

131" & 120" TWIN CAM RACE ENGINES



NEW FOR 2009

**NEW LATE MODEL
BETA 131" ENGINES**

- ONE YEAR FACTORY WARRANTY
- CUSTOM BUILD ENGINE PROGRAM
- 131" BIG BORE KIT
- "EVOLUTION® MOUNT" TWIN CAM®
- NIGHT TRAIN® ENGINE COVER SET
- DIAMOND CUT CYLINDER HEADS

A DIVISION OF THIESSEN PRODUCTS INC.

Performance Parts For Harley-Davidson® Motorcycles

CUSTOM ENGINE PROGRAM



CUSTOM LETTERING IN LOGO PAD

It's your engine, so let everyone know! JIMS® is now offering CNC custom lettering on the cylinder heads. Just one of the many options that JIMS® is offering to help you build your own custom engine. Choose up to eight letters per cylinder head.

1000-0001 Use on 120" or 131" Twin Cam® Engines.

DIAMOND CUT CYLINDERS AND HEADS



This patented diamond look is created by making hundreds of cuts in the outer edge of the cooling fins. These cuts make the motor look fantastic because the cuts are placed at the perfect angle to reflect light. It is that reflection of light that makes them sparkle and shine.

1000-0002 Use on 120" or 131" Twin Cam® Engines.

NIGHT TRAIN® ENGINE COVER SET

Going for that blacked out look? Now you can order your engine with these covers installed by JIMS®. These covers are OEM Harley-Davidson® covers that have been clearanced for roller rocker arms. Rest assured that the color match is perfect. Along with that comes the quality, fit, and finish that is Harley-Davidson®.

1000-0003 Use on all Twin Cam Engines using Roller Rocker Arms.

10.5:1 JIMS® COMPRESSION HOP-UP

Looking for that extra edge? Here is one way to gain power over the 120" stock configuration. Increasing compression is just one of the many ways to increase horsepower in the JIMS® 120". Developed, tested and proven during 131" development and now an option for all 120" engines.

1000-0012 Use on JIMS® Heads. Use on all JIMS® 120" Twin Cam® Engines.

See your local authorized Harley-Davidson® dealer and build your custom engine today. For more information contact your local H-D® dealer or visit our web-site at www.jimsusa.com

*Horsepower and Torque performance measured at the rear wheel with a Dynojet® Dynamometer. Your results may vary based on E.F.I. Induction (Non-carburated), camshaft and exhaust combination. **This is not a street legal engine.**

10:1 → 10.5:1

DO YOU HAVE A 120" AND WISH YOU HAD A 131"



JIMS® 131" BIG BORE KIT...

An easy solution to convert your JIMS® 120" into a 131". These kits are designed to work with existing JIMS® 120" Race Engines. The kit includes a set of 4-5/16" JIMS® cylinders, and a set of 4-5/16" JIMS® pistons. These are the same cylinders and pistons used in the new JIMS® 131" Race Engine. Since the 131" engine was based on the same stroke as the 120", other parts, including the flywheel assembly, cams, etc... can still be used. With simple case boring - and this kit - your 120" can be converted into the awesome 131" engine. (See JIMS tool No's 1400 or 1433, for boring engine cases to 131" conversions.)

With proper induction, exhaust and head modifications, this Big Bore kit will easily match the power output of the new JIMS® 131" Race Engine*. This kit offers a great cost alternative for the customer that has already purchased a JIMS® engine.

1000-0010 JIMS® 131" Alpha 1999 to present Big Bore Kit (Black) Use on all JIMS® 120" Twin Cam® Engines

1000-0011 JIMS® 131" Alpha 1999 to present Big Bore Kit (Silver) Use on all JIMS® 120" Twin Cam® Engines

1000-0013 JIMS® 131" Beta 2000 - 2006 Softail® Big Bore Kit (Black) Use on all JIMS® 120" Twin Cam® Engines

1000-0014 JIMS® 131" Beta 2000 - 2006 Softail® Big Bore Kit (Silver) Use on all JIMS® 120" Twin Cam® Engines

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Phone 805-482-6913 • Web: www.jimsusa.com • E-mail: sales@jimsusa.com



131" TWIN CAM

The 131" features the same stroke as the JIMS® 120" at 4-1/2", but carries a larger bore diameter of 4-5/16". JIMS® R&D Team has added many new features to further enhance the performance of this engine. The first step was to increase air intake into the 131" with CNC Ported Heads which were developed to flow air effortlessly. Next, we upgraded the oil pump to the high flow design found in all current production Harley-Davidson® Twin Cam® Engines.

