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Skunk2 Racing 306-05-1140

Skunk2 Racing 306-05-1140 Alpha Series Connecting Rod User Manual

For Acura Honda K20A/K20Z Engines

1. INTRODUCTION

This manual provides essential information for the proper installation, use, and maintenance of your Skunk2 Racing 306-05-1140 Alpha Series Connecting Rods. These connecting rods are engineered for high-performance Acura and Honda K20A, K20A2, and K20Z1 engines, offering superior strength and durability. Please read this manual thoroughly before proceeding with installation to ensure optimal performance and safety.

2. SAFETY INFORMATION

Installation of internal engine components requires specialized knowledge, tools, and experience. Improper installation can lead to severe engine damage, personal injury, or death. It is highly recommended that installation be performed by a qualified and certified automotive technician.

- Always wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the engine is cool and disconnected from its power source before beginning any work.
- Refer to the vehicle's factory service manual for specific disassembly and reassembly procedures.
- Use only calibrated torque wrenches for all fastener installations.
- Keep all components clean and free from debris during assembly.
- This product is designed for off-road or racing use and may not be legal for use on public roads in some regions. Check local regulations.

Proposition 65 Warning: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

3. PRODUCT OVERVIEW AND FEATURES

The Skunk2 Racing Alpha Series Connecting Rods are precision-engineered components designed to withstand the extreme demands of high-performance engine applications. Key features include:

- **Material:** Forged from high-strength 4340 chromoly steel.
- **Design:** Straight H-beam design for optimal strength-to-weight ratio.

- **Bolts:** Equipped with high-quality, Skunk2-branded, 3/8-inch ARP2000 bolts, capable of clamping loads up to 220,000 psi.
- **Lubrication:** Features dual oil passages at the pin ends for enhanced wrist pin lubrication and cooling.
- **Durability:** Undergoes comprehensive heat-treating, tempering, shot-peening, and magna-flux inspection processes.
- **Piston Compatibility:** Includes precision-machined bronze wrist pin bushings, compatible with most aftermarket pistons without additional machining. **Not compatible with OEM style pistons.**
- **Power Capability:** Engineered to handle over 900 horsepower.
- **Authenticity:** Laser-etched Skunk2 logo.



Figure 1: A single Skunk2 Racing Alpha Series Connecting Rod, showcasing its H-beam design and bronze wrist pin bushing.



Figure 2: A complete set of four Skunk2 Racing Alpha Series Connecting Rods, ready for engine assembly.



Figure 3: Two Alpha Series Connecting Rods displayed from different perspectives, highlighting their robust construction.



Figure 4: Top-down view of an Alpha Series Connecting Rod, showing the precision machining and H-beam profile.

4. SETUP AND INSTALLATION

Proper installation is critical for the performance and longevity of these connecting rods. This section outlines general steps and important considerations. Always consult a professional engine builder or the vehicle's factory service manual for detailed, vehicle-specific procedures.

- 1. Engine Disassembly:** Carefully disassemble the engine, following the manufacturer's guidelines. Ensure all components are organized and inspected for wear or damage.

2. Component Inspection:

- Inspect the crankshaft journals for proper size, concentricity, and surface finish.
- Verify that the pistons are compatible with the Alpha Series Connecting Rods. These rods are designed for aftermarket pistons and are **not compatible with OEM style pistons**.
- Ensure wrist pins are correctly sized and move freely within the bronze bushings.

3. **Cleaning:** Thoroughly clean all engine components, including the new connecting rods, to remove any manufacturing debris, oils, or contaminants.

4. **Bearing Installation:** Install appropriate connecting rod bearings (not included) into the rod and cap. Ensure correct orientation and proper seating.

5. **Lubrication:** Apply a high-quality assembly lubricant to the crankshaft journals, connecting rod bearings, and wrist pins before assembly.

6. **Rod and Piston Assembly:** Carefully assemble the connecting rod to the piston using the wrist pin. Ensure proper orientation of the piston and rod.

7. **Crankshaft Installation:** Install the connecting rod and piston assembly onto the crankshaft journal. Ensure the rod cap is correctly oriented with its corresponding rod.

8. **Bolt Torque:** Install the Skunk2-branded 3/8-inch ARP2000 connecting rod bolts. These bolts require specific torque procedures. **Always refer to ARP's official torque specifications for ARP2000 bolts and use a calibrated torque wrench.** Incorrect torque can lead to catastrophic engine failure.

9. **Clearance Checks:** Verify all clearances (e.g., rod side clearance, bearing clearance) are within engine builder specifications.

10. **Final Assembly:** Complete engine reassembly, following all factory service manual procedures.



Figure 5: Close-up view of a connecting rod showing the installed ARP2000 bolts and the Skunk2 logo.



Figure 6: Individual Skunk2 Racing ARP2000 connecting rod bolts, highlighting their robust design.

5. OPERATING CONSIDERATIONS

Once installed, the performance of the connecting rods is integrated into the overall engine operation. Consider the following:

- **Engine Break-in:** Follow recommended engine break-in procedures for new or rebuilt engines. This typically involves varying RPMs and loads to properly seat piston rings and bearings.
- **Oil Quality:** Use high-quality engine oil as specified by your engine builder or vehicle manufacturer. Proper lubrication is paramount for the longevity of all internal engine components.
- **Monitoring:** Regularly monitor engine oil pressure and temperature. Any abnormal readings should be investigated immediately.
- **Tuning:** For high-performance applications, proper engine tuning is essential to prevent detonation and excessive stress on internal components.

