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Standard Motor Products SC518

Standard Motor Products SC518 Alternator Rectifier

Model: SC518 | Brand: Standard Motor Products

INTRODUCTION

The Standard Motor Products SC518 Alternator Rectifier is a critical component in your vehicle's charging system. Its primary function is to convert the alternating current (AC) produced by the alternator into direct current (DC) that is used to power the vehicle's electrical systems and recharge the battery. This manual provides essential information for the proper handling, installation, and maintenance of your SC518 Alternator Rectifier.



Image of the Standard Motor Products SC518 Alternator Rectifier, showing its general appearance and components.

SAFETY INFORMATION

Always observe the following safety precautions when working with automotive electrical systems:

- **Disconnect the Battery:** Before beginning any work on the alternator or charging system, always disconnect the negative battery terminal to prevent electrical shock or damage to the vehicle's electrical components.
- **Wear Protective Gear:** Use appropriate personal protective equipment, including safety glasses and gloves, to prevent injury.
- **Consult a Professional:** If you are unsure about any step of the installation process, it is highly recommended to seek assistance from a qualified automotive technician.
- **Avoid Short Circuits:** Ensure no tools or metal objects come into contact with live electrical terminals.

PACKAGE CONTENTS

Verify that all components are present and undamaged upon opening the package:

- 1 x Standard Motor Products SC518 Alternator Rectifier

SETUP AND INSTALLATION

The SC518 Alternator Rectifier is an internal component of the alternator. Installation typically involves disassembling the alternator. Due to the complexity and specific tools required, professional installation is strongly recommended.

General Installation Steps (Consult Service Manual for Specifics):

1. **Disconnect Battery:** Ensure the negative battery cable is disconnected.
2. **Remove Alternator:** Carefully remove the alternator from the vehicle according to the vehicle manufacturer's service manual.
3. **Disassemble Alternator:** Open the alternator casing to access the internal components. Note the position and orientation of all parts.
4. **Remove Old Rectifier:** Disconnect and remove the old rectifier assembly.
5. **Install New Rectifier:** Carefully install the new SC518 Alternator Rectifier, ensuring all connections are secure and properly seated.
6. **Reassemble Alternator:** Put the alternator back together, ensuring all bolts are tightened to specifications.
7. **Reinstall Alternator:** Mount the alternator back into the vehicle.
8. **Reconnect Battery:** Reconnect the negative battery cable.
9. **Test System:** Start the vehicle and verify proper charging system operation using a voltmeter or dashboard indicator.

OPERATING INSTRUCTIONS

The SC518 Alternator Rectifier operates automatically as part of your vehicle's charging system. Once installed, it continuously converts the AC output from the alternator's stator windings into DC voltage. This DC voltage is then regulated by the voltage regulator to maintain a stable output for the vehicle's electrical demands and to charge the battery. No direct user interaction is required for its operation.

MAINTENANCE

The Standard Motor Products SC518 Alternator Rectifier is designed to be a maintenance-free component once installed correctly. Regular maintenance of the overall charging system, including checking battery terminals for corrosion and ensuring proper belt tension, will help prolong the life of all components, including the rectifier.

- **Periodic Inspection:** During routine vehicle service, visually inspect the alternator and its wiring for any signs of damage, loose connections, or excessive dirt/debris buildup.
- **Avoid Overheating:** Ensure proper engine cooling to prevent excessive heat buildup around the alternator, which can stress internal components.

TROUBLESHOOTING

If you experience issues with your vehicle's charging system, the rectifier could be a contributing factor. Below are common symptoms and general troubleshooting steps. Always consult a qualified technician for accurate diagnosis.

Symptom	Possible Cause	Action
Battery not charging / Low voltage	Faulty rectifier diode, loose connections, worn alternator.	Check battery and alternator output. Inspect wiring. Professional diagnosis recommended.
Dim headlights / Electrical accessories malfunction	Insufficient DC power output from alternator due to rectifier failure.	Test alternator output. If AC ripple is high, rectifier may be failing.
Battery overcharging / High voltage	Less common for rectifier, more likely voltage regulator.	Check voltage regulator. Rectifier failure typically leads to undercharging.

SPECIFICATIONS

Key specifications for the Standard Motor Products SC518 Alternator Rectifier:

Feature	Detail
Manufacturer	Standard Motor Products
Part Number	SC518
UPC	033086162997
ASIN	B009JHUOPG
Date First Available	July 1, 2012
Product Type	Alternator Rectifier

WARRANTY INFORMATION

Standard Motor Products offers a limited warranty on its products, covering defects in material and workmanship under normal use and service. The specific terms and duration of the warranty may vary. Please retain your proof of purchase. For detailed warranty information, refer to the official Standard Motor Products website or contact their customer support directly.

SUPPORT AND CONTACT INFORMATION

For technical assistance, warranty claims, or further inquiries regarding the Standard Motor Products SC518 Alternator Rectifier, please contact Standard Motor Products customer support through their

official channels:

- **Website:** Visit the [Standard Motor Products official website](#) for product information and support resources.
- **Customer Service:** Refer to the contact section on their website for phone numbers or email support.