**130 HP
135 TQ
RACE ONLY!**

JIMS® Assembled Race Engines are

TOURING AND DYNA®



Touring & Dyna®

131" TWIN CAM® ENGINE		
1308-3530	Black	1999-2006 Touring and 1999-2005 Dyna
1708-3530	Black	2007-Pres Touring and 2006-Present Dyna
1308-3535	Silver	1999-2006 Touring and 1999-2005 Dyna
1708-3535	Silver	2007-Pres Touring and 2006-Present Dyna

SOFTAIL®



Softail®

131" TWIN CAM® ENGINE		
1508-3530	Black	2000-2006 Softail
1508-3535	Silver	2000-2006 Softail
2108-3530	Black	2007-Later Softail
2108-3535	Silver	2007-Later Softail

See your local authorized Harley-Davidson® dealer and build your custom 131" or 120" today.

RACE ONLY
NOT STREET LEGAL



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JIMS® RACE ENGINES

Throw in a brand new JIMS® Billet Cam Support Plate, which utilizes the new Harley-Davidson® hydraulic cam chain tensioners, and finish it off with the latest in high-performance tappets, JIMS® Powerglide™ II. As always, power delivery is as smooth off the bottom end as stock, with a wide powerband of roll-on punch. These enhancements, plus 130HP** and 135ft-lbs** of torque, take the 131" to an unmatched level of performance and reliability.

now backed by a 1 year warranty*

HIGH PERFORMANCE COMPONENTS INCLUDES

- Screamin' Eagle® Adjustable Pushrods
- ARP® Cylinder Studs
- JIMS® Forged Pistons
- JIMS® Pressed Flywheel Assembly
- Screamin' Eagle® Valve Springs
- H-D® Hydraulic Cam Chain Tensioners
- JIMS® Billet Cam Support Plate
- JIMS® Roller Rockers
- JIMS® Powerglide™ II Tappets
- CNC Ported Heads
- H-D® High Flow Oil Pump
- Screamin' Eagle® Cams



Cylinder Heads are NOW available with custom lettering for a personal touch!

JIMS® Powerglide™ II. The ONLY Oil Pressurized Tappet. Designed Specifically for High Performance Twin Cam® Engines.



131" TWIN CAM® RACE ENGINE SPECIFICATIONS

- Horsepower: 130**
- Torque: 135**
- Bore Size: 4.313"
- Stroke: 4.500"
- Compression: 10.5:1
- Cam Lift: .635"
- Intake Valve: 2.080"
- Case Material: A356-T1
- Connecting Rods: 4340
- Recommended Octane: 91

**Horsepower and Torque performance measured at the rear wheel with a Dynojet® Dynamometer. Your results may vary based on E.F.I. Induction (Non-carburated), camshaft and exhaust combination.
This is not a street legal engine.



JIMS® Press Fit Flywheels with 4340 Chromoly Rods & JIMS® Quality Forged Pistons.

JIMS® Billet Cam Support with New Style H-D® Hydraulic Tensioners and High Flow Oil Pump.



*Applies to assembled engines only, dealer assembled race kits receive a 90 day warranty covering manufactures defect only.

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120" TWIN CAM® RACE ENGINES

Delivering 125 HP** and 121 ft-lbs** of torque is just the beginning. JIMS® thick-walled cases offer unmatched strength and are able to support a bore size of up to 4.800. This engine features pressed flywheels, forged pistons, Screamin' Eagle® valve springs, forged 4340 steel connecting rods and the latest in high performance tappets, JIMS® Powerglide™ II. From the ground up, this engine has everything needed to stop the competition in its tracks, and the track is what this engine was designed for. Since 2004, JIMS® has set the standard in High-Performance Twin Cam® Racing Engines, and we are just getting started!

