
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<tbody>
<tr>
<td>AE-001-P</td>
<td>(255ci-351ci) Windsor V8 (1968-later), 351M, 400M, (460ci) V8</td>
<td>Cam Eccentric - Inner</td>
<td>N/A</td>
</tr>
<tr>
<td>AE-002-P</td>
<td>(255ci-351ci) Windsor V8 (1968-later), 351M, 400M, (460ci) V8</td>
<td>Cam Eccentric - Outer</td>
<td>N/A</td>
</tr>
<tr>
<td>AE-003-P</td>
<td>5.0L (302ci), 5.8L (351ci) w/Fuel Injection</td>
<td>Cam Eccentric (FI)</td>
<td>N/A</td>
</tr>
<tr>
<td>AE-004-P</td>
<td>[332ci-428ci] &quot;FE&quot; V8</td>
<td>Cam Eccentric - Inner</td>
<td>N/A</td>
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### CAM SPROCKET DOWELS

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<thead>
<tr>
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<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
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<tbody>
<tr>
<td>AD-005-P</td>
<td>(302ci) 351W w/Two Piece Eccentric, 351C/M, 400M, (429ci, 460ci) V8</td>
<td>Solid Dowel</td>
<td>0.3115</td>
</tr>
<tr>
<td>AD-004-P</td>
<td>(221ci-351ci) Windsor V8 w/One Piece Eccentric</td>
<td>Solid Dowel</td>
<td>0.3115</td>
</tr>
<tr>
<td>AD-006-P</td>
<td>[332ci-428ci] &quot;FE&quot; V8</td>
<td>Solid Dowel</td>
<td>0.3090</td>
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</tbody>
</table>

### CAM TRAY BOLTS

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>MAKE &amp; APPLICATION</th>
<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB-011-P</td>
<td>5.0L (302ci), 5.8L (351ci) w/Roller Cam</td>
<td>Cam Tray Bolt</td>
<td>1/4-20 x 1/2 Place Bolt, Hex</td>
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</tbody>
</table>

### COOLANT TUBES

<table>
<thead>
<tr>
<th>PART NO.</th>
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<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-1</td>
<td>4.6L, 5.4L</td>
<td>Coolant Tube (O-Ring)</td>
<td>0.8750 0.437 1.915</td>
</tr>
<tr>
<td>TC-1-OO</td>
<td>4.6L, 5.4L</td>
<td>O-Ring For TC-1</td>
<td>N/A N/A N/A</td>
</tr>
<tr>
<td>TC-2</td>
<td>4.6L, 5.4L</td>
<td>Coolant Tube (Slip-Fit)</td>
<td>0.9800 0.500 2.438</td>
</tr>
</tbody>
</table>

### FLYWHEEL DOWELS

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>MAKE &amp; APPLICATION</th>
<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-6397</td>
<td>4.6L, 5.0L (302ci)</td>
<td>Stepped Solid Dowel</td>
<td>0.2485/0.3140 0.360 0.700</td>
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### FRONT COVER DOWELS

<table>
<thead>
<tr>
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<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
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<tbody>
<tr>
<td>AD-008DA</td>
<td>6.0L (363ci)</td>
<td>Hollow Dowel</td>
<td>0.4333 0.360 0.437</td>
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### HEAD DOWELs

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<tr>
<th>PART NO.</th>
<th>MAKE &amp; APPLICATION</th>
<th>PRODUCT TYPE</th>
<th>DIMENSION</th>
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<tbody>
<tr>
<td>AD-849</td>
<td>1.8L (110ci), 2.0L (121ci) Courier Eng.</td>
<td>Hollow Dowel</td>
<td>0.6310 0.500 0.485</td>
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<tr>
<td>AD-300</td>
<td>2.3L</td>
<td>Hollow Dowel</td>
<td>0.5555 0.468 0.470</td>
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<td>AD-600</td>
<td>3.0L</td>
<td>Hollow Dowel</td>
<td>0.6050 0.475 0.550</td>
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<tr>
<td>AD-011-P</td>
<td>3.8L (232ci)</td>
<td>Hollow Dowel (Split)</td>
<td>17mm 15mm 19mm</td>
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<tr>
<td>AD-008-P</td>
<td>4.9L (300ci), 3.6L (221ci), 4.2L (255ci), 4.3L (260ci), 4.5L (272ci), 4.7L (289ci), 5.0L (302ci), 5.8L (351ci), 6.6L (400ci)</td>
<td>Hollow Dowel</td>
<td>0.6745 0.552 0.435</td>
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<tr>
<td>AD-593</td>
<td>6.0L (18mm-20mm) 2003-2007 Powerstroke Eng.</td>
<td>Hollow Dowel (Stepped)</td>
<td>0.6970/0.7775 0.599 0.770</td>
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<td>AD-640</td>
<td>6.4L</td>
<td>Hollow Dowel</td>
<td>0.7763 0.700 0.755</td>
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<tr>
<td>AD-008A-P</td>
<td>(332ci-428ci) &quot;FE&quot; V8, (370ci-460ci) &quot;Lima&quot; V8</td>
<td>Hollow Dowel (Split)</td>
<td>0.7400 0.625 0.445</td>
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### HEAD PLUGS

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<tr>
<td>AP-020</td>
<td>MZR Eng.</td>
<td>Aluminum Plug</td>
<td>0.3645 Solid 0.360</td>
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### KNOCK SENSOR STUD

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<td>ST-1</td>
<td>4.6L</td>
<td>Knock Sensor Stud</td>
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### MANIFOLD DOWELS

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<tr>
<td>AD-025-P</td>
<td>(400ci) 351C, 351M</td>
<td>Solid Dowel</td>
<td>0.2500 Solid 0.500</td>
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### OIL PUMP DOWELS

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<tr>
<td>AD-230</td>
<td>2.0L, 2.3L Escort, Pinto</td>
<td>Hollow Dowel</td>
<td>0.7200 0.615 0.395</td>
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## ENGINE HARDWARE

