MAHLE OC 90

MAHLE OC 90 Oil Filter Instruction Manual

Model: OC 90
Brand: MAHLE

Introduction

The MAHLE OC 90 Oil Filter is engineered to maintain the quality, performance, and efficiency of your engine by preventing dirt particles from entering the lubricant circuit. This manual provides essential information for the proper installation, understanding of its operation, and maintenance to ensure optimal performance and longevity of your vehicle's engine.

Installation Guidelines

Proper installation of your MAHLE OC 90 Oil Filter is crucial for its effective operation and the health of your engine. While specific steps may vary by vehicle, the general principles and components are outlined below.



Figure 1: MAHLE OC 90 Oil Filter, showing its robust construction and sealing surface.



Figure 2: Side profile of the MAHLE OC 90 Oil Filter, highlighting the embossed text.

Video 1: An animated overview of MAHLE Original Oil Filters, detailing internal components and their functions. This video provides insight into the robust design and filtration process.

General Installation Steps:

1. **Preparation:** Ensure the engine is cool and the vehicle is safely lifted or on a level surface. Place a drain pan beneath the oil pan.
2. **Drain Old Oil:** Remove the oil drain plug and allow all old engine oil to drain completely.
3. **Remove Old Filter:** Carefully unscrew and remove the old oil filter. Be prepared for residual oil to drain.
4. **Prepare New Filter:** Apply a thin film of new engine oil to the rubber gasket of the MAHLE OC 90 filter. This ensures a proper seal.
5. **Install New Filter:** Screw on the new MAHLE OC 90 filter by hand until the gasket makes contact with the engine block. Then, tighten an additional 3/4 to 1 full turn as specified by your vehicle's manufacturer. Do not overtighten.
6. **Refill Oil:** Replace the oil drain plug and refill the engine with the recommended type and amount of new engine oil.
7. **Check for Leaks:** Start the engine and let it run for a few minutes. Check for any oil leaks around the new filter and the drain plug. Turn off the engine and recheck the oil level.

Operating Principles

The MAHLE OC 90 Oil Filter is designed for superior filtration, ensuring the longevity and efficiency of your engine. Its core features contribute to a clean lubricant circuit:

- **Superior Filter Media:** Features embossed and pleated filter media, providing a high dirt holding capacity and minimizing pressure drop. This ensures efficient removal of contaminants without restricting oil flow.
- **Robust Construction:** Built with high-quality sheet metal, endplates, and seaming, offering superior structural integrity. This prevents decomposition and collapse of the filter, even under extreme conditions like repeated cold starts or high dirt loads.
- **Pressure Relief Valve:** An integrated pressure relief valve ensures that the engine receives lubrication at all times, even if the filter media becomes clogged. This is a critical safety feature.
- **Anti-Drain Check Valve:** Where applicable, an anti-drain check valve prevents oil from draining out of the filter when the engine is off. This ensures immediate lubrication upon engine start-up, reducing wear.

These design elements work in harmony to provide "Filtration Perfected," as per MAHLE's commitment to original equipment standards.

Maintenance

Regular replacement of your oil filter is essential for maintaining engine health and performance. The MAHLE OC 90 Oil Filter is designed for durability, but its filtration capacity is finite.

Recommended Replacement Interval:

Consult your vehicle's owner's manual for the manufacturer's recommended oil and filter change intervals. Generally, oil filters should be replaced every time the engine oil is changed, typically every 5,000 to 10,000 miles or every 6 to 12 months, depending on driving conditions and oil type.

Signs of a Clogged Filter:

- Reduced engine performance.
- Decreased fuel efficiency.
- Illumination of the oil pressure warning light (indicating severe clogging).
- Unusual engine noises.

Do not exceed recommended service intervals to prevent potential engine damage from contaminated oil or restricted oil flow.

Troubleshooting

While the MAHLE OC 90 Oil Filter is a reliable component, issues can occasionally arise, often related to installation or other vehicle systems. Here are some common troubleshooting scenarios:

Oil Leakage After Installation:

- **Cause:** Improperly tightened filter, damaged gasket, or old gasket residue.
- **Solution:** Ensure the old gasket is completely removed from the engine block. Apply a thin film of new oil to the new filter's gasket. Hand-tighten the filter until the gasket seats, then turn an additional 3/4 to 1 full turn. Do not overtighten. If leakage persists, the filter or its gasket may be faulty and require replacement.

Oil Pressure Warning Light On:

- **Cause:** Low oil level, severely clogged filter, faulty oil pressure sensor, or internal engine issue.
- **Solution:** First, check your engine oil level and add oil if necessary. If the light remains on, and the filter was recently installed, ensure it's the correct filter for your vehicle and properly installed. A severely clogged filter (due to extended use or extreme conditions) can trigger this light; replace immediately. If the issue persists, consult a qualified mechanic.

Unusual Engine Noises:

- **Cause:** Insufficient lubrication due to a clogged filter or low oil pressure.
- **Solution:** Check oil level and filter condition. If the filter is old or appears damaged, replace it. If noises continue, seek professional diagnosis.

Specifications

Detailed technical specifications for the MAHLE OC 90 Oil Filter:

Attribute	Value
Brand	MAHLE

Attribute	Value
Model	OC 90
Item Model Number	77689565
Material	Paper, Steel
Product Grade	Performance Part
Vehicle Service Type	Car, Truck
Item Dimensions (L x W x H)	3.11 x 3.11 inches
Item Weight	8.9 ounces (252.24 Grams)
UPC	027067668103
Global Trade Identification Number (GTIN)	00027067668103, 04009026037935
Manufacturer	Mahle
Date First Available	January 15, 2011
ASIN	B0068MTO8S

Warranty and Support

For specific warranty information regarding your MAHLE OC 90 Oil Filter, please refer to the documentation provided with your purchase or visit the official MAHLE website. MAHLE stands by the quality of its products, designed to meet or exceed original equipment specifications.
For technical support or further inquiries, please contact MAHLE customer service or consult a certified automotive technician.

Note: Always ensure that any maintenance or installation work on your vehicle is performed by a qualified individual or professional mechanic if you are unsure of the procedure.

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