Comp Cams 11-207-3

Comp Cams 11-207-3 BBC Magnum Hydraulic Flat Tappet Camshaft Instruction Manual

Model: 11-207-3

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Comp Cams 11-207-3 Magnum Hydraulic Flat Tappet Camshaft. Adherence to these instructions is crucial for optimal performance and longevity of the product and your engine. Please read this manual thoroughly before proceeding with any installation or operation.

2. Product Overview

The Comp Cams 11-207-3 is a Magnum series hydraulic flat tappet camshaft designed for Big Block Chevy engines. It features specific lift and duration profiles engineered to enhance engine performance within a defined RPM range. This camshaft is part of a critical valvetrain assembly that controls the opening and closing of engine valves.

An image showing the Comp Cams 11-207-3 camshaft, a long cylindrical component with various lobes and bearing surfaces, designed for engine valvetrain operation.

Key characteristics include a lift of 0.510 inches for both intake and exhaust, a duration of 270 degrees at 0.050 inch tappet lift, and a 110-degree lobe separation angle (LSA). The recommended operating RPM range is typically between 1500 and 5800 RPM.

3. Installation

Installation of a camshaft requires specialized tools and knowledge of engine mechanics. It is highly recommended that installation be performed by a qualified professional. Improper installation can lead to severe engine damage.

3.1 Pre-Installation Checks

- **Inspect Components:** Carefully inspect the camshaft for any signs of damage, such as nicks, scratches, or bent areas. Ensure all lobes and bearing journals are smooth.
- **Cleanliness:** Ensure the engine block, lifter bores, and all related components are thoroughly clean and free of debris.
- **Matching Components:** Verify that all valvetrain components (lifters, pushrods, rocker arms, valve springs, retainers, locks) are compatible with this camshaft and your engine application. Consult Comp Cams specifications for recommended components.
- **Lubrication:** Apply a generous amount of high-quality camshaft assembly lubricant (such as Comp Cams Cam & Lifter Installation Lube) to all camshaft lobes, journals, and lifter bases. This is critical for initial start-up and break-in.

3.2 Installation Procedure

1. Carefully slide the lubricated camshaft into the engine block, ensuring not to damage the cam bearings.
2. Install the timing chain and gears according to engine manufacturer specifications, ensuring proper timing alignment.
3. Install the lubricated hydraulic flat tappet lifters into their respective bores.

4. Assemble the remaining valvetrain components (pushrods, rocker arms, valve springs, etc.) following engine manufacturer guidelines and torque specifications.
5. Adjust valve lash as required for hydraulic lifters (typically zero lash plus a specified preload).

4. Operating Considerations

The initial break-in period for a new hydraulic flat tappet camshaft is extremely important to prevent premature wear and failure.

4.1 Camshaft Break-In Procedure

- **Engine Oil:** Use engine oil specifically formulated for flat tappet camshafts, containing adequate levels of Zinc Dialkyldithiophosphate (ZDDP). Many modern oils have reduced ZDDP, which is detrimental to flat tappet cams. Consider using a ZDDP additive if necessary.
- **Initial Start-Up:** After installation, start the engine and immediately bring the RPMs up to 2000-2500 RPM. Vary the engine speed between 2000-2500 RPM for approximately 20-30 minutes. Do not allow the engine to idle during this period.
- **Cooling:** Monitor engine temperature closely during break-in. Ensure adequate cooling to prevent overheating.
- **Load:** Avoid placing heavy loads on the engine during the break-in period.
- **Post Break-In:** After the break-in period, allow the engine to cool completely. Change the engine oil and filter to remove any break-in contaminants.

5. Maintenance

Proper engine maintenance is essential for the longevity of your Comp Cams camshaft.

- **Oil Changes:** Regularly change engine oil and filter according to your engine manufacturer's recommendations. Continue to use oil with appropriate ZDDP levels for flat tappet camshafts.
- **Valvetrain Inspection:** Periodically inspect valvetrain components for wear, proper adjustment, and signs of damage. Check for excessive valve spring pressure loss or broken springs.
- **Engine Tuning:** Ensure your engine is properly tuned (ignition timing, fuel mixture) to prevent excessive heat or stress on valvetrain components.

6. Troubleshooting

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

- **Excessive Valvetrain Noise:**
  - Check valve lash adjustment.
  - Verify oil pressure and proper lifter function.
  - Inspect for worn lifters, pushrods, or rocker arms.
- **Poor Engine Performance/Misfires:**
  - Re-check engine timing (camshaft and ignition).
  - Ensure proper valve spring pressure and installed height.
  - Verify correct lifter operation.

- **Camshaft Lobe Wear:** This is often indicated by a sudden loss of power, misfires, or excessive valvetrain noise. It is typically caused by improper break-in, insufficient ZDDP in the oil, or incorrect valve spring pressure. This usually requires camshaft replacement.

7. Specifications

Specification	Value
Brand	Comp Cams
Model Number	11-207-3
Camshaft Type	Magnum Hydraulic Flat Tappet
Engine Application	Big Block Chevy (BBC)
Intake Lift	0.510 inches
Exhaust Lift	0.510 inches
Intake Duration (at 0.050")	270 degrees
Exhaust Duration (at 0.050")	270 degrees
Lobe Separation Angle (LSA)	110 degrees
RPM Range	1500 - 5800 RPM
Item Weight	10.66 pounds
Product Dimensions	288 x 33 x 33 inches

8. Warranty and Support

For specific warranty information regarding your Comp Cams 11-207-3 camshaft, please refer to the documentation provided with your purchase or visit the official Comp Cams website. For technical support, installation assistance, or inquiries about compatible components, please contact Comp Cams customer service directly.

Comp Cams Official Website: www.compcams.com