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> [Mando 12A1388 Starter Motor Instruction Manual for Kia Sportage 2.7L \(2009-2010\)](#)

Mando 12A1388

Mando 12A1388 Starter Motor Instruction Manual

Model: 12A1388 | Brand: Mando

1. INTRODUCTION

Welcome to the Mando 12A1388 Starter Motor instruction manual. This document provides essential information for the proper installation, operation, and maintenance of your new starter motor. Please read this manual thoroughly before installation and retain it for future reference. This starter motor is designed as an Original Equipment (OE) replacement for specific vehicle applications, including the 2009-2010 Kia Sportage 2.7L.

2. PRODUCT OVERVIEW AND FEATURES

The Mando 12A1388 is an Original Equipment (OE) starter motor engineered for direct replacement and optimal performance in compatible vehicles. It is designed to meet or exceed the specifications of the original part, ensuring reliable engine starting.

Key Features:

- Original Equipment (OE) Starter Motor with Solenoid
- Direct replacement for specified vehicle models
- Engineered for precise fitment and reliable operation
- OEM Interchange Part Number: JE1618400

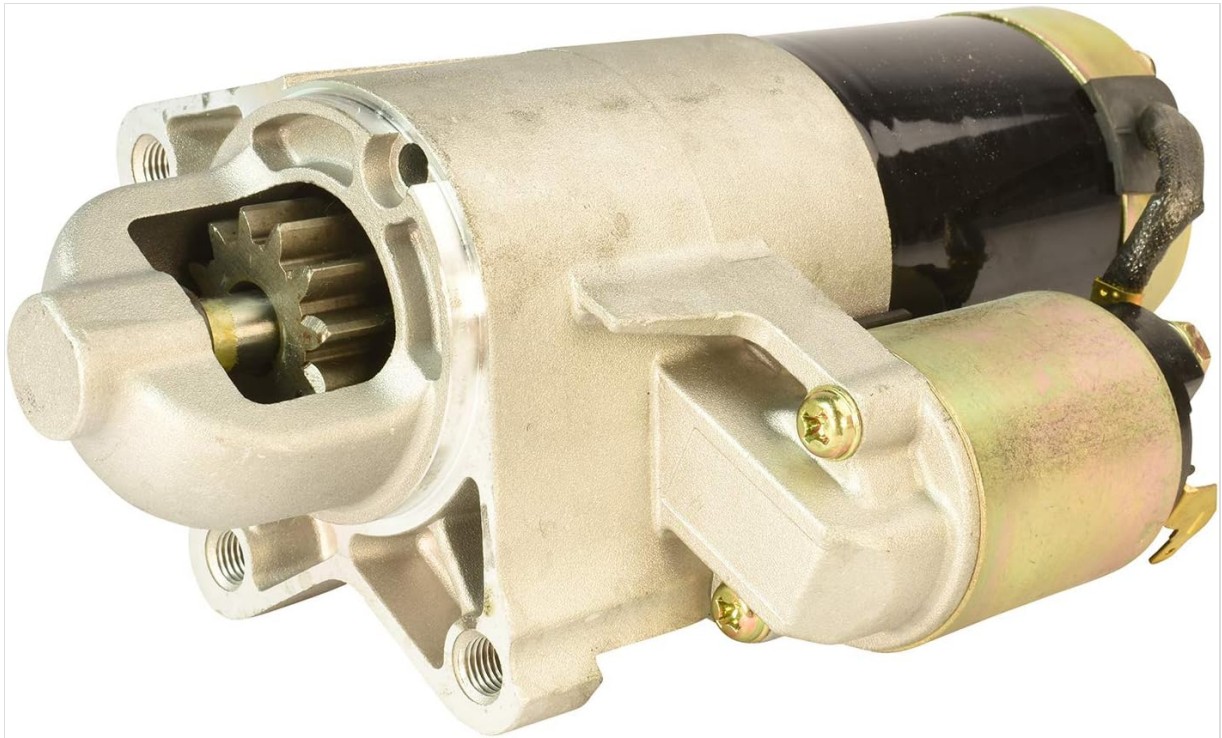


Figure 1: Front view of the Mando 12A1388 Starter Motor, showing the drive gear and mounting points.