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<tr>
<td>AP-001-P</td>
<td>4.9L (300ci)</td>
<td>Oil Galley Plug</td>
<td>1/16-27 x 1/4 Internal Hex</td>
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<td>SP-6265</td>
<td>4.6L</td>
<td>Spacer</td>
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<td>4.9L (300ci)</td>
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<td>SPT-10</td>
<td>5.0L Coyote Eng. (2011-2014)</td>
<td>Spark Plug Tube</td>
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<td>1.089</td>
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<td>SR-183</td>
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<td>SR-536</td>
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<td>SR-502</td>
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<td>3.8L (232ci)</td>
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<td>AB-010-P</td>
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<td>4.9L (300ci)</td>
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<td>5/16-18 x 3/4 Hex</td>
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<td>AB-015-P</td>
<td>(332ci-428ci) “FE” V8</td>
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<td>AB-011-P</td>
<td>7.5L (460ci)</td>
<td>Cam Thrust Plate Bolt</td>
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<td>AK-004-P</td>
<td>4.7L (289ci), 4.9L (300ci), 5.0L (302ci), 5.8L (351ci)</td>
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<td>AK-002-P</td>
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<td>AK-037-P</td>
<td>5.4L (330ci)</td>
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<td>AK-006-P</td>
<td>(332ci-428ci) &quot;FE&quot; V8</td>
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<tr>
<td>AK-007-P</td>
<td>351C, 351M, (400ci), 7.5L (460ci)</td>
<td>Woodruff Key</td>
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<tr>
<td>AK-008-P</td>
<td>7.5L (460ci)</td>
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<td>AB-026-P</td>
<td>4.3L (262ci)</td>
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<td>4.3L (262ci)</td>
<td>Flat Washer</td>
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<td>4.3L (262ci)</td>
<td>Tapered Washer</td>
<td>1-1/2 x 7/16 x 1/8 Washer</td>
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## ENGINE HARDWARE

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<th>PRODUCT TYPE</th>
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<td>CRANKSHAFT INSERTS</td>
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<td>FLAT LIFTER PLUG BOLTS</td>
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<td>FUEL PUMP BOLTS &amp; WASHERS</td>
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<td>HARMONIC BALANCER BOLTS</td>
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<tr>
<td>AB-001-P</td>
<td>4.3L (262ci)</td>
<td>Bolt</td>
<td>5/16-18 x 1-3/8 Cap Screw, Hex</td>
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<td>AB-019-P</td>
<td>4.3L (262ci)</td>
<td>Bolt</td>
<td>5/16-18 x 1-1/2 Hex</td>
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<td>AW-009-P</td>
<td>4.3L (262ci)</td>
<td>Washer</td>
<td>5/16 Star Washer</td>
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<td>AB-001-P</td>
<td>(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8</td>
<td>Bolt</td>
<td>5/16-18 x 3/4 Hex</td>
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<tr>
<td>AB-031-P</td>
<td>(265ci-455ci) Pontiac V8</td>
<td>Bolt</td>
<td>1/2-20 x 1 Hex</td>
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<tr>
<td>AW-010-P</td>
<td>(265ci-455ci) Pontiac V8</td>
<td>Washer</td>
<td>1-3/8 x 1/2 x 3/16 Washer</td>
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<td>AD-022</td>
<td>3.4L (207ci)</td>
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<td>0.4350</td>
<td>0.343</td>
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<td>AD-024</td>
<td>2.2L Ecotech</td>
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<td>0.3937</td>
<td>0.328</td>
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<tr>
<td>AW-013-P</td>
<td>All Other GM V6 / V8 Hi Perf.</td>
<td>Cam Lock Plate</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>AW-9016-P</td>
<td>(294ci-427ci) LS</td>
<td>Cam Retainer</td>
<td>N/A</td>
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<td>SP-230</td>
<td>3.8L (230ci)</td>
<td>Cam Spacer</td>
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<td>1.5050</td>
<td>1.288</td>
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<tr>
<td>AB-046-P</td>
<td>(294ci-427ci) LS</td>
<td>Bolt</td>
<td>8mm-1.25 x 24mm, Hex</td>
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<tr>
<td>AB-005-P</td>
<td>4.3L (262ci), 5.0L (305ci), 5.7L (350ci) w/Roller Cam</td>
<td>Bolt</td>
<td>5/16-18 x 5/8 Flanged Hex</td>
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<tr>
<td>AD-679</td>
<td>(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8</td>
<td>Solid Dowel</td>
<td>Solid</td>
<td>0.4386</td>
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<td>0.813</td>
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<td>AD-699</td>
<td>2.5L w/Automatic Trans.</td>
<td>Crankshaft Insert</td>
<td>1.4985</td>
<td>0.830</td>
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<td>1.092</td>
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<tr>
<td>AB-027-P</td>
<td>5.7L (350ci)</td>
<td>Bolt</td>
<td>15/16-18 x 1/2 Hex</td>
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<tr>
<td>AB-021-P</td>
<td>(262ci-400ci) Small Block V8</td>
<td>Bolt</td>
<td>3/8-16 x 5/8 Hex</td>
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<tr>
<td>AW-007-P</td>
<td>(262ci-400ci) Small Block V8</td>
<td>Flat Washer</td>
<td>3/8 Washer</td>
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<tr>
<td>AB-840-P</td>
<td>(294ci-427ci) LS</td>
<td>Bolt</td>
<td>16mm-2.0 x 103mm Hex</td>
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## ENGINE HARDWARE

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<thead>
<tr>
<th>PART NO.</th>
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### GENERAL MOTORS (Cont'd)

#### HEAD DOWELS

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<tr>
<td></td>
<td></td>
<td>Hollow Dowel</td>
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<td></td>
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<td>0.5113</td>
<td>0.406</td>
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<tr>
<td></td>
<td>Geo 1.3L, 1.6L Suzuki G13, G16 Eng.</td>
<td>Hollow Dowel</td>
<td>0.5562</td>
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<tr>
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<td>(262ci-400ci) Small Block V8, (265ci-455ci) Pontiac V8</td>
<td>Solid Dowel</td>
<td>0.3125</td>
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<td>4.1L Cadillac (FWD)</td>
<td>Hollow Dowel</td>
<td>0.5820</td>
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<tr>
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<td>4.1L Cadillac (RWD)</td>
<td>Hollow Dowel (Stepped)</td>
<td>0.5820/0.5910</td>
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<td>4.6L Cadillac Northstar</td>
<td>Hollow Dowel</td>
<td>0.6165</td>
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<td>(294ci-364ci) LS 1998-2000</td>
<td>Hollow Dowel</td>
<td>0.6250</td>
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<td>(294ci-427ci) LS 2001-2013</td>
<td>Hollow Dowel</td>
<td>0.6420</td>
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<tr>
<td></td>
<td>(366ci-454ci) Big Block V8</td>
<td>Hollow Dowel</td>
<td>0.6400</td>
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<tr>
<td></td>
<td>Geo, Suzuki Eng.</td>
<td>Hollow Dowel</td>
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#### OIL DIPSTICK PLUGS

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#### OIL FILTER ADAPTER BOLTS

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<td>5/16-18 x 1-1/16</td>
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#### OIL GALLEY PLUGS

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<td>3/8-18 x .46 Internal Hex, w/Sealant</td>
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<td>12MM Check Ball</td>
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<td>1/4-18 x .33 Internal Hex, w/Sealant</td>
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#### OIL PAN BOLTS

