

Raven MPV7100

Raven MPV7100 Valve Lifter Assembly Instruction Manual

Part Number: 14070-Z100110-0000

1. INTRODUCTION

This manual provides essential information for the installation, maintenance, and troubleshooting of the Raven MPV7100 Valve Lifter Assembly, part number 14070-Z100110-0000. This component is designed for use in Raven MPV7100 and MPV710 multi-purpose vehicles, including lawnmowers, generators, and utility vehicles. Please read these instructions carefully before proceeding with any installation or maintenance.

2. PRODUCT OVERVIEW

The valve lifter assembly is a critical engine component responsible for transferring the motion from the camshaft to the pushrods, which in turn operate the engine's valves. Proper functioning of the valve lifters ensures correct valve timing and engine performance. This specific lifter is a direct replacement for the original part in compatible Raven MPV models.



Figure 1: Raven MPV7100 Valve Lifter Assembly. This image displays the metallic, cylindrical valve lifter assembly, which is a crucial internal engine component.

3. COMPATIBILITY

This Valve Lifter Assembly (Part Number: 14070-Z100110-0000) is compatible with the following Raven models:

- Raven MPV7100 Multi-Purpose Vehicle
- Raven MPV710 Multi-Purpose Vehicle

It is designed for use in the engine systems of these specific lawnmower, generator, and utility vehicle models.

4. SAFETY INFORMATION

WARNING:

- Always disconnect the spark plug wire and battery (if applicable) before performing any maintenance or installation to prevent accidental engine startup.
- Allow the engine to cool completely before working on it to avoid burns.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- If you are unsure about any step, consult a qualified service technician.

5. SETUP AND INSTALLATION

Installation of a valve lifter assembly requires mechanical aptitude and specific tools. If you are not comfortable performing this procedure, it is recommended to seek professional assistance.

Required Tools (General):

- Socket set and wrenches
- Torque wrench
- Feeler gauges
- Engine oil
- Gasket scraper and new gaskets (as needed)

Installation Steps (General Guide):

1. **Preparation:** Ensure the engine is cool and disconnected from power. Drain engine oil if necessary for access.
2. **Access:** Remove engine covers, valve covers, and any other components obstructing access to the valve lifters. Refer to your specific engine service manual for detailed disassembly instructions.
3. **Removal of Old Lifter:** Carefully remove the old valve lifter. Note its orientation and position if multiple lifters are being replaced.
4. **Inspection:** Inspect the camshaft lobes and lifter bore for wear or damage. Clean the lifter bore thoroughly.
5. **Installation of New Lifter:** Apply a thin coat of clean engine oil to the new Raven valve lifter assembly. Carefully insert the new lifter into its bore, ensuring it slides smoothly without binding.
6. **Reassembly:** Reinstall all removed components, ensuring all fasteners are tightened to the

manufacturer's specified torque values. Replace any gaskets that were removed.

- 7. **Fluid Check:** Refill engine oil to the correct level.
- 8. **Test:** Reconnect power and start the engine. Listen for unusual noises and check for proper operation.

6. OPERATING PRINCIPLES

Once installed, the valve lifter operates continuously with the engine. Its function is entirely internal and automatic. It rides on the camshaft lobe, translating the rotational motion of the camshaft into linear motion for the pushrod. This linear motion then opens and closes the engine's intake and exhaust valves at precise times, allowing for combustion and exhaust cycles.

7. MAINTENANCE

The Raven MPV7100 Valve Lifter Assembly is designed for durability. Regular engine maintenance, particularly timely oil changes with the correct type and viscosity of engine oil, is crucial for the longevity of valve lifters and other internal engine components. Dirty or low oil can lead to premature wear.

- **Oil Changes:** Follow the engine manufacturer's recommended oil change intervals.
- **Oil Level:** Regularly check and maintain the engine oil at the proper level.
- **Inspection:** During major engine overhauls or repairs, inspect valve lifters for excessive wear, pitting, or scoring.

8. TROUBLESHOOTING

Symptoms of a failing valve lifter can include:

- **Ticking or Tapping Noise:** A distinct ticking or tapping sound from the engine, especially when cold or at idle, can indicate a worn or collapsed valve lifter.
- **Reduced Engine Performance:** A severely worn lifter can affect valve timing, leading to rough idling, misfires, or a noticeable loss of power.
- **Check Engine Light:** In some cases, engine performance issues related to valve train components can trigger a check engine light.

If you experience these symptoms, it is recommended to have the engine inspected by a qualified technician. Continuing to operate an engine with a faulty valve lifter can lead to further, more severe engine damage.

9. SPECIFICATIONS

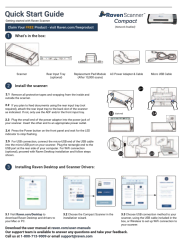



| Specification | Detail |
|-------------------|-----------------------------|
| Part Number | 14070-Z100110-0000 |
| Brand | Raven |
| Compatible Models | Raven MPV7100, Raven MPV710 |
| Manufacturer | Rato |

10. WARRANTY AND SUPPORT

For information regarding the warranty of this Raven Valve Lifter Assembly, please refer to the original purchase documentation or contact the retailer from whom the part was purchased. For technical support or further inquiries, please contact Raven customer service or an authorized service center.

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Related Documents - MPV7100

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