MAC 9616

MAC Ignition Tune-Up Kit Installation Manual

Model 9616 for Dodge Dakota 3.9L V6 (1997-2003)

1. Product Overview

The MAC Ignition Tune-Up Kit (Model 9616) is designed to replace key ignition components in specific Dodge vehicles, ensuring optimal engine performance and reliability. This kit includes OE-style replacement parts manufactured to meet or exceed original equipment specifications.

Image: Complete MAC Ignition Tune-Up Kit components.

Included Components:

- 1X Part# P4670 New Oil Filter
- 1X Part# Pa4372 New Air Filter
- 1X Part# Pcv346 New PCV Valve
- 1X Part# 4221 New Distributor Cap
- 1X Part# 3202 New Distributor Rotor
- 1X Part# 9616 New Pro Spark Ignition Spark Plug Wire Set
- 6X Part# SP1018 SKP Platinum Spark Plugs

Vehicle Compatibility:

- 1997-2003 Dodge Dakota with 3.9L V6
- 1997-2001 Dodge Ram Pick Up 1500 3.9L V6
- 1998-1999 Dodge Durango 3.9L V6

2. Safety Information

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

- Disconnect the vehicle's battery before beginning any work on the ignition system to prevent electrical shock.
- Allow the engine to cool completely before handling any components, especially spark plugs and exhaust parts, to avoid burns.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands if lifting is required.
- Consult a professional mechanic if you are unsure about any step of the installation process.

3. Setup and Installation

This section outlines the general steps for replacing the components included in your MAC Ignition Tune-Up Kit. Specific procedures may vary slightly depending on your vehicle's exact configuration. Refer to your vehicle's service manual for detailed instructions.

3.1 General Preparation

1. Park the vehicle on a level surface and engage the parking brake.
2. Ensure the engine is cool.
3. Disconnect the negative terminal of the battery.
4. Gather all necessary tools, including a spark plug wrench, torque wrench, screwdriver set, and dielectric grease.

3.2 Spark Plugs and Ignition Wires Installation

1. Carefully remove the existing spark plug wires from the spark plugs. Label them to ensure correct reinstallation.
2. Using a spark plug wrench, loosen and remove the old spark plugs. Inspect them for wear patterns.
3. Apply a small amount of anti-seize compound to the threads of the new SKP Platinum Spark Plugs (Part# SP1018).
4. Install the new spark plugs by hand to avoid cross-threading. Torque them to the manufacturer's specifications (refer to your vehicle's service manual).
5. Replace the spark plug wires one at a time to maintain the correct firing order. This prevents misfires and engine damage.
6. Connect one end of a new Pro Spark Ignition Spark Plug Wire (Part# 9616) to the corresponding new spark plug, ensuring a secure connection.
7. Route the new wire along the same path as the old one and connect the other end to the correct terminal on the distributor cap.
8. Repeat for all six spark plug wires.

Video Description: This video demonstrates various Dragon Fire Performance ignition components, including spark plugs and ignition coils, highlighting their design and features. While not specific to the MAC kit, it illustrates the type of components involved in an ignition system tune-up.

Video Description: This video showcases Dragon Fire Performance ignition parts, providing a visual overview of components like ignition coils and spark plugs, which are similar to those found in the MAC tune-up kit.

3.3 Distributor Cap and Rotor Installation

1. Locate the distributor cap. Note the orientation of the cap and the position of the rotor before removal.
2. Unclip or unscrew the old distributor cap (Part# 4221) and carefully lift it off.
3. Remove the old distributor rotor (Part# 3202) by pulling it straight up or unscrewing it, depending on the design.
4. Install the new distributor rotor (Part# 3202), ensuring it seats correctly. It may only fit one way.
5. Place the new distributor cap (Part# 4221) onto the distributor, aligning it with the mounting points. Secure it with clips or screws.
6. Reconnect the spark plug wires to the new distributor cap in the correct firing order, if they were disconnected from the cap.

Video Description: This video provides an unboxing and detailed view of a HiSport Distributor Ignition Pickup. This component is integral to the distributor assembly, and the video offers a visual reference for handling and inspecting similar parts during installation.

4. Operating Instructions

After installation, perform the following checks before operating the vehicle.

1. Double-check all connections for tightness and proper routing.
2. Reconnect the negative battery terminal.
3. Start the engine and listen for any unusual noises or misfires. The engine should run smoothly.
4. Allow the engine to reach operating temperature and check for any warning lights on the dashboard.
5. Take the vehicle for a short test drive to confirm proper operation.

5. Maintenance

Regular maintenance of your ignition system components is crucial for optimal vehicle performance and longevity.