HIGH PERFORMANCE COMPONENTS INCLUDES

- Screamin' Eagle® Adjustable Pushrods
- JIMS® Pressed Flywheel Assembly
- JIMS® Forged Pistons
- Screamin' Eagle® Valve Springs
- ARP® Cylinder Studs
- JIMS® Roller Rockers
- JIMS® Powerglide™ II Tappets
- Screamin' Eagle® Cams

120" TWIN CAM® RACE ENGINE SPECIFICATIONS

- Horsepower: 125**
- Torque: 121**
- Bore Size: 4.125"
- Stroke: 4.500"
- Compression: 10:1
- Cam Lift: .635"
- Intake Valve: 2.080"
- Case Material: A356-T1
- Connecting Rods: 4340
- Recommended Octane: 91

**Horsepower and Torque performance measured at the rear wheel with a Dynojet® Dynamometer.
Your results may vary based on E.F.I. Induction (Non-carburated), camshaft and exhaust combination.
This is not a street legal engine.

SOFTAIL®



Softail®

TOURING & DYNA®



Touring & Dyna®

**125 HP
121 TQ
RACE ONLY!**

120" TWIN CAM® ENGINE		
1408-3530	Black	2000-2006 Softail
1408-3535	Silver	2000-2006 Softail
2008-3530	Black	2007-Later Softail
2008-3535	Silver	2007-Later Softail

120" TWIN CAM® ENGINE		
1208-3530	Black	1999-2006 Touring and 1999-2005 Dyna
1208-3535	Silver	1999-2006 Touring and 1999-2005 Dyna
1608-3530	Black	2007-Pres Touring and 2006-Present Dyna
1608-3535	Silver	2007-Pres Touring and 2006-Present Dyna



*Applies to assembled engines only, dealer assembled race kit

See your local authorized Harley-Davidson®

For more information contact your local H-D®

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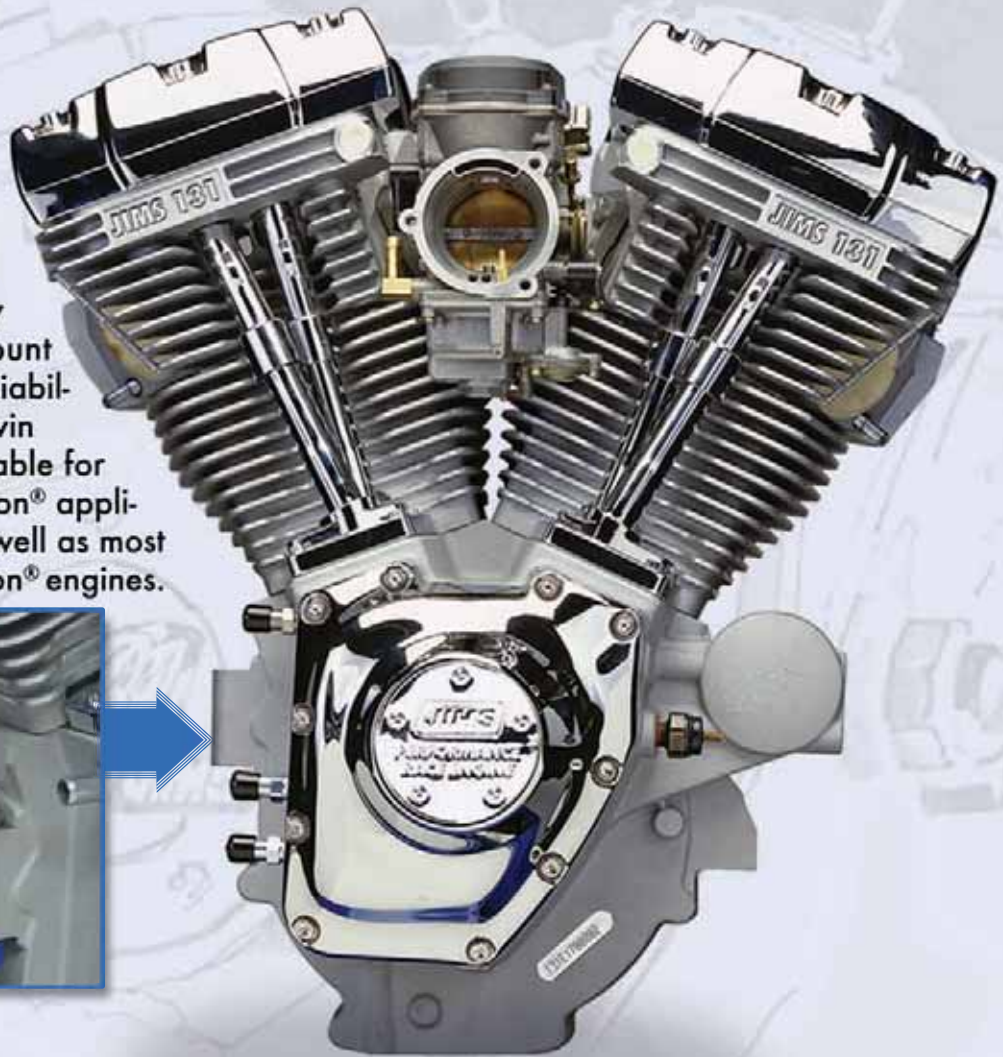
*Horsepower and Torque performance measured at the rear wheel with a Dynojet® Dynamometer. Your results may vary.