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<th>DIMENSION</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>5/16-18 x 7/8 Frame Bolt, Hex</td>
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<td>1/4-20 x 3/4 Frame Bolt, Hex</td>
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<td>5/16-18 x 5/8 Sims Bolt, Hex</td>
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<td>1/4-20 x 5/8 Hex</td>
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<td>1/4-20 x 1/2 Sims Bolt, Hex</td>
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<td>1/4-20 x 3/4 Frame Bolt, Hex</td>
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#### OIL PAN DRAIN PLUG WASHERS

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<tr>
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<td>1/2 x .900 x .078 Washer</td>
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#### OIL PAN STUDS & NUTS

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<tr>
<td></td>
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<td>Stud 5/16-18 x 2-1/2</td>
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<td>Stud 5/16-18 x 1-3/16 Torx</td>
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<td>5/16 Flange Nut, Hex</td>
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#### OIL PUMP BOLTS

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<th>DIMENSION</th>
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<tr>
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<td>7/16-14 x 2 Bolt, Hex</td>
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<td>7/16-14 x 2-1/4 Bolt, Hex</td>
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#### OIL PUMP DOWELS

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<tbody>
<tr>
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<td>Hollow Dowel</td>
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<td>Hollow Dowel</td>
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<td>Hollow Dowel</td>
<td>0.7600</td>
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<td>Solid Dowel</td>
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#### OIL PUMP DRIVE ROD BUSHINGS

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<td>Drive Rod Bushing</td>
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#### OIL PUMP SLEEVES

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<td>Hollow Dowel</td>
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## ENGINE HARDWARE

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<tbody>
<tr>
<td>S-220-10-P</td>
<td>2.2L (134ci)</td>
<td>Pedestal Shim</td>
<td>.010&quot; Thickness</td>
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<tr>
<td>S-220-20-P</td>
<td>2.2L (134ci)</td>
<td>Pedestal Shim</td>
<td>.020&quot; Thickness</td>
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<tr>
<td>S-006-10-P</td>
<td>3.1L (189ci), 3.4L (207ci)</td>
<td>Pedestal Shim</td>
<td>.010&quot; Thickness</td>
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<td>S-006-20-P</td>
<td>3.1L (189ci), 3.4L (207ci)</td>
<td>Pedestal Shim</td>
<td>.020&quot; Thickness</td>
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<td>S-006-30-P</td>
<td>3.1L (189ci), 3.4L (207ci)</td>
<td>Pedestal Shim</td>
<td>.030&quot; Thickness</td>
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### PEDESTAL SHIMS

### REAR MAIN DOWELS

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<td>AD-SS</td>
<td>2.2L</td>
<td>Hollow Dowel</td>
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### RETAINING LINKAGE SHAFT PIN

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<tr>
<td>PIN-1-P</td>
<td>4L80 Transmission</td>
<td>Retaining Linkage Shaft Pin</td>
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### ROTATOR ELIMINATORS

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<th>I.D.</th>
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<tr>
<td>RE200</td>
<td>7.4L (454ci) Also LPG</td>
<td>Rotator Eliminator</td>
<td>1.7400</td>
<td>0.640</td>
<td>0.350</td>
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<tr>
<td>RE200I</td>
<td>7.4L (454ci) Also LPG</td>
<td>Rotator Eliminator</td>
<td>1.7400</td>
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<tr>
<td>RE250</td>
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<td>Rotator Eliminator</td>
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<tr>
<td>RE200HP</td>
<td>7.4L (454ci) Hi Perf.</td>
<td>Rotator Eliminator (Cupped)</td>
<td>1.7400</td>
<td>0.640</td>
<td>0.300</td>
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### SPRING RETAINERS

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<tr>
<td>SR-220</td>
<td>2.2L (134ci)</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter</td>
<td>0.234/0.235</td>
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<td>SR-500</td>
<td>5.7L (350ci) Hi Perf.</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter</td>
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<tr>
<td>SR-366</td>
<td>7.4L (454ci)</td>
<td>Spring Retainer</td>
<td>Valve Stem Diameter</td>
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### SEAL HOUSING BOLTS

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<th>I.D.</th>
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<tbody>
<tr>
<td>AB-002-P</td>
<td>4.3L (262ci), 5.0L (305ci), 5.7L (350ci)</td>
<td>Bolt</td>
<td>1/4-20 x 1-3/4 Machine Screw, Torx</td>
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<tr>
<td>AB-003-P</td>
<td>4.3L (262ci), 5.0L (305ci), 5.7L (350ci)</td>
<td>Bolt</td>
<td>1/4-20 x 7/8 Machine Screw, Torx</td>
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<tr>
<td>AB-046-P</td>
<td>(294ci-427ci) LS</td>
<td>Bolt</td>
<td>8mm-1.25 x 24mm, Hex</td>
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### SEAL HOUSING DOWELS

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<tr>
<td>AD-026</td>
<td>3.8L</td>
<td>Hollow Dowel</td>
<td>0.4325</td>
<td>0.343</td>
<td>0.240</td>
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<tr>
<td>AD-003-P</td>
<td>4.3L (262ci), 5.0L (305ci), 5.7L (350ci)</td>
<td>Hollow Dowel</td>
<td>0.4445</td>
<td>0.297</td>
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### SPARK PLUG TUBES

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<tr>
<td>SPT-4</td>
<td>3.6L (High Feature Eng.)</td>
<td>Spark Plug Tube</td>
<td>N/A</td>
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### THRUST PLATE BOLTS

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<tr>
<td>AB-004-P</td>
<td>4.3L (262ci)</td>
<td>Balance Shaft Thrust Plate Bolt</td>
<td>1/4-20 x 1/2 Machine Screw, Torx</td>
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<tr>
<td>AB-006-P</td>
<td>4.3L (262ci)</td>
<td>Cam Thrust Plate Bolt</td>
<td>1/4-20 x 5/8 Machine Screw, Torx</td>
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<tr>
<td>AB-004-P</td>
<td>4.3L (262ci), 5.0L (305ci), 5.7L (350ci) w/Roller Cam</td>
<td>Cam Thrust Plate Bolt</td>
<td>1/4-20 x 1/2 Machine Screw, Torx</td>
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<tr>
<td>AB-004-P</td>
<td>5.0L (305ci), 5.7L (350ci) w/Roller Cam</td>
<td>Water Pump Shaft Thrust Plate Bolt</td>
<td>1/4-20 x 1/2 Machine Screw, Torx</td>
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<tr>
<td>AB-001-P</td>
<td>(265ci-455ci) Pontiac V8</td>
<td>Cam Thrust Plate Bolt</td>
<td>5/16-18 x 3/4 Hex</td>
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<tr>
<td>AB-044-P</td>
<td>(294ci-427ci) LS</td>
<td>Cam Thrust Plate Bolt</td>
<td>8mm-1.25 x 22mm, Flat Head Torx</td>
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### TIMING COVER BOLTS

