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> Comp Cams 12-671-4 Nostalgia Plus Hydraulic Flat Cam for Chevrolet Small Block Instruction Manual

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Model: 12-671-4

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Comp Cams 12-671-4 Nostalgia Plus Hydraulic Flat Camshaft. This camshaft is designed for Chevrolet Small Block engines, offering a specific performance profile. Adherence to these instructions is crucial for optimal performance and longevity of the component and your engine.

PRODUCT OVERVIEW



Image: The Comp Cams 12-671-4 Nostalgia Plus Hydraulic Flat Camshaft. This image displays the full length of the camshaft, highlighting its black lobes and polished silver bearing journals, indicative of its precision engineering for engine performance.

The Comp Cams 12-671-4 Nostalgia Plus camshaft is engineered to deliver a specific performance characteristic for Chevrolet Small Block engines. It features a 229/236 duration at .050" and a 112-degree lobe separation angle, resulting in a recommended operating RPM range of 1,800-6,200. The valve lift specifications are 0.468" for intake and 0.462" for exhaust. This camshaft is part of the Nostalgia Plus line, designed to evoke the performance and sound of classic 1960s muscle cars while incorporating modern engineering for reliability.

SETUP AND INSTALLATION

Installation of a camshaft is a complex procedure that requires specialized tools and expertise. It is highly recommended that this component be installed by a qualified automotive professional. Incorrect installation can lead to severe engine damage and void product warranties.

Pre-Installation Checks:

- Verify that all engine components, including lifters, pushrods, rocker arms, and valve springs, are compatible with the camshaft specifications.
- Inspect the camshaft for any signs of damage during shipping.
- Ensure the engine block's camshaft bearings are in good condition and properly lubricated.
- Confirm the correct timing chain and gears are available.

Installation Steps (General Guidelines):

1. Remove existing camshaft and related components according to vehicle service manual.
2. Thoroughly clean the camshaft bore and ensure it is free of debris.
3. Apply a high-quality camshaft assembly lubricant to all camshaft lobes and bearing journals.
4. Carefully slide the new camshaft into the engine block, ensuring not to damage the bearings.
5. Install the timing chain and gears, aligning timing marks precisely as per the engine manufacturer's specifications.
6. Install new or inspected lifters, ensuring they are properly lubricated.
7. Reassemble remaining valvetrain components, adjusting valve lash if applicable.
8. Perform initial engine break-in procedure as recommended by the camshaft manufacturer (refer to Comp Cams break-in guidelines).

Important: Always refer to the specific engine service manual and Comp Cams' detailed installation instructions for your particular application. Proper break-in is critical for the longevity of hydraulic flat tappet camshafts.

OPERATING CHARACTERISTICS

The Comp Cams 12-671-4 camshaft is designed to provide a specific power band and engine sound. Users should be aware of the following characteristics:

- **RPM Range:** Optimal performance is achieved within the 1,800-6,200 RPM operating range.
- **Engine Sound:** This camshaft is engineered to produce a distinct engine idle and exhaust note, reminiscent of classic muscle cars.
- **Vacuum:** Depending on engine configuration, this camshaft may result in a slightly lower idle vacuum compared to stock camshafts. This should be considered when integrating with vacuum-dependent accessories.
- **Fueling and Tuning:** Proper engine tuning (carburetor or EFI) is essential to maximize performance and ensure correct air/fuel ratios with this camshaft.

MAINTENANCE

- Regular maintenance is vital for the longevity and performance of your engine, especially after a camshaft upgrade.
- **Oil Changes:** Perform oil changes at recommended intervals using high-quality engine oil with appropriate ZDDP (Zinc Dialkyldithiophosphate) content, especially critical for flat tappet camshafts. Consult your oil manufacturer for suitable formulations.
 - **Valvetrain Inspection:** Periodically inspect valvetrain components (lifters, pushrods, rocker arms, valve springs) for wear or damage.
 - **Engine Tuning:** Ensure engine tuning remains optimized for the camshaft's characteristics.
 - **Cooling System:** Maintain a properly functioning cooling system to prevent engine overheating, which can negatively impact all engine components.

TROUBLESHOOTING

If you experience issues after camshaft installation, consider the following common troubleshooting steps:

- **Rough Idle/Stalling:**
 - Check for proper ignition timing.
 - Verify carburetor or EFI tuning.
 - Inspect for vacuum leaks.
 - Ensure valve lash is correctly set (if applicable).
- **Loss of Power:**
 - Confirm correct camshaft timing.
 - Check fuel delivery and ignition system.
 - Verify valve spring pressure is adequate.
- **Excessive Valvetrain Noise:**
 - Check oil pressure and oil level.
 - Inspect lifters, pushrods, and rocker arms for wear or damage.
 - Ensure proper valve lash adjustment.
- **Engine Overheating:**
 - Verify cooling system function.
 - Check ignition timing and fuel mixture.

For persistent issues, consult a qualified automotive technician or Comp Cams technical support.

SPECIFICATIONS

Feature	Specification
Model Number	12-671-4
Cam Type	Hydraulic Flat Tappet
Application	Chevrolet Small Block
Operating RPM Range	1,800 - 6,200 RPM

Duration at .050" (Intake/Exhaust)	229° / 236°
Valve Lift (Intake/Exhaust)	0.468" / 0.462"
Lobe Separation Angle	112°
Item Weight	8.9 pounds
Product Dimensions	23.3 x 2.9 x 2.6 inches

WARRANTY AND SUPPORT

For specific warranty information regarding your Comp Cams product, please refer to the official Comp Cams website or contact their customer service directly. Warranty terms typically cover manufacturing defects and are subject to proper installation and usage. For technical assistance or support, please visit the Comp Cams official support channels.

Note: Improper installation, use of incompatible components, or failure to follow recommended break-in procedures may void the product warranty.

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