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› COMP Cams Magnum Self-Aligning Rocker Arm User Manual

Comp Cams 1418-8

COMP Cams Magnum Self-Aligning Rocker Arm User Manual

Model: 1418-8

PRODUCT OVERVIEW

The COMP Cams 1418-8 Magnum Self-Aligning Rocker Arms are engineered for late model Small Block Chevy 305-350 applications. This set of eight rocker arms features a 1.6 ratio and a 3/8-inch stud diameter, designed to enhance engine performance. Constructed from durable 8620 chromemoly steel, these rocker arms are built to resist flexing and ensure maximum valve lift. The roller tip design minimizes friction, contributing to improved efficiency and a potential increase of 15 to 30 horsepower over standard rocker arms. They are suitable for performance applications with open spring pressure less than 350 lbs.



Figure 1: A complete set of eight COMP Cams 1418-8 Magnum Self-Aligning Rocker Arms, along with their corresponding nuts, ready for installation. Each rocker arm features a roller tip and is designed for optimal valve train performance.

INSTALLATION AND SETUP

Proper installation of rocker arms is crucial for engine performance and longevity. It is highly recommended that installation be performed by a qualified automotive technician. Always refer to your specific engine's service manual for detailed procedures and torque specifications.

Pre-Installation Checks:

- Ensure all components are clean and free of debris.
- Verify the correct stud diameter (3/8 inch) and ratio (1.6) for your application.
- Inspect the rocker arms for any manufacturing defects or shipping damage.

Installation Steps (General Guidance):

1. Ensure the engine is at Top Dead Center (TDC) for the cylinder you are working on, or follow the manufacturer's recommended valve train installation sequence.
2. Apply a small amount of engine assembly lubricant to the rocker arm pivot ball and the roller tip.
3. Place the rocker arm onto the stud, ensuring the pushrod is properly seated in the rocker arm cup.
4. Install the rocker arm nut and tighten it finger-tight.
5. Adjust valve lash according to your engine manufacturer's specifications. For self-aligning rocker arms, this typically involves tightening the nut until zero lash is achieved, then adding a specified number of turns (e.g., 1/2 to 1 full turn) to preload the lifter. Consult your engine manual for precise instructions.
6. Repeat for all rocker arms.
7. After installation, rotate the engine manually a few times to ensure proper clearance and operation before starting.

Note: Incorrect valve lash adjustment can lead to poor engine performance, excessive wear, or engine damage.

OPERATING PRINCIPLES

The COMP Cams Magnum Self-Aligning Rocker Arms are designed to optimize valve train geometry and reduce friction. As the camshaft lobe lifts the lifter and pushrod, the rocker arm pivots on its stud, translating the upward motion of the pushrod into a downward motion on the valve stem. The 1.6 ratio means that for every unit of lift at the pushrod, the valve opens 1.6 times that distance, effectively increasing valve lift for improved airflow.

The self-aligning feature ensures that the roller tip remains centered on the valve stem, preventing side loading and premature wear. The 8620 chromemoly steel construction provides superior rigidity, preventing flex that can lead to lost valve lift and horsepower. The roller tip further reduces friction compared to traditional stamped steel rocker arms, allowing the engine to produce more power and operate more efficiently.

MAINTENANCE

Regular engine maintenance is essential for the longevity and performance of your COMP Cams rocker arms. While these components are designed for durability, proper care will ensure their continued optimal function.

- **Oil Changes:** Adhere to your engine manufacturer's recommended oil change intervals and use high-quality engine oil. Clean oil is vital for lubricating all valve train components, including the rocker arms.
- **Periodic Inspection:** During routine engine checks or other maintenance, visually inspect the rocker arms for any signs of unusual wear, scoring, or discoloration. Check for proper seating of the pushrods and valve stems.
- **Valve Lash Check:** Although self-aligning, it is good practice to periodically check valve lash or lifter preload, especially if any unusual noises develop from the valve train.
- **Cleanliness:** Keep the engine bay clean to prevent dirt and debris from entering the valve train area.

TROUBLESHOOTING

If you experience issues after installing or while using your COMP Cams Magnum Self-Aligning Rocker Arms, consider the following common troubleshooting steps:

Symptom	Possible Cause	Solution
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Symptom	Possible Cause	Solution
Excessive valve train noise (ticking/tapping)	Incorrect lifter preload/valve lash Worn lifter or pushrod Insufficient oil pressure/lubrication	Re-adjust lifter preload according to engine specifications. Inspect and replace worn components. Check oil level and oil pressure; ensure proper oil viscosity.
Reduced engine performance/misfires	Improper valve timing due to incorrect installation Damaged rocker arm or valve spring	Verify correct installation and valve timing. Inspect rocker arms and valve springs for damage.
Oil leaks around valve covers	Improperly seated valve cover gasket Over-tightened valve cover bolts	Inspect and replace valve cover gasket. Ensure valve cover bolts are torqued to specification.

If problems persist, consult a professional automotive mechanic or contact COMP Cams technical support.

SPECIFICATIONS

Attribute	Detail
Brand	Comp Cams
Model Number	1418-8
Application	Small Block Chevy 305-350 (Late Model)
Ratio	1.6
Stud Diameter	3/8 inch
Material	8620 Chromemoly Steel
Rocker Arm Type	Magnum Roller Self-Aligning
Weight (Set of 8)	Approximately 2.4 pounds
ASIN	B001GFPTY0
Date First Available	February 13, 2005

WARRANTY AND SUPPORT

For specific warranty information regarding your COMP Cams 1418-8 Magnum Self-Aligning Rocker Arms, please refer to the documentation included with your purchase or visit the official COMP Cams website. Warranty terms and conditions may vary. For technical assistance, installation guidance, or product support, please contact COMP Cams directly through their official customer service channels. Always provide your product model number (1418-8) and any relevant purchase details when seeking support.

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