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<tr>
<td>AB-017-P</td>
<td>(262ci-400ci) Small Block V8</td>
<td>Timing Cover Bolt (Steel Cover)</td>
<td>1/4-20 x 1/2 Frame Bolt, Hex</td>
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<td>AB-045-P</td>
<td>(294ci-427ci) LS</td>
<td>Timing Cover Bolt</td>
<td>8mm-1.25 x 30mm, Hex</td>
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### TIMING COVER DOWELS

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<td>AD-016-P</td>
<td>2.2L (134ci)</td>
<td>Solid Dowel</td>
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<td>AD-046</td>
<td>4.3L (1996-2003) w/Plastic Timing Cover</td>
<td>Solid Dowel (Middle Stepped)</td>
<td>0.2483/0.3435</td>
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<td>0.945</td>
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<tr>
<td>AD-1284-P</td>
<td>(262ci-400ci) Small Block V8, (366ci-454ci) Big Block V8</td>
<td>Solid Dowel</td>
<td>0.2466</td>
<td>Solid</td>
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<tr>
<td>AD-012-P</td>
<td>6.2L, 6.5L Diesel</td>
<td>Solid Dowel</td>
<td>9mm</td>
<td>Solid</td>
<td>22mm</td>
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<tr>
<td>AD-307-P</td>
<td>6.6L Duramax</td>
<td>Hollow Dowel</td>
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### TIMING GEAR OILER

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<tr>
<td>TC-4</td>
<td>2.5L (151ci), 3.8L (230ci), 4.1L (250ci), 4.8L (292ci)</td>
<td>Timing Gear Oiler (Press in Type)</td>
<td>N/A</td>
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<td>ST-045-P</td>
<td>4.3L (262ci)</td>
<td>Timing Stud</td>
<td>5/16-18 x 1-3/4</td>
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<td>AN-001-P</td>
<td>4.3L (262ci)</td>
<td>Timing Stud Nut</td>
<td>5/16-18 Top Lock Nut, Hex</td>
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<td>AD-076</td>
<td>2.5L, 2.8L, 3.0L, 3.1L, 3.8L</td>
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<td>0.750</td>
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<td>AD-047</td>
<td>(294ci-427ci) LS</td>
<td>Solid Dowel</td>
<td>0.6206</td>
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<tr>
<td>AD-009-P</td>
<td>All Other GM V6 / V8</td>
<td>Solid Dowel</td>
<td>0.6210</td>
<td>Solid</td>
<td>1.150</td>
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<tr>
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<td>All Other GM V6 / V8 Hi Perf.</td>
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<td>0.6210</td>
<td>Solid</td>
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<td>AK-003-P</td>
<td>4.3L (262ci)</td>
<td>Woodruff Key</td>
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<tr>
<td>AK-002-P</td>
<td>(262ci-400ci) Small Block V8, (265ci-455ci) Pontiac V8</td>
<td>Woodruff Key</td>
<td>3/16 x 3/4</td>
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<td>AK-032-P</td>
<td>4.8L, 5.3L, 6.0L Gen III</td>
<td>Woodruff Key</td>
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<td>AK-166-P</td>
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<td>Woodruff Key</td>
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<td>SPT-11</td>
<td>1.8L G4 GM Eng.</td>
<td>Spark Plug Tube</td>
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<td>AD-125</td>
<td>446E Eng.</td>
<td>Hollow Dowel</td>
<td>0.7408</td>
<td>0.656</td>
<td>0.870</td>
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<td>AD-002</td>
<td>2.3L</td>
<td>Hollow Dowel</td>
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<td>0.355</td>
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<tr>
<td>AD-021</td>
<td>Isuzu</td>
<td>Hollow Dowel</td>
<td>11mm</td>
<td>8.5mm</td>
<td>8.3mm</td>
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<td>AD-242</td>
<td>4.0L</td>
<td>Solid Dowel</td>
<td>0.4250</td>
<td>Solid</td>
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<td>AP-020</td>
<td>MZR Eng.</td>
<td>Aluminum Plug</td>
<td>0.3645</td>
<td>Solid</td>
<td>0.360</td>
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<td>AD-SS</td>
<td>2.2L</td>
<td>Hollow Dowel</td>
<td>0.3546</td>
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<td>AD-402</td>
<td>SOHC 2.2L, 2.5L Vin A-E, J, K.</td>
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<td>AD-849</td>
<td>2.4L, 2.6L GS4B 2.7L</td>
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<td>AD-856</td>
<td>3.3L (202ci) Chrysler</td>
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<td>AP-019</td>
<td>Multiple Engines</td>
<td>Aluminum Plug</td>
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<td>Solid</td>
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<td>AD-849</td>
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<td>Hollow Dowel</td>
<td>0.6310</td>
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<td>11mm</td>
<td>8.5mm</td>
<td>8.3mm</td>
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# ENGINE HARDWARE

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<tr>
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<th>PRODUCT TYPE</th>
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<td>NISSAN</td>
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<td>AD-100</td>
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<td>0.432</td>
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<td>AD-M00</td>
<td>1.6L, E16 Eng.</td>
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<td>AD-400</td>
<td>1.6L (L16), 1.8L (L18), 2.0L (L20 &amp; Z20), 2.2L (QZ22), 2.4L (L24 &amp; Z24), 2.6L (L26), 2.8L (L28) L, Z Series</td>
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<td>Suzuki</td>
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<td>AD-021</td>
<td>1.8L, 2.0L, 2.2L, 18R, 20R, 22R Blocks</td>
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<td>11mm</td>
<td>8.5mm</td>
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<td>AD-394</td>
<td>1MZ-FE/3MZ-FE Eng.</td>
<td>Hollow Dowel</td>
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<td>1MZ Eng.</td>
<td>Coolant Tube</td>
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<td>1.6L (1587cc) SOHC 4AC Eng.</td>
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<td>2.4L, 20R, 22R, 22REC, 22RTEC Blocks</td>
<td>Oil Galley Plug</td>
<td>1/8-28 x .56 External Hex, w/Sealant</td>
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<td>Oil Galley Plug</td>
<td>3/8-19 x .39 Internal Hex, w/Sealant</td>
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## ENGINE HARDWARE

