

Moto Tassinari V3124-873B-2

Moto Tassinari V-Force 3 Reed Valve System

Model: V3124-873B-2

Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Moto Tassinari V-Force 3 Reed Valve System, model V3124-873B-2. The V-Force 3 system is engineered to optimize engine performance in snowmobile applications by improving air-fuel mixture flow into the engine's crankcase.

Please read this manual thoroughly before attempting any installation or maintenance procedures. Retain this manual for future reference.

2. SAFETY INFORMATION

Always prioritize safety when working with powersports equipment. Failure to follow safety instructions can result in serious injury or damage to the product or vehicle.

- Ensure the vehicle's engine is off and cool before beginning any work.
- Disconnect the battery to prevent accidental starting or electrical shorts.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Work in a well-ventilated area, especially when dealing with fuel or cleaning agents.
- If you are unsure about any installation step, consult a qualified mechanic or refer to your vehicle's official service manual.
- Keep all tools and parts organized to prevent loss or damage.

3. PRODUCT OVERVIEW AND PACKAGE CONTENTS

The V-Force 3 Reed Valve System features a unique design aimed at maximizing airflow and engine efficiency. Key design elements include a patent-pending snap-together cage and symmetric reed petals, along with a specialized reed tip shape that accelerates the air mixture.



Image: The Moto Tassinari V-Force 3 Reed Valve System, showing its multi-petal design and black housing.

Package Contents:

- 1 x Moto Tassinari V-Force 3 Reed Valve System (Model V3124-873B-2)
- *Note: Additional hardware or gaskets may be required depending on your specific vehicle application and are not included unless specified.*

4. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your V-Force 3 system. Refer to your snowmobile's service manual for specific intake manifold removal and installation procedures.

General Installation Steps:

1. **Preparation:** Ensure the engine is cool. Disconnect the spark plug wires and battery (if applicable).
2. **Access:** Remove any components obstructing access to the intake manifold and existing reed valve assembly (e.g., airbox, carburetors/throttle bodies).
3. **Removal of Old System:** Carefully unbolt and remove the old reed valve assembly. Note the orientation for proper installation of the new unit.

4. **Inspection and Cleaning:** Thoroughly clean the intake manifold mating surfaces. Inspect for any debris, old gasket material, or damage. Ensure surfaces are smooth and clean.
5. **Installation of V-Force 3:**
 - The V-Force 3 features a patent-pending snap-together cage design, simplifying assembly.
 - Install new gaskets (not included) on both sides of the V-Force 3 assembly if required by your vehicle's specifications.
 - Carefully position the V-Force 3 system into the intake manifold, ensuring correct orientation.
 - Install the mounting bolts. Tighten them evenly and gradually to the torque specifications provided in your vehicle's service manual. *Do not overtighten.*
6. **Reassembly:** Reinstall all removed components (carburetors/throttle bodies, airbox, etc.) in reverse order. Reconnect spark plug wires and battery.
7. **Post-Installation Check:** Before starting the engine, double-check all connections, hoses, and clamps for tightness and proper routing.

5. OPERATING PRINCIPLES

The Moto Tassinari V-Force 3 Reed Valve System is a passive component that enhances engine performance by optimizing the intake process. Its multi-petal design and unique reed tip shape allow for a more efficient and rapid opening and closing of the reeds, which results in:

- **Dramatic Horsepower Increase:** Improved air-fuel mixture flow leads to more complete combustion.
- **Additional RPMs:** Enhanced intake efficiency allows the engine to rev higher and more freely.
- **Higher Efficiency (Improved Economy):** Better fuel atomization and delivery can lead to more efficient fuel consumption.
- **Longer Reed Petal Life:** The symmetric design and reduced petal travel contribute to increased durability compared to conventional reed systems.

No specific user operation is required for the reed valve system itself once installed. Its function is integral to the engine's intake cycle.

6. MAINTENANCE

Regular inspection and maintenance of your V-Force 3 Reed Valve System will ensure continued optimal performance and longevity.

Inspection Schedule:

- Inspect the reed petals and cages at least once per riding season or every 50-100 hours of operation, whichever comes first. More frequent inspection may be necessary for aggressive riding or racing conditions.

Maintenance Steps:

1. **Removal:** Follow the reverse of the installation steps to remove the V-Force 3 assembly from the engine.
2. **Cleaning:** Gently clean the reed petals and cage assembly using a mild solvent or carburetor cleaner. Avoid harsh chemicals that could damage the composite materials. Ensure no debris is lodged between the petals or in the cage.
3. **Inspection:**
 - Check reed petals for any signs of fraying, chipping, cracking, or excessive wear.

- Ensure petals lie flat against the cage when closed. Any gaps or curling indicate wear and necessitate replacement.
 - Inspect the rubber overmolding on the cage for cracks or deterioration.
 - Check the integrity of the snap-together cage components.
4. **Replacement:** If any damage or significant wear is observed on the reed petals, replace them immediately with genuine Moto Tassinari replacement parts. Do not attempt to repair damaged reeds.
 5. **Reinstallation:** Reinstall the cleaned and inspected (or new) V-Force 3 assembly following the installation steps in Section 4.

7. TROUBLESHOOTING

This section addresses common issues that may arise related to reed valve performance. Always ensure other engine components (carburetion/fuel injection, ignition, compression) are in good working order before troubleshooting the reed valves.

Symptom	Possible Cause	Solution
Reduced Engine Performance / Loss of Power	Worn, chipped, or broken reed petals; improper installation (air leak).	Inspect reed petals (Section 6). Replace if damaged. Check for proper sealing and torque during installation.
Rough Idle / Poor Low-End Response	Reed petals not sealing properly (worn or warped).	Inspect reed petals for proper closure. Replace if necessary.
Backfiring / Engine Stalling	Severely damaged reed petals; significant air leak at intake.	Immediately inspect reed valve assembly. Address any air leaks. Professional diagnosis recommended.
Unusual Noises from Intake Area	Loose components; damaged reed petals vibrating excessively.	Check all mounting hardware for tightness. Inspect reed petals for damage.

If troubleshooting steps do not resolve the issue, it is recommended to consult a certified powersports technician.

8. SPECIFICATIONS

Attribute	Value
Brand	Moto Tassinari
Model Number	V3124-873B-2
Manufacturer Part Number	V3124-873B-2
OEM Part Number	017839
Product Dimensions	8 x 5 x 5 inches
Item Weight	0.01 ounces

9. WARRANTY INFORMATION

Specific warranty terms for the Moto Tassinari V-Force 3 Reed Valve System are provided by the manufacturer. Please refer to the official Moto Tassinari website or contact their customer service for detailed warranty coverage, terms, and conditions.

Retain your proof of purchase for any warranty claims.

10. CUSTOMER SUPPORT

For technical assistance, replacement parts, or further inquiries regarding your Moto Tassinari V-Force 3 Reed Valve System, please contact Moto Tassinari directly or the authorized dealer from whom you purchased the product.

You can typically find contact information on the official Moto Tassinari website.