EVOLUTION® MOUNT

TWIN CAM® RACE ENGINES

JIMS® Assembled Race Engines are now backed by a 1 year warranty*

JIMS® R&D Department has developed 131" and 120" Twin Cam® Race Engines that bolt directly into Evolution® motor mount style frames. Now the reliability and performance of Twin Cam® technology is available for most OEM Harley-Davidson® applications back to 1991, as well as most custom frames for Evolution® engines.



131" Evolution® Mount

131" TWIN CAM® ENGINE		
1908-3530	Black	1991-98 Touring and Dyna®, 1991-99 Softail®
1908-3535	Silver	1991-98 Touring and Dyna, 1991-99 Softail

120" Evolution® Mount

120" TWIN CAM® ENGINE		
1808-3530	Black	1991-98 Touring and Dyna®, 1991-99 Softail®
1808-3535	Silver	1991-98 Touring and Dyna, 1991-99 Softail

receive a 90 day warranty covering manufactures defect only.
dealer and build your custom 131" or 120".
dealer or visit our web-site at www.jimsusa.com

jimsusa.com • E-mail: sales@jimsusa.com

may vary based on E.F.I. Induction (Non-carburated), camshaft and exhaust combination. This is not a street legal engine.

RACE ONLY
NOT STREET LEGAL



DYNO NUMBERS



WHAT DO THE CUSTOMERS HAVE TO SAY

Dear JIMS:

I wanted to take this opportunity to congratulate you on your 120 C.I. engine kit. We have received nothing but positive feedback from our customers. The 120 CI kit has been a solid product this year and we are very excited about the release of your 131" later this year. We already have customers very interested in the new engine. We believe that the 131" will make a great addition to the already solid performance we have experienced from the JIMS product line. Attached is a copy of a dyno chart for a 2005 FXDWGI and you can see that it produced a powerful 130HP and 140 Lb Torque! Needless to say, that is a fun bike to ride! Our customer was totally thrilled with the performance of his bike and has three of his friends interested in your product. Again, congratulations on producing a great performance product and having a great support staff for dealer support. Keep up the great work!

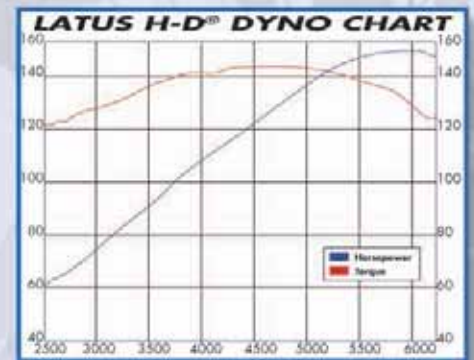
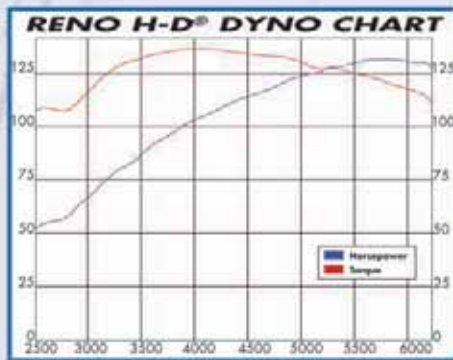
Mike Baptist
Reno Harley-Davidson/Buell

JIMS:

Please find enclosed a dyno chart of a 120 motor installed here at Latus Motors Harley-Davidson.

With the increased stud spread, Timken drive bearings, JIMS strengthened cases and JIMS flywheels many of the worries of building similar combinations on stock cases are no longer concerns. We are currently working on a Jims 131 high output project and will keep you posted on the results. We would not even attempt such a project on a stock engine. On behalf of our customers and those here at Latus Motors Harley-Davidson, thank you for providing such a great pallet from which to create and make true our customers visions of reliable performance.