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<tr>
<th>PART NO.</th>
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<th>DIMENSION</th>
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<td>U140-190</td>
<td>All U Series Transmissions</td>
<td>Planetary Sleeve</td>
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<td>2.4L (2366cc) SOHC Toyota 22RE, REC Eng.</td>
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<td>Spark Plug Tube</td>
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<td>5VZ Eng.</td>
<td>Spark Plug Tube</td>
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<td>5SFE Eng.</td>
<td>Spark Plug Tube</td>
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<td>Spark Plug Tube</td>
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## ENGINE HARDWARE COMPONENT LISTING

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## ENGINE HARDWARE COMPONENT LISTING

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<td>AP-004-P</td>
<td>1/8-28 x .56 External Hex, w/Sealant</td>
</tr>
<tr>
<td>AP-002-P</td>
<td>1/4-18 x .33 Internal Hex, w/Sealant</td>
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<td>AP-017-P</td>
<td>1/4-18 x .33 Internal Hex</td>
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<tr>
<td>AP-016-P</td>
<td>1/4-18 x .37 Internal Hex</td>
</tr>
<tr>
<td>AP-024-P</td>
<td>1/4-18 x .46 Internal Hex, w/Sealant</td>
</tr>
<tr>
<td>AP-005-P</td>
<td>1/4-19 x .39 Internal Hex, w/Sealant</td>
</tr>
<tr>
<td>AP-003-P</td>
<td>3/8-18 x .46 Internal Hex, w/Sealant</td>
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<tr>
<td>AP-006-P</td>
<td>3/8-19 x .39 Internal Hex, w/Sealant</td>
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### Valve Spring ID Locators - Specifications

<table>
<thead>
<tr>
<th>PART #</th>
<th>O.D.</th>
<th>I.D.</th>
<th>THICKNESS</th>
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<tbody>
<tr>
<td>4785HP</td>
<td>1.550</td>
<td>.570/Spring (.810)</td>
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### Dowel Pin - Specifications (Cont’d)

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<thead>
<tr>
<th>PART #</th>
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<th>LENGTH</th>
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<tbody>
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<td>0.4881</td>
<td>0.400</td>
<td>0.670</td>
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<tr>
<td>AD-521</td>
<td>0.6074</td>
<td>0.510</td>
<td>0.800</td>
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<tr>
<td>AD-532</td>
<td>0.4960</td>
<td>Solid</td>
<td>0.740</td>
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<tr>
<td>AD-593</td>
<td>0.6970/0.7775</td>
<td>0.599</td>
<td>0.770</td>
</tr>
<tr>
<td>AD-598</td>
<td>0.6210</td>
<td>0.406</td>
<td>0.700</td>
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<tr>
<td>AD-600</td>
<td>0.6050</td>
<td>0.475</td>
<td>0.550</td>
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<tr>
<td>AD-605</td>
<td>1.4985</td>
<td>1.092</td>
<td>1.075</td>
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<tr>
<td>AD-634</td>
<td>0.5155</td>
<td>0.437</td>
<td>0.665</td>
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<td>AD-635</td>
<td>0.6080</td>
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<td>0.905</td>
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<td>AD-6397</td>
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<td>AD-640</td>
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<td>1.4985</td>
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<td>AD-842</td>
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<td>AD-849</td>
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<td>AD-849A</td>
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<td>AD-856</td>
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<td>0.452</td>
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<td>0.3125</td>
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<td>AD-967</td>
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<td>AD-1284-P</td>
<td>0.2466</td>
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<td>AD-8081-P</td>
<td>0.6400</td>
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<td>AD-8120-P</td>
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<td>AD-E7RY</td>
<td>0.5010</td>
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<td>AD-M00</td>
<td>0.5320</td>
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<td>0.442</td>
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<td>AD-SS</td>
<td>0.3546</td>
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<td>AD-V00</td>
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<td>FD-1-1</td>
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### Valve Spring Retainers - Specifications

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<th>Part #</th>
<th>Valve Stem Diameter</th>
<th>Dimension Outside/Steps</th>
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<tbody>
<tr>
<td>SR-220</td>
<td>0.234/0.235</td>
<td>0.982/0.590/0.484</td>
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<tr>
<td>SR-809</td>
<td>0.335</td>
<td>0.962/0.697/0.491</td>
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<tr>
<td>SR-570</td>
<td>0.272/0.273</td>
<td>0.897/0.594/0.544</td>
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<tr>
<td>SR-626</td>
<td>0.311/0.312</td>
<td>1.144/0.830/0.562</td>
</tr>
<tr>
<td>SR-627</td>
<td>0.311/0.312</td>
<td>1.144/0.828/0.572</td>
</tr>
<tr>
<td>SR-779</td>
<td>0.315</td>
<td>1.080/0.750/0.612</td>
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<tr>
<td>SR-536</td>
<td>0.315/0.316</td>
<td>1.275/0.958/0.570</td>
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<td>SR-183</td>
<td>0.316</td>
<td>1.310/0.873/0.760</td>
</tr>
<tr>
<td>SR-500</td>
<td>0.341/0.342</td>
<td>1.236/0.862/0.675</td>
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<td>SR-502</td>
<td>0.342</td>
<td>1.370/1.056/0.665</td>
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<td>SR-318</td>
<td>0.370/0.373</td>
<td>1.330/1.000/0.600</td>
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<tr>
<td>SR-366</td>
<td>0.372</td>
<td>1.407/1.058/0.900</td>
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<tr>
<td>SR-014</td>
<td>0.430/0.431</td>
<td>1.570/1.207/0.840</td>
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### Washer - Specifications