6. MAINTENANCE

Connecting rods themselves do not require routine maintenance after proper installation. Their longevity is directly tied to the overall health and maintenance of the engine. Adhere to the following general maintenance practices:

- **Regular Oil Changes:** Perform oil and filter changes at recommended intervals using appropriate lubricants.
- **Engine Health Checks:** Periodically inspect for oil leaks, unusual noises, or performance degradation.
- **Professional Inspections:** For high-performance or racing engines, consider periodic professional inspections and rebuilds to assess wear on all internal components, including connecting rods and bearings.

7. TROUBLESHOOTING

Issues related to connecting rods typically manifest as severe engine problems. If you experience any of the following, cease engine operation immediately and consult a qualified technician:

- **Knocking or Tapping Noises:** Persistent metallic knocking or tapping sounds from the engine, especially under load, can indicate bearing wear or rod issues.
- **Sudden Loss of Oil Pressure:** A sudden drop in oil pressure can be a symptom of severe internal engine damage, including connecting rod bearing failure.
- **Metal Shavings in Oil:** The presence of metallic particles in engine oil during a change is a strong indicator of internal component wear or failure.
- **Engine Seizure:** In extreme cases, a connecting rod failure can lead to complete engine seizure.

These symptoms require immediate professional diagnosis and repair. Do not attempt to operate an engine exhibiting these signs.

8. SPECIFICATIONS

Attribute	Value
Model Number	306-05-1140
Brand	Skunk2 Racing
Material	Forged 4340 Chromoly Steel
Design	Straight H-Beam
Length	139.00mm
Weight (per rod)	499 grams (Balanced +/- 1 gram)
Bolts	3/8-inch ARP2000 / Skunk2 bolts
Wrist Pin Bushings	Bronze
Power Capability	900+ hp
Fitment	Acura/Honda K20A, K20A2, K20Z1 Engines (e.g., 2006-2011 Honda Civic 2.0L Si)
Compatibility	Compatible with most aftermarket pistons. Not compatible with OEM style pistons.
Included in Box	Set of 4 Connecting Rods

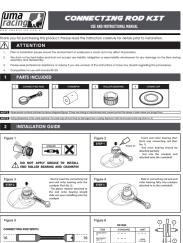
9. WARRANTY AND SUPPORT

For detailed warranty information, product support, or technical assistance, please refer to the official Skunk2 Racing website or contact their customer service directly. Warranty terms and conditions may vary and are subject to the manufacturer's policies.

Skunk2 Racing Official Website: www.skunk2.com

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Related Documents - 306-05-1140

 Part Number: SI-HD017	<p>Rtunes Racing SI-HD017 Short Ram Air Intake Installation Guide</p> <p>Detailed installation instructions for the Rtunes Racing SI-HD017 Short Ram Air Intake Kit. Includes part list, step-by-step guidance, and support contact information for vehicle compatibility.</p>
 INSTALLATION GUIDE BXSS-20603 BLOX Racing Subframe Hard Collar Kit	<p>BLOX Racing Subframe Hard Collar Kit Installation Guide (BXSS-20603)</p> <p>Installation guide for the BLOX Racing Subframe Hard Collar Kit (BXSS-20603), designed for specific Honda Civic, Acura RSX, and Honda Fit models. Provides step-by-step instructions, required tools, and important notes for proper installation.</p>
 BLOX RACING BXSS-20601 BLOX Racing Subframe Hard Collar Kit P/N: BXSS-20601	<p>BLOX Racing Subframe Hard Collar Kit Installation Guide (BXSS-20601)</p> <p>Comprehensive installation guide for the BLOX Racing Subframe Hard Collar Kit (Part Number BXSS-20601), designed for Honda Civic, Honda Del Sol, and Acura Integra models. Includes required tools, step-by-step assembly instructions, and important notes for proper installation.</p>
 L.A. SLEEVE ATV CATALOG	<p>L.A. Sleeve ATV Catalog - Performance Engine Parts & Services</p> <p>Comprehensive catalog from L.A. Sleeve featuring performance engine parts and services for ATVs and motorcycles. Includes big bore kits, pistons, rings, gaskets, connecting rods, crankshafts, performance carbs, pipes, silencers, and technical installation guides. Covers major brands like Honda, Arctic Cat, Bombardier, Kawasaki, Polaris, Suzuki, and Yamaha.</p>
 ATTENTION CONNECTING ROD KIT FOR HONDA RS150 PARTS INCLUDED INSTALLATION GUIDE	<p>UMA Racing Connecting Rod Kit for Honda RS150 - Installation Manual</p> <p>Detailed installation manual for the UMA Racing Connecting Rod Kit for Honda RS150 and RS150R motorcycles. Includes parts list, step-by-step instructions, and technical specifications.</p>



[BLOX Racing Subframe Hard Collar Kit BXSS-20603 Installation Guide](#)

Detailed installation guide for the BLOX Racing Subframe Hard Collar Kit (BXSS-20603), compatible with select Honda Civic, Honda Fit, and Acura RSX models. Includes product details, required tools, and step-by-step assembly instructions.