Mike Stegmann
Latus Motors Harley-Davidson



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ENGINEERING

Valve Train: Valve train loads are much higher in a racing engine like the JIMS® 131" or 120" than a stock Harley® engine. Cam lobe designs are more aggressive with higher lifts and acceleration rates. Valve springs must have higher rates and seat pressures for reliable control. And, these heavier, stiffer and more aggressive parts must run at high rpm. JIMS® has been developing and manufacturing racing-quality valve train parts for decades and is using this experience in the JIMS® Race Engines Kit.



Tappets: JIMS® manufactures its proven Power-Glide™II tappets to very high standards of fit and finish. The very close fit between the tappet body and hydraulic unit ensures that the tappet stays pumped up under the stresses of high rpm use. There is no higher quality tappet.

Rocker Arms: JIMS® Roller Rockers overcome another racing valve train difficulty – side loads on valve stems and valve guides. High rpm and heavy valve spring pressures can result in high side loads which; in turn, accelerates wear. JIMS® roller-equipped rocker arms reduce this loading.



Connecting Rods: JIMS® connecting rods are enormously stiff, strong and reliable. They are forged from race-proven SAE 4340 steel. Every surface is then machined in CNC work centers to ensure that both static and dynamic balancing meets engineering design standards. The various heat treat, machining and grinding procedures are carefully followed by JIMS® dedicated and independent inspection team to ensure the highest quality final product. JIMS® also has exclusive use of the standard Harley-Davidson® crank pin and crank pin bearings. These are the highest quality connecting rod bearings available.



Timken® Bearing: JIMS® uses the traditional Timken® tapered roller bearing assembly on the left side of the JIMS® engines. This bearing is more tolerant of the crankshaft flexing that is normal at high rpm. Experience in the field indicates that this traditional Timken® back-to-back set is more durable.



Engine Cases: The JIMS® Race engine cases are stronger, tougher and more versatile than a stock engine case. We didn't simply add metal here and there. We considered the greater load requirements of the larger racing engine and designed accordingly. Our case set has thicker walls, stronger stud bosses and, larger radius corners.



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RACE ENGINE

CYLINDERS

JIMS® cylinders are an integrated combination of high strength, high heat conductivity, aerospace aluminum alloy and tough, low-wear cast iron. This is a proven combination of materials using the latest developments in advanced casting technology. Molded together, JIMS® Race Engine cylinders remain rigid, straight and cool.

1000-1012 Black Cylinder Kit, Alpha & Beta. Fit to JIMS® 131" standard 4.313" piston size.

1000-1013 Silver Cylinder Kit, Alpha & Beta. Fit to JIMS® 131" standard 4.313" piston size.

1208-1610 Black Cylinder Kit, Alpha & Beta. Fit to JIMS® 120" standard 4.125" piston size.

1208-1620 Silver Cylinder Kit, Alpha & Beta. Fit to JIMS® 120" standard 4.125" piston size.

PISTONS

JIMS® pistons have been uniquely designed and developed for the JIMS® Race Engines. Both standard and oversize piston sets are available from JIMS®.

Fits JIMS® 131" A Engines

1386-1357 "A" Piston Set, Std. Size

1386-1356 "A" Piston Set, + .005"

1386-1355 "A" Piston Set, + .010"

Fits JIMS® 120" A Engines

1286-1357 "A" Piston Set, Std. Size

1286-1356 "A" Piston Set, + .005"

1286-1355 "A" Piston Set, + .010"

Fits JIMS® 120" Early B Engines

1486-1357 "B" Piston Set, Std. Size

1486-1356 "B" Piston Set, + .005"

1486-1355 "B" Piston Set, + .010"

Ring Sets for JIMS® 120" A & B Engines

1286-1354 Standard 120"

1286-1805 +.005 120"

1286-1806 +.010 120"

1604K .927" Wrist Pin Clips, 4 PK

Ring Sets for JIMS® 131" A & B Engines

1386-1354 Standard 131"

1386-1805 +.005 131"

1386-1806 +.010 131"

1604K .927" Wrist Pin Clips, 4 PK

CAM POSITION SENSOR COVER

JIMS® chrome plated billet aluminum cam position sensor cover carries the official JIMS® Twin Cam Race Engine stamped logo showing the world what you've got.

1208-1301 Chrome Cover, Cam Position Sensor, All

JIMS® HEAD GASKETS

The critical cylinder head gaskets were an integral part of the design and development of the JIMS® Race Engine. They carry the unique JIMS® Race Engine bolt pattern and are not off the shelf afterthoughts. Our head gaskets are coated multilayer stainless with embossed sealing rings. They seal, and they last.