<table>
<thead>
<tr>
<th>Part #</th>
<th>Dimension</th>
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<tbody>
<tr>
<td>AW-009-P</td>
<td>5/16 Star Washer</td>
</tr>
<tr>
<td>AW-007-P</td>
<td>3/8 Washer</td>
</tr>
<tr>
<td>AW-008-P</td>
<td>1/2 x .900 x .078 Nylon Washer</td>
</tr>
<tr>
<td>AW-001-P</td>
<td>1-1/4 x 3/8 x 1/4 Washer</td>
</tr>
<tr>
<td>AW-003-P</td>
<td>1-1/4 x 7/16 x 1/4 Washer</td>
</tr>
<tr>
<td>AW-010-P</td>
<td>1-3/8 x 1/2 x 3/16 Washer</td>
</tr>
<tr>
<td>AW-006-P</td>
<td>1-1/2 x 7/16 x 1/8 Washer</td>
</tr>
<tr>
<td>AW-002-P</td>
<td>1-1/2 x 7/16 x 5/16 Washer</td>
</tr>
<tr>
<td>AW-005-P</td>
<td>1-1/2 x 7/16 x 7/16 Washer</td>
</tr>
<tr>
<td>AW-011-P</td>
<td>2-1/16 x 1/2 x 3/16 Washer</td>
</tr>
<tr>
<td>AW-012-P</td>
<td>8mm Lock Washer</td>
</tr>
<tr>
<td>AW-001-P</td>
<td>1-1/4 x 3/8 x 1/4 Washer</td>
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<td>AW-002-P</td>
<td>1-1/2 x 7/16 x 5/16 Washer</td>
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<td>AW-003-P</td>
<td>1-1/4 x 7/16 x 1/4 Washer</td>
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<td>1-1/2 x 7/16 x 1/8 Washer</td>
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<td>3/8 Washer</td>
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<td>AW-008-P</td>
<td>1/2 x .900 x .078 Nylon Washer</td>
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<tr>
<td>AW-009-P</td>
<td>5/16 Star Washer</td>
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<tr>
<td>AW-010-P</td>
<td>1-3/8 x 1/2 x 3/16 Washer</td>
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<td>AW-011-P</td>
<td>2-1/16 x 1/2 x 3/16 Washer</td>
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<tr>
<td>AW-012-P</td>
<td>8mm Lock Washer</td>
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<td>PART #</td>
<td>WIDTH X LENGTH</td>
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<tr>
<td>---------</td>
<td>----------------</td>
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<tr>
<td>AK-024-P</td>
<td>3/32 x 1/2</td>
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<tr>
<td>AK-017-P</td>
<td>1/8 x 3/4</td>
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<tr>
<td>AK-015-P</td>
<td>5/32 x 5/8</td>
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<td>AK-018-P</td>
<td>5/32 x 3/4</td>
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<td>AK-025-P</td>
<td>5/32 x 7/8</td>
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<td>AK-031-P</td>
<td>3/16 x 19/32</td>
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<td>AK-002-P</td>
<td>3/16 x 3/4</td>
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<td>AK-010-P</td>
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<tr>
<td>AK-026-P</td>
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<tr>
<td>AK-028-P</td>
<td>3/16 x 1-3/64</td>
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<td>AK-001-P</td>
<td>3/16 x 1-3/8</td>
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<td>AK-003-P</td>
<td>3/16 x 1-13/32</td>
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<td>AK-005-P</td>
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<td>AK-035-P</td>
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<td>AK-037-P</td>
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<td>AK-166-P</td>
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<td>AK-030-P</td>
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<td>AK-020-P</td>
<td>1/4 x 1-1/4</td>
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<td>AK-016-P</td>
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<td>AK-013-P</td>
<td>5/16 x 1-7/64</td>
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<td>5/16 x 1-1/4</td>
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<td>AK-021-P</td>
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</tr>
<tr>
<td>AK-033-P</td>
<td>5mm x 16mm</td>
</tr>
</tbody>
</table>
Does This Look Familiar?

Well, Dura-Bond Has The Solution For You.

Save time and money with the new line of Dura-Bond engine hardware finishing kits.

Most rebuilders know the time and expense of trying to reclaim service parts. A recent study revealed that an average rebuilder could spend up to 15-20 minutes per engine searching for a reclaimed service part. That is why Dura-Bond has introduced a new line of engine hardware finishing kits. These kits include all of the necessary hardware and components needed to complete a rebuild such as dowel pins, cam bolts, seal housing components, woodruff keys, cam eccentrics, by-pass valves, etc. The engine hardware finishing kits allow rebuilders an easy way to inventory and recoup lost costs on these components. All this adds up to saving time and money.

- No need for expensive OEM parts or the time to reclaim used parts
- Easy to inventory
- Maximize lost costs and profits on these components by adding one part number into the bill of materials
- New parts vs. reclaimed parts presents a more professional looking product
- All kit components are manufactured to precise OEM dimensions for exact fit
- Extensive product coverage
# New Engine Hardware Kits for GM LS Engines

## FKC-6, FKC-7

<table>
<thead>
<tr>
<th>KIT NO.</th>
<th>YEAR</th>
<th>MAKE &amp; APPLICATION</th>
<th>CONTENTS</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>FKC-6</td>
<td>1999-2000</td>
<td>4.8L (294ci) Chevrolet (Vortec) Eng.</td>
<td>AD-258</td>
<td>4</td>
<td>Head Dowel</td>
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<tr>
<td></td>
<td>1999-2000</td>
<td>5.3L (325ci) Chevrolet (Vortec) Eng.</td>
<td>AB-045-P</td>
<td>8</td>
<td>Timing Cover Bolt</td>
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<tr>
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<td>1999-2000</td>
<td>6.0L (364ci) Chevrolet (Vortec) Eng.</td>
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<tr>
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<td>AK-001-P</td>
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<tr>
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<td>AB-046-P</td>
<td>4</td>
<td>Seal Housing Bolt</td>
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<tr>
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<td>AP-860-P</td>
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<td>FKC-7</td>
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<tr>
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## FKC-6B, FKC-7B

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<th>CONTENTS</th>
<th>QTY.</th>
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<tbody>
<tr>
<td>FKC-6B</td>
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<td>4.8L (294ci) Chevrolet (Vortec) Eng.</td>
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<td>5.3L (325ci) Chevrolet (Vortec) Eng.</td>
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<td>Cam Thrust Plate Bolt</td>
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<td>Cam Thrust Plate Bolt</td>
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<tr>
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<td>6.0L (364ci) Chevrolet (Vortec) Eng.</td>
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High Performance Hardware Kits

FKP-2HP, FKC-1HP, FKC-3HP

Application:
FKP-2HP: CHRYSLER (361ci-440ci) SB V8
FKC-1HP: GM (262ci-400ci) SB V8 (1957-1986)

New Engine Hardware Kit for Chrysler Hemi Gen III Engines

FKP-3

Application:
CHRYSLER 5.7L, 6.1L, 6.4L Hemi Gen III

New Engine Hardware Kits for GM LS Engines

FKC-6C, FKC-7C

<table>
<thead>
<tr>
<th>KIT NO.</th>
<th>YEAR</th>
<th>MAKE &amp; APPLICATION</th>
<th>CONTENTS</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>FKC-6C</td>
<td>1999-2000</td>
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<td>AD-258</td>
<td>4</td>
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</tr>
<tr>
<td>1999-2000</td>
<td>5.3L (325ci) Chevrolet (Vortec) Eng.</td>
<td>AB-044-P</td>
<td>3</td>
<td>Cam Thrust Plate Bolt</td>
<td></td>
</tr>
<tr>
<td>1999-2000</td>
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# ENGINE HARDWARE FINISHING KITS

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## ENGINE HARDWARE FINISHING KITS

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**Optional parts not included in kit.**

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**Optional parts not included in kit.**

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<td>Transmission / Bellhousing Dowel</td>
<td>0.6206 Solid 1.185</td>
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Valve Seat Technology Has Changed.