- **Spark Plugs:** Inspect spark plugs every 30,000-50,000 miles, or as recommended by your vehicle manufacturer. Replace if electrodes are worn or fouled.
- **Ignition Wires:** Check wires for cracks, fraying, or signs of arcing periodically. Replace if any damage is observed.
- **Distributor Cap and Rotor:** Inspect for cracks, carbon tracking, or excessive wear on the contacts during spark plug replacement intervals. Replace as needed.
- **Oil and Air Filters:** Replace the oil filter (Part# P4670) and air filter (Part# Pa4372) according to your vehicle's maintenance schedule, typically every 3,000-10,000 miles for oil and 15,000-30,000 miles for air, depending on driving conditions.
- **PCV Valve:** Inspect the PCV valve (Part# Pcv346) for proper function and replace if it's clogged or damaged, usually every 20,000-50,000 miles.

6. Troubleshooting

If you experience issues after installing the tune-up kit, consider the following common problems and solutions:

- **Engine Misfire/Rough Idle:**
  - Ensure spark plug wires are connected to the correct cylinders and distributor cap terminals in the proper firing order.
  - Check spark plug gaps and ensure they are correctly torqued.
  - Inspect spark plug wires for damage or improper seating.
- **No Start Condition:**
  - Verify battery connections are secure.
  - Confirm all electrical connectors on the distributor and ignition components are properly seated.
  - Check for fuel delivery and spark at the plugs.
- **Check Engine Light:**
  - A diagnostic scan tool can help identify specific fault codes related to ignition or engine performance. Address codes as indicated.
- **Poor Fuel Economy:**
  - Ensure all components are correctly installed and functioning. A faulty spark plug or wire can impact fuel efficiency.

7. Specifications

- **Brand:** MAC
- **Model Number:** 9616
- **Spark Plug Core Material:** Platinum
- **Spark Plug Thread Size:** M14x1.25
- **Vehicle Service Type:** Truck
- **Automotive Fit Type:** Vehicle Specific Fit
- **Manufacturer:** Mac Auto Parts
- **ASIN:** B07NHH14PV
- **Date First Available:** February 7, 2019

8. Warranty Information

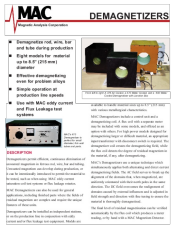
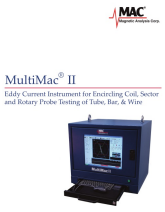
The warranty for this MAC Ignition Tune-Up Kit is provided by the seller. Please refer to the original product listing or contact the seller directly for specific warranty terms and conditions. Keep your proof of purchase for any warranty claims.

9. Support

For further assistance, technical support, or inquiries regarding your MAC Ignition Tune-Up Kit, please contact the seller or manufacturer through the platform where the product was purchased. Provide your

product model number (9616) and purchase details for efficient service.

Related Documents - 9616

	MAC 6000 Hydronic Heater Manual - Specifications, Operation, and Safety Official manual for the MAC 6000 Hydronic Heater. Find detailed specifications, operating instructions, warranty information, safety precautions, and trailering guidelines for MAC Inc. industrial heaters.
	MAC Demagnetizers: Industrial Solutions for Magnetic Field Elimination Explore MAC Demagnetizers, industrial equipment designed for efficient elimination of unwanted magnetism in ferrous materials like rod, wire, bar, and tubing. Featuring various models with AC and DC capabilities for diverse applications.
	MAC Pneumatic Rivet Buster - Parts and Specifications Comprehensive guide to the MAC Pneumatic Rivet Buster, including detailed parts lists, repair kits, and technical specifications. Features information on bore, piston stroke, impact rate, pressure, air consumption, and hose size.
	MultiMac II Eddy Current Instrument for Tube, Bar, & Wire Testing | MAC Discover the MultiMac II, an advanced Eddy Current instrument from Magnetic Analysis Corp. designed for efficient testing of tubes, bars, and wires using encircling coil, sector, and rotary probe methods. Learn about its features, screens, and applications for non-destructive testing.
	MAC Test Benches and Drives: Pinch & Constant Center Roll Systems Explore MAC's advanced Test Benches and Drives, including Pinch Bench and Constant Center Triple Guide Roll Test Benches, designed for precise material testing with features like V-rolls, pinch stands, and automated controls.
	Your Guide to Air Conditioning: Costs, Features & Selection | MAC Learn about the costs, noise levels, types (multi-split vs. split), and best air conditioning units from leading brands like Mitsubishi, Toshiba, and Daikin. Provided by Midland Air Conditioning (MAC).