1308-1312 131" Gasket Set, Head front/rear, Alpha & Beta

1208-1312 120" Gasket Set, Head front/rear, Alpha & Beta

JIMS® BASE GASKETS

The unique cylinder base gaskets use the same advanced design as our head gaskets. Stainless steel, embossed and coated, they represent the very best and latest in sealing technology.

1308-1311 131" Gasket Set, Base front/rear, Alpha & Beta

1208-1311 120" Gasket Set, Base front/rear, Alpha & Beta

CYLINDER TORQUE PLATES

To check cylinder measurements accurately these torque plates are essential. These plates simulate stress conditions when boring and honing. These torque plates are unique to the JIMS® Race Engine cylinder bolt pattern.

1308-1316 4.313" Bore Cylinder Torque Plates, Alpha & Beta

1208-1316 4.125" Bore Cylinder Torque Plates, Alpha & Beta

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COMPONENTS

HIGH LIFT ROCKER COVERS

JIMS® 131" & 120" rocker covers are modified stock items. They have been CNC relieved to clear the JIMS® Race Engine's special valve springs. Replacement covers available from JIMS®.

1208-1309 Chrome Rocker Cover Set, Modified, Alpha & Beta All

1208-1370 Black Rocker Cover Set, Modified, Alpha & Beta All



TAPPET COVERS

JIMS® chromed billet Tappet Covers are CNC machined from 6061-T6 billet aluminum. These tappet covers are designed specifically for use on JIMS® Race Engine only. Replacement covers, bolts, and gaskets are available from JIMS®.

Fits JIMS® Early A Engines

99-05 Dyna® & 99-06 Touring

1208-1313 Tappet Covers, Set

1286-1324 Screws Set, Chrome

1208-1314 Gasket Set

Fits JIMS® B & Late A Engines

All Softail®, EVO, 06-Pres., Dyna®, 07-Pres., & Touring

1408-1313 Tappet Covers, Set

1286-1324 Screws Set, Chrome

1408-1314 Gasket Set



POWERGLIDE™ II "PRESSURIZED OILING"

The Powerglide™ II has all the advantages of its predecessor - billet body, superior hydraulic unit, and roller perpendicularity held to .0002", hand-honed hydraulic unit cavity and now includes the following advantages. Total dynamic load capacities have been increased over 30% straight across the board. Lubrication capacities for the hydraulic unit and valve train (top end) have increased 10%. The lubrication capacities for the roller, cams and cam bearings have increased 100% to maximize cooling. The motorcycle industries only oil-fed axle.

1807 Powerglide™ II Tappet (sold each)



CYLINDER HEADS

JIMS® cylinder heads were developed in conjunction with Screamin' Eagle®, and are the best on the market. The heads were specifically designed for this engine configuration. This product stands at the end of a very long line of development, performance testing, reliability testing, racing and field experience. Cylinder heads incorporate the unique JIMS® Twin Cam® Engine bolt pattern.

1285-1332 131" & 120" CNC Head Set, Silver, Assembled, Alpha & Beta

1285-1333 131" & 120" CNC Head Set, Black, Assembled, Alpha & Beta



CYLINDER STUDS

The JIMS® 120" and 131" Race Engine cylinder studs are more than they appear from a casual glance. They are tapered for best load distribution and utilize the special 7/16" "J" thread design for greater strength and reliability.

1286-1360 Cylinder Studs, Long, Alpha and Beta

1286-1361 Cylinder Studs, Short



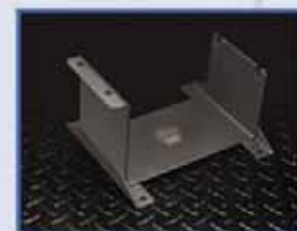
ENGINE STAND

JIMS® is renowned for its specialty tools for Harley-Davidson® engines. Among the most popular are JIMS® engine stands. JIMS® stands are precise, strong and stable and it is recommended for your JIMS® 120" and 131" Race Engines. We do not furnish a stand with the Race Kit since so many shops and mechanics already have them.

1205-1000 Engine Stand, Twin Cam® (Alpha engines only)

1405-1668 Engine Stand, Twin Cam® (Beta engines only)

1006T Engine Stand, Twin Cam® (Evo Case only)



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