Just Ask The Professionals, They’ll Know

“We use the 70000 series Dura-Bond powder metal valve seats to ensure our product quality and reliability.”
Bill Wages Jr., Plant Manager - AER Mfg.

“ProAction uses Dura-Bond powder metal valve seats for the following reasons: ease of installation, ID radius to reduce machining and increase air flow, durability in racing applications, and excellent machining.” Craig Pullman, Owner - ProAction/Topline

“Jasper has been testing Dura-Bond valve seats in stationary power generation units. These engines have operated in excess of 14,000 hours. The results have established Dura-Bond as our primary valve seat supplier.” Chuck Lynch, Quality Technician - Jasper Engines & Transmissions

“The 70000 series powder metal valve seats install easily, machine like butter, and greatly reduce valve seat recession.” Benjamin Baloga, Plant Engineering Manager - Tomadur Engine Company

“Dura-Bond has the only seat in the market that can duplicate OE level in aluminum cylinder heads.”
Recon

“Extraordinary machinability, 100% proper size 100% of the time.” Rob Estes, Manager - Action Machine

“We were having issues regarding heavy duty dry fuel applications. When we switched to Dura-Bond powder metal seats, our problem was solved.” Ernie Carmichael, Parts Manager - Reliable

“Dura-Bond valve seat inserts are regarded by our customers as the very best seat available. It has taken a lot of hard work by our sales staff, but now Dura-Bond is the only sintered valve seat insert accepted in the Australian market place.” William Nitschke, Purchasing & Marketing Manager - Precision International

“Dura-Bond’s powder metal valve seats offer excellent machining, longer tool life, and a more precise finish.”
Mike Howden, General Manager - S&M Distributing

“Price, availability, quality, and endurance - best seats by far!”
John Brissette, Purchasing Manager - Tri Star Engine Supply

We Make It, Not Just Distribute It!
Modern engines put much higher levels of thermal and mechanical stress on valve seat inserts. To handle the more severe conditions within this new generation of engines, the OEM is equipping them with high tech sintered valve seats. The normal cast chrome and other alloy iron seats will not adequately withstand the demands of this new engine environment.

Dura-Bond's patented material and processing of these powder metal valve seats offer excellent machinability, along with low wear and high heat resistance. These inserts have finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles to provide all the properties an application requires. Special compositions and processing have been developed to perform in the most extreme duty applications. Complete in-house capabilities, from development and tooling to testing, reduces lead time and cost.

If your requirements range from prototypes to high volume, let Dura-Bond Bearing Company be part of the solution.

Special Two Step O.D. Intake Valve Seat

**Application:**
IHC (Navistar) / Ford - 6.9L / 7.3L Diesel / Turbo Diesel Eng.

**Interchanges with:**
SBI SB1957ST
Tucker T-1696, T-2995

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30000 (GOLD) SERIES
VALVE SEAT INSERTS

DESCRIPTION and APPLICATION

**Superior Machinability**

The 30000 (Gold) series is the newest and most machinable of our valve seat materials. It is a sintered valve seat insert which offers a blend of finely dispersed tungsten carbide residing in a matrix of tempered tool steel and special alloy iron particles. The superior machinability is the result of adding our proprietary ingredients and solid dry lubricants to this blend, and by using our special processing techniques during manufacture.

**Designed for Unleaded Fuels**

This very machinable exhaust seat material is designed for unleaded fuels. The 30000 (Gold) series is intended for the light to medium duty range. (For the heavy duty or extreme duty range we recommend our 70000 (Diamond) series valve seat inserts.)

**New Powder Metal Technology**

Dura-Bond/Snyder has taken full advantage of the new powder metal technology to produce a “hard” valve seat which will machine almost like cast iron. The greatly enlarged picture (the 4 black squares are .0015” across) tells the story.

- Powder metal technology allows us to place a special high grade alloy iron (with its natural, tool lubricating graphite rich properties) within a tempered tool steel matrix.
- Because of our special processing, we are able to get very fine, spheroidalized, tungsten carbide particles to evenly disperse within the tool steel.
- These spheroidalized (round shaped) carbides are easier to machine because the tool bit can wedge in-between, with less cutting force and less friction.
- The smaller these “balls” of carbide, the easier it is on your cutting tool, because it will not be hitting any big irregular shaped “iceberg chunks” of carbide.

**CHEMICAL COMPOSITION**

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**PHYSICAL PROPERTIES**

- Apparent hardness: 20 HRC (approx.)
- Micro hardness: 20-43 HRC
- Thermal expansion: .0000075”/F (at 1000˚F)

Dura-Bond reserves the right to revise composition and specifications without notice.
DESCRIPTION and APPLICATION

This is a sintered, high speed (tungsten carbide) tool steel, valve seat insert. This material has special additives blended into the matrix which impart high temperature lubrication properties to the valve seat. These lubrication properties are “built-in” throughout, and are not affected by extreme heat or machining. These solid lubricants enable this material to be used in “dry” fuel applications such as propane, LPG, and natural gas. They prevent the “micro-welding” of the valve seat material to the valve face, therefore eliminating the primary cause of valve seat erosion. They also improve the machinability. Your tools last longer and you can cut faster.

Because of the special high temperature sintering and post heat treat processing, this valve seat material has cermet style metal alloy oxides. This gives it superior wear resistance to both pounding and abrasive wear at elevated temperatures. These** are called “cer-met” style because they are similar to ceramic (they do not soften at elevated temperature), but retain the machinability of metal. It is this high tech, new generation processing that allows us to achieve such high, hot hardness without having to put in massive amounts of expensive alloys, which would be required, to achieve equal performance. Normal foundry techniques do not allow this type of structure. You get superior wear resistance and high hot hardness at a very favorable price.

This valve seat insert is, therefore, used in engines using diesel, unleaded gasoline, and propane. We have been setting new longevity records in propane and natural gas applications using this seat.

The micro structure of this valve seat insert is a very fine evenly dispersed mixture of spheroidal refractory alloy carbides, cermet style metal alloy oxides and solid lubricant residing in a tempered martensitic matrix.

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**Metal Alloy Oxides

* 90000 series available for extreme duty applications, special order only.