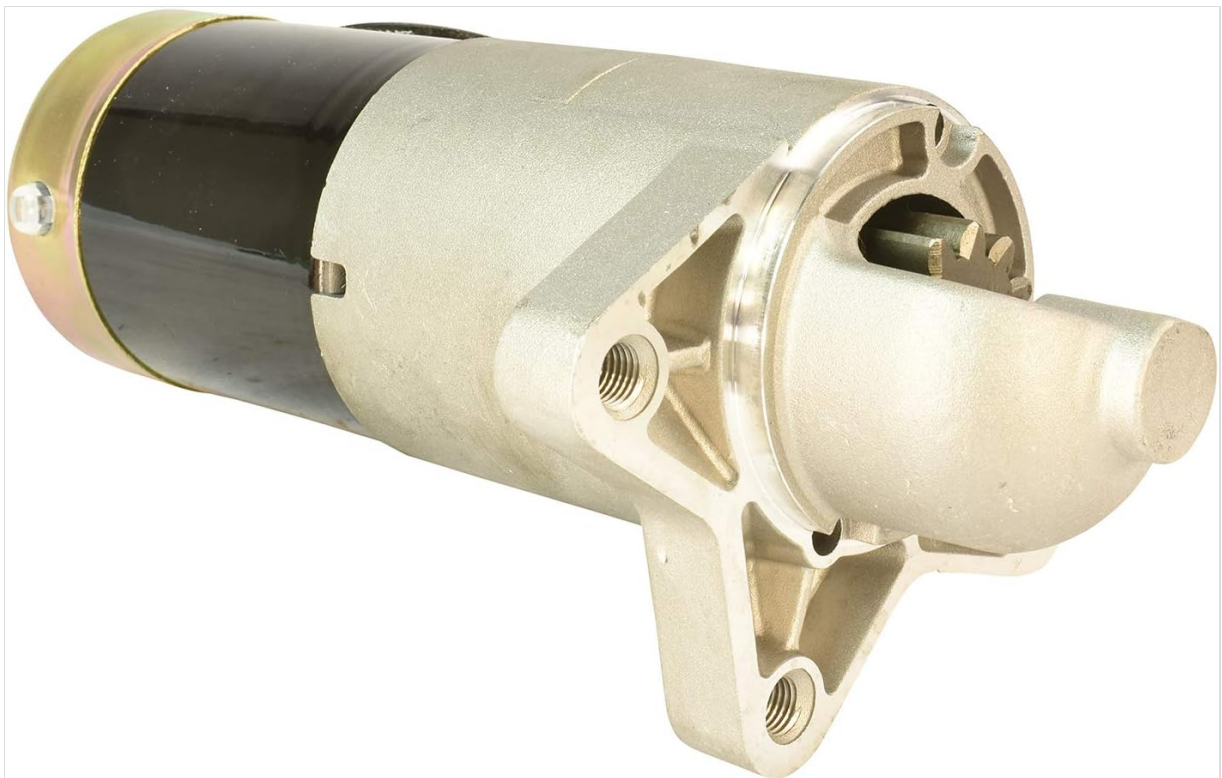


Figure 2: Side view of the Mando 12A1388 Starter Motor, illustrating its compact design.

3. SAFETY INFORMATION

Always prioritize safety when working on vehicle electrical systems. Failure to follow safety precautions can result in serious injury or damage to the vehicle.

- **Disconnect Battery:** Always disconnect the vehicle's negative battery terminal before beginning any installation or maintenance to prevent electrical shock or short circuits.
- **Personal Protective Equipment:** Wear appropriate personal protective equipment, including safety glasses and gloves, to protect against potential hazards.

- **Vehicle Support:** Ensure the vehicle is securely supported on a level surface using jack stands if lifting is required.
- **Vehicle Manual:** Refer to your vehicle's service manual for specific procedures, torque specifications, and additional safety guidelines relevant to your vehicle model.
- **Professional Assistance:** If you are unsure about any step or lack the necessary tools and experience, consult a qualified automotive technician.

This starter motor operates at 12 Amps. Handle with care to avoid electrical shock or short circuits.

4. INSTALLATION INSTRUCTIONS

This section outlines the general steps for installing the Mando 12A1388 Starter Motor. Specific vehicle procedures and component locations may vary. Always consult your vehicle's service manual for detailed instructions.

Required Tools (Typical):

- Socket wrench set
- Torque wrench
- Battery terminal wrench
- Wire brush (for cleaning terminals)

Installation Steps:

1. **Preparation:** Ensure the vehicle's battery is disconnected (negative terminal first). Safely lift and support the vehicle if necessary to access the starter motor.
2. **Locate Old Starter:** Identify the existing starter motor on your vehicle. It is typically mounted on the engine block or transmission housing.
3. **Disconnect Wiring:** Carefully disconnect all electrical connections from the old starter motor. This usually includes a large battery cable and one or more smaller solenoid wires. Note their positions for correct reinstallation.
4. **Remove Mounting Bolts:** Remove the bolts securing the old starter motor to the engine or transmission housing. Keep track of all hardware.
5. **Remove Old Starter:** Carefully extract the old starter motor from its position. It may be heavy.
6. **Install New Starter:** Position the new Mando 12A1388 starter motor in place. Ensure it seats correctly and aligns with the mounting holes.
7. **Secure Mounting Bolts:** Install and tighten the mounting bolts to the vehicle manufacturer's specified torque. Do not overtighten.
8. **Reconnect Wiring:** Reconnect the electrical connections to the new starter motor, ensuring they are secure and correctly oriented. Clean any corroded terminals before reattaching.
9. **Final Checks:** Double-check all connections, ensure no tools or debris are left in the engine bay, and confirm all components are properly secured.
10. **Reconnect Battery:** Reconnect the vehicle's battery (positive terminal first, then negative).
11. **Test:** Attempt to start the vehicle to confirm proper operation of the new starter motor.

Note: Professional installation is recommended if you are unfamiliar with automotive electrical systems or vehicle repair procedures.

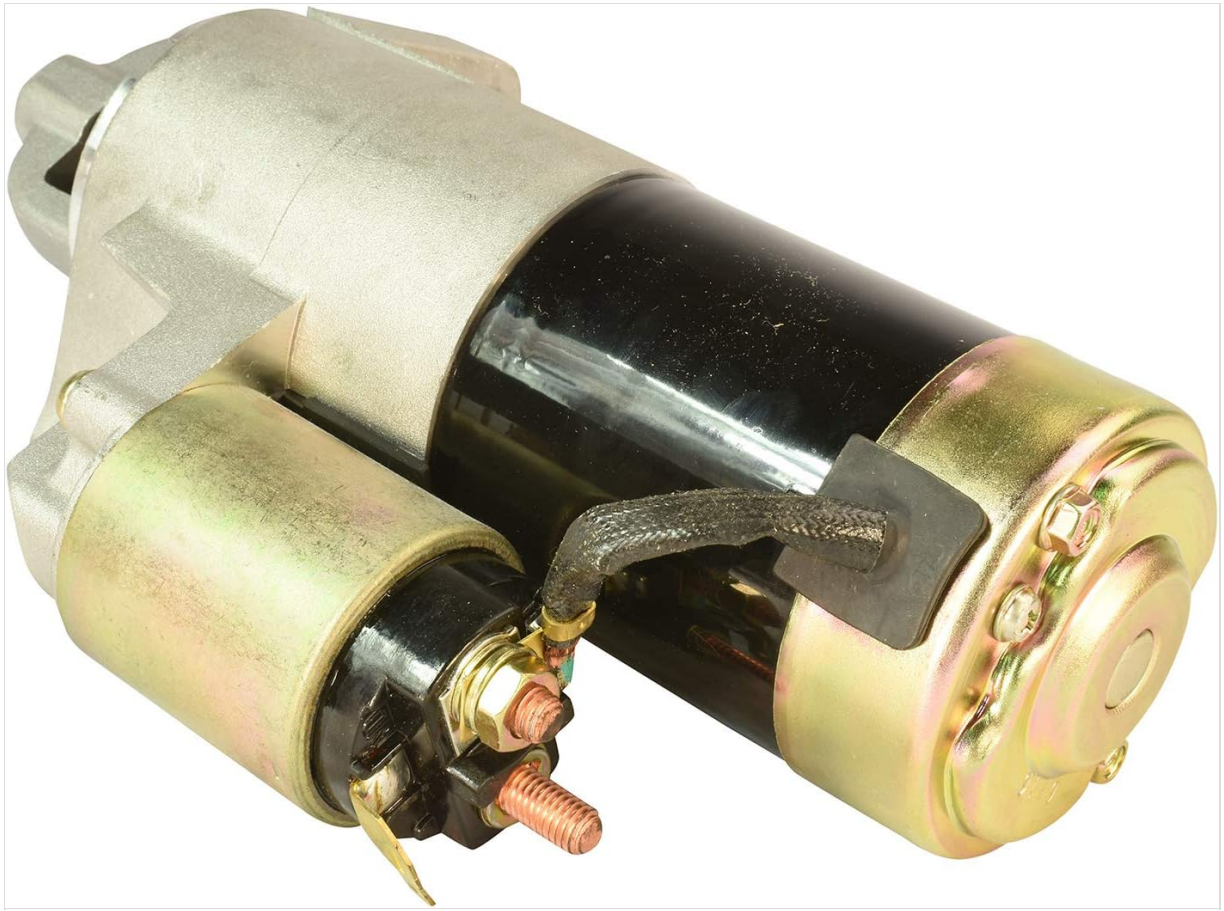


Figure 3: View of the Mando 12A1388 Starter Motor's solenoid and electrical connection points.

5. OPERATION

The starter motor is an integral component of your vehicle's starting system. When the ignition key is turned to the