Dura-Bond reserves the right to revise composition and specifications without notice.
## VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

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### Make to Order Parts - 300 minimum order quantity (Special pricing may apply).
# VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

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<th>PART NUMBER SERIES</th>
<th>Product Comments</th>
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Make to Order Parts - 300 minimum order quantity (Special pricing may apply).
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**Make to Order Parts** - 300 minimum order quantity (Special pricing may apply).
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**Make to Order Parts** - 300 minimum order quantity (Special pricing may apply).
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Make to Order Parts - 300 minimum order quantity (Special pricing may apply).
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Make to Order Parts - 300 minimum order quantity (Special pricing may apply).
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Make to Order Parts - 300 minimum order quantity (Special pricing may apply).
## VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

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**Make to Order Parts** - 300 minimum order quantity (Special pricing may apply).
### VALVE SEAT PROGRESSIVE LISTING BY OUTSIDE DIAMETER

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**Make to Order Parts** - 300 minimum order quantity (Special pricing may apply).
GM is equipping the LS3 heads with high tech sintered copper-infiltrated valve seats. High-Performance European engines like BMW and Mercedes also use this technology. This is a powder metal valve seat with a copper wafer that is infiltrated into the valve seat. This creates a unique product of 15% free copper in the microstructure of the seat. Allowing heat to be quickly transferred and performance greatly improved.

GOOD NEWS!

Dura-Bond has developed this technology and it is now available for the aftermarket in our “KILLER BEE” Valve Seat Line. Initially offered for the GM LS-Series engines with more applications to come.

- Offers Superior Thermal Conductivity
- Excellent Machining Characteristics
- High Thermal Expansion
- Lowest Wear – Improved Reliability/Durability
- Superior Surface Finishes
- Suitable for HD Intake and Exhaust Seats, Gas and Diesel
- Compatible with Most Valve Materials

“This is a Killer, LS3, Copper-Infiltrated exhaust valve seat.”

Lou Oniga, Powertrain Engineer - GM
GM is equipping the LS3 heads with high tech sintered copper-infiltrated valve seats. High-Performance European engines like BMW & Mercedes also use this technology. Dura-Bond has developed this technology and it is now available for the aftermarket in our “KILLER BEE” Valve Seat Line:

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Dura-Bond®
Quality Camshaft Bearings Since 1947

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*Special ID Features
"KILLER BEE" COPPER INFILTRATED VALVE SEAT INSERTS

DESCRIPTION and APPLICATION

GM is equipping the LS3 heads with high tech sintered copper-infiltrated valve seats. High-Performance European engines like BMW and Mercedes also use this technology. This is a powder metal valve seat with a copper wafer that is infiltrated into the valve seat. This creates a unique product of 15% free copper in the microstructure of the seat. Allowing heat to be quickly transferred and performance greatly improved.

- Offers superior thermal conductivity
- Excellent machining characteristics
- Lowest wear - Improved reliability/durability
- High thermal expansion
- Superior surface finishes
- Suitable for HD intake and exhaust seats, gas and diesel
- Compatible with most valve materials

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PHYSICAL PROPERTIES

- Apparent Hardness 35 HRC (approx.)
- Micro Hardness 50-56 HRC
- Thermal Expansion

Dura-Bond reserves the right to revise composition and specifications without notice.
"KILLER BEE" COPPER INFILTRATED VALVE SEAT
PROGRESSIVE LISTING BY OUTSIDE DIAMETER

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Dura-Bond

VALVE SPRING BOOSTER SHIMS

Available in both case hardened High Performance and regular series

All Dura-Bond shims meet or exceed OEM specifications.
Only prime quality cold rolled steel is used.

Avoid loss of power due to weak spring tension —
INSTALL BOOSTER SHIMS

Refacing valves and the grinding of valve seats causes loss of metal. This loss of metal results in the loss of proper spring pressure. To restore the proper spring tension, one must replace the lost material by installing a Valve Spring Booster Shim under the valve spring.

1000 SERIES

.015"

3000 SERIES

.030"

6000 SERIES

.060"

Cupped Shims are necessary when the spring base pad area is too shallow to hold the regular shim and the spring in the proper position.

3110-C .038" American motors, Chrysler, DeJurco, Dodge, Dodge Truck, Ford, Lincoln, Mercury, Plymouth, Hercules, John Deere

3153-C .030" Chevrolet (remachined pad), Chrysler (remachined pad), Ford (remachined pad), Oldsmobile (remachined pad)

3160-C .000" American Motors, Chevrolet, Ford, Lincoln, Mercury, Pontiac, Minneapolis-Moline

3060-C .000" Allis Chalmers, Chrysler, General Motors, International Tractor, John Deere, Massee, Mercury Marine

STANDARD REBUILDERS PACK: 500 Pieces per Box • Cupped, Industrial, or HP • 250 Pieces per Box
STANDARD PACKAGE: 100 Pieces per Box • Cupped, Industrial, or HP • 50 Pieces per Box

DESIGN FEATURES

Both sides are flat and without serrations or marks of any kind.

• All OEM specifications call for non-serrated shims.
• Non-serrated shims do not damage the spring pad area on today’s aluminum cylinder heads.
• Non-serrated shims lay flat so as not to set up any harmonics in the spring.
• Non-serrated shims lay flat so as not to introduce any lateral loads on the spring, valve or guide.
### VALVE SPRING BOOSTER SHIMS
**PROGRESSIVE LISTING BY OUTSIDE DIAMETER**

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*Most of the shims shown in this catalog are available in case hardened ("hp") series.*

*Use the same part number - just add "hp" to the end.*
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Web: www.dongross.com

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Web: www.dura-bondbearing.com

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Fax: 612-377-4522
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Web: www.enginepartspro.com

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9708 E. Montgomery Ave. # B
Spokane, WA 99206
Phone: 509-893-8724
888-893-8724
Fax: 509-893-8748
WHAT IS IT, HOMER?

I HEAR THE BASS ARE RUNNING, BOSS—CAN I LEAVE AS SOON AS I GET THESE CAM BEARINGS INSTALLED?

OKAY, BUT FINISH THE JOB FIRST!

THANKS, BOSS!

HEY!! WHAT ABOUT THAT JOB?!

HE HAD IT FINISHED BEFORE HE ASKED YOU.

IMPOSSIBLE!

HE USED DURA-BOND CAM BEARINGS—WITH THEIR NEW INSTALLATION TOOL!
TIME TESTED...

What’s eating the boss, Homer?

The job bounced!

He used second rate cam bearings and valve seats!

Homer! Do me a favor!

He forgot that “one local call now does it all.”

For Dura-Bond, best there is!!

Valve Seat Technology Has Changed!

3200 Arrowhead Dr., Carson City, NV 89706 • Tel (800) 227-8360 • www.dura-bondbearing.com
Imagine the boss giving me the afternoon off to play golf with you!

It was my idea, Homer, to show my gratitude.

For what?

For putting me wise to Dura-Bond cam bearings—they really install in a hurry!

I certainly owe you something! Anytime you want a favor—anything at all—

Do you give me this putt?

Let’s not go overboard.

Quality camshaft bearings since 1947!
Dura-Bond® TIME TESTED
Quality Camshaft Bearings Since 1947

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